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The machinery only journal for processing & packaging | www.machineryupdate.co.uk

Combining disciplines

Meats, fish and other proteins are facing up to the challenges that the demand for sustainability brings to the sector and combining machine technology with innovative materials is playing a part

INSIDE



NEWS

The UKIVA's Machine Vision Conference and Exhibition (MVC 2022) returns to the Marshall Arena, Milton Keynes on 28 April and it will act as a focal point for vision trends

NEW MACHINERY

Sticky products that are often used for the convenience foods sector can be weighed and packed automatically on a new machine designed to reduce any line stoppages Find out more on page 12

INSTALLATIONS

A point level switch is keeping beer quality high while reducing water usage



PLUS

Free registration is now open for the live UKIVA Machine Vision Conference event taking place in April www.machinevisionconference.co.uk



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TO PICK UP AND PLACE PRODUCTS INTO TRAYS.

March/April 2022

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Matara UK has completed a substantial project for machine guard frames being supplied to TS Converting Equipment

MACHINERY

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PPMA matters

Coping with change in strange times



David Barber CHAIRMAN, PPMA GROUP OF ASSOCIATIONS (INCORPORATING PPMA, BARA AND UKIVA)

t is true to say that we live in uncertain times and ones that are definitely going to demand greater efficiencies in our businesses going forward. I am not sure any of us saw the current supply pressures and increased costs that we are all experiencing but consumer demands for the latest things packaged in new, more sustainable ways will continue. I feel sure we all thought that when COVID-19 restrictions were lifted across the UK – as has recently happened – that good times would follow, but this view is certainly being tempered.

One good thing that has happened, however, is that in-person events with no restrictions are back with us, both in our own companies and in the wider sphere. For instance, this coming April will see exhibitions such as MACH and Drives & Controls return to the NEC, along with the UKIVA's Machine Vision Conference and Exhibition (MVC) return to the Marshall Arena in Milton Keynes following a couple of years as an on-line event.

Innovation across materials and machinery is essential to deliver greater, and sustainable efficiency

With its wide-ranging conference programme, the live MVC event will once again act as a focal point for the very latest vision trends and technologies and their uses in real-life applications as well as offering the opportunity to see a wide range of new vision products.

This year, our MVC keynote speaker at this one-day session will be delivered by Seb Millar, who is machine learning engineering manager at Recycleye, a company specialising in the application technology to improve waste recycling efficiencies at Materials Recycling or Materials Recovery Facilities.

Seb's talk is titled: 'Trash to cash – turning the world's waste into resource' and his presentation will cover how Recycleye Vision and Robotics has gone from an initial idea at Imperial College, London to the installation in multi-million pound facilities across Europe.

His speech is relevant at a time when the pressures on plastics packaging heighten, especially as the Plastic Tax, which will be charged at a rate of £200 per tonne, comes into force on 1 April.

Of course, this tax only applies to manufacturers and importers of plastics packaging components which contain less than 30% recycled plastics. This fact has driven several PPMA members to now offer new materials that help in this regard. You will find details of these in our meat, fish and other proteins special feature which starts on page 42 of this issue.



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News

Machine vision event is set for successful return

KIVA's Machine Vision Conference and Exhibition (MVC 2022) returns to the Marshall Arena, Milton Keynes on 28 April. With its wide-ranging conference programme, this free-to-attend, live event will once again act as a focal point for the latest vision trends and technologies and their uses in real-life applications as well as offering the chance to see a wide range of the very latest vision products.



Seb Millar will talk about trash to cash



28 April 2022 Marshall Arena, Milton Keynes, UK

The keynote presentation will be delivered by Seb Millar, who is machine learning engineering manager at Recycleye, a company specialising in the application of advanced machine learning, computer vision and robotics to improve waste recycling efficiencies.

Millar leads a team developing machine learning applications for waste material detection and selection for recycling in the waste industry. 'Trash to cash – turning the world's waste into resource' is the name of his speech which will cover how Recycleye Vision and Robotics has gone from an idea at Imperial College, London to installation in multi-million pound facilities across Europe. MVC 2022 has established a

reputation for its far-reaching educational Conference programme featuring a busy technical seminar programme, all delivered by experienced and knowledgeable vision specialists. Returning as a live event in the UK after an absence of two years, MVC 2022 will provide an informal environment where visitors and experts can interact to discuss machine vision.

The conference programme typically extends across eight different technical themes while the exhibition section contains new vision products. Register today for free entry. 2020 8773 8111 2020 www.machinevision conference.co.uk

Drives & Controls returns to the NEC for 3 days in April

The biennial co-located events: Drives & Controls, Smart Industry Expo, Plant & Asset Management, Fluid Power & Systems, and Air-Tech exhibitions – are returning to Birmingham's NEC between the 5-7 April, alongside MACH.

Drives & Controls will bring together key suppliers of equipment representing the multi-tasking culture of today's design engineer, covering critical areas such as energy efficiency, machine safety, drives, motion control, robotics, and automation plus much more, all under one roof. • More details on all these events are on pages 34-35



Beauty division is running its first Open House event

The Marchesini Group is opening the doors of its Beauty division to show the latest technologies developed for cosmetics product processing and packaging. From 26 to 30 April, the new 5,000sq m facilities, recently built inside the company's Pianoro, Italy HQ, will host a large selection of machines and production lines developed to meet the needs of the cosmetics industry: from large multinationals to small laboratories, customers and suppliers will be offered an up-close look at technologies designed to cater for the entire production cycle of a cosmetics product, from process to end of line. A vast range of machines and services can be found across 13 exhibition areas.



Southgate's recycled PET tapes

Sustainable options offer customer gains

Southgate Global has launched a PET tape, made of 85% recycled plastics, and designed as a sustainable alternative for users. With high mechanical tear resistance, the tapes are ideal for closing standard and recycled cardboard boxes while also allowing 20% of plastics to be saved in the process.



WAREHOUSE NEIGHBOURS THE ORIGINAL LEEDS SITE Latest storage facility opens

The Samuel Grant Packaging team were joined by suppliers, developers and colleagues from its Sheffield, Northeast and Marmax branches to celebrate the opening of its second warehouse in Leeds this February. The 40,000sq ft facility will give its customers more space to store products, freeing up essential storage in their own facilities while increasing revenue potential at the same time.

News

Technology for edge-to-cloud applications is being adopted

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WWW.Capcoder.com

nternet-of-Things (IoT) vendors are adopting OPC UA technology for edge-to-cloud applications and the growing list includes Amazon Web Services, Google Cloud, IBM, Microsoft, SAP, Siemens and Beckhoff.

Key drivers behind this progression are firstly, the global adoption of OPC UA as one of the open standards of choice for secure productionsystem interoperability across OT and IT networks, leveraging standardised data exchange. As such, there are over 850 registered OPC Foundation members supporting a large, rapidly growing eco-system of end users, standards bodies, and vendors.

STANDARD METHOD

Secondly, OPC UA uses a standardised method of defining, discovering, and using Information Models (IMs) and services associated with the production systems. This standardised approach to semantic information sharing prevents vendor lock-in and costly custom programming needed for non-standard IM ingestion in the cloud.

"It's thrilling to see that OPC UA is the one solution harmonised for process and factory automation, scaling from field to cloud (and back)," says Stefan Hoppe, president of the OPC Foundation. "The continued vision of the OPC Foundation - to establish OPC UA as THE open standard of choice for data interoperability throughout the world of automation started and flourished with controllers and visualisation systems and has now reached IT and the cloud.

"This will lead to a further growth of the open eco-system, based on OPC UA." www.opcfoundation.org



End of line units demonstrate a fruitful long life

Signalling machinery longevity and customer loyalty, Endoline Automation, together with distributor Ferag, is set to install its sixth end of line packaging machine into a leading snack producer in Belgium – almost 30 years after the first machines.

The first end of line systems, which were installed almost three decades ago in 1994, are still in operation within the factory of Vermeiren Princeps today, erecting and sealing almost 15 million boxes of cookies produced in that time.

Ahead of its time, Vermeiren Princeps has been incorporating automated processing and packaging lines into its facility for decades, however first and foremost is the integrity and quality of its brand. Since 1994, several more Endoline machines have been installed; last year a 607 fully automatic pre-set case sealer and a sixth unit – a 223 fully automatic case erector – is set to be installed this year.

UK falls behind on reshoring as reliance on Asian imports grows

he UK has become increasingly reliant on manufacturing imports from Asian low-cost countries over the past four years, despite supply chain disruption due to the pandemic, according to the Manufacturing Technology Centre's inaugural UK Reshoring Index. The index analyses two metrics - UK manufacturing output and import data from 14 Asian low-cost countries (LCCs) to track whether the UK is reshoring manufacturing back from Asia.

The index's manufacturing import ratio (MIR) – manufactured goods imports from Asian LCCs as a percentage of UK manufacturing gross output

reached 61% in Q3 2021,
a significant increase from
43% in Q1 2018. A higher
percentage indicates a lower
level of reshoring.

This increase in the MIR marks the continuation of a decades-long trend, as globalisation and the free movement of goods have led to British companies relocating their production overseas, and consumers becoming more reliant on manufacturing goods produced in low-cost countries.

The increase in the MIR is marked by two key trends. First, UK manufacturing output is yet to recover from 2018 levels and second, imports from Asia have been remarkably resilient. For Chinese imports alone, the growth was 67% which held up during the pandemic despite shocks in the global supply chain.

"Our analysis shows that the UK continues to be too reliant on manufacturing imports from Asian low-cost countries," says Dr Clive Hickman OBE, chief executive of the Manufacturing Technology Centre. "We must lead a renaissance in UK manufacturing with a renewed focus on jobs, skills and resilience to encourage the reshoring of industry." www.the-mtc.org



The Cell offers student benefits

An educational cell brings CNC milling to training market

Schools, colleges, universities, independent training centres and OEM training facilities can all benefit from a new Fanuc educational package that combines the company's machine tool and collaborative robot technologies. Developed in tandem with a number of industry partners, the Robodrill Educational Cell has been designed to bring automated CNC milling to the training marketplace at a competitive price point.

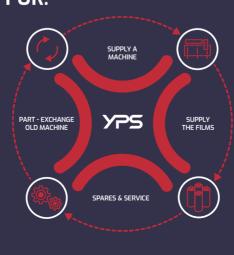
Designed with students in mind, the Cell enables trainees to gain hands-on experience in programming and operating CNC machine tools, as well as robots. The package content is relevant for modern factory applications and contains everything instructors require for teaching purposes.

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Regulations

Keeping control of the pressure...



The guidance document for pressure systems from the Department for Business, Energy and Industrial Strategy is a useful reference when conforming to the UK's Pressure Equipment Regulations 2016 (PER) or the EU's Pressure Equipment Directive, as it can save time

achine builders often find that part of the equipment they are designing falls within the scope of the UK's Pressure Equipment Regulations 2016 (PER) or the European Union's Pressure Equipment Directive.

While the purpose of the PER is to protect machinery end-users from unsafe products, it provides many options and routes to conformity. This can prove to be time consuming for those not fully familiar with this process and an inappropriate choice of the route to compliance could potentially lead to significant third-party inspection costs. A useful reference is the guidance document for pressure systems from the Department for Business, Energy and Industrial Strategy (BEIS).

The PER is mandatory for equipment operating at a pressure greater than 0.5 bar, and is wide ranging as it impacts upon design, production, final inspection/ test, marking/labelling, and instructions for use/ maintenance. The regulations do not apply to:

- Excluded pressure equipment and assemblies (specified in Schedule 1 of the PER)
- Pressure equipment and assemblies placed on the machinery market before 8 December 2016
- Pressure equipment or assemblies placed on the market on or before 29 May 2002 if they comply with the

safety provisions in force in the UK on 29 November 1999

The assembly of pressure equipment on the site of and under the responsibility of a user who is not the manufacturer.

DEFINE MANUFACTURER

The regulations define a manufacturer as a person with legal authority to design, manufacture, package and label pressure equipment before it is placed on the market, regardless of whether these operations are carried out by them, or on their behalf by another person. assessment procedure and drawing up the relevant technical documentation.

Firstly, decide whether the equipment really does fall within the scope of the PER as there are several exclusions, which are set out in Schedule 1 of the Regulations. Paragraph 'f' of Schedule 1 also includes a specific exclusion for equipment that is classified as 'no higher than category 1'. However, the only way to decide if this is appropriate, is to undertake the following steps.

The first stage is to decide whether the equipment should

By embracing a step-by-step approach, achieving compliance within the PER can be an inexpensive process

They are required to ensure that pressure equipment or assemblies have been designed and manufactured in accordance with the essential safety requirements (ESR), which are detailed in Schedule 2 of the PER. Alternatively, for equipment falling within Regulation 8 (sound engineering practice) it must meet the requirements of that regulation.

The machine builder is therefore responsible for classifying the equipment or assembly into the appropriate category, determining the conformity procedure that applies, carrying out the relevant conformity be categorised as a vessel, which is defined as 'a housing designed and built to contain fluids under pressure'; piping, which covers components intended for the transport of fluids when connected for integration into a pressure system; or a steam generator, such as a boiler.

GAS OR LIQUID?

Except in the case of a steam generator, it is also necessary to decide whether the fluid contained in the equipment is a gas or a liquid, and whether the fluid must be treated as a Group 1 or Group 2 fluid.

The decision about whether the fluid is a gas or a liquid

is usually straightforward as the regulations require the fluid to be treated as a gas if it has vapour pressure greater than 0.5 bar at the maximum allowable temperature for the equipment. Information about vapour pressure at various temperatures should be readily available from the fluid supplier. Deciding between Group 1 and Group 2 fluids is equally easy, as Group 1 covers fluids that are explosive, flammable, toxic or oxidising, with all other fluids falling into Group 2.

The next step is to identify the relevant conformity assessment table in Schedule 1B of the regulations and determine the correct classification of the equipment by plotting the maximum allowable pressure and, in the case of vessels, the volume in litres or, for piping, the nominal size. Conformity assessment must be carried out by Conformity Assessment Bodies, also known as Approved Bodies.

The PER is not a process that machine builders can afford to get wrong. Although initially it may appear challenging, by adopting a step-by-step approach, achieving compliance within the PER can be a relatively straightforward and inexpensive process.

■ For more information contact ■ www.tuv-sud.co.uk TÜV SÜD Product Service is the PPMA's technical and legislative partner



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New Machinery

Sticky convenience foods can now be weighed & packed on new line

where the new automatic MHW SF Extreme from Cabinplant, sticky products that are often used for the booming convenience foods sector can be weighed and packed automatically.

Available in the UK from Sealpac UK & Partners, this fully automated solution is designed to reduce any risks of involuntary production stoppages found with traditional labourintensive production and packaging lines.

Cabinplant says that increasing automation in this area has often been limited by the widespread use of sticky ingredients in ready-to-eat products, as the fully automated packaging plants have not been able to handle them. So far, the limit has been reached for fresh products such as chicken and fish, while stickier products have stuck to the weighing machine and have not been able to be packaged properly.

In the new multihead



Sticky ingredients used in ready-to-eat meals can be handled by latest system

weigher, Cabinplant's combination weigher is equipped with screw feeders, new scraper/weighing pans and a new processing solution, where the selected sub-portions are weighed and mixed in a pan. A special scraper design in the pan ensures that the entire portion is dispensed into a cassette.

From here, the food is packed into the trays on the conveyor belt.

This means dosing and packaging of ready-to-eat

meals, which includes sticky ingredients such as diced vegetables, onion rings, rice, pasta, tuna fish, mayonnaise, yoghurt, etc, can be handled by the system.

These processes were often previously performed manually or partially manually.

"Now, the production of a large number of ready-to-eat meals can be fully automated," says Henning Ingemann Hansen, director of research and development at Cabinplant.

The end-product can be ready-to-eat meals, which

are packed in plastic trays, or stand-up pouches or bags, depending on customer choice. The cassettes can be replaced, which reduces the time for cleaning and changeover to 5-10 minutes. "This solves the challenges with frequent changes in recipes and packaging sizes at a time when the retail trade wants more varieties as well as more frequent and smaller deliveries than ever before," says Hansen.

