The PPMA Show 2020 has been postponed until next year in the interests of health and safety for all concerned. It is the first time it won’t be staged since its 1988 launch.

NEW MACHINERY

BW Flexible Systems has a new continuous motion VFFS bagger, designed as an ergonomic and intuitive machine to complement its intermittent version. Find out more on page 16.

INSTALLATIONS

A plastic-free transit pack is used by a retailer of Spanish foods.

PLUS

The UKIVA’s Technology Presentation Hub that was developed following MVC’s postponement is still live! www.ppma.co.uk/ukiva.

Robotics come of age

Will this global pandemic help to make UK manufacturers adopt the very latest robotics, vision systems and automation developments to ensure their factories are efficient and safe?
Technology inspired by human talent

Cama Group is a leading supplier of advanced technology secondary packaging systems, continuously investing in innovative solutions.

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**PPMA matters**

**Could the ‘new normal’ be robotics?**

_Early months of 2020 were no wishful thinking_:

The timing and theme of this issue of Machinery Update is particularly prescient as we include our annual automation, robotics and vision systems feature. UK manufacturing can no longer stand still if it is to remain competitive or even safe for everyone. I would argue that there has never been a greater need for capital investment to bring many operations in-line with our European counterparts.

It’s always been surprising that robot density remains low in the UK; although it was interesting to read that the number of industry robots sold in the UK peaked in Q1 this year – the largest spike since 2012 (source: BARA). And while there is no correlation between Brexit and the coronavirus, the trend analysis suggests that robot automation is likely to play a key role in the UK’s recovery and longer-term business sustainability going forward.

The onset of COVID-19 will evidently force more companies to rethink their strategy around business continuity and how to plan for another pandemic. Health & safety is now driving the change agenda, so could robot automation and vision systems be the answer to social distancing and mitigate any future disruption or even temporary factory closures?

If you look at industrial vision, the sector has come a long way through the advancement of foreign body detection, optical character recognition and has even helped in the battle against COVID-19. The launch of UKIVA’s MVC Technology Presentation Hub is testament to this, which is still available to view online.

**Robot automation with vision systems could be the driving force in this decade**

The World Health Organisation is true, COVID-19 will be around for some time yet in the absence of a vaccine. It’s hard to imagine another year like 2020, from which post-Brexit negotiations have morphed into virtual obscurity amid this global pandemic.

The postponement of our PPMA Show (see page 7) is just one of the many casualties borne out of the coronavirus and the government’s restrictions around large gatherings. However, the health and safety of others is of course paramount, especially when social distancing cannot be compromised.

It is at least reassuring to know that many businesses and production lines have returned to some form of normality; albeit while raising the question: what will a ‘new normal’ look and feel like in a post-COVID manufacturing environment?

**IN THE DRIVE**

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This year’s PPMA Show is postponed 12 months

Further to the PPMA’s detailed conversations with the National Exhibition Centre (NEC), and in the interests of health and safety for all concerned, the trade association has taken the decision to postpone this year’s PPMA Show until 2021 (28-30 September).

The PPMA says this decision was not taken lightly as it considered the implications for visitors and exhibitors in respect of everything from social distancing, availability of hotels, travel and the preparation time required. Also, the government has not yet relaxed restrictions regarding mass gatherings, nor has it published any guidelines for staging large scale events such as this when the restrictions are lifted.

All in all, the PPMA felt the risk was too great as the health and well-being of those involved remains paramount, especially during the COVID-19 pandemic. Following the exhibition announcement, the PPMA’s Show Director Richard Little, said: “It’s the first time that we will not be staging our flagship event since the show’s inception in 1988, which is really disappointing. We have also had to consider that many of our exhibitors and visitors to our shows are categorised by the government as key workers, providing a range of essential engineering and maintenance services to aid the critical supply of food and pharmaceutical goods. “On behalf of the PPMA, I would like to take this opportunity to thank all our exhibitors, suppliers, registered visitors, staff members and media partners alike for their continued support during these unprecedented times.”

The PPMA Show 2020 website will remain a live information source for exhibitors and visitors.

Help with process needs is available at online event

The International Cheese Awards have gone online and will be hosted by dairy process solution company Sycamore Process Engineering, and its automation partner Au2mate. The team at Sycamore and Au2mate are offering up one-to-one meetings (in 30 minute slots) on Tuesday 28 July to give cheese and dairy companies the opportunity to ask questions about all of their processing needs, CIPs, pasteurisers and other machine upgrades.

UV light air purifier destroys coronavirus in food making sites

The GRU-V food UV light air purifier system is suitable for use in large food production and processing facilities or where fresh food is stored and handled. It helps to improve indoor air quality and energy efficiency while reducing airborne infection rates. The unit uses ultraviolet germicidal radiation to disable airborne micro-organisms, and reduce bacteria, moulds and viruses in seconds, with no chemicals.

Milky drinks for school kids

Ghana’s largest fully integrated cocoa processor Niche Cocoa Industry has signed a deal with Sidel to buy equipment to package a ready to drink chocolate milk in support of Ghana’s School Feeding Programme, providing 5.6 million pupils with the milk, aseptically packed in 250 ml PET bottles, for 100 school days per year. Read more on page 24.

Business assurance service for a range of management rules

TÜV SÜD has introduced its business assurance service in the UK to provide management system auditing and certification services for more than 40 management standards, including ISO 9001 (quality management), ISO 14001 (environmental management) and ISO 45001 (occupational health & safety).

As industry standards are becoming an increasingly common prerequisite for tenders within the supply chain, the service provides management system auditing and certification to assess business processes.
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Could this pandemic help the UK to finally automate its factories?

The feature on automation, robotics and vision systems that starts on page 28 of this issue could not be more prescient as COVID-19 rips through food processing plants that traditionally see lots of humans standing close together to handle foodstuffs in harsh environments. Pork processors, chicken plants, canning factories, sandwich sites and general meat processors were all hit with the virus in June.

On page 34 of our 30 page feature, you’ll find a new robotic meat processing cell that has been designed to suit the specific requirements of the primary meat processing sector. It has been created by CME for orienting and placing meat products such as chicken portions, steaks and burgers into primary packaging. And all this while achieving the highest hygiene standards combined with lower costs.

We also report on one area that the UK seems to be leading the robotics pack which is in the installation of autonomous mobile robots or AMRs (see page 30) and the adoption of Industry 4.0 delivering technology.

Meat processing has seen many COVID-19 issues

In brief

SUCCESSFUL UKIVA HUB
When the UKIVA had to postpone this year’s Machine Vision Conference & Exhibition (MVC) to spring next year, it launched a new Technology Presentation Hub that went live on 14 May. And on the day of its launch, the online event saw over 1,000 presentations viewed and in total, the seminar programme has since been viewed nearly 5,000 times.

“Our speaker programme has always proved popular for those attending previous MVC events, and we wanted to continue to share this industry insight via this new online hub,” says Allan Anderson, chairman of the UKIVA.

VIRTUAL PACKFORUM
Issues such as sustainability, reducing food waste, enhancing food security and extending shelf lives topped the agenda at Sealed Air’s European Packforum event in June. The ‘Power of Vacuum’ included presentations and interactive question and answer sessions on the increasingly critical role of vacuum packaging in protecting food.

Delegates heard from Denise Mathieson, senior UK technical packaging manager – fresh and packed quality at Tesco.

Supporting women in engineering every day...

In honour of the International Women in Engineering Day in June, Packaging Automation (PA) says it likes to think that it is playing its part in demonstrating that the engineering role can be a great rewarding career for women, even though it is still dominated by men.

Tanya Westenraad, for instance, joined the company nineteen years ago as an apprentice and she is now team leader mechanical design engineer. Responsible for the mechanical design of the Rotofill machine, she is the company’s pot filling expert. She is now keen to support and mentor new engineering apprentices at PA and encourage other women to consider a career in engineering.
As the use of electro-sensitive protective equipment (ESPE) increases to provide safe, barrier-free access for machinery end-users, it is only regular testing that can prove its efficacy...

Any system deterioration cannot generally be seen, and so testing is vital to prove safety

HSG180 refers to Regulation 6 of the Provision and Use of Work Equipment Regulations 1998 (PUWER). This covers the extent and nature of inspections, to help ensure that the appropriate systematic checks are done. HSG180 states that:

“Inspection and testing is only required under Regulation 6 where the safe operation is critically dependent on work equipment being properly installed or reinstated and failure to carry this out would lead to a significant risk and where the safe operation is critically dependent on inspection ultimately depends on the equipment that the ESPE is fitted to and the risk as a whole. TÜV SÜD would always follow the recommendation provided by the HSE in the first instance until a testing plan can be provided. This would depend on the equipment it is installed on, the frequency of use and the environment it is operating in.

The good news for machinery end-users is that HSG180 requires the manufacturer of machinery and ESPE supplier to carry out a systematic check of ESPE and machinery in use. This should be verified after installation. However, there are no specific references to how often these systems should be inspected to ensure that they continue to provide the same level of protection.

The Health and Safety Executive’s HSG180 guide (Application of electro-sensitive protective equipment using light curtains and light beam devices to machinery) helps machinery end-users to answer this question of timings. Concerning ESPE and AOPDs that are used to protect people from hazardous parts of machinery, the guide covers installation, use, inspection and also testing.

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As the use of electro-sensitive protective equipment (ESPE) increases to provide safe, barrier-free access for machinery end-users, it is only regular testing that can prove its efficacy...
Simplified Design... Vast Benefits

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Mettler-Toledo’s new washdown check weighing series minimises bacterial contamination risks in food manufacturing. These washdown resistant checkweighers withstand the most rigorous cleaning procedures in food production, ensuring weighing accuracy and upholding the highest hygiene standards.

The new equipment series is specifically designed for use in applications which require stringent cleaning processes that use caustic cleaning agents to combat bacterial contamination risks, without compromising their weighing accuracy. Applications such as meat, fish and seafood processing. Dairy products, baked goods and ready meals are also highly suited as, during the food production processes, liquid product ingredients could spill over and contaminate conveyor belts, or other parts of the machinery, which have direct or indirect contact with the product.

The new checkweighers can withstand the most rigorous cleaning procedures in line with the ECOLAB Material Compatibility Test. This includes the touchscreens, which do not need to be removed or covered during cleaning procedures, resulting in reduced downtime for regular cleaning processes on a line.

“It is extremely important that production equipment is able to stand up to the rigorous cleaning routines required to maintain an hygienic environment without sacrificing accuracy.”

