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March/April 2024

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# All eyes on Brussels

## Massive farmers' protests in Europe

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Anja Hoffrichter  
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Across Europe, thousands of angry farmers are taking to the streets to demonstrate - more or less loudly and sometimes aggressively - against planned cuts to the European Commission's Common Agricultural Policy (CAP). In addition, there are more and more environmental regulations, animal welfare standards, rising production and energy costs as well as country-specific restrictions that make it difficult for farmers to remain competitive. The protests range from blockades of distribution centres and government buildings to the siege of the European Parliament in Brussels.

In a recent open letter to the European Commission, the European Milk Board (EMB) called for an effective and sustainable reform of the agricultural system. Temporarily dampening protests with subsidies and only provisionally plugging holes and deficits is not a sustainable option. According to the EMB, the possible solutions start with the market players and thus with the distribution of margins in the value chain. The milk producer organisation leaves open what this should look like in concrete terms, but it is clear that it is alluding to the market power of retailers. It can also be assumed that the supply relationships between milk producers and dairies, and thus also Article 148 of the Common Market Organisation (CMO), which has been under discussion for years, will once again come into focus.

Ultimately, the milk price is realised on the product market and is strongly determined by developments on the world market and the food retail trade. A fixed price solution is probably more "wishful thinking".

The European Parliament elections are due in June. According to recent forecasts by the European Council of Foreign Relations, the next European Parliament will be more conservative than ever before. This would lead to significant changes in EU policy, not least in relation to environmental issues. It remains to be seen what impact this will ultimately have on European agricultural policy and therefore also on the dairy industry. All eyes will be on Brussels in the coming months, thinks...

**Anja Hoffrichter**

## EXPERT TRAINING OPTIMISES PRODUCTION

### Gerhard Schubert to introduce a digital training platform

In 2024, packaging machine manufacturer Schubert will be expanding its training programme with a recently developed digital learning platform on which it will be launching content specially tailored for machine operators. Following the opening of its large training centre a year ago, Schubert is now taking a next big step towards modern training concepts.

Sarah Busch, Head of Customer Trainings at Gerhard Schubert, explains: "We aim to provide our customers with all the professional support they need to get the most out of their packaging lines. With this in mind, we are increasing our investment in new training concepts – with a mix of traditional and digital learning content." The new digital learning platform is called Schubert Learning Space. The packaging machine manufacturer is currently testing its preliminary content in collaboration with customers and will be introducing it in 2024. It will feature interactive courses aimed at customers' specialists as well as Schubert's own employees.

Schubert will also be offering comprehensive learning modules specifically for machine operators. Especially in this area it is challenging for manufacturing companies to hire, train and retain good employees. The very diverse levels of technical expertise and language skills represent one of the most common obstacles. "This is why we are



Schubert will be expanding its training programme (photo: Gerhard Schubert)

developing a learning concept with pre-produced, highly accessible content – i.e. with plenty of images, animations and videos that can be understood with as little language as possible," reports Busch. This content will be available on demand and can be activated by the production heads themselves for staff training as needed.

Schubert is currently realigning itself internally to expand its training capacities and simplify the process of handling training courses. In a few weeks, another state-of-the-art training machine will be installed at the training centre.

## MODERNIZATION OF PRODUCTION

### GEA invests EUR 5.5 million at the Prenzlau site

GEA is investing around EUR 5.5 million in the modernization of production at the GEA AWP site in Prenzlau until 2026. By expanding its capacities, GEA is targeting further growth in the important market for heating and cooling technologies.

As part of this project, seven older machining centers will be replaced by new models. The new CNC machining centers and lathes enable a reduction in machining time of up to 20 percent and a reduction in set-up times of up to 70 percent. In addition, the new machines save valuable space in production and can be used for other purposes. Another important advantage of the new machines is the improved ergonomic situation for employees. The first new milling machining center went into operation at the end of 2023.

The investment in the new machines is also linked to an increase in production jobs at the GEA AWP site in Prenzlau. Around 20 additional production employees in machining, welding and logistics are to be recruited by 2026.



Stefan Kittendorf (Machine Operator) explains and demonstrates Thomas Strotkötter (Heating & Refrigeration Technologies, GEA), Tobias Länge (Managing Director GEA AWP) and Hendrik Sommer (Mayor of Prenzlau) the new CNC machining center (photo: GEA)



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*Vemag opened a customer centre back in 2005 (photo: VEMAG)*

# Solutions for cheese and dairy production

80 years of VEMAG Maschinenbau

**V**EMAG Maschinenbau GmbH, one of the world's leading companies in the development, manufacture and sale of filling and portioning systems, is celebrating its 80th anniversary this year. Founded in 1944 as a timber and equipment construction company with 20 employees, the company has gradually expanded and now employs over 900 people. The portfolio covers solutions for the production of food and pet food, including machines for processing of cheese and alternative cheese products. "We offer a modular system consisting of fillers and customized attachments for the forming of the end product, which can be flexibly tailored to the customer's specific requirements," says Andreas Ebert, Product Manager Sales Cheese & Dairy Products. A wide variety of applications are possible, from the production of sticks and balls to filling in different thermoformed packaging. VEMAG offers fully and semi-automated solutions for precise, clean dosing and filling of processed cheese preparations into cups, cans,

casings or directly into thermoforming machines. VEMAG also offers attachments for filling cream cheese into cups and for forming of rolls, disks, and balls with and without filling. "The possibilities are basically endless. VEMAG guarantees a high level of weight accuracy when portioning, which is especially important for our customers" explains Ebert.

To minimize losses, VEMAG is able to reform cheese offcuts and blocks into sticks, bars and other shapes.

## Patented double screws

The standard fillers are equipped with patented double screws. "The double screw and housing can be changed quickly to run new throughputs and shapes. Furthermore, the double screws are very gentle on the product," says Ebert.





*A wide variety of cheese moulds are possible (photo: VEMAG)*

*Managing Director Christoph Thelen and Andreas Ebert, Product Manager Sales Cheese & Dairy Products, focus on flexibility in order to fulfil the customer's special requirements (photo: IDM)*

Production takes place exclusively on site in Verden. Spare parts are also kept in stock at the headquarters. Around 85 percent of the machines are exported worldwide. VEMAG has subsidiaries in Brazil, Poland, the Czech Republic, Turkey, Australia and the Netherlands. In other countries, the company works with agencies. "Our agencies buy our machines and sell them on. Project management, installation and service are then carried out by the agencies on site. This enables us to offer customer-specific applications," says Ebert. In 2023, the focus was on Mexico: VEMAG machines were used to reform cheese curds into large pieces.



If it is not possible for customers to visit us in Verden, we can also bring the machines to the customer and carry out tests directly on site," says Ebert. Testing can be carried out together with VEMAG technologists and product managers and it is also possible to produce samples for retail.

### Customer Center

In 2005, VEMAG opened a Customer Center in order to offer customers the opportunity to test their products under realistic production conditions. The Customer Center was expanded in 2016. "The customers bring their recipes and we provide the appropriate premises and the necessary equipment for product development.

The company is growing continuously and so is the site in Verden, Germany. And what can visitors to the AnugaFoodTec expect? "We will be presenting over 20 lines in Cologne. There should be something for every customer," says Ebert.

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## GEA invests in technology center for alternative proteins in the USA

### Accelerating new food scale-up

GEA is investing EUR 18 million (USD 20 million) in a technology center for alternative proteins in the state of Wisconsin, USA. The new food tech hub will pilot microbial, cell-based and plant-based foods. and GEA state-of-the-art technologies and a team of biotechnology experts form the basis for scaling new food for industrial production, which is increasingly in demand in the USA. Groundbreaking at the new GEA campus in Janesville is scheduled for spring of 2024, with the opening to follow one year later.

The USA is one of the countries promoting the development of sustainable food options through favorable regulation and openness to innovative food technologies. For example, the Food and Drug Administration (FDA) already approved cell-cultivated chicken meat in 2022 and last year confirmed that the use of precision-fermented milk proteins in foods is safe.

"A number of new food pioneers in the USA are already writing innovation history. When it comes to industrial production, the market is still on the starting blocks. GEA's new food center bridges a gap in the innovation landscape, driving forward the development of complementary proteins through technology," says Dr. Reimar Gutte, Senior Vice President Liquid and Fermentation Technologies, leading New Food at GEA.

"Most new food companies are located in North America and the bulk of the investments in alternative proteins flow into this region. Consequently, there is an urgent need for scaling facilities like ours," says Arpad Csay, who leads GEA's North American new food business. "The GEA plat-



The new food innovation center on the GEA Campus in Janesville, USA (photo: GEA)

form in Janesville will enable manufacturers to conduct their scaling and testing work without the need to invest in their own capital-intensive infrastructure. In this way, we will help overcome scaling challenges and accelerate the industry's growth."

Beyond testing and validating processes, GEA also intends to promote the training of biotechnology specialists in the 10,000 square-meter building. Attached to the GEA site for homogenizers, separators, pumps and valves, which opened in December 2023, the new food experts will enhance knowledge sharing with other disciplines.

This project marks GEA's second investment in a new food hub, which fast-tracks innovations from the lab to commercial-scale manufacturing. Prior to this, GEA inaugurated its technology center focusing on cell cultivation and fermentation in Hildesheim, Germany, in June 2023.

## 500 times maximum efficiency Krones ErgoBloc L

Ever since the first ErgoBloc L from Krones was unveiled at drinktec 2009, it has been an integral part of bottling plants. With its market launch, Krones realised a vision at the time: the complete filling and packaging line combined in one block.



The anniversary block goes to the Philippine bottler Philippine Spring Water Resources Inc (PSWRI).

What followed was a success story - as the order for the 500th ErgoBloc shows. The anniversary block goes to the Philippine bottler Philippine Spring Water Resources Inc (PSWRI). "We are delighted that this milestone in Krones' block technology is being utilised at our facility," says Danilo Lua, President of PSWRI. "The block significantly expands our production capacity and allows us to meet the growing demand for our products while maintaining our commitment to quality and sustainability."

This is because the ErgoBloc's compact footprint, modular design and seamless integration of key processes, including stretch blow moulding, labelling and filling, into a single compact unit has multiple benefits in operation: it contributes to a significant reduction in space requirements, energy consumption and operating costs. In addition, the system's intuitive user interface and advanced automation features minimise downtime, optimise overall production efficiency and ensure product quality.





# IF ONLY SHE HAD KNOWN

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# Plant-based colors for plant-based dairy

## Natural ingredients matter

Natural ingredients are more important than ever in the plant-based sector. Theresa Wilms, GNT's Technical Sales Manager, explains how plant-based EXBERRY® colors can be used to bring the best out of dairy alternatives including flavored milks, yogurts, and ice cream



*Yuzu passion fruit soufflé (photos: GNT)*

**T**he plant-based dairy market continues to build momentum. Recent FMCG Gurus research found that 52.5% of consumers worldwide now enjoy these products, with milk drinks (81.7%), yogurts (46.8%), and ice cream (16.5%) the most popular options.<sup>1</sup>

The effective use of color is key to showcasing appetizing flavors in dairy alternatives. Color not only provides a visual signal as to how products will taste – it can actually influence consumers' experience of the flavor.

For example, one study on yogurts with strawberry, lemon, orange, and fruit of the forest flavors found that the coloring

increased the intensity of the product's taste. The study participants also said the fruit of the forest yogurt tasted sweeter when the amount of coloring increased.<sup>2</sup>

### Why natural ingredients matter

One factor limiting plant-based dairy products' popularity can be the idea that they are ultra-processed. A quarter of those who do not consume plant-based milk, yogurt, and ice cream feel these products have too many unfamiliar/artificial ingredients on the label and/or seem very processed.<sup>3</sup>

The aforementioned FMCG Gurus survey found that – when consumers are

deciding which plant-based dairy product to buy – natural formulation (70.3%) was the third most important factor behind taste (85.2%) and price (82.6%).

This shows the value of using familiar, trusted ingredients to color dairy substitutes.

### Plant-based colors

Our portfolio of plant-based, sustainable EXBERRY coloring solutions offer the perfect solution. EXBERRY Coloring Foods are created from edible fruits, vegetables, and plants using physical processing methods such as chopping and boiling.



Based on the concept of coloring food with food, they provide perfect synergy with the plant-based category and support completely clean and clear label declarations. In the EU and many other parts of the world, EXBERRY Coloring Foods can be listed simply as "concentrates (name of raw materials)."

EXBERRY can deliver excellent results in almost any application, including both dairy and dairy alternatives. By utilizing concentrates from raw materials such as carrots, sweet potatoes, blackcurrants, blueberries, and spirulina, we can deliver a broad spectrum of eye-catching shades in plant-based milk, yogurt, and ice cream. We also offer a range of different formats to suit individual project requirements, including liquids, powders, and organic colors.

Importantly, we have a vertical supply chain that gives us complete oversight of the non-GMO fruits, vegetables, and plants we use to make EXBERRY Coloring Foods. This allows us to maintain our strict quality and sustainability standards and guarantee year-round availability for all customers – even when there is global pressure on supplies.

### Technical tips

Plant-based colors have varying characteristics, including their color hues and their temperature and pH sensitivities. There are many options and combinations available and making the right choices will depend on the desired functionality.

Firstly, plant-based dairy is created from a variety of base materials including coconut, soy, and oat. Different bases vary significantly in their coloration and must be measured and taken into account to determine the choice of EXBERRY product and required dosage.

Many red, pink, and purple color concentrates contain anthocyanin pigments, which are influenced by the pH value of the application. At higher pH levels, the shade can become more blue and less stable, so pH should be lowered as much as the process and product will allow. Beetroot concentrates can provide an alternative. These colors contain betanin pigments,

which are heat-sensitive but will deliver a consistent hue regardless of the pH of the base product.