In operation, the solution does away with excessive give-away, which is often a problem on manual fill lines.

Cabinplant has developed the solution in collaboration with a large, European poultry company that invests heavily in the production of convenience food. Here, operators have been reduced by 8-9 people per line, or 60-70 %. This has increased productivity and reduced the vulnerability of the production line significantly. © 0845 302 3056 www.sealpac-uk.com

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Robot controllers can respond to changing market demands

o meet the demand for faster, more efficient production, ABB is adding two new members to its OmniCore controller family.

Available for a range of robots across ABB's portfolio, the new E10 and V250XT controllers offer best-in-class motion control, as well as 20% energy savings and futureproofing through built-in digital connectivity and 1000+ additional functions to meet changing requirements. These two new controllers extend the possibilities for enhanced robot control in a variety of industries, from electronics assembly to automotive, logistics, and general manufacturing.



All OmniCore controllers are based on the RobotWare operating system

"The growing demands of the industry for quicker, more diverse production and greater responsiveness to changing market conditions calls for solutions that bring new levels of speed, accuracy and flexibility," says Antti Matinlauri, head of product management for ABB Robotics. "As part of ABB's OmniCore controller family, the E10 and V250XT provide manufacturers with an expanded range of possibilities, enabling them to maximise their productivity and meet changing demands with minimum downtime." **1** 01908 350300 www.abb.com



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New Machinery

Palletising can be more efficient and sustainable

alco Melton's latest palletising solution is designed to minimise product damage while avoiding unnecessary costs related with the use of stretch film wrap.

Whether working with corrugated boxes, bags, sacks, or PET bottles, Valco Melton says its palletising adhesive gluing system applies the precise amount of adhesive required to make sure that products are safely stacked for transit and delivery to customers.

The use of anti-slip hot melt adhesive is an efficient and cost-effective alternative that replaces, completely or partially, the use of stretch wrap. This reduces consumable costs by up to 80% and takes a step towards a more sustainable supply chain, with the reduction or elimination of waste (stretch wrap or thermo-shrink film).

What's more, for certain end products, hot melt palletising eliminates the need to use carton corners, which reduces



Product damage and costs related to the use of stretch wrap film are avoided

further the use and stock of consumables, which brings additional savings.

This complete solution includes a selection of adhesive melters in different tank sizes to adapt to process requirements and adhesive types. Hot melt applicators for dot, bead or spray applications, and a pattern control which may be external or integrated in one of the adhesive melters are the other system components supplied to complete the package for new or existing palletising lines. The system remains independent to the line however, so that it can be moved to another location at any time, without the need to stop the production line – neither for the first installation, nor for subsequent location changes.

The company says its EC Series and NC Series standard hot melt units offer easy configuration to adapt the system to any production line requirement. 1 01952 677911 W www.valcomelton.com

Safety solution for access guarding on pallet magazines

A new safety solution from Leuze with induction loops, light curtain and monitored signal sequence satisfies the requirements of revised standard EN 415-4, thereby ensuring maximum safety for pallet magazines with automatic restart.

The access area is protected by a safety light curtain. In addition, induction loops are embedded in the floor in front of and behind the safety sensor so the system can distinguish between a forklift truck and people.

COMPLIANT SAFETY

With this concept, operating companies benefit from a standards-compliant safety solution which is suitable for both palletisers as well as for depalletisers and offers freedom for transporting materials to the left and right. And thanks to its scalability, the safety system can be adapted to various applications by using appropriate components.

Leuze offers this system as a complete package that has been tested and validated. 101480 408500 www.leuze.co.uk

First IP52 rated autonomous mobile robots can withstand dust particles and fluids, making them more flexible in use

Two new additions to the RARUK Automation MiR range of autonomous mobile robots are the first IP52 rated AMRs on the market. This gives them increased ability to withstand dust particles and fluids and allows them to be used in more challenging environments such as areas close to open, weather-exposed docking gates, for instance.

Both AMRs – the MiR600 and MiR1350 – are also compliant with the highest



The AMRs can now handle harsh environments

safety standards, ISO3691-4. This attribute, combined with the new IP52 design, makes these models the safest, most stable, flexible and reliable AMRs currently available, says RARUK.

Sophisticated navigation software on the MiR AMRs, combined with 3D cameras and 360deg laser-scanning technology, replaces

the need for wires, magnets and QR codes that are required by alternative robots. They safely manoeuvre around people and physical obstacles and automatically find the most efficient path to their destination and re-route around obstacles to avoid costly delays in the logistics process.

Both models are controlled with the intuitive MiR robot interface via a smartphone, tablet or PC and can be programmed without the need of previous experience. **1** 01462 670044 **www.rarukautomation.com**

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New Machinery

A modular design delivers flexible options for coffee

Syntegon Technology is expanding its equipment portfolio for coffee with the PMX packaging machine for ground coffee and whole beans. This machine can be used for different packaging formats thanks to fast format changes and full-corner-sealing.

A modular concept enables manufacturers to react quickly to changing market requirements and customer needs. At the same time, the PMX fulfils sustainability and digitalisation requirements as it processes recyclable mono-materials and reduces energy and material usage through condition monitoring.

The PMX is made up of individual modules which make dosing and closing stations as well as the machine design configurable to individual requirements. Thanks to the modular structure, specific customer requirements can be delivered while also achieving efficient output: the PMX packs up to 65 packs of 500 g of whole



Sustainable options are catered for

coffee beans per minute. To reach an output of up to 100 packs per minute, the machine is also available as a double tube version. All stations are designed to process recyclable packaging materials and valves made of mono-materials like polypropylene or polyethylene to meet the needs of sustainable value creation.

The PMX platform's flexibility offers a crucial advantage for coffee manufacturers, says Syntegon. 3D format changes on the closing unit can be achieved automatically at the push of a button which makes it suitable for small, medium and large packaging formats while bag variants and closing elements can be combined. Pack weights between 200 and 1200 g, both with upright and downfolded top parts, can be produced.

These bags are reclosable via tin tie, labels or adhesive tape. If required, manufacturers can use a spout closure through which the coffee beans are emptied out at the packaging side – a convenient feature, especially for end users. Meanwhile, the 'neutrafill' process, in which the coffee is gas-flushed before and during the packaging process, ensures aroma protection. **1** 01332 626262 **W** www.syntegon.com



Rental scheme offers flexibility

Rental scheme helps food processors to meet market needs

Proseal's machine rental options are providing food processors with a flexible, cost-effective solution to help meet the current surge in food manufacturing demand during the coronavirus pandemic.

Offering machine rentals for as little as three-months gives food companies fast access to the company's specialist tray sealing machines on a temporary basis. This enables them to meet immediate production requirements without having to financially commit to new equipment which may not be required longer term.

"Our machine rental scheme provides customers with a quick and affordable solution to help keep up with these demands and maintain production during such uncertain times," explains Tony Burgess, sales director of Proseal. © 01625 856600 www.proseal.com

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New software kit can deliver custom components for users

ew from IXON is the Component Software Development Kit (Component SDK) which allows users to create their own components for the IXON Cloud.

Besides remote access, IXON offers many possibilities to customise an IIoT platform for any business case. Users can choose from a vast library of pre-built components in the Studio and create their own machine dashboards with the drag & drop editor. However, if the exact component does not exist, the Component SDK comes to the rescue.

Users can therefore benefit from this flexibility and create their own insights to meet current and future needs.

The Component SDK allows users to program a custom component that combines machine data that's stored in the IXON Cloud with external data sources, for example from an ERP system, says IXON.

The development kit comes with a boilerplate, framework, templates, simulator app and deployment tools. This way, users can create any special components, easily:

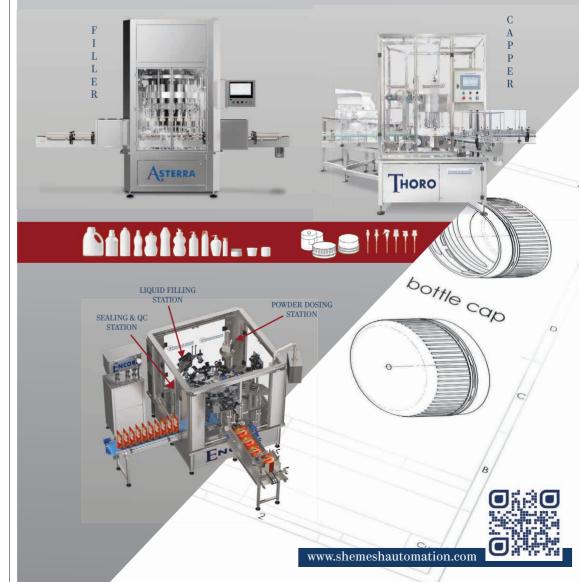
- 1. Download and install the Component SDK
- 2. Program a custom component with, for example, VueJS, a javascript framework
- 3. Test the component locally in the simulator
- 4. Publish the component to the individual library in the IXON Cloud portal

5. Add the component to the company dashboard. Propack Machinery is using the IXON Cloud to deliver more efficient spare parts service to customers.
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Suppliers of weighing and inspection solutions Minebea Intec is taking an important step with its online shop for single point load cells: the online presence not only offers customers the opportunity to access its single point portfolio quickly and easily, but also provides further specialist information on applications and areas of use for customers.

The new online shop is another milestone in the company's efforts to provide customers with digital information systems and ordering options. The shop offers access to a wide range of selected products - from single point load cells to weighing electronics and special measuring techniques. In addition to information on the products, supplementary material such as data sheets and technical drawings are also included.

COMPANY INTEGRATION

Details of the single point load cell series LC Solo and the indicators of the CSD series, which are a result of the close co-operation with its parent company MinebeaMitsumi, can also be found on the site. These products were designed at the company's headquarters in Hamburg but manufactured in MinebeaMitsumi's production halls in Japan.

The LC load cell series offers reliable weighing solutions for the construction of bench scales, counting scales or weighing systems.

The store with products from Minebea Intec and MinebeaMitsumi also offers bending beam load cells as well as weighing electronics such as the MP series in addition to the LC load cells. www.minebea-intec.com

New plug-and-play transport option delivers accurate mobility to cobots

ollon has developed a cobot transport unit (CTU) designed as an all-in-one solution to expand the workspace for collaborative robots - or cobots - that are manufactured by Universal Robots. The complete package consists of a linear axis, controller and software which is UR+ certified, individually configurable and easy to use.

Functionality, flexibility and cost effectiveness are combined in UR cobots to offer easy handling for users, however their inherent compact design, means the slim robot arms guickly reach their limits in terms of reach. If customers want to use their cobots more efficiently, or to handle larger components, a seventh axis is required which Rollon's new plug-andplay solution now facilitates.

As the company says, if a cobot is made mobile with a seventh axis, its working area can be significantly increased. It moves on a linear axis and can thus take on tasks at several locations, resulting in

more efficient utilisation, more flexible processes and also lower costs. The CTU was specially developed to expand the workspace of UR robots and is fully integrated into the programming world of Universal Robots.

"If you can operate a UR robot, you can also use the Rollon traversing axes right away," explains Tim Prinsloo, technical sales engineer, UK at Rollon. "These are UR+ certified and are characterised by high system rigidity, load capacity, travel speed and positioning accuracy," he continues. Different sizes are available

Three sizes are available to provide the maximum flexibility for customers

for the individual cobot models which are precisely matched in terms of size and performance. "It has never been so quick, easy and economical to combine a cobot from Universal Robots with a linear axis," he tells Machinery Update.

The new CTU consists of a configurable linear axis including pre-assembled cables, a control cabinet and the software component for UR Caps and allows for simple commissioning and operation for end users or integrators. "Elaborate axis design, adjustment and programming processes are no longer necessary," says Prinsloo. In addition, all ports and connections are designed in such a way that there is no risk of confusion.

Overall, setting up an axis takes less than fifteen minutes, while the intuitive UR interface guides the user through the installation step by step, so no special programming knowledge is required.

A total of three sizes are available: CTU-130 for the UR3, CTU-160 for the UR5 and CTU-220 for the UR10 and UR16. Thanks to eleven stroke lengths in 500 mm increments, the axis can be individually adapted to the specific requirements of the application. The maximum stroke length is 5,500 mm. By simply connecting several profiles, the length of the travel axes can be extended, thereby increasing the range of the cobot to about 10 m. 101234 964024 www.rollon.com

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New Machinery

Hygiene is the key ingredient

s the number of beverage variants being processed continue to rise, the need for equipment to protect against any flavour carryover becomes more important which is why KHS and Ferrum have partnered to put hygiene at the top of the machine design list.

For instance, the compact Innofill Can C from KHS offers flexible, taste-neutral filling, among other features. This is supplemented by matching seamer systems FCo6 and FCo8 from Ferrum which with their open design, are especially easy to clean.

Combined, both machines make for an efficient, flexible and hygienic filling process.

The global demand for beverages such as hard seltzers, energy drinks and craft beers continue to rise which has prompted beverage filling operations to increase their range in the can segment and fill more and more different products on the same line. "This means higher demands are made of the machine's flexibility and hygiene," explains Manfred Härtel, filling technology product manager at KHS. The greater the product

variety on a line, the greater the risk of contamination and flavour carryover."

"Our mutual customers have exacting standards when it comes to the quality of their products," says Marc Zubler, head of sales and product management at Ferrum. "An optimum hygienic machine design that reflects the current demands and requirements of the market is just as important as the consultancy service that goes with it," he says.

In terms of filling hygiene, the filling valves on the KHS can fillers are equipped with PTFE expansion joints (Teflon) in place of conventional seals. The sliding seals in the bell guides have also been replaced by Teflon expansion joints to create gapless, hygienic seals going forward.

These effectively protect the product from contamination and are easier to clean.

Like KHS, Ferrum makes the highest demands of the hygiene of its machinery and their open design makes the components easy to clean and the machine readily accessible to operators. **1** 0121 713 6900 **w** www.khs.com



The seamer section is made entirely of stainless steel for added durability



Pictured from L-R: Robbie Dawson, CKF's sales director; Stephen Hubbard of Intralox and also Jamie Quinton, the managing director of CKF Systems

Licence brings gains in design

KF Systems has been awarded a licence to manufacture Intralox ARB technology in recognition of the in-house expertise and knowledge of the team at its facility in Gloucester.

The robotics and automation systems integrator has a long-standing relationship and partnership with Intralox, and the licence to manufacture ARB technology in-house will offer CKF more flexibility to design and develop industry-leading solutions for its customers.

The licence includes applications for 90deg transfers that don't need pushers or pop-up systems and a range of merge units, from simple inline merging to more complex systems that can merge a number of product lanes.

The CKF built equipment, using Intralox's patented technology, is designed to offer higher throughputs and smooth handling of a wider range of products, with less maintenance and product damage than traditional merging and transfer methods.

"Intralox are pleased to extend our preferred partnership with CKF," says Stephen Hubbard, corporate account manager at Intralox. ■ 01452 728753 ■ www.ckf.co.uk

New digital force gauge is launched

ecmesin has introduced its VFG digital force gauge which combines a highly responsive, capacitive 5 in colour touchscreen with sophisticated force and torque measurement features driven by the power of the company's Vector OS. Vector OS is the technology platform at the heart of the VFG and it enables operators to customise the touchscreen interface, configure the tester to their requirements and analyse test results quickly in the field.

The intuitive touchscreen interface makes it easy to navigate as users just swipe or press and hold to access menus, toolbars, and settings. Available in ten models with capacities ranging from 2.5 to 2500 N (0.5 to 550 lbf), the VFG caters for a diverse range of applications.

The VFG is constructed in a rugged aluminium housing, shaped to fit the hand and small enough to be comfortably used as a hand-held device. It is easily attachable to a motorised stand,

thereby making it an affordable first step to more controlled tension and compression testing where optimum repeatability is required. Alternatively, this powerful digital force gauge can also be integrated as a key component into custom test rigs. **1** 01403 799979

www.mecmesin.com



The gauge is shaped to fit the hand easily

British manufacturer of Depositors and Filling Machines



New Machinery

Robotic cell benefits from integrated network safety

Sick's network safety has been successfully integrated into a new range of robotic flexible manufacturing cells developed by Mills CNC, enabling maximum productivity and compliant safety with a high degree of interaction between human and robot.