The series includes the C33 PlusLine washdown checkweigher which offers robust performance, while the C35 AdvancedLine version offers precision and versatility. A combination of reliable weighing accuracy with rugged machine design, the C33 PlusLine delivers high precision weighing in harsh environments. If needed, cleaning with the parts in place is possible in most set-ups, while the flip-up design of the conveyors allows easy access to all critical areas for cleaning routines.

The C35 delivers precise weighing results on a stable weighing platform resistant to high-pressure washdown and most caustic detergents.

The checkweighers feature sloped surfaces to discourage liquid and debris collection, avoiding potential bacterial contamination risks, while conveyor belts can be removed quickly and easily for efficient cleaning. The series also features an open frame design with only four feet on the floor, which provides easy access for washdown purposes.

“These systems are IP69 tested and are resistant to most caustic detergents and disinfectants in contact with the product,” says Jürgen Kress, general manager at Mettler-Toledo Garvens.

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Mixers can grow with all food business need

For growing food production firms looking to add scalability to their business, Winkworth has launched a new compact mixer based on a ribbon blender concept, known as the UTS.

The UTS provides growing businesses with an affordable mixer solution, working on the premise that low cost does not have to mean low quality. Available in either a 100 litre or 240 litre capacity, and with short lead times, the competitively-priced UTS operates from a simple, single phase supply to provide a food-grade, hand-loading and hand-discharge, versatile solution. Easy to maintain and with low running costs, Winkworth has added a 5-year mechanical warranty as part of the deal, which the company believes makes the complete package an attractive option for those looking to upscale their output.

“While starting your own food production business is tough, we are confident this is an ideal solution for new food producers to add scalability to their growth,” explains Winkworth’s md, Grant Jamieson. “We’re offering low cost machinery together with the unrivalled benefit of our manufacturing expertise, including our Mixing Test Centre and mixer hire if required.

“The addition of a 5-year warranty should be a key selling point here, as businesses look for added-value in their investments,” he says. “From producing products in an industrial kitchen to a sizeable factory premises in the future, Winkworth can supply food companies with the right mixer or blender for the job and the budget.”

UBS High-Resolution Inkjet Printers

A single litre of UBS ink typically replaces 350Kg of outer case labels of which, 145Kg is backing paper. Printing directly eliminates waste, reduces haulage carbon and costs 4 to 5 times less than labelling.

Changeovers are quick and easy between products handled on sleeving equipment

ixapack Global is offering two compact ranges for high-speed sleeving with either top or bottom gluing. The top load and IS sleeving machines are suitable for many tray types and products including cans, pots and glass jars.

The top load sleeving machine allows a single product or a batch to be handled at up to 220 sleeves a minute. It places products in 1, 2 or 3 layers on a sleeve, with top gluing. Its tripod robot also delivers fully automated format changeovers.

Meanwhile, the IS sleeving machine enables a sleeve to be placed onto a product, like trays, before bottom gluing at up to 150 sleeves a minute.

The sleeving equipment is designed for versatility
New application head for hot melt adhesives is a fast, compact option

Robatech says its new jetting head is one of the fastest and most compact application heads on the market for high-precision hot melt adhesive applications. With up to 800 switching cycles per second, the SpeedStar Compact enables very small bead and dot application for particularly demanding and clean gluing applications at high production speeds. Robatech has integrated an automatic stroke adjustment to ensure that the electromechanical jetting head can maintain the precision in adhesive application over the entire service life of approximately 500 million operating cycles. Manual readjustments are no longer necessary, and maintenance-related interruptions are also reduced.

Compared to its predecessor, the SpeedStar Diamond, the new electric head has been technically optimised in terms of hardware and is, therefore, more durable. As the electronic unit is detached from the head, the Compact version is also 46 mm smaller. Also, the higher protection class IP55 allows better use in wet areas.

SpeedStar Compact is now available as a single- and multi-head in a short or a long version.

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Hugo Beck has launched two new machines specifically designed to meet the demands of e-Commerce packaging that are now available in the UK through Yorkshire Packaging Systems (YPS).

The top of the range PB 800 E-Com can pack products in either paper or plastic film, delivering the flexibility and choice in sustainable packaging styles and substrates — all from one machine.

Automatically adapting the bag size to the dimensions of the product, the new PB 800 E-Com is Hugo Beck’s most flexible and efficient machine, packing goods of up to 800 mm width by 200 mm height and 700 mm length. Both uncoated and coated paper can be used for producing bags with two glued or sewn sides plus a top overlap. When using film, the patented tight bag packaging ensures there is a minimum excess with only as much film being used as is needed.

“These exceptional e-Commerce systems offer the versatility required by this fast-paced and expanding sector as it responds to customer demands for pack integrity, data security and speed, as well as the wider global calls for sustainable and recyclable packaging materials,” explains Glyn Johnson, managing director at YPS. “Any e-retailer equipped with the E-COM range can respond swiftly and easily to a variety of contracts or product lines, thereby future-proofing their operation for years to come.

“At YPS, we can complement Hugo Beck’s ground-breaking machines with both recyclable plastic film and recyclable paper flexibles for a total solution that’s ideal for any online retailer,” he tells Machinery Update.

Alongside the PB 800 E-Com machine, and for those who are looking to pack with film only, the new flexo 600 E-Com machine packs e-Commerce goods to the highest standards, minimising film use and maximising results both with and without shrinking of the film bags. Designed to process products with a width of up to 600 mm and a height of 300 mm, a quick changeover adjusts between product batches or, as an option, the machine can automatically adapt to changes in a product’s length, height or width.

Speed and flexibility are key to the design of both machines and as they are connectable to customer’s ERP or control systems, both machines can also be easily integrated within a production line. Additional options include the ability to add an easy-opening perforation to the packaging as well as inserting a double-sided adhesive tape for resealing a bag for returns. An integrated scanner with a controller for product detection and creation of a shipping label can also be included on the line for additional capability.
New vertical form, fill & seal unit is in continuous motion

BW Flexible Systems is introducing the latest in its growing family of Verus vertical form, fill, and seal VFFS baggers with the continuous motion (CM) version that is designed as an ergonomic and intuitive machine.

Following the success of the intermittent motion Verus introduced a couple of years ago, the company says this new CM Verus provides a VFFS solution that leverages its proven technology while incorporating the best features of its Sandiacre, Simionato, and Hayssen equipment brands.

The CM Verus features a frame built to provide quick and easy access to vital components. As a result, the machine is easy to clean and maintain, to ensure that it meets today’s hygienic requirements; a characteristic that BW Flexible Systems understands is important to the market.

“We believe the CM Verus’s hygienic design and robust operational capabilities will make it a compelling packaging solution in the individual quick frozen (IQF) foods, cheese, and produce markets,” says Ian Bickerdike, commercial director EMEA at the company.

“Given the environmental operating requirements for IQF foods – especially IQF proteins – where conditions are increasingly wet and production needs to run twenty-four hours a day, seven days a week, we’re eager to bring the CM Verus to the frozen foods market,” he says.

The CM Verus also employs a new intuitive Human Machine Interface (HMI) that will feature programs to assist in training, troubleshooting and provide comprehensive performance management for operators.

The new bagger’s ergonomic design includes a simplified film-threading path combined with its user-friendly HMI features, to enable faster changeovers between different packaging formats, product SKUs and materials. And staying true to its Verus heritage, the CM Verus can seal a wide range of film structures, including recyclable films, and can create an extensive variety of bag formats.

BW Flexible Systems offers several ways for interested customers to learn more about the CM Verus, as well as their other packaging solutions. These are scheduled in-person visits to the newly expanded Technical Centre for Excellence in Nottingham, Live virtual tours of the facility and equipment, and a Virtual Packaging Solutions Event that is accessible 24/7. The CM Verus is featured in the Food: Fresh & Frozen Exhibit Hall.

All visits to the Technical Centre for Excellence in Nottingham adhere to strict social distancing and hygienic guidelines to ensure the health and safety of all involved.

To gain access to the Virtual Exhibit Hall, look for the link on the BW Flexible Systems’ home page.

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Engineers from across the food manufacturing industry are benefiting from remote multihed weigher services

During COVID-19, Abstract Sourcing and Trading has been assisting its customers using Multiweigh equipment remotely via VPN routers and cameras. This help has mainly seen site engineers and machine operators being trained remotely while any site visits are not possible.

“Although our multihed weighers are extremely reliable, it is important that site engineers and operators are fully trained in machine setup and maintenance in order to get the best performance from our multihed weighers,” explains Wilson Deyermond, managing director of Abstract Sourcing and Trading. “Using our VPN system combined with online meeting tools has allowed us to train remotely and we can also remotely operate the weigher and see the results instantly.”

Although these services were available before lockdown, the use of the system has increased during the pandemic and Deyermond believes more customers will now want this option when purchasing new multihed weighers.

“Customers have liked the fact that there is no need to wait for a site visit as training and machine setup assistance can be provided instantly,” Deyermond tells Machinery Update.

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Fortress Technology, in collaboration with Sparc Systems, has unveiled its first ever modular combination metal detector and check weighing conveyor system. Featuring a single swipe touchscreen HMI and paperless audit software with unlimited pre-programmed Codes of Practice (CoP), the robust Raptor captures all the data required to guarantee food product traceability.

Due to be unveiled at interpack in May, the Raptor Combi is the first flexible, fast and affordable fully integrated checkweigher and metal detector from Fortress. Designed for high care confectionery, chocolate, bakery, nutritional bars, packaged meats, cheeses and ready meals, including contract manufacturers supplying multiple retailers, it overcomes several limitations. Notably, the ability to accurately inspect and check the weight of larger size products and pack formats – up to 8 kg and measuring 300 mm by 400 mm.

Answering calls from food factories for a more flexible, hygienic and user-friendly combination inspection solution, Fortress says the Raptor Combi is the first truly modular system of its kind. Special common fixings and connection features, such as jigsaw style panels at the metal detector infeed and checkweigher outfeed, give manufacturers the option to rotate the equipment around their sites to suit a specific production layout, while maintaining the metal detection and check weighing sequence.

Additionally, Raptor’s universal design gives manufacturers the option to purchase a standalone Raptor checkweigher and attach a metal detector later to meet different phases of their production and inspection investment strategy.

“Both elements of this Raptor system uses compatible collective parts, even when there’s a bespoke element,” explains Fortress md Phil Brown. “This means that we can confidently give the assurance of fast delivery - typically six weeks - at the best price-performance ratio.”

