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NEWS & TRENDS

ALPMA

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Process Technology

Successfully running ALPMA's latest innovation OPTIYIELD

Wyke Farms Ltd is a family run company based in the heart of the Somerset cheddarmaking region, where the Clothier family have been making cheddar since 1861. Today, Wyke Farms is one of the largest independent cheese makers and milk processors in the UK producing over 15,000 tonnes of cheddar per year to the same award winning 160-year-old recipe. The Wyke Farms brand is the 4th largest brand in the Cheddar category and the only independent company in the top 10 cheese brands with retail sales of over £60 million and exported to over 150 countries.

Constant analysis of the cutting parameter

Wyke Farms have sustainability at their heart and in all areas of their business, over many years investments in Biogas plants, Solar arrays, water recovery and soil carbon management have achieved the lowest Carbon footprint for cheese production in UK, at 20% lower than industry average. These achievements are recognised by winning multiple awards including the Guardian Sustainable Business Award and the first cheddar company to achieve the Carbon Trust Triple standard.

Wyke Farms has been also investing in the most efficient and reliable cutting equipment from ALPMA to ensure the final cheese is also cut and handled as efficiently as possible and with highest yield.

Wyke Farms converts and packs a wide variety of cheeses, including numerous flavours of Cheddar, into fixed-weight portions ranging from 200g to 1000g. Each fixed-weight cutting line consists of an ALPMA FAP (automatic de-bagger) ALPMA BTS 300/C (Automatic Block weighing, scanning and cutting) and an ALPMA CUT 25/HS (High speed fixed weight guillotine portion cutter) and the new generation ALPMA CUT 32.

Continously high good production

These ALPMA Intelligent Cutters minimises giveaway and keeps the weight control and performance at the highest levels, which enables Wyke Farms to meet stringent weigh legislation.

"The ALPMA BTS 300/C intelligent cutting equipment is the best in class for optimising yield," says Wyke Factory Manager Pete Hooper.

Dear customers and business partners,

More and more people are consciously opting for a plant-based nutrition, whether for health, ethical or ecological reasons. As a leading full-service provider for cheese dairies worldwide, we have been developing innovative systems for the production of plant-based and microbial-based products through precision fermentation.

ALPMA Process Technology can draw on many years of experience and extensive expertise in this field. The most recent example is the successful commissioning of a plant at one of our customers in Italy. There, it is running to complete satisfaction and enables the efficient production of high-quality plant-based foods.

With our customised solution approach, we support our customers in the implementation of their product ideas. From the development of new recipes to the optimisation of manufacturing processes and individual plant configurations, we stand by them as a reliable partner. Together, we drive the success of the plant-based nutrition industry and make a valuable contribution to a sustainable future.

Learn more about our latest developments on page 4 and be inspired by the opportunities ALPMA offers you.

We look forward to accompanying you on this exciting journey.

Yours

Further ALPMA Innovations to come with ALPMA OPTIYIELD.

Self-learning process

Persistently low give-away

The most recent ALPMA Intelligent Cutting is operating with a new and exciting innovation – ALPMA OPTIYIELD. The innovative machine learning software of OPTIYIELD is designed to drive the performance of these best-in-class lines even higher: OPTIYIELD learns when a portion was not optimised and from where in the bar and block this came from. As a result, this reduces the occurrence of this happening and delivers the highest yield and lowest give-away achieved in the industry.

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Molkereigenossenschaft Bayernland

Using synergies - everything from a single source

The dairy cooperative Bayernland e.G., founded in 1930, has invested around € 55 million in a new building at its Bayreuth site. The main aim of this investment was to modernise and consolidate on the Bayreuth site. The investment included the new building with cheese dairy, brine bath, packaging and refrigerated ripening storage.

In addition to the entire ALPMA process technology, ALPMA-Sulbana was also allowed to plan and supply the cheese dairy from the pre-press vat up to and including the brine bath system. The system consists of three prepress vats with filling in microperforated moulds, main presses, mould logistics with mould washing machine, mould storage, moulding and the complete brine bath.

