Anuga FoodTec 2015 had an immense large offering for equipment, solutions and concepts for the dairy industry. Here is IDM’s first report from the show – much more is to follow in the next issues.

CHEESE MAKING

ALPMA: Milk in shape

ALPMA had a special focus on curd preparation: with its Coagulator and Bassine System, ALPMA offers comprehensive solutions which can be flexibly adapted to suit the wide ranging requirements and spatial conditions of both small and large-scale cheese-making companies.

The Coagulator can be used for both soft and semi-hard cheeses. This high-capacity system for continuous curd preparation processes up to 45,000 litres per hour – while at the same time offering premium quality and optimum yield. ALPMA is also addressing the requirements of manufacturers of speciality cheeses with the Bassine System. This technology is used for the production of soft cheese, and its layout can be adapted flexibly to suit the available space on the customer’s premises.

ALPMA offers a wide range of technologies for semi-hard cheeses. At the show, this segment was represented by the semi-hard cheese portioning device FORMATIC: It allows the continuous filling of yellow cheese curd in whey directly into the cheese mould. A high-capacity portioning system, the FORMATIC offers flexibility with regard to product and format, has a space-saving design and consistent portion weight with very few holes on the edge of the cheese and minimum effort required for cleaning.

GEA de Klokslag

GEA de Klokslag, one of the latest recruits to the GEA Group, presented its cheese making expertise. With the acquisition of the company in October last year, GEA filled the gap in its scope of supply allowing the global organisation to supply turnkey cheese plants from a single source.

GEA de Klokslag is a market leader in the supply of large-scale equipment for the manufacture of hard and semi-hard cheese. Since joining GEA the organisation has expanded its global reach and been able to embrace synergies within the Group that have provided mutual benefits.
The exhibition included an interactive presentation on large multi-touch screens demonstrating the whole cheese making process.  

**CHEESE CUTTING**

**ALPMA: CUT 32 portion cutting machine**

The latest generation of the CUT 32 portion cutting machine, lives up to its reputation for guaranteed product quality with extremely low costs: it combines state-of-the-art measuring technology with high-precision, hygienic mechanical engineering, inspection and simple control via servo technology. This means that the CUT 32 offers reproducible results during the cutting of fixed-weight cheese portions. In combination with the density scanner DS 32, the cutting machine even masters such tough challenges as cutting fixed-weight portions of Emmentaler. The density scanner scans the cheese bars for portioning in extremely small grid dimensions. The CUT 32 then automatically calculates the correct cut thickness and divides the cheese bar optimally into portions of the preselected weight. This allows optimisation of the yield by an average of 20 percent to almost 100 percent in comparison to conventional solutions and at the same time reduces the give-away to almost zero.  

**TREIF: Various cutting solutions**

For further processing of sliced products, there are several options e.g. the combination with robotic technology. With up to 100 picks per minute, the robots ensure reliable sorting of the slices, e.g. for reaching the fixed weight of the trays, and a smooth flow of the production process.

Less product cooling which means less energy costs is an advantage of TREIF’s slicer blade with patented lotus engraving. Thanks to the special engraving, a small „air cushion“ is created allowing the slice to come away from the blade immediately after slicing. Even with soft products that adhere easily to the blade such as cheese, the pressure on the product is reduced during slicing thanks to a smaller cutting angle with the lotus engraving.  

**WEBER MASCHINENBAU: DURABLADE FOR ALL**

Weber Durablade circular and involute blades are made of stainless steel and are designed to be hygienic and durable. They cut virtually any product without a non-stick coating. Durablade involute blades can also be fitted with Weber-patented multi-angles for particularly difficult, special applications. The expansion of the product range means Durablade is now also available for non-Weber Slicers.  

**ALPMA: SYSTEM SOLUTIONS FOR DAIRY PRODUCTS**

Handtmann showed a range of innovations and new developments to visitors from the dairy sector. Process solutions that guarantee maximum diversity and efficiency in the automated production of dairy and cheese products thanks to their flexibility. Reliable technical solutions are available for filling, forming, cutting, co-extruding or dosing of processed cheese, goat’s cheese, cheese rolls, cheese spread, yoghurt sticks and other products.

**THE NEW VDM DEPOSITING SOLUTION**

The FS 510 forming system with the new 24-way filling flow divider for forming at industrial level is a response to the current trend for variety in product shape. Simultaneous portioning precise to the gram, forming and cutting on 24 lanes. And the new rack solution as an alternative for the conveyor belt takes the products directly to downstream further processing. The customer benefits from high production output and well-formed products with extremely precise weights in a wide variety of shapes.

The new VDM depositing solution through to packaging provides yet another option for advanced product diversity for cream cheese, spreads or cheese salads. For trays, jars, cans or thermo-forming packaging.