Given that most food manufacturers supply multiple retailers, the Raptor introduces a brand new and failsafe, paperless, fully auditable CoP test routine. Rather than relying on operatives to schedule, perform, document and submit inspection performance checks, the Raptor pre-configures every test by retailer and product being inspected and alerts QA managers each time a test is overdue.

Inspecting up to 150 packs per minute, the Raptor checkweigher is a high-end system that calculates Average Finished Weight Variance. It is approved to both OIML and MID (EC TAC) specifications. While to detect the smallest metal particles, a Stealth metal detector is integrated into the new inline system.

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Travtec has added a second model to its TinyTampino range to offer a cost-effective offline solution for the application of tamper-evident labels to the smallest of pharmaceutical packs.

In operation, the new TinyTampino Micro can apply label seals from 12 – 16 mm wide to cartons down to 24 mm in width at speeds of up to 20 labels per minute. The easy to set up and operate machine can be placed on any desk or benchtop and is ideal for short runs, re-work and parallel importers, ensuring a consistent quality seal while providing the levels of security required for all pharmaceutical products.

The benchtop Micro model is flexible

The TinyTampino Micro will enable small size pharmaceutical packs to meet the regulations of the European Falsified Medicines Directive (FMD) as well as offering an effective security packing solution for other high value products. As well as being suitable for small volume operations and trial runs, the two compact models can operate as effective back-up machines to enable packing to continue in the event of an unplanned line stoppage.

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De Spiegeleire, a Belgian producer of pâtés, has implemented the SealScope seal inspection system from Engilico on its Omori flow wrapper to eliminate any open or leaking packs of its fresh product.

To give consumer pâtés a longer shelf life, they are individually packed in a resealable flow pack under modified atmosphere conditions, and so any leaks can lead to discoloration of the product and faster spoiling.

The SealScope system is based on sensors mounted on the sealing bars of the packaging machine that measure the distance or vibration when closing the sealing bar on every pack.

This non-destructive seal inspection system also means that the contents of any rejected packs, can be repackaged.

“ ”The choice of SealScope is perfectly in line with our quality policy,” explains David De Spiegeleire, managing director of the food company.

Flexible and compact line keeps drinks bottles safer

A line from Schubert Robotics (Shanghai) has been developed to handle glass bottles containing functional drinks while also ensuring they stay safe, secure and undamaged when shipped.

For the urgently needed expansion of automation in production, Taiwanese company TCI opted for a flexible and compact packaging line from Schubert. This is the first time that a new type of packaging that is designed to be completely break-proof, has been used for these sensitive products.

The company’s focus was on the highest quality and outstanding process speed of the new automated production line. In addition to the flexibility of the new line, the company also stipulated that the products should be handled very gently so that the refined glass surfaces would not be scratched or otherwise damaged during the packaging process. Additionally, the packaging had to be break-proof for shipping.

The functions of the new Schubert line comprise erecting the cartons, inserting plastic trays (below and above the bottles), pre-grouping the bottles, and filling and closing the cartons. The packer does all of this efficiently and in a compact space. Transmoduls can be loaded with a wide variety of different products using individually manufactured format attachments, so that a wide range of different formats can be packed on the same machine. At TCI, the line currently packs two different bottle sizes (50 ml and 750 ml).

This story first appeared in our June e-Bulletin and you can find the full story here: https://www.ppma.co.uk/machinery-update/bulletins/june-2020.html

TCI relies on elegant packaging design to convey the quality of its drinks range

A 100% seal inspection system for pâtés is delivering quality and production insights

A customer of Packaging Automation (PA) for four years, J.O. Sims turned to the tray sealing company again when it needed higher speed lines as part of a complete factory rejig when facing rapid growth in its business. The stone fruit company needed to find a solution that could maximise the grading and linear weighing machines to give optimum pack house capacity and efficiency.

PA has supplied a Revolution heat sealer to match the existing equipment on site and has also upgraded all the older onsite machinery to the new specification. This included soft seal and auto tension to completely deskill the operating process, to deliver maximum results for the site.

PA has ensured commonality across all new and existing tooling to avoid any additional costs and also double-checked the existing film layouts so that they worked with the new tooling.

The constantly fed Revolution machine means J.O. Sims is now achieving steady, consistent speeds, rather than stop start feeding which was the previous method.

This work has resulted in an uplift of about 30% from each machine which in turn, reduces the cost per unit and delivers greater competitiveness for the customer.

Delivering a range of sealing gains

New unit is an efficient option

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De Spiegeleire, managing director of the food company.

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New Washdown Checkweighers for Harsh Environments

Mettler-Toledo Product Inspection has designed a new series of washdown resistant checkweighers for precision weighing of food and beverage applications in harsh production environments. The free eGuide: “7 Points to Understand Hygienic Principles” explains how weighing accuracy should not be compromised even in environments that require stringent cleaning processes including those that use caustic cleaning agents to combat bacterial contamination risks.

Discover more:  www.mt.com/cw-hygienicdesign-guide
Bespoke thermoformer gives reliable efficiency

Multivac UK supplied a bespoke thermoforming solution for JCS Fish last year that has optimised the factory floor space required to handle its salmon portions more efficiently.

The new packaging machine has successfully allowed JCS Fish to produce consistent, premium salmon portions in a flexible vacuum packaging solution. The machine provided the business with the ability to achieve high production outputs without any compromise to the pack quality or presentation.

Replacing its previous process because of several reliability issues and patchy engineering and spare parts support, the company required a new packaging machine that would help to increase the reliability and efficiency of its process.

The company replaced its crate loading soft touch roller belt system for a Brillopak semi-automated PakStation to increase capacity but also strengthen the overall flow of the process by eliminating bottlenecks. The machine relieves these issues and enables more throughput with fewer line stoppages, increasing OEE on the packing line.

Packline Materials Handling

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Machinery Update July/August 2020 www.machineryupdate.co.uk

Payback has been very quick

Semi-automated packing station is bringing benefits

Fruit marketing and distribution company Worldwide Fruit boosted its capacity to load flow wrapped apples into crates while maintaining product integrity after installing an ergonomically designed semi-automated PakStation at its Spalding facility. In fact, the resulting productivity benefits has seen the distributor put in another order for a second machine to load a more varied range of its fruit.

The company replaced its crate loading soft touch roller belt system for a Brillopak semi-automated PakStation to increase capacity but also strengthen the overall flow of the process by eliminating bottlenecks. The machine relieves these issues and enables more throughput with fewer line stoppages, increasing OEE on the packing line.

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www.multivac.co.uk

www.brillopak.co.uk

www.packline.co.uk
Controlling static is key to success

Meech International has helped many companies throughout the world tackle static issues. One such company is Berry Global in the US, which produces plastics consumer packaging, non-woven specialty materials and engineered materials. After experiencing static charge build up within its injection moulding process, which caused painful electric shocks to its workers, Berry Global enlisted Meech to address the problem.

The installation of two Hyperion static bars eliminated the static issue, and greatly improved the company’s health and safety processes.

Meanwhile, a major producer of biaxially orientated polypropylene (BOPP) film applications, Cumbria-based Innovia Films looked to Meech’s long range blowers to remove static from the BOPP film as it winds on the slitter rewinder system. Static on the rolls of film could have proven hazardous during processing and Innovia had noticed that the film was not laying smoothly onto the reel, resulting in ribbing and other effects on its surface.

The blowers have ensured that Innovia Films is no longer encountering these issues, preventing downtime and also excess wastage.

Pallet stacking robot keeps ice cream maker on track

The RM Group delivered an ABB stacking robot to Marshfield Farm to remove the arduous task of manually stacking pallets for its staff, enabling these end-of-line workers to move to other areas of the ice cream production process.

This system includes an IRB 660 robot with a handling capacity of 250 kg in a very compact palletising area. The RM programming team integrated the robot into an existing system which allowed the dairy to keep within budget. Marshfield owner Will Hawking is delighted with the installation and the remote way that the RM Group has smoothed out initial setup issues.

“After learning how to run the equipment, the robot now runs smoothly all day, every day,” he says. It is handling thousands of boxes per day across different pack sizes and pallet configurations.
Quality of luxury teas is delivered by inspections

An Ishida x-ray inspection system is enabling one of France’s leading suppliers of luxury teas to satisfy the high quality and safety standards it demands. The Ishida IX model was one of the first x-ray inspection systems to be installed in France and is continuing to deliver consistently reliable performance.

Herbapac had originally used a metal detector to identify any potential foreign bodies in its teas. However, to meet the particular stringent monitoring standards of Japan, one of the many countries to which the company exports its products, the company decided to switch to x-ray technology. This move also satisfies the quality requirements of its high-end customer base.

The Ishida IX is being used to inspect bulk teas at a rate of 25 to 75 kg per hour, which are subsequently packed into boxes or bags. At the start of each production run, the machine is set up by passing calibration test pieces of metal, rubber and glass through the system. Any foreign bodies are then detected by measuring the density of the inspected tea products.

An x-ray beam is projected onto a line sensor. As the product passes through the x-ray beam, only the residual energy reaches the sensor. Measurement of the difference in the absorption level of the x-ray energy between the product and a foreign body enables the foreign body to be detected.

“We are fully satisfied with this detection system that secures our production,” explains Fanny Husselstein, director of the Herbapac manufacturing site.

“It is easy to use and also to clean, thanks to its ability to be disassembled and reassembled without tools.”

LOW SPEED OPTION

Niche Cocoa opted for a low-speed (16,000 bottles per hour) aseptic PET complete solution, which integrates Tetra Pak processing systems and the Sidel Aseptic Combi Predis with dry preform and cap sterilisation systems, two units of Gelbo OptiDry, a sleeve labeller, a VersaFilm Access shrink wrapping system, and a stretch wrapper. Also, Sidel’s EIT (Efficiency Improvement Tool), a data acquisition and plant intelligence system supporting beverage companies in decreasing unplanned downtime, reducing waste and costs has been supplied.

For its RTD chocolate milk, Niche opted for a sleek, transparent, 250 ml PET bottle, enhanced by wavy ribs that gently envelop the body of the container and both the bottle’s structure and weight (15 g) have been optimised for an ideal drinking experience.

‘Fit and forget’ actuators are low upkeep option for bread

David Wood Foods produces in excess of 420,000 loaves of bread a week, operating 24/7, 364 days of the year at its Newport site and actuators are an essential element of this production line.

The company uses HepcoMotion’s DLS4 belt driven actuator system which comprises belt-driven linear modules, an AC motor/inverter package and a range of compact planetary gearboxes for use with servomotors. A total of 10 x DLS4s are used in three key areas of the production line. Two are used to push the loaves into the oven, four are used as an infeed and outfeed in the cooler, and the final four are used in the packaging area to assist with packing the loaves into the delivery baskets.

