

# MACHINERY *update*

The machinery only journal for processing and packaging

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CONFECTIONERY • BAKERY • INTERPACK REVIEW • CONVEYING, PALLETISING & SHRINK WRAPPING



## Confectionery & bakery under the spotlight

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Front cover image courtesy of Rene Tillmann / Messe Duesseldorf

# What recession?



Is it me or, like the tabloids, are we all becoming just a little too obsessed with the gloomy reports of the impending economic recession? Yes, times are tough but in nearly 30 years working in the high tech or engineering sector, it has never been anything but tough! Being successful in business is tough – period!

The last 'official' UK recession; (defined by negative GDP for two successive quarters), was in 1990 to 1992.

Let's just remember what that involved. Apart from the sensational headlines in the press and opposition politicians predictably taking the opportunity to attack the Government of the day; most businesses felt relatively little impact. Certainly a couple of retailers went bust, certain banks had to make a few more painful write-offs and sadly, there were a number of tragic personal bankruptcies. But for the majority of businesses the pain was more theoretical than actual.

Even those on the very front line of consumer recession have strategies in place for averting the immediate impact of a spending slow-down and keeping the business going forwards – new offers, new formats, new ideas. The businesses that will suffer in the next 12 months will be those that were already in trouble during the tail-end of the consumer boom.

For most businesses like the UK machinery suppliers that are not consumer facing and have well-differentiated products developed over many years of tough trading, any pain is still some way off and may be minimal when it finally does arrive. One lesson learnt from the '90 – '92 recession was that the greatest pain was suffered in '93 when most of the fat had been cut away and there were only really painful choices left.

Three decades of government under investment and poor, short-term educational policies have ensured that the UK engineering and more specifically, the machinery supply sector has been in this position for many years. So what's new?!

In the last PPMA Members' Survey, nearly all respondents reported that they were realising improvements in orders, margins and even profit: 84 per cent stated that they were expecting to increase the number of employees and pipelines were healthier than they have been in years.

I leave you with a comment from Bob Hale, head of manufacturing at Grant Thornton: "Against a backdrop of profit warnings, falling business confidence and credit market turmoil, the UK manufacturing sector is a beacon in the dark. The strategic focus on new market entry is particularly positive, as it signals that many businesses within the sector are harnessing the strong growth rates still apparent in many parts of the world to counter the effects of a slowing domestic economy."

**So 'let's hear it' for the UK Machinery Suppliers!**

A handwritten signature in black ink, appearing to read "Christopher Barker".

Chief Executive, PPMA

# Record year for interpack as international audience grows

Celebrating its 50th birthday in style interpack 2008 attracted 179,000 visitors from 121 countries. This compares with 2005 figures of 176,964 visitors from 106 countries.

Visitors from outside Germany amounted to 110,980 or 62 per cent of the total (2005: 55 per cent) with a noticeable trend being the number of Asian visitors which at 20 per cent (2005: 17 per cent) of the overseas visitor total was remarked upon by many of the 2,744 exhibitors.

The Indian sub-continent formed a large contingent, as did visitors from South and Central America. However, although final figures are not yet available, it seems that once again the proportion of visitors from the UK was low (2005: 7 per cent).



Wilhelm Niedergöker, Managing Director, Messe Düsseldorf

Chris Buxton, Chief Executive Officer, PPMA said, "interpack has clearly maintained its

position as a true international venue. All our members had excellent visitor attendance, high footfall and reported high levels of enquiries on all days of the show".

An interpack visitor survey found that 97 per cent were more than happy with the show. Wilhelm Niedergöker, Managing Director, Messe Düsseldorf, said: "We were able to harness the upbeat mood in the run-up to the event and translate it into the show.

"This proves that our concept is right on target."

● The next interpack will be held from 12 -18 May 2011.

*Find out about the latest trends and the new technology on show - Full interpack report pages 15-26.*

## NEWS BRIEFS

**Walsall Engineering** has been appointed by CECCHIN Packaging & Automation of Italy to represent it in the UK market. The company supplies a range of vffs machines, including variable incline tilting machines for delicate items, as well as transporting, dosing and bubble wrap forming equipment. Typical applications for the ffs machines include pulses, small foodstuffs, loam, or plastic/metal components. Walsall will supply full sales, installation and after sales service support.  
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Robotics company **RTS Flexible Systems** has teamed up with automation and control specialist KS Automation to open a joint office near Regensburg in Germany to offer bespoke automation technology for Germany manufacturers, say the companies. The facility will be the first of its kind for RTS in Europe and is expected to boost sales of its vision guided, fast pick and place robots in conjunction with KS's motion control, vision and sensing technology, particularly in new market sectors.

T: +44 (0) 161 777 2000  
E: flexible.info@rts-group.com

**Easiweigh** now has full European R61 NMI approval for its entire range of standard and compact linear weighers. It sought NMI approval, says the company, as the Dutch certification is regarded as the toughest criteria in the EU. The process covers both the design and functionality of the machines as well as the electronic controls and load cells. It claims to be the only company in the UK with this level of approval for these machines.

