

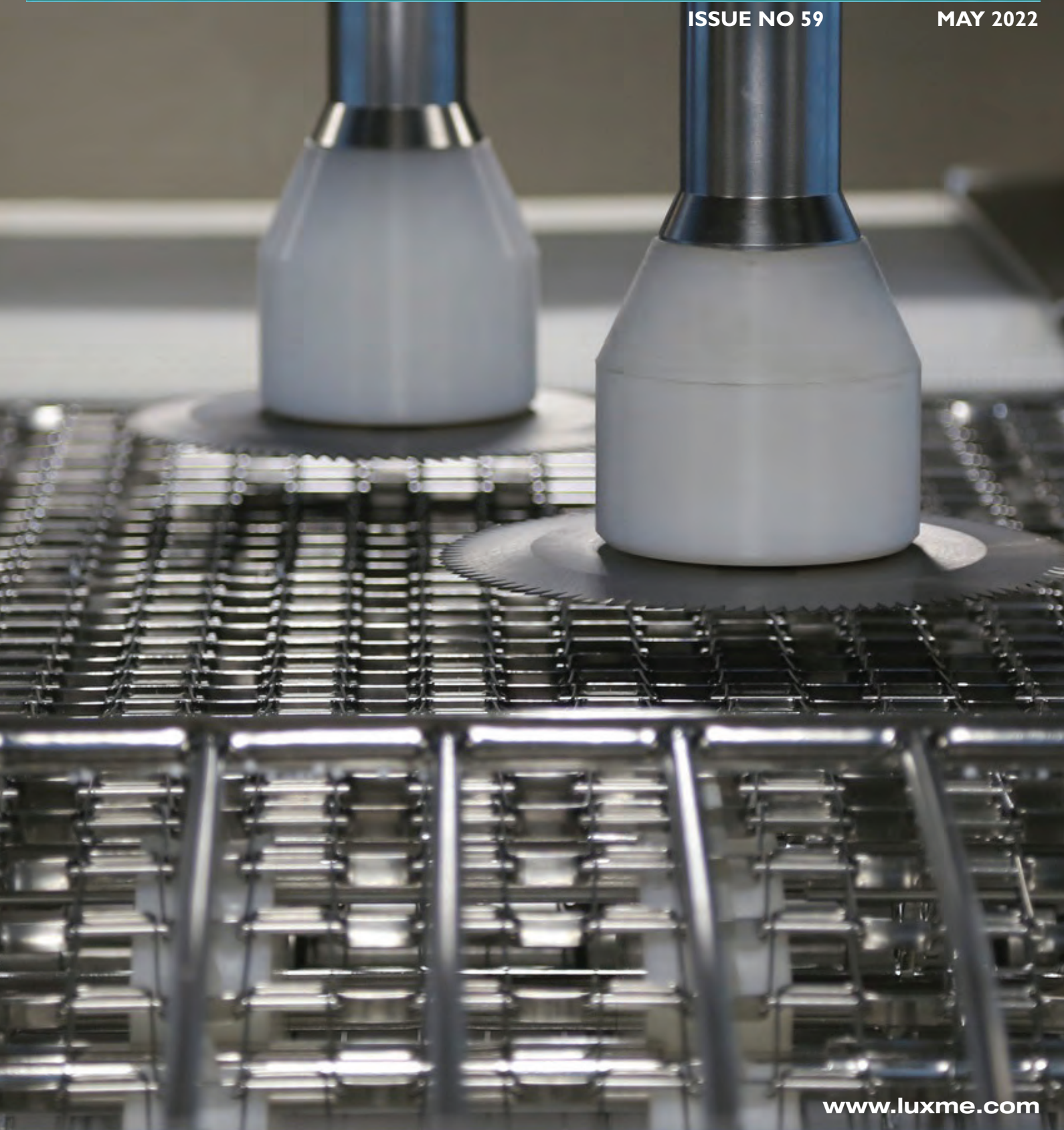
ISSN 1756 560X

innovations

IN FOOD PROCESSING & PACKAGING

ISSUE NO 59

MAY 2022



www.luxme.com

Innovations in the food and beverage industry

innovations

IN FOOD PROCESSING & PACKAGING

ISSN 1756 560X

17 ASHCROFT COURT • BURNHAM • BUCKS • SL1 8JT
UNITED KINGDOM

EDITORIAL

Tel/Fax: +44 (0)1628 666176
Email: terryprior@innovationsfood.com

ADVERTISING

Tel: +33 4 66 580 562 • Fax: +33 970 629185
Email: davidcopperfield@innovationsfood.com

Advertising and Business Development Director

David Copperfield

Tel: +33 466 580 562
Fax: +33 466 209 238
Email: davidcopperfield@innovationsfood.com

Publications Director: Terry Prior

Email: terryprior@innovationsfood.com

Subscriptions: Terry Prior

Email: terryprior@innovationsfood.com

Social media



Twitter: @innovfoodtech



Instagram: @innovationsinfoodtechnology



Linked In: www.linkedin.com/in/terry-prior52

Published by Print Workshop Publications
Innovations in Food Processing & Packaging is published quarterly in February, May, August and November

Subscriptions:

Printed version:

UK: £55.00 (inc postage)
Europe: £85 (Airmail including p+p)
Rest of the World: £90.00 (Airmail including p+p)

Online only:

£30.00

© Copyright of Innovations in Food Processing & Packaging. All rights reserved.
No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior written permission of Print Workshop Publications



innovations
IN FOOD TECHNOLOGY

EDITORIAL CALENDAR 2022 / 2023

AUGUST 2022

- Closure technology
- X-ray inspection systems
- Labelling solutions
- Strapping machines
- Colour sorting
- UV/EB technology
- Flooring innovations
- PET technology
- Bottling developments
- Bar coding
- Vacuum packaging
- Sensors for packaging
- Waste management
- Recycling
- Computer software
- Food traceability
- Barrier films
- Dairy packaging
- Bar coding

PREVIEW:
drinktec 2022
PPMA 2022

Copy deadline: **July 31 2022**

NOVEMBER 2022

- PET technology
- Bag-in-box technology
- Food safe lubricants
- Conveyor belt systems
- Direct-to-can digital printing
- Industrial software
- Thermoformed packaging
- X-ray inspection technology
- Packaging coding management systems
- Robotic automation
- Food safe lubricants
- Bottling technology
- Recycling
- Ready meal packaging
- Bar coding
- Vacuum packaging
- Dairy packaging
- Food traceability
- Labelling technology
- Barrier films

PREVIEW:
PACKEXPO 2022
FACHPACK 2022

Copy deadline: **October 23 2022**

FEBRUARY 2023

- X-ray inspection
- Dairy packaging
- Filling systems
- Packaging coding management systems
- Food safe lubricants
- Bagging technology
- Waste management
- PET technology
- UV/EB technology
- Bar coding
- Vacuum packaging
- Sensors for packaging
- Bar coding
- Recycling
- Computer software
- Food traceability
- Barrier films
- Robotic technology
- Bag-in-box technology

PREVIEW:
tbc

Copy deadline: **January 31, 2023**

Contents

ISSUE 59

MAY 2022

PROCESSING

- 4** **YTRON-Z® unit installed at BV Dairy for the smoothing or Stretching® of their range of yogurts**
- 5** **New role for equipment in meeting plant-based demand**
- 6** **Key Technology introduces VERYX® digital sorters for fresh cut, hydroponically-grown leafy greens**
- 7** **Synerlink launches Versatech, an innovative filling machine for food and dairy processors**
- 8** **Eliminating the risk of contamination in pharmaceutical and chemical manufacturing with Class Zero oil-free compressors**
- 10** **Plant eating boom pushes pipeline inspection innovations**
Fortress Technology / Sparc Systems
- 12** **With the triple whammy of supply chain pressures, rising transportation costs and increasing energy prices, how do food companies deliver sustainable packaging operations?**
Shemesh Automation
- 13** **GEA refrigeration service gives vegan meal producer Quorn food for thought packaging machines**
GEA
- 14** **Safe, sustainable, and money-saving – eliminate dust while cutting waste and costs with Luxme's automatic MINILux bag slitter**
Luxme
- 16** **Reciprocating action solves tough heat exchange challenges**
HRS Heat Exchangers

CODING, LABELLING, PRINTING, ADHESIVES

- 18** **The evolution of product labelling: New trends in sustainability**
Domino Printing

PACKAGING

- 17** **Paper wrapper: simple retrofits on existing KHS packaging machines**
KHS
- 23** **Festo and PCE Automation help Frugalpac™ increase production of sustainable wine bottles**
Festo
- 24** **A sustainable view of packaging in 2022 and beyond**
Asahi Photoproducts
- 30** **Strengthening the partnership: Sidel supported Bickford's Australia with rapid remote line conversion and maintenance on their aseptic line**
SIDEL
- 32** **Protecting premium food & beverage brand integrity**
Sumitomo

RECYCLING & WASTE MANAGEMENT

- 33** **WASTE2FUNC builds platform to collect food waste from agriculture, food industry, supermarkets, auctions and restaurants to convert it into bioplastics and biosurfactants**

AUGUST 2022 ISSUE

drinktec and PPMA 2022

Deadline for features and advertising in the August issue is July 31

Showcase your news and product launches through our website and weekly newsletter

Contact Terry Prior on 01628 666176 or email terryprior@innovationsfood.com

Visit our new **DAILY NEWS** website at
www.innovationsfood.com

Twitter: [@innovfoodtech](https://twitter.com/innovfoodtech)
Instagram: [@innovationsinfoodtechnology](https://www.instagram.com/innovationsinfoodtechnology)

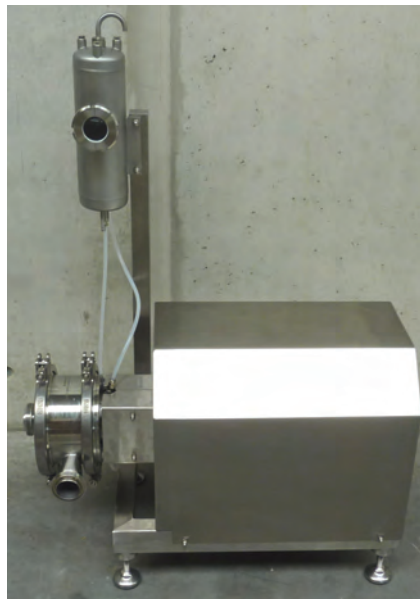
YTRON-Z[®] unit installed at BV Dairy for the smoothing or Stretching[®] of their range of yogurts

BV Dairy in Shaftesbury, UK has recently installed a YTRON-Z unit for the smoothing or Stretching[®] of their range of yogurts.

In the YTRON-Z[®], the yogurt coagulum is subject to an extremely short and intensive burst of shearing which smooths the yogurt. The mechanical action of the YTRON-Z causes stretching of the protein molecules which improves the viscosity of the yogurt. "Yogurt-Stretching"[™] is now associated with the

YTRON-Z[®] and has brought about the following advantages:

- Improvement in gel stability
- Elimination of syneresis and grit or nodule formation



tion giving a smooth product

- Reduction in the protein content in the milk base by around 0.2%

The number of rotor/stator sets, slot widths and speed is selected based on the composition of the yoghurt being processed.

BV Dairy join the large number of yogurt producers using the YTRON-Z for this application.

The technical information was from the reference work by A.Y. Tamime & R.K. Robinson "Yoghurt Science and Technology".

www.ytron-quadro.co.uk

EFSA's positive opinion supports more sustainable and healthier food processing through biobased EcoXtract[®] Technology

Methyloxolane is an innovative bio-based solvent for the extraction of vegetable oils, plant proteins and natural ingredients. It is produced from agricultural by-products (e.g., sugarcane bagasse). Its carbon footprint is only 10% that of the petrochemical solvents it replaces.

The EFSA Panel of experts reported today that methyloxolane is a safe solvent for use in the food industry. EFSA's positive opinion is based on its expert panel's review of a full application dossier including state-of-the-art scientific studies performed under OECD's latest standards. The dossier and the expert opinion show that methyloxolane provides unprecedented safety for the consumer. This allows methyloxolane to be added to the 20 solvents approved for food use in Europe (Directive 2009/32/CE). This is a breakthrough with worldwide impact. Except for ethanol, all the other solvents approved for use in food production are totally or partially produced from petroleum.

Towards healthier more sustainable extraction processes

The use of methyloxolane for extraction will have a huge impact on the safety and the sustainability of food processing in Europe and beyond. It opens the door for an option to eliminate petrochemical residues in the food chain. "We consider ourselves as frontrunners: petroleum-derived hexane has had an unchallenged position as a food industry solvent for over than 50 years with 1 million tonnes used each year in food processing, world-wide. We now offer a safe, competitive and renewable alternative to food businesses committed to eliminating the presence of petrochemical residues in the food chain" says Laurence Jacques, Director of the EcoXtract Programme.

"We are looking forward to enabling a safer and more sustainable food chain" comments Laurence Jacques. "The approval of methyloxolane for food applications opens the door for a more efficient extraction process which increases dramatically oil yield compared to mechanical pressing. This results in high quality oils and defatted stable protein-rich ingredients for food and feed. Our goal consists in helping the food producers to implement the EcoXtract[®] process to provide safe and clean food for all with no additional land use for preserving our beautiful and fragile planet"

Selig Group delivers clean peel liner for hot fill applications in Europe

Selig Group has begun production of its highly successful Uni-Gard[™] range of one-piece, induction seals in Europe. The introduction of Uni-Gard production to the EU enables low lead times and enhanced customer service in the region for this popular product range.

Selig's Uni-Gard[™] range is ideal for food producers looking to seal plastic PP and PP-EVOH jars with hot fill contents or for use in retort filling processes. This one-piece, multi-layer, liner delivers excellent barrier properties and has been designed for high temperature applications. It also provides producers with a range of production benefits ranging from higher operating speeds and the flexibility to run wider operating parameters, to

greater packaging confidence. Available in both peelable and welded versions, Uni-Gard can also be enhanced with custom prints, offering further product differentiation and added value to packaging.

Darren Dodd, Marketing and Service Director at Selig Group, comments: "Previously only produced in the USA, the introduction of Uni-Gard production to Europe will reduce lead times and improve our capacity to serve existing and new customers looking for hot fill sealing solutions. The Uni-Gard brand has, over the years, built a reputation for reliability and quality and now European food producers can make the most of these benefits more easily."

REVworx[™] opens for business

REVworx[™] offers on-demand contract vacuum-microwave manufacturing services for the production of high-quality, shelf stable snack and ingredient applications for food companies big and small.

Located at EnWave Corporation's headquarters in Vancouver, Canada, the REVworx facility showcases the most scalable and reliable vacuum-microwave processing technology in the world paired with complementary upstream and downstream food processing equipment. REVworx offers flexible production capabilities, filling the growing demand for innovative consumer products made using EnWave's proprietary technology.

The opening of the REVworx facility offers

food companies with the opportunity to leverage vacuum-microwave technology with:

- reduced risk to launch innovative vacuum-microwave dried products
- enhanced collaboration with dehydration specialists to create new and novel snack and ingredient products
- opportunities for fruit and vegetable growers to convert imperfect produce into saleable premium products and reduce overall food waste
- end-to-end support to launch dehydrated food products pragmatically to prove out the value proposition of using vacuum-microwave technology in their operations.

Send your news to
terryprior@innovationsfood.com



NYU Water Research Centre in Abu Dhabi using Axium Process Pilot Plants for innovative research program

New role for equipment in meeting plant-based demand

Plant-based proteins continue to make the headlines. The 'Alternative Proteins: Consumer Survey' by the Food Standards Agency (FSA) is just one of many reports that demonstrate the potential of this market. While meat continues to play a vital role in the vast majority of people's diets, recognition of and, to a certain extent, acceptance of alternatives is growing. Some 60% of respondents to the FSA survey said they were willing to try plant-based proteins, dropping to 34% when asked if they would be prepared to try lab grown meat, with 26% saying they were willing to try edible insects.

Whatever the take-up of the various options ends up being, there is a lot of interest in the possibilities. An essential part of this process is the equipment available to produce such products. It is somewhat ironic that one of the biggest challenges in creating plant-based options is how to replicate the textures that we associate with meat. Key to this is the development of machinery which can help achieve this.

Interfood Technology supply solutions for both meat and meat-free products so have extensive experience in meeting the challenges. A good example is the production of vegan 'chicken' nuggets. Simon Jubb is Manager of Interfood's Preparation Division. He comments "a typical line solution for nuggets might involve a vacuum mixer, a former, a batter applicator, a breading unit, a fryer and a spiral freezer. There are a number of operations and attention needs to be paid to each process to ensure a good end product. Taking forming as an example, the Alco former that we

supply has shaping plates individually designed according to specific needs, thereby ensuring an aesthetically pleasing result. After all, as the old saying goes, 'we eat with our eyes'."

Jubb continues – "we also offer the Power Heater for which we have seen a significant increase in demand with the growth of vegan and vegetarian products. It is now being used by a number of processors given its capability to achieve meat-like textures and excellent flavours for plant-based alternatives to chicken, pork, beef and others."

Interfood's equipment offering for meat-free production requirements also encompasses cooking, slicing and packaging systems, along with the Afogrill and Afoflame systems which provide a roast or flame-grilled finish to meat-free as well as meat-based products. In many cases this allows the creation of full line systems alongside its end-of-line inspection and case packing systems. Andre Clareboets is Divisional Manager at Interfood Slicing. He comments "recent projects in which we've been involved include the production of both sliced vegan cheese and cooked meats through fully integrated lines with the Weber wePACK Thermoformer packaging machine and Weber's high speed slicing solutions at the heart of the systems. These are complimented by package inspection from Sparc systems and case packing machinery from Buhmann, all supported fully by our in-house project department"

www.interfoodtechnology.com

NYU Abu Dhabi (NYUAD) is a leading research university having an international presence with a comprehensive science academy at its core. It supports innovative research and graduate education programs that explore the frontiers of knowledge in powerful and interdisciplinary ways vital to global challenges.

NYUAD recently commissioned filtration specialists, Axium Process to develop, manufacture and supply a range of bespoke membrane filtration and Ion exchange pilot systems suitable for detailed investigations over a wide range of industrial, environmental, and process-based applications. Manufactured in 316L stainless steel, Axium's membrane systems are designed to support the development of innovative solutions via education, training, and comprehensive research into Microfiltration, Ultrafiltration, Nanofiltration and Reverse Osmosis technology. The equipment accommodates multiple commercial scale membrane options, including hollow fibre, tubular, spiral and ceramic variations.

Now successfully installed and commissioned at the NYU Water Research Centre in Abu Dhabi, the sophisticated data collection software supplied with each plant has been fully optimised by Axium's commissioning team to enable accurate and detailed representation of the practical separation/concentration limits achievable against a representative feed stream sample.

Axium Process specialises in membrane filtration technology and manufacture technically advanced bespoke pilot systems that benefit from over two decades of practical filtration expertise. Axium's pilot equipment is typically used for applications such as clarification, removal of suspended solids, purification, removal of salts and ions, dairy fractionation, cell recovery, extract filtration and the separation of microplastics from liquid feed streams.

www.axiumprocess.com



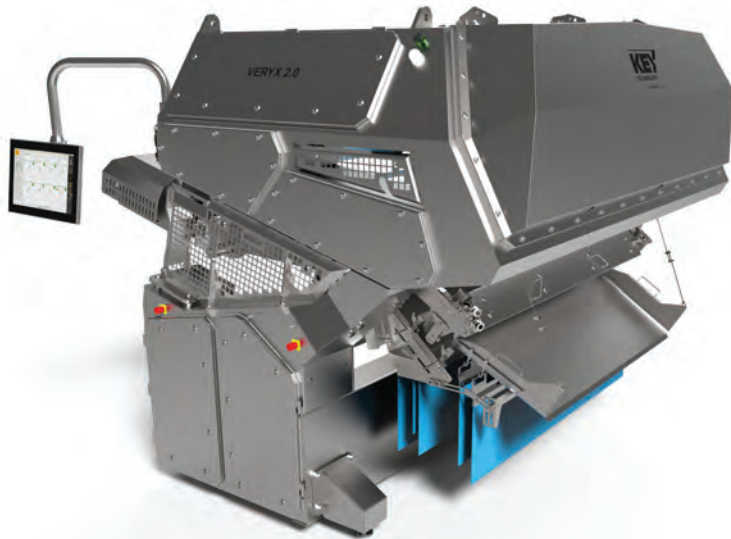
The new Minebea Intec website: tangible weighing expertise

Minebea Intec has made the user the focus of its website relaunch: improved usability, intuitive navigation and modern features ensure that prospective customers can directly access their ideal



solution. The new website provides an important foundation and ensures that the digital portfolio of the leading provider of weighing and inspection solutions is presented to its best advantage.

The new website is a prime example of Minebea Intec's evolving digital offering. With its clear user navigation and smart features, the website ensures that the entire portfolio of weighing, inspection, service and software solutions can be explored in just a few clicks. Users are not only able to access information via the website but can also calculate relevant cost factors such as the return on investment or potential savings for themselves using online calculators. The smart product finder, an excellent example of the intuitive user experience provided by the new site, is sure to be of particular interest for visitors to the website.



Flavorchem unveils latest innovation in pilot thermal processing

Flavorchem, a global flavour and ingredient supplier, continues its commitment to customer collaboration and innovation with the new state-of-the-art pilot plant at their Downers Grove campus. The fully automated, custom-designed pilot plant utilizes the latest in thermal processing capabilities and features three separate dedicated spaces for extractions and experimental technologies.

"We are privileged to work with some of the most progressive and dynamic companies in our industry and are thrilled to be able to take them to the next level with our pilot plant. Our pilot plant was designed with flexibility, scalability, and will further advance our capabilities to be a valued extension of our customers' R&D and commercialization processes," says Ken Malinowski, President of Flavorchem.