Hepco says the DLS4 is a reliable, low maintenance solution offering trouble-free operation from proven V guide technology.

The HepcoMotion system is reliable
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Mixing cosmetic powders is now a high speed affair

British designed and built horizontal Delta Blade mixer (HDBM) from Boone Mixers has helped contract cosmetics manufacturer Surefil to produce a range of powder products, mixing pigment into a very light powder within an ATEX Zone 22 area, while achieving a 75% reduction in mixing time compared to pre-project estimates.

Surefil’s R&D laboratories develop new cosmetic products from the ground up, each formulation being individually crafted for each customer, and its range includes lipsticks, powder compacts, eyeshadows and nail varnish, with ATEX Zone 1 required for nail varnish and eau de toilette production.

For its new development, senior factory manager Matt Waring wanted the reassurance of well-engineered, fully ATEX-approved mixing equipment. “We were keen to buy British, and we were able to test the product at Boone’s factory on its test rig so we were confident that we could scale it up, and it was very price competitive too,” he says.

The HDBM Model 1250 supplied to Surefil has a working capacity of 1100 litres and is modified to work within the Zone 22 parameters and the HDBM’s ‘short and tall’ mixing shell along with the special ‘delta’ shape of the high-speed, high attrition mixing elements rapidly disperses a small percentage of pre-milled pigment into the absorbent bulk material.

A 25% cost saving on previously used packaging materials was also delivered.

Antalis has supplied a plastic-free transit packaging option to a retailer of Spanish foods to reduce overall environmental impact. The key criteria was that it had to ensure temperature consistency for at least 24 hours, the maximum journey time from warehouse to customer.

The solution includes WrapPak Protector, an on-demand solution by Ranpack that converts multi-layered paper into box lining, wrapping, thermal insulation and block and bracing; FillPak TT, a table-top converter that transforms single-layered Kraft paper into void fill on demand, and Kraft paper tape that offers humidity protection and is recyclable with the carton.

Compared to pre-project estimates, the Boone HDBM has completely exceeded expectations, allowing Surefil to operate as much as four times faster than expected.

If a second line is needed: we’ll definitely contact Boone
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FlexLink is part of Coesia, a group of innovation-based industrial and packaging solutions companies operating globally, headquartered in Bologna, Italy. www.coesia.com
The COVID-19 pandemic has thrown a spotlight onto some of the challenges faced in our food and drink sector, says BARA (British Automation & Robot Association). Labour availability and productivity, already recognised as problems, have now become major issues.

The need to implement greater levels of automation has come to the fore and many companies are now trying to accelerate studies and projects to meet the challenge.

About 50% of our food is imported with about 30% coming from the EU. Brexit was already generating concerns regarding import tariffs and transport costs. The impact of the pandemic, causing factory closures overseas and disruption of transport infrastructure, has certainly demonstrated the fragility of our food supply chain.

As a result of Brexit, the UK has become a much less attractive place for Eastern European workers and as current government policy is to restrict immigration it is unlikely, we will be able to bring in replacement workers from other countries, even if they wish to come. This is having a significant impact on the availability of labour in the food sector where EU workers make up about 25% of the workforce.

SATISFYING LARGE DEMAND

The pandemic has increased consumer demand for food via the retail sector leading to larger production volumes. At the same time, health and safety issues have resulted in reduced labour productivity due to the social distancing requirements never mind the general nervousness of employees in going to work. These issues have made it difficult to satisfy this increased demand.

The application of automation and robot solutions provides the opportunity to build highly productive manufacturing operations that are resilient in the face of future global challenges. One key benefit from the greater application of robot automation is to provide the opportunity to utilise the available workforce much more efficiently and productively. Use the skills and attributes of staff to add value to the products and not in performing mundane, repetitive or dirty and demanding tasks. This reduced dependence on labour then provides greater flexibility of capacity and resilience in times of labour shortages.

Robots of all types are getting easier to use, and the new product illustrated here enables users to jog, teach and calibrate robots from their own computer.

As most people know, we currently use fewer robots than our main competitors worldwide. One benefit of this starting position is we do not need to develop new solutions or technologies. The answers are already in place, proven and are available; we just need to adapt these solutions to our local needs (but that should not be a major challenge).

The increased use of robot automation should not be seen as a threat to jobs. This is about building a strong food and drink sector providing stable employment in roles which are both interesting and challenging. If we achieve this objective, we will build a sector which meets our food needs, provides a strong contribution to the UK economy and also well paid employment.

Robots can make the UK

If a factory is largely automated, it is easier to scale production to meet demand.

BARA chairman Mike Wilson asks what next for food?

www.bara.org.uk
Could robotics come of age in ‘new normal’?

There’s been a few false dawns for robotics in the UK, but could it take a global pandemic to finally convince the manufacturing industry of their benefits, especially the latest versions available.

Apart from the automotive sector, it’s no secret that the UK has been slow to adopt robotics technology across other manufacturing operations, but there is one area that the UK seems to be bucking this trend just now. And this is in the installation of autonomous mobile robots or AMRs.

Notwithstanding the exceptional times in which we live, this type of robot is finding favour across several sectors and the UK becoming an early adopter of the technology. According to Peter Williamson, managing director of RARUK Automation, the uptake of AMRs has been very positive and even though some orders have been ‘paused,’ he is confident that when things get back to normal, the market will continue to prosper. He thinks the same for the range of collaborative robots – or cobots – that the company supplies as well as the EffMat storage technology it sells to warehouse, logistics and e-Commerce operations.

“Cobots transformed the robotic and automation world as they are an easy and straightforward way to automate a process,” he says. “They are not a fixed, complex installation requiring safety guarding and so they got over people’s reluctance to take the plunge.” He feels that AMRs are also proving to be an easy-to-adopt technology.

Earlier this year, RARUK launched the new MiR250 AMR, designed to enhance operations for all those looking to automate the internal transportation of goods. It is an agile, rapid-charging, cost-effective means of transporting payloads of up to 250 kg around premises such as factories, warehouses and healthcare facilities – essentially any business seeking automation of their internal logistics.

Featuring compact dimensions, the specially engineered agility of the MiR250 allows it to move under objects, navigate in narrow spaces and take corners quickly. Internal logistics is a bottleneck for many companies because of the frequency and uniformity of tasks, combined with a lack of qualified labour. At present, there is a notable growth in demand for robots that can operate in environments housing a high number of obstructions, including people, says Williamson.

Earlier this year, CKF Systems announced a new partnership with Global AGV, supplier of automated guided vehicles to the logistics industry. CKF has been providing end of line processes for customers for three decades, but although there has been a great demand for an AGV solution, the company felt there was never a good enough option before this new business relationship.

The Global AGV solution can be integrated into the customer’s facility without the need for any expensive infrastructure changes or reflectors installed in strategic places.

Meanwhile, RARUK’s Williamson also believes that as well as addressing the problem of a reduced workforce, post Brexit, robotics of all types will continue to automate processes in support of the current social distancing measures.

Martin Walder, VP of industrial automation at Schneider Electric says that over the last few years, there has been a significant increase in the demands for robots, and indeedcobots and as automation developers introduce better sensing/vision capabilities, ever more complex applications can be tackled.
“With this change comes an additional benefit,” he says. “For an industry struggling to attract engineering expertise, automation and robotics, with the improved productivity they generate, will create more opportunities for workers to work on more varied value-add activities.

“Not only this, but the current situation has given a glimpse of the level of home and remote working there might be in the future, with increased automation and robotics being monitored, maintained and optimised remotely through secure connections,” he continues.

However, he believes that for the ‘robotics and cobotics’ movement to thrive, the industry must educate the workforce on its benefits and capabilities. “With greater understanding, will come greater implementation and proficiency,” he says.

“We are set to see more manufacturers recognise the true benefits of smart manufacturing, but in the meantime, increased data insights and connectivity will lay solid foundations for new, and more effective business models to work alongside skilled workers,” he concludes.

Multivac UK believes that the emphasis on automation, with the back-up of an established company, will only increase as the availability of relatively low-cost labour dwindles in the food industry. For instance, clever process design has enabled a range of its customers to increase their market reach while decreasing their overheads and consumable costs.

“A retrofit loading system for a customer in the dairy sector has allowed them to keep their existing high production speed while reducing the robot speed through clever gripper design and integration with the packaging machine,” explains James Bedford, systems application manager at the company. “This has meant that the amount of robot movement is reduced, meaning less wear and tear on the components.”

Chris Hunt, UK sales manager at Cobalt Systems believes that with the introduction of social distancing measures, end-to-end automation to facilitate fewer people along the production line will be the aim for some manufacturers as the pandemic rumbles on. “For those companies who have partially automated the process already, extending automation beyond production and into packaging processes will make a print and apply labelling system an appealing option,” he says.

“What we’re observing now are manufacturers taking this as an opportunity to plug the gaps in their automation process which previously might not have been considered a priority,” he says.

NEW COBOTS AT INTERPACK
Packaging machinery manufacturer Schubert is taking time this year to increase the flexibility of its technology with a new range of cobots. It is currently developing a comprehensive system for its new cobot modules that will be seen for the first time at interpack 2021 in Düsseldorf next February.

OAL thinks robotics and automation are vital at a time of labour shortages and social distancing and says the company’s APRIL robotics ingredient handling system improves efficiency while protecting operator health.

“Combining robotics and advanced automation, the technology offers manufacturers a flexible and scalable solution that delivers an accurate and cost-effective alternative to operators on the factory floor,” says Jake Norman, head of sales & innovation at OAL.

www.cobaltis.co.uk
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Even before the pandemic, a general economic downturn had resulted in machine vision sales in Europe and the US flattening out after many years of sustained growth; and so the vision industry will certainly not be exempt from the current recession,” says Allan Anderson, UKIVA chairman.

Nevertheless, he believes it could bounce back very quickly as it is in a prime position to help many other industries with their recoveries as they look to increase levels of automation and improve overall efficiencies.

In the UK, UKIVA members have been weathering the storm, with some projects being delayed (rather than completely cancelled) while others have been brought forward. The key challenge is to develop new business opportunities to fill the gaps from postponed orders. And this is where Anderson says the vision industry is so well positioned, with an extensive range of established and versatile technology already in use in a variety of different industries that can be readily adapted to meet emerging requirements.

