

Danish filters optimise global cheese production

Cheese producers from all over the world look to Denmark when the filtration process needs to be optimised. HiFlux Filtration A/S is developing more and more self-cleaning filtration solutions for the dairy sector, where manual filtration is increasingly being phased out and replaced by fully automatic filtration. The benefits are operational and energy savings and greater food safety.

Global cheese production continues to grow, and dairies from near and far are demanding Danish-produced filter solutions. HiFlux Filtration A/S, with headquarters and production in Hedensted, Denmark, is servicing more and more cheese producers worldwide. The fully automatic self-cleaning filters are popular with the segment for several reasons. A long-standing focus on the food industry has given the East Jutland company valuable knowledge of the challenges of food production. This knowledge forms a solid basis for dialogue with the industry. Product development based on operational data from existing installations and the use of technological tools - such as CFD (Computational Fluid Dynamics) flow analyses, provides in-depth documentation of the benefits of fully automated filtration. The fact that the effect of switching from a manual to a self-cleaning solution can be demonstrated in detail is described by Martin Holgaard, Sales Director at HiFlux Filtration A/S, as a great advantage for customers, sales partners and the company itself.



"When we start a dialogue, we can track down the customer's needs fairly quickly. Our job is to help optimise a process, and valid data to support filter efficiency is always interesting reading. At the same time, we often have experience from a similar case," says Martin Holgaard and elaborates that the high demand from the dairy sector is not only about increased efficiency, but also about greater food safety. While manual filters require human contact for cleaning, emptying and replacement, a fully automated filter operates completely without operator intervention.

"In addition, many cheesemakers face the challenge of greatly reduced uptime due to clogged manual filters. This is a particularly well-known problem when it comes to the production of processed cheese," says Martin Holgaard.

Increased need for efficiency gains

Hot melted cheese with high viscosity is a difficult mass to handle. When HiFlux Filtration A/S installed the first customised Auto-line filters for processed cheese, it was based on the dairies' constant challenges with production downtime and high maintenance costs for manual filters. The ever-growing global demand for cheese - and the accompanying



increasing production has only increased the need for efficiency, consistent quality and maximum food safety.

"The Auto-line filter operates in a closed system and depending on the type of cheese and viscosity, it can process up to 5000 kilos of processed cheese per hour. After filtration, you have a pasteurised mass, free from bacteria and particles, ready for further processing", says Martin Holgaard and adds that the Auto-line filter design is carried out according to EHEDG guidelines for the use of equipment in the food industry. This makes the solution one of the few sanitary automatic filters that can be used in the food sector.

One tonne of extra cheese per week

The hygienic benefits of self-cleaning filtration are another reason for its popularity. For example, cheese grains that were previously discarded and used for animal feed can now be filtered out and used in the production. This can result in up to one tonne of extra cheese per week! The production gain is so significant because of the filtering of the whey. Before the curd can be pressed into moulds, the whey must be drained off, and it is inevitable that usable cheese grains are discarded in the process. But by passing the whey through the Auto-line liquid filter, the cheese grains can be saved.

"In practice, the whey is sent to another system for further processing, while the sluice at the bottom of the liquid filter catches the cheese grains and separates them. The cheese grains can then be pressed into a mould on the same production line as the other cheeses in the dairy. It is important that the filter runs at an extremely low speed so that the tiny grains are not destroyed," emphasises Martin Holgaard and explains that the switch from manual filtration to fully automatic is also popular for climate and energy reasons. It is possible to reduce energy consumption, while at the same time no longer having to dispose of worn-out manual bag filters.



Reduced climate footprint

Energy-saving measures have been at the top of the agenda at HiFlux Filtration A/S for several years. This is reflected in all new initiatives on the product side, and the company has committed to the "Science Based Targets initiative" to maintain continuous improvements in the company's green transition. It is a focal point to ensure a reduction of customers' climate footprint through energy-optimised filter solutions. On the dairy side, a large proportion of customers are in markets that have only just taken the initial steps on the climate path. Nevertheless, Martin Holgaard has noticed that there is a great deal of interest in the filter manufacturer's energy profile.



HiFlux Filtration A/S

"People listen carefully when we tell them that self-cleaning filtration can help reduce their carbon footprint. Our new Abacus controller has been developed with the sole purpose of reducing the customer's energy consumption. A reduction of over 20 per cent is absolutely achievable, and naturally we are seeing a growing interest in this. Not only among dairies, but throughout the food industry and other sectors. We assume that interest will only intensify from now on," concludes Martin Holgaard.

About HiFlux Filtration A/S:

HiFlux Filtration A/S is a Danish company that for over 60 years has specialised in providing customised filtration solutions for liquids for the process industry, as well as the food and energy sectors. The focus is on the development and manufacture of liquid filters. Advice, problem solving, assembly and service are important elements of the company's activities. HiFlux Filtration A/S has distributors all over Europe and a branch office in the Netherlands.