

Gemini software adds efficiencies for food

Pick-and-place operations for fresh and frozen food can be improved with the launch of a new robot and software package from Bosch Packaging Technology company Demarex.

The IP65 rated Paloma D2 delta robot is available with up to three arms and, depending on the model and product, can pick-and-place between 50 and 240 products/minute. The addition of corresponding end-effectors mean a fourth movement axis can be added to rotate the product before placing or where several products need to be placed into tight trays and packages.

The Gemini 3.0 software allows simulation of new production processes on a virtual machine, claims Bosch, so that products are not required for trials. This allows shorter



installation times and increased efficiency, it says. A 3D view enables operators to adjust and optimise patterns and other settings and these can be saved and recalled as required.

The new robot with its tool-free changeable form sets and software can reduce downtime and changeover times to less

than five minutes, says the company.

The vision system ensures even misaligned products are picked and placed accurately, with no need for an additional intermediate infeed process.

T: +44 (0) 1332 626262
E: ukenquiries@boschpackaging.com

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Pick-and-place performer

Ishida Europe has introduced a system capable of faster and more efficient packing of trays into cases or Eurocrates.

The Ishida IPS moves individual trays rather than collations at speeds up to 150 trays/minute, says the company. The IPS robot's moving parts have a very small inertia which mean it is able to accelerate or decelerate rapidly. During the operation the system optically tracks each tray which is picked and the cases or crates filled while in motion.

Picking individual trays simplifies the infeeding into the machine and enhances



accuracy and consistency, says Ishida. The IPS also offers flexibility of case layout, as each

layer can be arranged in a different collation pattern for greater stability when multi-layering. The machine is also able to include incomplete layers for cases filled to a specific weight or to include 'bonus' packs.

The Ishida IPS is designed for a wide range of products and applications, which include ready meals, meat, poultry, seafood, salads, fresh fruit and confectionery. Re-set programmes and easy change pick heads allow changeovers from one tray to another in less than two minutes. It is rated to

IP65 standard.
T: +44 (0) 121 607 7700
E: info@ishidaeurope.com



Making the flow go

K-Tron Process Group has introduced ActiFlow, an alternative to other forms of mechanical hopper agitation used in loss-in-weight (gravimetric) feeding applications.

ActiFlow prevents bridging and rat-holing of cohesive bulk materials in stainless steel hoppers. It is a non-contact device, consisting of a patent-pending drive system and intelligent control unit. For difficult flowing materials it eliminates mechanical agitators with secondary motors and gearboxes, as well as the need for flexible side wall agitation devices or aeration pads.

ActiFlow helps to simplify the cleaning process during material change over and reduces headroom requirements, says K-Tron. The device is bolted to the outside of the extension hopper, above the feed screws.

Together with the control unit, it continuously activates the material inside the hopper with optimised frequencies and amplitudes. Working in concert with K-Tron's patented Smart Force Transducer advanced filtering algorithms ensure an accurate weight signal even with the ActiFlow running.

T: +44 (0) 161 491 6225
E: pcs@ktron.com

Six axis robot is 'EZ'y to use

Toshiba Machine's first six axis robot, the TV800 EZcell, has been launched by TM Robotics (Europe).

It has a total arm length of 800mm, a reach of 892mm and a composite maximum speed of 8.06 metres/second. It has been developed for use primarily in food and pharmaceutical packaging markets.

The robot incorporates the latest components, making it slightly faster than equivalent machines with the same footprint. It has maximum cycle time of 0.4 to 0.5 seconds, position repeatability of ± 0.02 mm, and a maximum payload of six kilograms as well

as an increase in memory size, standard USB port and Ethernet connections.

The EZcell is easy to use and it takes less than half a day to train an engineer, says TM Robotics. The software, which integrates with CAD data, makes operations, set-up and changes easy to complete via its intuitive screens and menus, and can be used either on or off line without having knowledge of the robot language.

Simple programming makes the robot very versatile resulting in very little downtime, the company claims.

The company has also launched a portable robotics



Top end labelling systems

Espera Scales is hoping its new ES1000 series of labelling systems will lead it to new markets outside the food industry.

The range is aimed at top end markets and is constructed of stainless steel and corrosion resistant machined aluminium.

Flexibility is a key feature of the ES1000 systems, says Espera and includes labelling

heads mounted on H stands for overhead mounting on conveyors, integrated conveyor systems with multiple heads as well as wrap around bottle labelling. Consistent accuracy is achieved by electronically synchronising labelling head speeds to conveyor speeds.

A single touch screen can control a number of labelling heads and from the screen the



The TS180 Starter Pack

system, the TH180 Starter Pack, which it believes recognizes a gap in the market for a system that will assist product/sales demonstrations, in-house staff training, and help boost robotics interest in schools and universities.