The new thermal processing unit allows Flavorchem to simulate HTST, UHT and aseptic conditions with both indirect heating and direct steam injection and is fully expandable to allow for customer specific equipment to be used and additional processing equipment to be added seamlessly. Filling capabilities include a clean fill hood for hot – and cold-fill of glass and plastic bottles along with an aseptic bag filler.

"It's been a pleasure to oversee the development and utilization of our brand-new pilot plant facility," says Blake Wester, Innovation & Technology Manager at Flavorchem. "Our specialized equipment allows us to explore cutting-edge flavour technology to test flavors, extracts, and ingredients in different finished applications and provides our customers the opportunity to test their products on a pilot scale before they scale up into production."

The ability to run the customer's actual product or base at a pilot scale allows developers to formulate flavors that are optimized for production. This approach accelerates brand owners' speed to market while providing full confidence that the flavor will perform in the finished product the same way it did in the pilot plant.

Südzucker plans production plant for protein concentrate from Faba beans

Südzucker Group is expanding its existing protein portfolio as part of the group's strategy 2026 PLUS. The goal is to obtain proteins from regionally grown Faba beans for processors in the food and animal nutrition industries. To this end, the cultivation of Faba beans is to be significantly expanded and, in the medium term, an own production facility for protein concentrate is to be built at the Offstein site (Rhineland-Palatinate). An investment of around EUR 50 million is planned.

Südzucker's subsidiary BENEÓ, a specialist in functional food ingredients, is thus expanding its plant-based protein portfolio, which was previously based on wheat and rice. Südzucker Group is thus significantly intensifying its involvement in this business area. Until the new production plant in Offstein is fully operational, the Faba beans will initially be processed at intermediate production facilities. In this way, customers will already benefit from the products in the short term.

Key Technology introduces VERYX® digital sorters for fresh cut, hydroponically-grown leafy greens

Key Technology, a member of the Duravent family of operating companies, introduces its VERYX® digital sorters for fresh cut, hydroponically-grown leafy greens. Combining Key's expertise in sorting and conveying, VERYX sorters integrate with Iso-Flo® vibratory conveyors to find and remove defective product, as well as foreign material (FM), to improve product quality while simultaneously increasing yield.

"Demand for hydroponic leafy greens is skyrocketing for a variety of reasons – superior taste, minimal water usage, zero pesticides and production location flexibility, since environmentally-controlled greenhouses can be built virtually anywhere," said Marco Azzaretti, Director of Marketing at Key. "Hydroponic greens are a premium product, typically costing two or three times the price of traditional, field-raised greens. Hydroponic growers must consistently achieve the best quality to meet their customers' high expectations. They want every single leaf to be perfect. This is why they partner with Key."

VERYX is the only belt-fed leafy greens sorter that can inspect product entirely in-air with top and bottom sensors to see all sides of the product with no blind spots, enabling VERYX to eliminate more FM and defects. Analyzing the colour, size and shape of every object in the product stream, VERYX removes imperfect, misshapen, discoloured, bruised, broken or torn greens. To better identify difficult-to-detect FM and defects, VERYX can be equipped with Key's proprietary Pixel Fusion™ technology, which

combines pixel-level input from multiple cameras and laser scanners to create a unique, unambiguous 'signature' for each type of substance in the product stream.

Engineered from the ground up to maximize sanitation and ease of cleaning, VERYX features an open design, sloped surfaces, and minimal exposed fastener threads. Fast and accurate recipe-driven changeovers maximize production versatility and uptime while ensuring repeatable results.

Key equips VERYX with their Discovery™ suite of software capabilities, which enables the sorter to collect, analyze and share data to reveal patterns and trends that improve sorting and help control upstream and downstream processes. For example, this information can help growers of hydroponic greens better understand the performance of different growing panels and how various growing practices affect final product quality.

Key can integrate VERYX with Iso-Flo infeed and collection conveyors to gently move product and preserve its integrity while maximizing sort accuracy. Since greens tend to overlap and clump, the specialized infeed monolayers the product stream to effectively present it to the sorter's inspection zone and enhance system performance. VERYX can also be integrated with application-specific Iso-Flo vibratory conveyors that dewater, transfer, or separate hydroponic greens by density prior to sorting or with belt feed conveyors to move product downstream to packaging.

www.key.net





CSB ERP solution provides cost savings and informed business decisions

Coherent data capture throughout the production process and detailed analyses, using an ERP solution devised by leading specialist CSB-System, has enabled US meat producer Courage Production to maximise yields and efficiencies throughout its operation, enhance data collection and planning processes, and deliver valuable cost savings.

Courage, based in California, specialises in hot dogs, beef jerky, poultry and delicatessen products. To better support government regulations and the increasing documentation requirements for its business, the company introduced ERP software from CSB, which greatly simplified the processes.

"In the past, everything was rather complicated with some 50 pages of paper being passed onto production, such as bills of material, recipes and work instructions," explained Courage Production's president, Rob Engelhart. "We have now digitised and streamlined this to a great extent. At the same time, we have really intensified our data capturing."

One particular example of this is the efficiency gains that have been achieved in the company's four smoke houses. Around 350 different items go through the smoke houses, where they each lose part of their weight. By weighing every smoking cart before and after smoking, using PC racks specifically set up for this purpose, the ERP system was able to aggregate the data to provide a precise overview. This enabled Courage managers to identify in which smoke house specific products had the lowest loss.

The availability of such information has allowed optimal planning and distribution of the raw materials to the different positions in the chambers. The numerous minor improvements achieved, such as a two per cent increase in hot dog yields and one per cent less water for beef jerky, has translated into a major cost saving. "This allows us to optimise the yields of every item in every smoke house, and to reduce our losses to an absolute minimum," said Engelhart.

As well as high levels of efficiency, digital optimisation has also enhanced planning and control, with predictive machine planning helping to ensure the best possible utilisation of the production lines, while providing the flexibility to respond quickly to short-notice orders.

As part of this, the CSB Advanced Planning and Scheduling (APS) module takes the five most important factors into account for planning - product group, label, wrapping films, allergens and set-up changes. This provides an optimised planning proposal, which can be adapted dynamically and in detail by managers.

Several additional optimisation measures have further increased transparency. Overall, the ERP system and its data on purchase orders, order entries, invoices, calculations, production orders and inventory movements will become the 'workhouse' and growth driver for all Courage Production's business decisions.

Synerlink launches Versatech, an innovative filling machine for food and dairy processors

Synerlink, a leader in rigid, eco-friendly packaging solutions for the food industry, has launched Versatech, a future-proof filling solution for the food and dairy industry. Its modular design enables customers to continually realign this packaging innovation with their evolving business strategy.

"Through conversations with our customers, we discovered a market need for a filling solution that would outlast the standard 20-to-30-year lifecycle," said François Truffier, Synerlink President. "Rather than disposing of this machine when it ceases to support the business, Synerlink's customers can quickly, and inexpensively, reconfigure Versatech to once again work in support of new business initiatives."

Starting with a compact 2.5-by-4-meter frame, Versatech is expandable with standard-increment modules that come in lengths of 440, 880 or 1,320 millimeters. Versatech combines that flexibility with a centralized cabling network to offer plug-and-play functionality that allows food and dairy processors to access the latest filling and packaging technologies as they become available.

"For large food and beverage processors with well-established product lines, Versatech will

provide more versatility compared to other machines to test new markets, products and packaging options," said Fabien Jégo, Synerlink Design Leader. "For smaller processors that need a machine for today's volume and one that can scale up with their growing business, the Versatech is the perfect solution."

In addition to its future-proof design, Versatech includes several other features that were highlighted by customers: The tubular frame shape, removable slats and chainless design were all included to simplify maintenance and improve hygiene safety. The enhanced ergonomics of the loading station, and simplified training and troubleshooting via the HMI, address the growing issue of operator turnover.

"Today's Versatech includes the best available technology for filling yogurt, sour cream, butter and other products in cups," said Fabien Jégo. "In the future, this innovation will also be available for products in bottles, jars and other rigid containers, and will even be able to incorporate sustainable and hygienic packaging technologies that don't yet exist today."

Bühler and Ardent Mills open new state-of-the-art mill in Florida

Swiss technology group Bühler and Ardent Mills, a leading flour milling and ingredient company headquartered in Denver, United States, celebrated the opening of Ardent Mills' new Port Redwing Mill in Gibsonton, Florida. The mill, powered by the most advanced milling technologies from Bühler, is already in operation and contributes to both companies' commitments to innovation and sustainable development within the food ecosystem.

The opening ceremony was held at the Ardent Mills Port Redwing facility in Gibsonton, Florida. From Ardent Mills, Dan Dye, CEO, Heather Dumas, Chief People Officer, John Barton, Chief Financial Officer, Angie Miller, Vice President of Sales, Troy Anderson, Vice President of Operations, and others were on site to celebrate how Ardent Mills and Bühler are transforming how the world is nourished. From Bühler, Stefan Scheiber, Bühler Group CEO, Johannes Wick, CEO of Grains & Food at Bühler, and Andy Sharpe, President & CEO of Bühler North America were in attendance.

Stefan Scheiber, Bühler Group CEO said: "The Port Redwing Mill is another highlight in Bühler's great relationship with Ardent Mills. It is encouraging to work together with an inspiring

customer, driving innovation through collaboration and implementing the most modern and efficient solutions in wheat processing in the US. This is an important milestone for Bühler, and another great example of innovations for a better world."

"Port Redwing is a testament to Ardent Mills' commitment to transform how the world is nourished and drive innovation - and we couldn't have done that without Bühler," said Dan Dye, CEO of Ardent Mills. "Bühler were exceptional partners at every step of the process, and their partnership allowed us to integrate in the insights and technologies we needed to build this new state-of-the-art facility. With the Port Redwing Mill, we are entering a new era in the milling industry."

Ardent Mills is one of Bühler's long-standing customers in North America and the partnership dates back several decades. With roots dating back to 1867 and a steam-powered mill in the prairie town of Grand Island, Nebraska, Ardent Mills, the joint venture between Cargill and Horizon Milling, is one of the largest flour suppliers in North America. It operates in more than 40 locations and specializes in flour, quinoa, pulses, and organic and gluten-free products that drive emerging nutrition and innovation across plant-based ingredients.

Jorgensen back in the USA!

To strengthen the relationship with US clients in their automation process Jorgensen Engineering is scaling up its US presence. The strategic initiative with localized service and spare parts on demand will enable Jorgensen to operate closer to US customers making the automation expertise in the sectors more accessible.

"We are working close with leading global players as Nestlé, Danone, Tetra Pak, Abbott, Unilever and Kraft Heinz. And Jorgensen's US

portfolio counts established companies as Campbell's Soup, JBT FoodTech, Hormel Foods and lately Panasonic," says CEO Kenneth Bo Madsen. "The tough competition and tight margins in the US food sector together with raised minimum wages and quality and safety issues will accelerate the automation process. Our new and expanded US presence will make it easier on all levels to support the industry's optimization needs."

CompAir details the importance of sustainable compressed air systems for greener production

CompAir has published a new white paper to promote and guide businesses with strategies they can take to implement more sustainable and environmentally friendly compressed air processes, improving operational efficiencies and overall performance while reducing emission levels and energy costs too.

The white paper, which is titled "Compressed Air for a Sustainable Future", can be downloaded free of charge at https://gdg.gardner-denver.com/CMP_ALL_WG_en_2202_MFG_Sustainable_LP2. It highlights the key developments within the compressed air industry that can help businesses to be more eco-friendly and advises on the latest innovations that can help decision-makers upgrade to greener systems.

Furthermore, it recommends several ways in which businesses can turn their compressor into a sustainable source of energy, by applying heat recovery, for example, and offers tips that can help units run more cost-effectively over time.

With total greenhouse gas emissions amounting to approximately 700 million tonnes per year, the industrial sector is the third-largest climate polluter in Europe. As such, there is a lot of pressure on industry to reduce its carbon output and become a greener sector. But reducing carbon emissions can help deliver improved operational efficiencies too.

One of the key topics discussed in the white paper is how modern oil-free compressors can help businesses achieve both sustainability and efficiency goals. Through oil-free air compressors, businesses cannot only guarantee the highest air quality standards, but also record less emission levels than similar oil-lubricated models. In many cases, whole life costs are reduced, with businesses able to save on the cost of oil replacement and lower maintenance expenditure. Oil-free systems are increasingly specified, due to their ability to deliver higher quality air, enhance efficiency levels and exceed environmental targets.

David Bruchof, Product Manager for Oil-free Compressors from CompAir said: "Compressed air accounts for a significant part of total energy costs for Europe's industrial manufacturers, which is typically about 10% but can be as high as 40%. Therefore, investing in environmentally friendly systems can go a long way towards the entire sector's carbon footprint.

"This white paper explores how businesses can use new technologies and equipment to help become greener and informs decision-makers on the best next steps to make their businesses' air compression systems more eco-friendly."

Eliminating the risk of contamination in pharmaceutical and chemical manufacturing with Class Zero oil-free compressors

Industrial compressed air brand, Worthington Creyssensac, has launched the new 'Class Zero' oil-free compressors for the UK & Ireland markets. Certified* to be 100% free of any traces of oil or other contaminants, the new OF 20-75V range has been designed for use in pharmaceutical, biotechnology and chemical sectors, where production of air quality to the ISO 8573.1:2010 class is essential to maintain high standards of manufacturing.

With no lubrication in the compression cycle, this new generation of compressors replaces previous oil-injected machines, that rely on downstream filtration to achieve the required high levels of air purity. As well as further enhancing product safety, oil-free technology enables pharmaceutical and chemical producers to save time and money by dispensing with monitoring, cleaning, and maintenance of oil filters, the removal of which will help to achieve lower operating costs.

With climbing production energy costs in mind, Worthington Creyssensac implemented variable speed drive (VSD) compressors in its new oil-free models to help offset the rising costs. A VSD compressor matches the power consumption to the air demand, especially when the production process is not constant, varying its speed and thus reducing the energy consumption during low usage periods to maintain outlet pressure to +/-0.1 Bar. By selecting a VSD compressor, the manufacturers can meet their fluctuating air demand profile, reducing overall energy consumption by as much as 35%.

Stewart Craig, Product Manager at MultiAir UK & Ireland, which supplies Worthington Creyssensac machines via a network of approved Oil-Free distributor partners, commented:

"With pharmaceutical and chemical manufacturers facing increased energy costs and



striving to achieve sustainable production, oil-free technology offers a significant advancement in more environmentally-friendly compressors. It not only helps to avoid risk to products and brand reputation, but also adds financial value through a lower total cost of ownership.

"Worthington Creyssensac engineers are committed to improving safety and efficiency in these sectors. Our new OF 20-75V compressors are supplied with our Airlogic² Touch controller with integrated ICONS smart monitoring and control system. This maximises compressor reliability and performance, helping to schedule optimum service windows, predict any risk of failure and measure overall machine health."

www.worthingtoncreyssensac.com

EXHIBITIONS & CONFERENCES

14-19 May 2022

IFFA 2022

Frankfurt, Germany

www.iffa.messefrankfurt.com

24-28 May 2022

THAIFEX – Anuga Asia 2022

IMPACT Exhibition Centre, Thailand

www.thaifex-anuga.com

14-17 June 2022

EXPO PACK MEXICO 2022

Mexico City, Mexico

www.expopackmexico.com.mx

12-16 September 2022

drinktec 2022

Munich, Germany

www.drinktec.com

27-29 September 2022

PPMA SHOW 2022

NEC Birmingham, UK

www.ppmashow.co.uk

27-29 September 2022

FACHPACK 2022

Nuremberg, Germany

www.fachpack.de

15-19 October 2022

SIAL 2022

Paris Nord Villepinte, Paris

www.sialparis.com

23-26 October 2022

PACKEXPO 2022

Chicago, USA

www.packexpo.com

22-25 October 2022

suedback 2022

Messe Stuttgart, Stuttgart, Germany

www.messe-stuttgart.de/suedback/en/

23-26 October 2022



PACKEXPO 2022

Chicago, USA

www.packexpointernational.com



PPMA TOTAL SHOW 2022

PAKEX  INTERPHEX 

27-29 SEPTEMBER 2022
NEC, BIRMINGHAM



THE COMPLETE
PRODUCTION
LINE EVENT

FREE
TO ATTEND
REGISTER
NOW

FOR MANUFACTURING
IN FOOD, BEVERAGES,
PHARMACEUTICALS,
TOILETRIES, COSMETICS
AND MORE...

ppmatotalshow.co.uk



PPMA GROUP OF ASSOCIATIONS
  

Plant eating boom pushes pipeline inspection innovations

With plant-based eating now mainstream in the UK, food safety and contamination detection specialist Fortress Technology is reporting high demand for its latest range of hygienic pipeline metal detection and x-ray systems.

According to a 2021 report by Bloomberg Intelligence, the global plant-based alternative market is forecast to grow to \$162 billion in the next decade. Up from \$29.4 billion in 2020. Suggesting that plant-based is no fad.

Catering to changing demographics, well-being trends, and new product developments (NPD) in plant-based alternatives, Fortress R&D in recent months has focused specifically on upgrading its pipeline systems to maintain the highest hygiene standards. Providing valuable reassurance to the British consumers who continue to ditch animal-derived foods.

From explosive sales in oat and soya drinks to the supermarkets more than doubling their vegetarian and plant-based ready-meals and one of the leading supermarkets even trialling a fully vegan

'butchers' counter last year, it's no coincidence that over a similar time period Fortress observed a huge uplift in enquiries for its flexible Metal Detector Pipeline and new Raptor X-ray Pipeline.

One of the key challenges facing the ever growing and evolving plant-based food sector is how best to maintain productivity while providing consumers with safe, uncontaminated products. Further complicated by the fact that there remains no legal definition of vegan products in EU or UK law.

Despite this descriptive labelling minefield, processing compliance in this growth sector demands the highest levels of sanitation. To avoid tarnishing plant-based brand reputations, Fortress Technology's latest metal detection and x-ray pipeline machines are designed to assist processors inspecting high-viscosity foods to optimise hygiene standards, tackle cross contamination and maintain a robust HACCP system.

Both machines are especially suitable for inspecting products like meatless sausages, broths, gravies, syrups, condiments, juices, fruit and vegetable concentrates, milk and cream alternatives, oils and even plant-based viscous pet food.

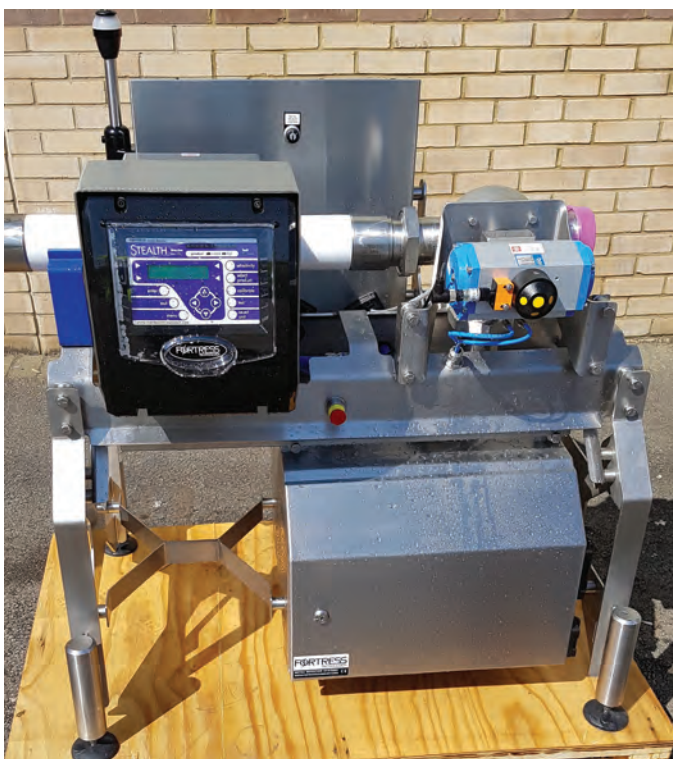
spread of foodborne bugs and prevent bacteria accumulating in protein-alternative processing environments, both Pipeline systems are IP69K rated and USDA certified. This means they can withstand harsh processing environments and high-pressurised washdowns after every product changeover.

By upgrading the structure, Fortress has reduced the external surface area of its Pipeline Metal Detector by over 60%. Also, by routing the connectors through an encased unit, there are fewer areas where bacteria can hide and thrive during repeated washdowns.

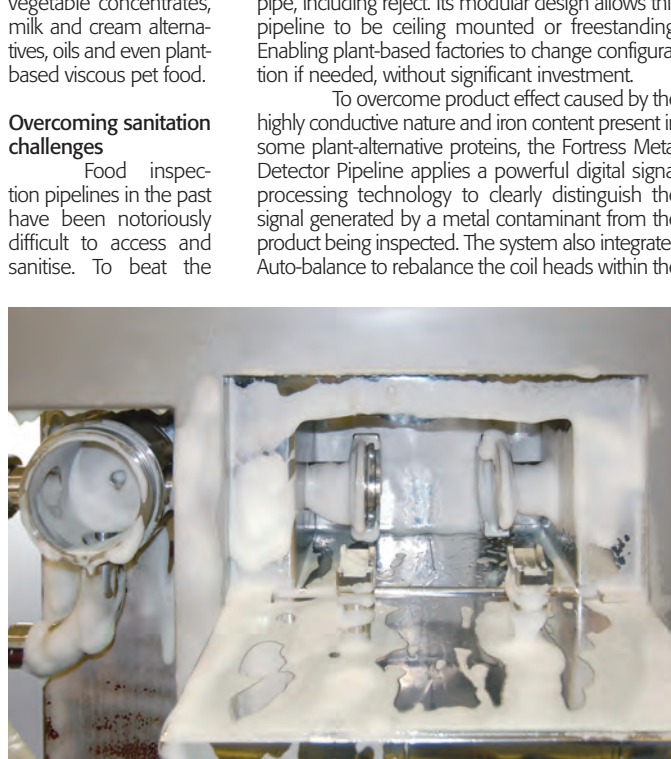
Average clean times should now take a matter of minutes, suggests Commercial Manager Jodie Curry. "If sanitation employees have open areas and smooth surfaces to work with, they can more efficiently access and clean equipment to reduce machine downtime or speed up the changeover process from one product to another."