Mills CNC's new SYNERGi Premier flexible robot cells have a two-way loading/ unloading station with five automated drawers. Even at this increased level of automation, human interaction with the Fanuc robot is needed to feed the machine.

Working outside the cell, operators load up workpieces and remove machined components through the two-way drawers.

At the heart of the safety concept is the EFI Pro network technology that supports direct integration of the Sick sensors and the robot controls via Ethernet/IP CIP Safety up to SIL₃/Ple. The system enables direct data transfer



Mills CNC took part in the Southern Manufacturing exhibition in February

to the safety control of the robot over one Ethernet cable with no hard wiring.

Each of the drawers is fitted with a TR110 safety interlock with guard locking, which interacts directly with the Fanuc Dual Check Safety control architecture of the robot cell system via CIP Safety. A Sick microScan3 safety laser scanner is positioned at the foot of the robot to allow safe access for setters into the machine cell. Sick says implementing safety was critical to bringing the SYNERGi cells to market. Less sophisticated systems would have required a complete shutdown whenever the robot and operator inhabited the same space, requiring a reset and restart. They would have also required complex wiring that could have been difficult, if not impossible, to achieve. www.millscnc.co.uk www.sick.co.uk



Spiroflow's CTE filler is patented

Bulk bag filler can provide excellent returns for foods

Spiroflow's Cone Table Elite (CTE), a patented high speed bulk bag filler solution that delivers densification of 10-20% more product fill per bag, is providing excellent returns on investment.

Aimed at both confectionery manufacturers and ingredient producers alike, the technology injects vibration energy directly into the bag, densifying and dispersing material to increase weight per filled bag to deliver bag stability and bulk bag filling throughput.

By using the filler, more weight can be shipped on each container resulting in as much as a 20% reduction in shipping costs for producers, the equivalent of four bulk bags per container saved. Total bag usage savings are also recorded. 1 01200 422525

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Starch-free gummy depositors deliver flexibility and hygiene

Baker Perkins has introduced a new starch-free depositor for gummies and jellies. With outputs up to 1,000 kg an hour, Baker Perkins says the ServoForm Flexi provides an hygienic and flexible alternative to many starch moguls applications, particularly in the functional, nutraceutical and also the healthcare markets.

The ServoForm Flexi meets the needs of manufacturers looking for the hygiene and simplicity of starch-free depositing but with the longer setting times and versatility of moguls. Products using gelatin, pectin, carrageenan or blends as the gelling agent can all be handled on this new equipment.

BESPOKE LIGHTWEIGHT PLASTICS MOULDS SIZED 800x600 mm

are designed to maximise the output while also being easy to handle in a starch-free process

Depositing is at final solids, so although the products need time to set before being demoulded, no drying is required. This significantly reduces the time, energy and space required for postdepositing operations.

At the end of the depositor, the moulds are removed from the machine and stacked on pallets before being moved to a setting room. After setting, the moulds are loaded into a demoulding machine where the product is removed gently and transferred to finishing processes such as oiling, sanding and conditioning before packaging. 1 01733 283000 www.bakerperkins.com



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New Machinery



High speed inspection delivered

Inspecting individual packs/bars

Mettler-Toledo Product Inspection has launched the X34C x-ray inspection system that is designed for the detection of contaminants in small, individual packaged products at high speed.

It is based on three key design principles of compactness, high speed and precision:

- Compact Footprint: the system has a footprint of just 700 mm in length, which includes an integrated reject, allowing it to be installed into production lines where factory space is at a premium.
- High Speed Capabilities: the X34C can operate at 120 metres per minute, which means it can keep up with many high speed flow wrapping machines and pack sealers used in the confectionery sector for packing individual products.
- Precise Performance: the . optimised focal distance of the 0.4 mm diode detector and 100 W Optimum Power Generator maximises the probability of detecting small contaminants and helps to reduce the false reject rate. Because the power and contrast levels of these components are automatically optimised for each application, the system does not always need to run at its full 100 W output, delivering power savings.

A key benefit for users is that a single bar rather than an entire multipack can be rejected. O161 848 8636 www.mt.com

Jar lidding range offers flexibility across sizes

TS Packaging Machinery has extended its capping solutions for the food and drink sector with the introduction of a range of jar lidding machines.

The new FBL-150, 350 and 500 models provide the fast and efficient automatic placement and tightening of metal Twist-Off (TO) and Press-on Twist-Off (PT) closures onto glass jars and bottles with a vacuum seal. They are suitable for a wide variety of products, including mayonnaise, tomato ketchup, cooking sauces, pickled vegetables, jams and honey.

This choice of machines offers the flexibility to handle containers with neck sizes from 27 mm to 110 mm at speeds of up to 500 jars per minute. They can also be supplied with an accompanying vertical caps sorter-feeder for an all-in-one feeding and lidding solution.

ATS says the introduction of these new models further enhances its portfolio of packing equipment, which includes capping machinery,



ATS Packaging Machinery is supplying the new range manufactured in Italy

bottle unscramblers and pump and trigger systems. These form part of the company's complete system offering for the design and installation of bespoke, automated filling and packing lines.

"These new machines will add to our capabilities in the development of solutions tailored to specific product and customer requirements," says Richard Aitchison, technical sales and product manager at the company.

The new range is being supplied by leading

food packing machinery manufacturer FBL Food Machinery, based in Parma, Italy, along with its complete range of pasteurisers and filling machines.

"ATS's excellent knowledge of the food industry and the company's complementary ranges of equipment make them the ideal partner to provide the best sales advice and after sales service and support for UK customers," says Lucio Cavazzoli of FBL. 1 01622 678143

www.ats-packaging.com

Digital options from secondary packaging machine producer will be debuted at show

At Anuga FoodTec in Cologne (26-29 April 2022), Schubert will be exhibiting its new 3D printer developed in-house for high-quality printing of format and spare parts – which is called the PARTBOX. This PARTBOX enables users to produce the parts they need directly on site.

The company will also demonstrate its lightline cartonpacker packing grated cheese pouches into cartons which will include a GS.Gate industrial gateway which enables secure access to the machine and production data. "What this means is that we can carry out remote maintenance and use the data obtained to increase the machine's performance," explains Georg Koutsogiannis, senior sales account manager at Schubert.

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With PARTBOX, users can produce the parts they need directly on site







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Mills CNC: Like No-one Else!

New Machinery

Combo unit is accurate and delivers flexibility

he C80 combo unit from SCS UK integrates the Teltek C80 checkweigher with the Cassel multi-frequency metal detector and is designed to handle difficult products as well as packs made from metalised films.

Introduced last year, sales and marketing manager Vikki Singer tells Machinery Update that customers have appreciated the unit's accuracy and flexibility as well as the reliability that the embedded Windows 10 brings to the machine. "Another key consideration has been the competitive price for such a high-quality machine," she says.

This combo unit can be fully integrated as an inline inspection system; it comes with a PC based Windows operating system and has a large 15 inch multifunction touchscreen. This touchscreen display is designed as a user-friendly option to give operators maximum flexibility.

The unit is designed and manufactured to engineering



designed to cope with tough, hostile environments. The transport system is a precision engineered C8o weigh platform guaranteeing weight stability, high accuracy

and repeatability, says SCS UK. The unit is made from stainless steel with IP65

Conveyors are driven by virtually maintenance free brushless DC motors. The C80 weighing mechanism is easy to clean with quick release

protection.

stainless-steel corrosion free load cell to offer longevity and trouble-free weighing.

A range of belt sizes and reject devices are available to suit specific customer needs including Air Blast, Pusher, Single or Double Flipper/ Divert Arm and Drop Flap.

The C8o features wide ranging networking, feedback and communications (open source) capabilities, giving operators total control. 10161 222 6361 www.scsukltd.com



Latest roller cleaner tackles any quality issues for converters

Meech International has launched TakClean Ultra: a new tacky roller cleaning system for medium and wide web applications. It is an advancement of Meech's original system, but with its compact, robust and visually appealing design, TakClean Ultra has been manufactured specifically for webs measuring between 650 mm and 1,450 mm in width.

The TakClean Ultra offers double-sided and single-sided web cleaning via Meech's specially formulated 'TransTak' technology. Elastomer contact cleaning rollers and perforated adhesive rolls work in combination with Meech's static control technology to remove loose contaminants and eliminate static charges.

"Built to help converters tackle quality control on their production lines, its stylish design and advanced features make it the ultimate contact web cleaning device for sensitive materials," says Adam Battrick, sales director at Meech International. 01993706700 www.meech.com





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Cost-effective weighing system for bulky materials applications

he new Thermo Scientific Ramsey Flex electronic integration solution enables reliable, cost-effective, easy-to-use weighing with bespoke functionality. Ramsey Flex is the 'brain' of the belt scale and operator interface, enabling process management and control in the field, local control room, or remotely. It can be used for new belt scale or retrofit projects with Thermo Scientific belt scales or those of many other suppliers. It can also be used for single-conveyor projects or alternatively, complex multi-scale systems.



Field mount with touchscreen HMI

"Thermo Scientific products are synonymous with highly reliable, accurate analytical measurement and control," says Kyle D'Silva, director of marketing for production process and analytics at Thermo Fisher Scientific. "Our process customers have asked for remote operation, control flexibility, affordability, ease-ofoperation, and simplified maintenance and we are confident Ramsey Flex meets these needs and also delivers real value.

"Ramsey Flex allows customers to adapt as their processes grow, and to seamlessly add additional scales into their connected networks," explains D'Silva. I 01788 820300 W www.thermofisher.com



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Installation News

Loading and cartoning equipment meets frozen food flexibility need

Polish frozen treat manufacturer is now using secondary packaging equipment from Cama to boost and maintain speed and throughput, rather than relying on seasonal, low-skilled labour.

With eight operators working in a three-shift pattern, potential efficiency and speed improvements were the goal. The company also wanted to save on materials, as the cartons had originally been designed for manual loading. Not only were they complicated, but they also required specialist handling.

By automating the process, Cama's machines also removed the need for this specialist packaging design.

"This type of application is not new to use," explains Alessandro Rocca, sales engineering director, at Cama Group. "This is not the first time we have delivered a machine for chilled washdown applications; indeed, our machines are designed for multienvironment applications, and feature open, easily cleanable frames and no trap points.

"We have a range of machines that can fulfil the packaging needs but being able to mix and match our solutions to best fit the

Carton design has been simplified

customer's needs is definitely

desirable capability," he tells

of the solution is the primary

controllers - in this case

Allen-Bradley GuardLogix

and CompactLogix PLCs -

For this application, the core

a very powerful and highly

Machinery Update.

and the way they interface with the customer's management software as well as the machine's own onboard packaging-recipe-control and the tightly integrated robot controller.

"The customer needed maximum flexibility from our machines," Rocca explains, "to address a wide range of packaging formats".



The machines had to cater for 13 different packaging styles, which encompassed multi flavours, in multi layers, comprising 4, 5, 6, 8, 9, 12 or 20 product counts. Each format is sideloaded into a pre-glued carton which is then closed with hot-melt.

Cama supplied an IT280 robotic loading machine and a CL169 continuous-motion cartoning machine which is fed by four lanes, after which the products are spaced using accelerating conveyors. Each product is then placed into an intermittently moving pocket conveyor and when collated, are picked up by a delta robot and loaded into a bucket conveyor.

The electronic cartoning machine then sideloads the products into the cartons, which are then transferred to a flap-folding station, closed by hot-melt and then conveyed to the machine's outfeed.

"Our BTG range, with its multi-application, multienvironment capabilities was designed specifically to address flexibility needs of our customers," says Rocca.

"Thanks to its electronic backbone, it is also fully Industry 4.0 compatible, a capability that has been exploited extensively during the pandemic, where we have been able to undertake a huge number of remote operations and interactions, including full FATs." • 01793 831111

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A successful warehouse install

A robot is delivering operational gains for spare parts orders

Spare parts company L&S Engineers is using the Q3 robot from Wise Robotics to help automate its warehouse operations. This quick and compact robot is designed for rapid goods-to-person solutions or accelerated inventory movement operations.

Since installation, L&S has achieved a productivity improvement of 40% in its warehouse operations, with pick throughput up by 150%. "We have seen a reduction by more than half in our pick error rate, due to pick to light, touch screen, and static pick stations," says an L&S spokesperson. "Replenishment throughput has since doubled, space utilisation is up by 26% and our stock accuracy is also up, with stock now being secured more carefully." 01522 706070

www.wiserobotics.com

Drive technology retrofit delivers ice cream gains

hen Swiss food company Delica AG decided to modernise its cornet ice cream production facilities it decided to retrofit a range of control technology from Omron.

"The system was running well, but in addition to the control problem, the wear and tear was too high, and the spare parts were becoming more and more expensive," says Urs Weber, automation/IH electrical team leader at Delica. "We therefore also integrated new servo axes and had the susceptible gears replaced."

Delica was already familiar with Omron but had previously used solutions from other suppliers in terms of drive technology. In this modernisation project, everything was to be consolidated. The basis now, is the Sysmac automation platform in addition to Omron's 1S drives with continuous integration from the NX/NJ machine controller to the software. With the Sysmac software platform, PLC functionality, motion control, robotics control, HMI, safety, and camera systems can be seamlessly integrated and networked throughout.

A further challenge that had to be overcome in this project was the number of different production changes required. In addition to the different flavours, there are up to 30 different ice cream toppings and up to 20 different shapes to be handled, with each production changeover.

Product changeover is completed without rejects

Previously, changeovers could cause up to 30,000 waffle ice creams to be rejected. Thanks to the more modern plant, production changes are now carried out without any rejects. Furthermore, the packaging processes are now between 10 and 20% faster.

Omron says that replacing a control system and the drive technology can often make a substantial difference when it comes to logging times, energy efficiency, or predictive maintenance. 1 01908 258258

www.industrial.omron.co.uk

A six-head filling and capping machine has been designed to handle two sizes of bottle containing yogurts and cream

CWM Automation has designed and manufactured another machine for the dairy industry, this time for yogurt and cream. This latest project has involved a six-head bottle filling and capping machine being supplied to fill 250 ml and 500 ml bottles with yogurt and also cream.

The company was tasked with designing and manufacturing a six-head filling and closing machine for a major dairy producer. This new line consists of an



The company supplies many dairy firms

infeed table and conveyor, which transports the bottles to the six-head bottle turnover rinser for the bottles to be rinsed and cleaned via ionised air. Once cleaned, the bottles are fed into the filling section via a change part servo-operated scroll. The filler is Clean in Place (CIP) capable, with interchangeable nozzles for different products.

After the bottles have been filled, they are transported to the closing section to be automatically capped. Capped bottles are then fed into a metal detector and checkweigher via a U-bend conveyor.

CWM says that with issues such as changing customer tastes, environmental factors and stringent hygiene standards affecting dairy production, many manufacturers have turned to automation to maintain their competitive advantage. CWM has therefore supplied filling and closing machinery for a wide range of dairy products including yogurts, milk, cream and cheeses. 1 01427 614222 www.cwm-automation.com

Installation News

Point level switch maintains beer quality while reducing water use

he Vegapoint 21 point level switch installed on a foam trap tank at Bell's Brewery in Michigan is the first of its kind to be installed in the US.

Developed by Vega Controls, these low cost, smart level switches are controlling the water spray used to suppress the foam produced during the brewing process. Without any instrumentation on this vessel, the spray ball would constantly run water, whether excess foam was present or not, only to eventually flow down the drain. Operating the foam trap this way wastes water, and Bell's saw this as an opportunity to reduce its water consumption.

The brewery operators recognised they only needed to spray water when the foam rose too high, but they also needed to maintain a certain water level to prevent any CO2 from escaping through a side vent pipe and into the cellar space. To achieve overall control of the process, they needed two point level



Bell's Brewery has saved 15 million gallons of water by changing its practices

switches – one that could switch the spray ball on when it sensed the foam was too high and another that would switch the spray ball on if the water level dropped too low.

