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Money-grubbing in inflation

The VLOG seal should be dropped



Roland Sossna
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For many years, the VLOG seal was a huge success - first and foremost, of course, for the seal's owner. In 2019, the German VLOG association reported an increase in sales of appropriately labelled GMO-free products in German food retail by a whopping 15% year-on-year to an estimated €11.3 billion. In 2020, the figure was already €12.6 billion. However, this was not because consumers were increasingly reaching for such products, but rather because retailers forced their suppliers to apply for seals for more and more of their products (and to pay for them; in German retail, €9.3 billion worth of dairy bore the VLOG seal in 2021). For food retailers, however, this has long since ceased to be an opportunity for differentiation - after all, all competitors now stock products with the VLOG label. It can be assumed that retail managers are more concerned with maintaining the sustainability profile of their respective chains at the expense of the producers and avoiding a shitstorm if they suddenly declare VLOG obsolete for their business. The label has always been irrelevant for sales, but hardly anyone wants to admit this, having ridden out the run on GMO-free in the first years.

Perhaps VLOG's motives were noble in 2010, but in the meantime VLOG has become a money printing machine, Greenpeace, whose offshoot VLOG can safely be called, sends its regards. According to the official VLOG fee scale, 0.015 to 0.035 percent of the relevant turnover is due. For a million euros, that is up to €350 in licence fees, so that the association, with an estimated income of probably €3 to €4 million in fees, is definitely a big ship among the licence fee collectors in Germany. For the trademark users, certification fees come on top of that. This also explains the aggressiveness with which VLOG presses for compliance with its standards, supply crisis due to the Ukraine war and all. On the contrary, it is claimed that Ukraine does not expect any decline in its GMO-free rapeseed exports for 2022. It is even insinuated that there would be no shortage of GMO-free feed at all, if only sufficient fair payment were made.

In sum: VLOG has outlived its usefulness for the vast majority of products. In times of rampant food price inflation, the label does not promote sales at all, but only increases the price. Neither the farmers and dairies nor retailers benefit from it. And certainly not the consumers, who are forced to spend less and less money on the noble ideal of GMO-free food. The VLOG label can go, says Roland Sossna.

BEVMAQ

Online platform for used beverage machines

BEVMAQ, a newly founded company in Quakenbrück, Germany, specializes in the global trading of used machinery and equipment for the beverage industry.

Founders and managing directors of BEVMAQ are Carsten Hormes, former managing director of Wilhelm Hormes Ing. KG, and the two GINDUMAC founders, Janek Andre and Benedikt Ruf. Hormes brings industry knowledge and network to the company through his many years of experience at the family-owned plant manufacturer Wilhelm Hormes. Andre and Ruf, have shown with the GINDUMAC Group how to successfully establish platform business in the used machinery trading industry.

BEVMAQ offers sellers and buyers of used machinery and equipment an all-round carefree package, ranging from purchasing and machine documentation to transport and installation.



BEVMAQ offers sellers and buyers of used machinery and equipment an all-round carefree package (photo: BEVMAQ)

"Global marketing, best possible purchase price and professional pick-up are essential. Transparent documentation, fair prices, and full transaction management make us unique in the market. In the non-transparent and fragmented used machinery market, we thus offer a long-awaited added value for the beverage industry," adds Carsten Hormes, MD Engineering of BEVMAQ. bevmaq.com

LSC

Protecting cheese

Cheeses made from unpasteurized or raw milk are estimated to be 50 to 160 times more likely to cause Listeria infection compared to those made from pasteurized milk. In order to answer the rising demand for a natural and safe solution to this critical issue, Lallemand Specialty Cultures LSC now offers the LALCULT Protect LC1, a bioprotective culture.

Tests carried out at the French National Research Institute for Agriculture, Food and the Environment (INRAE) have confirmed the bioprotective effect of the culture through significant limitation of the growth of *L. monocytogenes* concentration on different cheese technologies.



Lallemand Specialty Cultures has developed a new bioprotecting culture against *L. monocytogenes* (photo: LSC)

ELOPAK

First tethered caps solution

Announced in 2021, the tethered cap is one of the latest innovations launched by Elopak. The Pure-TwistFlip has been designed so that the closure remains attached to the carton throughout its entire lifecycle, thereby reducing the risk of it being littered. It complies with the EU's Single-Use Plastic Directive, which was introduced as part of efforts to reduce the impact of certain plastic products in the environment and tackle marine littering.

The Pure-TwistFlip 29i is also Elopak's lightest screw cap to date, helping to reduce the use of plastics. It can be combined with any Pure-Pak carton to create an original packaging solution that prioritises the environment, safety and consumer convenience.

The cap itself is produced by United Caps.



First dairy in Germany to use the new Pure-TwistFlip closure is NordseeMilch (photo: Elopak)

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IRB and the chocolate factory

Collaborative robot technology in the food industry



Ralf Naßmacher, Senior Sales Manager, ABB Robotics, Germany

Today's consumers are accustomed to an enormous variety and individualisation in their food selection while also expecting freshness and sustainability of the products consumed. These products have to find their way from the factory to the counter or the refrigerated shelf in the best quality possible. This trend is also clearly noticeable in the dairy industry along the entire value chain, with the added pressure of competition by the growing range of the milk substitutes market.

Many dairy companies are already meeting these challenges today through different levels of automation in their manufacturing and logistics processes. However, many process steps still require the involvement of human employees. That is why companies must ensure safety whenever humans and machines work closely together. In the case of robots, this is often done with cages, fences or other barriers. Great potential for more efficiency can be found precisely at these points of contact! Safe human-robot collaboration without spatial boundaries not only saves space in production, but also time – through the elimination of long ways the products have to go and more fluid production processes.

The IRB 660 with its handling capacity of 180 or 250 kg is perfectly suited for palletising and material handling tasks.



Safe human-robot collaboration in palletising

When looking for inspiration on how to realize such seamless human-robot collaboration, it is always worth taking a look across product and country borders. For example, to the Caçapava factory in Brazil, where Nestlé produces the popular KitKat chocolate bars for the American continent. As a food manufacturer, Nestlé is well acquainted with the ever-higher demands of consumers and the importance for manufacturing architecture. In the Brazilian production facility, Nestlé was faced with the challenge of making the packaging process more flexible and using the available space as efficiently as possible. For carrying out this automation task, Nestlé received support from a trusted automation partner: ABB. The Caçapava factory was already using ABB Robotics palletizing solutions, but now the food manufacturer needed a more compact robotic cell that could also be replicated at other sites. In addition, it had to be taken into account that employees occasionally enter the palletizing area in order to speed up the pallet changes. Therefore, safe interaction of the robots with their human colleagues was also indispensable in this application.

For this special requirement profile, ABB developed a new, compact robotic palletizing cell together with Nestlé's engineering team. The IRB 660 four-axis palletizing robot picks up the cartons

at the end of the production line with its suction gripper head and accurately stacks them on the pallet to distribute the load equally. With its handling capacity of 180 or 250 kg (depending on the variant) and a reach of 3.15 meters, this robot is predestined for palletizing and material handling tasks.

In addition, thanks to the safety-certified SafeMove technology, the IRB 660 is able to cooperate with its human colleagues on the production line. In SafeMove, the safety functions are integrated directly into the robot controller. Thanks to a smart combination of sensors and software, robots equipped with the SafeMove technology are able to detect when people are approaching and safely reduce their movement speed accordingly or stop it completely if necessary. They resume their movement autonomously as soon as people are within a safe distance again. This collaborative approach eliminates the need for space-consuming safety fences and other barriers and allows Nestlé to automate smaller areas on the production line.

Overall, SafeMove has enabled Nestlé to save around 30 to 40 percent of the space in its production cells compared to the previous ABB cells at the Nestlé site – simply by eliminating the need for protective fences.

Thanks to SafeMove technology, the robot can work together with its human colleagues on the production line without interference.



Simulation of cell designs shortens implementation

To demonstrate to its customer how the finished cell would work before installation, ABB used its RobotStudio software to simulate the complete solution, including the cycle times of the robot activities. RobotStudio is a virtual environment for programming and simulating complete robot installations. This is made possible by the virtual controller, a copy of the original robot software including the configurations used in real production. Using digital twins of the respective production cells, RobotStudio allows cell designs to be created and tested offline without having to interrupt ongoing operations. This significantly shortens the project time and helps to optimize the cell design before building the physical counterpart. With the help of RobotStudio, the project partners ABB and Nestlé were able to speed up the implementation and avoided any failures that might occur in the start-up process.

The new installation has been so successful that it has now been installed in three other Nestlé factories in Brazil, with 13 palletizing cells already in operation and further installations and commissioning underway.

Key to the flexible manufacturing of the future

Whether it's chocolate bars or yoghurt: both in confectionery production and in the dairy industry, there are process steps in which human and machine work side by side. That is where particularly high safety requirements come in. And it is precisely here that there are big opportunities for greater efficiency, both in terms of process speed and in the optimal utilization of the available production space. The combination of safe human-robot collaboration and a digital cell design brings advantages wherever food manufacturers need to respond to consumer trends by adapting their capacities quickly and efficiently. The end-to-end automation of manufacturing and logistics processes makes it easier to meet the demands for variety, freshness as well as just-in-time delivery of their products in a safe and future-proof way.



In order to demonstrate the functionality of the finished cell to its customer before installation, ABB used its RobotStudio software to simulate the complete solution, including the cycle times of the robot activities. In this way, automation solutions can be quickly integrated into the running operation.



To meet Nestlé's requirements, ABB's engineering team worked closely with the company to develop a robotic palletising cell tailored to the exact on-site conditions.

SACCO SYSTEM

Kemikalia is now Sacco System Nordic

Sacco System has renamed its Scandinavian subsidiary Kemikalia in Sacco System Nordic AB. Kemikalia, now Sacco System Nordic, was established as a private company back in 1914 in Malmö. Starting from the first of May 2022, after 108 years of activity, Kemikalia will change its name to Sacco System Nordic AB, and thus officially become a full subsidiary of Sacco System for the nordic countries.





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Testing, testing

The role of phage testing in creating stand-out, quality cheese



Author: Eric van den Berg, Phage Expert at DSM Food & Beverage



Consumer appetite for cheese products is showing no signs of slowing down, and the cheese category is becoming increasingly diverse and competitive to meet this growing need. But it's not just diversity of offering that is important to today's consumers – cheese producers must ensure their products are of the highest quality to stand out on crowded retail shelves. One of the biggest barriers to achieving consistent cheese quality is bacteriophages (phages) – viruses that infect and destroy

the lactic acid bacteria needed to produce yogurt and cheese. Controlling phages is crucial, as they can slow down fermentation and negatively impact the flavor, yield and texture of cheese products. Implementing an effective phage management solution can therefore make all the difference, helping cheese producers meet high manufacturing standards, deliver quality products and ensure continued consumer appeal.



(photo: DSM)

Overcoming cheese challenges

Phage contamination can be extremely problematic for cheese producers. Different types of phages can be found across the globe, which can easily transfer through air, equipment or people – and dairy factories in particular make the ideal environment for accumulation. Phages work fast; as soon as they find and infect a bacterial host, they quickly proliferate. And more complicated still, once phages enter and contaminate an environment, they can survive for long periods of time – even for decades. For cheese manufacturers, this can cause significant disruptions to the production process, and ultimately, affect the sensory properties of the final products. However, with the right measures in place, phages can be maintained at safe levels. These solutions, together with a durable culture rotation plan, can help ensure reliable and consistent production. As phages are strain-specific, culture rotation – composed of different phage-unrelated strains with comparable performance in application – is an essential practice in the dairy industry. Rotating from one culture to another prevents phages attacking one specific culture, which may lead the culture to proliferate and could eventually affect culture performance – ensuring cheese production remains consistent.

Phage testing is also widely used in today's dairies to help detect phages before they cause complications, helping to prevent production delays, minimize costly downgrades in cheese quality and help bolster cheese yield. However, receiving phage testing results is often a lengthy process. For instance, most dairies routinely take samples to be analyzed by their culture supplier, where results can take between five and 10 days.

Alternatively, dairies can perform an in-house analysis using an activity assay, but this can take anywhere from four to eight hours. This is usually too late to prevent the effects of phage contamination on the performance of cultures or the duration of the fermentation process. If the problem is left unaddressed, this can have a significant impact. In fact, just one week of phage-affected cheese production can result in significant cheese waste and losses of up to €200,000. It is no surprise that manufacturers are on the lookout for a solution that targets phages quickly, before it affects production.