The Metal Detector Pipeline has a slim design and compact footprint measuring approximately 1 metre for the largest 100mm diameter pipe, including reject. Its modular design allows this pipeline to be ceiling mounted or freestanding. Enabling plant-based factories to change configuration if needed, without significant investment.

To overcome product effect caused by the highly conductive nature and iron content present in some plant-alternative proteins, the Fortress Metal Detector Pipeline applies a powerful digital signal processing technology to clearly distinguish the signal generated by a metal contaminant from the product being inspected. The system also integrates Auto-balance to rebalance the coil heads within the



Trigon Snacks required a supermarket spec metal detector that was sensitive enough to adapt to the fine oil and sugar tolerances on its new honey roast nut line



Trigon Snacks required a supermarket spec metal detector that was sensitive enough to adapt to the fine oil and sugar tolerances on its new honey roast nut line



With insufficient space to accommodate a flap style reject, Fortress engineered an efficient retracting band conveyor and reject mechanism



www.fortresstechnology.co.uk

Fortress Technology (Europe) Ltd based in Oxfordshire is a wholly owned subsidiary of the privately-owned Toronto based Fortress Technology Inc. Putting consumer safety first we're trusted by thousands of domestic and global manufacturers to design, build, install and maintain inspection equipment that deliver exactly what they promise. From food to FMCG; pharmaceutical to bulk; SMEs to listed companies; metal detectors to checkweighers; x-ray to combination systems; Fortress inspection systems are renowned for their speed, accuracy and simple operation. All designed to catch contaminants, slash waste, spot product defects, comply with weights legislation and reduce production downtime.

Fully customisable, for 20+ years we have offered the Fortress Never Obsolete guarantee. Ensuring future sustainability and compliance with HACCP and Codes of Practice. This guarantee now extends across all our new combination, x-ray and checkweighing systems.

Fortress has manufacturing facilities in the UK, Canada and Brazil. Sales and service support is available globally both direct and through trusted distributors.

fortress technology

unit, which may over time expand or contract due to changes in product temperatures passing through the pipeline. Helping to maintain metal detection sensitivity.

Adapting to the contamination risks

Blending plant-based ingredients, including soybeans, lentils, chickpeas and vegetables to emulate traditional meat products often requires a complex series of manufacturing steps. This can increase the risk of different foreign contaminants entering the food chain. Utilising x-ray technology, the Raptor Pipeline inspection system is capable of identifying a variety of different physical hazards including stones, metal, glass, ceramics, and high-density plastic in slurries, semi solids, and fluids.

The Raptor X-Ray Pipeline houses a powerful and durable electric linear actuator. Its unique cabinet design also features an innovative three-way reject valve to dispose of contaminated product. Each valve can be easily accessed without

the use of complex tools.

The Raptor Pipeline X-Ray can be easily integrated into an existing rigid or flexible piping system or placed behind a vacuum filling machine. It is available in three models: 1½, 2½ and 6 inches. Average inspection throughput is up to 14,000 kg per hour for plant-based alternative applications.

By inspecting pumped product and rejecting contaminants prior to packaging and processing, the potential for wasted packaging materials and product loss caused by the removal of contaminants after packaging is eradicated. It also ensures the reduction of expensive downtime and damage to downstream equipment.

Featuring sophisticated data capture and reporting software, both Fortress pipeline systems satisfy Quality Assurance mandates, ensuring traceability compliance with stringent food processing requirements, including GFSI/SQF, BRC and HACCP.

Bespoke AI technique delivers 'utopian' vision of product presentation

Scorpion Vision Ltd's advanced stereo vision and neural network solution, the Scorpion 3D Neural Camera, can elevate the presentation of retail packaged fresh produce to unprecedented levels.

Scorpion Vision is pushing the envelope in terms of what can be achieved by applying AI to machine vision in an automation context. By guaranteeing that processes such as sprout, carrot and leek trimming are consistently completed within the tightest visual tolerances, Scorpion's bespoke AI approach enables food processors to achieve utopian presentation that will meet the approval of even the most discerning shoppers. The Scorpion 3D Neural Camera has also been heralded as a food waste saviour, as food factories can put a stop to perfectly good food being discarded due to inconsistent and sub-standard inline preparation techniques.

The advent of AI presents an exciting opportunity to enhance the capabilities and performance of vision systems in food processing applications. On the back of this, many off-the-shelf AI-camera solutions have become available.

Paul Wilson, MD of Scorpion Vision Ltd, explains why these 'plug and play' cameras can't match the consistent performance and premium presentation that can be achieved by Scorpion Vision's 3D technology with bespoke AI: "Lots of companies have jumped onto the AI bandwagon, thinking that all you have to do is programme a camera with deep learning software. It is not that

simple, which is why, although off-the-shelf camera solutions appear cheaper at a glance, they rarely provide more than 80% reliability. Integrating AI into an automation system that works 100% of the time requires a deep understanding of the build challenges."

Scorpion builds AI vision systems from scratch to deliver robust and reliable application-specific solutions to food processing problems.

Paul continues: "We already have our proven automation platform so have been able to build AI into that with great success. Our AI cameras are designed from the ground up to suit the application. That means we can optimise the design and the parameters to enhance performance on that product. If we want to use more powerful lighting or move the lighting outside the camera, for example, we can do, because we have complete control over the build."

AI-based vegetable processing

Scorpion Vision's bespoke AI approach can be applied to automated vegetable trimming processes to achieve repeatable precision.

With an organic object such as a vegetable, there is no fixed size, shape or colour, and this presents a problem for classic machine vision camera systems that rely only on known shapes or patterns.

Accurate trimming is key to the presentation of vegetables destined for retail sale. If the leek is cut too short it 'telescopes' and dries out. If it is left



too long, unsightly roots are left. However, a standard 3D camera will struggle to determine the stem plate when it is obscured by roots or soil. In this scenario, applying AI improves machine vision performance dramatically.

Access to leading technology

The system is based on the 3D Stinger - designed by Tordivel AS to be used in cutting-edge 3D stereo vision applications. Scorpion Vision Ltd can also design automation systems incorporating machine vision technology from other manufacturers. Since signing a distribution agreement for the UK and Ireland with fast-growing global camera and vision systems manufacturer HIKROBOT in 2017, Scorpion Vision Ltd has installed a number of systems based on products from HIKROBOT's innovative portfolio.

www.scorpionvision.co.uk

With the triple whammy of supply chain pressures, rising transportation costs and increasing energy prices, how do food companies deliver sustainable packaging operations?

Tony Bryant, Sales Director at Shemesh Automation, a global manufacturer of high-end packaging machinery, explains how all-in-one packaging solutions can make food and beverage companies more sustainable, leave little room for human error and boost productivity.

Packaging plays an important role in promoting brand awareness and shelf appeal in retailers' food aisles – it's a very competitive market. However, packaging suppliers also need to reduce their carbon footprint and offer sustainable, well-designed packaging and correctly positioned labelling that is distinctive and does what it says on the pack.

There is a global trend towards trying to keep production processes in-house to cope with supply chain pressures and rocketing transport costs. But where companies have not automated their lines, they are regularly suffering with staff shortages which are having a knock-on effect on productivity. Fully automated operations are cost-effective and can rapidly boost output of food and beverages.

Automation can boost staff skills

Flexibility is key for managing diverse products, such as soups, sauces and soft drinks which can come in a variety of bottle shapes, sizes and containers. Downtime for changing lines to accommodate different items can result in lost revenue. What's needed is a hands-off approach with cutting-edge equipment that encompasses all aspects of downstream packaging from liquid filling to capping, continuous labelling and case packing.

From low viscosity sauces to sticky or chunky condiments like peanut butter, offering complete downstream, turn-key solutions can help expand knowhow, enhance production efficiency, lower costs, raise output and product quality as well as improve market share and overall profit margins for a business.

I understand some companies prefer human involvement, but why would you employ a skilled intelligent person to manually cap bottles of tomato sauce or alcoholic beverages? You can get a significant ROI with an automated capping machine that is faster, consistent and reduces the risk of errors, allowing staff to be deployed on more productive tasks better suited to their skill sets.

Hiring and retaining staff, the rising cost and availability of raw materials, soaring fuel and energy prices and the plastic packaging tax, aimed at tackling single use plastic waste, are major challenges facing food producers. Bringing everything in-house and automating processes is the

driver to maximising production capacity – highly-automated processes require less close operator interaction.

Automation provides a consistent process irrespective of staffing levels. A flick of the button and you are off and running, which is a significant benefit. Thanks to modern, maintenance-friendly designs, when operators do get involved, they have optimum accessibility of machine parts allowing for tool-less changeovers quickly and safely. The latest technology is also 4.0 ready so any issues or software updates to a line

working with a packaging machine supplier what their capabilities are and how they are structured for change. Reliable delivery, quality product, competitive costing and great service are still key indicators of performance.

Optimum productivity depends on the high performance of a supplier's machinery and minimal production downtime. That's why at Shemesh we make a worldwide network of qualified technicians available to customers 24/7, making sure there is access to expert support whenever and wherever it's needed.

Challenging environment

The challenge is sourcing easy-to-use systems that can seamlessly interact between brand labels, complex shapes and materials - but that don't cost the earth.

All-in-one packaging machines with completely hands-free operation increase production efficiency by encompassing all aspects of food packaging. Automating labour intensive tasks and reducing the reliance on packaging materials that incur a tax burden will make processes more sustainable.

We all have the responsibility to care for the environment and the world around us. This means making machines that are designed and built with sustainability in mind. Thanks to the latest technology advances the portioning process itself is much faster, while fewer filling stations and smaller turrets overall are required, saving space in a production plant.

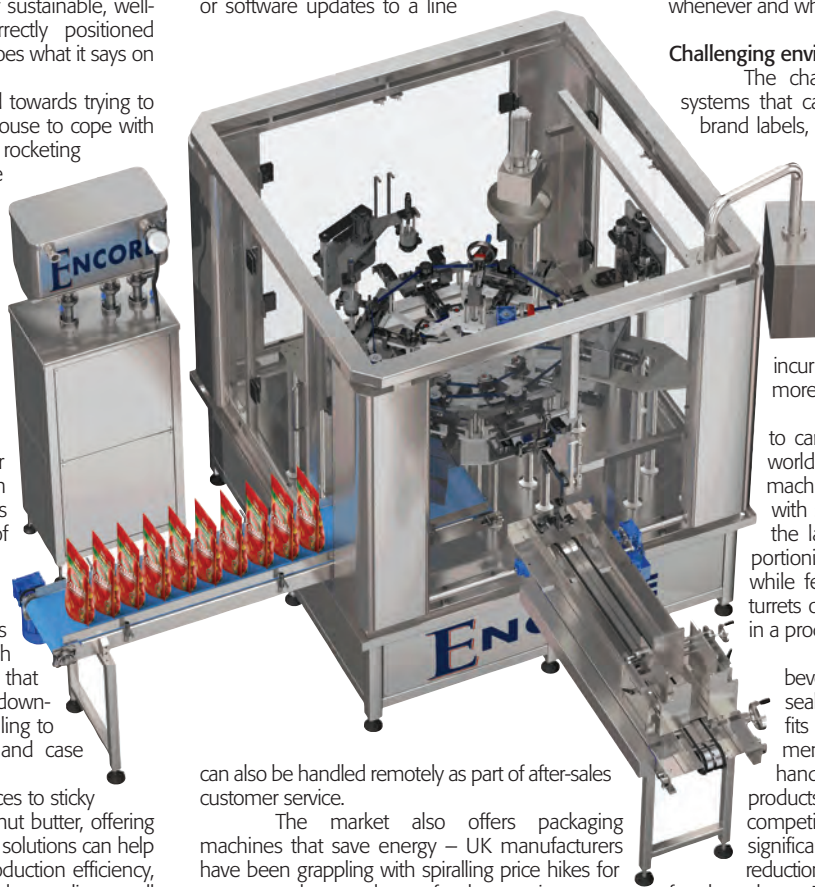
The goal is to offer food and beverage manufacturers flexible filling, sealing, and capping machinery that fits their specific packaging requirements. The ability to effectively handle a variety of packaging and products is a key advantage in the highly competitive market. Also, delivering significant sustainability benefits and reductions in operational costs – alongside fast throughputs. That's an unbeatable ROI.

can also be handled remotely as part of after-sales customer service.

The market also offers packaging machines that save energy – UK manufacturers have been grappling with spiralling price hikes for many months – and cater for the growing move away from plastic wrapping to eco-friendly and recyclable materials. This is particularly evident in fresh produce where suppliers are turning to cardboard and paper wrapping for improved sustainability.

Shoppers becoming more savvy Shelf appeal is massively important. Shoppers are becoming more savvy because of the cost of living crisis – coupled with a stronger awareness of sustainability. Retailers are demanding that suppliers have packaging systems in place that not only protect the integrity and offer great presentation of goods, but can also accelerate the process in getting them to market and offer prolonged shelf life.

Manufacturers need to decide when



For more info on the full range of machines and Shemesh Automation visit www.shemeshautomation.com

GEA refrigeration service gives vegan meal producer Quorn food for thought

As the number of people embracing a plant-based diet continues to rise, demand for vegetarian and vegan foodstuffs has seen almost daily launches of new plant-based products across the globe. With data also showing that, nowadays, more adults are considering a vegan diet, it looks like the food industry is fully engaging with a sector where consumers are highly focused on healthy plant-based eating.

Innovative solution helps Quorn keep cool

Quorn Foods is renowned for developing a range of meat-free meals that meet growing demand from consumers for alternative, natural ingredients that are kinder to the planet. This innovative market leader needed an innovative solution for a failing refrigeration system at its facility in Yorkshire, UK.

After proposing to the customer a GEA Grasso Conversion Kit (GGCK), GEA was tasked with the job of meeting a strict 10-day deadline set



by Quorn Foods during a planned shutdown for not only installing and commissioning the new, larger compressor that would improve performance of supply of refrigeration to the production facilities, also for removing the obsolete equipment.

Interruption-free production

A specialist in supplying high-tech processing, packaging and refrigeration kit for the food industry, GEA completed the task in half the allotted time, enabling Quorn Foods to bring production back online without any interruptions to the schedule of work at the plant or to the start-up plan.

Investing in a GGCK enabled Quorn Foods to benefit from boosting the refrigeration capacity by an extra seven percent. This not only improved



the efficiency of the site but also delivered energy savings and a reduced carbon footprint.

GEA also upgraded Quorn Foods' existing control with a new state-of-the-art GEA Omni Retrofit Panel control, a much more sophisticated control and management system designed to smooth out what had been an erratic operation.

Meeting targets the icing on the cake

The innovative solutions put forward by GEA have delivered the reliability of refrigeration supply demanded by the customer – the GEA Grasso compressor is meeting Quorn Foods' target of 98% availability for the production of its vegetar-

ect. It's a real team effort that delivered a successful outcome for Quorn Foods in terms of improved performance and increased lifetime for the plant. The tight deadline could have been a little unnerving but thanks to top-notch teamwork we beat it by a half – really great work!"

Training and servicing on the menu

As well as providing first-class training for Quorn's staff, GEA's team of engineers also carried out service work including PRV calibrations, mechanical safety switch calibrations and the replacement of the motor bearing, coalescent filter and oil



ian, vegan and meat-free recipes – alongside a reduction of 29% in electricity usage.

Quorn Foods' Engineering Site Manager, Neal Simmonds, said GEA was awarded the contract ahead of other refrigeration providers due to its "innovative ideas" and "thinking outside the box approach", and didn't disappoint with its handling of the project, enabling the customer to get back into production earlier than expected.

He commented: "Originally we had requested a like for like replacement for the failing compressor but GEA offered an alternative, cost-effective solution which was delivered ahead of schedule and without downtime to production. It has been a highly successful project, giving Quorn a payback of less than three years."

GEA's Business Development Manager Heating & Refrigeration Solutions – UK, Mark Penney, added: "We are thrilled to be part of this proj-

separator sight glass.

Following on from the works carried out by GEA, Quorn Foods is developing even more choices for its mouth-watering meat alternative meals, while continually reducing the carbon footprint of its factory in line with the company's environmental philosophy.



www.gea.com

Safe, sustainable, and money-saving – eliminate dust while cutting waste and costs with Luxme's automatic MINILux bag slitter

Addressing the food industry's need for a hygienic, bulk ingredients, high-volume bag opening solution that eliminates dust and removes the associated H&S risks, Luxme International developed the MINILux – an automated food-grade bag slitter with self-contained dust collection and recovery. Converting labour-intensive, inefficient processes into automated and sustainable ones, the MINILux recovers 1.5-2% more product at a rate 1.8-2x faster than a single bag dump station. Facilitating a healthy, safe, and hygienic working environment by recovering both airborne and trailing product, it also reduces waste and boosts profits.

Safeguarding operator health

The health and safety challenges of handling dust-rich bulk ingredients – such as powders, mixes, spices, flours, dairy products, nuts, and seeds – are widely known, and the moment when bags are first opened is when the risk is greatest. Operators using manual bag dump stations are at increased likelihood of developing breathing and asthma-related conditions linked to working with airborne-rich materials in a dusty environment over prolonged periods. Certain ingredients, such as flour, are also known to be volatile; as well as the long-term health dangers, dust-rich environments also present an explosion risk.

Luxme's MINILux protects workers from occupational breathing conditions and greatly

reduces the risk of explosion by containing all dust particles within the system itself, ensuring workspace air remains clean, safe and hygienic.

Meeting air and workplace quality rules

There is also clear evidence that improved indoor air quality in workplaces boosts employee performance. Recent studies on workplace productivity show that high-performing, green-certified buildings with improved ventilation resulted in employee performance improving by 8%, the equivalent to a £4,600 increase in employee productivity each year¹. And with the World Health Organization placing increased focus on indoor air quality, encouraging countries to use its guidelines as a scientific basis for legally enforceable standards, this is an issue that is only going to become more significant. Businesses will soon prioritise indoor air quality, both to comply with existing regulations and get ahead of future legislation.

Eliminating cross-contamination

Capable of opening up to six 25kg bags per minute, the MINILux is an all-in-one conveying, slitting, emptying, integral dust filtering, and empty bag compaction solution. Adhering to the highest standards of food hygiene, it features multiple clean-out access points for easy cleaning to ensure allergens and pathogens do not enter the food chain.

This is especially important for producers of specialist or 'free-from' food ranges. When



Luxme's MINILux automatic bag slitter eliminates dust, making manual bag stations redundant

making claims around a product's integrity – be it organic, vegan, nut-free, gluten-free, or similar – it is crucial they can be substantiated. Aside from the serious health risks associated with consuming a known allergen, brand reputation can be severely impacted if cross-contamination is found to have occurred. Consumers will only pay a premium for a specialist, niche product if they trust its authenticity, so adherence to the highest standards of hygiene is important for food producers in these markets.

The MINILux has been designed for versatility and efficiency. It processes most 25kg bag types and sizes on a continuous basis, allowing batches with a variety of bag sizes, weights, and constructions to be slit and opened in a single run without set-up adjustments. To accommodate clean-out, there are access panels on each of its four sides. In contrast to the typical enclosed design of most industrial equipment, it is far easier to clean and quicker to access, facilitating speedy yet safe product changeovers. All internal components have been designed to food safety standards allowing easy and thorough cleaning. In addition, material finishes are of AAA quality; the highest food-grade standard available.

Boosting product recovery and profits

Bulk ingredients are an expensive commodity, and any wastage comes straight off a food processor's bottom line – put simply, any product circulating in the air or leaving the plant within the empty bag represents lost revenue. By containing product within the system, the MINILux not only supports a safe and dust-free workspace but also greatly reduces the volume of ingredients that are lost. Product recovery compared to a manual process is on average 1.5%-2% higher.

To further enhance the MINILux's product recovery, the system comes with an optional upgrade of a recovery tumbler complete with dust recovery. Opening, rotating, and tumbling empty bags numerous times, it releases any remaining product to make the solution more cost effective, boasting a 99.93-99.98% efficiency depending upon the free-flowing characteristics of the product.



The MINILux adheres to the highest standards of food hygiene



Suitable for automatic slitting of 25kg bags of bulk ingredients, the MINILux increases productivity

To put the cost savings offered by the MINILux into context, across two eight-hour shifts at a typical food and bakery mix powders plant using seven mixers, six days per week, owners can achieve:

Faster feed rate, to lower mixer fill time for one extra batch/shift versus a manual process.

Increased revenue, with the extra batch/shift delivering around £3,000,000/yr (two extra 6,500 lbs batches/day over 300 days/yr at a selling price of £0.75/lb).

Material recovery of 1.5% higher yield, a saving of around £313,000/yr with £.38/lb material.

Self-contained dust collection

Further cost-savings are enjoyed by eliminating the need for purchasing a separate, standalone air ventilation system. It is common for sites handling high volumes of bulk ingredients to use sophisticated air ventilation/filter systems to improve air quality. These systems are expensive to install, energy intensive, and require regular maintenance. They also inherently collect and mix product with airborne dust, rendering it no longer fit for production.

A more cost-efficient alternative is the MINILux with the self-contained dust collection package. Offering the option of a six-inch spigot for direct connection to either a central dust collection

system or associated venting, dust recovery can also be self-contained within the MINILux, with recovered product funnelled back into the process for re-use.

"MINILux is the technology of the future – its operating features increase productivity and deliver higher efficiency, better air quality, and workplace safety for a more profitable and ergonomic bag slitting solution," says Rick Leroux, VP/GM of Luxme International.