The system contains a TH180 mini SCARA robot along with a TS1000 controller (which offers four axis simultaneous control). The robot comes in a safety cube which has been specially designed to fit inside two carry cases.

The self-contained unit can be set-up in 15 minutes without the need for air, and through a series of commands has been designed to showcase the various capabilities of a robot including: palletising, counting and cycle times.

Users can also complete on the spot-programming in SCOL (a language similar to BASIC), using free software downloadable from the company website to create specific mock-ups or demonstrations.

www.tmrobotics.co.uk

operator is able to position the label on the pack and control belt speeds.

Accessories for the range include end of label warning and press down after rollers. A variety of thermal and hot foil coders can be integrated with the new system says the company.

T: +44 (0) 845 056 7900
E: kettell@espera.co.uk

Energy savings with new shrink tunnel

Sealed Air unveiled its latest energy saving shrink tunnel, the GT-71 at its demonstration facility, Packforum®, near Paris.

The new tunnel achieves higher speeds than previous models thanks to the introduction of independent fan motors on top and bottom which can be fine tuned to regulate the temperature to suit individual product configurations, says Sealed Air.

The energy saving is achieved thanks to better insulation of the tunnel housing, which also features an insulated window for inspection purposes.

The GT-71, which is made by Sealed Air's Shanklin® division, has a smaller footprint than

conventional tunnels on high speed lines. Operating in tandem with Shanklin's® Omni™ sealer, speeds of more than 100 packs/minute can be achieved, it claims.

Pack presentation and quality is maintained, even at high speed, as the tunnel conveyor incorporates a riser bar to improve the airflow on the bottom of the pack, which tilts as it goes through the tunnel. The GT-71 can 'slot in' to any line, thanks to both right-to-left and left-to-right operation, says Sealed Air.

It also confirmed it is focusing on 'source reduction' with its range of films rather than the development of biodegradable

and other environmentally based products. "We have had many successful projects with customers where micron gauges have been reduced from the standard 19 microns to 11 microns without loss of machine performance or pack quality and integrity," said Helios Ruiz, Sealed Air's marketing director for Europe.

"We have worked on a corn-based film but are not sure if this is the correct route to take. 'Make food not film' is a strong argument. Success in micron reduction can have as big, if not more of an environmental impact," he explained.

T: +44 (0) 1274 260870

E: mick.gillard@sealedair.com

MACHINERY BITES

Walsall Engineering Group has reached an agreement with Verinox of Italy to act as its sales and engineering partner in the UK and Irish markets offering a wide range of heat treatment, chilling and food processing equipment featuring sophisticated process control technology.

T: +44 (0)1922 405355

E: sales@weg2001.co.uk

Sewtec Automation has devised a special machine to apply tamper-evident labels to both single and multipack cartons for pharmaceutical products.

The system can also be adapted for case trace applications using 2D codes, says the company.

The new Sewtec LX5194 labelling system can handle a variety of pack sizes up to 67 x 85mm with a throughput of 3,200 singles and 800 multipacks/hour.

Camera vision systems ensure the correct and accurate placement of labels on both the top and base of the packs. An advanced control unit, with preset memory functions, allows the call-up of individual settings for the different pack sizes and changeovers and can be carried out in less than five minutes.

T: +44 (0) 1924 494047

E: sales@sewtec.co.uk

The **OPTIMA WF X** series weigh/filler has been designed for the precise handling of both liquid and granulated products, says the company.

With a maximum output of 320 containers/minute the filler's accuracy helps to reduce waste and is particularly suitable for high value products, according to OPTIMA.

T: +44 (0) 5602 588242

E: info@optima-gb.com

Sandwiching takes the biscuit

Two new features added to the largest of Baker Perkins' biscuit cream sandwiching machines reduce downtime and waste in high output operations.

The six-lane high-speed sandwiching system operates at up to 4,800 sandwiches/minute on some products. The features address the difficulty of accurately positioning at speed the cream deposit on the bottom of the biscuit and reliably placing the second biscuit on top.

The bottom biscuit is located exactly in the middle of the lane via accurately aligned pusher pins which are connected through a solid plastic block in which both pins are carried. The chain drive shaft and sprockets are machined from a solid billet, and the addition of the new feature makes pin misalignment virtually impossible.

An additional stability feature



on the six-lane creamer involves replacing a solid platform under the magazine holding the top biscuits, with a forked platform that sits outside the pins to give much broader and more stable support.

Baker Perkins high-speed cream sandwiching machines

are available in two, three, four, five and six lane versions.

They are a key module in complete systems that can accept biscuits from the oven, and feed to the wrapping machine.

T: +44 (0) 1733 283000

E: bpltd@bakerperkinsgroup.com