Advances in testing

Recent innovation in phage testing can potentially revolutionize how we think about reliable and consistent cheese production. DSM's latest phage testing kit, for example, can detect phages within an hour, helping to increase cheese yield and quality, reduce waste and boost value in cheese production by 5-10%. A digital qPCR kit, the Delvo

Phage test kit is easy to use, offering quantitative phage detection results 'on the spot' at several stages during production – without needing to leave the site. Producers can analyze raw- and normalized (pasteurized) milk samples and the ingredients used for normalization, as well as milk samples from the cheese vat after filling and during fermentation. While for whey, testing can be carried out during whey separation in the cheese vat, or at a later stage during cheese production e.g. at the press, as well as in the whey buffer tank depending on which sample has the most predictive value for that specific process. As a general rule of thumb, the less phage pressure there is in a dairy process, the further downstream in the process the Delvo Phage test kit can best be applied.

By effectively monitoring and managing phages across several different processes, the test kit acts as an early warning system for phage problems, allowing producers to take a more proactive, preventative approach. Through early intervention, cheese producers can reduce economic losses by preventing waste, minimizing production slowdowns, and improving sustainability.

DSM's integrated phage management portfolio also includes the Delvo Analytics app, a 24/7 platform for phage insights and data from whey samples. Manufacturers can access insights on phage results and trends, as well as tailored recommendations on culture rotations and processes. These solutions, combined with DSM's whey testing and culture rotation services, enable cheese



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producers to make smarter, data-driven decisions for more efficient production and stay one step ahead of phage contamination.

Fast acting solution

Despite the widespread challenges phage contamination presents, lengthy phage testing times have historically been a barrier for many. Now, thanks to advances in testing technology, such as DSM's Delvo Phage test kit, phage contamination can be detected and addressed faster and easier than ever before. With these digital tools at their fingertips, producers can take a more proactive approach to phage management, for great-tasting, quality cheese – every time.

DSM is a dedicated partner to the food and beverage industry and is committed to supporting cheese producers, no matter the cheese challenge. With its extensive portfolio of cheese solutions

and team of cheese experts, DSM can help cheesemakers deliver the taste and texture consumers expect in both cost-effective and premium cheese, while also better supporting the health of the planet.

To find out more, visit:

Delvo@Phage test kit | DSM Food & Beverage

IDF New Bulletin

News

A new Bulletin on eco-friendly and energy-saving dairy technologies is already available on IDF's website. The purpose of these guidelines is to assist sustainability managers and leaders in improving energy management across the dairy supply chain.

GREATVIEW

Sustainable packaging solutions

With the official launch of Greatview Planet in June this year, Greatview is responding to the growing demand for sustainable packaging solutions for liquid dairy and non-carbonated beverages. Greatview Planet expresses Greatview's contribution to the development of the circular economy by increasing the share of renewable, wood-linked material in the packaging.

Made primarily from FSC-certified paperboard, Greatview's aseptic packaging material has sustainability at its heart by using natural feedstock from sustainably-managed forests and other controlled sources. To protect the product inside, the cartons are laminated

Greatview is committed to replacing fossil-based feedstocks with renewable alternatives

News



with polymers. With Greatview Planet, Greatview increases the share of renewable content linked to the forest by using bio-attributed, mass-balanced polymers made from tall oil based bio-naphtha, fully certified to the globally recognised RSB (Roundtable on Sustainable Biomaterials) Standard.



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Disinfection without handling chemicals

Molkerei Hainichen-Freiberg modernises its water treatment system

Molkerei Hainichen-Freiberg has modernised its water treatment system: by implementing electrolysis systems from ProMinent, it no longer needs to handle dangerous chemicals it previously used for disinfection. Instead, innovative systems use harmless cooking salt to produce a disinfection solution on site. The benefits for the dairy include a vast improvement in health and safety, lower operating costs and consistently low water consumption.

Reduced water consumption

Every year Molkerei Hainichen-Freiberg turns 150m kg of milk into yoghurt, blanchmange, cheese and milk powder for babies. The high consumption of fresh water for various applications, such as rinsing centrifuges, used to be an undesirable cost factor for the company.

Thanks to a chlorine dioxide system, the dairy has already managed to considerably cut costs for fresh and waste water in the past. The vapour water produced in the production process, which contains aromas and other ingredients that promote germ growth, is disinfected and then reused. This saves Hainichen-Freiberg around 60,000 m³ of drinking water annually.

Increased safety

Treating water with chlorine dioxide involves the use of hydrochloric acid and sodium chlorite. These chemicals can be dangerous during transport, storage and handling. This is why Molkerei

Dairies can increase occupational safety, reduce water consumption and lower operating costs through innovative water treatment. ProMinent supplies the right technology for this (photo: ProMinent).

Electrolysis plants from ProMinent eliminate the need to handle hazardous chemicals. They process harmless common salt directly on site into a disinfection solution for water treatment (photo: ProMinent).



Hainichen-Freiberg wanted to replace its outdated system and switch to a process without chemical handling.

Electrolysis gives the dairy a safe and cost-effective alternative to previous methods. By deploying ProMinent's electrolysis systems CHLORINSITU, it no longer has to handle dangerous chemicals. The innovative systems use harmless cooking salt to produce a disinfection solution on site, which is not only safer but also cheaper, thereby cutting operating costs.

The sodium hypochlorite solution (NaOCl) produced from common salt can be added to the respective process as required or temporarily stored for peak demands.

Upgrade completed during day-to-day operation

ProMinent modernised the dairy's water treatment system without any interruptions to production. With the aid of a temporary arrangement produced especially

for this project, the technicians installed the new system during ongoing operation. Huge benefits are to be gained from the modernisation: a vast improvement in health, safety and process reliability, lower operating costs and consistently less water consumption. Molkerei Hainichen-Freiberg's investment in a modern disinfection system has therefore paid off.

Key data

- » Safe and reliable disinfection of water vapour with an electrolysis system
- » Effective reuse of the processed vapour in further tasks
- » Reduction in annual chemical costs of around €11,000
- » Consistently low water consumption



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Fully automated cheese treatment with a robot

Stäubli six-axis machine used in the aging of Emmental cheese



The TX200L HE transfers the round cheese to the maintenance system's conveyor belt.

The quality of cheese ultimately depends on proper storage and aging. This is why Allgäuer Emmentalerkäseerei Leupolz in Germany's Allgäu Alps opted for an innovative, fully automated storage and maintenance system in which round cheese loaves, each weighing approximately 80 kilos, are handled by a large Stäubli six-axis machine.

The Leupolz cheese dairy is located near Wangen, just north of Lake Constance, in a truly idyllic setting surrounded by forests, pastures and meadows. Founded in 1960, the cooperative employs 25 people and obtains its milk from around 170 suppliers. It processes around 45 million liters per year, equivalent to about 125,000 liters per day. Among the dairy's specialties are cheese "wheels" weighing approximately 80 kilos, some 6,000 of which leave the farm every year, with around 10% qualifying for the Demeter organic label.

The correct maintenance and care of these huge cheeses is a laborious business. Achim Baumgärtner, Executive Assistant at Leupolz, explains: "Each cheese wheel has to be attended to about three times a week to ensure optimal quality. With an average maturation period of four months, the cheeses have to be washed, brushed and salted between 40 and 50 times, which is potentially costly in terms of labor and expenditure."

The management team at Leupolz was looking for a solution that would be as efficient as it was economical, so that they could offer this natural product at a competitive price despite the intensive effort that goes into its storage and care. The vision of a fully automated system began to take shape...

**Achim Baumgärtner,
Executive Assistant at Leupolz,
is enthusiastic about the
cheese maintenance system.**



Hygienic robots in preference to problematic linear axes

To realize this vision, they brought in Lemmermeyer, a plant manufacturer based in the Bavarian town of Deiningen. The company has extensive experience in the field of stainless steel plant construction and has built an especially strong reputation for itself in the food sector.

The stainless steel cheese maintenance system, which entered operation in 2019, is a prime example of Lemmermeyer's design expertise. Attention was paid to compliance with stringent hygiene standards, avoidance of dead spaces, and the right choice of robot for handling the cheese wheels – in this case, the large six-axis Stäubli TX200L HE.

"If we had used classic linear axes for the handling processes within the plant, we would have come up against a major hygiene obstacle," says Manfred Görthofer, Head of Project Management at Lemmermeyer. "Condensation buildup and lubricant contamination via the joints of the axes could not have been avoided, and this is of course problematic when processing unwrapped foodstuffs. That's why we are increasingly moving towards the use of encapsulated Stäubli robots with their superior hygiene design for such processes."

80 cheese wheels per hour

The Leupolz setup clearly demonstrates that the robot-assisted cheese maintenance system not only complies with strict hygiene

standards, but is also impressive in terms of performance, with around 80 cheese wheels passing through the system in the space of an hour. The task of the TX200L HE (HE = Humid Environment) is to load and unload racks with either four or eight shelves on which the cheese wheels are stored. A forklift collects the racks from the maturation chamber, delivers them to the processing area, and returns them afterwards.

The six-axis robot is equipped with a special gripper that resembles the prongs of a forklift. It uses this to pick up the wooden board on which the cheese rests and places it on the system's conveyor belt. The next step is to separate the board from its cheese wheel. The board is then cleaned, while the cheese is washed, brushed, sprayed with salt and dried with a blower. The final step is to place the cheese wheel back on its board and move it to a defined transfer position on the conveyor belt. Here, the TX200L HE picks it up and places the board together with the cheese wheel back in the correct compartment of the rack.

To ensure that the six-axis machine can approach all stations without hindrance, it is mounted on a base unit. The TX200L has a reach of just under 2.6 meters, and with a total weight of 100 kilograms to be handled (80-kg cheese wheel, 5-kg wooden board and 15-kg gripper), axis 6 operates at its full payload limit.

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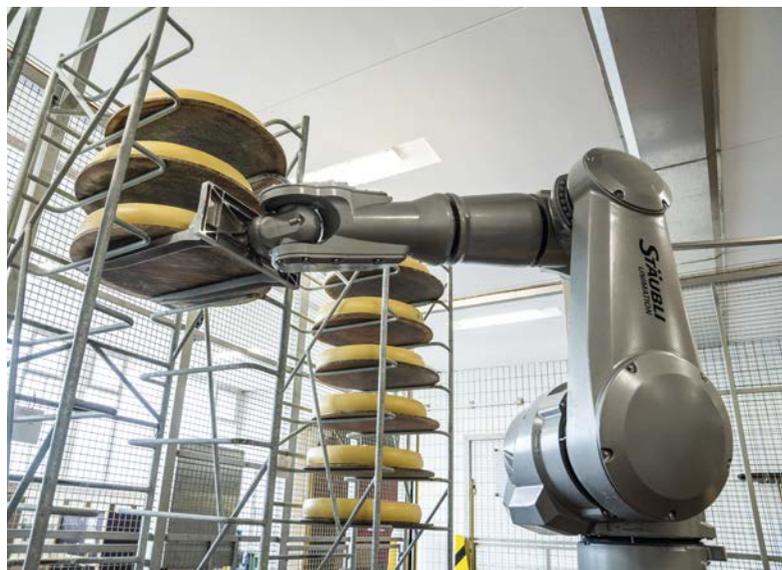
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For handling the cheeses, the six-axis robot is equipped with a huge special gripper that resembles the prongs of a forklift.



The innovative installation, which meets stringent hygiene standards, handles around 80 cheese wheels every hour.

Trouble-free operation from day one

Even when the robot is lifting and carrying its maximum payload, it can still easily cope in continuous operation. As Achim Baumgärtner says, "Our TX200L HE has been running absolutely trouble-free since commissioning. The same applies to the entire system. We have not experienced any failures here, and even our daily cleaning procedures are incapable of harming the system or the robot."

SPX FLOW

New IO-Link control unit

SPX FLOW has launched a new control unit as a part of the CU4plus platform that now includes IO-Link communication protocol. The CU4plus IO-link Control Unit works with all APV and Waukesha Cherry-Burrell valve ranges and can be retrofitted into any existing installed base when paired with an IO-Link master.

The CU4plus valve control unit fits any SPX FLOW air-operated sanitary valve bringing unprecedented safety, simplicity and reliability to dairy processes. The addition of the IO-Link technology, which is an Industry 4.0 data-ready communications protocol that connects sensors and actuators to process automation systems, allows data to send and retrieve to/from hygienic valves. It forms the backbone of many food and beverage control systems. It is hygienic hardware that does not need to be enclosed in a stainless-steel panel, a feature which reduces installation time and cost.

News

19th International Dairy Cooperatives Forum

7 to 8 September, Bialystok, Poland

The 19th International Dairy Cooperatives Forum is the most important event of the dairy industry in Central and Eastern Europe. This year's edition will be held in Bialystok, Poland on September 7th-8th, 2022.

Not only representatives of the dairy industry will come to Bialystok, but also experts and agricultural advisers from many countries. During the two days of the conference, they will discuss the most current topics related to dairy industry such as the Green Deal, CAP etc.

Information: www.forum-mleczarskie.org

News



The giant six-axis TX200L HE removes a cheese wheel from a storage rack.