The Handtmann vacuum filler with depositing system flexibly deposits fluid and pasty products accurate and precise to the gram into all types of containers. Its individual movement ensures outstanding product appearance on 1, 2 or 4 lanes.

Other highlights of the trade fair were the new VF 630 K vacuum filler with heated hopper for the production of processed cheese or the ConPro system. It stands for the continuous production of products in vegetable alginate casing. Yoghurt sticks in alginate casing offered as a snack are only one example.
ECOLAB: Improved efficacy

ECOLAB launched a new range for surface hygiene cleaning and demonstrated the performance of the new HYBRID equipment lines.

3DTRASAR CIP, a unique approach to monitoring and optimisation of CIP applications, was presented for the first time at the exhibition. 3D TRASAR CIP is an integrated program that utilizes advanced sensors, cleaning chemistries and analytical software and service to provide more in-depth visibility into the critical factors that drive efficient, safe and effective CIP processes. 3DTRASAR CIP provides instant insight into all relevant CIP processes and their respective consumption figures and related costs. This solution enables production plants to see the big picture behind the data in order to act quickly and easily achieve optimum results. It makes CIP procedures transparent and facilitates consistency.

Ecolab also launched a new system for its foam cleaner range. TOPAZ is new and has wide application and Open Plant Cleaning (OPC) capabilities which complement Ecolab’s Topax biocide products and the state-of-the-art Topactive open surface cleaning and disinfectant range.

To ensure this foam cleaning system functions consistently and performance is optimized Ecolab has also introduced new dispensing equipment. This includes new hybrid compact main stations as well as satellite systems to complement Ecolab’s market-leading boosters and mobile units. ecolab.com

Jimco: Mobile UV-C disinfection

Jimco, supplier of industrial environmental technology, launched a new compact disinfection system, the mobile FLO-D Mini System, based on UV-C technology. The system facilitates automatic and chemical-free disinfection of surfaces in production areas and cold rooms.

Tests performed in collaboration with the University of Southern Denmark document that FLO-D breaks down e.g. listeria and salmonella microorganisms in large production facilities.

The technology is applied by, among others, commercial kitchens, hospitals and supermarkets as in private homes worldwide.

jimco@jimco.dk

NTF-Aalborg: Hygienic machine guarding

NTF-Aalborg launched a new series of machine protecting and guarding. The system is easily adjusted on site and the hygienic stainless steel design makes it easy to clean.

Exxon Mobil informed about its lubricants for the food industry. The Mobil SHC Cibus range of lubricants was improved to increase

Döhler focused on natural ingredients and ingredient systems (photo: Döhler)

Veggies are conquering the dairy industry

Low in calories, yet rich in physiologically valuable ingredients: thanks to such benefits, vegetable juices and purees are becoming increasingly popular among consumers and are today used in rather uncommon applications, for instance in soft drinks, yoghurt or ice cream. In order to meet the growing demand for vegetable ingredients, Doehler has expanded its portfolio of juice concentrates and purees significantly.

doehler.com

INGREDIENTS

Doehler: Multi-sensory product experiences

Doehler presented natural ingredients and ingredient systems for food and beverages, that are characterised by an outstanding multi-sensory product experience. The globally active company introduced ingredient solutions that fulfil the technological requirements of specific applications and harmoniously appeal to all the senses in the final product. The broad portfolio of natural ingredients includes flavours, colours, health & nutrition ingredients, cereal ingredients, dairy ingredients, specialty ingredients, fruit & vegetable ingredients and ingredient systems. In Cologne, a special focus is put on natural colour alternatives, botanical extracts, authentic fruit flavours as well as on fruit and vegetable ingredients for technologically demanding food and beverage applications.

doehler.com
Lubricants for food applications such as the Mobil SHC Cibus range increase the overall efficiency of food manufacturing plants (photo: Exxon Mobil)

the efficiency of hydraulic processes by its low viscosity. Mobil SHC Cibus is kosher and Halal certified, allows longer running time without the need to change (thereby reducing costs). exxonmobil.com

CSI: The smart-Pal
CSI introduced the smart-Pal for the first time at Anuga FoodTec. According to Sybolt van den Bosch, CCO at CSI, supply of products in time, food and workers’ safety, food quality and efficient operation are core for the food industry. The huge price pressure on food makers, increasing product diversification and ever smaller batches have made operators look closely at TCO and OEE. The new smart-Pal is an answer to these factors.