INFRARED IMAGING VALUE
A perfect example of this is the use of infrared imaging to detect elevated body temperature for screening in high-traffic public places. This is finding increasing use as lockdowns are eased and could be included as part of an alternative strategy to the UK quarantine regulations.

Many UKIVA members are offering solutions in this area.

Machine vision can also open up further opportunities for automation across multiple industries using key building blocks such as embedded vision, deep learning and vision-guided robots. It is especially important in areas which are traditionally highly dependent on people working closely together.

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Robots used to advantage

The use of robots across many sectors bring efficiency gains as well as offering benefits in high care processes.

It is prescient to report, given the COVID-19 problems being experienced in meat plants, that the latest robotic meat processing cell from CME has been designed to ease the transition from traditional manual handling of meat products within primary processing and high care areas, to that of an automated solution. The HFPC120 system, designed and manufactured by CME in the UK, is one of the few on the market created specifically for orientating and placing meat products such as chicken portions, steaks and burgers into primary packaging while achieving the highest hygiene standards, and enabling lower operating costs.

REASEACHED DESIGN
"Following a combination of research and dialogue with UK food sector manufacturers to understand both the challenges and perceived barriers to automation, we have combined our engineering design expertise with the latest HE Scara robots from Stäubli, and other proprietary technologies, to produce the HFPC120," explains CME’s md Paul Knight. “We have produced a fully automated cell using EHEDG guidelines to suit the specific requirements of the primary meat processing sector.”

This unit also helps firms meet the current social distancing guidelines, too. Stäubli’s HE robot range was chosen as it has been developed specifically for processes in hygienic, humid or harsh environments. CME specifically selected Scara type robots for this system because their configuration means that, unlike Delta type robots, they are mounted to the side of the line and not permanently overhead. This significantly reduces the potential for dust or debris accumulating above the line and subsequently contaminating the products being handled below.

Meanwhile, Cambridge Precision (CPL) has invested in its first Doosan cobot to create a flexible, autonomous and high-productivity (milling) manufacturing cell. Mills CNC has, through its recently-created automation division, supplied this Doosan M0617 cobot equipped with ONRobot electrically-driven two finger parallel grippers and Schunk vices. It was installed in the company’s St Neots facility where it has been integrated with a Doosan DNM 6700 vertical machining centre to create a flexible and highly-productive automated manufacturing cell.

“The cobot helps to free-up skilled labour by handling repetitive and less profitable tasks,” explains Nick Raven, CPL’s general manager. “Robbie (the cobot) has been welcomed by the team and has enabled team members to focus on other manufacturing and assembly demands.”

The milling cobot cell can operate 24/7 and since installation, it has been programmed to handle more than 20 different projects and, from a standing start, over 5000 prismatic parts were manufactured in the cell in the first two months of operation.

“The new CP180L robot is faster, more accurate and uses less energy, even though its reach is far longer
of our first cobot that we are considering investing in a second in the near future,” says Raven.

Another industry sector benefiting from installing robots is somewhat surprisingly, the equestrian market, that uses ‘Hunter’ wood shavings for bedding. Once the loose, wood shavings generated by Metsä Wood UK’s various manufacturing processes have been collated into bales using bespoke machinery at its Boston plant, the bales are removed from the line by a recently installed new Kawasaki robot and placed directly onto a 1200 mm x 1200 mm pallet ready for dispatch. To ensure that the load is stable, the robot must also rotate the bales through 90deg as it stacks, a task easily performed while transiting from pick-up to deposit.

NEW KAWASAKI ROBOT
The new robot, which was installed last year, is a Kawasaki CP180L with associated HMI, which replaced an older robot, also a Kawasaki unit (a ZD130) that was originally installed at the plant in 2002. This machine had provided sterling service, and according to Metsä Wood project manager Andrew Burns, “Our records revealed that the Kawasaki robot installed in 2002 had completed 10,794,000 cycles, and it had performed superbly.”

In a typical working day, about 1000 x 25 kg bales are picked off the line and stacked safely using the necessary orientation changes programmed into the new Kawasaki CP180L robot. Removing the old robot and placing the new one onto its plinth was straightforward according to Mick Middleditch of Highham Ferrers based RJC Projects, who were tasked with accessing the cell and swapping them over.
**Feature: Automation, robotics & vision systems**

**Sturdy and yet flexible mounting**

For anyone experiencing problems in reliably mounting cameras, lights, sensors and robotic tools in an industrial application, Alrad Imaging says it has the solution via its Swivellink mounting system. These special mounting arrangements can save users time and money because they offer easy to assemble, robust mounting systems which are designed to neatly route all cabling internally.

Solutions are available to mount several products including cameras, sensors, monitors and robotic arm components as well as mounts for workbenches and tables. Mounting plates are available for all makes of cameras, smart cameras and also vision systems. “Not only will they offer you multiple configurations, but the creative approach means they can be manipulated as you wish,” explains technical sales director at Alrad, Ian Alderton.

Swivellink is now offered in three different sizes, XS, Standard, & Heavy Duty, and they can be supplied in metric or imperial (the Heavy Duty version is only available in imperial sizes.)

A selection of products is also available for robots. These include a range of pedestals, mounting plates and teach pendant holders for general mounting of all manufacturers’ arms and also for some specific manufacturers such as Fanuc, Universal and Yaskawa.

The Swivellink product line has been used for hundreds of different applications in all types of industries and, says Alderton, the goal has always been to intelligently design a sturdy yet flexible product line that will solve any automation problems.

**Keeping foods on clean track**

B&R Automation has developed its track system to withstand high pressure cleaning

Production and packaging machinery used in the food and beverage industry must not only be easy to clean, but also highly resistant to aggressive substances. Powerful cleaning agents and scalding hot water are extremely effective at killing bacteria and germs – but over time can take their toll on machine components. These challenges are further compounded as the individualisation trend gains momentum in the food and beverage industry.

**KEEPING COMPONENTS SAFE**

Machine builders and operators are under pressure to produce goods efficiently in small batch sizes and intelligent track systems containing permanent magnets and other components, play a part in this. However, these must never come into contact with water or other liquids. This has so far made track systems out of bounds for the food and beverage industry but, says Alan Conn, md of B&R Automation in the UK, the time has now come to equip food and beverage machinery to meet the new individualisation trend demands of its market.

Therefore, B&R is now offering its intelligent ACOPOStrak system with IP69K protection. “The shuttles and segments of the new washdown variant are constructed of stainless steel, securely welded and resistant to corrosion,” says Conn. “The IP69K-rated ACOPOStrak is built for high-pressure washdown cleaning using hot water up to 80deg C and is also fully protected against dust ingress.”

A completely enclosed stainless steel housing prevents even the tiniest ambient particulate matter from penetrating into the interior of the shuttles and track segments which keeps the permanent magnets perfectly safe, even during washdown.

**Swivellink**

Alrad Imaging supplies the Swivellink options

**Br Automation**

The IP69K-rated ACOPOStrak is built for washdown using hot water at up to 80deg C

For anyone experiencing problems in reliably mounting cameras, lights, sensors and robotic tools in an industrial application, Alrad Imaging says it has the solution via its Swivellink mounting system. These special mounting arrangements can save users time and money because they offer easy to assemble, robust mounting systems which are designed to neatly route all cabling internally.

Solutions are available to mount several products including cameras, sensors, monitors and robotic arm components as well as mounts for workbenches and tables. Mounting plates are available for all makes of cameras, smart cameras and also vision systems. “Not only will they offer you multiple configurations, but the creative approach means they can be manipulated as you wish,” explains technical sales director at Alrad, Ian Alderton.

Swivellink is now offered in three different sizes, XS, Standard, & Heavy Duty, and they can be supplied in metric or imperial (the Heavy Duty version is only available in imperial sizes.)

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Gripper delivers fulfilling benefit

A cobot and gripper combination has delivered a 500% productivity increase at the fulfilment centre of DCL Logistics

When DCL Logistics needed a flexible automation system that would integrate with its existing work cell setup and accurately handle the picking and packing of items into boxes in the company’s fulfilment centre, it deployed a UR10e cobot from Universal Robots in conjunction with Piab’s piCOBOT gripper.

The result of this installation was a 500% efficiency increase, 50% labour savings, a 100% order accuracy and a return on investment of just three months.

Before the new system, it took five people to manage a conventional manual picking process: someone in the warehouse to pick the order, someone to bring it to the line, someone to verify it, someone to kit it, and someone to pack and ship.

MORE THAN 50% SAVED

“The robotic system can do within two hours what a team of five people would do in an entire day,” says Brian Tu, chief revenue officer, of DCL Logistics. “The robotic systems actually save us greater than 50% in labour costs.” In this way, the robots address a primary concern to manage labour over time, which is crucial to the growth of DCL Logistics’ business.

When a robot replaces a task that a worker was previously doing, that worker can be reallocated to other services or trained to manage and maintain the robot. And during peak seasons, the robot allows the company to meet customer needs without bringing in additional staff.

The automation team at DCL Logistics used the UR+ online platform along with the simulator to research and choose the right peripherals for the application. Tested and proven certification for every UR+ product along with the UR CAPS software make the process a plug-and-play scenario instead of having to learn the commands of the robot.

DCL chose a Piab piCOBOT gripper, an UR+ certified product, and a DataLogic camera that can scan multiple barcodes at the same time or scan a part number and a serial number.

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Piab’s extensive range of suction cups enables customers to tailor their own solutions. And despite its minimal weight, Piab’s end of arm tooling is still able to lift objects weighing up to 7 kg.

Available with a generic electrical interface as well as several options for mechanical mounting plate dimensions in accordance with the ISO 9409-1 standard, the piCOBOT can be configured to work with any collaborative robot and also smaller industrial robots. Originally certified to work with cobots from Universal Robots, piCOBOT now extends its reach into the cobot market offering a high degree of configurability to cobots from several manufacturers.

Offering plug-and-play extensions to cobots, piCOBOT ensures safe and effective human-robot interaction.

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Customers need remote support

Ishida believes the coronavirus pandemic has clearly demonstrated the benefits of remote support in enabling factories to continue operating when social distancing requirements have made any on site visits much more challenging.

“Out of necessity some of our service activities have been carried out remotely and we have even successfully completed a machine installation without deploying staff to site,” explains Ross Townshend, Ishida Europe’s business manager – advanced services and data.

Nevertheless, the relevance of remote support will be equally significant once the crisis is over. “The availability of monitoring and reporting software systems offers a major opportunity to improve productivity and efficiencies as part of the fully-automated ‘Industry 4.0’ factory.