Stäubli's HE robots have indeed been designed to endure even the toughest cleaning procedures with aqueous media in the 2pH - 12pH range. These robots even withstand spraying by a high-pressure water jet without any problems. This means they can be

operated without an additional protective coating and cleaned quickly and thoroughly. Plus, the HE versions are just as capable as the standard robots, which puts them among the fastest on the global market, even when operating with food-grade oil.

Higher quality – happier employees

The use of robots has also resulted in impressive savings. "In the past, we needed three people to attend to the cheese. Today, it's done by 'half' an employee," says Achim Baumgärtner. "Of course, this saves on labor costs and, much more importantly, we can relieve our staff of weekend working, deploy them where they are needed more urgently, and do not have to constantly ask them to work overtime. The shop floor atmosphere and the workload have improved significantly due to the higher degree of automation."

Another important aspect concerns the care and maintenance of the cheese wheels themselves. The enormous capacity of the robotic system makes it possible to significantly shorten the washing intervals and thereby enhance overall quality. Achim Baumgärtner: "Thanks to the robot, we can now attend to the wheels up to three times a week. In the past, we had to get by on just once or twice. The more intensive care has a positive effect on the quality of the cheese, and we have a higher product yield. This works to the benefit of the end consumer, too. Our Allgäuer Emmentaler has never tasted better!"



Stubborn Brat*



***an obstinate raw material**
[caking, adhesive, flowing poorly]

**The more complex it is to handle raw materials,
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drinktec 2022

Munich, 12 – 16 September



Water is the number 1 ingredient in beverage manufacturing and is also among the most important ingredients in the production of liquid food. So, it's only natural that the topics of water and water management have a major role on the agenda of this year's drinktec, which takes place from September 12 to 16 in Munich.

This starts with the responsible use of water as product water; using it as process water as frugally as possible is also important. For both water sources, the full savings potential has long remained untapped in the beverage and liquid food industry. The water footprint can still be made significantly smaller – leading industry representatives are saying that savings of 60 percent are definitely achievable.

Many starting points for saving water

But where can beverage manufacturers find the scope for frugal water usage? Here are a couple of examples: Regular product changes make it necessary to plan a rinsing or cleaning step between the production orders. A second example is the question of how dirty the containers or production lines are. Manufacturers of beverages or liquid food often base their cleaning processes on a maximum level of dirtiness that generally doesn't occur in production. And, for a third example: Possible recirculation often isn't carried out sufficiently. The available process water is then disposed of instead of being utilized in a cascading usage in other process areas.

Of course, there is much more at drinktec than „just“ water technology. Read IDM's show preview on the following pages.

Krones: Solutions beyond tomorrow

Krones will be presenting its new claim "Solutions beyond tomorrow", a host of innovations and a forward-looking vision of its goals, and will be defining sustainability as an innovation driver.

The biggest innovation driver in all new and further developments is the demand for sustainability, which is a major concern among consumers and customers. Krones consistently transfers sustainability to its entire portfolio in the fields of process technology, filling and packaging technology, and intralogistics, in order to offer resource- and media-efficient solutions. This development is supported by digitalisation, which also helps to boost performance in production and increase profitability and flexibility.

At the Krones stand at drinktec, everything will therefore revolve around saving resources and media in production, sustainable packaging solutions, and digital transformation. On show will be, on the one hand, solutions that already meet these requirements today, and on the other, approaches that may still seem visionary today, but will become innovations that go far beyond tomorrow. The new Krones claim forms the bracket for this.



Krones will be showcasing some visionary approaches to saving resources and media. (Fig.: Krones)

FAMIX: Production safety and cost efficiency

Production reliability and cost efficiency, flexibility and modern control and networking options: These are some of the top themes of the trade fair appearance of FAMIX-Maschinenbau.

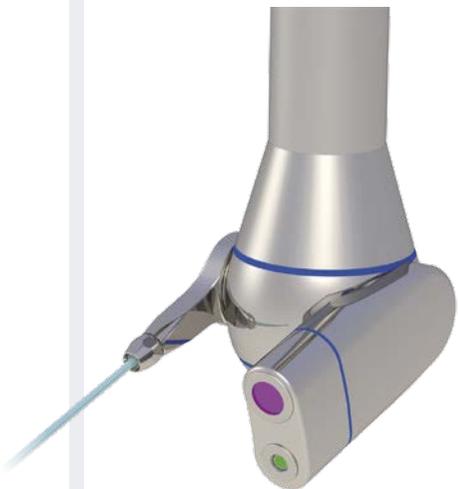
The main attraction on the stand is the FAMIX TurboDigi Mixer. This mixer combines degassing, mixing and carbonation in one system. The proportions are controlled digitally. Thanks to the patented FAMIX carbonating and mixing units, the production of sophisticated carbonated and non-carbonated beverages is possible.



FAMIX shows among others the TurboDigi Mixer (photo: FAMIX)

Fraunhofer IVV: Autonomous tank cleaning system

The Fraunhofer Institute for Process Engineering and Packaging IVV presents AJCsens, the latest version of an intelligent, autonomously operating tank cleaning system for time- and resource-optimised cleaning processes. The innovative, for the first time highly integrated and miniaturised sensor technology as well as the implementation of a self-optimising process control enable a demand-oriented cleaning of the entire tank space. The system thus solves the three major challenges addressed by this year's world's leading trade fair for the beverage and liquid food industry: Digital Transformation, Sustainable Production and Water Conservation.



The AJCsens autonomous tank cleaning system should put an end to the worst-case cleaning scheme. (photo: Fraunhofer IVV)

Evo-ON

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September 12-16
MUNICH
Hall A6 - booth 339

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Performance through Understanding

Jung Process Systems: **Extended Series**

A new size of the hygienic twin screw pumps from Jung Process Systems is making its debut at drinktec: the HYGHSPIN 105. It supplements the previous models HYGHSPIN 50, 70, 90 and 125 with an economical intermediate size. „This allows the range of applications to be refined in an even more targeted manner,” explains Sales Manager Henning Groenwoldt-Hesse. „If a HYGHSPIN 125 is actually oversized for the customer’s requirements, we offer a more cost-effective alternative with the new HYGHSPIN 105.”

In general, an evolutionary approach is taken for all HYGHSPIN models. The basic concept of all models offered under the HYGHSPIN brand name has remained the same, so that uniform spare parts can be used within one size. „All our pumps are developed according to the same design principle. The basis remains the same, and the entire pump does not have to be replaced when upgrading,” explains the Sales Manager. In fact, improved components or innovations can be integrated into existing pumps. For the customer, this means that uniform spare parts can be stocked for all pumps in use. Logistics are therefore lean and fast, as there is no need to stock components of different generations in parallel. The components are manufactured exclusively at the company’s headquarters in Northern Germany. Groenwoldt-Hesse: „Our pumps are designed for long production circles. Existing pumps are not devalued by innovations, but can be retrofitted. In this way, we want to make a contribution to sustainability and cost savings.”



A new size of the hygienic twin screw pumps is making its debut at drinktec (photo: Jung Process Systems)

GNT: **Coffees with colorful milk foam**

GNT will demonstrate how EXBERRY Coloring Foods can be used to create a vast array of colorful, clean-label, and sustainable beverages at drinktec 2022 in Munich. EXBERRY colors are plant-based concentrates that can be used to deliver a full rainbow of shades in almost any food and beverage application. GNT will hand out hard seltzers (4.5% ABV) and mocktails featuring yellow, orange, and red EXBERRY shades. A barista will also offer coffees with colorful milk foam while a mixologist will be creating a variety of vibrant cocktails. In addition, the company will showcase market examples of various beverages made with Coloring Foods. GNT recently announced plans to become the leader in its field on sustainability and the booth will also feature a section dedicated to the topic.



GNT will exhibit at drinktec (photo: GNT)

Flottweg: **Plant-based milk alternatives and centrifuges**

In the production of plant-based milk alternatives, the raw material is first mixed with water and finely ground. This is followed by an extraction process in which an attempt is made to extract as many ingredients as possible into the liquid phase. Flottweg decanter centrifuges are recognized as being the most efficient machines for the separation of raw milk from extracted plant parts. The Sedicanter is a decanter centrifuge produced by Flottweg for soft, free-flowing sediment that is difficult to process using a standard decanter. The unique Flottweg Sedicanter combines the advantages of a separator and a decanter centrifuge. Similar to a separator, this product clarifies the suspension, i.e. it delivers an optimally clarified concentrate. At the same time – like the decanter – it processes large quantities of solids at the inlet and produces dry solids (sediment) in the discharge.



The Sedicanter combines the advantages of a separator and a decanter centrifuge (photo: Flottweg)

The new IO-Link master modules and L-coded cables are suited for the food industry (photo: ifm)



ifm: L-coded cables for the food industry

Daily cleaning of the installations with a high-pressure jet is the norm for many applications in the food industry. The components used in this process must meet hygienic requirements, for example with regard to their material, and also have a high protection rating. The new IO-Link masters of the PerformanceLine series are specially designed for such applications. They meet the IP65, IP67 and IP69K protection ratings, the M12 sockets are made of stainless steel and the seals are made of EPDM. The new IO-Link masters have either four or eight ports and are available in two versions for either PROFINET or EtherNet/IP. Since the ports can supply actuators with up to 2 A, actuators with high power requirements, such as valve terminals, can also be connected. A current limitation can be set separately for each port, and a current and voltage measurement enables easy monitoring. If several masters are used in one application, the power supply can be cascaded via L-coded M12 cables with a daisy chain. This saves material, time and costs during installation. The parameters of the IO-Link masters and all connected sensors can be conveniently set via the moneo|configure SA software.

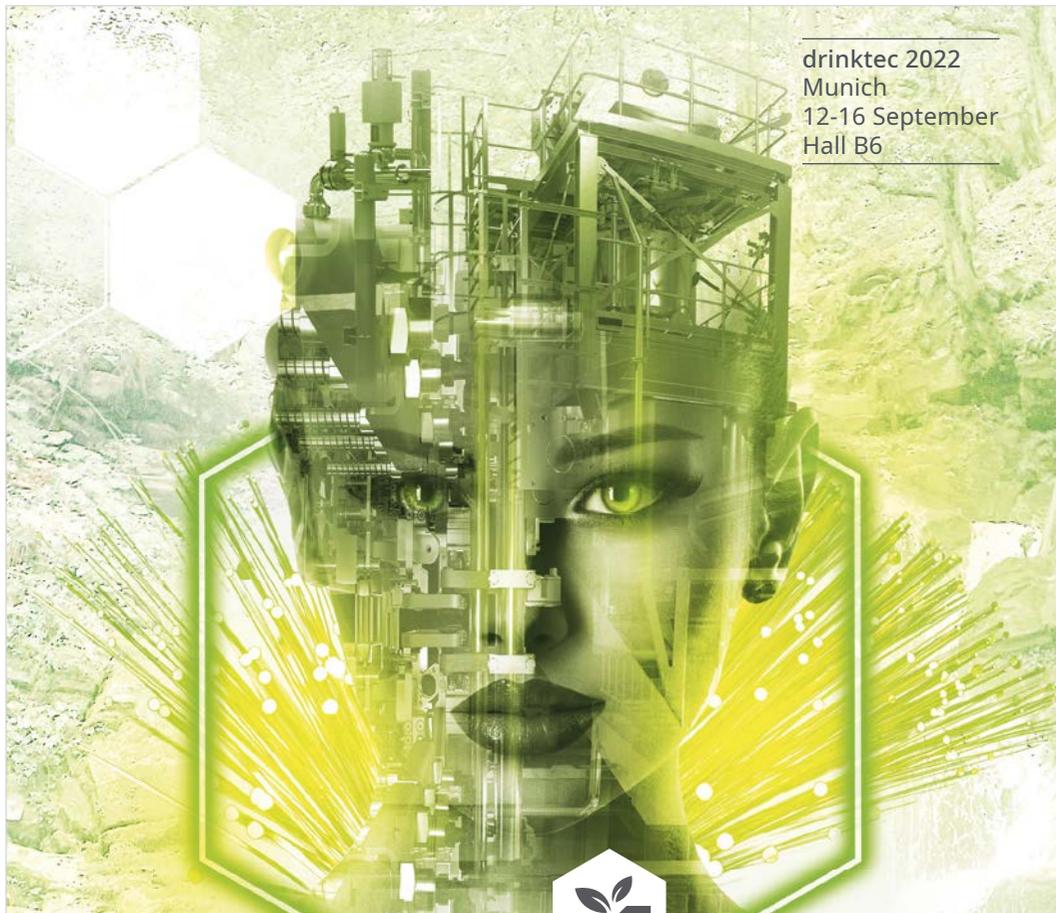
Connecting sensors to IO-Link masters in the food industry means that suitable cables are needed, which also meet the strict requirements. For this purpose, ifm now offers a comprehensive range of cables with connectors that are L-coded according to IEC 61076. The proven ecolink technology ensures a reliable and tight connection through secure mounting, even without tools. The L-coding and the cable cross-section of 2.5 mm² enable transmission of currents up to 16 A. The connection cables are available with straight and angled connectors and in lengths from 0.25 m up to 50 m.