Reference:

1 <https://www.hsph.harvard.edu/news/hsph-in-the-news/healthy-buildings-can-improve-workers-performance/>



www.luxme.com

Established in 1979, Luxme International Ltd has grown to become one of the leading providers of tubular chain conveyors and bag slitting technology worldwide. With over 40 years of experience and thousands of satisfied clients, Luxme International offers high-quality material handling products and superior customer service, with extensive experience in solids handling systems. The company operates primarily in the manufacturing, process, agricultural, mineral, chemical, pharmaceutical, and food industries, engineering and manufacturing complete conveying systems to meet individual customer needs at competitive prices. Potential clients are invited to visit Luxme's test facilities and showroom located in Montreal, Canada, to see the tubular chain conveyors and bag slitters up close and operating.

luxme

AMF Bakery Systems introduces a unified family of brands

AMFBakery Systems (AMF), industry-leading manufacturer of high-speed automated food processing solutions, introduces a unified family of brands heightening the Company's promise to deliver best-in-class unit equipment. Backed by focused leadership, each with a dedicated team of engineers, the new brand architecture reflects AMF's commitment to continuous improvement and specialization.

The family of brands, inclusive of: AMF Fusion, AMF Flex, AMF Tromp, AMF BakeTech, AMF Den Boer, AMF Vesta, AMF Conway, AMF PackTech, AMF Workhorse, and AMF APEX offers industrial bakers complete system solutions across a vast range of baked products and production rates. From soft bread and buns, artisan breads, pizza, flatbreads, cakes, pies, pastries, croissants, and more, AMF's family of brands has the engineering solutions and manufacturing expertise for bakers seeking automation to fully automated production solutions.

"With the launch of this family of brands, AMF will continue to rise as the baking partner of choice," Global Marketing Director, Diana Boxey said. "This strategy helps us better differentiate the areas of specialization within AMF. We have highly focused teams of engineers and master bakers delivering innovative solutions across each area of the baking process. As we continue to grow as a company, defining this structure will ensure that our teams

maintain focus on developing solutions that increase value for our baking customers in an increasingly competitive marketplace."

At the front of the bakery, AMF Fusion delivers sanitary industrial mixing solutions integrated with fully automated dough handling systems. AMF Flex and AMF Tromp serve industrial bakers with the dough process expertise and make-up system solutions needed to achieve premium product quality for a range of products through extrusion and volumetric dividing systems to sheeting, laminating, depositing and decorating technologies.

Within the baking process, AMF BakeTech, AMF Den Boer, and AMF Vesta teams collaborate to develop the most optimal proofing, baking, cooling, and freezing solutions tailored to each bakery's specifications and unique product portfolio.

Moving commercial bakers' most valuable assets from mixer to marketplace, AMF Conway offers a range of seamless conveying and transfer solutions.

Downstream, AMF PackTech delivers gentle slicing, bagging, and bulk packaging for baked products. Driven by the AMF Workhorse specialists, pan handling and post-packaging solutions serve a variety of pan and product applications.

Delivering value to bakers in today's emerging consumer markets, AMF APEX features simplified product models and value-oriented systems that move bakers from manual to semi-automated operations or semi-automation to labor-free, fully automated bakeries at lower production rates than AMF's standard high-speed systems.

www.amfbakery.com

INNOVATIONS IN FOOD (& BEV) PROCESSING & PACKAGING

AUGUST ISSUE - **drinktec** and **PPMA** PREVIEW

For your editorial feature or advertising enquiries contact teryprior@innovationsfood.com

Reciprocating action solves tough heat exchange challenges



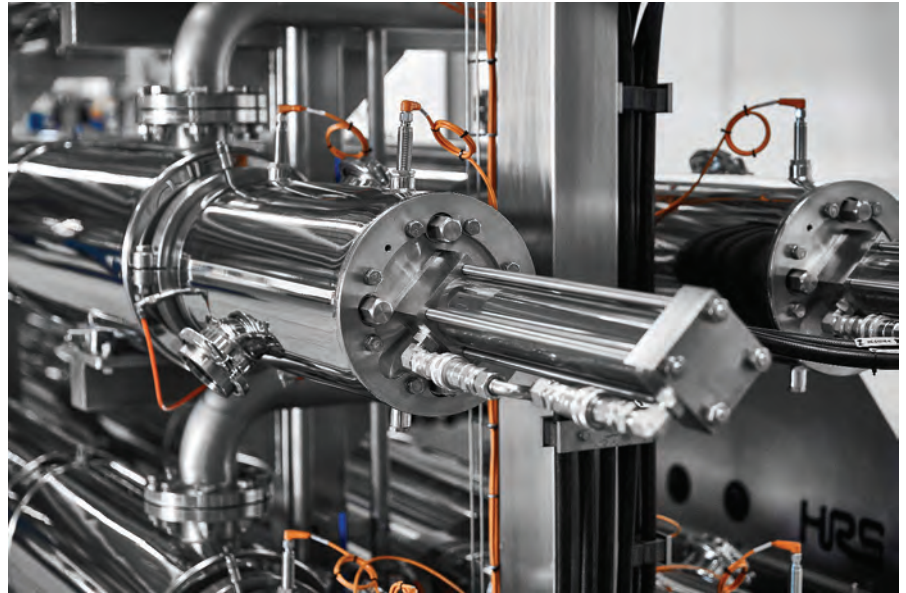
Matt Hale
Sales & Marketing Director
HRS Heat Exchangers

Scraped surface heat exchangers have been used for difficult heat transfer applications involving viscous fluids or where fouling is an issue, such as evaporation processes. The most common type of scraped surface heat exchanger (SSHE) uses a rotating shaft with blades or augers which scrape the surface of the tube. The popular HRS R Series is based on this approach. However, the design is not optimal for every situation, and so HRS developed the Unicus Series of reciprocating scraped surface heat exchangers.

The HRS Unicus Series is specifically designed to provide the improved heat transfer of a traditional SSHE, but with a gentle action to preserve the quality and integrity of delicate food products such as cheese, yoghurt, ice cream, meat paste, and products containing whole pieces of fruits or vegetables. Over the years, a number of different scraper designs have been developed, meaning that every application, from processing curds to heating sauce or pasteurising fruit compotes can be handled in the most efficient yet gentle way possible. Other applications where the Unicus Series has been beneficial include handling meat slurry and mince, and processing yeast-malt extracts.

The hygienic design uses a patented stainless-steel scraping mechanism which moved hydraulically back and forth within each interior tube. The movement performs two key functions: it minimises potential fouling by keeping the tube wall clean, and also creates turbulence within the material. Together, these actions increase the rate of heat transfer in the material, creating a highly efficient process which is ideal for viscous and high fouling materials.

Since they are controlled separately, the speed of the scrapers can be optimised for a particular product being processed, so that materials which are susceptible to shear stress or



The BP Series is suitable for pumping materials with pieces and whole fruits, such as compotes and strawberries

pressure damage (such as creams and custards) can be handled delicately to prevent damage while still providing high levels of heat transfer. The Unicus Series has proven particularly useful in handling viscous food products where texture and consistency are important attributes. For example, some creams or sauces may shear when subjected to excess pressure, making them unusable. The Unicus means that effective heat transfer can be carried out at low pressures which overcomes these problems.

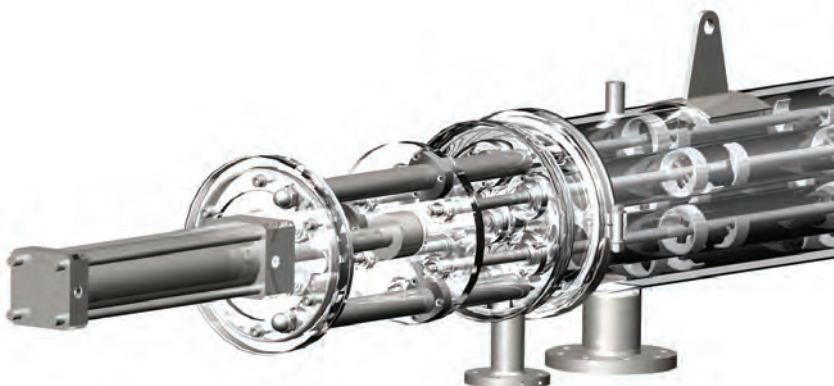
Each Unicus SSHE consists of three elements: a hydraulic cylinder and power pack (although in smaller units a pneumatic cylinder can be supplied instead), a separation chamber to ensure hygiene and preserve product separation from the motor, and the heat exchanger itself. The heat exchanger consists of a number of tubes, each of which contains a stainless-steel rod to which the appropriate scraping elements are fitted. Using a

range of food-safe materials including Teflon and PEEK (polyether ether ketone), these provide different internal geometry setups according to the application, such as 120° scrapers for large particulates and 360° scrapers for viscous fluids without particulates.

The Unicus Series is also fully scalable by increasing the shell diameter and adding more interior tubes from a single tube up to 80 in one shell. A key feature is the specially designed seals which separate the inner tube from the separation chamber, tailored to the product application. These seals prevent leakage of the product and ensure internal and external hygiene. A standard range of models for food processing provide heat transfer areas from 0.7 to 10 m², while larger models up to 120 m² can be made for specific uses.

One area where the Unicus Series excels is in evaporation applications, where the prevention of fouling is particularly important. HRS has a specific version of the Unicus for use in evaporation units

where volume reduction of the material is essential. The scraping action keeps the heat transfer surfaces clean so that Unicus evaporators can concentrate materials to a level that is unattainable using traditional technologies. Unicus evaporators can be used in multi-effect setups or in combination with mechanical vapour recompression.



The HRS BP Series is a range of hygienic reciprocating, positive-displacement pumps



www.hrs-heatexchangers.com

Paper wrapper: simple retrofits on existing KHS packaging machines

Simple conversion for great flexibility: the new packaging alternative from KHS, that wraps beverage cans in paper instead of film, can also be retrofitted to existing Innopack machines manufactured by the Dortmund systems supplier. Customers can either opt for more flexibility by switching between film and paper packaging as required or permanently switch to paper.

Since 2020 KHS has provided a facility on its packaging machines for wrapping beverage cans in paper. In order to give customers maximum flexibility, the new function has been integrated into a combined machine: whether wrap-around packs, packs on trays or pads with or without film or paper wrappers, the new system solution can process a broad range of secondary packaging.

Paper may be a relatively new packaging material on the beverage market; especially as an alternative to plastic, however, this material is increasingly capturing beverage fillers' interest. The paper wrapper meets consumer demand for alternative, environmentally-friendly packaging material. As not every beverage producer wishes to install a completely new machine, however, the paper wrapping unit is now also available as a conversion option. This means that bottling companies can quickly and easily react to marketing trends and consumer demands using existing Innopack packaging machines.

Replacement or addition

KHS provides two retrofit options. If paper wrappers are to permanently replace shrink film as a secondary packaging, all that needs to be done is to substitute two modules; the machine layout can stay practically the same. Here, the former film wrapping module is replaced by the newly developed module that can process paper. The shrink tunnel is also substituted by a module that folds and



glues the paper.

Beverage producers who do not wish to compromise on flexibility when it comes to secondary packaging can retrofit the new KHS packaging system as an additional option on their existing machine. In this case, the paper wrapping unit is adapted and the paper folding and gluing module is installed on the machine as an extra.

Simple switch

Once the modules have been fitted, switching materials calls for no other conversion except the standard format changeovers. As soon as the packaging materials have been changed over and the hot melt devices are ready for operation, production can begin.

"Conversion is a simple matter on all machine types in the Advanced series," claims Uwe Bartholemy, head of Technical Support for Packaging at the KHS Service Division. This is chiefly facilitated by the modular design of KHS' Innopack machinery. Then a quantum leap for the industry on its launch in 2000, this plant engineering has long established itself as a standard. "Generally speaking, we can also convert older machines in this way. Here, we carefully examine each individual case to check whether the control unit needs an update or not, for example."

Technically straightforward

From a technical viewpoint, on KHS Innopack packaging machines with a shrink tunnel only the existing film wrapping module has to be replaced by the further developed module for paper wrapping. This can then process both materials. Packers without a film wrapping module have the new module installed as an extension. As opposed to the former machine segment, this now also has a gluing station that sticks the paper together beneath the pack. The packers also require a paper folding and gluing module – either as an addition or a replacement of the shrink tunnel – where the packs are closed.

Costs for conversion are much lower than those for investment in a new machine. Moreover,

only partial commissioning of the current formats is required as these have already been configured for the existing machine modules. New formats can also be set up with less effort than that required for the existing ones. Incidentally, when asked which of the two variants – replacement or addition – will be more in demand in the future, Bartholemy has a clear answer. "Paper wrappers are still a relatively new form of secondary packaging. With a view to future market development, lots of bottlers want to keep all their options open. I thus assume that the flexible combined machine will prove an extremely attractive proposition for our customers."



www.khs.com

The KHS Group is one of the world's leading manufacturers of filling and packaging systems for the beverage and liquid food industries. Besides the parent company (KHS GmbH) the group includes various subsidiaries outside Germany, with production sites in Ahmedabad (India), Waukesha (USA), Zinacantepec (Mexico), São Paulo (Brazil) and Kunshan (China). It also operates numerous sales and service centers worldwide. KHS manufactures modern filling and packaging systems for the high-capacity range at its headquarters in Dortmund, Germany, and at its factories in Bad Kreuznach, Kleve, Worms and Hamburg. The KHS Group is a wholly owned subsidiary of the SDAX-listed Salzgitter AG corporation. In 2020 the KHS Group and its 5,085 employees achieved a turnover of around €1.130 billion.



At a glance: the paper wrapper conversion

Areas of application

- Beverage and food cans (all sizes)
- Beverage cartons
- Other cylindrical and quadratic packaging styles
- Pre-packed products

Two variants

- Machine conversion to switch from film to paper wrappers as the secondary packaging: replacement of the film packaging modules and shrink tunnel by the paper wrapping and paper folding and gluing modules
- Conversion to create a combined machine for flexible film and paper processing: replacement of the wrapping module and addition of the paper folding and gluing module

Advantages

- Low cost of investment
- Only partial commissioning of existing formats
- Faster resumption of production

The evolution of product labelling: New trends in sustainability

Product labelling has long been used as an avenue for brands to highlight commitments to corporate social responsibility and demonstrate to retailers and consumers that they meet required ethical standards. The advent of the global FAIRTRADE certification and label in the 1990s is perhaps the most prominent, though by no means the only, example of this.

Today, consumers increasingly look to product packaging to find information about brands' ethical and eco-credentials. Indeed, with an ever-increasing global focus on sustainability, many companies are now exploring new product labelling initiatives which focus specifically on a product's environmental footprint. However, concerns have been raised that static labelling schemes may offer consumers only part of the picture.

In this article, Rob Ellinor, Programme Manager, Domino Printing Sciences (Domino), explores the challenges faced by brands in managing the demands of the eco-conscious consumer and highlights the role that variable data labelling can play in helping to provide a greater wealth of transparent information about products and supply chains.

Growing demand for sustainable goods

In recent years, businesses globally have come under ever-increasing pressure to demonstrate their commitment to sustainability. Major global events like COP26 continue to shine a spotlight on the need for change – and the onus is on brands to demonstrate how they are making a difference. Consumer awareness is also rising, with shoppers pushing for more information to inform their shopping decisions and habits.

The push for sustainability can be seen across fast-moving consumer goods, including food and beverages, personal care, and household cleaning products. Increasingly, brands in these sectors are looking to their product labelling to demonstrate their eco-credentials. For some, this means adopting new eco-conscious labelling initiatives such as the EU Ecolabel or Foundation Earth's traffic light labels, which rank the environmental impact of items.

In addition, some brands are choosing to present their own 'eco scores' with labelling that demonstrates a product's total carbon or water footprint. Many large vegan and vegetarian food and drink brands – including Quorn, Oatly, and THIS – now include carbon footprint information as standard, and several global multinational corporations, including Unilever and Nestlé, have voiced ambitions to introduce the same. The Chinese Manufacturers' Association and the Carbon Trust have also launched a product carbon footprint and labelling scheme for businesses in Hong Kong.

The risk of greenwashing

The rise in sustainability labelling initiatives could be seen as an indication of positive change; however, it has been suggested that some sustainability claims may not tell the whole story. For example, a carbon footprint label only tells the consumer about greenhouse gas emissions but

omits overall land or water usage. Equally, while logos can be displayed on food packaging to highlight that meat or vegetables are locally sourced, this doesn't guarantee that the supply chain is the most sustainable choice. Indeed, when grown out of season, locally grown vegetables may be less sustainable than imported alternatives.

So, is there agreement as to what 'sustainable' actually means?

The Food and Agriculture Organization of the United Nations (UN) states that sustainable diets are "protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy, while optimizing natural and human resources".

Considering all these factors and the subsequent sheer volume of data that comprises sustainability, many existing, static labelling options will fall short of providing the much-needed assurance of a product's provenance.

Indeed, the accuracy of information presented to consumers has come under scrutiny in recent years amidst concerns over greenwashing. In 2021, the UK's Competition & Markets Authority (CMA) published a Green Claims Code aimed at protecting consumers from misleading environmental claims, which could introduce penalties for organisations that are found to be making misleading 'green' claims.

Batch-level traceability for sustainability and provenance

Variable 2D codes (e.g., Data Matrix and QR codes), specific to a product's batch level, could help to provide brands with a solution to overcoming the complexities of sustainability labelling. Consumers and supply chain partners could use these scannable codes to source granular information about products and packaging.

While the ingredients within a product are unlikely to change from batch to batch, the source is likely to vary, being susceptible to supply chain fluctuations and the seasonal availability of ingredients. Brands already collect such batch-level information, but it may not be present on product packaging due to complexities in changing label designs between batches and limited on-pack space.

When the source of product ingredients is variable, 2D codes can facilitate the appropriate sharing of this information. For example, for products containing meat and dairy, a batch-level 2D code could provide information about the farm where livestock was raised, and farming methods used to back up claims such as 'free-range' or 'organic'. This could be taken a step further to provide more granular information about specific batches of raw produce, potentially even homing in on data on individual animals.

By comparison, without a variable data label, brands will inevitably have to display metrics that reflect a worst-case scenario. Take, for example, a packaged food company with suppliers that change based on seasonal availability – certain ingredients will be less polluting at times when they

are in season and can be sourced locally, but product labels will need to reflect the times when embedded emissions are at their highest. The only other alternative would be to change the entire product label between varying batches – which would come at a significant cost.

Effective data exchange within supply chains

Across the globe, new initiatives are already emerging that aim to bring more transparency to consumers via 2D codes. In the US, for example, the SmartLabel™ initiative provides scannable QR codes linked to a searchable database that consumers can use to find detailed information about specific ingredients within products. Internationally, the GS1 Digital Link Standard facilitates this capability, allowing brands to include designated sustainability information at the batch or product level within a GS1 Digital Link barcode.

Utilising batch-level 2D codes allows brands to provide more granular information to consumers and benefits brands by providing more transparency within their supply chains. This increased visibility can deliver the insights needed to run supply chains more efficiently. Variable 2D codes are the key to effective data exchange within supply chains, allowing information to be shared from each step of a product's lifecycle, from the initial raw material supply to retail sales data.

The same 2D code can also be used to communicate any extra information that might not fit onto a product label, including essential marketing information and campaigns – facilitating deeper customer engagement and longer-term brand loyalty. Brands can provide access to sustainability commitments and policies, or personalised experiences, such as location-specific recycling advice, allowing consumers to check whether packaging is accepted via household kerbside recycling, or locate their nearest recycling point.

Conclusion

Static product labels and environmental 'eco' certifications alone cannot meet a modern-day eco-conscious consumer's ever-changing and increasing information demands. This new breed of discerning consumer requires more.

Variable 2D codes allow the sharing of more granular, transparent information about products, enabling brands to demonstrate the true scope of their sustainability commitments while also providing access to the information needed to run supply chains more efficiently.

As demands for data sharing from consumers, governments, and regulators increase, the importance of batch-level 2D coding will become only more apparent. For those not yet exploring the benefits of variable data coding, the time to act is now.



www.domino-printing.com

**Vitafoods™
Europe**



The world's nutraceutical event

10-12 May 2022 Geneva

2-13 May 2022 Online

Connect with nutraceutical experts

This year, Vitafoods Europe 2022 returns to its annual May slot in your diary. As it's a hybrid event you'll be able to join us in person and online to share ideas, see new products, source ingredients and innovate with an inspiring community of experts. This is your chance to connect with industry-leading buyers, suppliers and manufacturers from over 110 countries, so don't miss it.

Register for your free badge now and save €160*

Geneva: **10-12 May**

Online: **2-13 May**

For more details visit

vitafoods.eu.com

*Onsite visitor registration will cost €160

Sustainable laser solutions for the food industry

Leading laser manufacturer Luxinar is paving the way for sustainable solutions in the food industry. Whether it's providing an ink-free alternative to mark packaging or laser coding directly onto food, the company's CO₂ laser sources are opening up a variety of eco-friendly possibilities.

To mark packaging the laser ablates the inked coating on paper and card packaging materials, leaving a clear, high-quality mark. Variable information such as best before dates, batch codes, barcodes and 2D Data Matrix codes can be applied on the production line, on the fly, with the information being updated continuously as required. The laser marking process is quick, clean, and reliable. Marks are indelible and tamper-proof, and consumable costs are effectively non-existent once the laser coder is installed. This makes laser coding an attractive alternative to traditional ink-based technologies.

Luxinar's CO₂ lasers have found some surprising applications in the food industry. From grill

marking of meat products to scribing eggshells and marking freshly baked bread rolls the laser sources are used in numerous imaginative ways. The process uses no potentially harmful inks or chemicals.

Laser coding can be used to apply product information such as dates, batch codes and place of origin, or may simply be used to apply logos and graphics for brand identification and advertising. This is useful when products must be presented without packaging; in fact, the laser process may actually eliminate the need for packaging in some cases, reducing both cost and environmental impact.

The above is just a snapshot of the numerous applications for CO₂ lasers in the food industry that give high quality, quick and clean results. Lasers also offer a sustainable solution for marking packaging by eliminating ink, solvents, chemicals and cartridges and, by marking directly onto food, they reduce the need for packaging materials.