The Vegapoint 21 is a capacitance point level switch for the detection of waterbased liquids and they come equipped with a three-wire transistor output – perfect for controlling the spray ball.

Bell's installed the new point level switch at the side of the foam trap vessel, and since every sensor is equipped with secure Bluetooth connectivity, installers quickly configured and set up the sensor using a

The switches are making life easier for the operators

smartphone.

With accessibility right at the sensor, setup was easy and there was no need to make multiple trips between the sensor and the control system during commissioning.

Also, it comes equipped with a bright LED ring, which can be seen from any direction and in any light. Operators can choose from 256 different colours to coincide with their process status: process is running, sensor is switched, or process error. With a quick look, operators can see the colour of the light and know what's happening

with their process. This final feature was especially helpful to Bell's Brewery, adding another layer of safety to the foam trap. When the LED is on, on arcters here with

operators know the tank's water level is at a safe level, and thus preventing any CO₂ from escaping into the cellar space. • 01444 870055 • www.vega.com/uk



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Laminator gives print finisher a valuable new client service

olio Print Finishing has invested in a new Komfi Sagitta 52 laminator to bring more specialist work in house and increase its profits as a result. Purchased from Friedheim International, the exclusive distributor of Komfi technology in the UK, the Komfi Sagitta 52 was installed at Folio's Bristol production facility in mid-December and has already had a major impact on the way the business operates.

"I had previously seen the Komfi Delta 52 running and was very impressed, but we decided to go for the Komfi Sagitta 52 because of its price, faster running speed, footprint, reliability, make ready times and its ease of running," explains Richard Hughes, md of Folio.

SAVINGS IN MANY AREAS

"Financially, purchasing the new Komfi Sagitta 52 was a no-brainer for us as we spend over £50,000 a year on outsourcing lamination work and this investment will pay for itself within a year," he tells *Machinery Update*.

Producing the lamination work in house also means the company is saving on transport costs while reducing turnaround times, allowing it to take on more work. The in house service and the increased capacity has also proved popular with clients.

"The installation all went to plan; the machine was installed and up and running within just eight hours," he continues. "We selected four members of staff from within the business who we wanted to run the laminator and Friedheim completed their training within two days, so we are now fully operational." 1 01442 206100 friedheimpackaging.co.uk





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Installation News



Gentle onion distribution offered

Combination range delivers efficiency benefits for onions

A Danish organic vegetable producer has been so delighted with the weighing/packing solution supplied by Newtec for onion packing, a video has been made of the feedback.

In the video, the head of operations at Axel Månsson A/S explains the benefits of its Newtec weighing/packing option that consists of a multi-head combination weighing machine, model 4015B2, combined with two C-Pack VAC929 net clipping machines.

"Newtec's combination weighing machine with fifteen channels can achieve the efficiency, capacity and precision required in our production," says Jonas Lauth Pedersen, head of operations – vegetables at Axel Månsson A/S. 1 01406 426526 w www.newtec.com

New facility includes bottling/packing line

new spirits facility that allows bottling and packaging from small volumes in single casks to 30,000 litre tankers has been installed by QAS Group in Kirkcaldy, Fife. It hosts a new bottling and packaging line provided, installed and commissioned by Evolution Bottling and Packaging Solutions (BPS).

At the heart of this new 1,800 bottles per hour line is a nine head MBF Synchrofill rinser, filler, capper block supplied with adjustable change parts and universal transfer scrolls to accommodate a range of cylindrical bottle sizes and other shaped bottles. The semi-automatic Clean in Place system facilitates efficient sanitisation between products and importantly, it is completed without the use of any dummy bottles.

Secondary sealing of the bottle caps is provided by a Robino and Galandrino capsulator that can handle PVC, tin and polylaminate



The new spirits facility handles a range of products in various pack formats

capsules, as required.

An automatic rotary modular labeller from PE Labellers provides three self-adhesive labelling stations for the efficient application of front, back and neck labels with optical orientation. The modular design brings a degree of future proofing whereby labelling stations can be added or changed to accommodate different labelling requirements going forward.

The line also includes a case sealer from TMG and a

case weigher from Logics and Controls, while conveying and line control was also supplied by Evolution BPS, whose Scotland-based team of engineers installed and commissioned the line.

"I have worked with Evolution on many projects over the last ten years or so and always found them to be thorough, professional and a good company to work with," says QAS Group bottling director David Harris. 1 01721 724296

www.evolutionbps.co.uk/ppma

Bulk bagging system is helping building materials supplier to meet increased demand for aggregates in the Midlands

RMGroup has supplied a BB-400 bulk bagging system to building materials supplier Tippers. This new equipment supplements its existing BB-400 bulk bagging and form fill & seal vertical packaging system and will meet increases in demand for virgin and decorative aggregates across branches throughout the Midlands region.

The BB-400 is the fastest bulk bagger from RMGroup and is capable of filling 3 bulk bags per minute



The BB-400 is the fastest bulk bagger from RMGroup

and able to refill to weighment in just 17 seconds.

In operation, a large 20 tonne heavy duty hopper feeds onto a large in-feed belt conveyor, which then feeds the BB-400. The FIBC filling machine itself is controlled by an integrated weighing system

that fills the hopper to a pre-set weighment, making bulk

automation precise at highspeed and volume. Built to a high standard, the systems are guaranteed to withstand 20 years of service even with the most abrasive raw materials.

Commenting on the BB-400, Tippers' Bill Tipper, said: "The installation process was flawless from delivery to installation and the bagger fully meets our expectations and performance requirements. 1 01686 621704

www.rmgroupuk.com

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PERFECTION IN AUTOMATION A MEMBER OF THE ABB GROUP

ABB



Exhibition News

Technology to support digitalisation is shown

ensor and controls company ifm electronic will be showcasing the edgeGateway – a reliable connection between sensors and IT – at this year's Smart Industry Expo at Drives and Controls. Visitors will be able to see the edgeGateway technology in action as well as automation solutions for making products

safely; error-proofing the production process and sending data analytics securely to the cloud.

edgeGateway provides an easy and convenient way to send sensor data to the cloud and is easy to integrate into existing systems as it supports Microsoft Azure, Google, AWS and also Cumulocity.



ifm will be discussing how sensors support digitalisation and achieve maximum uptime

Meanwhile, ifm's specially developed tank demonstration with the new LW2720 radar level sensor on show is fully certified for use in hygienic areas, making it an ideal choice for food and pharmaceutical applications,



including those that involve CIP and SIP operations.

The ifm team will be on hand to discuss how sensors, such as position sensors, process sensors, control systems and connection technology, can support digitalisation and achieve maximum uptime. HALL 9/10 STAND J64 www.ifm.com/uk

Engineering shows are back at the NEC

It's showtime in April with the return of several events to the NEC, Birmingham including MACH 2022 (4-8) as well as Drives & Controls (5-7) plus its co-located events including Smart Industry Expo. Here, we highlight just some of the PPMA members exhibiting. www.machexhibiton.com www.drives-expo.com

New sensors and software launched at Drives & Controls



Baumer will be promoting its expanding range of IO-Link devices and supporting software at Drives & Controls including the EB200E Programmable Incremental Encoder, a 'smart', flexible and cost effective sensor with IO-Link designed to record different measured values. Also on display will be the new Baumer Sensor Suite control software which helps engineers to test and evaluate IO-Link devices.

HALL 9/10 STAND F90 www.baumer.com

Robotic handling solutions that offer flexibility to users across several industries will be demonstrated at MACH



highlight its latest advanced

automated handling and robotics solutions at MACH 2022, including a high payload collaborative robot, machine tending systems and a magnetic levitation-based conveyance system.

The stand will feature an example of one of ABB's latest robotic machine tending solutions - the FlexLoader M for AGV – which is a fully

automated feeder for automated guided vehicles. Handling all types of workpieces, it can pick straight from

the pallet brought to it by the AGV.

Meanwhile, ABB's latest high-capacity collaborative robot called GoFa will be



ABB's FlexLoader M for AGV will be found on the stand

on the stand. Designed as a collaborative partner for a wide range of applications, GoFa offers a 5 kg payload

and a 950 mm reach. With a top speed of 2.2 m per second, GoFa also offers easy programming and a high degree of built-in safety.

Visitors to the stand will see GoFa in action alongside ACOPOS 6D: a new handling system that uses magnetically levitating shuttles to carry products and materials to processing stations, eliminating mechanical wear and speeding up transit times. HALL 18 STAND 310 www.abb.com

Innovation and automation are the themes of largest stand at MACH

A total of 16 machexhibition.com

including seven new models; two advanced SYNERGi automated manufacturing cells; three cobots undertaking a range of operations and new software solutions from the Training Academy can be found on the Mills CNC stand at MACH.

The exclusive distributor of Doosan machine tools in the UK and Ireland is attending MACH 2022 with two key exhibition themes: innovation and automation.



Tony Dale is the ceo of Mills CNC

"Being the first MACH show for four years we have decided to push the boat out at MACH 2022," explains Tony Dale, ceo of Mills CNC. "With all the challenges and issues that have confronted. and are still confronting. component manufacturers. it's become increasingly clear that improving manufacturing productivity and operational efficiencies are central to the continuing growth, competitiveness and success of all UK and Irish companies.

"Our stand at MACH 2022 recognises this fact and is why we have decided to focus on innovation and automation at the event: showcasing a memorable, different and distinctively designed stand." HALL 19 STAND 100 W www.millscnc.co.uk

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Southern Manufacturing Review

Components range was answering visitor needs

range of specialist components were demonstrated by Elesa UK at the exhibition including those meeting the requirements of specific niche industries.

In the case of its metal and visually detectable lines, these are designed to be especially easy to detect and remove in the unlikely event that fragments might be accidentally broken off or dislodged and thus fall into a food or pharmaceutical processor. These metal and visually detectable components offer an additional line of defence and insurance against the potentially disastrous consequences of such an incident, says Elesa.

Produced in advanced engineering plastics, they are developed in conjunction with selected suppliers and AISI 304 grade stainless steel, ensuring compliance with FDA regulations to help keep food-and-pharma products free of foreign matter (which may be inadvertently



broken off from the processing equipment itself).

These metal detectable knobs, adjustable handles, bridge handles, cylindrical handles and hinges are manufactured in 'green-blue' RAL 5001 material, suitable for contact with food (FDA CFR.21 and EU 10/2011), with a special additive which allows the detection of small pieces (down to 5 mm) by means of a metal detector. This, coupled with their unusual colour for the production environment, permits a two-stage detection.

Where visual detection alone is employed in the

production environment, Elesa offer 'signal blue' RAL 5005, highly recognisable components in the same product series.

Also on show was Elesa's LM.F-HD-SST series of levelling feet in stainless steel with a permanent floor mounting facility which are EHEDG certified (European Hygienic Engineering & Design Group). This means that they offer significant advantages in improved hygiene and reduced cleaning time (and resources). 01526 322670 www.elesa.com

Best of engineering was seen at the event

Companies offering the very latest in design, innovation, production techniques and processes gathered in February at Southern Manufacturing & Electronics held at the Farnborough International Exhibition and Conference Centre development. Here, we highlight just some of the products on show from PPMA members attending the three-day exhibition

Automation offer is providing ease of use for industry

Mills CNC was raising the profile of its automation business at Southern Manufacturing & Electronics 2022 and showed several working machines on its stand.

The company's SYNERGi automated manufacturing cell was just one of the options for visitors to discuss. A custom designed and built version has previously been supplied to highend audio equipment specialist Linn Products. The cell represents a significant investment for Linn and comprises a new Heidenhaincontrolled Doosan DVF 5000 (5-axis) machine and a Fanuc industrial 6-axis robot with a 45 kg payload capacity.

Since being installed last year, the cell has proved its worth running overnight and over the weekends...unattended: delivering significant productivity gains and process efficiency improvements.

According to Carl Patrick, industrial automation product manager at Mills CNC, it is the ease of use of these manufacturing cells that has been well received by customers. "Operators of this system don't necessarily need to be highly skilled engineers, which is proving popular," he told *Machinery Update* at the event.

Further information on this manufacturing cell can be found on page 22 of this issue. 101926 736736 www.millscnc.co.uk

Dust extraction firm marks 50th anniversary with attendance at the manufacturing event

0

Dustcontrol UK showed its range of high-performance extraction equipment at Southern Manufacturing & Electronics 2022, highlighting the firm's range of both fixed and mobile cyclone-based dust extractors and air cleaners.

The DC11-Module for example, which comes in several models, is an optimised stand-alone unit for source extraction and industrial cleaning. Also on show was the DCF Immersion,

a mobile pre-separator made for handling materials that are sucked/ transported through a neutralising fluid and collected in a fine net basket, staying in the fluid until emptied. This compact and portable unit can also

be easily transported between workstations. The team also showed the DC Tromb and DC AirCube range, along with its DC 1800 EX and DC 2900 units, and a range of accessories including ATEX and suction cases. 01327 858001 www.dustcontroluk.co.uk

This DCF Immersion was on show in Farnborough



t the exhibition, binder was demonstrating the benefits of its new M8 Snap-in cable connectors which are designed to simplify safe signal transmission in sensor-actuator applications. M8 signal cable connectors from binder support efficient and reliable installations in sensor and actuator applications. Featuring snap-in quick locking and now offered with 3 to 6 pins, they are suitable for industrial applications that require reliable signal transmission and are subject to installation space constraints.

binder, a leading producer of industrial circular connectors, is adding further straight over moulded M8 snap-in connectors to the existing 718 product series. In addition to 3 and 4 pins, these are now also available in 5- and 6-pin versions. They can also be supplied with either PUR or PVC cables up to 2 m or 5 m standard length.

Customised lengths can also

These M8 connectors can fit in tight spaces

be supplied on request. Since the locking mechanism does not require any rotating elements, these connectors are particularly easy to handle and are efficient to use.

While the electrical connection is established by mating and unmating in the new M8, the mechanical locking is provided by means of snap-in elements. These are pushed axially into one another during the mating process and then held in position by spring force. To release the connection, this force must be overcome, and the plug pulled off backwards in an axial movement

As the connector latches and unlatches, a clicking sound is heard. As a major advantage over screw or bayonet locking, the snap-in technique does not require any rotating elements. This makes the corresponding connectors easy to handle – an essential requirement for efficient, time-saving installation. O1442 257339 www.binder-connector.co.uk



SOUTHERN Manufacturing & Electronics

A complete range was on show

Baling press reduces waste volume by up to 95% in operation

HSM (UK) discussed its complete range of powerful and economic baling presses including vertical, horizontal and fully automatic models with visitors to its stand at Southern Manufacturing & Electronics in February. This meant visitors could find the right baling press for waste management as well as explore large file and data carrier destruction or PET recycling.

On show was a vertical baling press that can reduce the volume of waste by up to 95%. Not only does this save valuable space but users can benefit from the generation of a secondary raw material. A second machine on show was the ProfiPack packaging machine which is suitable for shipping and storage areas. 2 01543 272480

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Complete system offers benefits for flower firm

rena Flowers has increased its eCommerce capacity by 300% with a new automated gift card inserting, sorting and package labelling solution.

The company can handle 15,000 highly complex, personalised orders per hour at peak times, and since the installation, 46 staff have been re-deployed elsewhere in the business, achieving batching and also in mailing labour.

And, says supplier of the system Kern, the solution installed will pay for itself within three years.

"We wanted to reduce the reliance on manual labour involved in inserting cards into envelopes, scanning bar codes, creating address labels and the subsequent sorting into batches, according to date, courier, product type and gift add-ons," explains



huge savings in sorting, Kern says this system will pay for itself within three years

ceo of Arena Flowers John Hackett. "We needed to find a way to introduce new levels of automation so looked at other industries to see what we could learn.

"A critical factor was that a new system would not compromise our personalised offer and be able to handle 15,000 orders per hour at peak times," he continues. "High-speed mail and sortation technologies were

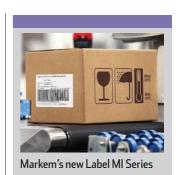
an obvious solution and Kern's in-depth approach impressed us the most.