Proleit: MES solution for the brewery and beverage industry

It is no secret that the industry is currently facing a significant overhaul linked to energy policy, digitalization and a shortage of skilled workers. When it comes to tackling and solving these challenges, the added value of a manufacturing execution system (MES) becomes all the more clear.

As one of the leading suppliers in this field, ProLeIT will be presenting its MES solutions, brewmaxx Integrate and Plant Integrate iT, at drinktec.

drinktec 2022
Munich
12-16 September
Hall B6



The future starts in our heads

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Aetna Group: Live demonstration

Aetna Group will demonstrate live the performance of its machines. A high speed end-of-line plant with a case packer that reaches 100 cartons per minute, incl. robot palletiser, wrapping machine and internal logistics will be on show. There will be a demonstration of real-time line monitoring systems.

Aetna will show the Recycle compactor, a machine which compacts consumables – such as empty, non-reusable cardboard boxes – and reduces their volume by up to 70%, facilitating their transport.

An ultra-high-speed Genesis Thunder stand-alone wrapping machine will also be on show, capable of a production rate of more than 200 pallets per hour.



Ultra-high-speed Genesis Thunder stand-alone wrapping machine (photo: Aetna Group)

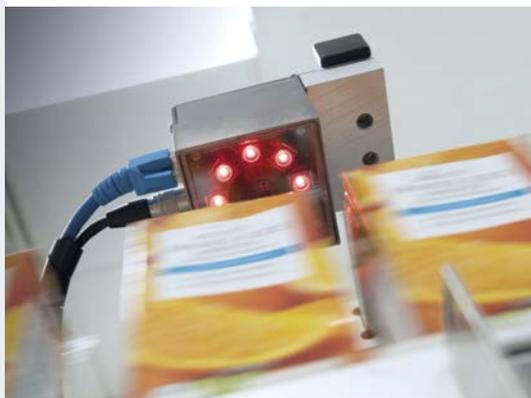
Domino: Smart vision systems

Machine vision camera systems are used to detect, capture, inspect and verify codes and plain text, providing automated optical inspection even at high line speeds.

Products and packaging are marked with e.g. barcodes, 2D Data Matrix codes, QR codes, best before dates, batch numbers at different line speeds. No matter which code is applied: Completeness and correctness must be checked to avoid expensive product recalls or rejects – ideally during production.

The new Domino R-Series industrial vision systems automatically verify that the applied code is correctly positioned, contains the correct information and provides the required qualitative readability.

Using industrial vision sensors, the intelligent camera systems detect marking errors before they can affect production. This eliminates labour-intensive manual inspections and errors can be detected and corrected at an early stage.



The new R-Series industrial vision systems automatically check whether the applied marking is correct (photo: Domino)

Sidel: New packaging system

Sidel is pushing the boundaries again in the aseptic packaging market with the introduction of the Aseptic Predis X4. The new system is an integrated blow-fill-cap solution that incorporates consolidated Predis dry preform sterilisation, making it ideal for the growing market of sensitive beverages in PET bottles. It builds on Sidel’s proven and successful aseptic technology and introduces further innovation in design and digitalisation.

The Aseptic Predis X4 is developed by Sidel to continue to help its customers to meet the growing market for healthy and nutritious drinks with a long shelf life, such as juice, nectar, soft drinks, isotonic, teas (JNSDIT), and liquid dairy products (LDP). Demand for these products is expected to reach 192 billion units by 2024, a rise of 44% compared to 2011. Sensitive products represent 55% of the non-alcoholic beverages market and forecasted growth (at 2.3% CAGR 2019-25) is higher for PET than for other materials.

The Aseptic Predis X4 will be introduced for the first time at drinktec 2022 and will then go through a progressive deployment plan across applications and regions.



The Aseptic Predis X4 will be introduced for the first time at drinktec 2022 (photo: Sidel)

**Bosch presents
Process heat
solutions
(photo: Bosch)**



**Bosch:
Solutions
for steam and heat**

Bosch Industrial Boilers is presenting its heating and process heat solutions for drinks manufacturers, breweries and dairies.

Multi-fuel firing systems create a very high level of supply reliability in the area of fuel supply. Systems with local fuel storage tanks or using self-generated energy from renewable sources ensure interruption-free operation during times of insufficient main fuel supply. Even existing systems which have been in operation for many years can usually be converted to use various energy sources flexibly. In addition to increasing system availability, the expert team from Bosch is supporting boiler operation to become more energy efficient and resource-saving thanks to comprehensive project planning and modular technology.

Demand for solutions to use renewable energy sources is rapidly increasing. Bosch covers the topic of climate neutrality in heat and process heat supply using a multi-technology approach. This includes a portfolio for using carbon-neutral energy sources such as green hydrogen, biofuels or hybrid solutions. Bosch is also offering new options in electrification for the drinks sector, presenting the new electric steam boiler (ELSB) at its trade stand: The boiler is 100 per cent electric and, in combination with green power, is fully carbon neutral. It is particularly attractive for companies with photovoltaic systems, for example. The electric boiler hugely increases the proportion of green electricity used, paving the way for carbon neutrality. Bosch offers the ELSB electric steam boiler in various output sizes for 350–7500 kg/h steam with very high efficiency over 99 per cent.

 Sustainable heat.
Industrial experts.

Gernep: New generation of labellers

GERNEP will be showing its new generation of machines for the first time at drinktec. Inside and out, there are a number of innovations to discover. At the fair, visitors can marvel at a premium labeller with wet-glue/self-adhesive technology and two smaller labellers for the beverage industry. In keeping with the motto More than Labelling, Gernep has invested a great deal in recent years in the further development of the company and its machinery, in order to provide customers with the best possible assistance in presenting their products.



GEA WHITEBLOC AERO

Optimized to offer ESL beverage producers sustainability and low TCO, GEA Whitebloc Aero combines a sustainable and reliable decontamination container process with great operational flexibility.

Let's talk at Drinktec 2022, Hall A3, Booth 373

SACMI: Glue consumption minimised

SACMI Beverage has developed an innovative system for its labellers in which the glue dots are applied exclusively to the label and not to the container. This reduces consumption to a minimum and makes it easier to separate the label from the container during recycling. As part of the REFPET project, SACMI proposes the use of special "washable adhesives", i.e. substances that are soluble in alkali and at low temperatures, a solution that is particularly suitable for returnable PET packaging where high washing temperatures could damage the container.



Glue dots on the label and not on the bottle save resources. (photo: SACMI)

GEA: Saving water

GEA's innovations at the show deal with water consumption in processing operations. GEA will demonstrate the intelligent software solution GEA SmartFiltration Flush for membrane filtration plants, which halves CIP fresh water consumption. While the plant is being cleaned, sensors constantly assess the permeate quality of the water. They stop the process as soon as the hygiene level is reached, instead of planning it firmly in advance.

Another new feature is the GEA Centrifuge Water Saving Unit, which has already proven its savings potential at the Naarmann dairy. It enables the cooling water required for the separation technology to be reduced by several hundred litres per operating hour. With a very small footprint, the unit can be easily fitted into the production room and retrofitted within a very short time.



GEA is working on the OptiPartner autopilot. This enables dairies to optimise themselves. (photo: GEA)

KHS: Our path into your future

KHS will be presenting its latest machine and packaging systems. The focus will be on the filler/seamer block SmartCan by KHS/Ferrum. The SmartCan gives operators greater line efficiency and maximum process reliability. Customers profit from a space-saving, flexible system that is convincing thanks to its simple operation and sets new standards with its optimized hygiene concept. At the same time the joint development scores on simple and fast format changeovers when filling different products.

Moreover, for KHS the issue of environmental protection is also a major focus at the trade show. "Consumers and beverage producers are actively calling for sustainable packaging that's as climate-friendly and low on resources as possible," stresses Dr. Johannes T. Grobe, CSO of the KHS Group. "KHS is well aware of its responsibility here and helps customers by providing specific advice and developing and implementing recyclable systems." With its new KHS Loop LITE packaging concept the systems provider is consistently continuing to pursue this policy and now presents a very light 0.5-liter PET bottle made entirely of recyclate. The specially-developed design of this ecofriendly packaging for highly carbonated beverages allows up to 25% less material to be used compared to standard market CSD bottles and can be fed into the closed recycling loop with no trouble whatsoever. Its thin interior coating

of glass also ensures long-term product protection, with the tried-and-tested Nature MultiPack system from KHS providing optimum carrying convenience.

Greater flexibility with automated line changeovers

Besides environmentally-friendly packaging, more and more consumers want to be able to choose from a wide range of products. Bottlers thus frequently need to expand their portfolios, with the number of stock keeping units or SKUs constantly on the rise as a result. In order to keep line availability and efficiency at a high level, they require fast product changeovers. KHS caters for this demand with its new, modular automation concept for PET lines. With fast, reliable and reproducible changeovers it significantly boosts the overall equipment effectiveness. In ideal conditions format changeovers from one to another SKU can be performed in 30 minutes – including running the system empty and restarting it. Up to 80% of all manual activities are rendered superfluous by the new KHS setup.



Lantech: Automatic stretch wrappers

A highlight at the Lantech stand is the fully automatic RL Automatic ring stretch wrapper. This machine innovates wraps up to 180 loads per hour without compromising on packaging quality and safety.

The new RL Automatic ring stretch wrapper combines various features for high speed and outstanding wrapping quality with those that eliminate operator intervention and minimise downtime and safety risks. The Metered Film Delivery feature, for example, offers doubled wrapping force for maximum stability without squeezing and twisting the load or tearing the film. The Load Seeking Clamp feature provides protection against film tears by welding the film end to the load. With Wrap Cycle Control, the film tension can be adjusted during operation via the control panel. The optional extra Automatic Roll Change allows the film rolls to be changed automatically. The RL Automatic stretch wrapper is suitable for load dimensions of up to 1200 mm x 1200 mm x 2700 mm.



The fully automatic RL Automatic ring stretch-wrapper wraps up to 180 loads an hour. (photo: Lantech)



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Filler/seamer block SmartCan by KHS/Ferrum
(photo: Roth und Schmid Fotografie)



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Beckhoff: **MX-System**

The MX-System from Beckhoff is a flexible, space-optimized and intelligent system solution that can completely replace conventional control cabinets, thereby opening up entirely new possibilities in plant automation. As a modular control cabinet replacement that can also be decentralized on the machine if required, the MX-System saves engineering, assembly, installation as well as maintenance effort. This enables highly efficient processes for the manufacturers and operators of machines and systems – from the planning, setup and installation of the MX-System through to the maintenance of MX-System-equipped machines.

For the machine end user, there are clear advantages in terms of service and maintenance: the MX-System consists of EtherCAT components that are networked throughout, so comprehensive system diagnostics are possible at any time. In addition to classic status LEDs, each function module has a unique serial number in the form of a DataMatrix code. This code can be scanned via a smartphone app, which connects the smartphone to the control in order to retrieve diagnostic data on the corresponding function module. Module exchange is also very easy, since the modules are hot-swappable and can be plugged in and unplugged during operation. Just like the manufacturer of the machine, operators also benefit from the fact that the modular MX-System covers the com-



The MX-System significantly improves efficiency (photo: Beckhoff)

plete variety of automation technology with considerably fewer parts and therefore fewer assemblies to stock as spares. Through their simple basic principle, MX-System modules can also be reused very easily beyond the life cycle of the machine.

JUMO: **Complete solution with intuitive operation**

JUMO is expanding its extensive automation portfolio with a complete solution for process engineering operations. The application is designed to be particularly user-friendly and can be used in a wide range of industries.

At the heart of the solution is the JUMO variTRON automation system, for which a special application for process engineering has been developed. With the help of various JUMO smartWARE applications, an integrated solution can be implemented from the sensor to the cloud. The focus is on three user groups.

Plant operators can use the new JUMO smartWARE program to intuitively create and edit process engineering programs and recipes using a graphical editor. This browser-based application can be used on a PC, laptop, or tablet.

End users can then visualize and control the program flow in the browser with the aid of a display, for example on a web panel or a tablet. The user interface can be freely customized, is consistent and can be operated intuitively.

In addition, other JUMO applications such as JUMO smartWARE SCADA, JUMO Cloud, or JUMO smartWARE Evaluation can be used for monitoring, batch recording, and individual report generation.



JUMO offers an end-to-end automation solution from the sensor to the cloud (photo: Jumo)

BERICAP: **Tethered caps**

BERICAP is presenting a fully comprehensive range of closures for the beverage industry to drinktec visitors. Since 2021 aluminium roll-on closures are part of the portfolio when MALA Verschluss-Systeme became part of the BERICAP Group.