Some yellow and orange plant-based colors contain carotenoid pigments from raw materials such as carrots, pumpkins, and paprika. These colors provide turbid shades that benefit from a natural stabilizer in applications such as milkshakes to maintain homogenous color through the

shelf life. Carotenoid pigments can also shift from orange to a yellow hue in the presence of fat. If carotenoid-based colors are unsuitable for the application, turmeric concentrates – which contain curcuminoid pigments – can provide an effective option for products with opaque packaging. Safflower, meanwhile, features carthamin pigments, which deliver vibrant yellow shades with good pH, heat, and light stability.

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Blue and green EXBERRY shades are made using the on-trend superfood spirulina. This is a protein-based color solution and can be heavily impacted by acid and temperature. For optimal performance, any acid used in the formulation should be blended in well before adding the spirulina. Temperatures above 80°C can also cause the spirulina protein to denature. For maximum color retention, add the color after heat treatment. If this not an option, increasing the spirulina dosage can ensure the correct shade is achieved.

At GNT, we offer a vast portfolio of plant-based colors made from more than 30 different raw materials. This gives us a comprehensive toolbox of solutions to

ensure we can deliver effective results for almost any project requirement. We provide full support throughout the product development process – from color selection to stability testing to regulatory matters – to help our customers achieve the results they need.

### Plant-based colors you can trust

The plant-based dairy market continues to grow, with Euromonitor predicting a 4.1% CAGR between 2022 and 2027.<sup>4</sup> To ensure success in this increasingly competitive marketplace, it is more important than ever for manufacturers to create appetizing products with natural ingredient lists.

By using plant-based, sustainable colors to deliver strong visual appeal, EXBERRY can help dairy alternatives reach their full potential.

- 1 FMCG Gurus 'Custom Survey - Global and Regional - Dairy' (Q4 2023)
- 2 Calvo, C. et al. 'Influence of colour intensity on the perception of colour and sweetness in various fruit-flavoured yoghurts' European Food Research and Technology (2001)
- 3 FMCG Gurus 'Custom Survey - Global and Regional - Meat & Plant-Based Protein' (2022)
- 4 Euromonitor 'Redefining Dairy and Alternatives Through Innovation' (2023)

#### Plant-based ice cream strawberry



#### Pineapple lassi







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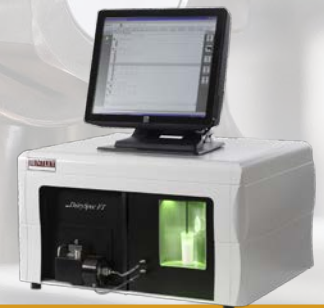
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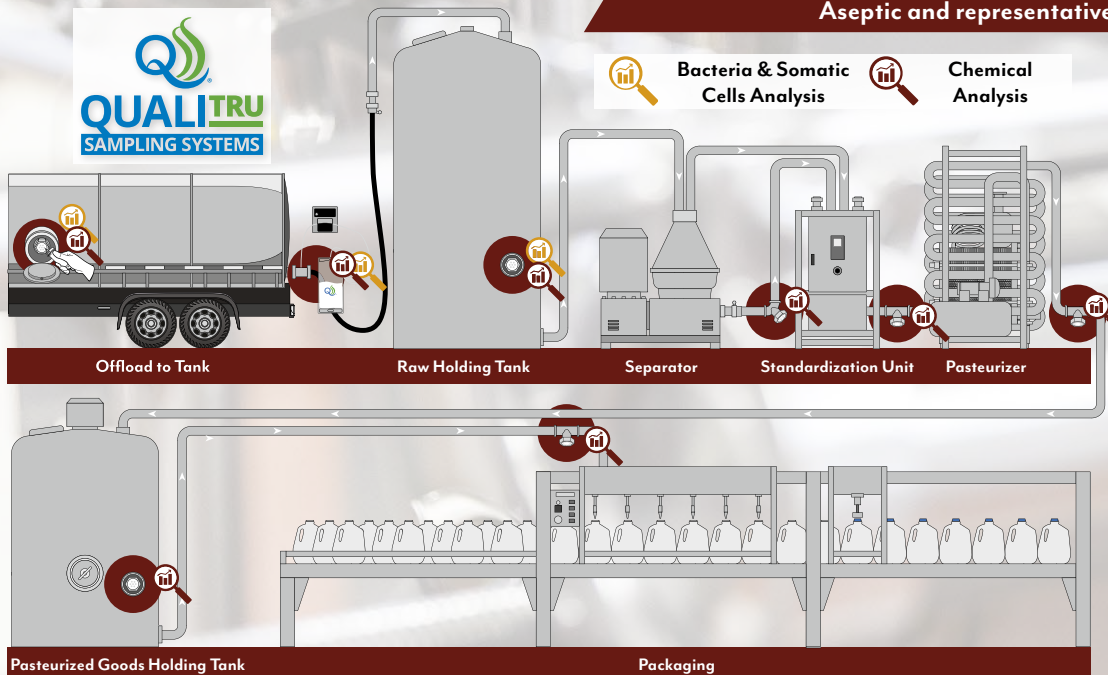


Bacteria & Somatic  
Cells Analysis



Chemical  
Analysis

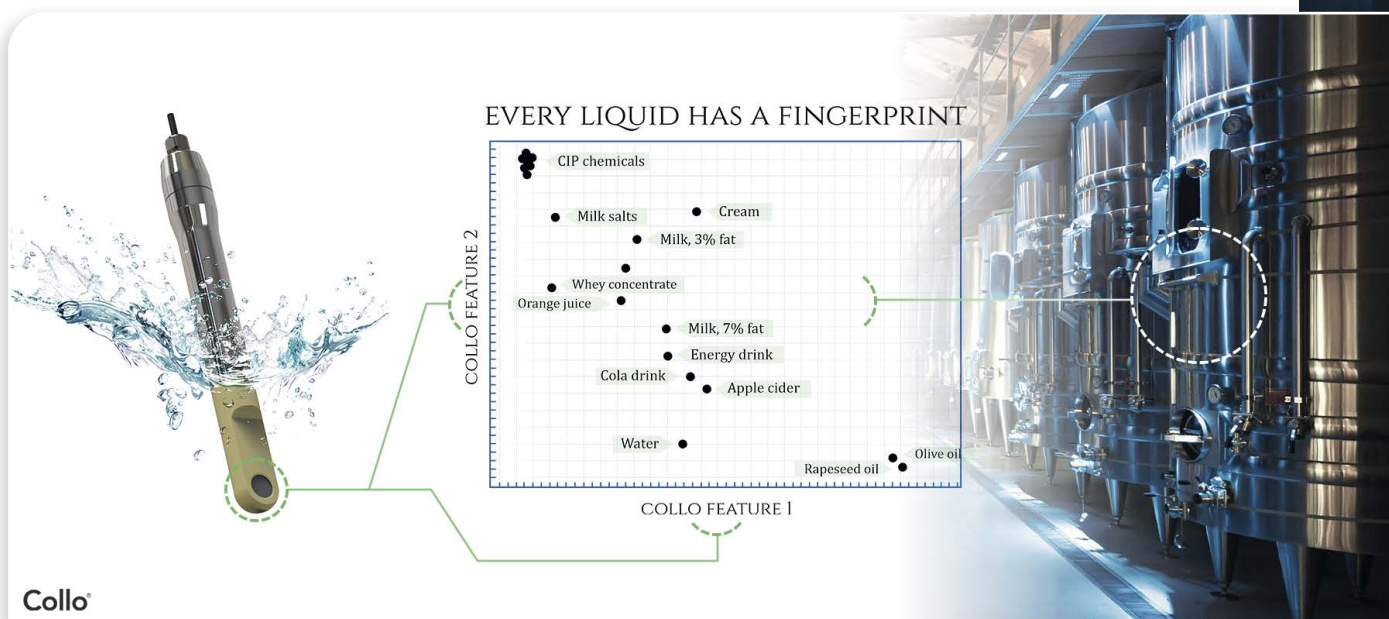
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- Easy to use
- Improves process monitoring



# Optimize quality control

Real-time industrial liquid process monitoring technology

*Collo creates a 'liquid fingerprint' of the measured liquid based on its dielectric properties (photo: ColloidTek)*



**F**innish deep tech company ColloidTek, has developed Collo Analyzer, a new method for real-time liquid process quality monitoring, offering benefits for the food and beverage manufacturing industry. Based on EMF sensors and machine learning, the technology detects various contaminants and identifies potential risks in liquid processing with a single real-time measurement and instant, in-line analysis. According to the company this solution provides food and beverage manufacturers with comprehensive information about the quality of their products at any stage of production, ensuring the safety, quality and correct taste of the end-product.

In liquid processing, for example, in the dairy industry, efficient quality control is critical. It is essential to confirm that there are no contaminants in milk batches, such as the remains of CIP chemicals. Traditionally, collecting samples for laboratory analysis

has been time-consuming, leading to delays and potential product quality risks. In addition to the logistics of transporting the sample to the laboratory, manufacturers can expect to wait days for results. Meanwhile, the milk has often already been processed into end-products.

However, if a sample's testing finds the batch to be potentially hazardous, the implications may be huge. Product recalls incur significant costs, from logistics and disposal to legal fees, fines, and refunds. Further to the immediate financial costs, the potential long-term consequences caused by damage to reputation and loss of consumer trust could be capable of crippling even a larger company. This is especially true in today's digital age, where hazardous products can go viral in a matter of hours and cause lasting reputation damage, impacting sales and profits.





*Collo Analyzer monitors total liquid quality in real-time with EMF sensors, Machine Learning, and liquid fingerprints (photo: ColloidTek)*

### Real-time quality control

Collo Liquid Analyzer is an efficient and reliable method to ensure companies meet their quality and safety requirements. Unlike traditional laboratory testing, the Collo Analyzer offers instant, in-line analysis of the quality of the liquid.

“Our solution fingerprints liquids and can detect nearly any change in any liquid,” explains Matti Järveläinen, CEO of

Collo. “Collo’s strength is that it can detect various contaminants and risks from the food or beverage product with one single measurement. These include CIP chemical residues in the product, foreign objects like metal particles, cross-contamination, and even product taste or structure changes.”

With Collo, a test takes two seconds. The measurement can be done at the site manually by dipping the sensor into the product, or in-line straight from the pipe.

There is no need to send samples anywhere; the results are instantly available. This is made possible by EMF technology and the advanced algorithms that power the analyzer.

“The ‘fingerprint’ of a liquid is compared to what the client requires. If something is off, they know immediately and can take appropriate action. This reduces hazardous mistakes and poor-quality batches,” says Järveläinen.

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Messe Köln | March 19<sup>th</sup> – 22<sup>th</sup> 2024 | Hall 6 | Booth A-060

# Anuga FoodTec 2024

## Best Practice technologies



Whether it is about complete production lines or individual process systems for milk products, cheese, beverages and viscous food – Best Practice technologies are currently called for that ensure both efficiency and product quality. At the same time, these systems must be scalable and flexible, in order to also be able to process new ingredients in future. More than a third of the around 1,350 exhibitors from Germany and abroad present solutions in the field of process technology.

### Digital and networked

The optimisation of production processes occupies a lot of space at Anuga FoodTec. It is primarily the digital technologies that provide insights into the processes that were not so available in the past. Food manufacturers use this as the foundation for elevating their own production to the latest standard and to optimise the harmonisation of human being, machine and processes. With their portfolio, the exhibitors in Cologne begin at precisely this point – for example, with intelligent sensor and web-based process control systems that can also be retrofitted on existing systems. They enable comprehensive sustainability management at the central point of the plant control system.

This enables cross-process automation from the preparation of raw materials with mixing and reduction through processing with portioning, dispensing, molding or extrusion to options like gripping and insertion of the products into the packaging. Intelligent feeds and precise sorting then subsequently ensure that the products are finally packaged and ready for shipping.

The exhibition programme will be complemented by conferences, interactive forums, panel discussions and lectures, special events as well as guided tours. The Main Stage Responsibility (Hall 9, B080/C081) and the Innovation Stage (Hall 5.2, C100/D119) revolve around themes like automation, digitalisation, robotics, sustainability and process optimisation. Further informations: [www.anugafoodtec.com](http://www.anugafoodtec.com)

Below you will find initial information about exhibits and exhibitors at Anuga FoodTec 2024.





## ANDRITZ: Extraction technology

ANDRITZ will present its range of solutions for dewatering, drying and automation in the food industry. Among the highlights is the Turbex extraction system for the production of functional nutrients, which will receive the International FoodTec Award.

Another highlight the company will present at Anuga is the recently opened Food Innovation Xperience center for food and feed processing including alternative proteins. This development and technology center offers customers and research institutes the opportunity to conduct feasibility studies and pilot plant tests for scale-up or R&D activities under food grade or even ATEX conditions.

In response to the growing global demand for alternative proteins, ANDRITZ leverages its comprehensive product portfolio to provide customers with tailored end-to-end solutions and support in scaling up production. Visitors to Anuga can explore ANDRITZ's wide range of process solutions for the production of alternative proteins, in particular from sources such as peas, pulses, lentils, insects and animal by-products.



