

Automated Spray System Helps Frozen Pizza Manufacturer Save Over US\$50,000 in One Year

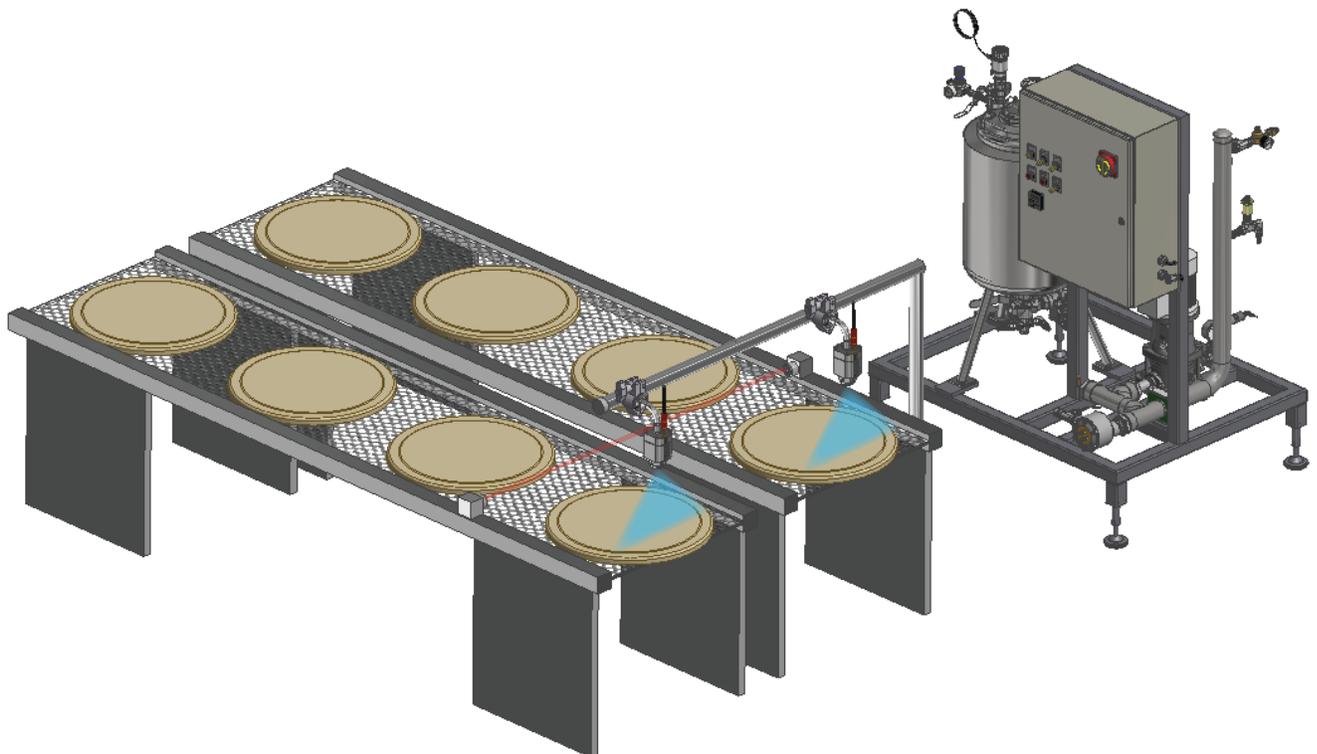


Problem:

A private label manufacturer of frozen and deli pizzas needed to apply olive oil to the pizza crusts. The manufacturer previously had workers manually ladling oil on the crusts but the results were inconsistent and used too much oil. The customer wanted to automate the process while maintaining high quality standards.

Solution:

Spraying Systems Co.'s solution consisted of an AccuCoat® Heated Spray System with two PulsaJet® automatic spray nozzles. The spray nozzles are activated by photo eyes that detect the presence of the pizza crusts as they pass under the nozzles at line speeds ranging from 30 to 60 feet per minute (9 to 18 m/min). The automated system maintains the proper liquid temperature for the oil and intermittently sprays each 11" (279 mm) round pizza crust without wasteful overspray. The system uses Precision Spray Control (PSC) to maintain the proper coating weight of 0.5 ounces (14 grams) of oil onto each crust despite line speed fluctuations. Because the PulsaJet nozzles use hydraulic UniJet® spray tips, no oil mist is created.





Automated Spray System Helps Frozen Pizza Manufacturer Save Over US\$50,000 in One Year – Continued

Results:

The AccuCoat® Spray System maintains a more much consistent coating weight of oil on the pizza crusts and has reduced the total volume of oil used. The production rate for this product has greatly increased and automating this process has allowed the manufacturer to re-assign workers to other tasks within the plant. These factors combined to save the manufacturer over US\$50,000 annually, resulting in a payback period of 12 months.

A CLOSER LOOK AT THE SYSTEM



PulsarJet® nozzles are equipped with UniJet® spray tips. Model AA10000AUH-55417 features a ½" sanitary flange and is constructed entirely of food contact materials.



AccuCoat Spray System provides closed-loop temperature control for the sprayed liquid to enable the viscous liquid to be sprayed hydraulically rather than using compressed air for atomization. The spray controller also provides easy control of spray pressure and cycle times.

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.



Spraying Systems Co.®
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