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# Foodex Meatex down but not out!

Foodex Meatex visitor figures dropped from an audited figure of 16,591 visitors in 2006 to 12,969 (unaudited) for this year's show.

Although this represents a provisional drop of nearly 22 per cent, many PPMA members were still pleased with the quality of leads.

Tony Burgess, Control Systems Manager, Proseal UK, said: "We were very busy with a number of very strong enquiries. And for the first time ever at any show we sold a machine off the stand."

Other echoed these sentiments with Jim Sydenham, director, Interfood Technology saying: "Our investment in the show has paid dividends this year, with senior personnel attending from many of the major companies with some



very promising leads from new contacts."

Nonetheless there were dissenting voices. Among these were Ishida Europe's sales manager Martyn Wilkie, who stated: "There's a lack of visitors and the volume of traffic is poor this is a real issue for us."

Andrew Reed, Managing Director - Events & Exhibitions, William Reed Business Media,

said: "At a time when the food manufacturing supply chain is under increasing pressure from price hikes and the economic slowdown, Foodex Meatex, plus the other four shows run at the same time, did much to reassure exhibitors that shows are still high on the agenda when it comes to generating sales."

He added: "Importantly the increasingly time and cash-starved visitor benefits from the user-friendly flow from Foodex Meatex into Food & Drink Expo and the Baking Industry Exhibition.

"The snow which covered the UK certainly did not help visitors BUT we are very pleased with both exhibitors' and visitors' response and commitment to the show."

● Foodex Meatex 2010 takes place from 21-24 March.

## MATERIAL WORLD

### Plastics chief wants facts not fiction

Peter Davis, Director General of the British Plastics Federation (BPF) has slammed Government spin, Press sensationalism and 'Dodgy Dossiers' from organisations such as WRAP for the poor image of packaging.

He criticised the campaign, led by the Daily Mail, against the plastic bag and accused the Prime Minister of "jumping on the bandwagon" in calling for retailers to charge for the 'single use' carrier bag.

This despite the fact that it is 70-80 per cent reused and accounts for only 0.05 per cent of landfill.

BBC's Panorama programme which urged viewers to drink tap water rather than bottled water, was also criticised: "They obviously don't spend much time in the Underground or airport queues", commented Davis.

He pointed out that PET bottles weigh 43 per cent less than 20 years ago and 21 per cent are recycled, with that figure rising fast. Two top drink brands now use 100 per cent recycled PET bottles, he claimed.

WRAP should "stick to sound science", Davis said. A recent WRAP study found the carbon impact of 75cl glass bottles and PET bottles to be the same for bulk imported tankers from Australia.

But the facts in the WRAP document also clearly showed PET has a huge advantage on carbon impact. For example a full truck load of PET wine bottles weighs less than 75 per cent of one loaded with glass and 55 per cent of the glass bottles in the study were imported empty from France, while all the PET bottles were UK produced.

# 'Electric' efficiency values get level playing field

A new IEC international testing standard for low voltage electric motors has been welcomed by automation technology company ABB.

A spokesman for the company said, "We have waited a long time for a level playing field to be introduced."

The new standard, IEC/EN 60034-2-1, will tighten up the testing procedure and gives manufacturers the opportunity to publish more accurate efficiency values.

The old standard was partly based on estimated values. The new version is based on actual

measured values of losses in the motor. Winding and rotor losses will now be based on actual measured temperature rises.

Under the old efficiency testing standard additional load losses were estimated at 0.5 per cent of the input power at rated load. The new standard allows for measurement of these losses and the motor manufacturer must state in its documentation how the efficiency values have been measured.

ABB will adopt this method of testing and believes the new standard will help to harmonise efficiency measurement

worldwide. While electric motors are typically very efficient compared with other machines, working at 95 per cent for a 90kW high efficiency motor, the large numbers of motors installed means small changes in efficiency can make a big difference.

ABB says that two thirds of electricity used in industry is used by electric motors and the purchase cost of a motor is only 1 per cent of its total life cycle cost, the majority being electricity use.

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## Digby Jones to open PPMA Show

Minister of State for Trade and Investment Digby Jones will open the PPMA Show 2008 on September 30. Now Lord Jones of Birmingham, he will also include a walk around the exhibition when he will visit as many companies as possible.

For six years, until June 2006, he served as Director-General of the CBI, where he regularly visited businesses in the UK and worldwide. During this time he took the British business message to 70 different countries, regularly meeting with



political, business and media figures in the United Kingdom and around the world. He has consistently championed British industry and the importance to

all economies of a healthy manufacturing sector.

"We are very honoured that Lord Jones has agreed to open the Show," said PPMA Chief Executive Chris Buxton. "This will give a huge boost to the event's profile as well as giving a well-regarded senior government minister an opportunity to engage directly with our members."