Markem-Imaje introduces the SmartLase F250: compact, industry 4.0-ready fiber laser printer

Markem-Imaje, the global provider of end-to-end supply chain solutions and industrial marking and coding systems has unveiled the SmartLase F250. The new compact and high-performance 20W fiber laser delivers high-quality permanent coding on high-density substrates.

With customers increasingly adopting laser marking solutions for more of their product identification and packaging applications, the SmartLase F250 is the ideal solution for modern fast pace production lines. The SLF250 is the first new product launched as a result of Markem-Imaje's acquisition of laser coding and marking solutions specialist Solaris Laser.

Highly-reliable, the SmartLase F250 reduces operational expenses through fewer line stoppages and by eliminating the requirement for ink. The SmartLase F250 delivers chemical-free production that is truly environmentally friendly and helps businesses meet sustainability compliance goals.

Compact and intelligent, the SmartLase F250 is ideal for businesses seeking best-in-class code quality at high-speed where space is at a premium. Built for even the most challenging environments, the SmartLase F250's controller, printhead and touchscreen user interface come with at least IP55 ingress protection level which provides long and reliable operation in harsh, dusty and humid conditions.

Packed with features, the SmartLase F250 comes industry 4.0-ready with an array of industrial interfaces that enable its safe and seamless integration with even the most complex plant automation and manufacturing execution systems. Once integrated, the intuitive user interface delivers an increase of up to 20% in operating efficiency.

"The SmartLase F250 combines speed and efficiency with simplicity, safety and sustainability," said Alex Koudriashov, Laser Product Marketing Manager at Markem-Imaje "The F250 is a printer designed with the future in mind. Fewer line stoppages and the fact it uses no ink can radically reduce OPEX, while the elimination of chemical components makes it ideal for companies who are looking to reduce their impact on the planet.

Virtually maintenance free, the SmartLase F250 provides additional peace of mind with the help of MIVA (Markem-Imaje Virtual Assistant) which provides customers with remote troubleshooting, while 24 or 48 hour on-site service level agreements (SLA) are available in most markets.

Labelexpo Europe announces new dates

Tarsus Group, organizer of the Labelexpo Global Series, has announced that Labelexpo Europe 2022 has been rescheduled, with the event now taking place 11-14 September 2023. The organizing team has made the decision to move the event dates in light of the significant supply chain pressures the European label industry is currently experiencing coupled with the fast-evolving situation in Ukraine.

Lisa Milburn, Labelexpo managing director, explained: "Firstly, I'd like to acknowledge the support we have had from the industry with many committing to Labelexpo Europe in spite of the issues many of them are currently dealing with, we know the decision to reschedule the show will be as disappointing for them as it is for us. This has been a very difficult decision for us to make, we have been working tirelessly to overcome the supply chain issues and produce the show the industry needs, especially in light of the challenges of the past two years. Unfortunately these issues have proven to be insurmountable at this stage so we feel that rescheduling is the responsible decision to

make."

Jules Lejeune, managing director, FINAT, also commented: "FINAT fully understands and supports the decision that has been taken. Given the existing shortages of chips and components, the current shortages of paper and other consumables to produce labels, and now the major geopolitical uncertainties caused by the situation in Ukraine, there are simply too many hurdles to overcome. FINAT remains a proud supporter of the world's leading trade exhibition for the label and package printing industry. We admire our longstanding partner Labelexpo for taking this extremely difficult decision, and for putting the interests of the industry first"

Given the moving of Labelexpo Europe the next major global event for the package printing industry will be Labelexpo Americas which will take place at the Donald E. Stephens Convention Center, Chicago, 13-15 September 2022. Other upcoming Labelexpo events this year include Labelexpo Asia (28 June-1 July), Labelexpo India (10-13 November) and Labelexpo South China (7-9 December).

Xaar's guide helps new users explore the possibilities of inkjet

Xaar has launched a new guide to help those new to inkjet maximise the potential of this extremely versatile non-contact technology.

The ability to apply a wide range of fluids with precision and accuracy across a variety of different substrates and materials, is seeing inkjet grow in importance to today's manufacturing processes. Increasingly, it is either replacing traditional production methods or delivering new applications.

Titled, 'Your guide to a successful inkjet development project', the guide will help readers learn more about what to consider when starting their inkjet development journey, including 'Why digital inkjet?', 'What fluid do I use?' and 'What system components do I need?'

From the need to use difficult fluids on a variety of substrates, to the ability to print in multiple

orientations, the guide encapsulates Xaar's 30 years of experience in a single resource, to demonstrate how a wide range of industries can now seize the opportunity of inkjet technology.

Graham Tweedale, Chief Operating Officer at Xaar said, "Inkjet is enabling a multitude of new manufacturing applications, yet as a technology it can seem daunting to the uninitiated.

"That's why we've created this guide; to help inform our customers' inkjet development journey and assist in delivering a successful outcome with the shortest possible time to market. Ultimately, it will help businesses take advantage of on-demand and variable data printing, reduce waste, and deliver an improved return on investment – all through exploring the possibilities of inkjet."





Avery Dennison launches the first certified portfolio of vegan labels

Avery Dennison has achieved another market first with the launch of a new certified portfolio of vegan labels, which contain no animal-derived components. Additionally, every item in the portfolio was created without animal testing, or the use of GMOs of animal origin. Because of this, the collection has received approval from EVE VEGAN®, an independent organization created by Vegan France, which works to promote vegan alternatives in different industries, including food and medicine.

At the time of launch, there are six paper facestocks, three adhesives and two liners in the collection, and they can be mixed and matched according to customer needs. Each item offers a similar level of performance to non-vegan alternatives in both converting and application. Based on converter and end user needs, there are plans to expand the range with new paper facestocks.

"Veganism goes beyond diet," says Luuk Zonneveld, product manager at Avery Dennison. "It's a philosophy and way of life centered on avoiding animal exploitation for food, clothing and everything else you can think of. Naturally, this extends into the world of packaging, and we're excited to help brand owners take their dedication to being cruelty-free to the next level with these innovative labels developed by our R&D team."

Suitable for the beauty, wine and spirits and food and beverage sectors, the new labels also serve as a unique selling point for brands. Thanks to the certification, companies can let consumers know their entire purchase – packaging included – abides by their values.

"We're very proud to have received EVE VEGAN® certification and consider it a powerful symbol that lets brand owners, and their customers, know we take our commitments seriously," says Luuk.

Fortis Solutions Group acquires Label Tech, Inc.

Fortis Solutions Group LLC, a leading provider of high impact printed packaging solutions and a portfolio company of Harvest Partners, is pleased to announce the acquisition of Label Tech Inc. based in Somersworth, New Hampshire.

Label Tech is an award-winning, ISO-certified flexographic and digital manufacturer of pressure sensitive, (including coupon, game piece and UL labels) and non-pressure sensitive labels and flexible packaging for the consumer product, food and beverage and health and beauty end markets.

Fortis President and CEO John O. Wynne, Jr. commented, "We are elated to acquire Label Tech, one of the premier flexographic and digital converters in the Northeast. This acquisition will further our geographic footprint and enable Fortis to provide additional products and solutions to our valued customers. I thank Pat Brady for entrusting us with the future of his company. We are looking forward to working alongside the outstanding Label Tech team."

Label Tech owner Pat Brady commented, "I'm thrilled to be teaming up with John Wynne and Fortis Solutions. Our business philosophy is very closely aligned, and they are a very high-quality operation."

Macsa ID INTEGRA software ensures traceability of fruit and vegetable products

Further underlining its position as one of the UK's leading manufacturers of advanced coding and marking equipment for the food industry, Macsa ID UK's new INTEGRA Traceability Software ensures traceability of fruit and vegetable products from field to fork. This latest technology offers automatic calibration using RFID technology which helps reduce food waste by avoiding unnecessary and costly mass recalls.

Macsa ID's INTEGRA Traceability is able to generate the entire traceability tree, starting from the harvesting of fruits and vegetables through to dispatch. It can provide any traceability report that may be required meaning that if a problem is detected at origin or in the field, the relevant shipments can be easily identified.

Equally, if any incident is suspected in a final product, it is possible to identify its origin and also to know which other products have been affected. As such, only the affected batch or batches need to be withdrawn from the market - avoiding massive product recalls.

Macsa ID has developed an app that allows the farmer to record the data that is most likely to affect the traceability of fruit and vegetable products in each of the plots or areas of cultivation. The system records this data in real time and then uploads them to a database in the cloud.

The data can also be stored locally on the device and then later uploaded to the cloud. This is useful when working in areas without mobile data coverage.

When fruit and vegetable products arrive at the factory for packing, an entry registration is generated via a voucher or production order. The food items are checked to see if they need to be quarantined due to conditions in the field. For example, the application of pesticides might cause the consignment to be withdrawn.

To facilitate and automate all processes, each incoming batch is identified with a RFID chip. This allows products to be read and tracked throughout the factory by strategically placed antennas that are able to identify the batch of fruit

and vegetables without any contact.

The RFID chip is placed in the first container, which will then be sorted into the production line during the packaging process. The chips are encapsulated and shaped to resemble the product that is being processed. All chips have an unmistakable registration number and are reusable once the packaging process is finished.

Macsa ID's powerful warehouse management software, INTEGRA Storage can be used to complement the INTEGRA Traceability module. It ensures control of all raw materials arriving from the field that can be distributed in any of the warehouses available to the customer.

INTEGRA Storage also manages location, batch and date of entry for each stored product, as well as alarms when maximum storage time is about to be exceeded.

Batch sorting of fruit and vegetables starts by depositing the container with the RFID chip. All the fruit that is sorted will be associated with the data linked to the RFID chip (lot, harvesting area, harvesting date, farmer, etc). It is capable of working with multiple lines of sorting, packaging and sizing equipment, and allows several batches to be processed at once.

Once the RFID chip reaches the encoding section of the packaging area, INTEGRA Traceability automatically changes the message of the marker / label applicator, personalizing the batch, expiry date, etc, of each product.

When production has finished, the RFID chip is detected and ejected by the antenna array. From this moment, the chip is disconnected from the batch and ready to be reused infinitely.

Using bar code readers, photocell counters and linking systems, INTEGRA Traceability software is able to connect all the boxes and containers that make up a pallet. Finally, it manages labelling by giving each pallet a registration number or SSCC (serial shipping container code), linking this number with all the lots and batches it contains.

<https://www.macsa.com/en-uk/>

INNOVATIONS IN FOOD (& BEV) PROCESSING & PACKAGING

AUGUST ISSUE - **drinktec** and **PPMA** PREVIEW

For your editorial feature or advertising enquiries contact terryprior@innovationsfood.com

A new approach to packaging – with a clear view towards increased sustainability

With new translucent paper Crystalcon, Sappi is adding another innovative product to its range of sustainable packaging papers. Used in combination with Sappi's heat-sealable Seal Silk, the new paper delivers a recyclable, easy-to-implement packaging solution for a variety of food and non-food applications – all from a single source.

- Crystalcon's translucence allows consumers a direct view of the package content
- No additional converting or finishing of the papers is required
- From confectionery to envelopes and magazines, this is a sustainable packaging solution suitable for both food and non-food applications

Manufacturers are currently facing twin challenges: consumers are increasingly demanding more sustainable packaging solutions, but they also want to be able to examine product contents when walking through supermarket aisles. Currently, film is often used in whole or in part for such packaging. "By combining Sappi Seal with Crystalcon, we are offering manufacturers a sustainable and recyclable packaging solution to fulfil these requirements," says Kerstin Dietze, Key Account Manager Packaging Solutions.

The combination of Crystalcon with Sappi

Seal Silk, from Sappi's innovative Functional Paper Packaging division, offers a highly sustainable packaging solution. The Seal papers feature excellent heat-sealing properties and are recyclable through standard paper disposal systems. Meanwhile, the new translucent Crystalcon paper can be easily sealed onto Sappi Seal. The result is that this fast and sustainable packaging solution is well suited to both food and non-food applications.

Crystalcon is an uncoated, compostable translucent paper. Although not completely transparent, it allows sufficient visibility for consumers to examine the packaged product.

"It excels wherever high barriers are not required, but where product visibility is important," adds Kerstin Dietze. From noodles and rice to magazines, viewing windows in envelopes or sales packaging for greeting cards, the possible applications are numerous.

For more information about the products, please go to:

<https://www.sappi-psp.com/products/flexible-packaging-papers/crystalcon>

<https://www.sappi-psp.com/products/functional-paper-packaging/seal-silk-g-3-02>

Clearmark supports Ecolab to maintain 60% production uplift during pandemic

Coding and labelling specialist Clearmark Solutions has helped Ecolab maintain a 60% uplift in the production of their water, hygiene and infection prevention solutions during an unprecedented increase in demand due to the Covid-19 pandemic. Providing next-day, on-the-ground support and a rigorous training programme, Clearmark ensured that Ecolab could continue to meet the strict print quality requirements of the pharmaceutical industry despite a significant increase in output. As a result, Ecolab has since purchased a next-generation ICE Zodiac Hawk coder with integrated print checking from Clearmark for another of its lines.

As a global leader in water, hygiene and infection prevention solutions and services, Ecolab helps to make the world cleaner, safer and healthier, protecting people and vital resources. With over 95 years' experience, it operates from two manufacturing sites in the UK and the US. When the global pandemic struck in March 2020, the company quickly experienced a sharp rise in demand for its hygiene-focused products. Within a short timeframe, Ecolab's manufacturing process at its production site in Wales was transformed from a 2-3 shift outfit to a 24/7 operation. The company needed to ensure its existing coding solutions could support and sustain this increased production

capacity, to maintain quality and prevent downtime during a critical time for the business.

After discovering a print quality challenge with one of its 12-year-old ICE Zodiac coders, Ecolab's site engineering manager contacted the Clearmark technical support team, who responded immediately to keep the critical operation moving. A field service engineer was dispatched to site the next day and provided a short-term workaround, which initially enabled production to continue without any major disruption. Just 24 hours later, a long-term solution was implemented, with Clearmark also delivering comprehensive training to Ecolab's in-house operators to maximise performance across all coding lines, preventing downtime and disruptions going forward.

Thanks to Clearmark's rapid support and training provision, Ecolab was able to maintain a 60% uplift in production throughout the pandemic while meeting the strict print quality requirements of the pharmaceutical sector. Avoiding disruption due to poor-quality prints, the company helped to prevent costly downtime, as Ecolab's Engineering Manager Jamie Hughes explains: "The Clearmark support team went out of their way to get us back up and running. We were very impressed with the service level provided; something that is both refreshing and rarely seen. A lot of suppliers talk the talk about good customer service but Clearmark actually delivers on that promise, going above and beyond."

As a result of Clearmark's consistent approach to customer service and the robust performance of their existing ICE Zodiac thermal transfer printers, Ecolab has recently purchased a next-generation ICE Zodiac Hawk with integrated print checking from Clearmark for another of its lines, cementing the partnership between the two firms.

www.clearmark.uk

Avery Dennison launches AD Stretch accelerator programme

Avery Dennison Corporation has announced the launch of AD Stretch, a first in the labels industry program aimed at partnering with startup innovators to solve key challenges and create new opportunities within sustainability, customer experience and value chains.

The company intends to engage with startups to further enable disruption and evolution in labels and packaging while strengthening innovation capabilities across the industry. The aim is to address some of the industry's most urgent business challenges by matching Avery Dennison's experience and scale with promising startups and inventors to collaborate and grow together.

"Complementing our industry-leading internal capabilities and our corporate venture program, AD Stretch will play a critical role in our overall innovation approach and extend our circle of innovators," says Pascale Wautelet, Global Vice President, Research and Development, Label and Graphic Materials, Avery Dennison. "We're stretching beyond borders and boundaries, and increasing the pool of industry talent we work with to create a collective global problem-solving culture that inspires everyone it touches and generates real value for our stakeholders and society."

The program will be launched by regional cohorts starting in Asia Pacific and Latin America, then rolling out in Europe and the U.S. later this year. With the end goal of solving a specific problem, each cohort will have a region-specific brief that draws on regional challenges.

The core themes will focus on connecting consumers to brands through new experiences, creating sustainable, responsible and efficient value chains (SRE) and the development of materials and packaging 2.0.

"When faced with a complex ecosystem, there are challenges and opportunities in equal measure," says Shruti George, senior director, Strategic Innovation Platforms at Avery Dennison. "In some cases, the solutions lie in scale and existing infrastructure; in other cases, in agility and a blank page. By combining our financial firepower with the agility of start-up innovators, we're supercharging our efforts to increase efficiency in the supply chain, create the next generation of packaging and solve environmental challenges."

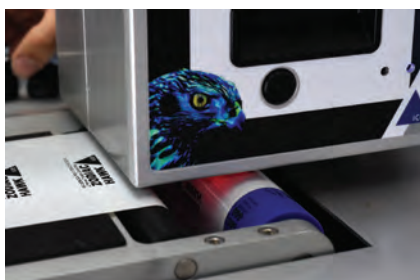
The program, in partnership with venture studio Highline Beta, aims to attract the best and brightest startups and innovators. Following a period of review and consultation, the applicants will be narrowed down to 10 finalists that will go on to execute a pilot project. www.ADStretch.com

INNOVATIONS IN FOOD
(& BEV) PROCESSING &
PACKAGING

AUGUST 2022 ISSUE
drinktec and
PPMA PREVIEW

Copy deadline is July 31

Email: terryprior@innovationsfood.com



Festo and PCE Automation help Frugalpac™ increase production of sustainable wine bottles

A collaboration between Festo and PCE Automation has helped recyclable packaging experts Frugalpac Limited to achieve the high throughputs and precision assembly necessary to meet increased demand for its innovative paperboard Frugal Bottle.

Frugal Bottle is the world's first paper wine and spirits bottle. Its innovative design comprises an outer made from 94% recycled paperboard with an inner food grade pouch. Frugal Bottle is fully recyclable, is five times lighter than glass and has a much lower carbon footprint than traditional wine bottles. It also offers 360-degree branding for better impact on the shelf.

Frugal Bottles are manufactured from two paperboard blanks that are precision cut, glued and then wetted front and back, before being stacked ready for feeding into the bottle forming machine. Achieving the desired throughputs is a major challenge because the glue pathway is complex and must be tailored to the profile of the bottle. In addition, the correct amount of glue has to be applied to prevent malformation or unsightly glue excess on the finished bottle.

Frugalpac had approached an adhesive systems company for a solution, but they were unable to achieve the desired cycle times. Working closely together, PCE Automation and Festo developed a fully automated gluing and wetting line to meet the tight tolerances and complex gluing patterns necessary to deliver throughputs of 630 bottles per hour.

Ronan Quinn, project manager for PCE, says: "The gluing process was more complex than anything we'd encountered before. Tight tolerances on the gluing pattern combined with a short cycle time and critical bead thicknesses were a real challenge. We would usually undertake the entire design and assembly inhouse, but on this occasion



Festo supplied the handling gantries to us fully assembled which added real value in terms of component compatibility and commissioning."

Making it stick

The automation cell provided by PCE Automation requires minimal human intervention. An operator loads the blanks for the front and back of the bottles at the front end. The machine then picks, loads, transfers, glues, transfers again, wets and conveys the prepared blanks into a container at the end of process. The prepared blanks are then transferred to the bottle forming machine.

PCE Automation used the Festo Handling Guide Online (HGO) to design the automation cell. This free online tool dramatically reduces design, assembly and delivery time and enables customers to create a ready-to-install handling system: whether

for a single-axis system, a 2D linear and planar surface gantry or a 3D gantry. With just a few clicks, the HGO delivers the right standard handling system, including CAD model, animation, and complete EPLAN schematic documentation. The individual steps (including RFQ, layout, quotation and CAD design), which previously could take 10 to 15 days, can be completed in a matter of minutes. The reduction in design and documentation time enabled PCE to meet Frugalpac's delivery expectations.

The unique gluing and wetting solution was tested and sized at Festo's UK Application Centre to prove that the desired cycle times could be achieved. It uses the Festo CPX-E-CEC Controller as the PLC to deliver interpolated soft motion, controlling multiple axes at the same time to achieve the complex curves on the glue paths. Festo CMMT servo controllers feature in the three handling systems for precise and repeatable loading, gluing and unloading. Festo core pneumatics products, valve terminals and process valves are also used extensively throughout the gluing and wetting system.

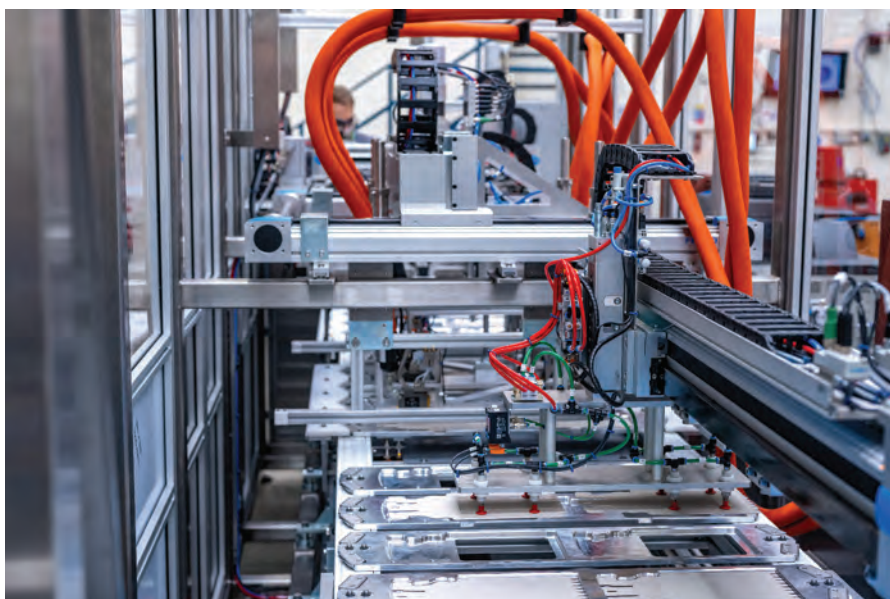
Bottling success

The PCE automation cell needed to achieve a cycle time of just 19 seconds to meet Frugalpac's requirements. The gluing and wetting solution delivers a gluing time that is 50% faster than specified, enabling the entire machine to meet the overall cycle times required. It achieves this by batch-gluing eight bottles simultaneously, with different glue patterns being applied to the front and back blanks.

