Conveyor Washer - Single Stage
A Food Processing Case Study

Customer
A food industry leader that processes ultra-pure liquid for privately labeled beverages.

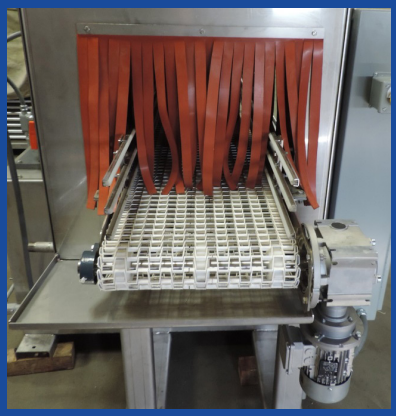
Project
The customer needed a wash system capable of sufficiently cleaning **watermelons** for the purpose of harvesting the internal section to produce drinkable juice.

Requirement
Provide a system capable of removing dirt and other organic materials from the outer rind, and delivering the watermelons to the peeling process sanitized at the rate of **400 melons** per hour.

Specifications
Completely remove all particles, microscopic organisms and apply a sanitizer.

Challenges
- Aggressively spray clean the **watermelon** to remove dirt and organic growth without penetrating the exterior rind and contaminating the interior fruit.
- Water only spray cleaning without an elevated solution temperature.
- Transfer the melons through the process without compromising the outer rind.

ITS Solution
Provide a single stage conveyor type cleaning system with a dedicated rinse spray bar to apply a sanitizing solution prior to the melons exiting the system. The cleaning stage consists of multiple spray bars with nozzles delivering a concentrated volume of solution from 360° to envelop the entire watermelon. For melon containment and protection during transfer, ITS provided a Polypropylene conveyor belt and UHMW part guides.



Keys to Success
- Process development by the ITS engineering and sales teams.
- Product analysis and sanitizing solution recommendation by ITS partner
- Testing within the ITS R&D lab

Results
ITS developed a process and provided a spray cleaning system capable of delivering a product in compliance for food-grade product manufacturing. In addition to providing a capable cleaning process, material handling design considerations allowed for processing without rind damage, which eliminated unnecessary product losses.