Among the highlights is the Turbex extraction system (photo: ANDRITZ)

Advertising



photo: Koelnmesse



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Comparison of current BAPC methods in use:  
IDF Factsheet 22/ 2022: Enumeration of butyric acid forming (cheese spoiling) clostridia – methodical considerations

**Gerhard Schubert:**  
**Solutions for food packaging**

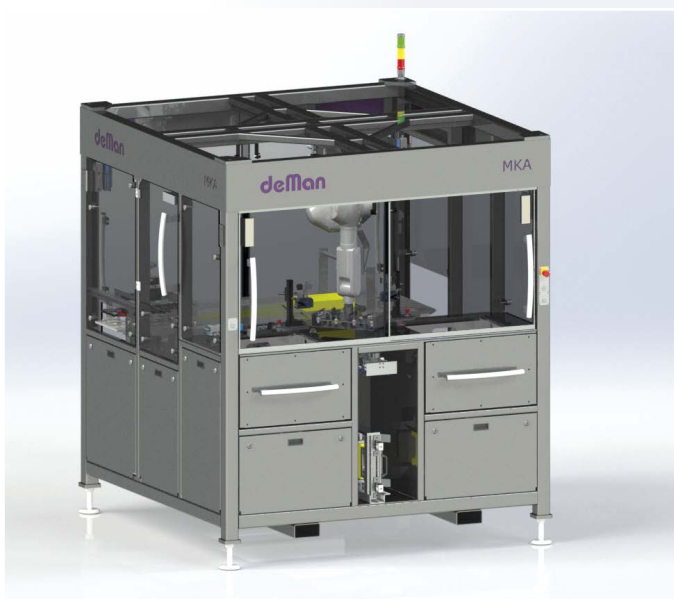
The TLM Comfort Feeder will be showcased live and in action at the Schubert stand. The background to the development of the packaging solution was the observation that delays can occur in the process if the blanks magazine on the packaging system runs empty – which result in machine operators having to react quickly to prevent unnecessary stops. With the new TLM Comfort Feeder, this roadblock has been eliminated, as can be experienced live at the fair. All that is needed is to place the entire pallet with the blanks still in the cutting sheet into the machine. An F4 robot then pulls the blanks directly from the sheet one by one and feeds them to the erecting process in the A6 erector – at an speed of 60 cycles per minute. The cut sheet can be optimised to ensure the greatest possible utilisation of the packaging material.

In addition to the live demonstration, Schubert experts will be providing information about the wide range of packaging machines at various thematic islands. From pick & place robots in the Pickerline to Flowpackers and Casepackers, all the way through to complete packaging lines.

Also on the topic of sustainability, Schubert has two further highlights in store for visitors to the fair: Dotlock, a technology that makes cardboard packaging entirely glue-free, and its cardboard-monofilm hybrid solution – also without glue – that significantly minimises the use of plastic.



*To feed the Comfort Feeder, only the complete pallet needs to be placed into the line. (photo. Gerhard Schubert GmbH)*



*The packaging line includes, among other things, the MKA carton erector (photo: de Man)*

**de Man:**  
**Packaging line as an animated hologram**

de Man Automation + Service will be presenting a complete packaging line to visitors - as a hologram. In terms of size, the automation specialist's new packaging line for a customer in the food sector would have been beyond the scope of a trade fair stand. So de Man decided to break new ground and present the line as an animated hologram. This is located in a glass box measuring approximately 1 metre x 1 metre and clearly shows visitors the path of the products through to the finished pallet. The packaging line consists of the MKA carton erector, the MPZ carton packer and the MRZ palletising cell. All three cells can be purchased individually or combined as a complete packaging line. In the MKA, the tray blanks are hot-melt glued, unfolded and conveyed in pairs next to each other into the packing cell. Here they are stretched and, if required, labelled. Meanwhile, the products run through the MKA to the MPZ, where a robot packs them into the erected cartons. The fully packed trays are conveyed to the palletising cell, accumulated and gripped and palletised eight at a time by the robot. Of course, de Man will also be providing information about its other customised solutions in the field of robotics and conveyor technology as well as its services.



## MULTIVAC: Comprehensive range of slicing equipment

The MULTIVAC Group will be exhibiting its expanded slicing range, which extends from entry-level solutions to high-output machines. With the addition of the new Professional series, the company can now also offer small and medium-sized businesses a range of cost-effective solutions, which serve as an entry-level into industrial-scale slicing, and which can be used as a stand-alone version or integrated into a complete line.

MULTIVAC will be showing for the first time a slicer model from the Professional series, which will be operating as a line concept with a MULTIVAC flowpacker to package cheese slices in a flowpack.

For those industrial-scale food processors, who have high demands in terms of capacity and variety of portion types, the company will be presenting a new slicer model in the Performance series at Anuga FoodTec. Thanks to its quick-changing devices, which can be operated without tools, companies can use the slicer for a wide range of high-output applications – for example with two-track slicing of raw ham. The machines of this series are also available for four-track slicing of cheese or very long sausage products with a length of up to 1,850 mm. Thanks to a new function for compensating for product length tolerances, process reliability is increased when gripping the product, and the yield is also improved, since there is no longer a requirement to manually cut the product logs to length. In addition to the new slicer, the Performance series also includes the familiar SLX 2000 slicer model.

Also to be seen at the trade fair is the first slicer model in the Advanced series, which is integrated into a complete line solution for full-range producers. The slicer is suitable for medium to high output quantities, and it closes the gap in MULTIVAC's slicing range between the Professional and Performance series.

Trade fair visitors will be able to experience the machines in live operation in the Processing Marquee.

*The Performance series also includes the familiar SLX 2000 slicer model.  
(photo: MULTIVAC)*



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## SOLUTIONS BEYOND TOMORROW



We shape the future

**Whether for beverage bottlers, food producers or recycling companies: Krones stands for solutions that combine performance and sustainability. Let's work together on the world of tomorrow!**

**Anuga FoodTec 2024, 19-22 March, Cologne,  
Hall 5.1/Stand A120-D129**

## Danish Export Association: Sustainable solutions

A lineup of 21 Danish exhibitors joins the Pavilion of Denmark. In the largest stand on the Pavilion is DSI Dantech. The company is a supplier of freezing, cooling, and heating solutions including Mechanical Individual Quick Freezing (IQF) technology, Cryogenic IQF technology, and Plate Freezing technology. According to the company, these solutions are up to 30 percent more energy efficient than other freezing alternatives, saving resources, energy costs, and CO<sub>2</sub> emissions.

Aiming to save energy, minimize down time and optimize precision in processing of beverages and other fluids, Hydract has developed a hydraulic valve system that reduces energy consumption by at least 95 percent compared to traditional valve solutions driven by pneumatics (compressed air). Combined with a hydraulically locked piston this leads to more efficiency and safety in the processing – as pressure transients are eliminated. Due to the hydraulic precision, the valve piston always regulates to the closed position – thus adding a lot less wear and tear to the valve sealings. The system is fully digital and therefore provides data which among other things are used to predict maintenance.

Eilersen Electic has developed an onsite calibration system called EilerCal. According to the company this system saves millions liter of water and many man hours in large production areas where regular calibration of tanks and silos is necessary. In 2023 Eilersen was nominated for the HI Sustainable Award at HI-messen in Herning, Denmark.



*A lineup of 21 Danish exhibitors joins the Pavilion of Denmark (photo: Danish Export Association)*

**TX2-200 in HE version:  
modified for the most demanding  
tasks in food production**  
*(photo: Stäubli Robotics)*



## Stäubli Robotics: Food industry robots

Stäubli Robotics will showcase the breadth of its food-safe automation solutions, covering a range of industry segments and numerous applications in primary and secondary processing and packaging. The hygienic food robots are designed to help ensure producers meet stricter safety requirements and quality standards while also optimizing their processes and boosting productivity.

Stäubli will present several live demonstrations at ANUGA FoodTec showing how its hygienic food industry robots automate a variety of processing tasks requiring the safe handling of unwrapped foods including raw meat and baked goods.

In 2023 Stäubli unveiled its next-generation TX2-200 robot, a powerful, cleanroom-compatible six-axis machine representing the top of the TX2 series. In Cologne, the food industry will be among the first to see the new HE version of the TX2-200. This version is the largest robot in the series with a load capacity of up to 170 kg and a reach of 2.209 mm, making it ideal for heavier handling applications.



## Krones: Sustainability concept

Krones, together with its subsidiaries Steinecker, Milkron, Evoguard and HST, will be presenting plant and engineering solutions for beverage and food production. One main focus will be on showcasing customised, holistic sustainability concepts, especially those designed to save water and energy in the production process.

Specific applications include HydroCircle, a complete concept for wastewater recycling, and specially designed heat exchanger systems or heat pumps for sustainable energy recovery.

Also on show is Steinecker's bioreactor is suitable for both precision fermentation and cell cultivation, making it possible to manufacture new food products like alternative proteins for meat substitutes and whey and egg proteins. Krones recently launched a partnership with the Swiss startup Food Brewer, and now the two companies are testing various applications and sharing the results with other companies to develop their own recipes and trials.

For further process technology, Krones also offers a diverse range of solutions, from the plant planning and engineering expertise of Milkron to HST's HLI90 high-pressure homogenizer and the Vario-Asept D direct-heating system from Krones right through to the broad portfolio of pumps and valves from Evoguard and Ampco, for both standard and aseptic applications.



*Steinecker's bioreactor was premiered at the BrauBeviale 2023 (photo: Krones)*

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## Meet consumer demands with **EXBERRY® plant-based colors for dairy alternatives**

70% of consumers say natural ingredients influence their plant-based dairy purchase decisions<sup>1</sup>

<sup>1</sup> FMCG Gurus 'Custom Survey - Global and Regional - Dairy' (Q4 2023)

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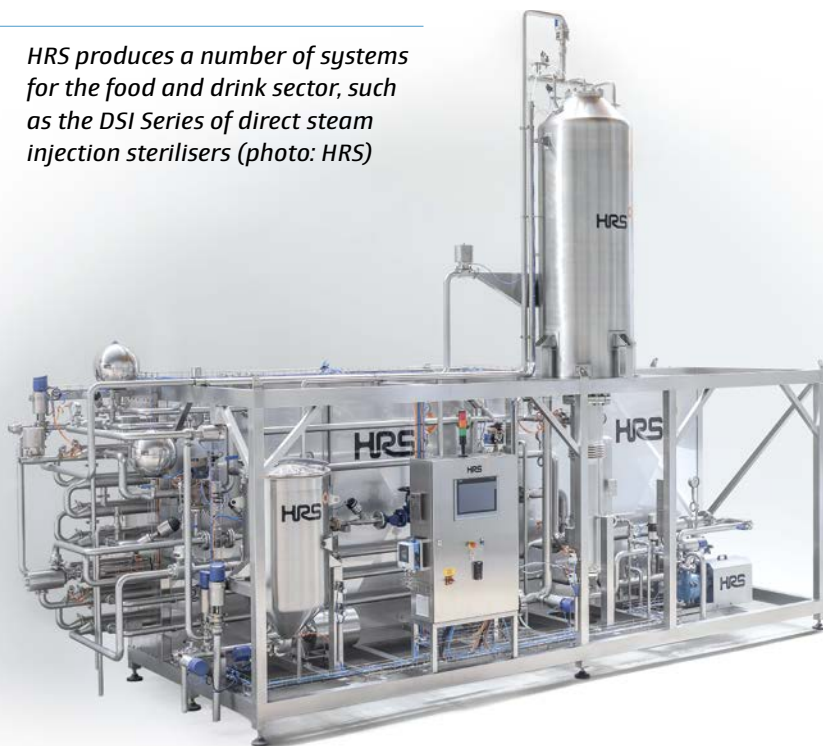
**EXBERRY®**

**HRS:**  
**Turnkey processing solutions**

At Anuga FoodTec 2024, HRS Heat Exchangers will showcase its range of complete all-in-one solutions, including pasteurising, sterilising, aseptic filling and clean-in-place capabilities in a single system, as well as options which can be skid-mounted for easy installation.

Other HRS systems for the food and drink sector include deaeration systems, the I Series of ice crushers and melters, direct steam injection sterilisers (DSI Series) and dedicated CIP and SIP systems. The company also provides systems for customers to conduct product and processing trials before committing to a final production solution.

*HRS produces a number of systems for the food and drink sector, such as the DSI Series of direct steam injection sterilisers (photo: HRS)*



**Handtmann: FS 525 forming system**

The Handtmann FS 525 all-in-one forming system now offers producers of snack and convenience products a new option to further expand the possibilities in the production of formed products: the co-extrusion function. The forming system provides flexibility for both “free forming” and “forming and separating” of products from the food sectors of dairy, confectionery, fish, pet food and many more. The added co-extrusion function now allows the production of a wide variety of filled products.

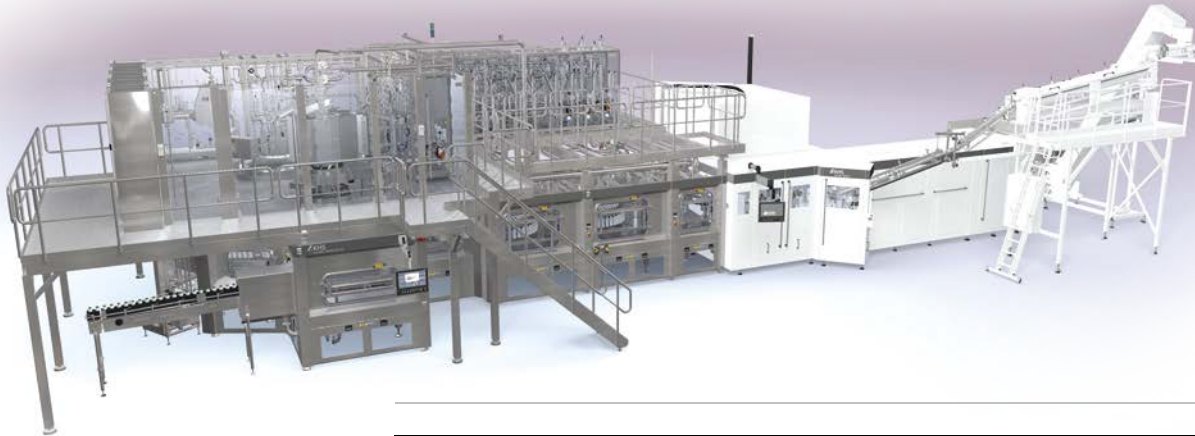
The FS 525 forming and cutting system combines two different forming principles for maximum flexibility in industrial applications (hole plate forming technology for free-formed 3D products and rotary cutter for different cross-sections with a straight cut) and now also offers the option of co-extrusion. This option further extends the range of applications for the production of filled formed products with closed or open ends of calibres 20 to 50 mm. The servo-controlled valve for the inner product with valve sleeves in diameter 22/8 mm with 8 mm valve tip/8 mm valve opening, diameter 22/10 mm with 10 mm valve tip/10 mm valve opening, diameter 30/12 mm with 16 mm valve tip/12 mm valve opening, diameter 30/15 mm with 16 mm valve tip/15 mm valve opening provides a wide range of applications. Mould component sizes are available in calibre 25, 30, 35, 40, 50, 55, 60 and 70 mm. Thanks to servo technology, the positioning of the filling, be it pasty, chunky or soft, is always accurate and precise in terms of weight.