According to a consumer study on tethered caps, which will become mandatory in Europe in July 2024, consumers are willing to embrace eco-friendly closures if they also have handling benefits. A majority of consumers surveyed rated the BERICAP tethered caps – which go by the name of ClipAside – more positively than conventional closures for their intuitive handling, their 180-degree opening angle and the fact that they are very hygienic. Beverage manufacturers who change over to ClipAside early can enhance their brand appeal and improve customer loyalty.

BERICAP will show its ClipAside solutions (photo: BERICAP)



Envirochemie : Calculating the carbon footprint

Envirochemie can provide companies with an individual CO₂ balance sheet for their water processing plants, in which experts determine the carbon footprint of their industrial water and wastewater management systems. The first step is to work with the customer to select the plant components or processes to be examined. Next, the data is researched and analysed, before being used as the basis for compiling the individual carbon footprint. The experts then determine the potential for optimization and present it to the customer.

Benefits of CO₂ accounting:

- » Evaluation of technological alternatives, such as water reuse or recycling, that also reduce the water footprint
- » Highlighting of alternatives for sludge disposal
- » Identification of options for reducing operating costs

A large-scale dairy succeeded in relieving the pressure on its existing aerobic wastewater treatment plant with a Biomar anaerobic reactor from Envirochemie. This reduces the energy needed for ventilation units by 30%. Partial flows with high organic loads are also treated in the anaerobic reactor. The biogas created enables 30% savings in fossil fuels and disposal costs. All in all, the carbon footprint is reduced significantly.



A dairy uses an anaerobic reactor to relieve pressure on its aerobic wastewater treatment plant (photo: Envirochemie)

ILPRA Monomaterial thermoforming

ILPRA's product management team dedicated to FS & FFS technologies is working towards achieving a dual sustainability, capable of referring both to the materials used and to the work cycle of the technologies applied, in a holistic approach. This means considering the plant as a single unit whose result is more than the sum of individual parts; thinking holistically therefore means conceiving a machine as a whole, avoiding overlapping of functions and maximizing the integration between the parts. This is why ILPRA is able to design and supply fully automated packaging solutions, starting from the hopper to palletizing.

Thanks to ILPRA every dairy can have access to a customized package, thermoformed by compostable or recyclable packaging material, no matter if PLA, PP or rPET. This supports the European 2025 objectives connected to carbon footprint reduction of the environmental impact of packaging.

By the renewed and updated range of ILPRA lines, it is finally possible to dream about a unique monomaterial

thermoformed rigid container decorated with latest labelling technologies and highly customized, allowing customers to fully embrace the principles of the circular economy and in the same time be immediately recognised in food shops as a game changer compared to standard rigid container shapes available in the market.

The ILPRA range dedicated to filling machines for preformed packages allows sustainable packaging, proposing itself as the optimal solution for easily carrying out sanitizing, unstacking and lidding operations,



Fill Seal 6L for set yogurt with a capacity of 15,000 cph (photo: ILPRA)

even for special materials such as glass, ceramic or cellulose-based containers. Thanks to the constant collaboration with the main stakeholders in the field of primary packaging, ILPRA is a reliable hub for achieving the ideal creation of the container, scrupulously studied by the ILPRA Product Management team so that the entire package respects the parameters required by the new regulations.

ILPRA SpA, is a 100% Italian company operating since 1955 in the packaging business, listed on the Italian Stock Exchange, generating more than €30 million turnover.



Thermoformed monomaterial packages (photo: ILPRA)

News

Learn from the expert!

The CHEESE TECHNOLOGY book has been a German a long-standing, widely appreciated benchmark and is now available in English. The book comprises all fields of cheese technology in an exemplary extent and depth. Much of the latest literature has been reviewed and insights thereof integrated in this book.

Further information and order:
www.cheese-technology.com

THE BOOK HAS 9 CHAPTERS:

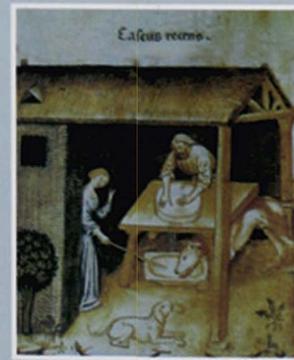
General overview, divided into definition, processing scheme, history, significance of the various groups of cheese concerning nutrition Raw material and additives for the production for various groups of cheese Varieties of the respective groups of cheese as well as their manufacturing processes and evaluation (quality, shelf life, etc.) Packaging of the various cheese groups Influences on quality, checking and quality assurance Description of defects and notes for improving quality issues.

CHEESE TECHNOLOGY

by Josef Kammerlehner, 930 pages, ISBN: 978-3-00-021038-9, €109 plus shipping

Josef Kammerlehner

Cheese Technology



2009

This book addresses above all cheese makers but also trainees as well as students, graduates of food technology and scientists. For special instructors, this book is a solid base for courses or lectures. It is an extremely valuable help as reference book for dairy specialists and the cheese industry as well as for technical advisers and suppliers. CHEESE TECHNOLOGY makes an invaluable contribution to the preservation and documentation of accumulated know-how of cheese technology across decades.

Every gram counts

Grunwald Inline fruit mixer



Grunwald linear machines with inline fruit mixing technology (photo: Grunwald)

Producers of yoghurt with various flavours are familiar with the situation of having to carry out several product changeovers every day and they know the special challenges in order to reduce product loss and machine downtimes to a minimum. With the inline fruit mixer Grunwald has developed an intelligent and innovative solution to meet these challenges.

When this inline fruit mixer was developed special attention was paid to keep the product feeding pipework as short as possible. The inline fruit mixing reduces the mixing process to a minimum in case of a flavour change and thus considerably reduces the loss of fruit which is an important issue. In addition the change between the different types of fruit can be carried out much more quickly. This means “reduction of the cost of products and increase of productivity at the same time” for the producer.

This inline fruit mixing technology is economically advantageous especially for machines filling yoghurt with fruit layer. In order to fill yoghurt with fruit layer a pre-filler for fruit as well as a main filler for stirred natural yoghurt is used.

To produce stirred fruit yoghurt on such a machine the pre-filler is used as fruit dosing pump which accurately feeds the fruit preparation cycle by cycle to the filling station for the stirred natural yoghurt. The inline mixer equally mixes the fruit preparation in the yoghurt. The percentage of fruit preparation can be changed on the operator panel of the cup filling machine. The modified values are automatically stored in the recipe control. The change-over from filling yoghurt with fruit layer to the filling of stirred fruit yoghurt is either carried out manually within approx. 5 minutes or in fully automatic operation by the push of a button (or: via the touch panel), depending on the specification of the machine. The customer can choose from very simple and low budget design up to fully automatic CIP/SIP design.

This technology is dedicated for being used on flexible rotary-type and linear machines with frequent change between various types of fruit and for production speeds of up to 12,000 cups/h and for filling up to 6 types of fruit. The advantages compared to stand-alone fruit mixers are low investment costs and it is verifiable that the production costs are reduced, and the flexibility is increased.

IT-secured company growth

Milk and cheese from the Zurich mountain regions at Natürli Zürioberland

The independent small cheese dairies in the Zurich Oberland focus on production. However, for many of them, Natürli Zürioberland AG takes care of sales, marketing, logistics and, in some cases, cheese ripening. This concept has enjoyed increasing success for almost thirty years – a growth that needs to be controlled and managed. To support this, the company has recently started using a new ERP system and now has a secure IT base for business in the years to come.

It all began in the 1990s with the idea of saving small mountain cheese dairies from extinction and helping them meet the demands of today's cheese market. Instead of producing widely known cheeses, they should in future focus primarily on regional specialities. The "Natürli Zürioberland" cooperative, which was founded for this purpose, took over tasks such as marketing, distribution and logistics – and was successful very quickly, so that the cooperative could be converted into a public limited company.

Mastering complexity

"The continued success proved the founders of our company right," says Gino Barille, IT manager at Natürli Zürioberland AG. "The annual growth of our company has continued unabated ever since. But the more the business grew, the greater the demands on the management of business processes became." For many years, an ERP (Enterprise & Resource Planning) system based on Excel and the database software Access, some of which had been developed in-house, did the job. Eventually, however, it was no longer able to cope with the complexity. "Too many double entries of processes or difficult maintenance due to partly unknown software codes showed more and more clearly: we need a new, modern ERP solution," says Barille.

"In the end, the decision was made in favour of an ERP system oriented towards medium-sized companies and tailored to the processes of the food industry," adds Barille's colleague Manuel Diener, the head of logistics at Natürli Zürioberland. "With the GUS-OS Suite, we are treading a middle path: We have a standard solution that has been established on the market for a long time, which on the one hand offers an extremely large number of functions. On the other hand, it doesn't overwhelm us with its own complexity and the sometimes long communication channels that are often found with the really big software providers."



From "mild" to "extra mature"

Today, the new ERP solution controls all essential business processes – starting with the eight clay stone cellars for cheese ripening from "mild" to "surchoix" to "extra", through the connection with distribution, the ordering processes with the office staff, to delivery and logistics. In addition, the company distributes other articles for partners in the Zurich region. This also means that both micro and larger companies have to be mapped, even though they may use completely different communication and IT systems.

The biggest change brought about by the GUS-OS Suite was the replacement of many manual activities: "Before, many employees ran around here with lists," recalls IT manager Barille, "but today every material movement and every step flows directly into the system." Now, there are also fixed roles for the individual employees, for example for purchasing or logistics. "This creates transparency and enables targeted and data-supported production planning," says Barille.

One example is the logistics process: At the beginning there is the order entry, which defines the delivery date and the tour. In

Many of Natürli Zürioberland AG's cheese specialities mature in eight claystone cellars.
(photo: Natürli Zürioberland AG)



Gino Barille, IT manager at Natürli Zürioberland AG:
"The new ERP system creates transparency and enable targeted and data-supported production planning." (photo: Natürli Zürioberland AG)

the next step, sales releases the orders so that internal logistics can take over to pick the goods. Then the actual delivery takes place, including the printed delivery note, on the basis of which and after successful delivery, the invoice can finally be issued. By specifying and controlling these steps, the ERP solution contributes significantly to process reliability in the company.

Availability and price calculation at the push of a button

"This way it is also easier to deal with conflicting goals," emphasises logistics boss Diener. "Of course, sales wants to sell as much as possible, but production must also be able to keep track of that." With

the help of the GUS-OS Suite, the company is now able to call up the necessary information at the push of a button, for example, in order to negotiate the appropriate prices. Diener: "Availability, order costs, price calculation – today, we can call up all this much faster and more reliably."

After about a year of implementation, the solution went live in late summer 2021. Barille and Diener, together with the GUS experts, also focused primarily on testing – not only to ensure that the software would run smoothly in live operation, but also to familiarise future users of the system with the new software step by step in this way.



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Manuel Diener, Head of Logistics at Natürli Zürioberland AG:
"The standard functions of the GUS-OS Suite provide all those specialist functions that we need as a food company."
 (photo: Natürli Zürioberland AG)

No more "jumble of little buttons"

The integration and training of the specialised departments represents one of the biggest success factors of the project. After all, it was necessary to transfer all the individual solutions and makeshift tools of the colleagues into a uniform solution. A "jumble of hundreds of small buttons" was thus transformed into a stringent user guidance system that is also fully documented. "The prerequisite for this step was, of course, that the standard functions of the GUS-OS Suite provided all the technical functions that we need as a food company," Manuel Diener emphasises.

In this respect, the ERP introduction also meant a standardisation of the business processes – a process that is never completely finished, especially since the company continues to grow and the processes also change continuously as a result. One advantage of the GUS-OS Suite for such process changes is its Workflow Designer: With the help of this central tool, Barille, Diener and their team can make adjustments without interfering with the programme code. This in turn significantly increases the maintainability of the system. "And if we did come across very special features, such as the connection of our weighing system, GUS programmed this within the standard framework of the solution," reports Gino Barille.

Today, the solution is supported and lived by the entire team at Natürli Zürioberland, also because it runs in a stable and fail-safe manner. In addition, the individual departments appreciate the fact that they now have a common database: What the sales department sees, the logistics department sees as well. This saves a lot of time and redundancies and avoids many errors, so that, for example, less goods have to be written off. Last but not least, the new solution frees up a lot of resources, which the technical staff can now use more for their core tasks.

IT base promotes new business ideas

Barille and Diener also see their company as better equipped for the future: It now has the necessary foundation to optimise and expand further business processes. Process and quantity expansions can be carried out easily and quickly with the help of the GUS-OS Suite – without programming knowledge.

"In the past, we could not implement many business ideas, or only with great difficulty, because it was simply not possible to map them in our software," recalls IT manager Barille. "Today, on the other hand, it's the other way round: the ERP solution partly gives us new ideas because the range of functions is very large and tailored to our industry. In this respect, our new ERP implementation is much more than just a software change. It offers the entire company many new possibilities far beyond IT."

