

ZOTT COOLING TUNNELS GO INDUSTRY 4.0 WITH 120 ZERAX® FANS – 66% LESS ENERGY



Zott SE & Co. KG, a family-owned dairy company, is known across Europe for brands like Monte, Jogobella, Zottarella, Sahne-Joghurt and Bayerntaler. For nearly 100 years, Zott has combined tradition with innovation, investing in modern technologies to produce milk, cheese, cream, yogurts and desserts.

A recent milestone was the retrofit of its cooling tunnels at the main plant in Mertingen, Germany. Built in 1989, the tunnels are vital for keeping dairy products fresh. After more than 30 years in service, they were upgraded to meet the standards of Industry 4.0.

THE CHALLENGE

Zott's cooling tunnels were equipped with outdated fans that consumed excessive

energy, leading to high operating costs and a heavy environmental impact. Frequent maintenance added to the challenges, while limited automation and control options made efficient operation increasingly difficult.

THE RETROFIT SOLUTION

Zott partnered with NOVENCO® Building & Industry to carry out a state-of-the-art retrofit project.

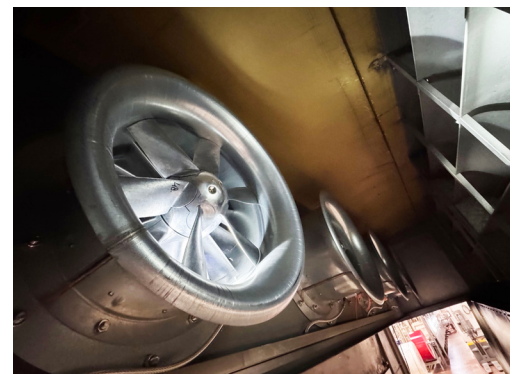
The centerpiece of the modernization was the replacement of 120 fans with ZerAx® high-efficiency axial fans.

To ensure seamless installation, each ZerAx fan was delivered with an adapter plate for quick mounting and a short diffuser to maximize pressure efficiency.

Frequency converters allow flexible speed

control, with one converter controlling four fans per sector for synchronized, cost-efficient operation.

An external MCB-107 option card guarantees uninterrupted control, even during power unit failures.



Efficient, quiet, and future-ready – ZerAx® fans at the heart of Zott's retrofit

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THE IMPACT

The retrofit delivered benefits far beyond energy savings. By replacing outdated fans with modern ZerAx technology, Zott achieved 66% energy savings with an impressive return on investment of under one year. The new system also ensures lower maintenance needs, smarter integration into automation and control systems, and greater reliability with reduced downtime. On top of that, the cooling tunnels now operate with considerably lower noise levels, improving working conditions for employees.

When tradition meets innovation, remarkable things happen. This project highlights how smart engineering and innovative technology can breathe new life into existing infrastructure – avoiding costly new construction while achieving cutting-edge performance.

RESULTS

- 66% ENERGY SAVINGS – OVER 1.5 MILLION KWH ANNUALLY (≈ 306,660 KWH PER TUNNEL)
- ROI LESS THAN 1 YEAR
- LOWER MAINTENANCE REQUIREMENTS
- SMART INTEGRATION INTO CONTROL SYSTEMS
- REDUCED DOWNTIME
- REDUCED NOISE EMISSIONS

CONCLUSION – A MODEL FOR INDUSTRY 4.0 IN DAIRY

As part of a practical technician's project by Florian Sindel, the modernization stands as a benchmark for sustainable retrofits in the food industry. With its combination of reduced energy consumption, improved airflow, lower maintenance costs, and a payback period of less than one year, the solution demonstrates how dairy companies can upgrade existing systems to meet the demands of Industry 4.0.

By modernizing its cooling tunnels with NOVENCO ZerAx fans, Zott has shown how smart automation and energy efficiency can go hand in hand. The project highlights a clear path for the dairy sector: future-proof operations that are more sustainable and more efficient. With this step, Zott strengthens its role as a pioneer in sustainable dairy production, delivering not only delicious products to millions of consumers, but also contributing to a greener future.



120 ZerAx® fans powering Industry 4.0 efficiency at Zott dairy