A production output of up to 150 portions per minute is possible in a single lane. The FS 525 forming and cutting system can be incorporated into integrated processes, such as the Handtmann transfer system, or be synchronised with automation options such as a weighing system, tray feeding or depositing into thermo-forming machines.



*The FS 525 forming and cutting system (photo: Handtmann)*





Advertising

*KHS presents its new  
InnoPET BloFill ACF-R  
aseptic block (photo: KHS)*

**KHS:**  
**Flexible systems  
and solutions**

Sensitive beverages and flexible systems and solutions – these are the topics in focus at the KHS trade show booth for this year's Anuga FoodTec. With its new InnoPET BloFill ACF-R aseptic block the Dortmund systems supplier wants to set new standards in safety and hygiene when it comes to bottle sterilization. The rotary aseptic block has a capacity of up to 36,000 1.0-liter bottles per hour and in the future is even to be available with a top output of 48,000 500-milliliter bottles an hour. The new plant engineering achieves a sterility of log 6 inside the bottles – which is equivalent to a reduction in germs of 99.9999%. Visitors can also find out all about the latest generation of InnoPET Plasmex barrier technology and the first module in the digital KHS ConnectApp service. The first tApp function is the Guide module that with its interactive work instructions and powerful notification management system helps to ensure trouble-free workflows during inspection and maintenance or when training up new employees, for instance. Moreover, all work steps can be documented with the app.

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Aseptic Combi  
Predis*

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 **Sidel**



*CLEAN-FIELD HD-Line cleaning field including automatic swing gate, automatic dosing and hand disinfection (photo: Kohlhoff Hygienetechnik)*

**VEMAG: Efficient solutions**

VEMAG Maschinenbau will showcase over 20 lines on more than 1,000 square meters. The solutions on display can be used for a wide variety of applications, for example to produce convenience, fresh meat, bakery, sausage or dairy products.

During live demonstrations on the stand, visitors can experience the quality of the machines and the various production possibilities such as filling into cans and cups, grinding, forming and exact portioning of doughs and masses in person. The machine solutions can be easily integrated into complex production lines.

Depending on the desired end product, quickly interchangeable forming nozzles and knives are available for several applications, e.g. for round, long or oval specialties. The machines on display bring product ideas to life. The VEMAG double screws and the low-pressure forming of burger patties or balls made from meat or plant-based masses, for example, are particularly gentle on the product. Further demonstrations at the stand will include the forming of energy bars on several lanes using a filling flow divider, the dividing of doughs with different dough yields and the production of unusual sausages with a special pattern.



*VEMAG's vacuum filling machines and flexible attachments can be used to process a wide variety of products precisely and efficiently (photo: VEMAG)*

**Kohlhoff: Wheel and roller cleaning for industrial forklifts**

With the new CLEAN-FIELD HD-Line model series, Kohlhoff Hygienetechnik, Unna, is expanding its range of cleaning fields with a further variant that has been designed for a total load of up to 5000 kg. These systems can therefore also be used by industrial forklifts in order to avoid the entry of contaminants or the carry-over of dirt when transporting goods.

Simply by driving or walking onto the CLEAN-FIELD, the self-swinging brush elements integrated in cassettes are immediately set in motion and semi-actively (mechanically) clean both wheels and rollers as well as shoe soles - optionally wet or dry. With the wet cleaning option, the system is additionally equipped with an automatic dosing system. It ensures that sufficient cleaning or disinfecting liquid is always available.

The modular cleaning fields are available as built-in or surface-mounted versions in various dimensions. The variants designed for floor installation require an installation depth of only approx. 60 mm. Only the CLEAN-FIELD SL-Line model series, which was designed for a total load of up to 500 kg, can be used as an on-floor variant.

To clean the tubs and brush elements, the individual cassettes can simply be folded up and locked. If necessary, they can also be completely removed. When hung in a specially developed cleaning trolley, brushes can be cleaned easily and thoroughly.

All CLEAN-FIELD models can be adapted to individual hygiene requirements. If, for example, access control is required, the additional equipment with an automatic swivel gate is possible. For increased hygiene requirements, further components are available - ranging from hand disinfection or entrance control devices with turnstile to a complete compact hygiene lock.



## GEA: Low-consumption dairy technology

Equipped with the latest drive generation, the GEA ecoclear i bacteria removal separator is ideally suited to small to medium-sized dairies. The key innovation is the integrated direct drive. It transmits the drive power directly to the bowl, considerably reducing energy consumption. Nor does it require any transmission, belt or coupling, which might reduce efficiency and be subject to wear and tear. Both spindle and engine are mounted in a drive cartridge and, as a modular exchange unit, can be easily maintained on site. The new integrated direct drive is now also available for the GEA ecocream i skimming and GEA ecoclean i clarifying separators.

GEA ecoclear i is one of the first centrifugal types to be launched with the new GEA X Control generation. This enables high computing power and correspondingly new interfaces for integration into process line control systems – as a basis for the integration of artificial intelligence (AI). This has a huge impact on the 'plug & produce' capabilities of machines and components and facilitates new service functions via remote access.

The sustainable line of GEA's MSI skimming separators with GEA EngySpeed is catalyzing a paradigm shift in separator design. In place of smaller yet higher-speed centrifuges larger bowl volumes are now coming to the fore. For dairies, this means the same clarification area at lower speeds and using less power. Maintenance intervals are likewise extended – particularly for the drive assemblies – because the lower mechanical load causes significantly less wear on the drive. The EngySpeed system reduces the energy consumption of GEA's MSI series milk skimmers by up to 40 percent.

Digitalization – from real-time monitoring and service assistance to self-learning, AI-based plant optimization – is also spurring more sustainable production processes.

For the dairy industry, GEA is launching its KPIInsight digital assistance system for separators as a new product in the GEA InsightPartner family. While conventional condition monitoring solutions consider centrifuge condition, KPIInsight gives an overview of the milk and whey centrifuges' performance. A clearly organized dashboard provides a real-time overview of process efficiency based on key parameters, such as production volumes, energy consumption, discharging and CIP cycles. Trend analyses covering a 30-day period indicate anomalies and process discrepancies, to which operators are able to respond immediately.



*The new bacteria removal separator GEA ecoclear i features an integrated direct drive in cartridge design (photo; GEA)*

Advertising

Anuga FoodTec 2024  
19-22 March, Cologne  
Hall 5.1, Stand A120-D129

**SOLUTIONS  
BEYOND  
TOMORROW**



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**MILKRON**

# Visionary and highly flexible filling technology

Current trends and technical developments at the GRUNWALD Alm



**“This is the place to be!”**  
is the symbolic statement of Managing Director Ralf Müller on the machines to be exhibited and what visitors may expect at the almost legendary green GRUNWALD Alm.



*Highly flexible GRUNWALD cup filler for the dairy industry*

**T**wo rotary-type GRUNWALD-ROTARY cup fillers will be the centre of attention at the 170 sqm booth. Equipped with state-of-the-art and future-oriented filling technology, the machine manufacturer from southern Germany will be showcasing trends and technical developments that are in high demand among customers in the dairy industry and are well received by production managers due to their great flexibility. It has always been important to Grunwald to develop machine concepts that enable customers to react in a very quick and flexible way to the diverse requirements of the markets.

## Exhibition machines

The 3-lane rotary-type machine GRUNWALD-ROTARY 20.000UC was designed for filling dairy products. Its ultraclean technology easily meets maximum hygiene requirements. This machine can handle both cups of standard sizes and 1 kg buckets with handles. Depending on the product, the production speed amounts up to 7,500 cups/h.

The second, technically sophisticated and high-quality filling machine is the 4-lane rotary-type machine GRUNWALD-ROTARY 20.000E. “E” stands for extra class in the development of cup fillers from Grunwald. This top class, compact machine offers

maximum flexibility and high performance with a small footprint. This machine is a high-performance cup filling machine that will fit in almost any production hall.

Performance and flexibility are its outstanding features. Depending on the product, up to 10,000 square or round cups can be handled. The machine concept considers the filling of liquid to pasty dairy products such as yoghurt and fruit preparations. By using a mobile chamber filler this machine can be extended to fill non-pumpable, dry products, such as cereals and toppings, with a filling volume of 20 – 60 ml. This chamber filler can be disconnected very easily from the docking station of the GRUNWALD-ROTARY 20.000E in a few simple steps and cleaned externally. The machine also considers a free space to retrofit the machine for “swirl” filling to allow for absolute and future oriented flexibility of this machine concept with the filling of products.

## Strategic and visionary thinking

The customers’ demands on high machine availability, quick format and product changes, optimisation of costs and high level of experience as well as easy operation of such technically sophisticated filling machines are still the centre of attention of the Wangen-based mechanical engineering company.





*Aerial view of the GRUNWALD premises with the newly installed photovoltaic system with an output of 600 kWp (kilowatt peak) (photos: GRUNWALD)*

The trade fair team in Cologne will present the corresponding research and development work that may be expected in 2024, including new machine concepts that will be presented during the “Grunwald Dairy Days” in Wangen in autumn. Grunwald already mentioned the following five highlights:

### UNIVERSAL high-performance rotary-type machines

For the first time a cup filler in ultraclean design will be shown that has a performance which has never before been achieved with a rotary-type machine: 21,000 single cups/h. This machine can handle both single cups and different multi-chamber cups. This universal high-performance cup filler also offers 2x6-lane design, packaging material sterilisation  $\geq$  LOG 4, aseptic design and the option of steam sterilisation for filling various dairy products in single cups and different multi-chamber cups.

### In addition, the following bucket filler will be on display:

Universal high-performance rotary-type bucket filler in ultraclean design with packaging material sterilisation  $\geq$  LOG 4, aseptic design and the option of steam sterilisation for filling pH neutral dairy products. The filling performance is up to 1,200 buckets/h resp. 7,800 kg/h with 5 resp. 10 kg buckets.

### High-performance inline machines:

Grunwald has also developed an 8-lane inline machine with integrated packer in ultraclean design with packaging material sterilisation  $\geq$  LOG 4, aseptic design and

the option of steam sterilisation for filling various dairy products that will be shown at the exhibition. In addition, this machine considers ergonomic storage systems for packaging materials and maximum storage time for user friendly one-man operation. The production speed is up to 20,000 cups/h.

Two inline high-performance filling machines with production speeds of up to 40,000 cups/h for the accurate filling of different dairy products will be on display. They are in 2x8-lane design and are equipped with an integrated packer as well as packaging material sterilisation systems.



*Format flexible GRUNWALD inline machine with ultra-clean (UC) hygiene design*

# Road to digitalization

Virtual Configurator optimizes process valve selection

Author:

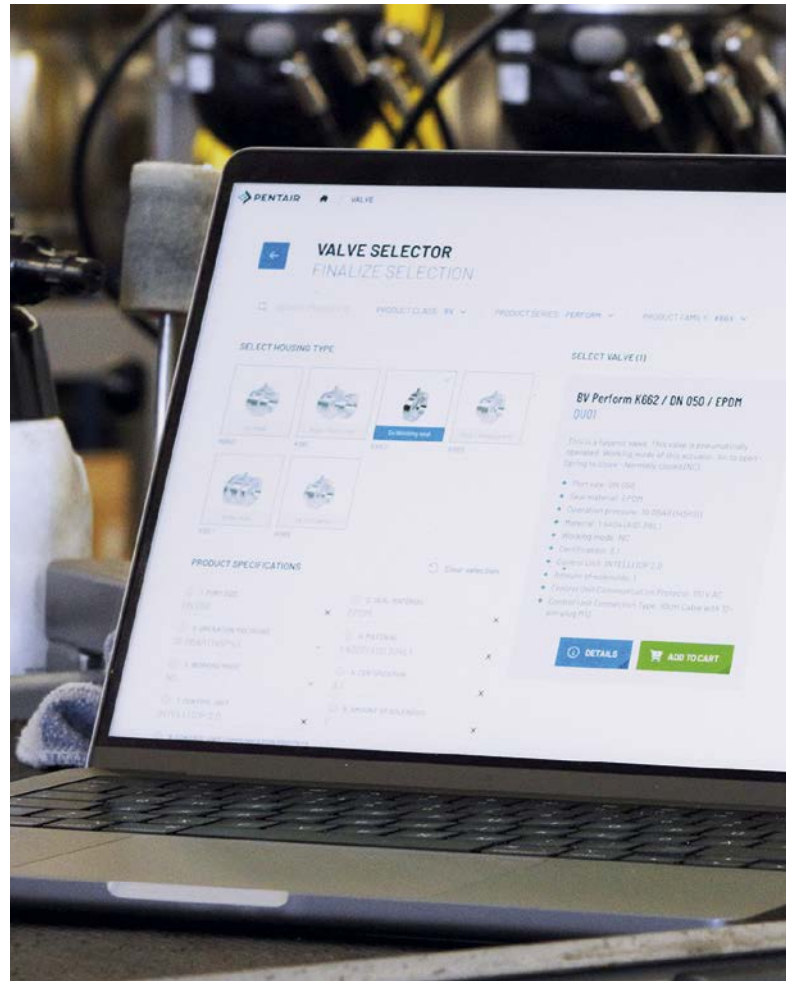
Martin Wagner, Pentair Südmo GmbH, Riesbürg, Germany

If the corona pandemic has advanced anything, then virtual communication. This applies to team meetings as well as e-commerce in the B-to-B area. A current and exemplary example of this modern B-to-B communication is the product configurator "mySüdmo" ([mysudmo.pentair.com](https://mysudmo.pentair.com)), with which the customer can quickly and reliably select the right process valve for his personal requirements and needs. This configurator is a browser-based application. No app or program needs to be installed. The configurator can be accessed via its Internet address at any time and with little effort, both as a guest and with your own account.