The modular automatic palletizer uses a Cartesian robot arm and can palletize up to 15 cpm processing all types of packages and pallets. Automated with CSI Palletware the machine offers fast changeover, 99% availability and a ROI of less than 6 months. The smart-Pal can be installed in just one shift. Like with the iPal, CSI plan to sell 10 to 20 smart-Pals in the first year, followed by a 100% annual increase for the next consecutive 10 years. csiportal.com

Ecolean: Making the world lighter
Ecolean showcased their unique transparent aseptic package and the new and more efficient EL4+ aseptic filling system under the theme, a lighter world at a booth measuring an enormous 402 sqm.

Ecolean’s new transparent package was one of the highlights at the show (photo: Ecolean)

The new EL4+ aseptic filling system, an updated version of the successful EL4 system, was running continuously in Ecolean’s stand throughout the exhibition producing more than 80,000 packages per day. Ecolean MD Paul Mellbin told IDM that the increased capacity of the machine (from 9,000 to 12,000 units/hr) was achieved by intelligent engineering and innovation at bottle necks in filling and sealing.

At the booth, the Ecolean Air Aseptic Clear package was shown and visitors could experience a full range of lightweight packages in various sizes for chilled and ambient distribution. And there was the reclosing device SnapQuick, that, with its 0.5 gram weight, takes lightweight packaging and reclosing to a completely new level. Ecolean manufactures all packaging material itself. So far, the company has installed some 30 aseptic and over 200 chilled filling lines worldwide. There is a processor in China that has 24 Ecolean lines running in one plant. ecolean.com

Ishida
Ishida Europe showed an integrated fresh packing line and four multhead weighers, including the world’s smallest model, a screw feeder weigher, and the world’s first weigher in IP-69K standard. Quality control technology was showcased by a checkweigher and three X-ray models, one machine can spot both metallic and non-metallic contaminants within products packed in PET bottles, tetra packs, carton brick packs and doypack style stand-up pouches. ishidaeurope.com

Mettler-Toledo: New Profile Advantage metal detector
Mettler-Toledo presented the new Profile Advantage metal detection system. This innovative system offers an improved detection sensitivity for iron and non-ferrous metals, and reduces false rejects. Food producers thereby benefit from higher product safety and increased overall efficiency for their production lines. mt.com
trepko: New additions
trepko introduced two new additions to their portfolio at Anuga FoodTec.

After the integration of Hugard, trepko are now offering aseptic and ultra-clean in-line filling machines for pre-formed containers. These machines carry the name “trepko aseptic”, at the show there was a 100 series machine on display. The 100 series can operate at up to 50 strokes and with up to 12 lanes guaranteeing an output between 3,000 and 70,000 cph. The 100 series is very robust, of modular design and equipped with servo drives offering automatic adjustment and drip-free filling. A change-over of formats is done within 5 min. An optional “Ultra Flex” system allows a complete change-over within 8 min.

The other addition was the 3000 series of bottle fillers that came to trepko via the acquisition of a South African firm. The 3000 series is modular as well and change-overs are short due to quick-release parts. trepko say that downtimes and maintenance are low and high levels of SIP/CIP can be achieved. Speeds between 1,500 and 48,000 bph are available. Bottles are gently handled at the bottom or by the neck. An ample portfolio of options is provided, such as fully automated CIP, rinsers or interface for line control and management. trepko.com

VMS: Test filler
VMS, specialists in filling equipment for dairy products, have developed a a filler for test production runs. The machine can either be rented by manufacturers or milk processors may conduct their test runs at VMS in Germany. An aseptic filler taken from the normal series is equipped with filling nozzles that rotate driven by servo drives. Fed from a 2-compartment buffer tanks, the machine can generate virtually thousands of different filling patterns from swirls to checker-board pattern, etc. Up to three different designs on top of each other in one cup are possible. The operation is extremely easy.

VMS has developed a filler for test production runs – CEO Markus Köger demonstrated what modern filling technology is able to do (photo: IDM)

Weber Maschinenbau: “More Value”
Weber Maschinenbau showcased new developments and updates to its product range at Anuga FoodTec. Maximum yield coupled with minimum giveaway, flexibility and minimum floor space utilization were the characteristics of most exhibits.

A brand new service provided by Weber is Weber Consult. This service offers the identification of potential to increase the efficiency of complete packaging lines by checking up and downstream periphery as well as all the line components. The service is independent from the manufacturer of the equipment. Kamsteeg Consultancy who are actually providing the Weber Consult service reported that several projects generated savings to processors of €170,000 or more. Josef Zerle, head of sales at Weber, reported that machines for small to medium output are increasingly getting under the radar of large manufacturers as they are required to produce ever smaller batches and increasing product variety.

Established Weber machines used in conjunction with high-performance components to provide added value in the areas in which Weber customers operate were also on show in Cologne: these included the 405 Slicer in conjunction with the SmartLoader recently developed by the Weber Group – a compact and flexible solution for loading cut foods into packaging.