Natürli Zürioberland AG

Natürli Zürioberland AG sells selected regional cheese specialities from commercial cheese dairies under the "natürli" label. The company also produces high-quality dairy products and cottage cheese at its own dairy in Saland in the Tösstal valley. natürli cheese and natürli dairy products are available at numerous retailers, in the company's 15 humidors, from major distributors and in the natürli online shop.

The history of Natürli Zürioberland AG goes back to the 1990s. At that time, the association "Käservereinigung der Region Zürcher Berggebiete" was founded to promote the production and sale of cheese, dairy products and specialities from the Zürcher Berggebiete region. The aim was to secure the livelihood of the village cheese dairies and to preserve the associated traditional cheese culture in the region. Thus, since 1995, Natürli Zürioberland AG has offered a comprehensive range of high-quality cheeses and dairy products from small regional cheese dairies.



(photo: Natürli Zürioberland AG)

Russia

A dairy industry in a perfect storm

The Russian dairy industry is in a "survival mode", being braced for the worst crisis since Soviet times as Western sanctions wreak havoc upon production and consumption. Russia has been subjected to sanctions for many years before the current crisis, said Arkady Ponomarev, founder of the Russian dairy holding Molvest. However, the new challenge is different from what the industry has ever experienced.

"The economy that was in Russia until February 24, 2022, and the one in which the country exists after the beginning of the special military operation in Ukraine, are two completely different economies," Ponomarev said.

A set of measures embarked on by the Russian Finance Ministry and Central Bank has provided the Russian dairy industry with a "temporary shelter", Ponomarev said. The biggest question now is how safe this shelter is as new sanctions keep being imposed. Besides, it is yet to be seen how long Russia could ensure "that life is supported inside this shelter," Ponomarev added.

The Russian financial authorities have indeed protected the dairy industry by rescuing the Russian rouble's exchange rate. Only two weeks into the Russian invasion of Ukraine, the rouble was down 40%, at 139 roubles to the dollar – the lowest level ever.

Since that low point on March 7, however, the Russian rouble has staged a dramatic recovery. At the time of this writing, it was trading at 71 to the dollar, which was stronger than it was at the time of the invasion. Still, the exchange rate fluctuations prompted dairy companies to suspend new investments in the Russian dairy industry and even freeze some already launched projects.

"The sanctions have had a significant impact on the entire dairy industry. Most companies had to suspend investment projects and farm construction," Igor Eliseenko, general director of the Siberian-based dairy holding company Molsib said.

"MolSib is operating normally, but at the same time, globally the dairy industry depends on imported goods and equipment, spare parts and packaging components," Eliseenko said, adding that milk farms experience problems too, in the first place due to a lack of imported feedstuff.

The Ukraine war also triggered a mass exodus of Western business from the Russian market. As many as 300 brands pulled out from the country or downsized local operations, including Valio. The Finnish dairy company sold the Russian operations to Velkom Group. With the transaction, Valio's personnel in Russia has transferred to Velkom Group.

7th IDF Symposium on Science and Technology of Fermented Milk 29 and 30 Nov, 2022

The 7th IDF Symposium on Science and Technology of Fermented Milk will be a two day virtual event held on 29th and 30th November 2022. The event is dedicated to researchers, product developers, as well as regulators.

Symposium sessions include:

- » Session 1: Innovation in fermented dairy for human health
- » Session 2: New developments and opportunities in fermented dairy
- » Session 3: Exploration of novel ingredients and processes for fermented dairy
- » Session 4: Microstructure of dairy products

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News



Russia may see a slump in dairy products consumption

"Russia's attack on Ukraine made it impossible to continue our operations in Russia, both ethically and from a business perspective. Exiting from Russia has proved difficult in this situation because of the constantly changing legislation and reciprocal sanctions. We have sought out solutions and a suitable buyer throughout spring. With the transaction, we will complete this process and our operations in Russia will end," said Valio CEO Annikka Hurme.

Exiting from Russia is indeed a tricky task for Western companies, as the Russian government threat foreign firms pulling out of the country to nationalize their assets.

Disrupted supply chains

The first months of the Ukraine war have been marked by a sharp rise in production costs in the Russian dairy industry, primarily associated with a logistics crunch.

Russian and Belarusian freight road operators have been banned since April 16 from working in the EU, except for those transporting essentials such as food, mail, medicine, and energy. The Belarussian government has replied by banning the EU

trucks from entering its territory. Besides, the world's three largest container shipping lines, Denmark's Maersk, France's CMA CGM, and Swiss-based MSC have suspended their bookings to and from Russia.

Coupled with sanctions against the financial sector, the transport blockade has disrupted supply chains in the dairy industry. The first problems emerged in the packaging segment, as Tetra Pak, Elopak, Stora Enso, Tetra Laval, and some other companies have pulled out from the country or saw their supplies disrupted. In this background, some dairy companies reportedly had to even cut production due to a lack of package.

Deliveries of dairy products to retail chains in Russia began to fail due to a lack of package, the Russian newspaper Vedomosti reported, citing its own sources on the market. In this regard, the dairy companies considered alternative packaging options for milk including big metal cans.

A package similar to the Tetra Pack can be created in Russia in three to six months, Mikhail Charny, an expert from the working group of the National Technology



Most equipment in the Russian dairy industry is imported



Russia runs out of package: The dairy industry in Russia is running out of packaging material

"First of all, the decline will be seen in more expensive categories of non-essential items - cottage cheese and dessert group and yogurts, secondly - butter, cottage cheese, sour cream, and cheeses. At the same time, regardless of the category, there will be a shift of demand to the low price segment, especially in regions where the consumer is historically more sensitive to food prices," Iskakova said.

On the other hand, the consumption of milk in the film, cottage cheese in the flow pack will grow, and the demand for products with milk fat substitutes is also predicted to rise.

"A price hike on the dairy market will also contribute to a drop in demand. The latter will occur due to a significant rise in the cost of raw materials, packaging, equipment, and components, their possible shortage, as well as an increase in the interest rate on loans," Iskakova said.

In 2021, the average price of dairy products in Russia increased by only 7%, while the production costs soared by 25%. During the Covid-19 pandemic, numerous companies constrained the rise in retail prices, sacrificing margins, in a bid to preserve customers' loyalty until better times. Now, it seems that these better times are not going to come any time soon.

"In 2022, there is and will be no other way for dairy manufacturers to survive but to synchronize the rise in prices with a growth of production costs," Iskafov said, adding that the current crisis is likely to stimulate industry consolidation, as less effective companies would be forced to leave the market.

Things are still can deteriorate, as the new sanctions discussed by world powers, including an embargo on the Russian oil and gas exports could turn into a major blow for Russia, sparking an economic turmoil of unprecedented scale with poorly predicted consequences.

Initiative estimated. However, the Russian newspaper Fontanka reported that accomplishing this task would require importing foreign equipment, which is also problematic due to the sanctions.

As explained by Konstantin Sinetsky, chairman of the Russian Southern Dairy Union some companies have an opportunity to switch to alternative packages, but this would entail a rise in production costs, plus reduce the products' shelf life. All in all, such steps would make dairy businesses less efficient. In addition, the government agencies would have to weaken control over dairy producers.

"In the context of a sharp shortage of packaging, when its stocks are exhausted, the state will have to turn a blind eye to deviations from the regulatory framework," Sinetsky said, explaining that due to the crisis some companies may start sparing money on quality control. "This could cause several delayed consequences: falsification, safety problems, quality degradation," he added.

The current supply disruptions are not only about the package. Russian dairy companies have a dependence on Western equipment and raw materials too.

"Now, for example, some manufacturers are also experiencing an acute shortage of hydrogen peroxide – needed to disinfect packaging. As it turned out, peroxide is also not produced here [in Russia]. In addition, it is a dual-use item. How now to

maintain the previous level of production quality is the question for the manufacturers to answer," Sinetsky added.

The lack of imported equipment, on the other hand, is not an immediate task to solve. However, in the next 6 to 12 months, it can start causing serious troubles.

"As for domestic production, we are heavily dependent on imports. The share of imported equipment is close to 80%. The performance of the equipment is highly dependent on the availability of imported spare parts, components, and consumables," said Lyudmila Manitskaya, chairman of the Russian dairy union.

In the long run, the absence of imported equipment could hamper investment activity in the Russian dairy industry.

Consumption is on the line

The Ukraine war is likely to bring problems not only on the production side. The Russian GDP is expected to slump by 11% in 2022, the World Bank forecasted. This is the strongest decline since the 1990s and is likely to be associated with a sharp drop in the population's purchasing power. The domestic demand for dairy products is expected to be hindered.

"In 2022, due to the current situation, high inflation, and a possible increase in unemployment, sales in the dairy market as a whole are likely to fall," said Albina Iskakova, commercial director of the Russian group of companies Belaya Dolina.

Evaporated milk in PET – aseptically filled

FrieslandCampina has once again chosen Krones dry-aseptic technology

Never change a winning team – may very well be what decision-makers at the dairy cooperative FrieslandCampina thought when it came to upgrading filling capacities for evaporated milk at their facility in the Belgian town of Aalter. And in view of the good experience gained with Line 1, the customer once more opted for a Krones Contipure AseptBloc DN for Line 2.

As one of the world's biggest dairy cooperatives, FrieslandCampina has always endeavoured to master the balancing act between running a safe and dependable production operation and using state-of-the-art technology. Back in 2014, the company decided to install dry-aseptic technology in its production facility in Aalter (Belgium) for aseptically filling milk and dairy products in PET containers. At the time, it was one of the first Contipure AseptBloc DN systems delivered by Krones, with preform sterilisation, reduced consumption of sterilisation medium and reliable results. Line 1 produces 36,000 containers per hour. FrieslandCampina has now brought an almost identical dry-aseptic line from Krones on-line, this one rated at 24,000 bottles per hour.

Conscious decision for rPET

FrieslandCampina in Aalter produces longlife milk and milk drinks for the European market. This also includes evaporated milk, which has so far been filled in small glass bottles. But these non-returnable containers no longer met the company's sustainability criteria since it has pursued a strong sustainability policy along the entire supply chain for years – “from grass to glass” as they would call it themselves.

And therefore FrieslandCampina, as the first dairy company in Belgium decided to use recycled PET here as well – to be more

precise containers made of 100% recycled PET (rPET) in order to reduce consumption of virgin PET, and thus new raw material. Another advantage that plastics (no matter whether virgin or recycled) have over glass is their considerably lower weight. The PET containers for evaporated milk, which range from 200 to 500 millilitres in size, weigh between 10 and 16.6 grams. For special markets, FrieslandCampina uses multilayer preforms weighing 12.5 grams.

Additionally, the PET containers are dressed in a sleeve featuring a “zip” over its entire height. This perforated line simplifies recycling because the zip enables consumers to separate the sleeve quite easily from the container before placing each in its appropriate bin.

Besides their focus on more sustainability, a second major criterion for the purchase of the new line was that filling capacities urgently needed to be upsized since the existing aseptic line with the Contipure AseptBloc DN was running 24/7 – and product demand kept on rising.

FrieslandCampina now makes rigorous use of rPET

The new line started operation in early 2021. It is rated at – The PET containers for evaporated milk weigh between 10 and 16.6 grams.

» Since the use of 100% rPET has proved successful in Line 2, corresponding preforms will in future also be used in Line 1.



FrieslandCampina in Aalter produces longlife milk and milk drinks for the European market

100 per cent sterility

Brecht Deleu had already assisted in putting in place the first aseptic line from Krones in 2014 and was also one of FrieslandCampina's project managers for the second line. This time he became actively involved in the layout work. In his view, the fact that Krones had meanwhile implemented some essential improvements was an advantage tipping the scales in the company's favour. "The Krones people have done their homework. Everything we'd commented on with regard to Line 1 was taken into due account and optimised for Line 2," he says.

Brecht Deleu gives some examples: "Closure feed was one thing that was improved. In Line 1 the closures are kept in the sterilisation medium for only 13 seconds. Now, thanks to a helical infeed, they stay in there for an entire minute," is how he describes one upgrade. "Preform handling was likewise improved, and the blow-moulder is designed for more user-friendliness overall. On Line 2, it now takes just one hour to replace the moulds (and not five hours as before) because the routine has been automated. But the most important result for us is that the line's microbiological safety was increased even more. We checked 60,000 bottles, and none of them was unsterile. You can't get any better than that," he says.

