



Case Study

AUTOMATED SPRAY SYSTEM IMPROVES
COOKIE PRODUCTION

FOOD PROCESSING INDUSTRY

SPRAY TECHNOLOGY FOR BAKERIES SOLUTION



During cookie production, many bakeries use an automated cutting knife to portion dough onto a conveyor. Without proper lubrication, the cutting knife and conveyor belt become sticky with built-up dough, forcing workers to stop the process so they can clean the equipment manually. This leads to excess labor hours and lost productivity.

► PROBLEM: DOUGH BUILD-UP ON BAKERY EQUIPMENT

A prominent food equipment manufacturer contacted BETE to explore a lubricating spray system solution to help mitigate dough build-up on its cutting knives and conveyor belts. The company wished to reduce product waste, increase productivity, and lower the risk of employee injury for their customers.

► SOLUTION: BETE FLEXFLOW® SPRAY SYSTEM WITH ELECTRIC HYDROPULSE® (EHP) NOZZLES

BETE engineers visited the manufacturing facility to witness the dough build-up on their processing equipment. After careful assessment, the FlexFlow 1012-HY precision spray control system with hygienic EHP automatic nozzles proposed the ideal solution. The spraying system's precision oil dosing can lubricate the cutting knife and conveyor without overspray, ensuring consistent product quality and a clean, safe environment for workers. An added benefit is that the hygienic enclosure option for the controller and sanitary component design of the 316 SS food-grade EHP nozzles exceeds food safety standards for production and washdown.

BETE conducted several tests on the live production line to validate their recommended solution and determine which oil might be best within the application's constraints. Canola oil proved a suitable medium, but BETE can optimize its systems to spray almost any oil by adding a heater for viscosity calibration. The setup required three EHP spray nozzles equipped with BJ flat fan tips: one directed at the knife blade and two aimed at the conveyor belt.





Results

The exceptional accuracy of the FlexFlow spray system has proven to generate significant annual cost savings for their customers by increasing efficiency, reducing product waste, reducing labor hours, and improving worker safety.

BETE's response to the customer's unique challenges with a superior spray system led to the purchase of several additional units and requests for BETE spray technology integrations with other food processing equipment.



ADVANTAGES OF THE FLEXFLOW SYSTEM & HYDROPULSE NOZZLES

- Lubricate the target with precision and accuracy
- Save on expensive oils vs. manual coating
- Intuitive programming and versatile spray control
- Reduce maintenance and downtime



SPRAY NOZZLE & SPRAY SYSTEMS EXPERTS

- ISO 9001 Quality System
- Over 70 years of experience solving unique and complex spray challenges
- Innovators in nozzle design, fabrication, and complete spray system solutions

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