“As we emerge into the ‘new normal’ and the effects of a major recession, there will still be business to be won but competition will be even tougher,” he says. “Companies that are able to deliver high output at maximum efficiency will be best placed to succeed.”

Automation is of course not a new concept, but as Townshend points out, increasingly automated lines mean there are fewer personnel available to monitor machines and ensure they continue to perform to their best ability. Even a minor fault that goes undetected for a short time can lead to a loss of output and unscheduled downtime.

“With the right monitoring system, such as our own Sentinel software, individual machines and also complete single and multiple packing lines can be monitored by both the equipment supplier and the processor and packer,” says Townshend.

Mixing robots with UK vision

One-stop shop for vision products Multipix Imaging has taken on the HIKrobot range

Multipix Imaging has signed a new distribution agreement with HIKrobot to make its full range of vision products more available to UK and Ireland users.

“HIKrobot have one of the most comprehensive range of vision products available, offering area and linescan cameras, vision box, smart cameras and more,” explains Julie Busby, md of Multipix. “The technology can substantially improve productivity and directly benefit the environment.”

At the same time, and in the first application for HIKrobot in the UK, global fashion brand Superdry has adopted the company’s mini-robot carriers to transform order picking and put-away at its UK hub. This is part of a phased roll-out of goods-to-person robotics that will boost productivity across its international network of multi-channel fulfilment centres.

The robots work in unison with manual pickers, automatically selecting and lifting modular pick-walls and transporting them to pick-to-light stations where a predetermined pick-face is presented to the operative.

This spring saw the installation of 40 more HIKrobot robots in an expansion of the existing goods-to-person system. The enlarged operation will handle the entire picking and put-away of womenswear for retail, eCommerce and wholesale. Menswear will follow later with an estimated requirement for 60 more robots at the site.

“The adoption of robotics has come about through a requirement to cut operating costs and to reduce our reliance on labour,” explains Gordon Knox, director of logistics at Superdry.

The mini-robot carriers are a hit at Superdry
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Control platform for tomorrow…

Phoenix Contact’s PLCnext has unlocked the door to the beneficial Linux operating system

In the last 30 years, deterministic PLC Programming within a PLC CPU has largely been at the mercy of IEC 61131-3 programming language. This is not to say that other languages and techniques (C++, C#, Opensource, etc) cannot and have not been utilised in control systems, but this has had to involve separate compilers and the arduous management of separate CPU resources to achieve true determinism within a system.

However, Phoenix Contact’s latest control platform, PLCnext, has unlocked the door to this with its Linux operating system. The PLCnext Runtime runs on the Linux operating system, but, importantly, the PLCnext Runtime has access to the Linux operating system. This means PLCnext allows high level languages (for example C++, C#, Python, Rust as well as Opensource) to be combined with traditional IEC 61131-3 languages (FBD, STL, SFC, Ladder) and compiled on a common compiler.

As a result, traditional IEC-61131-3 PLC code and high-level language programs can be run deterministically on the same CPU and even combined in the same task.

PREWRITTEN APP DOWNLOAD

It also allows the ability to download prewritten ‘Apps’ from the PLCnext AppStore to the controller, either as an entire complete application solution or as a service for the application program.

This means end user companies, system integrators and machine builders can now future proof their businesses for years to come by having the traditionally trained IEC-61131-3 engineers of the present passing their knowledge and practical commissioning skills to the next generation of programmers, says Phoenix.

To meet the needs of food and beverage manufacturers to handle ever more types and varieties of products at increased throughputs, Rockwell Automation has introduced the iTrak 5730 small-frame intelligent track system.

Rockwell says the system uses independent cart technology to support smart, flexible and efficient machines. Independent cart technology is designed to offer many benefits over traditional gear, chain and belt conveyors, including unlimited machine flexibility, better traceability and increased uptime.

By using magnetic propulsion, the individually controlled carts can quickly start and stop with high precision, which reduces machine wear and is energy efficient. Changeovers are also managed quickly at the touch of a button.

This new system has the smallest footprint within the company’s independent cart portfolio. It has a 50 mm minimum pitch that makes it ideal for primary packaging applications.

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Digital service brings benefits

The Cama Group has now added live FAT tests to its range of digital manufacturing services.

Thanks to its deployment of advanced automation solutions, Industry 4.0 concepts and on- and off-machine connectivity, Cama is now able to virtualise every step of a project: from initial design concepts, through build, testing, commissioning/installation and beyond for ongoing maintenance and support of its robotised end of line equipment.

The company’s new Live FAT (Factory Acceptance Testing) is the latest addition to its digital-capabilities portfolio, which also encompasses pre-sales visualisation, virtual design (using augmented reality) and virtual commissioning.

“The launch of our Live FAT service comes at the perfect time,” explains Daniele Bellante, ceo at the Cama Group. “Someone once said that necessity is the mother of invention, and this is especially true in the current business climate. “Although we have been working on the technology for some months now, its virtual, on-line approach is proving incredibly pertinent and beneficial in these times of lockdown and separation,” he tells Machinery Update.

Using the Live FAT Platform, smart cameras located close to the machine’s primary operational elements give customers real-time video access to machine tests – using their own protocols and project specifications – live from Cama’s premises. In addition to the comprehensive overview given by the smart cameras, customers can also access complementary cameras covering static equipment, such as electrical panels.

Sharing of the visual information and data streams is via a secure, invite-only Microsoft Teams portal, accessed using a computer, tablet, or phone.

“The adoption of smart on-machine technology and far deeper connectivity delivers multiple benefits for both us, as machine builders, and, of course, for our many customers who operate in multiple industries across the globe,” explains Bellante. “Virtualisation can be applied to so many different facets of a machine’s lifecycle, and will help address multiple geographical, economical, technical and, in this instance, societal hurdles, where customers may not currently be able to deliver test products due to quantities, shipping costs, or simply because they are overly delicate or maybe frozen.”

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Smart sensors are value add

Intelligent, programmable sensors are revealing their potential to add value far beyond their ability to detect, measure, identify or safeguard, as Sick UK explains.

In a digitised world, the data a sensor produces is an empowering raw material for businesses today.

If you use sensors, or design them into machinery, get ready for a paradigm shift,” says Neil Sandhu, Sick UK product manager for imaging, measurement and ranging. “We have come to rely on sensors as foot soldiers relentlessly producing data on the frontline of every machine and process,” he continues.

“But, just as the phone in our pocket has far outstripped its beginnings as a device for making audio calls, so intelligent, programmable sensors are revealing their potential to add value far beyond their ability to detect, measure, identify or safeguard.”

Precisely because sensors are eyes and ears sitting right at the heart of operations, in a digitised world the data they produce is an empowering raw material. That data can be transformative across entire business processes. The challenge is, how do we harness, integrate and process this data seamlessly and also simply?

Already, increased connectivity has multiplied the ways that sensors and actuators can interact in automated processes, perhaps via IO-Link, perhaps independently of the control, or via edge devices such as sensor integration machines and gateways.

When Sick conceived its AppSpace software engineering framework five years ago, some saw it as a bold move for a hardware manufacturer; now it is normal to download a Sick SensorApp as a ready-made software solution that integrates sensor data into those automated processes and can individualise them.

AppSpace has made it easy to solve applications without complex programming, whether you are a user, an integrator, or a machine designer, says Sandhu.

Intelligent devices have become flexible platforms that can be adapted to changing process and product needs.

Now, users expect intelligent machines to make their automation more responsive and adaptable. Soon, they will also expect the information from, and about, all the devices on those machines to be transparently available 24/7.

Sensor machine vision: based on image data, the camera will train for a specific task without programming knowledge.
systems with maximum uptime and also minimum inventories.

Through dashboard-based tools, it will deliver live insights into the operating health and service status of devices. It will also integrate data seamlessly into condition monitoring and prescriptive maintenance systems.

Users can start simply with the Sick Installed Base Manager: A foundation module for the IntegrationSpace concept, anyone can use this smartphone App to tag and build a database that gives fingertip access to information about any installed devices; it’s described as a data ‘acorn’ that can grow into the digitisation of entire maintenance regimes.

Users can manage a digital twin of their assets along their entire life cycles using the Sick AssetHub, web-based enterprise asset management (EAM) system. Data is evaluated in the AssetHub to ensure maintenance happens at the right times, software and firmware are up to date and that inventories are well planned and optimised.

**EASY-TO-USE LIVE DATA**

The LiveConnect module unlocks a secure and easy-to-use live data connection between each intelligent sensor and the cloud. The sensor status can be visualised, for instance via a personal device, and process data integrated into live monitoring applications. The LiveConnect web service creates a live digital trail linking hardware to SensorApp, and to the cloud.

This new Monitoring Box module enables process changes to be tracked from devices, giving users real-time access to sensor parameters, for example whether pre-set limits have been exceeded. Alarms and notifications can be set up, and the historical data and events collected can be used to make application-specific predictions.

“In turbulent times, organisations must be resilient and agile, responding quickly to fluctuating demand and maximising uptime,” says Sandhu. Meanwhile, designers can add value to their machines by making it easier for users to harness digital data for business improvement, and from the machine right through to the enterprise level.

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**Feature:** Automation, robotics & vision systems

ABB is celebrating the fifth birthday of its YuMi collaborative robot (cobot) this year which it says has blazed a trail in a raft of diverse applications and industries since it was launched in 2015.

The company believes that YuMi’s dexterity and dual-arm 14-axis design has played a key role in enhancing productivity and quality on production lines worldwide and across applications. And this year, ABB has made robot programming more intuitive with Wizard Easy Programming software.

This Wizard easy programming is a graphical programming method designed to enable users to quickly create robot application programs for the single-arm YuMi cobot, without the need for specialised training. By using a simplified approach, the Wizard allows users to program and use the robot without prior knowledge of any robot programming language. A user can simply drag and drop these functions on the FlexPendant, see the results immediately and adjust the robot’s actions within seconds.

Wizard is available as a pre-installed application on the FlexPendant device for all new single-arm YuMi robots and the new software is also available to existing YuMi customers in the form of a free add-in that can be installed via RobotStudio to the FlexPendant.

Meanwhile, Kuka has launched a new product series in the medium payload category – the KR Iontec as the successor to the KR 60-3 robot.

It is designed for operation in conventional and digital production worlds and stands out for its large work envelope. It can be used in any installation position – on the floor, on the wall or inclined – while the option of converting the payload capacity of the installed robot from 30 to up to 70 kg also makes it extremely flexible.

**AN OPTIMISED WORK ENVELOPE**

Thanks to its long reach, the ability to work particularly close to the robot itself and the enlarged workspace beneath the robot leads to an optimised work envelope, says the company.

