

LEBENSMITTEL TECHNIK

Special Issue

Offizielles Organ der Gesellschaft Deutscher Lebensmitteltechnologe e.V. (GDL), des Vereins Österreichischer Lebensmittel- und Biotechnologen (VÖLB) sowie Partner im DLG-Netzwerk für Lebensmittelverarbeitung

4 | 07

April
39. Jahrgang
H 4007



Air management
**Controlling hygiene
and climate
in the company**

Presented by

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As much as necessary...

Economical improvements of product quality and hygiene

About four years ago, Just in Air GmbH was formed in Bremen to provide competent support in process, air and hygiene management to the food industry. The company is now well established on the market and has expanded its activities on international level. No wonder - prolonging or securing the shelf life of a product is a topic of global significance.

Just in Air is an independent consultation and planning company for process, air and hygiene management. It collects industry-specific operational data and provides planning support including practical implementation solutions for food companies with the aim to create an optimally designed processing environment. According to Managing Director Ralf Ohlmann, "The goal can be for example an improvement of the microbiological status in order to obtain a prolonged shelf life. However, other objectives can include the reduction of the effort needed for securing an already existing good hygiene status or the optimum design of processing logistics. Our customers have to produce profitable and safe products with high benefits for the company in a market with constantly increasing requirements and legal stipulations and under high cost pressure. This is a challenge for the company and often exceeds the internal technical ability. We simply and quickly support our customers in the optimization of existing product conditions." This includes in particular analysis of the operational



Optimization concepts are developed at the Just in Air headquarters in Bremen.

environment, depiction of the production process, air management including weak point analysis and the necessary comparison with the product requirements.

Within the food industry, the company offers diversified services. Its line of action ranges from the dairy, bakery and meat-processing industry to the producers of delicatessen products and beverages. Not only existing facilities are being optimized but increasingly the planning of new ones accompanied right from the beginning. Currently, Just in Air displays above average growth rates. From the incipency in 2004 to today, the number of employees grew to more than 10 processing engineers working in the Bremen headquarters alone and some more at individual international locations.

Ohlmann: "Our staff mainly consists of established food technologists with a lot of practical experience who are able to recognize problems immediately and who can propose solutions in intersectoral cooperation with our specialists for ventilation technology or mechanical engineering. For us, the product counts, the technology is a required accessory." In a normal engineering company, mostly technicians decide on optimization solutions. "Their solutions will be necessarily dominated by technology."



Ralf Ohlmann:
"We focus on the product."

Practical experience from the food production field is lacking,” explains Ohlmann. His food technologists use a different approach. They also consider the impact a certain measure will have on a product. They always follow the premise “as much as required but as less as possible“. Ohlmann emphasizes: “We do not want products adapted to the equipment but equipment which is fit for the product.”

Many of his customers have problems without knowing the reason. Often, measures to improve the hygiene status are implemented during the packaging stage. In most cases this way only the effects of a microbiological contamination are combated but not the causes. These are often found in the areas cooling, intermediate storage, picking and packing where microbiological influences can impair the product. Ohlmann: “If we try to eliminate the sources of microbiological contamination at these sites as much as possible, we do not carry the problem along into the packaging section. This approach makes more sense than a later treatment with relatively large efforts.” In case a food producer experiences an acute emergency situation with the environmental hygiene in his company, the specialists from the Bremen company are prepared for immediate support. After that, the reason for the microbiological contamination has to be determined and a medium- to long-term concept to be compiled in order to be on the safe side in terms of hygiene and climate in future. Ohlmann uses an example to explain his



Construction of a ventilation equipment and adjustment of a pilot plant for air degermination at Air Solution.

approach: “Let’s take a meat company in summer. Warm air is fed in from the outside into chilled rooms. Here, an air treatment would be recommendable because otherwise condensate will form which is a welcome growth environment for microorganisms. Targeted air management also offers high potential savings in terms of energy costs.”

The procedure in a company always follows a proven schedule. First a questionnaire is sent to the customer to prepare for the status analysis on site. Information on products, production quantities, production areas, ventilation equipment or cleaning and disinfection plans have to be provided. The status analysis is done during the running production and includes mainly the determination of air-borne count, recording of surface contamination, air temperature and humidity as well as the visualization of the existing air flow. Ohlmann: “During this phase our employees are moving along in the company like shadows. They know what to do without interrupting the production processes. Even if we measure the hygienic condition inside of machines, these must be turned off only for a few minutes to enable us to put our measuring instruments in place.