John-Paul Grogan, Product Director at Frugalpac, says: "Frugalpac is committed to the development of more sustainable packaging. The application of automation in the production of Frugal Bottle will help us to achieve our aim of reducing the carbon of wine and spirits packaging."

Festo and PCE are now working with Frugalpac to develop an automated method for the forming of the Frugal Bottle itself.

www.festo.com/gb



The Frugal Bottle automation cell was designed by PCE Automation using Festo's Handling Guide Online (HGO) to speed up design and delivery times

A sustainable view of packaging in 2022 and beyond

By Dieter Niederstadt, Technical Marketing Manager, Asahi Photoproducts

There are many aspects of what we used to think of as normal life that have been irreversibly changed by two factors: the pandemic and the climate crisis. And the packaging industry is not immune to these changing dynamics.

That being said, the industry – across the entire supply chain from raw materials suppliers to manufacturers, brands and consumers – is shifting the way we think about packaging. In 2018, the EU passed Directive (EU) 2018/852 for packaging waste which states that by end of 2025, a total of 65% of all packaging waste should be recycled. Consumers are beginning to demand less product packaging that is more sustainable yet can still adequately protect products. Brands are responding to these demands – and to their own sustainability goals – by turning to packaging converters for greener packaging options. And converters, in turn, are looking for ways to incorporate more sustainable materials and practices into their product development, manufacturing and distribution processes. The ultimate goal is to achieve sustainability across the supply chain. But achievement of this goal is not necessarily in line with corporate cost savings goals. In order to improve sustainability, investments must be made. And consumers need to be educated about the value of more sustainable product packaging and be willing to pay a premium for it.

Sustainability: A goal worth pursuing

Due to both consumer demand and climate crisis pressures, we see that sustainable efforts are becoming increasingly important to brands. To achieve a low carbon impact, brands must engage the entire supply chain for a life cycle assessment of the carbon footprint for each of their products. To the extent that other stakeholders across the supply chain have measured their carbon footprint in accordance with PAS 2050, the brands can actually apply those CO₂ emission calculations to their own footprint. Thus, brands should be looking for suppliers who are pursuing a carbon measured strategy or whose products/materials have already been measured.

Asahi Photoproducts is on the path to studying carbon neutrality. Having met PAS 2050 standards for measuring our current state, we continue to evaluate the possibility to reduce our product carbon impact for our next generation AWP™-DEW CleanPrint water-washable flexographic plates.

A heritage of sustainability

Our move to bring more sustainable products to market did not start during the pandemic. Rather, we have been working toward this goal for half a century, even though the terminology for the various aspects of sustainability has changed many times over those years. Asahi Kasei was in fact the first manufacturer of a water

washable liquid photopolymer plate resin (APRTM) in 1971.

For many years, our parent company Asahi Kasei has recognized that climate change is a serious global issue, impacting both the natural environment and society as a whole. Its group mission has been, and continues to be, to contribute to life and living for people around the world. Even when much of the world's economic and social activity was suspended due to the Covid-19 pandemic, greenhouse gas (GHG) emissions did not decrease greatly, and emissions began increasing again when economic and social activity resumed. This is one indication of the difficulty of resolving the issue of climate change, and the need to accelerate relevant efforts. It is a key driver in Asahi Kasei's increased drive toward attaining carbon neutrality status in all of its operations by 2050.

For Asahi Photoproducts, an early and key aspect of our drive toward delivering products in harmony with the environment includes moving from a hydrocarbon-based solvent wash plate-making process to a non-VOC based alternative such as water wash. But, of course, we are not stopping there as we continue our journey to a carbon neutral status. We will also continue to study our raw material and manufacturing processes to determine how that might fit into our future development efforts.

It is also important to note that with the improved quality and productivity flexographic printing technology has achieved over the years with innovations such as Asahi's CleanPrint family of water wash plates, flexo is well positioned to compete with both offset and rotogravure printing. It should be noted that rotogravure accounts for about 20% of packaging printing worldwide, but has a key disadvantage: It requires the use of a highly toxic chemical, Chromium trioxide, for manufacturing rotogravure cylinders. While the European Union has extended its approval for the use of this chemical through September 2024, that does not diminish its impact on rotogravure's carbon footprint. It's just one of the components of the rotogravure process that makes it significantly less sustainable than flexography, especially using solvent-less production of the plates.

Packaged versus fresh

There is another trend that is important to mention, and that is the growth of what is known as



“Zero Waste Shops” selling unpacked food stuffs. While this approach is admirable in reducing packaging waste at a local level, it may not be able to solve the food waste problem on a larger scale. Food waste is a significant problem globally, and in many areas of the world, food security is a growing issue. Packaged food, on the other hand, especially if packaging material can be reused as a new raw material in a closed loop circular economy, can actually be more sustainable. Using lightweight functional barrier films in packaging to prevent moisture, oxygen and contaminants from food contact can vastly improve food shelf life and reduce food waste. In the end, non-packaged food on a large scale likely results in more spoiled food, actually wasting this valuable resource. Not everything needs to be packaged, of course. But there is value in a smart hybrid model for retail food that can minimize waste and maximize sustainability.

A final note

For flexographic operations, in addition to careful supply chain management, efforts toward carbon neutrality, and other sustainability initiatives, we see three growing trends that can help these operations be not only more sustainable, but also more profitable in 2022 and beyond. These include:

More automated platemaking which reduces time, cost and carbon footprint in the value chain. An example is CrystalCleanConnect, a fully automated platemaking line jointly developed by Asahi and ESKO and Kongsberg. The first two units have been installed in Asia and are delivering terrific results. This fully automated platemaking system has



a direct and positive impact on the sustainability of flexo platemaking and encourages converters to make the shift from rotogravure to flexo.

In-house platemaking at the converter site. As more automation is introduced into the platemaking process, it becomes easier, more efficient and more sustainable to bring platemaking in-house. A side benefit is that plate production times can be reduced from days to hours.

Transitioning away from a hydrocarbon-based solvent wash platemaking process to non-VOC based alternatives such as water-wash.

If the pandemic has taught us anything, it is that life is not as predictable as we may have thought. And it is absolutely clear that the world has truly changed, even beyond the threats posed by the coronavirus. We must come together to address these challenges in a meaningful way, and Asahi

Photoproducts is determined to be a leader in these efforts, especially as it relates to sustainability. In the past one to two years, there has been a marked increase in awareness regarding problems of greenhouse gases, plastic waste, food waste and other issues related to achieving harmony between the development of human society and the global environment.

No one individual, company or government can single-handedly cure the climate crisis. It takes universal, global collaboration and cooperation to get the world to a point where climate deterioration is eased. Asahi Photoproducts is proud to be a contributor to this worldwide effort.

For more information about carbon neutrality, be sure to download our free white paper: Sustainability: A Goal Worth Pursuing. www.asahi-photoproducts.com

Tetra Pak partners with leading beverage brands to launch the world's first tethered caps on carton packages

Joining forces with leading beverage producers, Tetra Pak is launching tethered caps on carton packages. Marking a significant milestone in the company's long-term work on design for recycling, five new tethered cap solutions are currently being introduced across Ireland, the Baltics, Spain and Germany in different product categories – a market first for these geographies. As part of a wider programme, this development paves the way for Europe-based customers to stay ahead of schedule and meet the Single Use Plastics (SUP) Directive coming into force by 2024.

Julia Luscher, Vice President Marketing, Tetra Pak, comments: “We are delighted to be supplying a number of customers with tethered cap solutions, helping them to ‘walk the talk’ towards their sustainability ambitions. Understanding our customers’ needs and having collected consumer insights through multiple pieces of research across various markets, our new tethered caps have been designed to enhance convenience. For instance, they are easy to open and re-close for subsequent consumption, while featuring carefully sized diameters for smooth pouring and drinking.”

Tethered caps play an important role in preventing litter, as the cap will stay attached to the package. They could also help reduce the carbon footprint of the carton when they are chosen by food manufacturers as plant-based options, made from polymers derived from responsibly sourced sugarcane, thereby increasing the renewable content of the package. Additionally, a majority of Tetra Pak's tethered cap portfolio features a reduced amount of plastic. Depending on the various solutions, the company achieved a plastic content

reduction ranging between 7% and 15%.

Marco Marchetti, Vice President Packaging Materials, Sales and Distribution Solutions, Tetra Pak, adds: “Starting with these five new introductions, we are planning to equip approximately 300 packaging lines with tethered caps in Europe by the end of 2022. Considering the scale of change required across the value chain, early collaborations like these are putting the food and beverage industry on a fast track to accelerate the transition to a low carbon circular economy.”

- In May, Borrisoleigh Bottling Ltd (BBL) is set to start commercial production of the new plant-based C38 Pro tethered cap on Tetra Top® 330 and Tetra Top® 500 carton packages. Based in Ireland, BBL is an experienced and awarded water producer, who's seeking 'to lead the industry towards a more responsible and sustainable future'.
- The new HeliCap 26™ Pro closure – on a Tetra Prisma® Aseptic 1000 Square package - is being tested since February 2022 in the Baltics with Cido Grupa, who is leading the juice segment in that region since many years and exporting its products to over 20 countries across the globe.
- In Spain, LY Company Group – that is driving the growth of carton-packaged water in the country, with the mission of ‘reaching a turning point in which both society and companies are aware of the importance of choosing sustainable packaging for the conservation of the planet’ – will soon start commercial production of the new plant-based DreamCap™ 26 Pro closure on a Tetra Prisma® Aseptic 330 Square package.
- In the same country, Lactalis Puleva – part of the Lactalis Group, a world leading dairy company -



has chosen to test the new HeliCap™ 23 Pro closure. The cap, in its plant-based option, has been applied to Tetra Brik® Aseptic 1000 Slim packages for the brand Lauki, on shelf since March this year.

- Weihenstephan, one of the oldest and most popular German dairy brands, will soon test the production of the new LightWing™ 30 closure, on a Tetra Brik® Aseptic 1000 Edge carton.

The company has also heavily invested towards an improved manufacturing experience for customers. Tetra Pak's new high quality, automated production lines for tethered caps utilise Artificial Intelligence technology for increased efficiency.

Marchetti concludes: “We are on a journey towards creating the world's most sustainable food package, a carton that is fully made from responsibly sourced renewable or recycled materials, is fully recyclable and carbon-neutral. We are ramping up investment in the development of alternative solutions across our packaging portfolio such as tethered caps and other drink-from systems, to reduce littering while increasing the renewable share of our cartons.”

“In total, we are investing around €400 million in the development and roll-out of tethered cap solutions, including a €100 million investment last year in our Châteaubriant plant in France to accelerate the production of tethered closures. By working seamlessly across multiple project streams and covering approximately 40 different packages with tethered caps, we expect to sell over 1.5 billion such closures by year end.”

www.tetrapak.com

100% r-PET: Harvest Moon and Greiner Packaging create sustainable cup packaging

Greiner Packaging's stated aim is to keep plastic circulating in the economy for as long as possible. To this end, the packaging specialists look to work together with their customers to create new packaging solutions that can be recycled themselves and, ideally, contain recycled material, too. This was also the declared goal of Harvest Moon, and the plastic cups in the new cardboard-plastic solutions for its fermented yogurt alternatives are produced from 100% r-PET, making them super sustainable. No virgin material is used at all, and the new cups significantly cut down on carbon emissions. "By switching from virgin PP to r-PET, we can reduce CO2 emissions by around 40%*" explains Jan Smka, sales manager at Greiner Packaging.

Sustainable material

A sustainable plastic, r-PET (recycled polyethylene terephthalate) is lightweight, shatterproof, and free of plasticizers. Because the new cups are made from 100% recycled, unprinted r-PET mono-material, they can be processed into 100% food-safe cups again and again as long as the appropriate collection streams are used. Recycling the cups requires less energy than using virgin material and produces less waste.

Sustainable packaging

But aside from the material used, cardboard-plastic combinations have a number of other sustainable

properties. The cardboard wrap, which can be made from recycled material, lends sturdiness to the plastic cup so that it can be produced with particularly thin walls. This wrap is especially easy for consumers to detach from the cup thanks to a new, innovative tear-off system, with the two components then disposed of separately and recycled. Since the white or transparent plastic cup is unprinted, it can be recycled very effectively. In addition, the carbon footprint of K3® cups is significantly smaller than that of alternative packaging solutions.

Joint mission

"We want the work we do to benefit society. We have a real taste for doing good – and for us, that includes using sustainable packaging for our yogurt alternatives. In Greiner Packaging, we have found a partner that can fully meet our expectations in this regard and shares our belief in eco-friendly cooperation," says Lena Lembcke, marketing and brand manager at Harvest Moon.

More sustainable food packaging thanks to hubergroup's new oxygen barrier coating

Recyclable packaging solutions are increasingly in demand. However, due to a complex requirement profile, flexible food packaging often consists of combinations of different films and is, therefore, difficult to recycle. That is where hubergroup Print Solutions' new HYDRO-LAC GA Oxygen Barrier Coating comes in. It protects the packaged food from oxygen and thus enables mono-material packaging. Consequently, it is easier to recycle and can be returned to the material cycle.

"Conventional flexible food packaging often consists of several laminated film layers of different chemical natures. Each fulfils a specific function – one of which is the protection against oxygen," explains Dr Ralf Büscher, Senior Expert Projects Flexible Packaging at hubergroup. "However, packaging that consists of several plastics cannot be recycled at all or only with great effort."

That is where hubergroup's new oxygen barrier coating comes into play. It allows food manufacturers to use pure, so-called mono-materials for their packaging. To do this, they use film laminates made of the same polymers (usually polypropylene or polyethylene), between which they apply the oxygen barrier coating. An OTR (oxygen transmission rate) of less than 10 cubic centimetres of oxygen per square metre and day can be achieved under industrial conditions, when using polypropylene. Oxygen-sensitive foods such as muesli or nuts are thus excellently protected from atmospheric oxygen in modern, recyclable packaging. Dr Lutz Frischmann, Global Product Director Flexible Packaging at hubergroup: "Through innovative solutions such as our new barrier coating, we can contribute to a circular economy together with our customers."

Heura launches packaging 3.0 with R-PET for chilled products

Europe's fastest-growing plant-based meat company, Heura, has announced Packaging 3.0, an overhaul for its refrigerated products. The packaging for Heura's chilled products now comprises of 3 parts: a 92% R-PET tray, a plastic film and an FSC-certified cardboard sleeve.

With the new packaging offering increased strength and durability, the update sees the chilled products evolve their 2.0 packaging format, which featured cardboard packaging with a plastic seal. Creation of the new R-PET packaging sees 75% less renewable energy used, 50% less use of fossil fuels,

44% less non-renewable energy used, 40% less emissions of polluting gasses used and 14% less water consumption. Full impact results of the packaging can be found here.

Heura co-founder, Marc Coloma, said of the R-PET packaging launch: "We cultivate a growth mindset at Heura, and it was clear that we needed to take action to improve our packaging in order to continue as a mission-driven company. We will continue to make data-driven decisions that enable us to take the greatest steps throughout our ever-evolving sustainability journey."

Antalis has signed an agreement to acquire BB Pack Group in Germany

Antalis has signed a binding offer to acquire BB Pack Group in Germany – BB Pack, cr8 Packaging and Printmate – allowing Antalis to expand its footprint in the fast growing packaging market.

The offer is subject to the satisfaction of customary conditions precedent, including the approval of the German competition authority. With a consolidated turnover of €42 million in 2021, BB Pack Group is a packaging distributor specialized in the e-commerce sector offering a wide range of packaging materials, design and customized printing solutions.

Commenting on this transaction, Hervé Poncin, Chief Executive Officer of Antalis, said: "The acquisition of BB Pack will boost the overall contribution of Packaging to Antalis' consolidated gross margin and reinforces Antalis' position in the fast growing packaging distribution sector."

Beyond the German market, Antalis continues to strengthen its capacity to service international customers across all European countries with bespoke packaging solutions. "Since founding the business in 1999, our company has grown to be a recognized and highly specialised supplier of packaging concepts and solutions for the e-commerce and industry sectors. Joining the Antalis group will allow us to grow our customer portfolio and expand internationally", added Michael Bube, BB Pack Managing Director.

100% recycled Priplak® R100 now available from Antalis

Antalis Visual Communications has added Priplak® R100, the first recycled polypropylene range made from 100% post industrial waste, to its sustainable portfolio.

Priplak R100 is a strong, flexible plastic sheet that is ideal for POS, stationery, labels, packaging and counter-top display applications. It has a smooth, white surface that is corona treated on both sides for UV printing.

It is manufactured using certified post-industrial polypropylene waste, a combination of Priplak's manufacturing waste and that of customers participating in the Priplak 'buyback' scheme. As with all the Priplak range, Priplak R100 is 100% recyclable and can be recycled many times over. It is also halogen free.

Antalis' Visual Communications Product Manager, Paul Neale, comments: "For some applications, plastic offers significant advantages, including longevity, durability, protection, and reusability. Priplak R100 and the Priplak 'buyback' scheme helps to close the loop, creating a product that is also highly sustainable."

Priplak R100 is available via Antalis from stock. For customers seeking a polypropylene sheet produced from 100% post-consumer polypropylene waste, Priplak PCR100 is available to order ex-mill.

For more information, please visit www.antalis.co.uk or contact Antalis on +44 (0)370 6076014



PulPac's global IP portfolio for Dry Molded Fiber is expanding rapidly

PulPac is an R&D and licensing company that has developed Dry Molded Fiber, a breakthrough technology to replace plastic products with circular cellulose fiber alternatives.

PulPac's IP portfolio now covers key global markets with 84 national grants and hundreds more in pending applications. Most recent, the US Patent Office issued a notice of allowance regarding one of PulPac's first patent application (US16/085456). It concerns PulPac's Dry Molded Fiber technology and is especially suitable for blow-molding and manufacturing bottles.

PulPac's business model is based on cooperation within an IP- and technology-pool with partner companies that share PulPac's holistic view on sustainability and efficient use of resources.

PulPac today holds 26 patent families (17 not yet published) with 84 granted national patents, and plus 50 pending patent applications that give a potential of hundreds more national patents. Eight new patent applications have been filed the past six months and filing pace is expected to increase further. Going forward, an average of two new patent applications are expected to be filed every month.

Peter Ekwall, Chief Intellectual Property Officer at PulPac comments; "Our public IP is just the tip of the iceberg. Underneath is an extensive body of confidential patent applications, world-leading know-how and trade secrets that are only shared with partners within our pool. This is a model that gives our partners an unmatched competitive advantage, and an incentive for making the shift to fiber - and away from plastics."

The IP portfolio revolves around the novel production method, "PulPac's Dry Molded Fiber method", a method of manufacturing three dimensionally shaped cellulose articles formed from dry fibers with air as a carrying medium and pressed using a heated mold.

Based on the core IP, PulPac has developed a complete technology platform covering multiple areas of fiber application manufacturing and machinery solutions to match. Blow Molded Fibers is one upcoming competitive application for Dry Molded Fibers suitable for manufacturing of e.g. bottles and caps, all driven by the need of disruptive technical solutions that enable a sustainable packaging industry. As the technology owner and world leader in R&D for Dry Molded Fiber, PulPac continuously files new IP derived from own R&D - but also from R&D emanating from PulPac's technology pool and its partners.

PulPac's development and innovation partner PA Consulting, the consultancy that's bringing ingenuity to life, is an important contributor of IP and to-date has been involved in a number of patent applications and innovative ideas. There is even more IP, created by licensees and partners in the technology pool.

Besides new patent applications, PulPac has filed 13 divisional applications stemming from PulPac's early and broadly described patent applications and directed towards specific solutions within the Dry Molded Fiber technology.

High yield, matte white, in-mould labelling film

Innovia Films has launched RayoForm™ EUP60, a white BOPP film for in-mould labelling (IML). Produced in Europe at one of our state-of-the-art production facilities, EUP60 is a very high opacity, high yield product, having a density as low as 0.55 g/cm³. Combined with its specially formulated and printable matte surface, EUP60 is engineered to give outstanding high-speed sheet feeding and adhesion for both UV and oxidative inks.

EUP60 is designed with special features that make it suitable for any shape container or lid without risk of distortion to the container or lid. This film is perfect for use on small-to-medium size, thin or thick wall PP or PE containers, providing a tactile 'soft-touch' finish after moulding. It also means a finished, polyolefin mono-material container can be produced, making the final pack fully recyclable, and meeting the Plastic Recyclers Europe packaging design recommendations.

Alasdair McEwen, Product Manager, Labels explains "As well as the technical performance of EUP60, we can produce reels for the customer that are longer than anything else in the marketplace. More linear metres in a reel leads to less changeovers and improved printing efficiency, with printing speeds of up to 14,000 sheets per hour being realised. This applies to either roll-to-roll or roll-to-sheet conversion processes and customers can choose either horizontal or large diameter vertical reel packing, depending on their require-



RayoForm™ EUP60 high yield matte white film for in-mould labelling

ments".

The large diameter rolls that Innovia can supply, means less roll changes and higher efficiencies for converters as well as a dramatic reduction in packaging waste.

McEwen adds "Our 5-layer film technology allows us to produce this film with the optimum combination of yield, opacity, whiteness and printability, ensuring excellent off-press ink adhesion with either traditional or UV offset inks".

To find out more contact your local Innovia Films Sales Manager or email labels@innoviafilms.com

www.innoviafilms.com

Olympia Dairy sets sustainability benchmark with SIG's SIGNATURE 100 packaging material with no aluminium layer

Olympia Dairy has taken a big step forward in sustainability as it becomes the first company in Belgium to fill products in SIG aseptic carton packs with SIGNATURE 100 packaging material with no aluminium layer. 100% linked to forest-based renewable materials, SIGNATURE 100 lowers the carbon footprint of carton packs even further.