The reduced space requirements of the robot, with a 30% smaller footprint and a 10% more streamlined disruptive contour, enables a more compact cell design.

Yaskawa Motoman has developed new cobots while also offering Scara robot options. The HC20DT cobot is a 6 axes robot which combines the powerful capabilities of handling payloads up to 20 kg and the flexibility of a reach of up to 1700 mm. The robot arm can be guided by an operator and robot positions and gripper operation can be registered via ‘teach’ and ‘tool’ buttons.

At the same time, the company offers the SG-Series of Scara robots that are suitable for applications such as picking, packing, dispensing and handling or small components, especially in small spaces.

Holmach believes that sophisticated technologies define modern pharmaceutical production today and its principal Jorgensen Engineering has developed specialist applications in the handling of pouches and bags of blood products such as pouches, vials, bottles and Saline solution (IV Bags) for autoclave sterilisation. Using camera technology, the IV bags are identified going into the autoclave trays, while the trays are also read and tracked so the system knows which pouch is in which tray going in a particular autoclave at any time.

With many years of autoclave automation systems installed, robotic
Delivering with robots

solutions have allowed much better tracking and data acquisition, says Holmach.

The tracking system is also able to interrogate the autoclave to match the validated process to the IV bag, with any deviation seeing the IV bags rejected before they can go further along the process.

Latest news from Stober is that it is collaborating with Stäubli Robotics to expand its range of robots. The company is supplying Stäubli with additional axes that enable the robot manufacturer to configure its multi-axis robots with even more dynamic options for any precise, high-speed tasks.

Manufacturers in industries such as the automotive, food, medical, pharmaceutical, plastic and electronics sector rely on robots for many operations including loading and unloading, palletising, handling, sorting or stacking a wide array of components. Stober says these enhanced Stäubli systems will give them greater value and flexibility.

The first Stäubli and Stober joint project was for linear technology manufacturer Rollon. This involved expanding the six axes Stäubli robots with a seventh, plus an optional eighth, Stober axis. An SD6 single-axis controller from Stober manages the motion control on the two additional axes.

To support SME companies to adopt robotics technology more easily, Comau has launched a global web-based networking platform that creates a win-win ecosystem between ‘verified’ systems integrators and companies exploring automation opportunities. To help industries of all sizes reap the benefits of automation in an intelligent and cost-effective manner, the Comau Marketplace platform features real-world case studies, targeted solutions and industry-specific guidance on how automation can help increase productivity and lower overall costs.

As a catalogue of answers in the world of automation, Marketplace allows SMEs to filter solutions by industry and/or application and delivers information in a standard, story-telling format that facilitates easy comparisons between options.

Another option to help with automation flexibility is the new Smartshift toolchanger introduced by RARUK Automation. Designed to operate with all models in its Universal Robots range of cobots, the system cuts production time and errors and allows companies to scale-up capacity with ease.

THE SMARTSHIFT TOOL HOLDER

The Smartshift tool holder attaches to the wrist of the robot, enabling it to switch from one tool to another. This allows several tools to operate in the same area, to complete a particular set of tasks. As a result, the tool changer reduces set-up times and provides providers greater versatility, says RARUK.

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New Industry 4.0 cartoner gains are cyber-safe in use

In making its range of cartoning equipment smarter for its customers, Mpac has concentrated on making the HMI more intelligent while at the same time delivering cyber security by keeping the operating parameters local.

As Rob Heijligers, the product manager leading the digital transformation at the Mpac Group says, you don’t need to rely on an internet connection to get all the new Industry 4.0 features and benefits. “We have found that large company’s in particular do not want their machines connected to the internet as this can pose many cyber security issues, especially for a plant running multiple lines of equipment,” he explains to Machinery Update.

“This is why we have built the system in-house to keep all the processing power local, and not based on Cloud operation,” he continues.

“In our vision, the machine is not just a tool that the operator uses, but rather a companion; one that advises the operator, one that thinks with him and for him,” he explains. It proactively provides information about maintenance needs and performance enhancements, helping decision makers to make the right choices.

THE NEW HMI IS THE KEY

The new HMI has been developed for seamless interaction between operator and the machine and following the postponement of interpack, it was launched on a complete packaging line during a live stream event in June. This line includes an infeed (Solano single cell), cartoner (Vento-i) and also an Alisio case packer.

“The company named this HMI, the IMI which stands for intelligent machine interface. It has a simplistic layout, smooth scrolling lists and an easy movable top and bottom bar to deliver the benefits to operators.

Based on research findings from its customers, the company has designed what it calls the Industry 4.0 productivity package. This is built on four pillars that each contribute to maximise the machine OEE. The condition monitor that is designed to increase machine availability, specifically by preventing uncontrolled stops. Due to constant internal measurements, the machine detects even the slightest abnormalities at an early stage and then warns the operator of an impending issue or any required maintenance before it becomes an actual problem.

“Users are also in control of the logged data, as it is stored locally without the need for a Cloud connection,” says Heijligers. The performance monitor calculates the overall equipment efficiency so users can easily identify performance bottlenecks in the machine, while video instruction gives ‘on the job’ support. This IMI video library can be quickly accessed by operators, with instructional videos explaining how to handle alarm events efficiently and safely, and also how to prevent them in the future.

Users are in control of their logged data as it is all stored locally, not in the Cloud
New Machinery

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**AI benefits inspections**

Syntegon is working to bring the benefits of AI and Deep Learning to deliver life-changing pharma gain.

-- Reservations about validation are keeping some companies from using AI in pharma manufacturing

-- Manufacturers are considering the use of AI, and some have already issued first studies, reservations about implementation and validation are keeping most companies from using these applications in real production environments. In parallel, machine vision software companies are already offering Deep Learning vision tools as part of their portfolios.

-- Hence, it is not necessary for manufacturers of automated vision inspection machines to develop their own Deep Learning algorithms or neural networks. In fact, the existing solutions only require moderate software modifications.

-- Additionally, an upgrade of the vision computers with higher processing power can be realised with Graphic Processing Units (GPUs), which are widely available in the gaming industry.

-- Inspection technology experts can easily perform the required upgrades for visual inspection usage, as was discussed at the 2019 PDA Visual Inspection Forum in Washington DC. However, there is one crucial point that must be considered to enable validation: in contrast to many other industries, the Deep Learning model for pharmaceutical use must be ‘frozen’ once the development...
phase is finalised. Indeed, it must be static and can no longer change to make it version-controlled for validation.

Syntegon Technology is currently working on such a project to implement Deep Learning algorithms for the inspection of syringe stopper edges on its AIM 5023 inspection machine. The pharmaceutical industry is known for its conservative approach to innovation. This is mainly due to the very strict regulatory guidelines for process validation – overall a highly positive attribute since the manufactured products have a direct impact on the health and safety of patients. “Such an ambitious project needs a lot of experience regarding software implementation and process validation to push the concept beyond the finish line – a combination not every machine manufacturer can offer,” says Dr Jose Zanardi who is responsible for inspection development and applications at Syntegon.

BESPOKE APPROACH
Typically, a ‘one size fits all’ approach will not work in Deep Learning projects for visual inspection. Instead, the first step should consist in a pre-assessment based on a large number of diverse images from reference samples. “In our example this could be images of good units with bubbles, different stopper positions, products and fill volumes for body inspection, as well as different types of particles intrinsic to the process,” says Zanardi.

Based on the available image data, offline verification studies provide the basis for the integration of Deep Learning models into the existing software. In the second step, a customer-specific project should be defined with parameters such as product, existing machinery, expectations and timeline. “We believe that this technology has the potential to achieve detection rates close to 99% in the future while reducing false reject rates dramatically by half or more,” says Zanardi. He is confident that the Deep Learning application can be implemented in a GMP environment – and will obtain regulatory endorsement for both the qualification strategy and implementation.

www.machineryupdate.co.uk JULY/AUGUST 2020 MACHINERY UPDATE 53

Finding the correct automated gripper solution is pivotal to maximising efficiencies & minimising costs

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Palletiser is a wizard option

The UR palletising system from Olympus Technologies makes palletising and depalletising easy as it is designed to offer maximum flexibility in a minimum footprint. Importantly, pallet configuration is performed offline, to ensure the palletising system remains in production while new products are prepared. A configuration wizard enables the user to enter the case dimensions, and then simply drag and drop these cases onto the graphical pallet. The software then does the rest. Subsequent layers can be copied and re-orientated from previous layers, and each layer can be configured uniquely. The only time a user has to touch the robot teach pendant is to import the completed pallet programme, and to start and stop the robot’s production. “This configurator also takes account of the orientation of the presented cases, so that cases can be placed onto the pallet with case labels facing outwards,” explains Gavin Jamieson, director at Olympus Technologies. Modest guarding on the cell avoids the continuous activation of area scanners (used on unguarded solutions) when staff walk past or work close to the palletising cell. Fully optimised production speeds are maintained until someone enters the cell to swap pallets. This solution also enables the cell to be CE marked, says the company.

In operation, the system picks single and multiple cases, and cases picked together can be dropped separately. The software automatically chooses the optimal pick/drop routine for the layer of cases. Olympus custom designs the pneumatic end effectors to maximise their flexibility for specific products. A single palletising system is able to support two low volume production lines, with the two lines terminating together alongside the cell, and one pallet station being used for each line. The system can also incorporate the addition of slip sheets/interlayers into the assembled pallet.

The UR palletising system is an easy to use option

MAP seals checked with vision system

VisioPointer from TriVision is a complete end of production line vision system that can visually check seal integrity on MAP packaging and inline vacuum skin packs. Available in the UK from Tendring Pacific, the system analyses the entire seal area of the pack to ensure that seals are free of product contamination, free of welding errors, free of film folds and are 100% intact.

“VisioPointer can operate at up to 240 packs per minute, validating seal integrity with its unique, advanced image processing software and proven arrangement of camera and lighting above and below the conveyor belt,” says Anton Hutson, managing director of Tendring Pacific.

At the same time as checking the seal integrity, VisioPointer is also able to inspect the positioning and accuracy of labels, artwork, bar codes and printed date markings, including those on transparent materials, on both the top and bottom of a wide variety of food containers.

The Production Optimisation Module gives an additional and instant overview of the current production quality, so that the cause of non-conformities can be quickly identified and remedied. Other data streams from the module help determine and fine tune maintenance schedules and bring greater levels of efficiency.