Measured data and sound practical experience are the foundation for the assessment of the current condition in the facility. This is the basis for improvement measures. One of them could be for example to utilize the air a second or third time in a circulation process after risk factors such as germs, vapor or dust have been eliminated. Air which has been treated this way and reused several times will yield interesting energy savings.



The employees working in the respective company are always included in the development of solutions. The knowledge transfer taking place between them and the hygiene specialists will sustainably secure the improvement success. Often raising the awareness, complying with behavioral rules or the handling of instruments used for the determination of germ counts, air temperature, humidity, air flow etc. are main topics in this context. The service is comprehensive, ranging from new planning to project monitoring, consultation and performance review of the entire optimization concept from the idea to the final concept. At a producer of soft cheese, the time required from the first analysis to the implementation of all measures was about six weeks and also included improved product safety as well as significant potential savings. “Predominately we focus on the realization of a processing environment which complies with the product, has low microbiological risks and takes as many economical aspects as possible into consideration,” says Ohlmann. “An active degermination of air shall be applied for elimination of residual risks only.” The success is remarkable. Using comparably simple measures, the minimum shelf life of acidified dairy products, ripened cheese and even meat products could be prolonged by 30-50 per cent. Ohlmann: ▶

Air Solution in brief From ventilation to degermination

Air Solution GmbH is operating in Bremen since 2000. Owner and managing director of this specialized engineering company is Ralf Ohlmann. The product portfolio ranges from complete ventilation engineering to specific air degermination solutions. Humidifying, dehumidifying and germ reduction are important issues in the food industry which can be mastered with equipment offered on the market. Foremost goal is to achieve an optimum and low-germ processing environment in order to increase or stabilize shelf life and safety of the products.
www.airsolution.de



Microbiological equipment is available at Just in Air to provide reliable and quick results.

“Or let’s take delicatessen products for example. If these have a deviating and partly very high initial germ count, then they will not be marketable after a short time because of the exponential microbiological growth. If I succeed in keeping the germ count on a constantly low level, the initial load is significantly less resulting in a considerably longer shelf life. Basically, it is pure math.”

Just in Air’s list of references comprises international companies as well as medium-sized enterprises from the food industry. The aim is the implementation of integrated solutions. It is insufficient to assess or plan only one production stage because the adjoining areas also have some influence and therefore have to be included in the consideration. Ohlmann: “This is the only way to come to a really functioning solution.” His concept is right which is proven by the large and now international demand for his optimization and planning services. Projects in all of Europe, Asia and Australia have already been concluded or are still in the pipeline.

Air quality at its best

Interview with Michael Wolf, Managing Director of the dairy Milchhof Meran in Southern Tyrol

LT: Why did you ask Just in Air to collect operational data on hygiene and climate including weak point analysis in your company?

Wolf: Whoever believes to be good will never get better. Our company experienced a strong growth over the past years and we wanted to know in general whether our facility still complies with our requirements despite all reconstruction work and new installations. First and foremost we want to ensure a high product quality and avoid possible problems in future.

LT: Which parts of your company were examined?

Wolf: The production areas.

LT: How time-consuming was this examination?

Wolf: Everything was done comparably quick and smooth. The Just in Air team has completed and evaluated the examination in shortest time.

LT: Which result did the hygiene experts from Bremen present?

Wolf: It was found that not all production areas have an optimum air management. This means, everything is ok under normal conditions. However, certain situations might trigger a problem because the overpressure in the filling areas cannot always be ensured.

LT: To what extent does Just in Air implement the improvement measures?

Wolf: The company offered us further support after the necessity for

improvements had been determined. We gladly accepted this offer. Just in Air then submitted several proposals together with a specialized installation company.

LT: What kind of optimization measures will be applied?

Wolf: A central control of the air management shall ensure a constant overpressure in all production areas. To

achieve this, the air feed is partly increased, the air circulation optimized, and the air conditioning equipment for the rooms replaced by energy-saving installations.



Michael Wolf: “First and foremost we want to ensure high product quality”

LT: How will these actions affect the hygiene status in the respective areas?

Wolf: With these measures, we will have an optimal air quality which enables us to prevent possible problems in future.

LT: How do you assess the cooperation with Just in Air?

Wolf: It was a pleasant, good, customer-oriented cooperation which was characterized by competent and constructive work.

LT: Do you consider other improvement measures in terms of hygiene and climate in other parts of your company?

Wolf: Consideration is always positive. After having taken care of the production area, we will next take a closer look at the packaging storage.

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At Milchhof Meran, a central air management control shall ensure constant overpressure in the production areas.

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