## Questions guiding through the selection process

Through the selection process itself, the customer is guided through specific questions. These were developed together with the sales and construction specialists. The approach was: What questions will consumers ask, which ones do we have to answer, what interests them? Each answer to the respective question narrows the possible options further and further until an individual solution proposal is offered.

Specifically, the configurator starts with "I need help with my selection" or "I already know my valve type." If the first way is chosen, the selective steps already mentioned follow. For example, these could be: brewery, production, aseptic valve, switching valve, tank bottom valve, activator, and housing. At the end of this process there is a valve proposal including all practice-relevant data, documentation and a 3D animation. The customer therefore



knows exactly what he is getting. This also applies to the second way, if the basic valve type is already known. Here the selection is made via the stored product series or product families.

## Goal: Individual offer within one to two working days

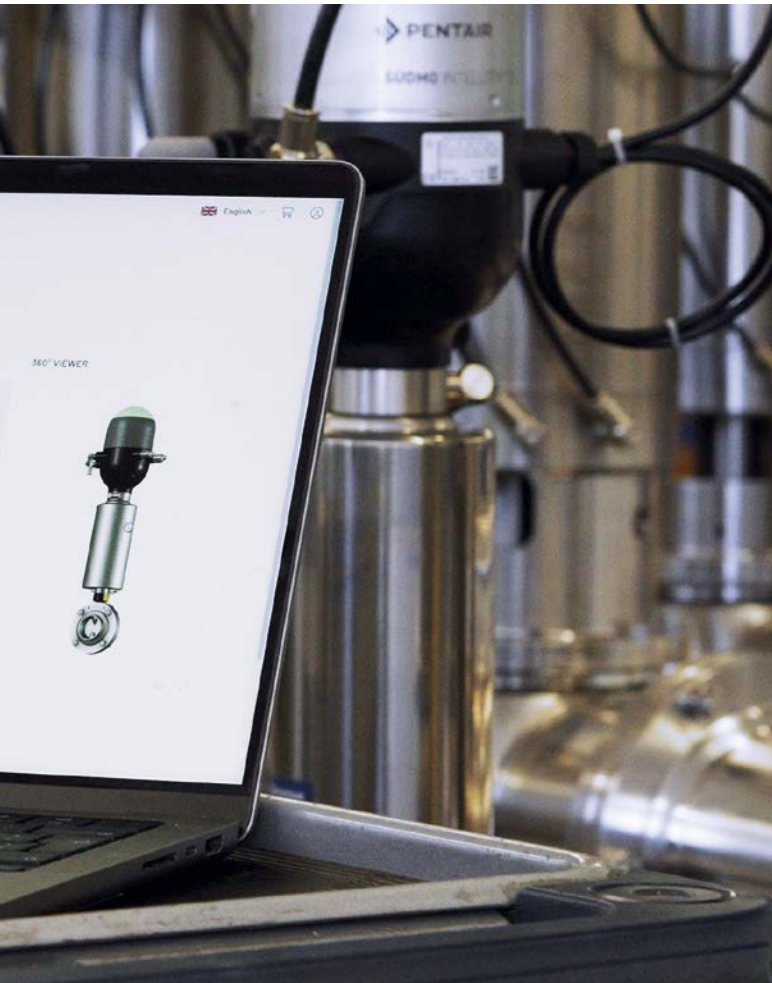
Using a common shopping cart function, the customer then reaches the responsible department, which checks the plausibility of the request and then prepares and sends an individual offer. The customer does not communicate with an artificial intelligence, but with "physical" contact persons. Due to the pre-selection, they are able to submit a very precise and detailed offer within three to a maximum of five working days. However, the declared goal is to



speed up the process to one or two working days. Customers and specialist departments can also access the offer at the same time and clarify individual points together and in direct contact. This also shortens the response and processing times.

### Dual seat, single seat and flapper valves are currently mapped

In the current version, the configurator maps the three most important product groups. Namely, these are double seat, single



seat and flap valves. The ultimate goal is to make the more than 100,000 products in the portfolio available virtually. Furthermore, the documentation is to be expanded, for example by adding spare parts lists or operating instructions. Videos are also being considered, in which, for example, service work is shown in detail, or the networking of practice and configurator via barcode on the valve, as well as the expansion of the language range. The final step is to store prices. It is important for this process that the configurator is a genuine in-house development and not based on a standard solution. The necessary know-how is therefore available internally, so the defined goals can be implemented as planned and new needs of the market can be addressed at any time. And always according to the directive: higher speed plus higher efficiency plus more security equals more customer benefit.

## ECOLAB expands regional coverage in Vietnam

NEWS

Ecolab announced the opening of its new cutting-edge manufacturing plant in Ho Nai Industrial Park, near Ho Chi Minh City. Around the world, Ecolab provides innovative solutions to help improve businesses' operational efficiency, product quality, and safety while reducing water and energy use and waste. This new facility demonstrates Ecolab's continued commitment to supporting customers, innovation, and sustainability in Vietnam and throughout Southeast Asia.

The new plant has 3,000 square meters of space with an advanced laboratory, manufacturing facility and warehouse. The new facility will also provide additional local job opportunities, bringing the company's workforce in Vietnam to more than 100 people. Ecolab supports customers in multiple industrial markets, including food service, lodging, healthcare, building facilities, food and beverage processing, manufacturing, transportation, pulp and paper, micro-electronics, petrochemicals, and power generation.

Sam de Boo, EVP and president for Ecolab Global Markets, said: "Vietnam is a key strategic market for Ecolab, and the investment in a plant marks a key step in better supporting our customers. The markets we serve will continue to benefit from our global innovation capabilities, combining chemistry, digital technology, data analytics, and service to deliver exponential customer value."

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**Used machines:**

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**Margarine machines**

*Brands: SPX Gerstenberg - Schröder, Bock & Sohn*

**Butter machines**

*Brands: Benhil, SIG Ecopack, Hassia, Trepko, GEA Ahlborn, Egli, SPX*

**Also complete dairy factories**

# Optimisation of the global spare parts supply

MULTIVAC pursues ambitious growth targets

**T**he MULTIVAC Group is pursuing ambitious growth objectives. In this interview Dr Christian Lau, Group President and COO of MULTIVAC, explains the role played by automation, sustainability and the expansion of a worldwide network.

**IDM:** MULTIVAC Group is currently planning the construction of a further factory at its headquarters in the Allgäu. What benefits are you anticipating?

**Lau:** Our company has experienced continuous growth in recent years. One of the reasons for this growth, is that an increasing number of customers are asking not just for single machines, but rather for bespoke lines from one source, to process and pack their food products or medical and pharmaceutical items. One-stop shopping solutions for slicing, packaging, inspection, labeling and handling. And these lines, which in many cases are over 20 metres long, require a lot of assembly space. Despite its floor space of 90,000 square metres, our factory in Wolfertschwenden is reaching its limits.

It is for this reason, that we are now starting on the construction of a second factory just 800 metres from the main factory, and this will cost around 60 million euros and have a floor space of 35,000 square metres. We will then move the manufacture of

components for our processing and packaging machines, which currently takes place in the main factory, to the new building complex. Thanks to the space gained by this move, we will have more room in the current factory for our line business. At the same time we will also use the new factory, which is due to be gradually brought into operation from 2025, to further optimise the supply of spare parts for our customers throughout the world. There we will store thousands of spare parts for machines produced by the entire MULTIVAC Group, i.e. MULTIVAC, TVI and FRITSCH. And we will also be able to dispatch components, which are ordered via the Webshop, from there as well, in many cases on the same day. This means that customers can reduce costly downtime. And that is a significant benefit of the new building.

**IDM:** Smart Factory and Industry 4.0 should lead business into the future. Does MULTIVAC already use such technology?

**Lau:** Automation will play a key role in our new production factory. Some process chains will be fully automated – for example in warehousing, production and dispatch of goods. Driverless transport systems, for example, will be used there to move materials. And industrial robots, which can load and unload CNC milling machines. We are also arming ourselves with this technology against future shortfalls in staff caused by demographic changes.



photo: MULTIVAC



*“Automation will play a key role  
in our new production facto”*

**Dr Christian Lau**

Group President and COO of MULTIVAC



Such productivity-enhancing technology across all aspects of Industry 4.0 does not only play an important role in our production. Our customers benefit from this as well. We have been developing for several years so-called Smart Services for our packaging and processing machines. Our machines are equipped with sensors, which enable them to send live data from customers' production to the MULTIVAC Cloud. There the data is evaluated by intelligent software. This then displays on a dashboard, whether the production process is being run to the optimum level. And also what the user can do to increase productivity and service life, as well as reducing the use of packaging material and maintenance time.

**IDM:** MULTIVAC now produces not only in Wolfertschwenden, but also in Bulgaria, Japan and shortly in India. What strategy do you pursue with your global network?

**Lau:** Founded in 1961 as a small business in a garage, the MULTIVAC Group is now represented on all continents – with more than 80 sales and service companies, around 7,000 employees, of which 1,300 are sales advisors and service technicians, as well as 14 production sites located in Germany, Austria, Bulgaria, Spain, Brazil, China, Japan, USA and India. Thanks to this wide network, we have succeeded in looking after our customers worldwide with our rapid reaction times – whether it is designing new line solutions from one source, installing machines and supporting customers on-site in putting them into service, or providing comprehensive after-sales service. And also increasingly in gaining more local market share.

We have recently completed the expansion of our Japanese production site in Tsukuba, 60 kilometres north-east of Tokyo. Because Japan is a significant market for MULTIVAC. Thanks to the new building, we have been able to expand the local production capacity significantly, while also improving our logistics. Similarly in India. There the purchasing behaviour is changing rapidly, partly due to rising living standards. Consumers are increasingly buying not just loose goods at the market, but also packaged products in supermarkets. Since the Indian market is becoming ever more important for MULTIVAC, we are currently building a sales and production complex, which will have a total floor space of 10,000

square metres, at a site in Ghiloth, some 120 kilometres from Delhi, and this new building was officially opened in December 2023. The factory is also due to be a production hub for the South Asiatic region.

**IDM:** Corona plunged the world into supply chain chaos, which to some extent still persists. What was MULTIVAC's experience of the crisis?

**Lau:** The COVID-19 pandemic and its associated bottlenecks in the supply chain certainly posed a challenge for us. For example, we really had to battle to obtain sufficient quantities of aluminium and stainless steel for our machines. And many electronic components were suddenly no longer available in the required quantities. But we did not put our head in the sand. Instead of that, we looked for alternatives. For example, we quickly redesigned our machines and ancillary equipment, so that we could also use servo motors from other suppliers. Thanks to this flexibility, we were able to keep all the balls in the air during the entire COVID-19 pandemic. We didn't have one single day of production loss, and we were able to supply all our customers. We are very proud of this achievement. And since then things have almost returned to normal. The supply chains are stabilising, and we have emerged from the crisis stronger than before, thanks to improved processes and emergency management.

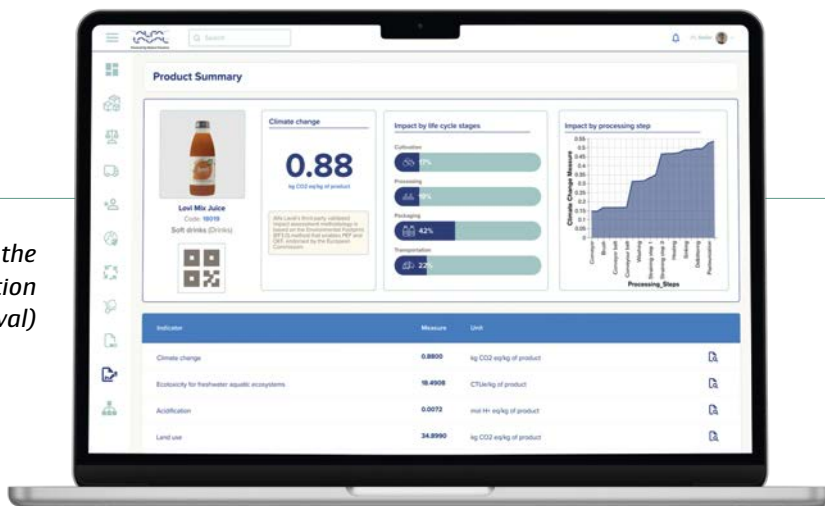
**IDM:** Sustainability is playing an ever greater role in the packaging sector as well. How is MULTIVAC reacting to this mega topic?

**Lau:** Operating as an international company, we see ourselves duty-bound to deal with the environment and its resources as responsibly as possible. We are therefore constantly striving to reduce the energy consumption of our infrastructure, as well as increase the proportion of our own energy generation. Photovoltaic equipment, combined heat and power units, as well as geothermal heat pumps, have recently been installed at many production sites. And where we buy in power for the sites in Germany and Austria, 100 percent of this is provided by environmentally-friendly eco power. At our headquarters in Wolfertschwenden we have also gone over to cooling some of our milling machines with cold water from natural wells instead of cooling plants. In addition to this, we also procure resources responsibly along the entire supply chain. And last but not least, we invest in research and development, so that our packaging and processing machines consume less power, water and compressed air. Examples of this are energy-efficient electric motors and state-of-the-art methods for machine standby. By implementing these measures, we want to make a major contribution to sustaining the environment for future generations.

# Life-cycle Assessment Solution

Innovative software service

*Alfa Laval introduces the  
Life-cycle Assessment Solution  
(photo: Alfa Laval)*



Based on the strategic importance of sustainability, Alfa Laval introduces the Life-cycle Assessment Solution, an innovative software service. The service tool can provide input for the EU Corporate Sustainability Reporting Directive (CSRD) and address the EU Green Claims Directive. It will help Alfa Laval's food and beverage customers to specify necessary data demonstrating their environmental impact and compliance with the coming directives.