"Very good ramp-up phase"

The line was installed in December 2020/January 2021. Then the first microbiological tests were performed in February. "We had



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Also complete dairy factories

One of the world's biggest dairy cooperatives

FrieslandCampina is owned by around 17,000 dairy farmers from the Netherlands, Belgium and Germany organised in a cooperative. The dairy cooperative runs facilities in 38 different countries and has a payroll totalling about 24,000 people, which ranks it among the world's biggest dairy cooperatives. The four business lines are subdivided as follows:

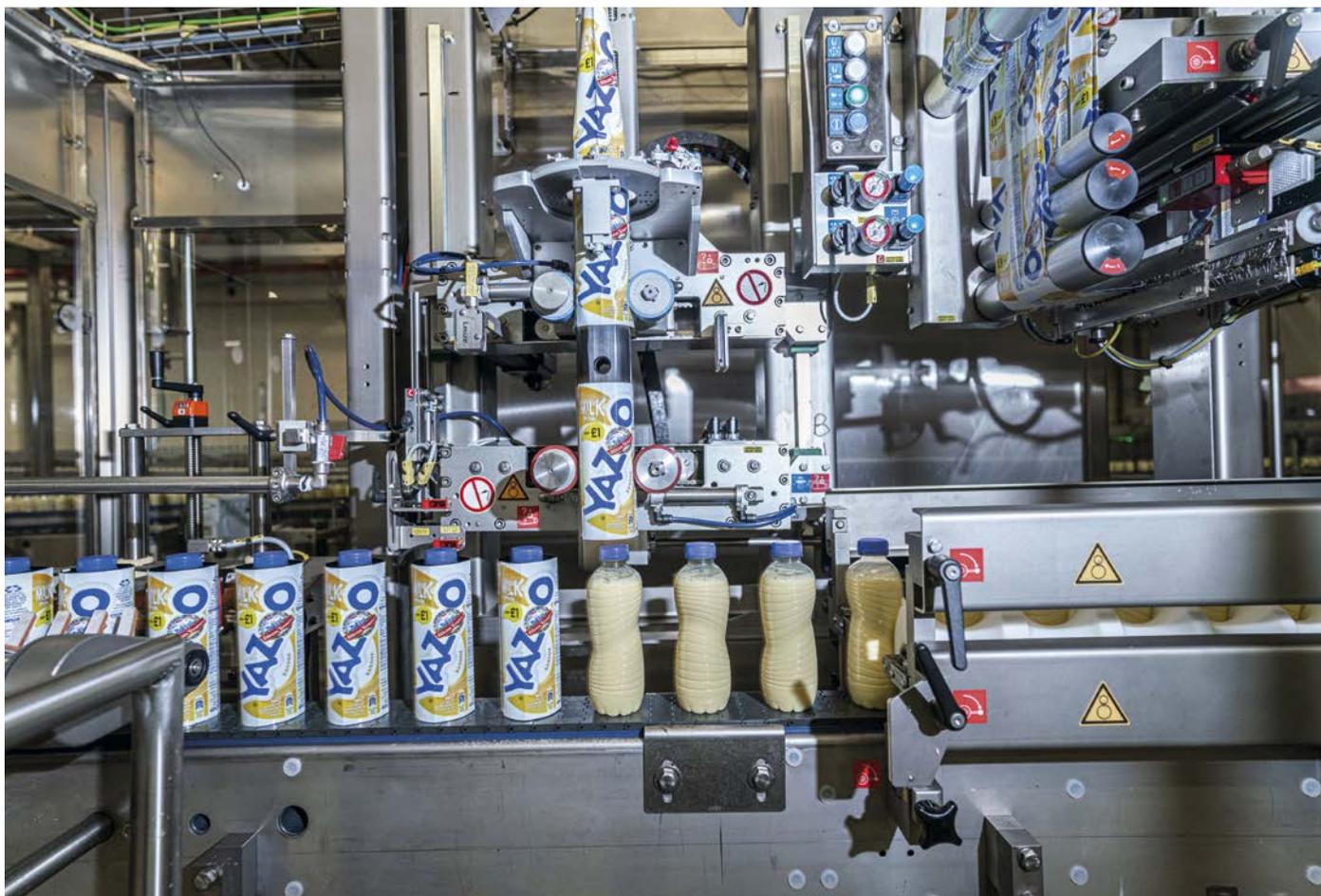
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- » Ingredients

The facility in Aalter, located halfway between Bruges and Ghent, is the biggest of FrieslandCampina's three production sites in Belgium. It is the European hub for longlife milk and milk drinks in cardboard and PET for brands like Campina, Joyvalle, Cécémel, Fristi and Nutroma. In Aalter, a total of eleven cartoning lines are running, three lines for white HDPE containers, three lines for small 7.5-gram portion packs and now two aseptic PET lines from Krones are all up and running. The production location in Lummen is known for its cream specialties under the Debic brand. The plant in Bornem specializes in longlife dairy drinks.

a very good ramp-up phase," explains quality assurance specialist Lisa Moeyaert who is responsible for validating new installations. "There were no microbiological problems, all products were sterile. The blow-moulded containers' quality has been very good – material distribution in the stretch blow-moulding process is spot-on. That's important for the 'topload', meaning the containers' stability during transport, with six to seven layers stacked on a pallet. Nor were there any complaints in regard to the quality of the screw-caps and the way they were put on top of the bottles," is her verdict.

Each container format was first validated by FrieslandCampina before it was released for production. Since May 2021, the process is finished and all products and formats have been acceptance-tested. Various inspection and monitoring systems provide production-concurrent quality checks and quality assurance: Three Checkmat units automatically inspect the containers for correct fill level and correct closure and label placement, and the Preform-Check unit in the blow-moulder monitors preform quality. "The most important thing for me with regard to validation was that the Krones team was here on the spot, so we could perform the tests together. That worked wonderfully," admits Lisa Moeyaert. "I like the way Krones people work, their very open, communicative and invariably solution-driven mindset."

The PET containers are dressed in a sleeve.





Brecht Deleu, project manager
at FrieslandCampina.



Lisa Moeyaert, quality assurance
specialist at FrieslandCampina



Delphine Haelewyn, maintenance
supervisor at FrieslandCampina

Unmatched slicing quality and performance

Weber Slicer weSLICE 9500

The weSLICE 9500 is Weber's most recent addition to its high-performance slicing portfolio, once again raising the benchmark relative to performance, yield, and quality. Especially for demanding applications such as 4-fold cheese or 2-fold raw ham, the slicing quality and performance is unparalleled. With the latest Weber DirectDrive technology, all product feeding components accurately guide the product, resulting in perfectly cut and visually appealing slices while achieving maximum portion weight accuracy and care for the product. Thus, the weSLICE 9500 performs with maximum product yield and minimum give-away. The weSLICE 9500 also features the renowned Weber Durablade Performance involute blade ensuring top slicing quality. All blades at the core of the slicers are developed and manufactured by Weber, incorporating years of expertise and innovation. The latest flagship slicer weSLICE 9500 additionally features Vario technology, contributing to its exceptional performance. When the Weber vacuum gripper technology is used, the product yield increases even further, as end pieces are reduced by more than half. The end result is production with almost 100% weight-accurate portions and very little give-away. The new Weber Slicer weSLICE 9500 also has a lot to offer with regards to ergonomics, user-friendliness, and safety, such as the new tool-free quick-change system for product grippers. Improved cleaning options, increased serviceability and optimized



The weSLICE 9500 is Weber's most recent addition to its high-performance slicing portfolio (photo: Weber)

ergonomics, like easier access to conveyors, contribute to maintenance of a hygienic environment during production.

The new weSLICE 9500 unlocks its full potential in the complete line concept. In combination with Weber components that are perfectly integrated and complementing its performance, such as the wePRESS form press, the wePICK pick robot, and the wePACK thermoforming packaging machine the weSLICE 9500 helps to push line solution thinking forward. With complete line integration, the slicer can optimize line speed to ensure an even transport of the portion, or automatically increase or decrease the speed of subsequent components. The line's ability to self-optimize therefore leads to an overall increase in production quality.



Both Krones lines include a Contipure AseptBloc DN blow-moulder/filler block for low-acid products with PreformCheck inspector and a Prejet rinser for preforms



FrieslandCampina uses recycled PET – to be more precise containers made of 100% recycled PET (rPET) in order to reduce consumption of virgin PET, and thus new raw material.



The new line is rated at 24,000 bottles per hour and started operation in early 2021.

Hourly output of 24,000 bottles

The new line started operation in early 2021. It is rated at 24,000 bottles per hour and includes:

- » Contipure AseptBloc DN blow-moulder/filler block for low-acid products with PreformCheck inspector and Prejet rinser for preforms, a Contiform Asept blow-moulder, and an aseptic filler
- » Sleevematic TS labeller with Multireel S magazine for the sleeve reels and Shrinkmat steam tunnel, plus two Linadry container dryers, one upstream of the labeller and one downstream of the steam tunnel

- » Variopac Pro WTS packer for producing wrap-around cartons and film-wrapped trays, and for wrapping the packs in film only
- » SitePilot Line Diagnostics monitoring system

The line is run by only three operators, one each for the blow-moulder/filler block, for the labeller and for the packer. "The operating staff were already familiar with Krones technology from their experience gained with Line 1. That is, of course, a major advantage," says Brecht Deleu

Validated for 72 hours of uninterrupted operation

The line has been validated for a continuous production time of 72 hours without interruption for cleaning. "At present, we do not need any more than that because we don't fill one and the same product for longer than three days running," explains Lisa Moeyaert. Depending on the products involved, the line is changed over two to three times a week. Changing over both product and format takes about four hours, just changing the format one to two hours.

The new additional aseptic line gave a significant boost to FrieslandCampina's production flexibility. The line handles small portion packs, a total of seven different sizes between 140 and 500 millilitres. All products are milk-based and have been sterilised before they are filled, the most important being evaporated milk in 140-, 300- and 500-millilitre containers for the Belgian and Dutch markets and the countries in the Middle East. The line also fills evaporated milk as private labels for retailers.

In addition, the line processes the same products as the first aseptic line, which is installed right opposite Line 2:

- » Chocolate milk in 200-millilitre containers
- » A strawberry-flavoured fermented milk-based drink, likewise in 200-millilitre containers
- » Flavoured milk in 400- and 500-millilitre bottles for the UK market

New maintenance strategy

Since their cooperation started with the commissioning of the first PET line in 2014, FrieslandCampina and Krones have jointly developed a specially optimised care and maintenance concept. A service agreement has been concluded both for Line 1 and Line 2, which covers maintenance and exclusive spares supply. "Last year, we changed the maintenance-interval strategy," says Delphine Haelewyn, the maintenance supervisor. "There used to be just one maintenance routine per year for Line 1, which took 15 days. Now we've scheduled three maintenance routines each for both Line 1 and Line 2 in one year, each of which lasts five days. And these routines are no longer carried out by Krones alone – we're handling them together now. An intensive cooperation is very important, as it has a lot of advantages," is her firm conviction. The result: After one year with the new maintenance strategy, unscheduled standstills went down by 30 per cent, with the lines' performance levels significantly higher than before.

Results of the new maintenance strategy

- » Three maintenance routines per year, each lasting five days
- » Downtimes reduced by 30 per cent
- » Significantly higher line performance

CSL USA

New fermentation facility

CSL USA (Cultures Supporting Life) has opened its new custom fermentation facility, located in Franksville, Wisconsin. The 80,000 sq. ft. facility will support the growing food, beverage, health, and nutrition markets. CSL USA will have access to strains and technologies developed by Sacco System (Italy) over its 150 years of history.

CSL USA will promote the full line of food ingredients, food cultures, bacterial cultures, probiotics, and comprehensive fermentation services to customers in the US.



CSL USA has opened a fermentation facility in Franksville, Wisconsin (photo: Sacco System)

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New challenges, new answers

Sidel's Food, Home and Personal Care initiative

Sidel has recently established a new strategic initiative focusing on the Food, Home and Personal Care (FHPC) markets. IDM asked Pascal Lefèvre who has been appointed Global Vice President of FHPC at Sidel about the reasons behind this move.

IDM: Why did Sidel decide to reaffirm its ambition in this area?

Lefèvre: Sidel has a long tradition in the beverage industry and has also been working in the FHPC sectors for 50 years. The FHPC markets have different challenges. They are large but very fragmented and growing constantly. The rapidly increasing importance of eCommerce has a strong impact on manufacturing, reduces the accuracy of sales forecasts and puts pressure on margins. Consumers demand personalised products in terms of health and convenience at affordable prices. All this, together with sustainability and digitalisation requires new thinking at every level.

IDM: Large corporations like Sidel are not renowned for a high degree of flexibility ...

Lefèvre: That's exactly why Sidel has reaffirmed its ambition to help FHPC brands in this way. By establishing this new initiative, we can work flexibly and be much more agile. We are developing a new portfolio of machines and solutions that addresses the needs in the FHPC sectors. It is not only the high-speed machines. Our customers require mid-capacity equipment that reduces resource consumption and is flexible in any way. One product worth mentioning is Cermex EvoPack, a secondary packaging unit. It reduces product repacking by managing those activities directly at the production line, cutting waste and energy consumption.



**Pascal Lefèvre,
Sidel: Sidel has
reaffirmed its
ambition to help
Food, Home and
Personal Care
brands
(photo: Sidel)**

IDM: Which trade shows will Sidel be attending in 2022 and what products can we expect to see promoted?

