

Product portfolio for the food industry



Constant product quality and reliable storage life of the product significantly depend on optimized and constant ratio of temperature and air humidity as well as on the purity of the air in the production area. Fluctuations of these sensitive parameters stimulate the growth of microorganisms or directly lead to an interference of the product quality. Voith process air systems and air conditioning systems guarantee indispensable permanence of the production conditions.

More and more sensitive products with fewer preservatives demand hygienically designed machines and hygienic process management. In addition to the processing, optimum hygienic conditions in the production area are vital for sensory and microbiologically faultless foods.

Air conditioning systems, process air systems and clean room technology

For decades, Voith has been developing and implementing technically clever and cost saving solutions in these fields. Optimized energy recovering concepts meet concerns of the aspect regarding economic efficiency.

Automation: energy saving and efficient

The intelligent Voith automation modules reflect the entire experience of the business, regarding air engineering. The food industry relies on that industrial know-how. Voith systems come into operation in the following industries: dairy processing, confectionery, bakery products, sausages, tinned food, vegetable and potato as well as beverage.



Customized solutions

Voith stands for integrated system solutions: starting at the requirements analysis over the project planning to the commissioning. In the sensitive area of food production, the dependable automation presents an integrative component of the solution. That way, a loss at interfaces can be avoided. In-house developed industry modules complete standard components and lead to more efficient air engineering systems. The user-friendly Voith monitoring allows constant online monitoring. Parameters critical to hygiene will be controlled and ensure ideal hygiene conditions.

Berglandmilch reg.Gen.m.b.H.

The largest dairy processing company in Austria, Berglandmilch reg. Gen.m.b.H., relocated one of their facilities. Berglandmilch invested in a new cooling tunnel for the production of yogurt, which has to be integrated into a fully automated transport system. The company was not satisfied with the cooling results at the old facility.

A totally new developed air blast system enables Voith to cool the product by means of an optimized process. Taking advantage of the air dynamics enabled an even flow through the product pallets. Even in the center of the pallet, an improvement of the heat transfer at the cup of yogurt could be observed. An innovation, which was developed in the Voith pilot plant station and adjusted in detail to the special needs of the customer. This led to a faster and consistent cooling and significantly reduced operational and investment costs.

Zott GmbH & Co. KG

The dairy processing company Zott GmbH & Co. KG, located in Mertingen, produces, among other things, Mozzarella cheese. Clean room conditions which guarantee a sterile production environment are required for the production.

Voith solved the problem with clean room technology and implemented sterile surrounding conditions for hygienically relevant production areas. Monitored pressure drops between production area and preliminary function areas as well as air locks between the clean room and function area, keep mold and yeast away from the product. The system provides compliance with optimum temperature and humidity. That way Mozzarella received a sterile “clean slate”. The storage life of the product could be significantly improved.



- 1 Cooling tunnel, Berglandmilch
- 2 Clean room technology, Zott
- 3 Ventilation and air conditioning for production of yogurt, Zott

Stollwerck AG

Stollwerck AG, a chocolate manufacturer required a process air system for coating. Although being a long standing tradition, coating is an extremely delicate production process which requires individual solutions. The goal was optimization of the drying time while maintaining high product quality. Fluctuation in air conditioning impacts the quality of the surface and may even result in sticking together of a complete batch.

In consideration of the GMP guidelines and the HACCP concept, Voith developed a process air system which provides exact predetermined parameters of air, temperature and humidity for each step of the process within the shortest period of time. This was a new way to guarantee high product quality and to meet the high demands of the consumer. With this innovative process air system, Voith minimized investment costs and reduced cost of operation.

Breeding and aging area, DMK Erfurt



Air conditioning, Danone





Constant development of our products provides innovative results with state-of-the-art technology. Our customers benefit from unrivaled innovations and world-wide service.

Griesson-de Beukelaer GmbH & Co. KG

Air conditioning was to be installed in the high bay warehouse at Griesson-de Beukelear GmbH & Co. KG. In order to ensure the product quality (e. g. cookies, cookie mixture), defined air conditions had to be maintained in every area of the warehouse.