As consumers, investors and other stakeholders prioritize sustainability, the Corporate Sustainability Reporting Directive (CSRD) mandates companies to report their sustainability impacts and risks. Applicable to large EU organizations from 2024, CSRD ensures consistent and standardized measurements, promoting transparency in disclosing social and environmental initiatives. Compliance isn't just a legal requirement but a strategic commitment to ethical conduct, aligning with the stakeholders' expectations for responsible business practices and a sustainable future.

The EU Green Claims Directive, on the other hand, demands authenticity

in environmental marketing. Companies must verify green claims, aligning with consumer expectations for transparency. This directive sets clear guidelines for credible communication of eco-friendly initiatives in the EU, fostering trust and meeting the demand for genuine sustainability efforts. The Green Claims Directive is expected to enter into force in 2024 with a start-up period between 2024 to 2027.

To comply with these directives, companies and organizations must demonstrate supply chain transparency, requesting and reporting data from suppliers to verify due diligence in achieving sustainability goals. For instance, EU estimates that more than 50 percent of current environmental sustainability claims can be categorized as greenwashing due to a lack of verifiable data.

## About the solution

The Alfa Laval Life-cycle Assessment Solution complying with ISO14040/44 enables the food & beverage companies to support the directives and to navigate in the sustainability reporting and

communication through comprehensive environmental monitoring, addressing climate impact, freshwater use, land management, and fossil fuel dependency, providing valuable environmental input in line with the directives.

"Alfa Laval's solution not only meets upcoming directives but also goes beyond, offering a reliable and comprehensive tool for businesses to reduce emissions from their processing lines. Our customers will now be able to provide vital data to demonstrate their environmental impact, which will be essential for them to remain competitive in the food and beverage sector," says Nish Patel, President of the Food & Water Division.

Based on the European Commission's endorsement of the Environmental Footprint Methodology (3.0), the Life-cycle Assessment Solution offers up-to-date, clear environmental impact data. The software provides supply chain transparency through lifecycle analysis, empowering the food and beverage industry in making informed and sustainable decisions.



# Optimizing cleaning processes sensibly

Horpovel® GmbH

**H**orpovel® GmbH specializes in ensuring the production of flawless dairy products. As an expert in the manufacture of cleaning and disinfecting products for the dairy industry, she focuses on the cleaning optimization of filtration systems, among other things.

## Can membrane filtration also be optimized?

Yes, with membrane filtration it is often the case that the cleaning concept is oversized. By closely examining the cleaning requirements, it is possible to determine which cleaning steps are necessary in which form, duration and frequency and which are not. For example, in RO plants for whey, which are not operated at full capacity, it is quite possible to suspend enzymatic cleaning on a daily basis.

Furthermore, cleaning steps are often carried out that have little effect on the cleaning result (e.g. enzymatic cleaning steps in plants that do not filter products containing protein).

## Are there any other advantages?

On the one hand, the wastewater load can be reduced by using the necessary ingredients precisely, and on the other hand, the rinsing quantities can be reduced by avoiding overdosing.

## How high are the average savings potentials with CIP optimization?

When cleaning the production and filtration systems, savings of up to 40% can be achieved by optimizing the CIP cleaning steps in terms of time and sequence and by using high concentrates.

## What measures are possible?

1. Optimization of the rinsing phases
2. Optimization of the step sequences
3. Optimization of the circulation times

After analysing the actual condition and determining the target condition, the effective duration of the cleaning steps can be measured and set on site. In addition, flushing can be adjusted using special measuring technology.

## What does Horpovel® want to achieve with its customized cleaning concepts?

The aim is a cost-optimized, comprehensible and easy-to-use cleaning concept with which you can meet the increasing demands of your customers and authorities. The optimization of cleaning processes focuses on the efficient and sustainable use of available resources.

For further information please visit our homepage [www.horpovel.de/en/press/](http://www.horpovel.de/en/press/)

**Application-specific cleaning processes**

Good cleaning is results-orientated, cost-effective, reproducible and achieves a stable result. For this reason, Horpovel® GmbH has developed application-specific cleaning concepts for its customers. These concepts are used both in the area of general CIP cleaning and in membrane cleaning.

Horpovel® GmbH sees itself not only as a manufacturer and supplier of cleaning agents and disinfectants, but also as a partner for the development and further development of cleaning chemicals and strategies to optimise your cleaning processes.

- innovative
- certified
- cooperative
- sustainable

**Horpovel®**  
Efficient cleaning processes

Further information can be found summarised on our homepage [www.horpovel.de](http://www.horpovel.de)

**ANUGA FOOD TEC** koelnmesse  
International supplier fair for the food and beverage industry

Visit us!  
KÖLN, 19.-22.03.2024  
Hall 4.1, Stand B009

# Systems in the higher power range

HST in Dassow



**H**ST in Dassow, Mecklenburg-Western Pomerania, is known as a manufacturer of homogenisers and high-pressure piston pumps. With 43 employees, the company produces between 50 and 70 homogenisers and high-pressure pumps every year. "We tend to sell systems in the large capacity range from 10,000 to 50,000 l/h. Our customers rely on robust and high-quality products because they are in use 24 hours a day, seven days a week," says Managing Director Torsten Kaben. Around 25 per cent of the systems are sold in Germany, with the rest being exported.

HST has been part of the Krones Group since 2014. Here, the company benefits from the entire Krones network. "Since becoming part of the Krones Group, we have better access to the markets," says Kaben. Krones also buys the homogenisers produced







*The two managing directors see growth particularly in the areas of spare parts sales and Krones process technology (photo: IDM)*

in Dassow for its lines. "This gives us very good references. The process technology sector here is growing, from which we are also benefiting greatly," says Managing Director Michael Penz. Around 50 per cent of the systems manufactured in Dassow are supplied by Krones, the rest are marketed independently. It goes without saying that the Krones Supplier Code of Conduct must be complied with.

There are three series in the portfolio: Standard HL1-HL6 in Gaulin design, the HLI (I stands for Integrated) and the HLE (E stands for Economy). The latter series is specially designed for the lower power range, is manufactured abroad and is modified in Dassow and brought up to European standard. "This gives our customers the option of choosing between a basic machine or an HLI without gearbox cooling and fewer auxiliary units. With the HLE, we offer a homogeniser for the low-cost range. The advantage here is that customers often start with small projects and we can then move on to larger projects," says Kaben.

HST is also well positioned in terms of service. The company has a global setup and worldwide service. It is also possible to control the systems via remote maintenance.

## New markets

Dassow's focus is clearly on international markets. The company wants to position itself even better worldwide. "We are looking for markets with a good price level, especially the USA," says Penz. Kaben adds: "The USA is a Gaulin market and we have this design and are able to replace outdated or defective systems. The company has also had 3A approval for this market since last year.

Kaben and Penz also see positive developments in the chemical and plant-based sectors. Various major projects have been realised here together with Krones, including a project for a German fruit juice manufacturer.

## Growth

The two managing directors see growth particularly in the areas of spare parts sales and Krones process technology. "Krones is positioning itself more broadly here, which means we can participate in the growth. In aftersales, we score points with more favourable prices," says Kaben.

In order to be equipped for further growth, the construction of a 300 m<sup>2</sup> cold hall was completed this year. This gives the company a production area of 2,000 m<sup>2</sup> and a further 900 m<sup>2</sup> for offices. Further expansion measures are possible.



*There are three series in the portfolio: Standard HL1-HL6 in Gaulin design, the HLI and the HLE (photo: HST)*



# Specialist for automatic palletising systems

Scott Palletising Solutions at Anuga FoodTec



photos: Scott Automation

**A**s a leading provider of advanced automation solutions, Scott Automation is active in various areas, including Materials Handling and Logistics (MHL). The MHL division specialises in tailor-made palletising solutions, from the end of the production line, through to delivery into the warehouse.

We spoke to Marcel Thünken, System Sales Engineer at Scott about their latest developments and what visitors can expect at Anuga FoodTec

**IDM:** At this year's Anuga FoodTec, you will be focusing on the topic of "Scott Palletising Solutions". What goals are you pursuing with this?

**Thünken:** At the last Anuga FoodTec we presented our latest generation layer palletiser, PAL 4.0. This time we don't want to limit us only to one machine, so we will be presenting our complete portfolio. On top of that we are going to show that safety is a top priority for Scott by showcasing a very specific application.

**IDM:** What can visitors expect at the Scott stand?

**Thünken:** Visitors can expect an overview about our complete portfolio. We start by taking secondary packaged product from the end of the production lines, through sorting, consolidating, palletising, full and empty pallet handling including labeling and load securing, as well as automatic truck loading – Scott is not only a system designer, but builds and installs complete turnkey solutions.

Visitors will be able to benefit from the full expertise and experience of the trade fair team, and can receive detailed information on the latest trends in the field of automatic palletising of food products. They will have the chance to get a detailed explanation on how our systems help to increase production line efficiencies, decrease cost of ownership and especially on the best way of handling their products.



*“Scott is not only a system designer, but builds and installs complete turnkey solutions”*

**Marcel Thünken**  
System Sales Engineer at Scott



**IDM:** One focus of your trade fair appearance will be on the new PAL 4.0 palletiser. Which technologies have been integrated into the development of the PAL 4.0? Are there any special features and innovations here?

**Thünken:** We care about the final end products and pallets of our customers, and have developed a patented row pusher bar to gently handle delicate products. The open design provides industry leading visual and physical access for operators and reduced maintenance times.

We developed a user-friendly interface for creating new pallet layouts; this incorporates our flexible layer pattern build with gap optimization, and ensures efficient pallet utilisation and reduces changeover times.

To monitor all functions and process data, the PAL 4.0 is equipped with interfaces for SCADA, ERP, MES, MRP, SAP systems etc. which allows increased traceability. We also offer remote connectivity and diagnostics which help reduce downtime and speed up service during the lifetime of the palletiser. On top of that, the machine was developed with our partner SEW-Eurodrive, with a focus on optimised energy efficiency by using the latest servo drives

**IDM:** Your company is active in many sectors, what role does the dairy industry play for you?

**Thünken:** Next to frozen food and bakery products, dairy is the main industry for Scott, in which we want to expand our systems and bring our knowledge to every customer. We are currently handling a lot of dairy products like milk, cheese, yoghurt, drinks and ice-cream. Scott have provided those materials handling solutions for some of the world's largest manufacturer across Europe, United States and Australia.

**IDM:** What plans does Scott have for future growth or expansion?

**Thünken:** Six years ago we became part of the global Scott Group, based in New Zealand. Now we are delivering our palletising systems not only throughout Europe, but worldwide, with the main markets being Europe and America. We are focused especially on the future growth in the DACH countries. Here we are expanding, but with the same technology – our proven palletising systems.



**IDM:** What advantages do your palletising systems offer for the dairy and food industry?

**Thünken:** Scott is a specialist in automatic palletising systems for all kinds and sizes of products like boxes with lids, open yoghurt trays or fragile packs, with an emphasis on gentle handling to ensure no product damage. Coming from the beverage industry, we have adapted and further developed our systems for other sectors, especially for the dairy and frozen food industry. We design machines with a capacity ranging from 5 to 150 products per minute. Typical applications are dairy and food producers, where transit cases must be aligned accurately to maximise stacking strength and gentle product handling is essential. We know exactly how to handle for example yoghurt trays and boxes with stacking pins which need to nest into each other. For us, the process does not stop after palletising, we also take care about the full pallet transport into the warehouse or automatic truck loading, including installations in low and negative °C temperature environments – which is important in the dairy industry.

# Dairy business in Poland faces rampant uncertainty

Rising expenditures hinder export opportunities

**P**olish dairy companies believe their industry is going through the worst crisis since the country's joining the European Union, and things are promising only to get worse for the time being.

In the first half of 2023, the Polish dairy industry suffered a net loss of PLN 14 million (\$3.2 million), local news outlet Portal Spożywczy reported, citing official government figures. Compared with the previous year, the industry saw its net revenue falling by only 4%, indicating a slight decline in dairy consumption. The real problem is skyrocketing operation costs, explained Grzegorz Rykaczewski, Agrifood market expert at Bank Pekao SA.

For those following the Polish dairy industry, this figure has not come as a surprise, as the financial situation had already been on a downward track for some time. In the first quarter of 2023, Polish dairy businesses saw their combined net profit plummeting to PLN24.6 million (\$5.8 million) from PLN783.5 million (\$183.6 million) in the previous year.

Dairy processing plants fail to meet their ends meet even despite a decline in the wholesale raw milk prices in 2023, which usually helps processors to generate profit, Rykaczewski said. Minor but long-awaited improvements in this field have been completely offset by soaring energy and labour costs.

*Big plants consume smaller players*







*Polish dairy industry passed through a crises*

### Rising expenditures hinder export opportunities

“Dairy business finds themselves in a dramatic situation,” Andrzej Szczepański, president of Robico, a major Polish dairy company, said, voicing concerns about the industry’s competitiveness in the global arena. “Energy prices might have ruined one of the pillars of the dairy industry, namely strong export opportunities.”

Poland vitally needs to keep its dairy export running, as the country’s dairy production remains well above domestic consumption.

“We are no longer competitive on the global market, while 30% to 40% of dairy products needed to be exported,” Szczepański estimated.

Indeed, Polish dairy exports slumped by 13% during the first five months of 2023 in the context of fierce competition in the global market. While the world’s dairy superpowers, the EU, the US and New Zealand, expand dairy production, local publication Rzeczpospolita said that global demand leaves a lot to be desired.

To some extent, the negative export dynamics could be associated with a high base effect, as in the previous year, the country sold dairy products to foreign customers worth PLN 16.8 billion (\$3.8 billion), 37% more than the previous year, the Finance Ministry estimated.

China, the world’s largest dairy importer, restricted purchases of cheese and milk powder in a move that proved to be quite sensitive for the global trade balance.

In 2022, energy costs skyrocketed across the European Union, largely owing to fears over the cessation of Russian natural gas deliveries. In 2022, the European power benchmark averaged 230 EUR/MWh, 121% higher than in 2021. At some point, the energy

situation appeared to be so tense that some Polish businesses warned they could halt operations.

