

Case Study

SOLVING STICKY FLAVORING
RESIDUE IN TANKS

FOOD PROCESSING INDUSTRY



POTATO CHIP MANUFACTURER SOLUTION

With very sticky residues, all sizes of tanks benefit from robust jet cleaning systems. However, the cycle time and water used by conventional jet cleaning systems are often not the right fit for smaller vessels, which will either fill with too much cleaning fluid, or the overall water used due to longer cycle times will make the cleaning process inefficient.

► PROBLEM: STICKY RESIDUES IN SMALL TANKS

A prominent potato chip manufacturer had problems cleaning the barrels of flavor concentrate used in their production line. The barrels were only 24 inches in diameter, but the residue left was sticky and hard to clean. The spinning spray balls used didn't complete the job, and a secondary manual clean was required.

While the barrels were relatively small vessels – the viscous, sticky residue meant that the spinners, generally suited for small tanks, were not up to the job. Another issue was that most rotary jet cleaners were too big and had too high a flow rate to be practical. The set cycle time required by most rotary jet cleaners is 10 minutes or more to ensure the jets reach each part of the tank – which is too long of a cycle for the manufacturer.



► SOLUTION: THE BETE HYDROWHIRL[®] ORBITOR 100

BETE provided a HydroWhirl Orbitor 100 tank cleaning machine, which is a fast cycle small rotary jet cleaner. The Orbitor 100 rotates through its cleaning cycle quickly, with full cleans achievable in 2 minutes. It also runs on a lower flow rate, comparable to spinning spray ball, which means that powerful impact cleaning is delivered efficiently with reduced overall water consumption.





Results

The HydroWhirl Orbitor 100 was trialed against several other competitor machines and was selected over them. It gave a better overall clean and was judged to be a more robust machine that would last longer and require less maintenance.

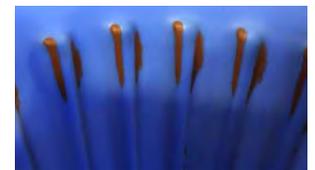
The impact cleaning of the Orbitor 100 ensures the barrels are washed without the need for a secondary manual clean, saving time and money. The robust and elegant design of the Orbitor also means that maintenance issues are less frequent than with other competitor machines, leading to reduced downtime.

CHALLENGES WITH OTHER TANK WASHING NOZZLES

- Most rotary jet cleaners are physically too large
- Spinning spray balls don't produce enough impact for effective cleaning
- Other fast cycle jet cleaners are deemed to be too "fragile" and easily damaged

ADVANTAGES OF THE BETE HYDROWHIRL® ORBITOR 100

- Fast cycle times
- Low flow rate
- Compact design
- Produces powerful impact cleaning



Before Orbitor



After Orbitor



WHY CHOOSE BETE FOR YOUR FOOD INDUSTRY SPRAY NEEDS?

- ISO 9001:2015 Certified
- The ability to solve unique and complex process challenges
- Trusted nozzle design and manufacturing with consistent quality assurance

Top food processing companies depend on BETE's specialized spray technology for everything from precision coating applications to cleaning tanks.

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