UHT milk will be launched this spring in SIG's combiblocMidi 1,000ml carton pack with SIGNATURE 100 packaging material, as Olympia Dairy partners with SIG to play a pioneering role in sustainability within the European dairy industry.

SIGNATURE 100 packaging material from SIG is made from up to 82% FSC™-certified paperboard, sourced from sustainably managed forests. The certified polymers used to laminate the paperboard, and in the closure, are linked to forest-based renewable material through a mass-balance system. SIG uses tall oil as its forest-based renewable feedstock – a by-product of the paper industry – rather than a crop grown on agricultural land that could otherwise be used for food. Committed to limiting the use of finite natural resources, SIG's choice of raw materials contributes to a circular economy.

Kris Huygh, CEO at Olympia Dairy: "Following our installation of SIG's fast and flexible CFA 812 filling machine last year – the first in Belgium – we were able to open up a new retail distribution channel for our liquid dairy products.

Now we are playing another pioneering role in the European dairy market by being the first in Belgium to choose SIG's SIGNATURE 100 packaging material with no aluminium layer. This sets a new benchmark in offering the most sustainable dairy products, which meet the needs of both retailers and our environmentally conscious consumers."

A European, ISO-conform and critically reviewed Life Cycle Assessment (LCA) for SIGNATURE 100 packaging material confirms lower carbon emissions*. The polymers used are certified according to ISCC PLUS standards (International Sustainability & Carbon Certification) via a mass balance system.

Volker Bubacz, Head of Market Area France, UK & Benelux at SIG: "Our close cooperation with Olympia Dairy offers another first for Belgium. By choosing our futureproof and sustainable solutions, such as SIGNATURE 100 packaging material, Olympia can provide the very best option in terms of sophistication, convenience and minimal environmental impact. In turn this will lead to improved brand image and long-term consumer loyalty."

*Results based on ISO-compliant life cycle assessment CB-100732c: https://cms.sig.biz/media/4440/sig_lca_signature_addendum-combiswit-plus.pdf
www.sig.biz

Sustainable packaging takes centre stage at Westfalia Fruit's in France

Westfalia Fruit's business in France, has launched a new range of environmentally and consumer friendly packaging for avocados that dramatically reduces and replaces the use of plastic, eliminating altogether the use of black plastic which is difficult to recycle, whilst successfully maintaining fruit quality. These industry leading initiatives, were stringently researched and developed in advance of a new law banning plastic packaging on most fruit and vegetables, which came into effect in France from New Year's Day 2022. Cucumbers, lemons and oranges are among the 30 varieties banned from being wrapped in plastic according to the new law.

These sustainable packaging alternative solutions include options with no plastic, or a significant reduction in plastic, reflecting Westfalia's industry leadership in environmental sustainability including waste and carbon emission reductions.

Zero plastic options include a cardboard tray with a paper label or a paper band, that are fully compostable. Both are made with Forest Stewardship Council materials, guaranteeing that the cardboard used has been sourced from sustainably managed forests that consider people, wildlife and

the environment in the long term. The FSC is the only timber certification scheme endorsed by the conservation organisation WWF.

A heat seal film option includes recyclable plastic which contains a QR code on the packaging directing consumers to details of where they can recycle their plastic rubbish. A paper lid is also in development for this packaging.

Additional solutions include an FSC certified string bag and zero packaging natural laser marking on the skin of the avocado itself permitting logo & messaging placement.

"We have worked hard to remove plastic from our packaging to contribute to solving the plastic waste challenge and to lower our carbon footprint. We are delighted to take a proactive approach in implementing industry leading initiatives, enabling compliance to respective laws whilst offering a host of solutions for our customers and consumers," said Johnathan Sutton, Group Safety & Environmental Executive at Westfalia Fruit.

The packaging initiatives have been introduced and adopted as solutions by a wide range of retailers in France.

European fibre-based packaging alliance statement

Fibre Packaging Europe (FPE) welcomes the European Commission's Circular Economy Package, notably its proposal for the "Eco-design for sustainable products regulation" (ESPR) as it aims to make sustainable products the norm on the EU market and reduce their overall environmental and climate impacts. The design phase is instrumental throughout the value chain, from the use phase until the end of life, and we commend the European Commission for ensuring a level playing field between the sustainability of EU and imported products.

"This is a highly anticipated and timely piece of legislation, especially as it sets out requirements enabling consumers to have access to products which are designed with the environment in mind. Products from renewable sources, such as fibre-based packaging, allow us to de-fossilise our options and help meet the EU's climate neutrality objectives" said Mike Turner, Chairman of Fibre Packaging Europe.

Whilst, the ESPR introduces ecodesign requirements such as durability, ease of repair and maintenance, and the use of recycled materials, the European fibre-based packaging industry believes that one important requirement is missing, namely, the renewability of raw materials. Considering the Commission's climate neutrality ambitions, renewable materials can play a central role for energy production as well as for products.

Designing products to be recyclable will also have to be the new norm in the EU. While the ESPR touches upon this element in the body of the Regulation, the fibre packaging industry believes the "recyclability" ecodesign requirement should be further strengthened; 'ease of recycling' needs to be consistently addressed throughout the proposal, for example, in the Ecodesign Requirements (Art. 5) and in the context of the amounts of waste generated and the 'ease of re-use' (Annex I (p)). Fibre-based products are recycled back in the paper industry to become new paper products, achieving high quality recycling standards, both in terms of environmental performance and high-quality products.

"As we are anticipating a high number of revisions which will concern product legislation, legal ambiguity and duplication should be avoided," noted Mike Turner. The Alliance considers that the European Commission rightfully took the approach of ensuring legal certainty. For the fibre-based packaging industry in Europe, this also means ensuring consistency with other pieces of legislation, such as the Packaging and Packaging Waste Directive, which will set its own sustainability requirements related to circularity. By ensuring legal certainty, policy makers will allow the European industry to enhance its investments in innovative and sustainable solutions.

Fibre Packaging Europe will be working with policymakers to ensure that stakeholder expertise and scientific evidence are further taken up during the ordinary legislative scrutiny process.

Berlin Packaging acquires Panvetri

Berlin Packaging, a global Hybrid Packaging Supplier®, has announced the acquisition of Panvetri, a family-owned supplier of glass and metal packaging for the wine and olive oil industries.

Founded in 1998 and headquartered in Modugno (Bari) in southern Italy, Panvetri serves a wide range of wine estates, cooperative wineries, oil mills, and food manufacturers, mainly in the Apulia and Basilicata regions. In addition to wine and olive oil bottles, Panvetri's portfolio includes beer, spirits, and sparkling wine bottles, olive oil cans, food jars, and closures. With its strong local presence and established sales team, Berlin Packaging can help Panvetri expand its product offerings.

"Italy is a key country for the wine and olive

oil industries, and Panvetri enriches our presence and expands our coverage of southern Italy," said Paolo Recrosio, CEO of Berlin Packaging EMEA.

"We are proud to join Berlin Packaging and bring our experience in southern Italy to the rest of the company. We are also keen to expand our product portfolio with Berlin Packaging's unique shapes and sizes that will now be available to our customers," said Alessandro Pantaleo, CEO of Panvetri. "This acquisition is another testament to our commitment to growth in Europe. Panvetri strengthens our already robust presence in Italy and furthers our position as a leader in Italian food and beverage packaging," said Bill Hayes, Global CEO of Berlin Packaging.

Food packaging specialist £2m in packaging technology at new Sedgefield site

Food packaging specialist PFF Group has installed a £2m ground-breaking thermoforming system at its Sedgefield site as part of a £4m investment programme in new process technology.

It will be used to manufacture PFF's fully recyclable, food-grade packaging concept, IMPACT, which was launched in response to increased demand from food manufacturers for reduced plastic in packaging.

Illig is Europe's leading designer, developer and manufacturer of advanced, high-performance thermoforming machines. PFF challenged Illig along with its own technical team to design a precision engineered system to produce its unique rPET hybrid pot with a card wrap in a single process. This in turn offers a large reduction in overall carbon footprint of the product.

A joint project between PFF Group and Illig GmbH, PFF's development team was led by CEO Andy Bairstow. He said: "IMPACT is a technological breakthrough for the manufacture of food-grade packaging in the UK. As a business, our core values are innovation, sustainability and creativity, and this system meets each of these attributes, it's been fantastic to see both companies work closely

together to deliver the project.

"PFF's bold strategy to invest in advanced technology once again demonstrates our commitment to the complete recycling process. Using rPET gives industries like the dairy sector an opportunity to switch from traditional polypropylene to circular economy packaging.

"Our IMPACT product has the potential to revolutionise not just dairy, but all other food sectors where sealed-in freshness is essential and where reduced plastic and lower carbon footprint are sought after by consumers."

Matthew Revels, sales and marketing manager at Illig said: "We took on this exciting project in partnership with the team at PFF nearly two years ago and this week we have the pleasure of consigning this brand-new technology to the UK market. This partnership between Illig and PFF has proven highly successful through each stage of the design and development process. It has produced a strong working relationship between the two teams and established sound foundations for future development projects which are already in place to meet the demands of the ever-changing packaging market.

INNOVATIONS IN FOOD (& BEV)
PROCESSING & PACKAGING

AUGUST 2022 ISSUE
drinktec and PPMA previews

Copy deadline is July 31

Huhtamaki launches Push Tab® blister lid, a first-to-market, aluminum-free, mono-material PET blister lidding, for the global healthcare industry

Huhtamaki, a key global provider of sustainable packaging solutions, today announces a first-to-market sustainable innovation for the global pharmaceutical and healthcare industry. Huhtamaki's Push Tab® blister lid is mono-material PET and free from aluminum. It is designed to meet the stringent safety requirements of highly regulated pharmaceutical and healthcare packaging and provides the industry with a more sustainable alternative to traditional push-through blister packaging. This game changing innovation will help deliver sustainable packaging solutions for the growing global healthcare industry, whilst importantly maintaining functionality and efficiency, as Push Tab® blister lid runs on existing blister packaging lines without compromising on speed.

The Huhtamaki Push Tab® blister lid is made of mono-material PET (polyethylene terephthalate) which significantly improves recyclability of the packaging, whilst remaining compatible with existing high performance blister packaging lines, without needing modifications or extra investment. Huhtamaki and its partner – Klöckner Pentaplast – bring this first-to-market innovation to help the global healthcare and pharmaceutical sector meet their sustainability targets and achieve market growth at the same time. In 2021, European packaging sales in the healthcare category had an estimated value of EUR 1.4 billion, of which approximately 50% were in blister packaging.

"We are proud to partner with Klöckner Pentaplast to bring Push Tab® blister lid to market and continue to shape the sustainable future of pharmaceutical and flexible packaging. This innovation is designed as part of our blueloop platform, enabling us to speed up innovation and improve circularity in high-performance flexible packaging solutions. We are working hard to turn all our products into mono-material fully recyclable structures. In addition, we are collaborating with partners across the value chain to deliver innovation



that helps ensure that ambitious sustainability targets around the globe can be met," says Marco Hilty, President, Flexible Packaging at Huhtamaki.

"The pharmaceutical industry is proactively searching for sustainable packaging solutions that enable recyclability. Since blister packaging traditionally contains multiple materials, it is difficult to recycle them in a single recycling stream. Push Tab® blister lid solves this problem because it is made of mono PET. Push Tab® runs on existing blister packaging lines and is a plug-and-play solution, which means no additional investment is needed for our customers. This newly developed unique technology makes PET based lid film pushable and secures easy access to the tablet for the consumer," says Tobias Fackler, Senior Manager of the Healthcare Business Unit at Huhtamaki Flexible Packaging.

Find out more information about Push Tab® blister lid and www.huhtamaki.com/en/pushtab or www.huhtamaki.com/en/blueloop

New bakery packaging concept reduces CO₂ emissions by a third

Viipurilainen Kotileipomo is a nearly 100-year-old company that produces pastries and artisan breads from local ingredients using traditional methods. When the bakery was looking for a new solution for its cake packaging, its key criteria were to reduce the environmental footprint of the packaging, and to make assembly quick and easy.

Viipurilainen Kotileipomo and Metsä Board's packaging design team based at Metsä Board's Excellence Centre jointly developed a resource-efficient and 100% recyclable bakery packaging. The new eye-catching packaging reduces material requirements by 25%, and carbon dioxide emissions by 34% compared to the previous packaging. At the same time, the bakery was able to reduce its use of plastic by moving away from a PE-coated board. In addition to the environmental benefits, the design of the new bakery box makes it quicker and easier to assemble.

"Packaging sustainability is important to us and our customers, and it's great to be able to spread the word about reducing plastic and promoting recycling. The whole product development process was carried out in a structured way at the Excellence Centre and the new stylish packaging was quickly brought to market," says Teppo Ylä-Hemmilä, Bread Artist and Innovation Director, Viipurilainen Kotileipomo.

"The new concept is an excellent example of innovative solutions made possible by joint brainstorming. In designing the packaging, we used a virtual model at our Excellence Centre to quickly and accurately visualise the material, structure and its sustainability," says Ilkka Harju, Packaging Services Director, EMEA and APAC, Metsä Board.

The bakery packaging is made of lightweight MetsäBoard Prime FBB EB, a dispersion coated barrier board, which can be recycled using paper or paperboard collection waste streams. The MetsäBoard Prime FBB EB board is thick and resistant to grease, which is key for food that naturally have a high fat content such as pastries and cakes.

Klöckner Pentaplast adds rPET/PET capacity to Beaver site to further grow healthcare and food packaging market in North America

Klöckner Pentaplast (kp), a leader in recycled content products and high-barrier protective packaging, has chosen its production facility in Beaver, West Virginia for its multi-million dollar production expansion, adding post-consumer recycled content (PCR) PET capacity in North America.

This expansion will further grow kp's sustainable innovation offering in consumer health, pharmaceutical, and food packaging markets through the addition of an extrusion line and two thermoformers, delivering a total of 15,000 metric tonnes of new rPET/PET capacity. kp currently leads the industry with over 20% of its volumes made from PCR material.

Scott Tracey, kp's Chief Executive Officer states, "The expansion responds to continued demand for sustainable options from our food packaging, pharmaceutical, consumer and label film customers. The extrusion line will support

production of important sustainable product lines such as kpNext™ recyclable pharmaceutical blister films, and Smartcycle® recyclable label and consumer packaging films. The thermoformers will produce award winning kp Elite® mono-material protein trays which are made using up to 100% recycled PET and are easily recycled creating a circular economy."

The addition is part of kp's continued North America expansion plans. The state has committed to local grants and incentives for the placement. The installation will add 60 jobs to the West Virginia facility with commercialization beginning at the end of 2022 for the first thermoform line. The extrusion addition will be completed in mid-2023. The completion of the second thermoform line and new production hall, which will be capable of additional capacity expansions in the future, is scheduled for the end of Q4 2023.

Sidel strengthens commitment to Food, Home and Personal Care markets with new global vice president

Sidel reaffirmed its ambition to help Food, Home and Personal care brands meet sustainability goals and stay competitive as it announced the appointment of a new global vice president. Pascal Lefèvre will develop and drive Sidel's Food, Home and Personal Care strategy, meeting the unique needs of Food, Home and Personal Care markets and delivering flexible, eco-friendly, and tailored-made solutions that will address the new and complex retailing and distribution challenges that customers face.



Strengthening the partnership: Sidel supported Bickford's Australia with rapid remote line conversion and maintenance on their Aseptic line

To remain competitive in the dynamic beverage market, Bickford's in Australia reached out to Sidel to launch two new PET formats for its premium syrup and juice brands, to complement previously designed & commissioned 1 litre formats. Sidel experts conducted the line conversion with its latest remote solutions, in just two days for each new format. In addition and to respond to Bickford's commitment to product quality and safety, Sidel showed great versatility by also carrying out the maintenance of the Aseptic Combi Predis™ remotely, while optimising line efficiency.

Founded in 1839, Bickford's is an independently owned business under The Bickford's Group with its head office based in Adelaide, South Australia, and is one of the oldest and most

treasured Australian brands. The company enjoys premium positioning in the market and owns a wide product portfolio of non-alcoholic beverages, encompassing carbonated soft drinks (CSD), juice, cordials, syrup, flavoured and plant-based milk, and flavoured water. Every product from Bickford's shows great commitment to excellence and outstanding quality.

Bickford's was already equipped with a complete flexible PET line from Sidel, managing both sensitive products and CSD via an Aseptic Combi Predis™ and a Combi SF300, respectively. With the trend towards premiumisation, it is crucial for beverage brand owners to focus on flavour variety and product diversification in the market while maintaining safety. Thanks to a successful partnership on the 1 litre formats, Bickford's reached

out to Sidel again in order to introduce two new formats that would further increase their market share & category penetration and to perform maintenance for excellent product safety.

The right remote support to facilitate fast line adaptation and maintenance

Sidel supported the customer to reach their ambitions with highly skilled experts and two advanced remote solutions: Remote Video Assistance (RVA) and Remote Access. Despite all the pandemic-related restrictions, everything was delivered on time with impact.

Bickford's flexible complete PET line was tuned-up for introducing smaller format variations of two 1 litre PET bottles originally designed by Sidel in 2019 – adding a 500 ml option for Bickford's





premium syrups & flavoured milks and a 250 ml format for their premium juice brand.

Taking advantage of real-time video assistance, Sidel experts empowered the Bickford's team to implement the best line configurations, with regards to products dependent parts and moulds etc. Remote Access to the customer blow moulder, filler and labeller was also leveraged by the Sidel team to optimise recipe process parameters. In addition, the Bickford's team benefitted from Sidel's expertise in maintaining top line efficiency and ensuring overall packaging quality was produced with a high degree of accuracy using the remote solutions. This process focused on the optimisation of bottle conveyancing and the control of efficient machine operations.

To keep up with high product safety, 100 Clean In Place (CIP) cycle maintenance was also carried out remotely. Following careful guidance with RVA, the maintenance of Bickford's Aseptic Combi Predis™ from disassembly, spare parts replacement, reassembly to testing and validation was accomplished in only three days.

"Then to validate that the line was running at its maximum uptime, we proceeded with production assistance. We are glad that the customer is satisfied, and they have already planned the next remote 200 CIP cycle maintenance. This open partnership approach based on constant and regular touch points with the Bickford's maintenance team is a real lever to efficiently support them in achieving their goals" concluded James Terry, Service Account Manager at Sidel.

"Time was precious to fulfil our market commitments. Sidel's solid and prompt remote support empowered us to achieve the line conversion and the 100 CIP cycle maintenance with minimal downtime. These were great outcomes for our team. The strong knowledge foundations acquired by our technicians from previous Sidel training, together with the excellent expertise transfer enabled by their digital solution during these projects, was a formidable combination to keep on upskilling our team" commented George Kotses, Operations Manager at Bickford's.

Colpac's Stagione® range answers market drive for sustainable all-purpose packaging

The demands on packaging are ever increasing. From sustainable sourcing and reducing plastic, to packs that work at all stages of the supply chain, from freezing through to the consumer reheating at home. The market demands sustainable all-purpose packaging and the award-winning Stagione® from Colpac has attributes to answer many of these requirements and more.

At Colpac we start product development considering sustainability, from raw materials source to end of life recycling. Stagione®, like many of Colpac's products, is manufactured from FSC® certified paperboard.

Exporting sustainable packaging ranges like Stagione® is complex, as we need to consider a wide range of different regulations and facilities for packaging recycling. In the UK we work with OPRL guidelines for domestic ranges. Stagione® has high barrier properties achieved through a PP coating, and part of its wide appeal, is that the percentage of plastic in each base product is just above 5%, making it recyclable under even to the most stringent of standards. The lids are also recyclable, and the rPET lid contains almost 100% recycled materials.

During the last year, driven by demand, the range has been extended from three to seven sizes, with the most recent addition being the 1250ml Stagione® with a square footprint and PP lid. The new pack is now the largest size within the range, which offers leakproof food packaging solutions for food service operators, retailers and the take-away/delivery food markets - from smaller snack packs and individual protein pots, through to main meals.

Stagione® 1250ml has the versatility to work across multiple areas of the supply chain and the pack is suitable for the freezer, as well as being able to meet the complex needs of hot hold cabinets and microwaves.

The pack offers a larger surface area for increased product visibility and the PP lid, gives a secure closure whilst providing ventilation to let out condensation but maintain heat. Ideal for kitchen filling or production line operations, the 1250ml pack can be heat sealed and/or lidded for security, hygiene, and preservation. Delivered nested and with a rigid construction, the pack provides efficiency of storage as well as excellent stacking and space density for on shelf merchandising.

"Demand for food packaging solutions to meet the growth and complexity required in the food-to-go and the delivered food sectors has grown exponentially," comments Kate Berry, Colpac's Head of Marketing & Product. "Colpac have been well placed to support this growth, and with seven packs now within the Stagione® range, from 150ml to 1250ml we have broadened our market offering and are able to meet an even greater level of demand and filling variations."

"Every part of the supply chain has been considered in the specification of the entire Stagione® range. As a result, it is a highly sought-after product, meeting the needs across a wide range of sectors."

Undertaking continual reviews of product ranges there will be further development and additions to the Stagione range in the coming months.



INNOVATIONS IN FOOD (& BEVERAGE) PROCESSING & PACKAGING

AUGUST 2022 ISSUE

drinktec and PPMA previews

Copy deadline is July 31



www.sidel.com

Protecting premium food & beverage brand integrity



Ashlee Gough
Packaging Specialist
Sumitomo (SHI) Demag UK

Counterfeiting in the luxury food and drinks industry has long been a multi-million pound industry. The pandemic added to these pressures, with high demand for premium products coupled with interrupted supply chains and fewer physical audits amplifying the risks of opportunists and illicit bootleggers taking advantage of the disruptions.

Packaging specialist at Sumitomo (SHI) Demag UK Ashlee Gough examines how specialist closure and thin wall moulders are applying the latest injection moulding precision and In Mould Labelling (IML) techniques to step up their fight against the creative food and drink fakers to mitigate risks and safeguard brand integrity.