"The determination of the team to understand our challenge and then tailor a system to future-proof our operations was impressive," he tells Machinery Update. Arena Flowers

chose a bespoke mail inserting and sorting solution from Kern; a complex system involving an inserter

machine to place greetings cards in envelopes and a sortation machine with barcode readers to sort cards into different batches and be matched with the correct bouquet of flowers.

"The new solution had to increase efficiency and capacity and that's exactly what Kern delivered," comments Hackett. 0845 680 6060 www.kernpack.co.uk



New thermal labels for print & apply

Markem-Imaje has released a new range of GS1 compliant print and apply thermal labels. The Label MI series has been designed and certified to work with its existing Ribbon MI series quaranteeing quality and longer rolls for increased up-time, alongside GS1 compliant barcodes at any speed and with reduced darkness.

The Label MI Series comprises three thermal transfer label categories and a direct label category to meet the needs of all end-of-line case and pallet labelling requirements. The range includes:

- Label MI Prime a costeffective label for optimum use with print and apply labellers and desktop printers. It is suitable for a broad range of applications including plastics, film, glass, card and corrugated board
- Label MI Performance is designed for durability and long-term removability from a wide range of substrates or low temperature resistance, including deepfreeze
- Label MI Premium offers optimised quality for enhancing packaging design while ensuring durable and compliant codes
- Label MI Direct supplies high quality prints for short to medium term applications. The Label MI category names

mirror the Ribbon MI names for quick and simple purchasing decisions for customers. 10161 864 8111

www.markem-imaje.co.uk

An automatic print inspection solution is granted a patent to the joy of its inventor

AutoCoding Systems has received a Certificate of Grant of Patent for its automatic print inspection solution called 4Sight that was invented by its technical director Robin Eatch, after he considered alternatives to OCR (optical character recognition) technology as a method of inspecting printed codes.

Eatch worked directly with Sick to develop the application which resides on the Inspector P range of Sick cameras. With AutoCoding

Systems' knowledge of coding equipment acquired through the development of its coding management software, Eatch was able to build 4Sight, an application powered by Sick AppSpace which connects the camera to the printer.

The UK Patent Office granted its patent for Systems and Methods for Printed Code Inspection, identifying the unique aspects of the application. 01928 790444 w autocodingsystems.com



Robin Eatch is the inventor involved

Coders have met the increased demand seen during pandemic

Clearmark Solutions has helped Ecolab maintain a 60% uplift in the production of its water, hygiene and infection prevention solutions during an unprecedented increase in demand due to COVID-19.

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.



The service offer has proved critical

After discovering a print quality challenge with one of its 12-year-old ICE Zodiac coders, Ecolab's site engineering manager contacted the 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 shortterm 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 lines. 10115 964 0144 www.interactivecoding.co.uk

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Meats and fish are answering demand for sustainability...

s if belching and farting cows are not enough of an environmental issue for the market to deal with, like most fast moving consumer goods, the meat sector is also now having to consider its packaging choices very seriously – as are fish processors along with other proteins suppliers.

Long before the upcoming Plastic Tax made it financially sensible to use less plastics, or plastics containing a decent amount of recycled content, supermarkets and their customers have been demanding change. Therefore, many of the new developments you will find covered in the next 24 pages of this feature are all designed to meet these demands. And these include new materials as well as the latest machinery on offer.

Indeed, IFFA 2022, the major meat exhibition taking place in Frankfurt am Main this coming May (14-19) is putting climateneutral production high on the agenda as well as resource and energy management in meat processing. This includes water stewardship as well as packaging to suit everyone, including the growing number of flexitarians.

RECYCLED MATERIAL GAINS

Several PPMA members have been supplying materials to meet these new normal needs, including Sealed Air who has expanded its range of recycle-ready barrier display films to help improve recyclability throughout European supply chains. Meanwhile Hazel 4D describes its new 15-micron Nano film as a game changing product for pallet wrapping as its 30% recycled content can stretch to over 250% for users while **Yorkshire Packaging Systems** is now supplying Cranswick Country Foods with a new fully recyclable, recycled-content, food-safe barrier film.



Adapting to new normal

Packaging requirements for proteins are under all kinds of scrutiny and a combination of machine technology with innovation in materials, is now plaving a part. As can be seen in the photo of films supplied by Yorkshire Packaging Systems

In terms of machinery, the latest packaging solution from G Mondini is designed to deliver high quality skin packs with up to 50% less plastics. Downgauge is a new sealing technology the company has developed that can be applied to all new Trave tray sealers and some existing units (subject to evaluation of each specific machine). The company says this new development avoids the unnecessary usage of thick and heavy packaging materials without compromising on tray performance.

Multivac says that in two major projects last year, its consultancy service – The Right Pack – has helped remove 417 tonnes of plastics out of use and a total of 2,957 tonnes of packaging was moved to OPRL green label, both per year. And there were, of course, substantial financial gains to these moves. "These sort of mass gains for our customers can be made simple when you combine machine technology with material innovation and turn that into an action plan for individual sites," says Multivac UK's Elliot Chrisp.

Tony Burgess, Proseals's sales director believes the challenge is to develop pack formats that can deliver genuine sustainability benefits while remaining functional and fit for purpose, and which do not compromise on product protection and shelf life.

Of course, this feature also includes many stories that help keep products fresh; safe; looking good and processed responsibly. Enjoy!

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Better Packaging

New materials offer eco gains

Barrier display films help to improve recyclability in the UK market and across European food sector

CRYOV

Ithough this is the magazine of the processing and packaging machinery association, many PPMA members also supply films to customers, including new barrier options that are helping to meet the growing cry for more sustainable plastics alternatives.

For instance, Sealed Air has just expanded its range of recycle-ready barrier display films to help improve recyclability throughout European food supply chains.

Two new CRYOVAC Brand Eco BDF films have been specifically designed for compatibility with both LDPE mechanical recycling and chemical recycling processes. The new range includes Eco BDF20M, which is made from 100% virgin materials and Eco rBDF20M – a barrier display film containing

Sealed Air is expanding its range to meet new demand

30% Certified Circular Resins (CCR). Both films have been developed and tested according to protocols published by the On-Pack Recycling Label (OPRL) (UK), Association of Plastics Recyclers, with these practises aligning with those of Plastic Recyclers Europe. This means the new films are RIC4 certified.

ECO BDF films are compatible with the new CRYOVAC Brand TA4X range of hot air shrink tunnels, systems that can pack a variety of foods including fresh meat, poultry, fish and cheese.

Meanwhile, Cranswick Country Foods is reaping the benefits of a new fully recyclable, recycled-content, food-safe barrier film supplied exclusively by Yorkshire Packaging Systems (YPS) for use across its poultry range.

Following a pilot project engineered by materials company Dow and Bollore Packaging Films, YPS has launched

and distributed this new product – OXBTEC_RCB - in the UK, supplying it firstly to Cranswick Country Foods from September. Partially formulated with recycled polyethylene, 30%+ of the blend in the OXBTEC_RCB film derives from a certified feedstock recycled

(PCR-rich) resin made from 100% mixed plastics waste developed using

RUT360

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advanced recycling technologies. "We're pleased to be leading the way with the introduction of this innovative film for our poultry packaging," says David Garbutt, head of procurement at Cranswick. "It satisfies our circular goals whilst being technically outstanding in terms of freshness preservation and in the presentation of our products." www.sealedair.co.uk www.yps.co.uk

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A vision system is sorting frozen tuna with apparent ease

arexi Marine Technology's patented TUNASCAN system is a high-speed and high-throughput vision system that scans and classifies frozen tuna by species, size, and quality.

Using 3D profile sensors along with machine learning algorithms, TUNASCAN is able to classify and sort tuna by species with accuracy rates of more than 95%.

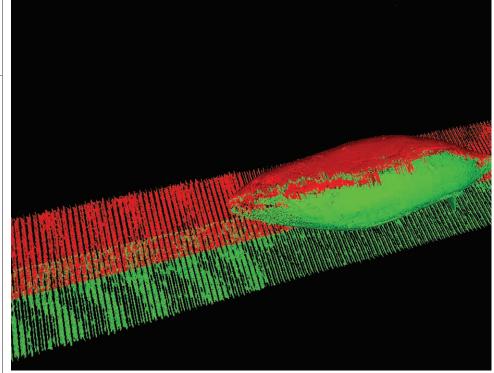
However, as machine vision technology is constantly evolving, and in the interest of improving the classification algorithms used by TUNASCAN, Marexi undertook an overhaul of the entire acquisition system with the support of Matrox Imaging and Grupo Alava, to offer more robustness, help avoid voids, and make the system easier to calibrate.

The patented two-channel vision system can process up to 20 tons of frozen tuna per hour, classifying the fish by species and weight. The 3D scanning and classification system is divided into three sections: reception hopper, scanning, and sorting. From the reception hopper, frozen tuna is fed into the system and passed through the scanning section, where two Matrox AltiZ sensors perform a 3D scan and a computer classifies each tuna individually, with classification results and location data sent to the sorting system.

Once there, each tuna is properly sorted into its appropriate container.

3D SENSOR UPGRADES

Upgrades to the TUNASCAN project centred on Matrox AltiZ 3D profile sensors. "We chose Matrox AltiZ sensors because our application required a strong, reliable way to obtain 3D point clouds from objects moving at a fairly fast speed; the application must also be able to deal with a lot of point-cloud noise and dirtiness produced by the tuna as well as physical operation



3D vision is netting tuna

An onscreen rendition of the 3D point cloud generated by the two Matrox AltiZ of the machine," explains vision and robotics engineer at Marexi Sánchez Carratalá.

As such, an enclosed 3D profiler suited for harsh industrial environments - like the Matrox AltiZ - was a really viable choice. "In the past we used separate cameras and lasers for obtaining 3D data, however, Matrox AltiZ allows us to integrate all these elements into a single sensor that provides exceptional robustness to the application."

The dual-camera single-laser design achieves what could not be accomplished with common

Tuna is scanned by two Matrox sensors before being classified and then sorted

3D profile sensors that feature one laser and a single camera and is thus able to attain the high reproduction fidelity that Marexi sought for its system. Matrox Capture Works – the interactive set-up utility for the Matrox AltiZ – was used to configure the 3D sensor and provide the code snippet for the acquisition portion of the actual application.

"Our TUNASCAN application really leverages the strengths of a Matrox AltiZ-based system," Sánchez Carratalá concludes. "Not only do the sensors deliver very accurate 3D data at really high conveyor speeds while dealing with a challenging product like frozen tuna, but it functions well in extremely harsh environments and works for really extended periods of time without maintenance." **1** 00 1 514 822 6020 **W** www.matrox.com/imaging

Packing line solution for langoustines

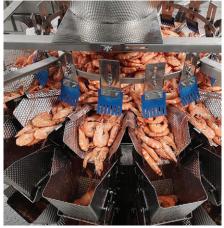
An integrated weighing and tray sealing solution from Ishida Europe has enabled one of Spain's leading fish processors to double throughput on one of its most popular and important product lines.

The recently installed line at Gambastar, based in Burgos, Northern Spain, comprises a 16-head Ishida CCW-RVE waterproof multihead weigher, QX-1100 automatic twin lane tray sealer and DACS-G checkweigher, which is weighing and packing fresh langoustines into a number of different-sized trays.

By replacing its previous linear weigher with the multihead, Gambastar has been able to increase line speeds from about 35 to 70 packs per minute. Equally important, the Ishida solution is delivering accuracy – to within 2% of target weight on a typical 520 g tray.

A particular benefit of the QX-1100 tray sealer is the single tool that is required for the three tray sizes from 200 g to 1 kg. This means that changeovers between packs can take place within a matter of minutes with the corresponding settings quickly called up on the intuitive and easy to use remote control unit.

All three machines offer hygienic designs to enable Gambastar to maintain strict hygiene standards. In particular, the IP66 waterproof construction of the Ishida CCW-RVE is designed for a full washdown. 1 0121 607 7700 W www.ishidaeurope.com



The line met business-critical client deadlines



Middleton Foods acknowledges the accuracy of Ceia detectors and the simplicity of the HMIs

Detection was secured quickly

Fish and chip batter supply has been secured through the rapid service response of MDS

rapid response from both the service and sales teams at MDS has ensured minimum downtime for a customer's primary production lines. Middleton Foods is recognised as the Nation's favourite supplier of fish and chip batters and is now a leading manufacturer of foodservice and bakery pre-mixes.

Having established a successful working relationship for more than a decade, MDS took a call from Paul Tromans at Middleton about a breakdown on one of its older machines. The production line was inspecting 1.5 kg batter mixes and it needed a vertically mounted metal detector complete with conveyor and to operate at a full higher level, retailer code of practice.

"I took a call to see if we had anything suitable in our demonstration stock and we had a unit available from the last PPMA Show," explains MDS's sales and marketing director David Hale. "However, we needed to modify the system from a simple stop upon detect system to a full retailer specification unit. "Since the design of the Ceia system is universal it was a relatively straightforward job to re-hand the head, add a reject, guarding and everything necessary to suit Middleton Foods' specification," he continues. "After the initial phone call on a Tuesday afternoon and a service visit within 24 hours, we successfully delivered its new system to site a day later."

The line was installed over the weekend, commissioned, and validated the following Monday. "Less than a week, start to finish," he says.

"The new MS21 detector works a treat and we have solved a problem with the added bonus of improving the level of detection at the same time," says Middleton's Tromans.

"Most, if not all of our lines have the Ceia Metal Detection systems on them, and when we need a new or replacement metal detector, Ceia are our preferred choice, and we would recommend them to anyone because of the accuracy of the detectors and the simplicity of the HMIs." 1 0161 286 8755 www.mds.org.uk



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System stops cutting blades in quick times

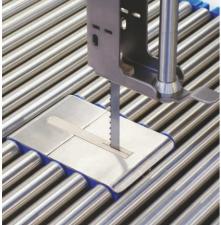
Scott's BladeStop bandsaw that is used in meat cutting and deboning is designed to reduce the risk of serious injury by detecting an operator and stopping the bandsaw blade in a market-best performance time. With over 1200 units supplied globally, Scott says its safety systems are leading the industry in fast-stopping bandsaw technology and capability.

The operator is protected in two ways. Firstly, it features body-sensing technology which monitors the entire body of the operator. It is the primary safety system for reducing serious injuries by mechanically stopping the blade. BladeStop detects the skin of an operator coming in contact with the blade and stops the blade in milliseconds. This can make the difference between a minor cut and a major accident.

Along with the touch sensing capability, BladeStop is also supplied with the additional GloveCheck sensing system. It was developed by Scott as a solution to further reduce the risk of serious injury as it monitors the area around the blade and stops the blade even before an operator comes into contact with the saw blade.

Both detection systems will initiate the fast-stopping capability and are available in the UK from Interfood Technology.

01384 210278
www.scottautomation.com



The system reduces the risk of serious injury



Single pass product learning and automatic calibration makes the life of operators much simpler

Detection meets new client needs

Fortress has delivered the increased sensitivity its customer needed in its metal detecting units

our Interceptor metal detectors from Fortress Technology have enabled a North American pork producer to meet its new fast-food customer's tough requirements for accurately and reliably inspecting high volumes of bacon.

Thanks to the Interceptor's increased sensitivity and simultaneous multifrequency features, the producer has not only satisfied its client's stringent food safety specifications, it has also eliminated false rejects by isolating product effect.

Winning a major contract with a big fast-food chain, the pork producer's investment in a higher-quality metal detection system was crucial to meeting its new client's quality assurance and HACCP standards. The company's existing inspection equipment was struggling to cope with the notorious product effect common with meat products that are wet and highly conductive. "Product effect can make it difficult for standard detectors to tell the difference between the signal generated by the bacon itself and any signal given off by a metal contaminant," explains European commercial manager at Fortress Technology Jodie Curry. "As well as resulting in a high volume of false rejects, there's greater potential for real contamination to be missed."