Voith developed an innovative solution with minimized cost of operation. The integrated solution did not take up any storage volume for installation of the air conditioning and cooling systems. Using an intelligent Voith automation module, the thermal storage capability of the warehouse will be utilized. This enables an air conditioned storage of products at lowest operating cost.

Stollwerck AG

Stollwerck AG Berlin placed an order for the consultation, planning and execution for the microbiologically controlled making of marzipan. Also as during the chocolate production, the making of marzipan requires the compliance with constant air conditions, starting from the making to the packing and the storage of the products.

The Voith air conditioning system realizes controlled production zones. The system considers the hygienic requirements of air filtration and air conditioning components for each specific product. In this sterile environment, the influencing factors of temperature, humidity and excess pressure reach their ideal values which ensure the quality of the delicate marzipan. This was also realized for the sensitive packaging area. In this area, a contamination of microorganism has to be avoided by trouble-free operation.



5



6

- 4 Air conditioning of the high bay warehouse, Griessonde Beukelaer
- 5 Air conditioning systems, Ihle
- 6 Mozzarella cheese production, Bayernland Bayreuth

Ihle GmbH & Co. KG

Landbäckerei Ihle GmbH & Co. KG, located in Friedberg near Augsburg was expanding. The complete installation of the air conditioning system for the new building was handled by Voith. The systems have to supply the areas raw material storage, grease baking works, confectionery, dough production, baking hall, picking as well as preparation and must work economically optimized.

In order to come to a perfect solution, process procedures were being analyzed and critical process steps were identified. A coordinating ventilation system conditions the air of different production areas and by using of intelligent automation, it enables the required operation of the unit. Through heat recovery, Voith opened up energy saving potentials for the customer. Sensitive routing of air flow systems avoids the formation of skin on dough. Due to the installation, a higher product quality and at the same time reduction of operating costs could be achieved.

Heat recovery starch dryer, National Starch



StoreCool SC, Alpenhain





Sophisticated production environment

Changed customer behavior and progressive technologies are only two influencing factors in the industrial production of foods. The sensitive industry is obligated to meet a multitude of hygienic and qualitative demands. This pertains to regulations valid in the EU and more severe hygiene requirements and quality assurance systems.

Unlike hardly any other field, the food industry holds responsibility to produce reliably constant quality. Manufacturers place emphasis on progress and innovation – on behalf of the customer. This heterogeneous efficiency profile requires cooperation between versed affiliate firms like Voith, the specialist for industrial air technology.



The product portfolio for the food industry

Air conditioning and process air systems for all areas of the food industry:

- Production
- Clean room areas
- Warehouses (High bay ware houses, raw material warehouses, goods, storage tanks, logistical areas)
- Aging areas, aging warehouses
- Filling

Process engineering:

- Process air systems
- Dehumidifying systems
- Extraction systems/vapor extraction systems
- Heat recovery systems
- Filtration systems
- Sterilization of the air by UVC
- Clean room technology
- Product cooling with ContiCool and StoreCool SC-Plus cooling tunnel and pallet cooling systems

Service:

- 24 hour emergency service
- Maintenance
- Spare parts
- Measuring, analysis and optimizations
- Consultation and training
- Telemaintenance (modem/internet)
- Hygiene inspections (VDI 6022/3)
- Hygiene training

Automation:

- Process and building automation system based on Siemens Simatic and Win CC
- Technical consulting
- Software development
- Project planning
- Electrical, measuring and control design construction (CAE)
- Electrical installation
- System optimization
- Rebuilds and upgrades
- Assembly and commissioning
- Training

Air conditioning, ventilation and hygiene technology for:

- Dairy processing industry
- Confectionery
- Bakery products
- Beverages
- Sausages and cold meats industry
- Coffee and tea
- Sugar
- Preserved food industry
- Convenience foods
- Vegetables and potatoes



Headquarters

Voith Paper Air Systems GmbH
Dr.-Hans-Frisch-Str. 4
95448 Bayreuth, Germany
Tel: +49 921 293-0
Fax: +49 921 293-105

Further Information



airsystems@voith.com
www.voith.com/airsystems

VOITH
Engineered Reliability