

SPRAY TECHNOLOGY FOR FOOD & BEVERAGE PROCESSING & EQUIPMENT

Maintaining product quality, operational efficiency, and hygienic standards is a constant challenge in the food and beverage industry. Leading manufacturers rely on BETE spray nozzles, fabrications, and automated spray systems to increase productivity, ensure cleanliness, reduce waste, and lower operational costs. With over 75 years of innovation in spray nozzle design, engineering, and manufacturing, BETE provides proven solutions backed by technical expertise. From coating and sanitizing to drying and cooling, we design our specialized spray technologies to exceed performance expectations and uphold the highest industry standards.

EXPLORE BETE'S RANGE OF SPRAY APPLICATIONS & TECHNOLOGIES

CLEANING & SANITIZING

- Ensure hygiene and safety compliance for products, equipment surfaces, packaging, worker stations, facility environments

COATING, MOISTENING, & LUBRICATING

- Apply uniform coatings of egg wash, glazes, oils, syrups, flavorings, nutrients, antimicrobials
- Deliver targeted spray coverage for pans, molds, conveyors, and other equipment to optimize release and reduce buildup

COOLING & FREEZING

- Manage thermal transitions in pasteurization, product chilling, packaging

HUMIDIFICATION

- Maintain controlled climate conditions in proofing ovens and storage areas

SPRAY DRYING

- Produce consistent powders – milk, formula, proteins, flavorings

TANK CLEANING & MIXING

- Effectively clean tanks, totes, drums, barrels, kettles
- Mix/blend ingredients and keep product in suspension with eductor nozzles

PLANT OPTIMIZATIONS

- Spray lances and manifolds for optimal nozzle placement and positioning
- Compressed air solutions for blow-off, drying, and static elimination
- Water conservation and treatment solutions
- Odor and pollution control spray technology



SOLVE CHALLENGING AND CRITICAL PROBLEMS USING BETE'S ADVANCED SPRAY ENGINEERING SERVICES, FEATURING PHYSICAL MODELING & COMPUTATIONAL FLUID DYNAMICS (CFD)



NEED HELP SELECTING THE PROPER NOZZLE FOR YOUR PROCESS?

CONTACT AN APPLICATIONS ENGINEER TODAY



CHOOSE FROM OUR WIDE RANGE OF SPRAY NOZZLES, FABRICATIONS, & SPRAYING SYSTEMS

FULL CONE NOZZLES



- Product washing and cooling
- Deluge cooling and pasteurization
- Bottle, can, and container washing/sanitizing

HOLLOW CONE NOZZLES



- Pasteurization

MISTING NOZZLES



- Sanitizing and sterilizing production areas
- Humidification and moistening
- Freezing tunnels

FAN NOZZLES



- Coating
- Product washing
- Conveyor and other equipment cleaning/sanitizing
- Bottle, can, and container washing/sanitizing
- Spiral and tunnel freezer cleaning

AIR ATOMIZING NOZZLES



- Coating and lubricating
- Product cooling
- Evaporative cooling
- Humidification and moistening
- Sanitizing and sterilizing

TANK CLEANING NOZZLES



- Tanker trucks and railcars
- Large commercial ovens and freezers
- Cooking kettles
- Tanks, barrels, totes, and drums
- Bright beer tanks, brew kettles
- Fermentation tanks

AUTOMATIC NOZZLES



- Coating
- Lubricating
- Moistening
- Product cooling

TANK MIXING NOZZLES



- Mix or suspend product and ingredients

SPRAY DRYING NOZZLES



- Transform liquid into powdered products

CUSTOM SPRAY FABRICATIONS



- Spray headers
- Tank cleaning lances

COMPLETE SPRAY SYSTEMS
(See next page)



BETE: YOUR SOURCE FOR COMPLETE SPRAY SYSTEM SOLUTIONS



ENSURE PRECISE AUTOMATION WITH FLEXFLOW® SPRAYING SYSTEMS

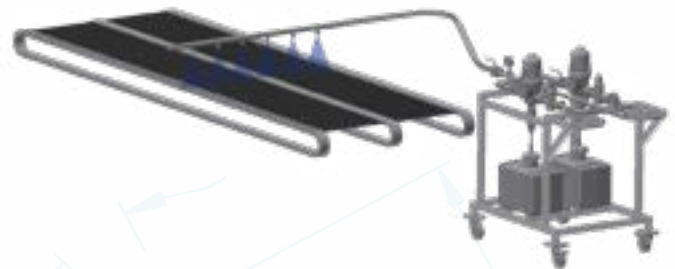
The BETE FlexFlow ensures precision spray control and flexible automation for various food and beverage processes, including the application of ingredients and flavorings to products moving on a conveyor, the exact dosing of antimicrobials onto packaging, and efficient spraying of oil to lubricate equipment. Combine Electric HydroPulse® (EHP) automatic nozzles with the FlexFlow spray controller, and you have an expertly engineered automated spray system with advanced intermittent spraying capabilities.

- Easy to operate
- Hygienic design
- Capable of cycling on/off up to 150 cycles per second
- Improve consistency with uniform and repeatable coverage
- Reduce consumption of expensive spray media
- Minimize overspray and maintain a clean, safe environment



STREAMLINE SANITATION WITH FLEXISAN™ MODULAR SPRAY SYSTEMS

Designed for versatility, the FlexiSan Modular Spray System optimizes Open Plant Cleaning (OPC) and delivers effective, consistent cleaning for various applications, from everyday washdowns to tackling tough soils. Use to apply cleaning and sanitizing agents to a wide range of equipment, including conveyors, hoppers, bins, and mixers, as well as other critical process areas.



- **Streamlined Sanitation** – Easily switch between rinse, clean, and sanitize steps for faster, more efficient washdowns
- **Portable & Easy to Use** – A rugged, stainless steel cart moves effortlessly between cleaning zones
- **Tough on Soils** – Handles everything from light residues to heavy build-up like syrups and coatings
- **Saves Water & Chemicals** – Precision spraying minimizes waste while maximizing effectiveness
- **Built for You** – Flexible options and automation features to fit your exact process needs

CUSTOM-ENGINEERED SPRAY SYSTEM SOLUTIONS

BETE's complete automated spraying systems can include any or all of the following:

- Nozzles/lances
- Piping/tubing/fittings
- Valves
- Pressure regulators
- Strainer/filters
- Automatic control valves
- Pumps & pump automations
- Pressure/temperature/flow sensors
- Custom-designed control panels
- Switches, relays, and other electrical hardware
- Structural skid frames

Whether you need to retrofit an existing spray system for improved performance and reliability or develop a new solution to meet evolving process needs, BETE has the in-house capabilities to make it happen.