Lefèvre: When it comes to FHPC markets the next big show is Interpack in Dusseldorf 2023. Sidel is planning to attend and will be able to reveal more about our plans in due course. We will also be at the beverages show, drinktec in Munich in September this year and again in coming months we will be revealing our offering at that show.

AXIUM PROCESS

Efficient crossflow membrane filtration

As the increasing use of crossflow membrane filtration becomes ever more beneficial to manufacturing companies, Axium Process actively encourage end users to investigate further the wide range of filtration options available for their applications.

The filtration specialist says that tailored research involving pilot trials can result in a more efficient solution that optimises separation performance and productivity.

Derek Davies, Business Development Director at Axium Process, said: "Crossflow membrane technology is used in almost every industry and has many advantages. However, identifying the ideal membrane and operating conditions is key to success. There are four levels of filtration with many variables to consider, including factors such as media type, temperature, pressure, and the pH range of the environment.

"Research can help end users make the right decision and will result in a customised solution more tailored to their



Crossflow Membrane Filtration: Trials help eliminate uncertainty and operational issues by accurately predicting separation performance, process viability, system design parameters and operational costs (photo: Axium Process)

needs. The research involves pilot plant trials that more closely replicate real-life conditions and detailed performance analysis that helps identify optimal parameters, with the most effective membrane."

Axium Process operates independently of membrane manufacturers and can carry out pilot trials at its test facility in Swansea or at end users' premises. The trials help eliminate uncertainty and operational issues by accurately predicting separation performance, process viability, system design parameters and operational costs.



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Naarmann and GEA

Cost-effective separator cooling and resource conservation

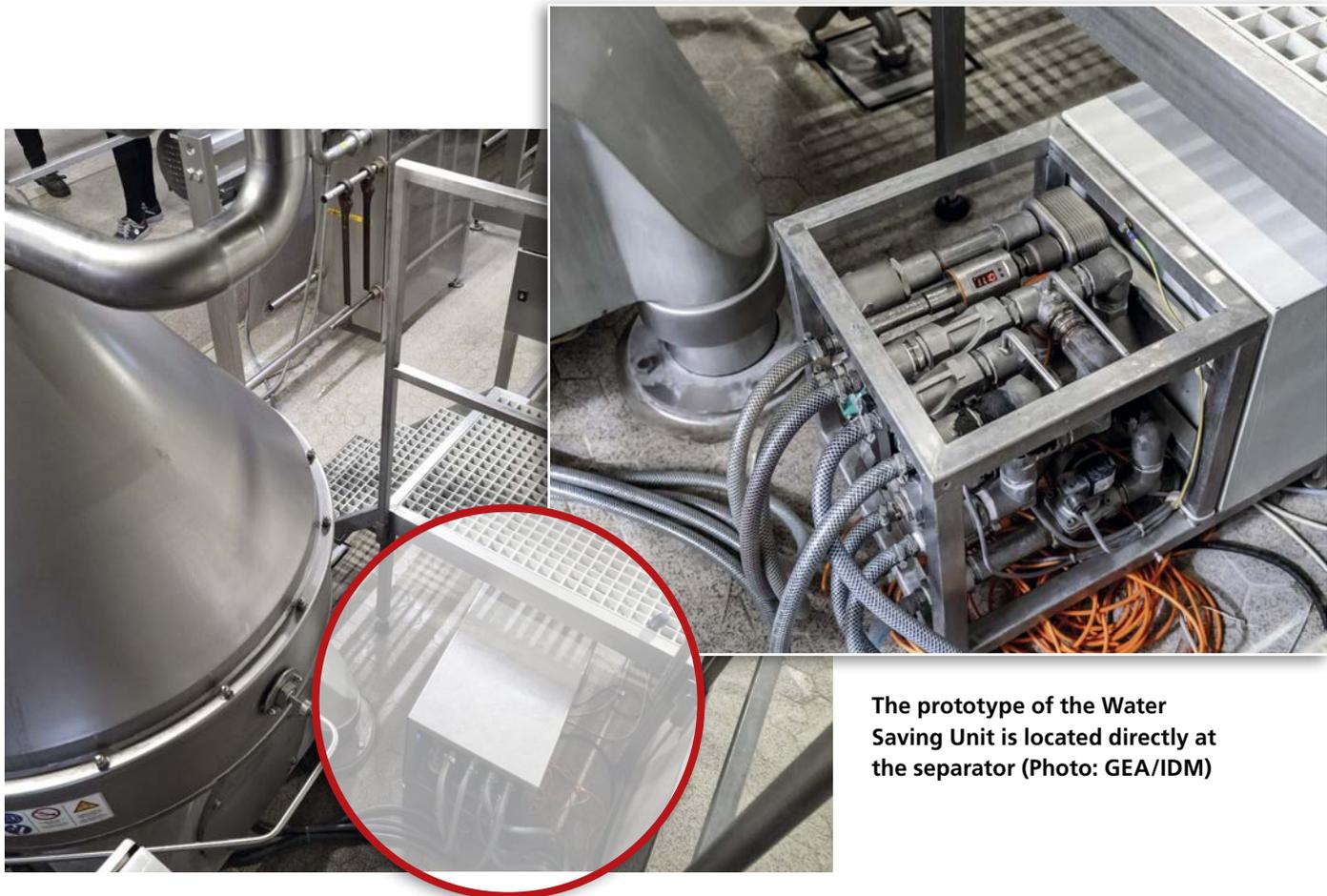
As is well known, separators have to be cooled. But now it is no longer necessary to run the cooling water in lost operation. GEA has developed the so-called "Water Saving Unit" (WSU) for this purpose together with private dairy Naarmann. IDM visited the pilot installation at the Naarmann plant in Neuenkirchen, Germany.

Private dairy Naarmann (210m kg milk processing, 200 employees, €120m turnover) has been on a consistent sustainability course for some time. This applies not only to the energy side, but especially to the consumption of resources.

Managing Director Andreas Naarmann says: "Saving energy and resources is the order of the day. And not just since the Ukraine war has been jeopardising our energy supply. We are constantly striving to increase potential savings, and the new Water Saving Unit has brought us a step further."

From idea to realisation

For eight years, Naarmann has been operating a GEA MSI 400 separator with capacity of 40,000 l/h, where a Standomat takes over the automatic milk and cream standardisation. The motor and hood/catcher were cooled quite conventionally with water,



The prototype of the Water Saving Unit is located directly at the separator (Photo: GEA/IDM)

which was discharged into the sewage system after heat transfer. GEA who was always aware that this was in principle an unnecessary consumption of (expensive) resources, already had a corresponding development underway and suggested to Naarmann, a long-standing customer, that cooling should be carried out via a heat exchanger and that they should jointly initiate a pilot project for this purpose. The first WSU was then manufactured in the trainee workshop at GEA Separator almost 2 years ago and installed at Naarmann.

The WSU is the size of two beer crates (380 x 580 x 495 mm) and can thus be placed directly next to the separator. In the pilot project, a display/documentation unit for flow values etc. was added to collect data on the heat exchange for the cooling water. The WSU, which is equipped with a circulation pump, operates two separate circuits for the engine and hood/catcher; the cooling water flows against ice water for both. The engine requires 5 l/min, the hood/catcher 4.9 l/min, the ice water flow is 11 - 13 l/min. The heat exchange is done via conventional plate heat exchangers. The thermal heat flow, which is continuously transferred to the circuit water by the separator, is approx. 14.5 kW, the WSU consumes only 40 W in total.

Andreas Naarmann: The Water Saving Unit has opened up savings potential for us (Photo: GEA)



Michael Frenking (right), Privatmolkerei Naarmann, and Sven Irrgang, GEA, have cooperated in the Water Saving Unit project (Photo: GEA)



According to Michael Frenking, who managed the project for Naarmann, the water savings are around one million cubic metres per year. The investment in a WSU pays for itself within 2.5 to 3 years, as Sven Irrgang, Smart Service Product Manager at GEA, reports. It is not only the water price that comes into play, but also wastewater charges and the costs of treating the cooling water, not to mention sustainability aspects.

The WSU is characterised by a short commissioning time, takes up hardly any space, is easy to maintain and also helps dairies with the sustainability certificate according to DIN 5000.1 and with any energy audits.

In conversation with the editors, Frenking emphasises the good cooperation with GEA during the project: "We worked with short decision-making paths on both sides. Everything went smoothly, we are absolutely satisfied with our WSU".

GEA now supplies the WSU as a retrofit for separators already in operation or integrated in new machines. Only half a day is required for the retrofit.

In the prototype setup, all measured values are shown on a separate display; the now available industrial model of the Water Saving Unit is fully integrated into the automation system (Photo: IDM)



2022 International Whey Conference

Blazing the whey



While the last International Whey Conference (IWC) in 2020 was a very successful but still 'only' online event, now we are finally getting closer to the opening of the much-awaited 10th International Whey Conference, to take place at Hyatt Regency Chicago from 11th to 14th September 2022.

Hosted every two years and co-organized by the American Dairy Products Institute (ADPI) and the European Whey Processors Association (EWPA), the International Whey Conference is the perfect opportunity for the whey industry and its customers to meet with researchers, scientists and processing technology providers, and to learn about the latest cutting-edge developments of whey at the global level.

As in the previous editions, the 2022 International Whey Conference will feature top tier speakers on innovative findings and hot topics, connecting science to commercial applications for whey.

ADPI President and CEO Blake Anderson will kick off the conference with an overview of the current state of the international whey sector, followed by ADPI Director of Training, Education, and Technical Development KJ Burrington and ADPI COE Dan Meyer, who will go through the last 25 years of research and growth.

The President of the European Whey Processors Association (EWPA) Luis Cubel will share a first insight into our experts' perspective on the 2030 whey markets by presenting the 'EWPA Whey Protein 2030' paper. "We have built our outlook on the future whey markets along a framework of four different scenarios. Within the drafting of the paper, it became very clear that the future of the whey sector is very much in our own hands, but

another decisive and determinant factor is for sure the political environment for milk and dairy in a broader sense," Luis Cubel stated. "Next to the economic outlook data that we gathered, my key takeaway from the work on this paper is that we all in the whey industry are based on a solid purpose basis: we deliver much more than added value and turnover. We are all convinced of the unique nutritional value that we bring to our customers on a daily basis – that is the real driver of our people and our industry!"

Álvaro Ruiz from the EWPA team in Brussels will present our digital communication platform 'wheyforliving.com,' which aims at increasing 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.

This year's International Whey Conference's high-level panel will also count with dairy scientists, representatives from various academic research fields and universities from around the world, as well as delegates from leading whey processing companies.

In addition, an award will be made available for the best overall early-stage researcher contribution, while the IWC Marketplace will offer participants valuable networking opportunities with technology, equipment, software and other solution providers for the whey processing industry.

Registrations are open until September 11th at 6:00 PM (CDT), so find your 'whey' to Chicago and come join us for the most outstanding event in the global whey industry!

More information at www.internationalwheyconference.org.

CHINA**Milk production increase**

China's major dairy producers registered output growth in the first half of this year, official data showed. In the January-June period, major dairy producers saw their output rise 1 percent year on year to nearly 15.11 million tons, according to data from the Ministry of Industry and Information Technology.

In June alone, dairy production stood at 2.75 million tons, increasing by 0.3 percent year on year, the figures showed. Major dairy producers are by official definition companies with annual revenue of more than 20 million yuan (about US\$2.97 million).



(photo: Xiangli_stock.adobe.com)

TETRA PAK**Replacing the aluminium layer**

Following the successful completion of a 15-month commercial technology validation of a polymer-based barrier replacing the aluminium layer, Tetra Pak is now testing a fibre-based barrier that is a first within food carton packages distributed under ambient conditions. Early results suggest that the package with a fibre-based barrier will offer substantial CO₂ reduction when compared to traditional aseptic cartons.



A fibre-based barrier is to replace aluminium in beverage cartons (photo: Tetra Pak)

AHDB DAIRY**Milk production to decline by 0.5%**

Global milk production will decline by 0.5% in 2022, according to AHDB Dairy estimates. The EU is expected to see the biggest drop in milk production compared to the previous year, at 838 million litres. Less milk is also expected in Australia and New Zealand (-2.4% and -0.7% respectively). Only a minimal decline is expected for the USA. Overall, a decline in raw material inputs will reduce product availability, with a particular focus on energy-intensive milk powder. Lower exports should ease the situation somewhat in the manufacturers' home markets. Market supplies of butter will also be tight, but manufacturers should be able to fulfil their contracts.

Milk prices will not rise so dramatically now, because demand is showing first reactions. These can be seen, for example, in China's significantly lower imports; quotations at GDT also fell in eight of the last nine trading rounds. For dairy companies, it will be a complex task to keep milk prices high enough to avoid further milk shortage.

Cheese Cutting Machines



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(photo: Hochwald)

Hochwald's new mega-dairy plant
Site Report



(photo: xxxxxx)

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