Weber Maschinenbau recently added Scanning Technology to its product range by taking a majority stake in Wente-Thiedig, one of Weber’s major partners and supplier for camera and image processing systems and optical measurement technology. This insourcing of expert knowledge and skills in image processing should further increase benefits for Weber customers, for example by increasing system reliability in their applications.

The Weber Pick Robot (WPR) automatically detects products in all conventional portion shapes and sizes thanks to its integrated camera housing. It uses its grabber arm to remove the products from the transport conveyor, rotate them to the correct position and lay them accurately in the pack. This completely does away with human contact when loading the products, which considerably improves food safety. weberweb.com

Andritz Frautech
CremaViva cold milk separation
CremaViva is the name of Andritz Frautech’s new cold milk separator. The company says that cold milk separation is becoming the preferred solution when it comes to reducing energy consumption.
The new CremaViva cold milk separation solution (photo: Andritz)

and to protect the quality of products. Operating at 5°C, high product viscosity can be handled due to a special bowl design without centripetal pumps and extraction tubes for product discharge. The whole operation is driven by just the initial hydrostatic – thrust and the temperature increase between milk inlet and cream outlet is limited to 1 °C. This keeps the fat globules in their original shape. Andritz claims that the quality of products made from cold separated milk is improved.

In the separator, special rotating mechanical seals ensure full hermetic design of the bowl to avoid air inclusion and keeps the chemical-physical and organoleptic properties unchanged. CremaViva features the first fully hermetic separator design with top feed ensuring complete separation of bowl and drive. CremaViva contains no water rinsed seals. The machines are available in capacities from 3,000 to 14,000 liters per hour at 5°C separation temperature.

Azo: Improvements
End-to-end HACCP concepts in the food and dairy industries specify control screening and separation of metals as mandatory. AZO’s patented cyclone screener Type DA360 N – for inspection and protective screening, fractioning, eliminating foreign matter, breaking up clumps and aerating products – does not need an additional dosing unit. This results in a low overall height meaning that it can be integrated seamlessly into existing systems. Dead spaces in the machine are kept to a minimum to further improve cleanliness.

AZO’s standard big bag connection system has been supplemented with a vibrating screen, which prevents foreign bodies to get into the production process. It provides a high level of cleaning and inspection convenience due to the quick and easy dismounting of the individual parts.

Another solution for docking was purpose-developed to meet the requirements for hygiene in the food industry. In order to prevent dirt and foreign matter clinging to the big bag from entering the production process, the FSA-type big bag connection system has been fitted with a flap. This seals the inlet into the subsequent system during the docking process and rejects any foreign matter that may fall from the big bag during docking. azo.com

HST: New homogenizer
HST Krones Group, introduced a new homogenizer. The HL 3.5 has a capacity of 10,000 l/hr at 200 bar. That makes the machine ideal for milk mix drinks or fruit juice. The machine on display was already sold to China. The HL 3.5 has a noise-reducing safety cover and comes in Krones design featuring that HST now belongs to Krones group. The gear box was redesigned for better power transmission and calm operation.

HST CEO Michael Penz told IDM that the integration of his company into Krones was a success: the number of employees has increased by over 50% in the first year after the sale. HST “hits” the market not only with the quality of its machines but also with its service competence (a 24/365 service is guaranteed). hst-gmbh.com

NETZSCH Pumps & Systeme
NETZSCH Pumps & Systeme showed in addition to the NEMO hygienic pump, also the adjustable temperature NEMO pump with heating or cooling jacket, a hopper pump and a barrel emptying sys-tem at the stand, as well as the hygienic version of the TORNADO rotary lobe pump and the Condux EasyClean from sister company NETZSCH Grinding & Dispersing.

NETZSCH pumps are particularly suitable for sheer-sensitive, viscous and solid-containing media, but also for abrasive, thixotropic and dilatant products.

NETZSCH pump with heating and cooling coat and TORNADO rotary lobe pump, also in hygienic version. (photo: NETZSCH)

Rieger: 3A valves
Rieger told IDM that their range of 3A certified valves was enlarged by an aseptic sampling valve. A new lockable aseptic sampling valve, according to IFS 6, is in the making. PMO stands for a patented range of double seat valves that are mix-proof and feature minimum seals. Rieger develops its valves together with customers and quoted an example of a major milk processor in New Jersey, US, who initially ordered only 6 types of valves for its new plant. The €2m project ended up with 51 customized new types or variations of valves.

rieger-ventile-valves.com

Cyclone screener Type DA 650 with extraction devices (photo: AZO)

The new HST HL 3.5 homogenizer in the Krones design (photo: IDM)