The system was designed to process 1.3 million l of milk / day, which corresponds to an annual volume of 40,000 t of cheese. The prepress vats have a length of the pressing surface of 12 m and process a batch size of 27,000 l.

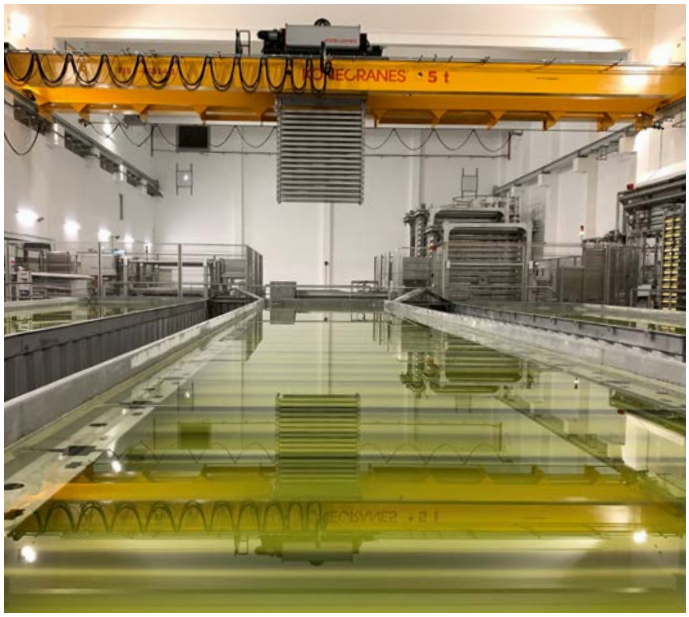
ALPMA was particularly convincing due to its flexibility
Bayernland produces semi-hard cheeses such as Edam, Gouda and Emmental as well as Baski and Cagliata. All cheese types can be produced in any of the following formats: large block of 45 kg, double Euro block of 30 kg, Euro block of 15 kg, or loaves of 3 kg. The formats are changed continuously directly from the mould store.

The salt bath system comprises six separate vats. These hold 112 brine bath racks, with one rack corresponding to one production batch. The total quantity of brine in the system is approx. 900,000 l. The cheeses can be fed to two packaging lines. The racks are manipulated by means of an automatic overhead crane. The system is fully automatic and is now only monitored by the cheese dairy staff.

ALPMA was able to implement individual solutions for Bayernland not only in the area of cheese-making technology but also in process technology. ALPMA Process Technology installed the entire connection in the cheese dairy (all milk and whey lines with valve clusters, CIP) as well as in the brine bath and brine bath environment (preparation of the brine using MF).

Since the increase in milk processing volume at the Bayreuth site also meant that the resulting whey volumes increased proportionally, Bayernland also relied on a second, new RO High^{TS} plant with a capacity of 50,000 l/h. This is used to concentrate thin whey economically to approx. 28% dry matter. Such a system not only saves our customer transport costs, but is also sustainable in terms of the company's CO_2 balance due to the reduction in the number of trucks.

Furthermore, with the enormous quantities of brine, it is important to a standardised microbial flora. Here, too, Bayernland Bayreuth relied on our proven concept of disinfection by means of microfiltration and the option of partial flow heating. Thus, in October 2022, an 8,000 l/h system with an expansion function to 10,000 l/h could be integrated into the process.



Installation of the second RO High^{TS}-plant for the concentration of whey

In particular, the new continuous heat recovery from compressed air and cooling generation sets new standards in terms of sustainability and resource conservation. The heat from the cooling water is not buffered in a large heat recovery tank, as is the case in the standard system, but is used again directly for the air-conditioning systems, the spray water or for heating the CIP feeds in the three new production halls.