Since the fourth quarter of 2022, energy prices have dramatically subsided, though Polish dairy businesses still bear 27% higher energy costs than a year before, the Polish Dairy Chamber calculated. Other types of production costs are also on the rise.

Polish dairy processing plants now pay 13.6% higher wages and salaries and spend 19% more money on external services, which usually involve logistics, transport and storage costs, the Dairy Chamber reported.

The dairy industry also expresses concerns over new costs associated with the environmental-protecting initiatives. For instance, the government has recently published a new deposit return system law, which mandates deposits on single-use plastic bottles of up to 3 litres, reusable glass bottles of up to 1.5 litres and metal cans of up to 1 litre, and will begin January 1, 2025.

Some market players believe new rules could add further pressure on the supply chain, though, in the long run, the industry could benefit from having access to more secondary materials.

### Big firms go shopping

A huge consolidation wave is expected to be one of the main consequences of the current crisis. In fact, dairy giants have already made several noticeable acquisitions. In 2023, local dairy behemoth Mlekovita took over the Czarnków cooperative, Polmlek, another major player, bought OSM Końskie. Finally, Mlekpól acquired dairy processor Jogo.

“The problems first hit the smallest companies, which do not have the resources to survive the crisis that has been going on



*Dairy consumption slightly dropped*

**Export is crucial for the Polish dairy sector**

for over eight months. As a result, each of the three largest dairy companies in Poland has already made acquisitions this year," said Michał Klimczak, financial director of the Polmlek Group.

In difficult times like this, product and sales diversification plays a key role, making bigger companies more flexible to the ongoing challenges.

"The wider the portfolio, the calmer producers can feel. Medium and small players do not have this comfort, which is why there will be more talks about acquisitions. When planning acquisitions, we look at the purchase amount and types of production in order to strengthen the portfolio," Klimczak said.

There are two reasons market players seek consolidation: the first is financial, as for small and middle-size operations, this might be the only alternative to bankruptcy. In the long run, the milk supply issue may come to the fore, as the current turbulence could disrupt raw material supply to the industry. Big players again have more resources to deal with this issue, Rykaczewski said.

The ongoing consolidation in the dairy industry has its pros and cons, Mateusz Augustyniak, partner at the trading company Foodcom SA, said. For some business owners, this is a reasonable way out of a tough financial situation.

"This is becoming an increasingly likely exit scenario," Augustyniak said, also pointing out that it may bring certain benefits for the industry as a whole. "It will contribute to increasing production efficiency, positively influencing the competitiveness of the Polish dairy market on a global scale."

"On the other hand, it may contribute to strengthening the position of larger companies," he said.



It is estimated that companies employing over 250 workers in Poland account for more than 75% of the dairy industry's output. This level has been slowly growing during the past few years, and this trend is likely to accelerate in 2023.

The beginning of 2023 showed how quickly market trends and economic conditions can change, the owners of the Polmlek, Jerzy Borucki and Andrzej Grabowski, told the local press, emphasizing that against all odds, 2022 was a great year, while now the industry is going through turbulent times, with further consolidation seeming inevitable. The Polmlek owners called the sector not to fear the takeovers, claiming that it helps troubled operations strengthen.

"Individual companies and plants that have joined us over the years have gained stability and security. Lacpol, acquired in 2019, is undergoing effective restructuring: we have significantly increased raw milk purchases, increasing sales, diversifying product range, and introducing our products to international markets and large retail chains," the Polmlek owners said, adding that this is only one of the successful examples.



## A room for deterioration

The further outlook remains vague, though market players warn that the market conditions could further worsen.

The ongoing trade dispute with Ukraine is a reason for some of the strongest concerns for Polish dairy companies. During the 20th International Dairy Cooperative Forum, representatives of the Ukrainian and Polish dairy industry signed a joint appeal to their government, calling not to impose restrictions on dairy trade.

Some calls have been voiced in Ukraine to consider restrictions against Polish dairy exports, as the country maintains restrictions against Ukrainian grain.

“We understand that politics has its own rules, but we want to be more than that. That is why Polish and Ukrainian organizations signed an agreement,” said Agnieszka Maliszewska, director of the Polish Milk Chamber.

The restrictions, if imposed, will put heavy pressure on the Polish dairy sector, as Ukraine is the largest sales market for some Polish dairy companies. In the first quarter, Poland exported dairy products to Ukraine worth US\$50 million. During the same period, imports stood at only US\$4.8 million.

In general, Polish dairy companies remain predominantly pessimistic. Andrzej Szczepański, for instance, believes any improvements in the financial situation in the sector should not be anticipated in the foreseeable future.

Other players agree that to get out from the economic pit, the Polish dairy sector requires fundamental market changes, in the first place, higher retail prices.

In 2023, the country experienced higher-than-usual food inflation, but it comes with a great price. In some segments, higher prices hamper consumption. If this trend continues, some dairy companies may face a need to scale down their product range in 2024.

## ARLA FOODS INGREDIENTS Upcycling power of insects

NEWS

Arla Foods Ingredients has teamed up with ENORM, Northern Europe’s largest insect farm, in a partnership that will significantly reduce food waste.

Delactosed permeate (DLP) is a residual dairy stream generated in large volumes during lactose production. Most DLP is currently used as material for biogas production, which is a less preferable option than re-use for animal feed according to the food waste hierarchy set out in the EU’s Waste Framework Directive.<sup>1</sup>

Arla Foods Ingredients has long been investigating ways to address this challenge, but DLP’s composition has previously made it difficult to use in traditional animal feed. This is about to change thanks to the larvae of the black soldier fly. Currently used by ENORM for animal feed, they also offer huge potential as a healthy and sustainable source of protein for humans.

Having developed the capacity to turn DLP into nutritious feed for the larvae, Arla Foods Ingredients has been supplying ENORM with DLP for trial production for several years. In December ENORM was opening a major new facility in Flemming, Denmark, and gearing up for full-scale production.

As a result, the amount of DLP that Arla Foods Ingredients supplies to ENORM will increase substantially – to 15 truckloads a week from early 2024. When the new facility is up and running, it will be able to produce 100 tonnes of larvae daily – enough for more than 10,000 tonnes of insect meal.

Because its destination will be feed rather than biogas, the partnership will allow DLP to move up in the waste hierarchy. Arla Foods Ingredients estimates that the partnership will enable its Danmark Protein facility to achieve a significant (16%) reduction in food waste.

Sønke Møller, Senior Sales Developer at Arla Foods Ingredients, said: “A commitment to circularity is at the heart of Arla Foods Ingredients’ business model. So we’re hugely excited to be partnering with ENORM as it works to revolutionise the provision of protein and create more sustainable food systems. This collaboration – which will see a by-stream previously classified as food waste transformed into something with potentially huge nutritional value – is a fantastic example of companies working together to make upcycling a reality.”



<sup>1</sup> Arla Foods Ingredients

# Cognitive health top of mind as Prinova anticipates 2024's food and nutrition "mega-trends"

**P**rinova has identified growing demand for ingredients for the mind as one of nine emerging food, beverage and nutrition "mega-trends". In a new report on functional health trends, it also spotlights the increasing prominence of branded ingredients, and growing demand for "real foods".

The provider of ingredients and premises commissioned expert researchers to analyse patterns in retail and food service and to conduct social media listening. This allowed it to build a framework of nine macro-trends that will shape the industry in 2024 and beyond.

The report highlights the growing number of products containing adaptogens and nootropics, which it attributes to factors such as enduring concerns around performance, focus and "brain fog" in the wake of the pandemic. It also notes growing demand for natural sources of caffeine, such as yerba and matcha, as consumers seek "an antidote to boom and bust caffeination". Meanwhile, ongoing talk about the stress of modern life, coupled with research on the importance of sleep and rest, has led to "an array of adaptogenic ingredients" being included in everyday food and beverage products.



## Other mega-trends identified in the report include:

**"Real Food Rules":** A shift away from complicated ingredient lists as consumers embrace ingredients in their most natural, unprocessed form. This includes recognising the benefit of animal-based products again, including previously maligned elements such as full fat.

**"Hack my Health":** With growing interest in the way products interact with our genotypes, phenotypes and lifestyles, companies are increasingly offering personalised services to cater for unique needs.

**"Targeted Nutrition":** Consumers are increasingly aware of the nutritional interventions they can make to improve their wellbeing at different life stages. More knowledgeable than ever, they are looking for products with detailed claims.



The Prinova report also notes that “branded ingredients are emerging from the depths of the ingredient list, with logos making their way to the front of product packaging, “particularly in categories like plant-based and performance nutrition. Prinova’s range of branded ingredients includes *enduracarb*®, a science-backed, slow-release ‘double sugar’ for endurance, and *Bacopin*®, a *bacopa monniera* ingredient which, studies show, may help improve memory and attention.

James Street, Marketing Director, EMEA & APAC at Prinova, said: “Consumers are looking to food, beverage and nutrition products to meet a growing number of needs. To identify where the opportunities are, and to help our customers create innovative, new



products, we’ve created a future-facing framework that identifies the most important emerging trends. We’ve seen how consumers are looking for nutritional ‘hacks’ in areas like cognitive performance and emotional wellbeing, while also yearning for a return to products with ‘real food’ or ‘natural’ credentials. And our research also shows that manufacturers are recognising branded ingredients as one of the best ways to communicate science-backed benefits and bolster credibility.”

## SOMIC New subsidiary in Asia

NEWS

The packaging machine manufacturer SOMIC opened its new hub in Bangkok, Thailand, with a grand opening. With this sales and service location, the company is consistently developing its global presence. After entering the US market with the subsidiary in the USA in 2014, SOMIC is now continuing its expansion course towards the Asian markets with the new subsidiary SOMIC Packaging Asia Pacific Co. Ltd.

The event with a comprehensive program – including live operation of the new SOMIC 434 packaging machine and the presentation of the new CORAS collating and grouping system via a live link to Amerang in Germany – offered guests a deep insight into the philosophy of the German packaging machine specialists.

In addition to the guests from 13 countries, Patrick Bonetsmüller, Chairman of the SOMIC Group, and Dr. Gerhard Huber, CEO of the SOMIC Group, also welcomed Mr. Hans-Ulrich Südbek, Head of the Economic Department of the German Embassy in Bangkok.

Said Lukasz Myszkowski, Managing Director of Sales, SOMIC APAC: “Foreign investors find Thailand an excellent location and operate in a stable and mature economic environment. In addition, the Thai government’s economic development plan shows the country’s clear orientation towards digitalisation and IoT.”

In addition to these factors, there is also the availability of well-trained specialists in Thailand, which is essential for the development of activities in Asia.

SOMIC is one of the world’s leading companies for shelf-ready packaging machines and offers users in the food and non-food industry in Asia a customised and future-proof concept for packaging products in one-piece or two-piece cardboard packaging. In particular, the development away from traditional RSC cartons towards wraparound cartons opens up new opportunities for these markets. It offers new display options and simplifies the presentation of goods on the shelf.



SOMIC opened its new hub in Bangkok, Thailand (photo: SOMIC)

# Global Sugar Taxes

## Tipping the Scales Towards Healthier Choices

Author: Tom Fuzer, VP of Market Strategy, HOWTIAN

**T**he global landscape of food consumption is undergoing a significant shift with the introduction of sugar taxes in over 120 countries. These initiatives are primarily aimed at guiding consumers towards healthier lifestyle choices by reducing the intake of sugar-laden foods and beverages.

Countries like Colombia and the United States have championed these taxes, which not only raise public awareness about sugar content but also contribute to improving public health.

### Colombia's Bold Step

In a recent development, the Colombian government announced the implementation of a 10% tax on sugary drinks and junk foods, effective November 1st, 2023. This tax will escalate to 15% in 2024

and 20% in 2025. The tax applies to products like: carbonated drinks, malt drinks, tea, coffee, fruit juices, energy drinks, sports drinks, and food items containing sodium, including sausages, candies, chocolate, pasta, cereals, bakery products, and sauces. The tax amount varies based on ingredient content, with different levels corresponding to different tax standards.

### United States' Sugar Tax Trend

Around 30 states in the United States have enacted laws to tax sugar-sweetened beverages (SSBs). Berkeley, California, was the first city to impose such a tax in 2015, followed by several others, including San Francisco, Oakland, Colorado, Seattle, and Philadelphia.



photos: HOWTIAN



Studies have shown that these taxes effectively reduce SSB consumption. Further research from the University of Illinois Chicago suggests that Seattle's SSB tax, implemented in 2018, has successfully reduced sales from sugar-taxed beverages by 23%, highlighting the sustainability of such policies.

According to a Nielsen data comparison on the sugar tax in Philadelphia, a study reported: "There is a significant dose-response relationship between the size of the tax and the amount of impact. A broad-based tax of 1 cent per ounce or more is associated with greater degrees of purchasing reduction in the beverage categories targeted by public health advocates, i.e., soft drinks and fruit drinks, while at the same time incentivizing the purchase of bottled water as a substitute."

The study also found that the tax had few income-related effects detected – thus, validating that sugar taxes reduce the sugar consumption of the American people as a whole, rather than just those unable to afford the increased prices.

## Beverage Industry's Response

In anticipation of sugar taxes, beverage companies worldwide have been reformulating their products to reduce sugar content. This shift towards "sugar reduction" and "sugar-free" options is driven by the consensus that reducing sugar intake is synonymous with health – in addition to following the World Health Organization (WHO) recommendation that added sugar be less than 10% of daily total caloric intake, and additional health benefits may be attained if further reduced to 5%.

## Natural Sweeteners' Role

In the quest to reduce sugar, natural sweeteners and sugar substitutes have gained popularity. Coca-Cola, for example, launched its first beverage entirely sweetened with stevia in 2018. However, overcoming the inherent "post-bitterness" of stevia remains a challenge for manufacturers.

In addition, cost is a concern often raised when considering natural sweeteners. Despite the steadily improving and sometimes more favorable costs compared to sugar, natural sweeteners may be mistakenly perceived as an expensive, out-of-reach luxury.