Inspecting retail and bulk packages of bacon ranging from five to seven kilograms, single pass product learning and automatic calibration means that operatives are not having to constantly reset and recalibrate the metal detector for the different pack sizes. "Automated technology features like these make the manufacturing process much simpler for production staff and significantly reduces the time spent introducing and checking operating protocols," adds Curry. 01295 256266

www.fortresstechnology.com

Fish transfer is speedy process

SMC engineers have used various actuators to deliver top speeds to seafood transfer machines

oving heavy loads at speed can create challenges due to the varied requirements of each application and for an end user operating a seafood transfer machine, the question to SMC engineers was how quickly two different loads of fresh fish could be moved on a production line with accuracy and speed, without compromising reliability.

The solution was SMC electric actuators. The first load, weighing 50 kg, required moving over 750 mm by the fastest method possible. This motion was achieved at an impressive rate of one

second. Meanwhile, the other load of 60 kg moving 225 mm was achieved in just 0.7 seconds.

The end user required a solution that performs in a similar way to the old magic trick of whipping off a tablecloth without plates and glasses ending up on the floor. In this scenario, the 'whip-out' motion would see fish on a high-level conveyor transferred to a lower-level conveyor while avoiding any damage to the product.

During the design stage, SMC engineers quickly realised that electric actuators needed to stop at multiple positions during



A successful project

one movement. Therefore, one actuator per stage would not have been adequate due to a lack of power. Also, because of the physical size and heavy loads involved, it meant that for both applications to achieve the best performance, a pair of belt-driven actuators was the answer.

Belt driven actuators were selected over the ball screw solution because of the stroke lengths, speed and accuracy required to help the end-user meet its production KPI's. Switching attention to the control's perspective, this was complex because both drives needed to move at the same time and speed, and over the same distance.

This technique is known as 'load sharing' motion and to achieve this, AC servo motors were chosen with the relevant drive units connected to a dedicated motion control unit. Electric actuators served as the best option for this specific application instead of pneumatic cylinders due to the accuracy required to reach multiple positions in a single movement.

SMC says this wouldn't have been possible with pneumatic actuators and an additional benefit for the end user

additional benefit for the end user meant lower running costs as no compressed air was required. This prototype design met the end user's brief and as a result, the machine builder received additional orders as the increase in efficiency has helped both businesses expand and become even more profitable. 1 01908 563888 2 www.smc.uk

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The belt driven actuator

ustainability in the meat industry will be a top theme at the IFFA 2022 exhibition which takes place at Frankfurt am Main from 14 - 17 May.

Organisers say that political requirements and nutritionconscious consumers are driving producers and manufacturers to act. Additional pressure is being generated by the global debate on climate protection and resource conservation. The meat processing industry is responding to this with technological innovations, including packaging, but also with fundamental corporate commitments to sustainable solutions.

Another step towards sustainability are machines with durable components and modern hygienic design, such as welded and rounded edges and recessed flush covers. They offer less contact surface for dirt and germs, and cleaning requires less water and energy.

In addition, cleaning times are shortened by automatic cleaning-in-place (CIP).

One of the 1,000 exhibitors that come from 49 countries taking part is PPMA member SF Engineering who will be showcasing its Portio Jet at the event. This new waterjet portion cutter is designed to portion boneless poultry products such as chicken breast, boneless leg meat and fish fillets into predetermined customised shapes while maintaining fixed weights.





Visitors to the IFFA 2022 exhibition in Germany will see SF Engineering's Portio Jet waterjet portion cutter

IFFA 2022 will highlight trends

German exhibition says sustainability is a catalyst for change and innovation in the global meat industry...

The Portio Jet can be seen on Marelec's IFFA stand (hall 9.1 Stand C10).

Developed to maximise yields, the portion cutter utilises the latest vision technology, featuring a 200Hz camera which scans the products and converts them into a 3D model before the intelligent cutting algorithm calculates the optimum cutting pattern. Typical applications include cutting chicken fillets into fixed-weight portions, cubes or strips. Boneless leg meat can be trimmed down and portioned into fixed weight portions, better known as steaks or thigh patty. Salmon fillets can also be

cut into fixed-weight loin portions, belly trim and tail section. By-products can be cut into strips and cubes. Whitefish fillets can also be portioned into several fixedweight pieces.

CUTTING ALGORITHMS

During setup, flexible cutting algorithms are programmed to determine which cuts have priority over others, allowing the portioning software to determine the cutting pattern that creates the most value for optimised yields. All production data is then collected through the Matrix J software where reports can be analysed for each shift or program and to trace

changes at machine level. Also being demonstrated at the show is the new Portio B, an intelligent, heavy duty portion cutter for pork or lamb loins containing bones. All of these products can be offered as standalone solutions or as part of a turnkey integrated SF Engineering production line.

Ishida's ability to provide bespoke solutions for meat and poultry packing - from individual machines to the design and installation of complete lines - will be showcased on the company's stand (C11 in Hall 11.0) at this year's IFFA.

The stand will feature two recently launched Ishida

models. Its next generation x-ray inspection system, the IX-G2-F, which offers enhanced sensitivities for the detection of low-density and difficult to spot foreign bodies such as bone; and the QX-900-Flex compact tray sealer that maximises output, capacity and flexibility for medium to high volume production lines within a compact footprint.

Also on display will be the company's proven RobotGrader, which uses pick and place technologies to grade products of varying piece weight and place them into a fixed weight pack into crates for further processing or bulk packing.

Completing the line-up will be two models from Ishida's multihead weigher ranges – the CCW-R2-106 Fresh Food Weigher and the CCW-RV-214 Screw Feeder Weigher, both of which offer a number of features which meet the particular challenges of weighing and packing fresh and sticky proteins.



The Ishida IX-G2-F incorporates a new line sensor that provides a highquality x-ray image through an enhanced signal to noise ratio, which has an increased capability to detect bone fragments by a factor of four compared with previous models. This further enhances the ability of the machine to identify contaminants, in particular when handling thicker and denser products such as chicken fillets, chicken breasts and a wide range of poultry products where they can often be overlapped or presented with uneven surfaces. Finally, the 6-head Ishida CCW-R2-106 Fresh Food Weigher is designed for all types of fresh sticky products along with smaller production batches.

www.iffa.messefrankfurt.com
 www.ishidaeurope.com
 www.sfengineering.ie





Flow wraps help slash plastics use

Paramount Packaging Systems has been assisting its Fuji colleagues in Europe to introduce a new packaging infrastructure to Aldi (Germany's) range of fresh meat. This solution will save Aldi Germany more than 50% of the plastics and CO2 it has historically used for its packaging.

Using its experience built on a previous installation in the UK for packing minced lamb, a number of new packaging systems have been implemented by Aldi's supplier and German meat giant Tönnies. The new Fuji Alpha 8 flow wrapping system uses 70% less plastics than traditional tray packaging, reduces transport costs by 80% and minimises CO2 emissions by 60%.

Aldi (Germany) is serious about its sustainability strategy, so "although the changeover to this new system is costly, we are prepared to invest tens of millions of euros...to help solve sustainability issues for our customers" Tönnies declares.

"The first step for Tönnies was to look at minced meat to meet their goal to reduce the amount of plastics packaging used for their products - tackling other products, such as pork steaks, bratwurst and goulash, is next on the list," says Aaron Bessell, sales director at Paramount Packaging Systems.

The Fuji Alpha 8 flow wrapping system was central to the new sustainable infrastructure because of its ability to help save up to 70% of plastics per packaging unit. In addition, the new packaging consists of 100% recyclable film. Its weight is estimated at 4.6 g for a 500 g pack of minced meat. 01252 815252

www.paramount-packaging.co.uk



Aldi (Germany) is serious about sustainability

Installs deliver all-round gains

Multivac UK offers a range of technology that is delivering benefits across all meats and fish



ultivac says that its B 625 belt-fed chamber machine is helping to ease labour shortage issues in the meat sector as a recent installation of three split-belt units confirm.

The first installation allowed the customer to replace two old ageing machines, with one new machine, to help increase production output and reduce its reliance on manual labour. It also allowed it to repurpose an operator elsewhere in

the factory. Late last year, the following two installations helped customers to increase their current vacuum packaging capabilities by investing in bigger, faster and more reliable equipment.

Multivac says that

for businesses that are struggling with the UK's labour shortage caused by the pandemic and Brexit, the B 625 is ideal. The split-belt option of the machine allows product loading from both sides by two operators, or from the front onto both seal bars with just one operator.

The B 625 is a high-output belt-fed chamber machine, offers volume benefits and when combined with Multivac's range of components for loading, shrinking,

it can be upgraded to an efficient complete packaging line.

Turning to fish, Multivac launched the Metalquimia spray injection system into the UK at its Packaging & Processing Discovery Forum last year. The spray effect on this patented spray injection system distributes into proteins even when the amount of brine is quite low (5-20%). The atomisation ensures a perfectly even spread across all fibres with deep penetration, encapsulating the brine within the product.

Following extensive trials, the company

is pleased to report that the atomisation process is successful on a broad range of fish products, and in particular, salmon, when compared to a lowpressure non-spray injection system. The company can Latest spray injection system is used on fish offer trials to sample the benefits that

spray injection can bring.

Meanwhile fish producers have also been investing in a new thermoforming packaging machine, with two of the latest RX 4.0 next generation thermoformers recently installed at fish suppliers. Indeed, the success of the first machine pushed towards the decision to purchase a second within 6 months. 01793 425800

www.multivac.co.uk



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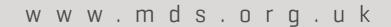
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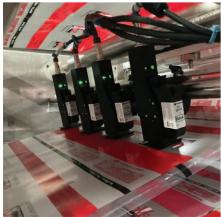
Coders are flexible for Iberian pork

Family business Iberlinares produce its hams and sausages to Iberian tradition while using modern production technology, and for printing PE meat packaging films, it needed a flexible printing solution that could adapt to printing on multiple positions on the same or different products and on multiple production lines.

It needed to be cost efficient while at the same time integrating smoothly with Iberlinares' production lines, printing on eight products with every product using its own label layout. Domino's Gx350i thermal inkjet printer met these criteria.

For instance, the controller can be set up in a safe location up to 25 m from the production line and four independently functioning printheads can be added to each controller. This meant for this application, only two printing systems using four printheads each were required. This, says Domino, simplifies integration while keeping the cost of investment down.

The Gx350i features Domino's common QuickStep 3 user interface, which the operators at Iberlinares find very user-friendly making message editing and operating the printer easy. For example, if the same label is used for various print positions, it only needs to be configured once and can then simply be sent to all printheads. O1954 782551 www.domino-uk.com



The Gx350i printers are a clean, reliable and easy to use option for meat production lines



Product inspection plays a crucial role in ensuring the black puddings meet the highest standards

Metal detectors keep puds safer

The Bury Black Pudding Company is using several metal detecting systems from Mettler

uality and safety are critical for UK firm The Bury Black Pudding Company, which prides itself on both its local footing and its international export success.

To ensure that it is compliant with the latest global food safety standards, while protecting consumers and its own brand reputation, the company has invested in several metal detection systems from Mettler-Toledo Product Inspection, allowing it to produce a range of black pudding products on different production lines at the Bury facility.

On one line, a Safeline HDS pipeline system inspects clipped black and white pudding products prior to filling. On another, a bespoke Profile Advantage conveyorised metal detection system inspects more challenging packaged applications such as large pudding rings and frozen slices.

"As the UK's market leading producer of black puddings in clipped sleeve and traditional, natural skin formats, we are very keen to ensure the product we send out is of the highest possible quality," says Matthew McDermid, the food company's marketing manager.

"Mettler-Toledo Safeline metal detectors help us protect our brand, increase our productivity and maintain high quality standards, which are essential for keeping our BRC 'A Star' standard," he explains.

The HDS metal detection system is integrated with a Handtmann vacuum filling machine on the production line, and delivers high levels of detection sensitivity, stability and ease of use. Washdown conditions during product changeovers on this line can be harsh, and the HDS system is sealed for ingress protection to IP69K standard.

The Mettler-Toledo Profile Advantage metal detector on the line producing pudding rings and frozen slices is equipped with multi-simultaneous frequency and product signal suppression technology, enabling it to overcome such product effects found in meats.

www.mt.com/metaldetection

Making energy a 'smart' option

WAGO is delivering energy data management smart solutions which it says, are ideal for meat processors

he production and processing of meat is an energy intensive, process driven operation, so it makes sense to save costs in these areas as much as possible, says Andy Turtle, product manager at WAGO Energy Data Management Solutions.

Up to 65% of energy consumption costs are due to cooking, heating and cold storage requirements for a food manufacturing business. In addition, processes like vacuum packing which are used extensively in meat processing can also be highly energy intensive.

Meanwhile, meat processing

businesses are facing even stronger headwinds in the coming years, with the cost of energy rising significantly, new legislation and also regulations arising out of the COP₂₆ summit, in addition to existing climate change pressures.

With increasing energy costs and the implementation of new regulations, it's clear that it's in the best interests of a food manufacturer to tackle this challenge, implement a robust energy management plan, and realise further opportunities like:

Ensuring access to all government projects
Fulfilling legislative

requirements

- Ensuring taxation levies are minimised
- Reducing energy use and associated costs
- Improving working conditions and gaining efficiencies through automation and digitalisation.

By implementing an effective energy management plan based on identifying and eliminating wasted energy, it's possible to see considerable reductions in emissions. The Carbon Trust quotes average reductions of 20% with up to 30% reductions also possible.

The structure of an effective plan is based around four key principles:



Measuring is key to success

- 1 Measuring the energy usage throughout the business
- 2 Fixing the basics
- 3 Automating and Digitalising
- 4 Reviewing progress made and setting goals for further reductions.



"The mantra for anyone implementing good energy management practices should be 'If you can measure your energy consumption, you can manage it'," explains Turtle. Many regulations and accreditations including ISO 50001 also advise that metering and energy management are the vehicle to achieving optimal energy use.

WAGO offers easy to use, modular solutions for existing energy systems which can measure as well as monitor energy consumption, and not only help reduce margin pressures, but also help in reducing the carbon footprint.

SCOPE FOR SAVINGS

The Energy Data Management or EDM in short, is a solution that meets the requirements of ISO 50001 as well as many other regulations and accreditations. Crucially, the system can be further expanded to include multiple sub-metering points, temperature metrics and power quality. "With WAGO Smart Energy

Data Management Solutions, there is enormous scope to expand the system and to measure and monitor the entire business's consumption," says Turtle.

The company also offers industry specific solutions like 'eXTReme 750 PLCs and IOs' for measuring the electricity consumption of processes located in high heat areas or for cooling and cold storage requirements. Also, integrating machines and systems into the Internet of Things is simple to achieve with WAGO's IoT Box. The complete system is ready for immediate use and is designed to offer meat processing businesses all the functions required for digitalisation. 1 01788 568008 1 www.wago.com/gb/ energy-management

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M6 METAL

DETECTOR

Linear motors are helping fish farms with vaccinations

ack in 1987, Norway used 50 tonnes of antibiotics in fish farming and today, it uses less than 100 kg per year thanks to vaccinations. To help achieve this, Norwegian machine builder Maskon has designed machines that automatically vaccinate the fish at up to 20,000 fish per hour while only requiring one operator instead of needing 4-6 experienced "fish-injectors".

In operation, this automated process requires the fish to be anaesthetised, sorted, ordered into a singular queue, and then finally vaccinated. Each vaccination module is equipped with four vaccination stations and at the heart of each station are LinMot linear servo motors supplied by Quin Systems. The motors are used for both positioning in the vaccination station as well as vaccinating the fish.

OPTIMUM INJECTION POINT

Each fish is measured by a Tordivel image processing system which calculates the optimum point for injection with a precision of over 98%. The length of the fish is also used to calculate the depth of injection. A sensor on the needle then monitors the injection process and the vaccine dosage for each fish.

