

Case story

Global pharmaceutical producer

Leading pharmaceutical company improves tank-cleaning solution

Effective collaboration during the design and testing phases paved the way for a highly resource efficient tank cleaning process at a leading global producer of anti-diabetic medicines. By using ultra-efficient Alfa Laval Sani SB and SaniJet cleaning devices, the cleaning time and media consumption is projected to be reduced by up to 30% compared to rotary spray head technology, while still maintaining the same, high cleaning standards.



According to a 2025 report from [The Insight Partners](#), the pharmaceutical industry is expected to continue expanding at a compound annual growth rate (CAGR) of around 7% from 2025 to 2031. A key contributor to this growth is the rising importance of anti-diabetic medicines.

In response to this trend, a leading producer of anti-diabetic medicine embarked on a substantial expansion of its insulin production capacity at several plants. An important consideration was the environmental impact of the new facilities, particularly concerning CO₂ emissions and water consumption. Given that Cleaning-In-Place (CIP) represents one of the most resource-intensive processes, the company sought water and energy savings, while upholding stringent hygienic standards.

Consequently, extensive investigations and evaluation of different solutions were carried out to identify options for conserving water and energy during the cleaning of bioreactors and storage tanks, before finalizing the process design.

Opting for UltraPure SaniJets for tank cleaning

Due to the scale of the project, multiple engineering companies and tank builder suppliers were involved in finding and testing the solution that would ensure product safety, while minimizing the production footprint.

Following comprehensive testing, various Alfa Laval UltraPure Sani SBs and SaniJets were chosen for the task. At the customer's request, the rotary jet heads and rotary spray heads had to be manufactured using advanced materials such as Hastelloy C-22, an extremely corrosion-resistant steel variant, to ensure durability, reliability and prolonged component lifespan.

"Good collaboration among all involved parties enabled us to complete the manufacturing and testing of the SaniJets within the agreed timeframe specified by the customer, even amidst changes to the process design during the specification phase,"



explains Alireza Taghavi, Portfolio Manager, Tank Cleaning at Alfa Laval. "Additionally, rigorous testing of the jet heads conducted at our Application & Innovation Centre convinced the customer of the superior capabilities of this innovative cleaning method compared to more conventional solutions."

Massive savings on water and energy

Once the new lines are up and running, the customer will benefit from substantial water and energy savings, significantly advancing the company's ambitious sustainability goals. Projections indicate savings of up to 30% in water, energy and operational costs compared to conventional tank cleaning solutions. With SaniJets, the cleaning cycle is completed much faster, increasing production uptime, while maintaining an ultra-pure cleaning standard.

Alfa Laval's [cleaning devices](#) — especially the UltraPure versions of [SaniJet](#), [Sani](#), [Sani SB](#), and [PlusClean](#) — are exclusively engineered to meet the stringent requirements

of pharmaceutical applications. All products come with a comprehensive Q-doc documentation package, comply with all relevant international standards for pharmaceutical production, and facilitate the cleaning validation process for pharmaceutical companies. The Alfa Laval cleaning devices are used by leading global brands in the pharmaceutical and biopharmaceutical sectors.

In summary, Alireza Taghavi, remarks, "Collaborating with a market leader committed to ambitious sustainability targets alongside prominent pharmaceutical engineering specialists, underlines our commitment to being a true industry partner and delivering resource-efficient solutions."



Contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com