## Stevia Leading the Charge

Amidst the diverse market of natural sweeteners and sugar substitutes, stevia has emerged as a frontrunner in the movement towards healthier sweetening options. Other natural sweeteners like monk fruit extract and allulose have their share of the market as well, but stevia stands out in popularity due to its natural origin and perceived health benefits. Derived from the leaves of the stevia rebaudiana plant, stevia offers a zero-calorie sweetness that is up to 300 times sweeter than sugar. As such, it has been gaining traction among consumers seeking healthier lifestyles and among manufacturers looking for clean label ingredients.

Innovative companies have been pivotal in advancing stevia's usage by overcoming challenges such as taste optimization and costs. For example, HOWTIAN has significantly improved the glycoside yield from natural stevia varieties, enhancing production processes and ensuring a stable supply of commercial stevia – all measures that have significantly reduced the cost of popular stevia extracts like Reb A over the years.

Its recent launch of the SoPure™ Galaxy line, a proprietary sweetener blend optimized for dairy products, exemplifies the industry's commitment to creating cost-effective, high-quality, and



From left:  
Martin Oswald, Weber, Joop Bouman, DERO GROEP,  
Jörg Schmeiser, Weber, Richard Bouma, DERO Joure,  
Kai Briel, Weber Inc. and Jurjen Bakker, DERO GROEP  
(photo: Weber Food Technology)

## STRATEGIC PARTNERSHIP

### Weber Food Technology and DERO GROEP

In order to offer a more extensive solution portfolio to customers worldwide, Weber Food Technology has entered into a strategic partnership with DERO GROEP.

DERO GROEP is a Dutch company specialized in diverse competence areas, including robotics, cheese processing systems, convenience solutions, and end-of-line machinery.

DERO GROEP has earned a good reputation, particularly in the field of automated cheese processing, providing both standalone solutions and integrated systems for production facilities. This expertise seamlessly complements the offerings of Weber, a complete solution provider. "Our customers will significantly benefit from this collaboration, as we will be able to offer them even more comprehensive solutions for the processing and packaging of their products in the future. As part of this partnership, DERO GROEP and Weber will jointly develop OEM products for the handling, defoliation, and dividing of cheese for Weber," explains Jörg Schmeiser, Chief Business Development & Innovation Officer at Weber.

tasteful sugar reduction solutions. This product line promises zero calories, no additives, high solubility, and a clean label, providing a taste experience as well as cost comparable to traditional sweeteners yet aligning with the global shift towards healthier and more sustainable diets.

### Naturally Sweet Future Ahead

In the shifting landscape of global health awareness, sugar taxes have become a prevalent tool for policy makers around the world aiming to curb sugar consumption and encourage healthier choices. Their existence is not just widespread, but intensifying, signaling a clear direction towards greater ubiquity and stricter regulations.

This trend represents a profound alignment with evolving consumer demands and preferences. Today's consumers are more

informed and health-conscious, seeking products that offer both taste and nutritional benefit. By proactively embracing sugar alternatives and reformulation, companies are not just adhering to regulations but are also positioning themselves at the forefront of a consumer-driven shift.

For those who act swiftly and effectively in implementing sugar reduction initiatives, the future is indeed sweet. More forward-thinking manufacturers will be able to navigate the emerging landscape of health regulations while also appealing to shifting consumer tastes and purchase behaviors.

With sugar taxes here to stay, a successful approach to addressing such regulation isn't so much about playing defense as it is about embracing this sweet revolution, and thriving in a future where health and taste go hand in hand.



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# Givaudan and Thimus

Understanding of consumer preferences through neuroscience



*Thimus' TBox provides participants with a headset to wear during taste tests (photo: Givaudan/Thimus)*

Givaudan announced an agreement with neuroscience company Thimus, the developer of the exclusive TBox platform that provides an integrated collection of explicit and implicit data for exploring how humans experience food. Givaudan's collaboration with Thimus is the first extensive use of the TBox platform in the world of food, resulting in Givaudan's new programme, Food Emotions powered by Thimus. The agreement adds to Givaudan's growing set of digital capabilities designed to deliver unique consumer insights and shape the future of food.

Food products are being redesigned to meet new expectations and sustainability, health, quality and emotion are crucial considerations in this re-invention. Understanding and responding to consumer preferences has never been more important, but there's often a gap between what consumers say and their actual experience

and behaviour. Neuroscience may be the key to closing that gap. A portable tool developed by Thimus is used to gain a fuller understanding of the consumer experience.

In addition to only having consumers participate in a focus group or answer a questionnaire, Thimus' TBox provides participants with a headset to wear during taste tests. The headset records brain signals, which are then processed by validated algorithms to measure four key mental states including frontal asymmetry, engagement, cognitive workload and relaxation. Using proprietary software and a cloud-based database for data analysis and retrieval, the tool is able to deliver insights that were previously unavailable or unreliable.

"Neuroscience has the unique ability to reveal how consumers truly feel about a product throughout the eating or drinking experience," explained Fabio Campanile,

Global Head of Science & Technology for Taste & Wellbeing at Givaudan. "The collaboration with Thimus marks a significant milestone in consumer understanding. It has the power to revolutionise how we co-create with our customers, increasingly satisfying consumers, and transforming the way the world eats while enabling more nutritious food choices."

Thimus Founder and CEO, Mario Ubiali, added: "We were immediately excited about the prospect of working with Givaudan because we see such a strong alignment in our missions of transforming food systems through a food experience lens. At Thimus, we're humanising neuroscience and using it to redesign the foods we eat. We're eager to support Givaudan in gaining an in-depth understanding of the motivations, culture and emotions that underlie these experiences."

Givaudan has used the Thimus technology extensively in several customer projects with very successful results. For example, Givaudan used Thimus technology in recent consumer tests on botanical soft drinks, comparing two prototypes. The results revealed that consumers implicitly found one concept significantly more satisfying than the other. The implicit data gathered from Thimus was used to pinpoint a negative reaction during the taste phase in the second product. The team was then able to identify a successful route to optimise the soft drink by improving mouthfeel. In this instance, the problem and its resolution could not have been uncovered by examining declarative data alone.

The technology will gradually be rolled out within Givaudan and will be available for selective customer use in some regions.

# Wheyforliving.com: Promoting the benefits of whey protein in Europe and beyond

Proteins are the building blocks of our body. They help us stay strong and healthy. The EWPA has been working for many years to raise awareness about whey protein and we are now entering an exciting new global phase.

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**A**s ‘veganism’ gains traction, particularly in the Western world, an increasing number of individuals are opting for protein supplements that are not derived from dairy. In this context, it may not be readily apparent to the public that numerous plant proteins are incomplete, lacking all essential amino acids. therefore, it is still crucial for the dairy sector to emphasize to consumers that unlike plant-based proteins, whey protein encompasses all nine essential amino acids.

Recent years have seen a booming health trend with consumers getting more focused on their health, fitness, and nutrition. This provides a great opportunity. Whey protein is acknowledged for its exceptional nutritional value, as it encompasses all essential amino acids required by the body daily. It plays a pivotal role in fostering the growth and maintenance of muscles and bones. Despite being widely recognized for its health advantages among doctors, nutrition scientists, and athletes striving to enhance their well-being and performance, many are less familiar with its benefits.

Back in January 2020, the European Whey Processors Association (EWPA) – EDA’s sister organization – launched [wheyforliving.com](https://wheyforliving.com), the B2C digital communication platform promoting the protein knowledge of consumers in Europe, raising awareness of the benefits and quality of whey protein, and ensuring that discussions about whey are science-based. The platform highlights what whey protein is, why, when, and how one should consume it, inspiring European consumers and ensuring that discussions about whey protein (and others) are based on facts and science-based knowledge rather than myths or hearsay.





With articles, infographics, videos, recipes, and tips, we aim to inspire individuals to make whey protein a part of their daily diet. For a generic website not connected to a specific brand, we've had tremendous success. Last year, we had almost 100,000 visitors on the website, and our ad campaigns were seen over 190 million times.

Recipes have been our most popular content for years, indicating a willingness for many to use whey protein in their diets. With [wheyforliving.com](http://wheyforliving.com), anyone can learn how to cook delicious and healthy pizzas, muffins, wraps, smoothies, soups, or pasta dishes with whey protein.

The ease with which whey can be used in cooking is one of its strong points. It can be a part of anyone's diet, not only body-builders' or athletes'. It is a valuable addition as a basic ingredient in anyone's kitchen.

## The Whey Forward

In 2024, we are preparing some of our most ambitious projects yet. We are pleased to announce a new project together with IDF and ADPI, to further expand and deliver positive messaging to consumers about the benefits of dairy-derived proteins. This step was a natural one to take, as ADPI have had consumer-directed messaging campaigns. With "the Strong Inside," ADPI focuses on proteins from milk, inclusive of whey protein, while wheyforliving specifically focuses on whey proteins. However, there are still many people around the world who have not yet been introduced to the benefits of whey and dairy proteins. Therefore, we have decided to take the opportunity to engage and involve IDF in protein messaging in areas of influence it may have worldwide, including both U.S. and EU geographic purviews. This will mean that we look outwards and bring the benefits of whey to an even larger audience.

As we move forward, let's continue to spread awareness and knowledge about the benefits of whey protein!

**Author: Alexander Roth,**  
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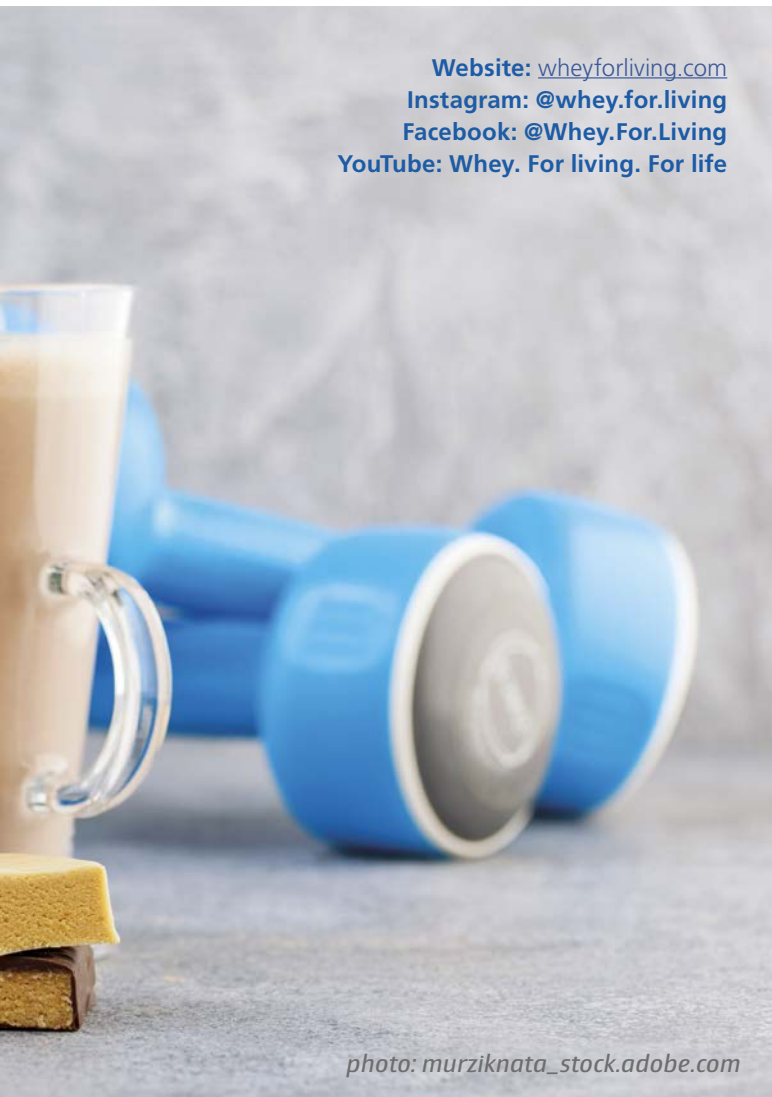


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NEWS

**DUPONT**

**Nanofiltration elements**

DuPont Water Solutions has launched the new FilmTec Hypershell NF245XD range of nanofiltration elements for use in the dairy industry. The durable elements are purpose-designed for use in long-lasting and efficient solutions for the separation and demineralization of milk and whey streams.

“The sanitary full-fit design of FilmTec Hypershell elements is specifically designed for food and dairy processing applications to help reduce the volume of water and energy consumed when concentrating milk and separating lactose or whey” said Yolanda Cuenca, Global Technical Leader Dairy. “OEMs, plant managers, and operators across the dairy ingredients industry are constantly seeking more cost-effective separation and demineralization solutions,” said Arturo López, Global Marketing Leader Dairy. “FilmTec Hypershell NF245XD elements can help them maximize operational efficiency by improving product yield while consuming less energy than alternative solutions.”

NEWS



Roquette further expanding its NUTRALYS plant protein portfolio (photo: Roquette)

**ROQUETTE**

**Pea protein range**

Roquette is pushing the frontiers of the plant protein market by launching four multi-functional pea proteins designed to improve taste, texture and creativity in plant-based food and high-protein nutritional products. By further expanding its established NUTRALYS plant protein portfolio, the ingredients company is bringing a host of new and improved application opportunities to the table for food manufacturers.

The four pea protein ingredients – NUTRALYS Pea F853M (isolate), NUTRALYS H85 (hydrolysate), NUTRALYS T Pea 700FL (textured) and NUTRALYS T Pea 700M (textured) – have been specifically created to address challenges commonly encountered when developing foods and beverages with plant proteins. These latest innovations present new format and formulation options, offering refined textures and high protein content for end products, such as nutritional bars, protein drinks, plant-based meat and dairy alternatives.





photo: SIG

Mupy's with ambitious growth target  
Packaging



photo: Staubli

Second robot line for Argentinian cheese manufacturer  
Technology/IT



photo: PREMIUM ROBOTICS

Directly from pallet to pallet  
Technology/IT



Two years of sanctions  
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