Everything from a single source

The project is characterised above all by its high flexibility with high cheese quality and high production output. The synergies of ALPMA Cheese Technology with ALPMA Sulbana, ALPMA Process Technology and Servi Doryl, which supplied a total of 680 microperforated cheese moulds, could be optimally utilised. But above all, we could and can count on excellent partnership cooperation and the technological expertise of Bayernland e.G., which was indispensable for a project of this magnitude.

Our thanks go to all those involved in the Bayernland project. We are proud to have been supplier for this project, the successful commissioning of one of the largest German cheese dairies in the last 20 years!

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Latteria Soresina

Parmesan - The Italian Gold

„The simple format changes and the flexibility of the CUT 32 have convinced us once again to choose ALPMA“, says the technical director of Latteria Soresina, Mr. Davide Arpini (on the left).

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Perfectly matured; It's a long way from the 40 kg Parmesan loaf to the final packaged 200 g portion at the point of sale.

Parmigiano Reggiano and Grana Padano have found their gourmets not only in Italy, but also worldwide. Last but not least due to the increased demand from the export markets, Latteria Soresina, situated in the east of Milan, has decided to invest in another fully-automated segment cutting line for Grana Padano.

The challenge of the project was to precut the Parmesan loaves, which are fully-automatic depalletized, and afterwards to cut them into fixed weight portions with the help of a CUT 32. Another requirement was to cut the Grana Padano segments into the typical market portion sizes. As desired by the project team of Latteria Soresina, ALPMA was also in charge of the automatic feeding of a special designed BDF flow packaging machine. No matter how the final packaging solution looks like for the gourmet at the point of sale, ALPMA gives the Italian Gold always the perfect cut.

„At Panseri-Impianti, we look forward to accompanying the line, which produces the Italian Gold, with our after sales service team", says the managing director of Panseri-Impianti, Mr. Luca Panseri.

Plant Based Foods

Vegan - plant-based, microbial, alternative...

... is this the future of our diet?! Plant-based foods have long since ceased to be just a trend.

This development is reflected in the increasing popularity of vegan cheese, yoghurt and milk alternatives. Consumers are becoming more open to alternative products, which is leading to a surge in innovation in plant-based foods. In recent years, for example, the number of new vegan cheeses launched worldwide has increased significantly year-on-year.

Protein fractionation is our strength.
ALPMA Process Technology works with customers to develop customised plants for the production of plantor microbial-based products. These activities are brought together under the brand name VeganoProt®. The many years of know-how in the extraction and concentration of natural proteins is available for process development.

Depending on the application, the following technologies are combined:
- Microfiltration (MF)
- Ultrafiltration (UF)
- Nanofiltration (NF)
- Reverse osmosis (RO)
- Continuous / batch processes
- Semi-automatic / fully automatic processes
- Organic / inorganic membrane systems

The function of fermentation is to produce alternative proteins by cultivating microbial organisms. Depending on the desired product, a distinction is made in fermentation between two processes, biomass fermentation and precision fermentation. In biomass fermentation, the microorganisms (e.g. fungi or algae) that proliferate are themselves the main component of the alternative protein. These microbes are able to multiply rapidly and thus increase the amount of available biomass in a short time. In precision fermentation, individual proteins, e.g. casein and whey proteins, are produced specifically by the microorganisms. The result is an identical copy of the natural protein.

Starch plants are broken down into their individual components - proteins, fibres and starch - through a combination of different processes. These can then be marketed individually. The dry format, in the form of isolates or concentrates, is particularly common because it offers the following advantages to the producer:
- Long shelf life
- Small storage area
- A diverse field of application

Proteins from oil plants, such as lupins, sunflowers or soybeans, offer a variety of possibilities to meet the increased demand for vegetable substitutes. When high-quality oils are extracted, the press cake remains as a residue. However, this still contains high-quality protein, such as soy protein or lupine protein, which can be extracted from the press cake in a multi-stage process.

ALPMA Process Technology provides multi-functional test facilities for your vegan products. These tests can also be carried out with supervision by an application engineer.

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