In a recent survey of senior food and drink execs by assurance specialists The Lloyd's Register, only a third admitted to vetting suppliers against a recognised GFSI standard. One in five declared that no checks were made as part of sourcing



IML labels with unique identifiers, such as a QR code, holograms or tags, are other methods that can deter counterfeiting



Tamper evident closures is one method deployed by packaging manufacturers to counteract fraud in the premium drinks, wellbeing and pharmaceutical markets © iStock.com/bert_phantana

decisions¹. Yet, despite these prevalent risks - 97 % stated that they'd been affected by food fraud in the last 12 months - few in the industry regard authenticating products as their highest priority.

Against this backdrop, the UK food and drink market remains one of the worst affected by counterfeiting. Deliberately packaged to deceive consumers, the Food Standard Agency's National Food Crime Unit estimates that the combination of adulteration, substitution, theft, misrepresentation, illegal processing, waste diversion and document fraud costs £11.97bn per annum².

Seizures of counterfeit products provide a good indication of the scale of the problem. In 2020, Operation OPSON IX seized 12 000 tonnes of illegal and potentially harmful products, including 1.2m litres of alcohol.

In a concerted effort to crackdown on groups profiting from illicit versions of branded spirits and premium foods, manufacturers are making labels more difficult to copy and bottles harder to refill. "One way to counteract counterfeiting and product tampering is through the innovative design of packaging that cannot be easily copied," highlights Ashlee.

"Until recently, this may have involved putting shrink or foil sleeve around a luxury drink brand, for example. Closure moulders especially are stepping up their efforts and investing in dedicated cells to produce high quality and anti-refill closures made up of a number of complex parts." Due to the intricacy of these closures, moulding precision is paramount.

Significant investment in high quality tooling, automation, machinery and expertise can be another major deterrent, highlights Ashlee. "Realistically, few counterfeit operators would make the level of investment required to replicate this level of technical precision."

Other overt packaging methods to deter counterfeits include concealing unique identifiers, such as a QR code, holograms or tags within the IML. While these can assist with track and tracing,

Ashlee claims that they only really help to validate the origin of a container and tend to be more widely deployed by luxury food, cosmetics, pharmaceutical and wellbeing brands.

"To outsmart quick-witted counterfeiters, manufacturers may need to deploy several tactics simultaneously to prevent brand value being diluted, including tamper evident bands, secure closures, snap buttons, barcoded labels and batch codes, and even chemical markers."

For packaging moulders producing thin walled containers, caps and closures by the millions, cost effectiveness remains vital. Sumitomo (SHI) Demag's EL-Exis SP range typically achieves between three and five percent more productivity when benchmarked against other packaging machines on the market. Now in its fourth generation and always aligned to evolving market trends, the EL-Exis SP series is designed to withstand the higher stresses and injection pressures that are so critical in achieving repeatability in closures and thin walled packaging products, while maintaining comparable mechanical properties. Centralised monitoring of real time machine performance and energy consumption is equally critical to reducing machine downtime.

References:

- <https://www.ifl.org/en-gb/resources/food-fraud-beverage-sector/ii>
- <https://www.food.gov.uk/safety-hygiene/food-crime>

<http://uk.sumitomo-shi-demag.eu/>



© AdobeStock

New testing facility confirms quality of recycled material

Berry Global's plastics recycling facility in Heanor, UK, has opened a Centre of Excellence to further enhance the level of quality evaluation of the recycled material that is used to produce the company's Sustane® recycled polymer.

The new laboratory facility, which complements Berry's existing testing capabilities, analyses the material composition of incoming scrap material, resulting in a higher quality of recyclate for use in the manufacture of second life products.

This latest service provides added reassurance for customers seeking to incorporate at least 30% recycled material into their plastic packaging to meet the requirements of the forthcoming UK Plastics Tax, as Jagan Mohanraj, Technical Director, Berry Global, explained:

"Following Berry Heanor's successful EUCertPlast accreditation, this new investment in our recycling laboratory facilities helps to ensure the consistency and quality of our Sustane grades, giving our customers the confidence that the performance of their packaging will not be compromised in any way by the inclusion of recycled material. This is particularly essential for packaging used in heavy duty applications such as collation shrink film and collection sacks. The Centre of Excellence exemplifies our Berry promise – bringing innovation for the world and added value solutions for our customers."

The Centre of Excellence was officially opened by local MP Nigel Mills, who commented: "I have kept in regular contact with the Berry Heanor site in the heart of my constituency since I was first elected an MP in 2010, and have always been impressed with their drive and determination to increase both volumes of recycled plastics produced at Heanor, as well as the commitment to achieve the highest product quality standards. The opening of these new testing facilities is a further example of Berry's work to achieving true circularity for plastic packaging, and this is indeed good news both for the environment and the economy of the East Midlands."

The establishment of the Centre of Excellence follows Berry Heanor's achieving of the European Certificate for Plastics Recycling (EUCertPlast). EUCertPlast certification, which works to the European Standard EN 15343:2007, demonstrates that best practices are being followed throughout the recycling process for pre- and post-consumer waste in terms of stock management of incoming waste, recycling process, quality management, staff training and qualifications, traceability in supply chain and environmental protection. The chain of custody provides full details of the origins of the waste material and the waste management company from which it was sourced.

"The opening of our Centre for Excellence underlines our commitment to produce recycled material, using our advanced expertise, with the highest levels of technical performance, consistency, quality and traceability," concluded Jagan Mohanraj. "This enables us to help customers towards meet their sustainability commitments, while still creating packaging solutions that are fit for purpose."

Berry's Sustane® is a range of premium sustainable polymers made from recycled plastic. The material, which is unique to Berry, delivers a high level of technical performance, making it suitable for use in a wide range of applications where previously prime polymer was used.

www.berryglobal.com

WASTE2FUNC builds platform to collect food waste from agriculture, food industry, supermarkets, auctions and restaurants to convert it into bioplastics and biosurfactants

WASTE2FUNC, a European BBI-JU funded project has been granted a €6.7 M budget to build a platform to efficiently collect food waste from agriculture, food industry, supermarkets, auctions and restaurants. These food wastes are currently often discarded, left on the field or incinerated and thus show no value. They will become valuable raw materials to be converted into bioplastics and biosurfactants, with applications in cosmetics, household – and personal care products. This conversion process uses industrial biotechnology. The project brings together 12 partners from 5 countries, including SMEs, large enterprises such as Croda, Evonik and Ecover, research institutes and agricultural associations. The platform will decrease CO₂ emissions by at least 20%, increase value from waste 2-10 fold and create jobs for the primary and downstream sector in Belgium and Europe.

Currently, food waste flows, such as fruit and vegetables that don't meet the standards or bad batches from food processing companies that no longer can be sold, often don't have a potential end-use route. Consequently, they just rot on the field, are discarded or even incinerated, which leads to unnecessary CO₂ emissions.

WASTE2FUNC can offer a solution to this problem. Project Coordinator Sofie Lodens explains: "These emissions can be avoided by using these streams to convert them in to high-value products. TripleW, an Israeli/Belgian SME and Ghent University together with the Bio Base Europe Pilot Plant have developed technology to convert mixed batches of food waste into functional ingredients, more specific lactic acid and microbial biosurfactants respectively, that can be used for the production of bioplastics and personal- and home care applications respectively. WASTE2FUNC will build a logistic platform to collect the agricultural and food waste and will demonstrate the conversion technology at large scale."

The first challenge is the establishment of the logistic platform allowing efficient collection of food waste streams without end use. To this end,

the project will develop a registration website/app that can be used to register food waste flows from the agriculture and food industry for collection by a waste collector. Farmers will be intensively consulted on how the project can make the collection of such food wastes worthwhile for them and what compensation should be given in return and thus look into a new revenue model for farmers. In addition, consultations will be held about the availability of these waste streams, both among farmers and the (food) industry.

Twelve partners from five countries including several SMEs and three large industries are involved to convert the collected waste into functional molecules to be applied in market products. Sofie Lodens explains: "TripleW already started their lactic acid production batches in their demonstration plant on the site of Group Op de Beeck in Kallo, Belgium. Ghent University and Bio Base Europe Pilot Plant recently established the spin-off company "Amphi-star" to bring their technology for the production of microbial biosurfactants to the market." The functional ingredients produced within the project, will then be tested and evaluated in end products by large companies such as Evonik, Croda and Ecover.

The ultimate goal at the end of the project is to understand the potential of establishing a biorefinery in which functional molecules can be made from all this collected food waste in a sustainable and economically profitable way. These functional molecules can subsequently be used as building blocks for bioplastics and as ingredients in cosmetics, in biological detergents and in numerous other applications. WASTE2FUNC will contribute to a more sustainable industry by using renewable resources and by its circular approach. This will decrease CO₂ emissions by at least 20% compared to the current production processes of these molecules and increase value from waste 2-10 fold and create (high-tech) jobs for the primary and downstream sector in Belgium and Europe.

Send your news items to
Terry Prior at terryprior@innovationsfood.com

Brammer Buck & Hickman and SKF release range of informative resources on bearings in food & drink applications

Brammer Buck & Hickman, the UK's leading supplier of industrial maintenance, repair and overhaul (MRO) products and services, has released a range of valuable resources on bearings aimed specifically at engineers operating in the food and drink sector; these include a webinar, a dedicated website section, a product brochure, a guide to the challenges faced in this sector, and several case studies.

In the food and drink industry, bearings are faced with some of the most demanding environments to be found, required to perform across a very wide range of temperatures, subject to frequent washdowns and guided by regulations that are becoming ever more stringent; and, of course, there are cost considerations. The choice of bearings therefore requires careful consideration. Brammer Buck & Hickman, which has extensive experience of working with some of the biggest names in the

food and drink sector, has come together with bearings manufacturer SKF to produce a range of resources to assist food and drink producers improve the performance and service life of their bearings.

A recorded webinar, hosted by Brammer Buck & Hickman and presented by SKF, is available on YouTube on the RubixTube channel. In under 40 minutes, the webinar examines the key issues that impact on bearings in the food & drink sector, with a focus on reducing risk when it comes to food safety. It also identifies bearings that are best suited to this industry and includes a preview of the latest products and technologies due to be released.

For those that prefer to digest information in a different format, Brammer Buck & Hickman has produced two new brochures. The first is a product brochure on SKF bearing solutions for the food &

drink sector, which covers the Food Line Blue Range, Food Line Deep Groove ball bearings and SKF Fryer bearing technology. The brochure looks at the key attributes of these bearing units and how they could benefit your production process. The second PDF is a guide: 'Top 3 Challenges in the Food & Drink Sector...and how to ensure your bearings meet them'. It looks in more detail at the issues surrounding safety, cost control and sustainability in the food and drinks processing sector. Just as importantly, it provides guidance on how to meet those challenges. Both brochures are available to download from the food & drink industry page on Brammer Buck & Hickman's dedicated SKF bearings section on its website: uk.rubix.com/supplier/skf/foodandbeverage



New ANDRITZ screen scroll centrifuge increases uptime and product quality

International technology group ANDRITZ has developed a new screen scroll centrifuge with innovative features that reduce wear, enable the rapid exchange of parts, and increase maintainability.

The new ANDRITZ screen scroll centrifuge HX can process bulk chemicals, minerals, agrochemicals, and food, even under difficult feeding conditions. It is designed for improved product quality and maintainability. New features include a Gentle Feeder™ feeding system, a modular scroll, and a rotating assembly that can be removed and replaced in one piece (express cartridge).

The express cartridge design enables the entire rotating assembly to be replaced without dismantling any process piping, reducing downtime to less than eight hours, even for major maintenance work. Minor maintenance work can be done without removing the cartridge as the scroll and screens are easily accessible and removable. The scroll itself is a modular unit designed specifically for cost efficiency and rapid repairs – worn parts can be replaced separately using standard tools. These new features minimize maintenance costs and maximize uptime.

The screen scroll centrifuge HX is also equipped with ANDRITZ's proven Gentle Feeder feeding system. It gently accelerates the solids, thus reducing particle breakage and screen wear. An automated cleaning-in-place system, a cake washing feature and optional additional wear protection round off this innovative solution.

www.andritz.com

Leybold expands service capacity for SCREWLINE dry screw pump range in the UK

Leybold UK, a leading vacuum technology specialist, has opened its newly extended service facility in Chessington, Surrey, offering a comprehensive in-house service for the SCREWLINE dry screw pump range, along with the capability for the larger portfolio of dry pumps. This expansion means customers will no longer need to ship pumps overseas for service and maintenance, thus reducing transport costs, lowering environmental impact, and improving lead-times, meaning a better-quality service for customers throughout the UK.

This is the first and only certified facility in the UK for the Leybold SCREWLINE range. To ensure consistency in standards UK engineers have completed extensive hands-on training at the Leybold Service Technology Centre in Dresden, Germany, working along time-served engineers who have serviced the SCREWLINE range for many years. In addition, the new service line in Chessington has been designed to maximise productivity and efficiency in accordance with Leybold's high quality standards, with only genuine parts and tools from the manufacturer used and backed with a full 12-month warranty.

SCREWLINE is a dependable backing pump, installed across a range of demanding and harsh environments, including the areas of vacuum furnace, aerospace, composites, and the production of lithium-ion batteries for electric mobility. Compared to oil-sealed pumps, the dry-compression SCREWLINE is more powerful, delivering a consistent and reliable performance.

"It's an exciting time for the Leybold UK Service team, as well as customers," explains Erik Vosselman, Business Line Manager, Service. "As a manufacturer of vacuum pump equipment, we are now able to offer local service support across the range of Leybold dry pump ranges, including DRYVAC, LEYVAC and VARODRY, as well as SCREWLINE, making us the partner of choice when it comes to vacuum repair and maintenance in the UK."

"With this new fast and efficient service, major servicing can now be carried out within ten days at our own on-site facility in Chessington, using genuine OEM parts," adds Paul Carroll, UK Service Manager, "quick response and minimal down time is also ensured by our exchange pool of pumps." Ates the solids, thus reducing particle breakage and screen wear. An automated cleaning-in-place system, a cake washing feature and optional additional wear protection round off this innovative solution.

www.leybold.com

Schoeller Allibert launches tallest version of the Magnum Optimum foldable large container to boost retail logistics

Schoeller Allibert, a leading global manufacturer of returnable and recyclable packaging, has announced a new addition to its Magnum Optimum® series, the best-in-class big box solution.

The new Magnum Optimum 1125 is the tallest model in the fully-recyclable range, opening new possibilities for clients in a range of markets. The solution is designed to meet the retail market challenge head-on, including the rapid ascent of fast, sustainable commerce.

Its expanded pick face is designed to offer optimal picking efficiency in fast-paced environments, while its non-sequential folding and locking technology makes it easy to handle on the shop floor.

Jon Walkington, Sales & Marketing Director at Schoeller Allibert UK, welcomed the launch, saying: "At Schoeller Allibert, continuous improvement is at the heart of everything we do, and we are proud to present Magnum Optimum 1125 as a demonstration of that commitment. We know it is vital to reduce our carbon footprint, and that many of our clients feel the same way. Everyone at Schoeller Allibert understands our responsibility to make sure we are on the right side of history on this issue."

The Magnum Optimum 1125 is made to maximise space while minimising return logistics costs and carbon footprint. Up to 52 erected boxes and 208 collapsed boxes can fit inside a standard trailer, a space saving of 73% when compared to standard containers. Despite a relatively light weight of 57kg, each unit can hold up to 500kg, with a usable volume of 1007L.

Designed to be as user-friendly as possible, even in fast-moving retail warehouses, the Magnum Optimum range features recesses for RFID labels, IoT devices, and barcodes for accurate container management and rapid scanning. It is also future proofed with SmartLink® readiness, offering real-time track and trace functionality as well as other important metrics such as container pressure, temperature, battery levels, and more.

Walkington added: "Retailers want longevity from their equipment, and our durable Schoeller solutions certainly deliver. Each Magnum Optimum in the range has a minimum 10-year lifespan, embodying the latest innovations in the circular economy. We wanted a sustainably oriented solution that can handle delivering goods directly into the hands of consumers just as well as it delivers to wholesalers and supermarkets."

The company is known for its durable containers that offer superior product protection, minimising the amount of secondary packaging needed. Schoeller Allibert's innovations designed to increase picking and order preparation speeds come as the retail and e-tail industries lean increasingly towards faster delivery to consumer-convenient locations.

Explaining this strategy, Walkington added: "We don't want our clients to wait to decarbonise their supply chain. By renting the Magnum Optimum 1125, customers have the freedom to spread the cost without impacting their CAPEX budget. This flexibility is perfect for today's fast-moving retail sector!"

www.schoellerallibert.com/uk

Accelerating processes with DENSO: Launch of the BHT-M70 handheld terminal

DENSO introduces the new BHT-M70 to the market this month. The Android mobile computer comes with the strongest decode engine from DENSO and scans up to 30 tags per second.

Same-day delivery, real-time locating of goods, highspeed tracking along the supply chain – businesses have to meet numerous demands with the rising challenges in our today's fastpaced world. The new BHT-M70 handheld terminal from DENSO, member of the Toyota group, helps face these challenges and fulfils not only customers' wishes but also those of employees. It will be launched at the end of April.

The new mobile computer was designed to meet the needs of a diversified workforce and contribute to operational efficiency. In retail, for instance, inventory times can be reduced significantly, and in logistics and warehouse management, the BHT-M70 is ideal to scan goods from a distance of up to 1.5 metres.

The mobile computer is the latest addition to DENSO's BHT series and is equipped with a large 4-inch touch screen and physical keys to accelerate processes by scanning a wide range of different codes, such as barcodes and QR Codes. In fact, the BHT-M70's decode engine and high-resolution CPU enable scanning that is three times faster than with regular devices for mobile data collection.

The new handheld terminal can easily

scan through plastic or glass and read dirty or damaged codes. Character recognition (OCR) automates the manual entry of expiry dates and slip numbers, reducing visual work for employees, while ensuring the accurate checking of goods.

In addition, the BHT-M70 features a diverse mix of Android-based software utilizing 4G, Wi-Fi communication, and GPS to realize a modern work style with digitalized processes.

As part of this modern work style, employees can optimize the communication among each other with the BHT-M70. For example, the BHT-M70 makes training new employees easier as its handling is almost self-explanatory and thus, very efficient.

The mobile computer even manages the digital transformation process, as employees can use communication apps such as chats and phone calls. That way, it is very easy to do a quick troubleshooting via video call. Furthermore, the BHT-M70 uses GPS to manage the location of goods.

By adding the BHT-M70 to their popular series, DENSO lets users select the best model to match the type of business and the work involved. The fact that some of DENSO's clients have been working with the devices for more than 20 years is proof of how reliable the handheld series is – in the past, present, and future.

Full-metal ultrasonic sensing from ifm electronic

Wet environments coupled with aggressive chemical cleaning can make non-contact ultrasonic distance measurement and level sensing very challenging, full-metal ultrasonic sensors in the new UIT300 range from ifm electronic provide a convenient, durable and cost-effective solution. To ensure long life even in demanding environments, all exposed surfaces of these cylindrical M30 sensors, including the sensing face and the connector housing, are fabricated from high grade 316L stainless steel, which is highly resistant to corrosion.

UIT300-series ultrasonic sensors have a sensing range of 250 to 2,500 mm, with a 400 x 400 mm target. They incorporate an IO-Link interface which is used for configuration and to provide a continuous measurement of sensor-to-target distance with a resolution of 3 mm. Also available via IO-Link is an echo quality indication, which can be used as an aid for optimising the installation of

the sensor and to monitor its performance while it is in service.

As well as the IO-Link interface, UIT300 sensors provide two conventional switching outputs which could be used, for example, to detect high and low liquid levels in a tank. The operating points for these outputs can be freely programmed by the user. Other models in the range are UIT301 sensors which have one switching output and one analogue 4-20 mA output, and UIT302 sensors with one switching output and one analogue 0-10 V output.

The operating temperature range for all UIT300-series sensors is -10 to + 60 °C and they have an ingress protection rating of up to IP69K, which means that they are suitable for use in almost any industrial or process environment. Available accessories include mounting brackets and a full range of ready-terminated cables.

Introducing new precise metering pumps for fluid transfer

Graco recently expanded its SoloTech hose pump line. The SoloTech-range now includes models for hygienic applications and additional sizes for industrial installations.

The Graco Solotech peristaltic pumps are designed with the purpose of creating a market-leading robust, reliable and durable metering, dosing and transfer pump. It's the ideal pump for slurries, solids and abrasives in hygienic applications or to pump caustic, abrasive or sensitive fluids in industrial installations.

Metering ingredients in the hygienic and sanitary spaces is often a major pinch point in the operation of a food, beverage and personal care production line. Graco SoloTech hose pumps deliver the exact amount of material when and where you need it allowing you to step away from manual inputs.

Solotech pumps utilize the unique single roller design to reduce compressions on the hose,

reduce friction and temperature, and increase flow per revolution. This results in increased hose life, millions of cycles without fail and lower operating costs compared to other technology.

Cleaning pumps and hoses in place saves your workforce precious time. Your labour costs go down and your productivity goes up when switching a process to new flavours. Our reciprocating positive displacement pumps are very inexpensive to maintain without valves, seals or glands, and easy access to maintenance points.

Discover the SoloTech range

- Industrial and Hygienic models
- 6mm up to 32mm hoses
- Metering capability 25ml up to 65liters per minute
- AC and Brushless DC motors available for all sizes

For more information, please visit www.graco.com/solotech.

We bring colour into view!

Compact pressure sensors and switches with
360° custom-colour status display

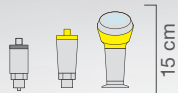


256 colours

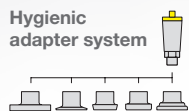
Individually selectable:

- Measurement in progress
- Sensor switching
- Process malfunction

Compact design



Hygienic adapter system



IO-Link



Adjustment via
smartphone



£319

VEGABAR 39 Clamp 1"