At 1.4m long, with its own in-feed & out-feed conveyors, cameras, on board PC, touchscreen and lockable reject bin, VisioPointer’s compact design makes it easy to install onto almost any existing production line.

www.tendringpacific.com

The VisioPointer analyses the entire seal area

The VisioPointer analyses the entire seal area
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Print inspection is easier than ever

The latest version of 4Sight, the automatic in-line print inspection system, delivers even more flexibility and functionality than its predecessor, says AutoCoding Systems. With the ability to combine inspections, multiple inspections can take place simultaneously, so users will have the ability to configure up to four different inspections, including print, barcodes or artwork, across a range of up to four cameras.

For example, one camera could perform a print inspection in two different areas of the field of view, each with its own region of interest and settings. Alternatively, one camera could perform a print inspection plus a 2D barcode read in the same area, while another camera inspects specific packaging artwork.

With three different set-up options, standalone, printer-led or integrated into a code deployment solution; even greater flexibility is offered. While the newly enhanced HMI offers users easy-to-navigate, clear drop-down menus, with explanatory descriptions where relevant.

Data examined for efficiencies

ProVision has launched an automated platform that allows valuable data to be analysed easily

Tray sealing company Proseal has launched an automated platform that captures and analyses valuable machine data to improve the efficiency and performance of the entire production line.

The new Proseal ProVision system enables companies to maximise the benefits of Industry 4.0 and the fully automated factory. The web-based analysis platform has been developed for Proseal’s GTe and GTs range of tray sealing machines, to help identify and understand the causes of downtime and other inefficiencies to maximise the production capacity of the tray sealer and increase overall equipment effectiveness. Importantly, ProVision can also be easily integrated with existing third party equipment to accurately deliver information and drive improvements throughout the whole production line.

ProVision can be viewed on any web-enabled device, including a PC, smartphone and smart TV. The Live View function allows real time, remote performance monitoring, enabling operators to work away from the line and efficiently operate multiple machines, and allowing engineers to check on machine performance and provide timely interventions if any problems are detected.

NO EXTRA COSTS INVOLVED

ProVision is offered at no extra cost to all new Proseal GTe and GTs machines that are supplied with an Ewon device to allow internet connection. As part of Proseal’s futureproofing of its equipment, updated software and Ewon devices can be retrofitted to pre-existing GTe and GTs machines. In addition, a scaled down version of the platform, ProVision Lite, has been devised to deliver many of ProVision’s key benefits, to older legacy equipment.

Positioning table delivers gains

The AM positioning table from IKO Nippon Thompson Europe provides XY & theta movement all in one package. This positioning module was developed for use in alignment stages by combining the IKO TU, CRBF, ML/LWL ranges.

The table has the benefit of tight overall height tolerance of +/- 10 microns allowing multiple units to be configured without any height adjustment being required. This AM range comes in four sizes, while each of the component parts are also available separately.
Kawasaki Robotics the best kept secret in Robotic Automation

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Larger printhead option for print and apply units

Videojet Technologies has introduced the new Videojet 9550 6 inch label print & apply (LPA) system for direct apply labelling applications. By expanding the printing capability of the proven 9550 2 inch and 4 inch LPA systems, Videojet is now able to offer the 9550’s performance for a wider range of applications.

Videojet says its 9550 LPA system has proved successful because of its design that eliminates mechanical adjustments, wear parts and failure points that cause everyday operational problems. The 9550 design removes the mechanisms that frequently cause everyday operational problems such as label jams and routine manual adjustments.

Also, using Intelligent Motion technology, the entire machine is automatically and precisely controlled from the beginning to the end of the production shift. In operation, the machine places the label onto a pack without the need for a tamp or air blast applicator, achieving throughput of up to 150 packs per minute for typical 4 inch x 6 inch GS1 barcode labels (dependent on environment, label quality and substrate). This means it never misses a label, even after line build-backs, says the company.

Manual adjustments are one of the main causes of daily operational problems, resulting in costly downtime and production loss. However, the direct drive system, with Intelligent Motion technology, feeds and places labels accurately even at high line speeds without the use of manual adjustments, clutches or nip rollers. This means that only two operator touches are now required to manage job selection and web changeovers, complemented by a collapsible mandrel to ensure quick label changes.

The Direct Drive system with Intelligent Motion technology is designed to control the entire label path ensuring web tension is maintained from start to finish, irrespective of speed or label size.

Contact Details:

Videojet 9550 label print and apply system with 6 inch printhead

Videojet Technologies

www.videojet.co.uk

0800 500 3023

Harnessing 4.0 technology for the benefit of all

Clearmark Solutions has put together an Industry 4.0 free guide to share details of how factories can benefit from new, smarter technologies. Information covered includes how universal communication standard protocols will facilitate factory connections to drive OEE and the benefits for fast adaptors to technological advancements without any human intervention.

www.interactivecoding.co.uk/industry-4-0

Industry partnership is designed to offer the flexibility needed for handheld label printers

Panduit and printer technology partner Epson have launched the first two jointly developed printers for the industrial, construction and network infrastructure markets. The MP100 and MP300 portable label printers offer a range of capabilities in compact device formats, including fast 1.4 inch (36 mm) print speed, a wide variety of die-cut and continuous label sizes and materials up to 1.5 inch (38mm) wide. USB connectivity, direct printing from Easy-Mark PlusTM, software and integrated automatic cutter with full and half cutting are also offered.

Contact Details:

Panduit

www.epson.co.uk

0871 423 7766

Rotech Machines has introduced invisible ultraviolet (uv) thermal inkjet printing to offer customers enhanced product security and traceability, and to protect against counterfeiting.

Invisible to the naked eye, the special uv ink allows customers in all industries to apply discreet or invisible codes that can only be seen under ultraviolet light, making it difficult for fraudsters to replicate, particularly if the codes are placed in different areas by month or by batch. Using thermal inkjet technology, the uv ink can be printed in conjunction with standard batch codes, date codes, QR codes, serial number, brand labels or barcodes, or applied directly on packaging or labelling.

www.rotechmachines.com

Applications are wide ranging

Anti-counterfeit uv ink gives security and traceability

www.interactivecoding.co.uk
Aafter a three-month trial period against inkjet printing technology, Macsa ID has installed 17 SPA C10 laser marking systems with beam expanders at Belgium-based global parts and accessories supplier TVH’s new logistics centre. They are applying two-dimensional (2D) codes to some 192,000 cardboard boxes per day or 1,344,000 cartons per week. Designed to reduce production line stoppages and downtime, the laser solution was chosen for its modular design, reliability and lower lifetime cost of ownership.

With its head office in Waregem, Belgium, TVH contacted Macsa’s exclusive distributor Codipack when it required a coding solution for its new logistics centre. With previous experience of print and apply technology, TVH originally planned to use a similar system to apply a unique 2D code on two sides of each cardboard box. The codes have the purpose of identifying the box at each stage of the logistics process, right up until shipment.

Once a box is identified by a reader/scanner, it is scanned at every stage of the production process until in the final stage, the unchanged code indicates which shipping label needs to be applied to the box. Given its importance at every part of the process, the quality and readability of the 2D codes is vital.

These 2D codes contain 10 numeric numbers and measure approximately 12 mm x 12 mm.
Who’s done what and gone where...

Electrocomponents

Mike England has been promoted to chief operating officer at Electrocomponents reporting directly to CEO Lindsley Ruth. In his new role, he will help to drive the Group’s long-term strategy, aligning the go-to-market, digital and customer and supplier centric activities across the globe. He will continue to lead the EMEA region until a new EMEA president has been appointed.

Kern

David Cox has joined Kern to take up the newly created post of UK head of sales. This role has been created to strengthen the company’s position in the UK market and to capitalise on recent product additions. At Kern he will be responsible for driving sales of mailing, smart locker and packaging solutions across the UK.

Heuft

Joanne Ball has re-joined Heuft some ten years after her first tenure, this time as customer centre co-ordinator to manage the new training and test facility.

Accraply

Justin Stovall has been appointed vice president of sales at Barry-Wehmiller company Accraply to oversee all global sales and business development activities. He joined the group company Synerlink in 2015 then had a stint at BW Flexible Systems before joining Accraply.

MDS

Luke Hill has joined MDS as its newest field-based service engineer to boost the growing sales and service divisions at the company. Based in Birmingham, he brings over ten years of experience of biometric engineering solutions to the team and is now also Ceiia trained and certified. “I’ve always been impressed by the quality and design of Ceiia’s detectors and so I decided I had to go for it when the chance came up,” he tells Machinery Update.

tna solutions

Raj Singh has joined tna solutions as group aftermarket & services manager to bolster the aftermarket experience for the company’s global customer base. He will focus on further boosting standards in customer care from troubleshooting technical issues to providing solution upgrades.

RA Rodriguez

Carl Richmond is the new sales engineer for the North of England at RA Rodriguez to help meet the growing demand for its range of products and brings technical sales and business development experience to the role.

Loma Systems

Ivor Milne has joined Loma Systems as a new regional sales manager for Scotland. Previously, he was a sales engineer at Markem-Imaje UK.

Optima

Jan Glass has succeeded Dr Juergen Kuske as chief financial officer of the Optima Group while at the same time, taking over the management of the central departments at the company. This industrial engineer joined Optima in 2016 and has held a variety of management positions since to give him insight into the company.

WMH

Tom Tomlinson, son of owner and founder of WMH John Tomlinson, is the new managing director of the company from July. He has been working at the firm for eight years and is keen to ensure it continues to develop its capabilities in meeting the demands for automation in the food and pharmaceutical industries. His engineering and logistics background will help him retain the firm’s core values. John will remain on hand to support the business.

CFK Systems

Nick Hornsey is a new software engineer in the engineering team at CKF Systems to meet the growing demand for the company’s automation solutions. He has an engineering degree in robotics and joins CKF from a cobot specialist.

Jennifer Halliday has joined the company as marketing manager tasked with bringing a new focus to its marketing efforts and also to raise the profile of the CKF brand.

Flexicon

Peter Kalinovski has been named regional sales manager of the new Flexicon (Europe) office in Germany which has been opened to provide factory-direct engineering services and technical sales support to customers throughout Germany. He brings five years of packaging industry experience to the role.

Nielsen McAllister

Nielsen McAllister, PR agency for the packaging and print sectors boasting many PPMA members as clients, is currently celebrating its 30th anniversary. Based in Derby, the agency was founded by current managing director Bob Bushby in 1990, at a time when Margaret Thatcher was still Prime Minister and a Mars Bar cost just 27p. The seven-strong team has enjoyed a virtual birthday party online during lockdown to celebrate.
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