The use of a pneumatic cylinder was eliminated as an alternative right from the start, says Quin, because they could not have reached the speeds and precision required by the application. An evaluation by Maskon of the linear motors available on the market determined that only



The LinMot linear motors



Antibiotics are reduced

Injection depth and site are calculated individually and the linear motor then positions each vaccination station the stainless-steel solutions from LinMot could provide the dynamics, precision, and especially the protection class and compact form factor required by the vaccination machine.

Importantly, they need to comply with the hygiene requirements of the food products industry. The stainless-steel motors in the Po1-37x120F-HP-SSC series from LinMot meet this requirement. They are made entirely of stainless steel (1.4404/316) and are characterised by their high protection class of IP69K. Gaskets were deliberately eliminated from the motor design. All connections are welded.

These motors are also fully potted to prevent condensation from forming. Space requirements were also a deciding factor, as the space available in the vaccine modules is tight.

The LinMot linear motor is

a tubular design and looks like an air cylinder. It is sealed and has a built-in encoder so does not need any external sensors. It also only requires a single cable connection.

The PS01-37x120F-HP-SSC-R version used in the vaccination unit has an outer diameter of 48 mm and length of 296 mm. When used together with the appropriate slider (shaft), it can apply a constant force of up to 210 N over the entire range of its stroke. For this motor, LinMot sliders are available for strokes from 75 to 860 mm. A high-clearance variant, PL01-19x350/260, with a stroke of 120 mm was selected for the vaccination unit.

All aspects of the motion are controlled including force as well as speed and position to ensure high repeatability and precision. • 0118 977 1077 • www.quin.co.uk

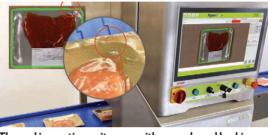
Hyperspectral gains

Imaging technique is used to check seals and also moisture content

yperspectral imaging (HSI) is being used in the meat, fish and other proteins sectors for seal inspection and also in a recent trial to measure product moisture levels.

HyperScope, Engilico's seal inspection system, uses HSI to detect contamination in the seal of trays with a much higher contrast than standard vision cameras. Particularly the new paper-based backings that reduce up to 80% of plastics in packs that are being adopted today. Engilico says that for traditional vision systems, this material might cause issues.

As the light sources in HyperScope illuminate the product from above, so same angle as the camera, there is no issue with the opaque cardboard. The system can detect contamination in the sealing area, as substances such as water, oil, fat, meat have a different spectrum than the spectrum of a perfect seal. Even with a printed plastics



The seal inspection unit copes with paper-based backings

top film or in low contrast situations with printed cardboard backings, when contamination is not visible for traditional vision-based systems, seal contamination can be detected using hyperspectral systems.

Meanwhile, Quantum Design UK and Ireland represents hyperspectral imaging company Specim who has been carrying out trials with

a minced meat company in Finland to determine accurate moisture levels. Using its FX17 HSI camera proved to be successful in this application. www.engilico.com www.qd-uki.co.uk



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hether it is adapting case packers for new meat pack formats; providing clamp attachments for films; increasing bacon efficiencies with case tapers; making the 'dressing' of poultry more efficient; strapping boxes of farmed salmon; supplying thermoformers for veal or automatically denesting card as well as plastics trays, you'll find that PPMA members have answered the need.

Lan Handling Technologies, for instance, installs dozens of fully automated packing lines at meat, fish and poultry producers every year and is increasingly receiving requests from food producers who are considering switching packaging types, which impacts the already installed case packing systems.

The company has recently received an upgrade request from a meat processor that had to switch from MAP trays to a more sustainable flow pack variant. Thanks to Lan's standardised but flexible case packing systems, relatively simple adjustments were limited to the gripper. "So that the vacuum tooling perfectly matched the new, lighter foil packaging: no negative impact on the product presentation and food safety was guaranteed," says Milou Jansen of Lan.

When a meat processor approached Packline Materials Handling for a way of lifting and rotating rolls of



Packs of veal are being handled



Lan Handling Technologies has upgraded its case packers for clients to handle sustainable pack options

Automating is the answer...

PPMA members have been answering sector needs for flexible and efficient automation across Europe

film and foil in a clean room environment, to minimise operator manual handling, a new stainless roll clamp attachment was devised. The new fully powered, mechanical roll lifter is equipped with powered lifting and clamping, in addition to powered rotation through 360 degrees.

Meanwhile, Endoline Automation has helped increase efficiency for bacon supplier Beckett's Foods, by replacing seven of its legacy case taping systems like for like. A long-established customer of Endoline, the company invested in several 706 semi-automatic pre-set case taping machines almost two decades ago.

"We have always been impressed with the quality of the Endoline systems, and, despite operating continuously for over 15 years, the machinery had only recently begun to cause downtime," comments Diane Lumley, head of operations for Beckett's Foods. "Replacing the systems like for like was the obvious solution as we wouldn't switch to another brand."

The new, 706 systems were installed to work across seven packing lines within Beckett's Foods' Coventry factory.

Aiming to reduce labour needs, Appledore Turkeys approached UPM Conveyors to automate the 'dressing' of the bird by designing and installing a 360-degree system. This has allowed operators ease of access without the original approach of moving the birds from one station to another. Hygiene has also improved as the design allows quick access to all internals for high pressure wash down. All aspects of the installation conform to the health and safety regulations for raw food handling including the conveyor belt being microbiological and metal detectable.

It has also resulted in a drastic reduction in labour showing a return on investment of three months.

At the same time, fish suppliers including Mowi and Cooke Aquaculture have been benefiting from the installation of robust and reliable stainless steel strapping machinery from Gordian Strapping. Minimal moving parts ensure that wear and tear is reduced on the machine and operational life is increased, explains Gordian. The fully enclosed cabinet, side sealing design, reinforced lower cabinet and permanently lubricated mechanisms are the moisture protection features included.

In the Netherlands, producer of veal Ekro has invested in four Sealpac thermoformers: an RE30 tandem machine for packaging the by-products and three RE25 thermoformers for packaging fresh veal in various weights and sizes, including entrecote, fillet, escalope, rib-eye and steak. "The Sealpac machines are characterised by their simplicity and reliability," says Anjo Kaatman, head of technical services at the yeal processor. The equipment is packaging veal products in two shifts per day.



Beckett's has replaced case tapers

Finally, when a leading UK meat processing group needed to handle specially developed card trays for its supermarket clients, it approached Partners in Packaging. The solution had to handle both the new style of card tray together with the more conventional recycled PET trays on the same machine, and with minimal changeover time.

Partners offered its C Series twin servo denesterplacer with two magazines to automatically place trays on to the production line; product is then placed in them before skin packing.

"Our C series has a unique combination of rotary and intermittent motion, using one servo motor for the rotary action, and a second combined with three rack and pinion actuated pick heads," explains Duncan Macintyre, director at Partners. "This enables it to pick and place an exceptionally wide range of tray types and sizes." *endoline-automation.com www.gordianstrapping.com*

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Testing times call for tried and tested solutions

Two ABB IRB 1200 industrial robots are helping a Taiwan based company to speed up and accurately test up to 1,800 COVID-19 samples a day. The solution resolved the trained staff shortage and the risk of staff contracting the virus, enabling testing to proceed 24/7.

To see how robots can help solve your labour shortage and testing problems visit: https://bit.ly/ABBRobotHealthcare





8 x-ray units are installed at Kepak Kirkham

Burgers are checked by x-ray units

Meat processor the Kepak Group has invested in eight X5 Space Saver x-ray units from Loma Systems.

Kepak's Kirkham, UK site manufactures a range of microwavable burgers and hot sandwiches that come in clear 100% recyclable packs, with additions such as cheese and sauce. The facility produces Rustlers, a brand which is built around taste, convenience and quality.

All of the site's eight processing lines had been using an ageing mix of metal detectors and checkweighers, which were not suitable to detect softer contaminants such as bones, as well as ensuring that a sauce sachet and cheese slice were correctly placed in the packs. Kepak wanted to increase its detection capabilities, but also continue to weigh products and check product integrity, all within a smaller footprint.

Due to the complexities presented by the final 'on-the-go' burger product, it was decided that each line should have a new x-ray machine. Loma was appointed to supply the Kirkham site with eight compact X5 Space Saver x-ray units, providing detection levels of 0.4 mm for very small metal contaminants and 0.8 mm to 1.6 mm to find softer contaminants. Overall line length is just 1000 mm.

"During installation, Loma's technical team were passionate in ensuring that the x-rays were performing at their best, and to that end I can't be happier," says Lee Arkinstall, project & improvement manager, food division, Kepak. **1** 01252 893300 **2** www.loma.com

Meat packing under control

Machine builder is relying on automation options from Pilz to make its thermoformers easier to use

achine builder Komet demands reliability and also simple and safe machine operation for the airtight packaging of fresh goods. In its automatic thermoforming machine Sprinter, the modular automation system from Pilz called PSS 4000 in combination with the visualisation system PASvisu is

responsible for the complete plant management. Plant control and the monitoring of safety-related and nonsafety-related signals are combined to be failsafe in one system. Together with Komet, Pilz developed the electrical design and implemented the automation and visualisation concept in the Sprinter.

The packaging of meat, sausage and other highly perishable goods is the main

focus at Komet. "With our compact, fast and flexibly cycling automatic thermoforming machines, we have made a name for ourselves in the meat processing and gastronomy industry," explains Harald Janke, manager at Komet. "The Sprinter model, for example, is designed for butchers' shops with up to five branches that regularly have to reliably package large quantities of fresh goods."



The PSS 4000 from Pilz has been a success

Previously, the Sprinter was equipped with the configurable small controller PNOZmulti from Pilz. As the demands grow and the complexity increases, the requirements for control, operability and safety increase. The broader range of applications, increased drive axes and flexible expandability of the insertion area required a sophisticated automation and safety concept.

"We do not have our own electronics division in our company and have relied on the competence of Pilz in this regard for many years," says Janke. "We formulate our expectations, define the interfaces and thereby work together to develop integrated



The Sprinter machine from Komet relies on Pilz's plant control

complete solutions in the areas of control, safety and visualisation that are precisely tailored to the needs of our customers."

The Sprinter's automation system PSS 4000 is solely responsible for the complete process and safety management of the plant in close teamwork with the web-based visualisation software PASvisu from Pilz. The previous strict separation between plant control and safety has been lifted without sacrificing any safety. At the same time, the multifaceted automation system with its range of operations and functions is by no means inferior to a standard controller.

Pilz says its web-based HMI software PASvisu makes automation projects easy to configure and visualise. Machine manufacturers and users have a complete overview of the automation at all times, either directly via the HMI at the machine or via remote access.

The web-based interface PASvisu is the interface between human and machine. The automation system PSS 4000 provides the relevant data. 101536 460766 www.pilz.co.uk



Components



Piston valves are a heavy duty option

Emerson's next-generation ASCO Series 290D is a pressure-operated, direct-acting angle-body piston valve built for demanding applications.

Featuring the highest KV/flow rate in its class and proportional control for accurate regulation, the new Series 290D helps improve reliability and safety in food and beverage, packaging and pharmaceutical applications. Suitable for use with a wide variety of media, including aggressive fluids, steam, gas, vacuum and superheated water, the versatile piston valve comes in many options, certifications and characteristics.

The Series 290D food-contact valves have approvals for hygienic applications that include EC, FDA, EU, RoHS and REACH compliance. The valves have less surface area and crevices for material to accumulate than existing valves, as well as a tighter mechanical design that reduces the number of leak paths.

They are designed to control the wide range of media found in food-processing applications, including superheated water and steam, and feature a selfadjusting steam seal.

In addition, the reliable fluid control mechanism of the Series 290D was engineered for safe shutdown, which improves plant and worker safety. While the actuator requires barely any maintenance, a safe actuator dismounting option is available to ensure maintenance workers are protected during potentially dangerous dismantling procedures. 101695 713600 w www.emerson.com

Machine builder benefits from outsourcing guards

atara UK has completed a substantial project for the manufacture and supply of machine guard frames for converting solutions provider T S Converting Equipment.

T S Converting provides slitting, coating and lamination equipment to handle a wide range of substrates, and all tailored to suit customer requirements. To comply with safety regulations, machines are supplied to customers with a protective guard frame and until recently, this frame was produced in-house. However, this process proved to be very time-consuming, costly and did not allow for key accessories, such as screw-in feet or castors to be used.

With T S Converting's latest project – a substantial order of mixed machines – the company turned to Matara to work with its CAD drawings, cut the aluminium to the correct size and then assemble the guarding panels to the exact specifications.



The success of this project sees Matara discussing other projects with T S

Aluminium profile was selected for this order due to its adaptability and the speed in which it can be produced, and for its cost-effectiveness when compared to steel.

This latest order has required over 200 m of 40 x 40 mm aluminium profile, which has been powder coated safety yellow (RAL1003). All sections of this guarding have been supplied with UK stocked 25 x 25 black powder coated wire mesh or clear polycarbonate panels. A wide range of accessories have also been included into the guard frames, including feet for mounting the sections to the floor for stability; connecting plates complete with fixings; door handles and hinges.

"The guarding has been a huge success not just for saving money but also how smart it looks," explains James Self, director at T S Converting Equipment. 1 01684 850000 W www.matara.com

Inductive sensors for extreme temperatures have new features to give robust flexibility

wenglor's INTT inductive sensors detect metallic objects at ambient temperatures up to 250deg C, and this series now has two new features that make it more flexible and robust. For dynamic applications in hot areas, system builders can now choose from flexible cables and simple push/pull connectors. The plug-in sensor heads are therefore easy to replace. The analysis module is also located directly in the M12 sensor plug, a feature

that offers great added value for users who design or operate drying ovens for paint or surface coatings, for example.

SERVICE LIFE OF 5 YEARS

These sensors have a long service life of up to five years. If the sensors need to be replaced due to mechanical damage, the new series can be switched out in one simple movement, even at high heat. The exchangeable sensor heads are connected

to the system via a plug-in cable: "Even with fireresistant gloves, the flexible cable can be very easily disconnected from the sensor thanks to the push/pull plug connection," explains wenglor product manager Dr Sascha Reinhardt. "So hot systems do not need to be switched off to accommodate sensor replacement as they can be replaced during operation with protective equipment." 101536 313580 www.wenglor.com

Motors benefit AGVs/AMRs

he BLV-R Series of brushless DC motors (BLDCs) have been specifically designed by Oriental Motor to meet the operating demands of AGVs/AMRs, or automated guided vehicles/autonomous mobile robots.

Based on the successful BLV Series, the BLV-R Series motors benefit from enhancements that are specifically designed to make them a cost-effective solution in AGVs and AMRs. Designed with enhanced speed length and weighs just 2.4 kg. The usable voltage range has been extended and is now 15 VDC to 55 VDC, with a speed control range of 1:4000 rpm. This wide input range is particularly beneficial for AGV operation, handling voltage changes which AGVs can find difficult to manage. For example, it compensates for voltage drops within the battery of an AGV, allowing it to continue operation. It also ensures that, in

other circumstances, the AGV



The new BLV-R Series motors are a cost-effective solution

capabilities and a proprietary communication system, they are available in a compact form, a factor that is ideally suited for use in the limited internal space, typically available in AGVs.

SMALL, COMPACT RANGE

The low voltage input power DC motor drivers measure just 75 mm x 65 mm x 29 mm, and have a mass of only 120 g which, says Oriental Motor, makes them the smallest comprehensive BLDC drivers in the industry today.

The motors are equally compact. For example, a 100 W motor with a 30:1 gearbox measures just 108.4 mm in normal operation if back regenerative energy causes the battery voltage to increase temporarily. Improved higher resolution, positional hall sensors within the motors enhance motor

feedback, improve stopping accuracy and lower speed operation. Improved torque control within the drivers results in stable speeds which can be easily maintained.

The BLV-R Series also has accurate torque control all the way down to 1 rpm. Typically, these levels of performance are very difficult for brushless DC motors to achieve, says the company, but they are essential requirements in AGVs because this allows them to make moves and make very accurate turns smoothly. 1 01256 347090 2 www.oriental-motor.co.uk



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Who What Where

Who's done what and gone where...

