

Food Packaging Industry

ITS Profile - Custom Conveyor Washer



Customer

This ITS customer manufactures plastic spools and reels for the handling of extruded products used in the food packaging industry. This industry leading manufacturer has supplied reels and spools for over 90 years with world class custom tooling, injection molding and structural molding capabilities.

Project

The customer required a new wash line to meet the high production volume of spool ends. The customer's current wash system design did not meet the production volume or part drying requirements. A more robust wash system design was needed that improved throughput, part handling, cleaning, and drying.

Requirement

Provide a cleaning system capable to process 34" diameter parts with a conveyor speed of up to 10 feet per minute for the purpose of removing bacterial contaminate and delivering fully sanitized in a 100% dry condition.

Challenges

- Design a part handling system to allow natural solution drainage from parts that reduces solution cross contamination and eliminates manual solution removal measures by an operator after parts exit the system.
- Include part handling guides that prevent part marking during transfer through the cleaning system.
- Provide condensed spray assemblies capable to effectively remove contaminants at a high throughput conveyor speed.
- Equip drain stages with intermediate blow-off air delivery systems to minimums solution cross contamination.
- Incorporate heated air with high velocity air delivery systems to ensure 100% dry parts at exit.



Part in Load Position



Part Containment Guides



Close Spray Nozzle Placement

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ITS Solution

Provide a custom designed conveyor type cleaning system that processed round parts in a vertical position with part protection guide rails to allow natural solution draining.

Integrate spray assemblies with increased flow and high impact solution delivery for effective contaminant removal at accelerated conveyor speeds.

Utilize intermediate air blow-off and final blowoff system designs that deliver high velocity air for cross contamination minimization and 100% dry parts at exit.

Keys to Success

- Through a cooperative effort between ITS and the customer, understanding the known process results of an existing cleaning system provided the design team a baseline for developing superior solution delivery systems to clean and sanitize parts. Additionally, the many years of ITS thermal drying experience provided a technologically superior moisture elimination system.
- Pre quote concept development meetings by ITS engineering and sales teams to development the best possible system concept.
- Cooperative project execution by ITS project management, manufacturing, and QC teams.

Results

Through collaborative efforts with our customer and all ITS team members we developed a design and provide a system build that delivered parts that exceeded all cleaning, drying, and the material handling expectations.

We look forward to partnering with you.
Contact ITS for a product proposal.
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Blow Off Fans



Full Coverage Spray Assembly



Blow Off Air Delivery Assembly