

## Case story

Ice cream producer, Poland

# New tank cleaning equipment paid back in less than six months

Leading ice cream producer saved 10,000 m<sup>3</sup> on CIP water by installing new rotary jet heads. The water savings returned energy savings of 650,000 kWh and reduced the carbon footprint of the plant by 500 tonnes. The total savings on electricity, water and chemicals paid back the entire jet head installation in less than six months.



#### About TJ20G from Alfa Laval

- State-of-the-art rotary jet head, ensuring process and product safety
- Designed to remove even the toughest residues from hygienic tanks by high impact cleaning in a 360°, repeatable cleaning pattern
- Can be used for cleaning of tanks and vessels between 15 and 150 m<sup>3</sup>
- Working pressure: 3–8 bar; max. working temperature: 95 °C

#### Benefits

- Allows 60% faster cleaning – more time for production
- Saves up to 70% of cleaning cost
- FDA compliance



Alfa Laval TJ20G  
rotary jet head.

#### Cutting resource use with advanced new tank cleaning technology

At one of the leading ice cream producers in Poland, millions of litres of ice cream leave the factory every year. The production lines are running non-stop. Between every production cycle, the big, vertical tanks used for storing and mixing of ingredients are thoroughly cleaned to meet the strictest requirements to hygiene and food safety.

Tank cleaning is a water-intensive process during Clean-in-Place (CIP). Additionally, the electricity required for pumping, heating, recovery, reuse, and treatment of the tank cleaning water is substantial.

Hence, the technical team sought upgrades that would allow them to save on resources, while maintaining the same, high level of food safety. After initial trials, the team opted to replace the static spray balls, traditionally used for tank cleaning, with new rotary jet heads, specifically the TJ20G from Alfa Laval. A safe choice, since the TJ20G jet head reduces the cleaning cycle and minimizes water, energy and chemical consumption, while ensuring perfectly clean tanks and maintaining process and product safety.

#### Increased efficiency returned significant resource savings

Significant savings were achieved in the first phase of the upgrade project, involving the replacement of tank cleaning equipment in 23 tanks. The new rotary jet heads quickly demonstrated the promised efficiency and returned savings on water and CIP media of 10,000 m<sup>3</sup> annually.

The massive savings on water and chemicals reduced the power consumption for pumping, heating and treating CIP liquid. The annual power savings amounted to 650,000 kWh, reducing the carbon footprint of the factory by 500 tonnes.

The total savings on electricity, water and chemicals paid back the entire jet head installation in less than six months.

“The potential of water, energy and cost savings is huge, when upgrading the static spray balls with rotary jet heads. The installation of the new jet heads at the ice cream factory was simple and required only minor changes to the tank cleaning installation. We hope to be able to upgrade the remaining tanks at the plant in the near future”, says Michal Starczyk, Channel Sales Manager at Alfa Laval Poland.

#### Considerable cost savings with new jet heads

In the case of the Polish ice cream producer, 23 static spray balls were replaced by rotary jet heads. The total annual savings on energy, chemicals and water amounted to:



#### Total energy savings

650,000 kWh



#### Water and CIP media savings

10,000 m<sup>3</sup>



#### CO<sub>2</sub>e savings

500 tonnes



#### Payback time

6 months



#### Contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com)