BW Packaging



Michelle Bryson has joined BW Packaging Systems as

global sustainable packaging leader to head the development of a sustainability roadmap for the company. In her new role, Bryson will collaborate with customers, packaging suppliers and industry associations to develop sustainable packaging strategies that drive toward cleaner manufacturing.

RA Rodriguez



Darren Reynolds, the operations director at RA Rogriguez

(UK) for the last five years, is taking over from **Peter Williamson** as managing director of the company. Williamson will now focus on supporting the development of the RARUK Group. Reynolds has over 30 years' experience in the bearings and power transmission industry.

Loma Systems



Mohamed Sacranie has joined Loma Systems as a new regional

sales manager for the Midlands and Northeast of England and brings previous experience gained from within the industry when working with OEMs and systems integrators to the role.

Ulma Packaging



Bill Anderson is the new regional sales manager for Scotland and

Northern Ireland at Ulma Packaging UK, and brings 38 years' sales experience to his new position.

Meech International

Adam Battrick has been appointed as chief operating officer (coo)

at Meech International. He has been working at the company since 1997 and in this time, has been business unit director and worked in technical sales, but has been promoted from his role as sales director. In his new position, he will be responsible for the overall day-to-day running of the company, working closely alongside, and continuing to report to **Chris Francis**, the company's ceo.

CKF Systems



Andrew Beard has joined CKF Systems as an electrician. He previously

worked as a contractor on a number of occasions, but he now brings his expertise to the company as a full-time, permanent employee.

RARUK Automation



Harry Brunker, who holds a first-class honours degree in mechanical engineering with professional development from Brunel University, has joined RARUK Automation's training team as an automation technician. He joins the line-up of certified Universal Robots (UR) trainers where he, and his fellow trainer **Paul Keeling,** will provide tuition in collaborative robot programming, which RARUK Automation believes empowers UK customers to get the best return from their UR investment.

Macsa ID



Jessica Coe has joined Macsa ID UK as business development manager for

the Anglian region from Linx, where she spent five years working in a variety of sales roles. "Jessica's industry experience will be invaluable, and she will be a great asset as we continue to develop and grow the business," says **Neil Greatorex** md at the company.

Antalis Packaging



Ian Whitcome has been appointed product manager at

Antalis Packaging bringing the experience from his previous role as national key account manager at the company to his new position. "After more than 20 years in sales, I wanted to share the knowledge I have accumulated, and this is a perfect fit," he says.

Diary Dates

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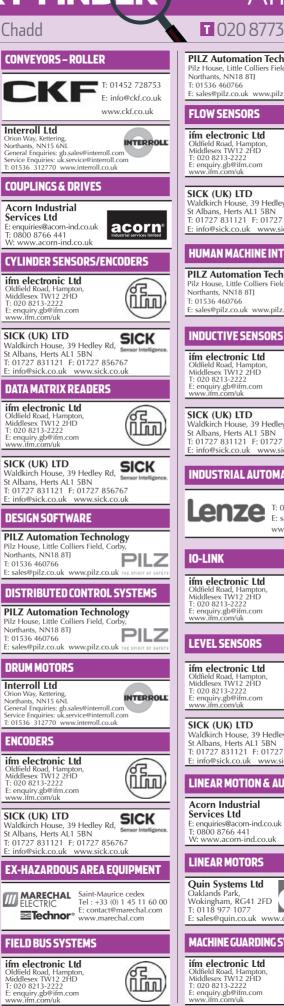
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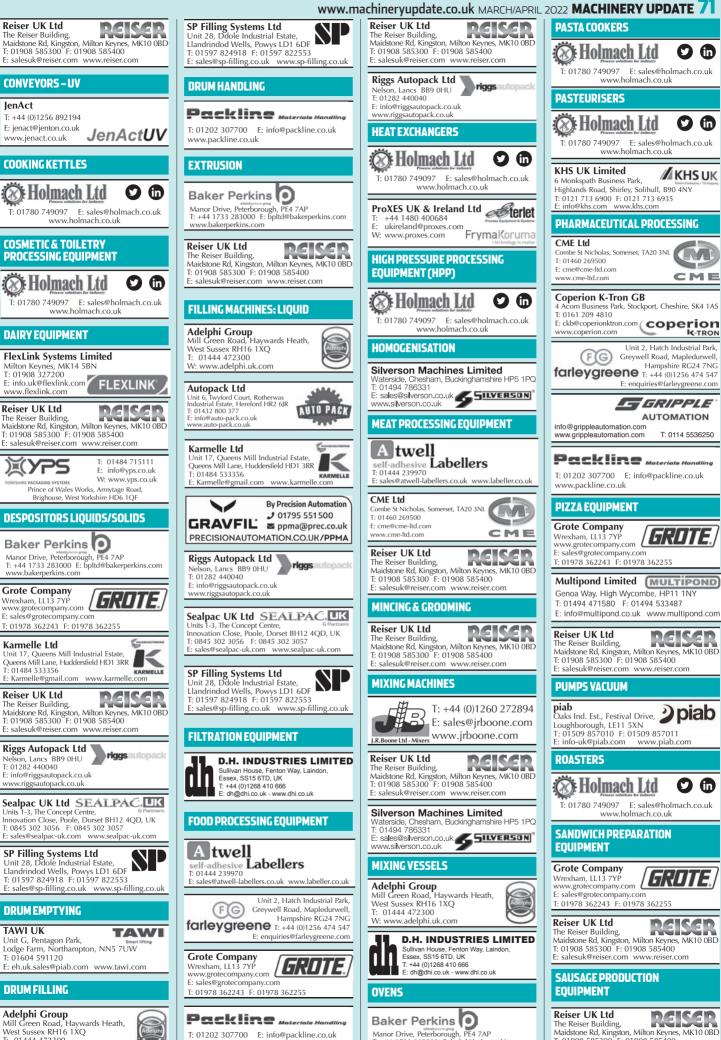
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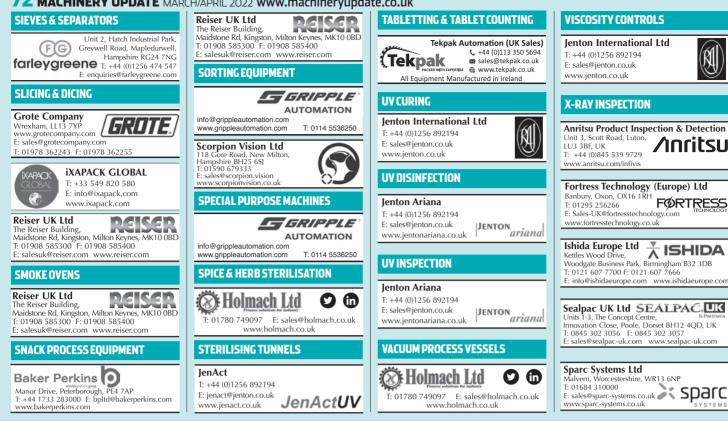
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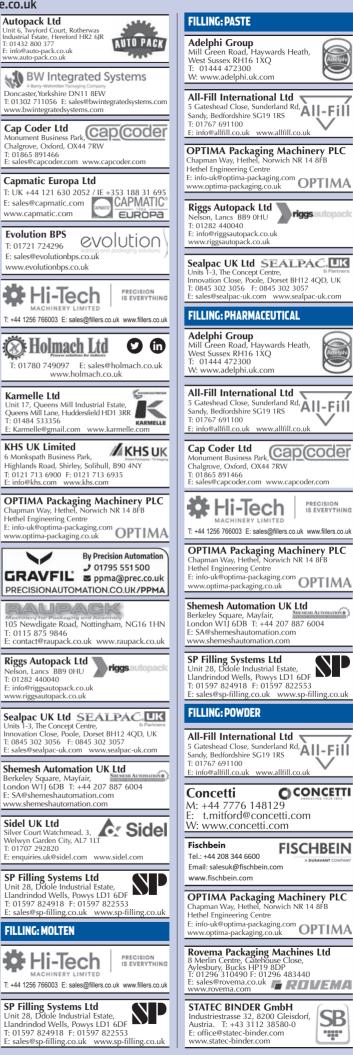
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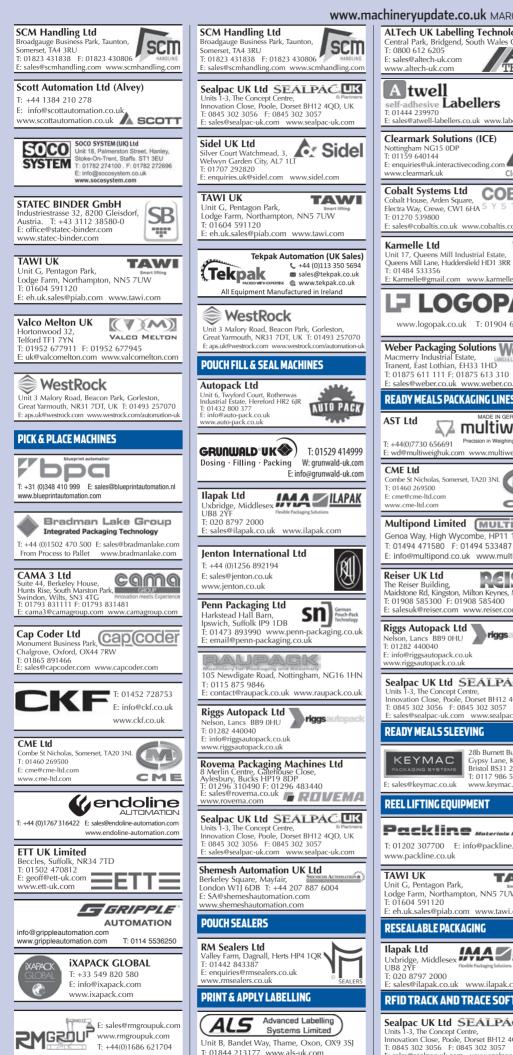
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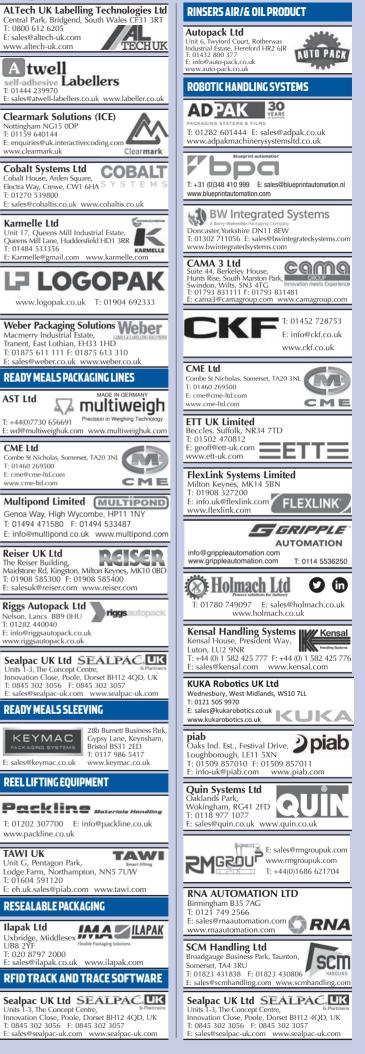
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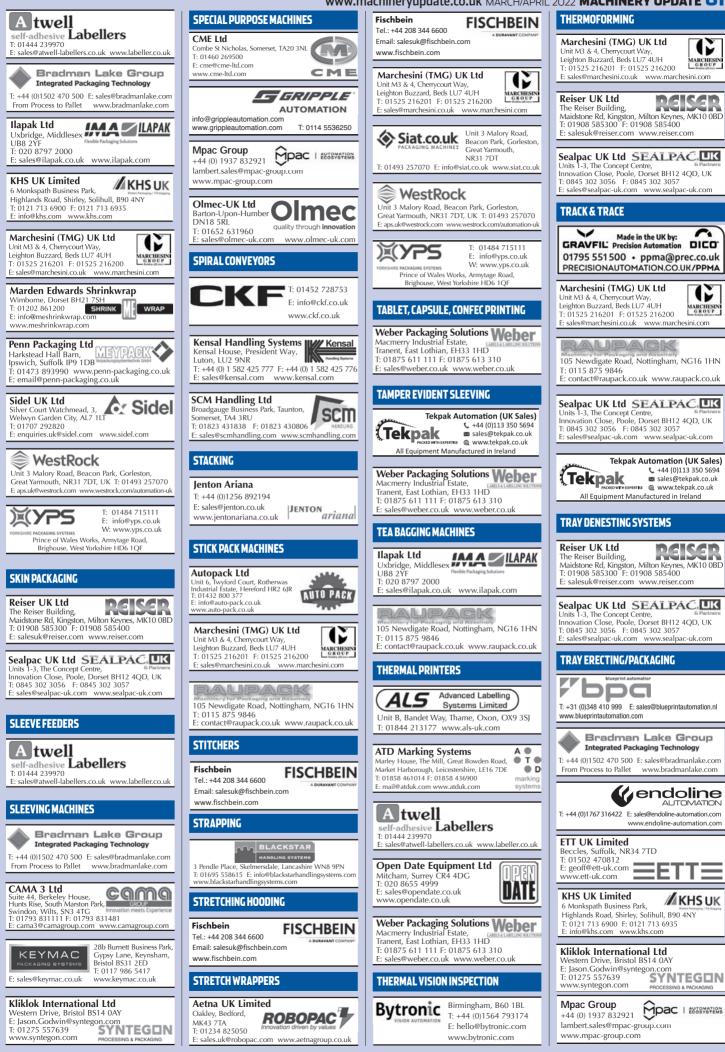
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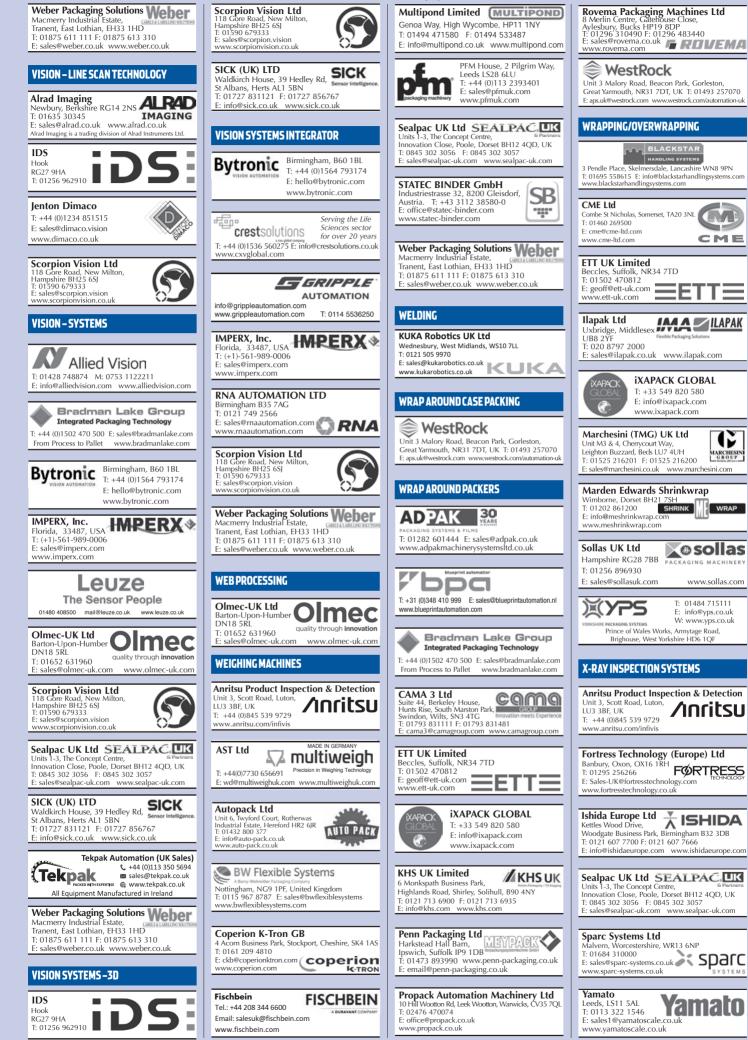


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