The PPMA Show 2008 will be held at the Birmingham NEC from September 30 – October 2. Visit: [www.ppmashow.co.uk](http://www.ppmashow.co.uk)

## Giving with one hand taking with the other

The Government is to direct £4bn to a new agency to provide training and skills for adults to make the system more responsive and demand-led.

A further £7bn will go to local authorities to help colleges and sixth forms raise the leaving age to 18. This will result in the Learning and Skills Council

being dissolved by 2010, when local authorities take responsibility for the full menu of choices: apprenticeships, diplomas, GCSEs and A levels.

Meanwhile the British Chambers of Commerce (BCC) has accused the Government of adding £45bn to industry costs through its failure to engage in

the EU decision making process.

The BCC study which looked at 30 EU Directives adopted in 2005 found that the 'impact assessment' process came far too late and was pre-occupied with the UK end of the legislative process limiting the ability to reduce the costs of regulation to business.



## Multivac is the tops

Multivac came up trumps at the Starpack Awards 2008 helping to win a Silver Star in the Technical Development category, sponsored by the PPMA Show 2008, for the Tesco FormShrink™ Chicken Pack.

Described by a panel of independent judges as a leap forward in technical development, the FormShrink™ pack does away with the need for the PP tray commonly associated with chicken packs. Its removal gives a pack weight saving of 68 per cent.

Importantly the hermetically sealed pre-printed film provides significantly less leakage and provides an extended shelf life of four days more than other



systems. It also does away with the need for labels.

The Multivac top and bottom forming R550 thermoformer was adapted to create the packs using FormShrink™ puncture resistant film from Krehalon.

Used by Tesco's supplier the 2 Sisters Food Group, the pack is created using shaped cutting on the Multivac machine before the chicken is loaded directly

into the formed film and a vacuum pulled both within the pack and the bird cavity, prior to gassing and sealing. Packs are cut using a profiled blade before entering the shrink tunnel creating a wrinkle free pack. The ability to pull a vacuum within the bird cavity is important when compared with flow-wrap alternatives, which leave higher levels of residual atmospheric gases.

The pack, which also won a Silver Star in the WRAP sponsored Environmental Development category, is projected to reduce packaging weight by 100 tonnes/year.  
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## The true cost of downtime

Repairs account for 70 per cent of the indirect costs associated with purchasing machinery. Overall unplanned follow up costs can represent between 10 and 28 per cent of total lifecycle costs of a system, reveals a study by Rockwell Automation

Strategies to avoid downtime and limit the costs to end users are stressed. The study claims that maintenance can account for 10 - 40 per cent of the indirect costs of a manufacturing plant; around half of this figure could be

saved by strategic diagnostic and condition monitoring of processing and packaging lines.

Costs per hour of downtime can vary enormously, but may go as high as US \$300,000, says Rockwell. But the figure needs to be calculated not just on lost production, as downtime can also result in quality defects and the inability to deliver on time causing damage to the company's image.

Rockwell claims that 18 per cent of maintenance work in plants without a strategy is

probably unnecessary saying that the loss of experienced staff, who are often not replaced, makes maintenance planning imperative.

The number of large multi-nationals standardising components like drives or sensors should simplify maintenance regimes. And OEMs are now working with diagnostic systems companies to provide condition monitoring as standard.

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## NEWS BRIEFS

**OYSTAR Packaging Technologies**, the US subsidiary of OYSTAR Processing and Packaging Group, has acquired MAP Systems from Clear Lam Packaging Inc. Wolf-Dieter Bauman, CEO of OYSTAR Holdings, commented, "The acquisition of MAP Systems is a further step in the double strategy of pursuing both internal and external growth. Its modified atmosphere technology ideally supplements our portfolio."  
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E: admin@mapsystems.co.uk

**Campden & Chorleywood Food Research Association (CCFRA)** is holding a 2-day conference on Sustainable Packaging for the Food Industry on June 11 -12 at its headquarters in Chipping Campden. Topics will include Understanding Refillable Packaging Systems and Factors Affecting Food Waste in the Home. For more information: [www.campden.co.uk](http://www.campden.co.uk)

**CCFRA has issued a new guide** to help companies ensure their heat processed foods receive an adequate thermal process. New products and those with altered formulations, manufacturing procedures or packaging shape or type, may require different heat processing regimes. The new guideline (No. 56) will help companies to evaluate processes and critical factors. For a copy go to CCFRA's online bookstore at: [www.campden.co.uk](http://www.campden.co.uk)

**The 2008 series of Storage Handling and Distribution (SHD) regional shows** continues in the autumn with two events scheduled: SHD South East, September 17, Kent Show Ground, Detling and SHD South West, November 12, Westpoint Centre, Exeter. For information: [www.shdregionalshowbiz](http://www.shdregionalshowbiz)

## Joining forces

TM Robotics (Europe), the European robot sales partner of Toshiba Machine, has announced a new machine vision partnership agreement with PCS Industries, of the UK.

The arrangement will offer customers an array of vision equipment and software products as well as the integration skills of PCS.

## Gently does it for Riley

Riley Automation says its new F-T02 linear vibratory feeder has been designed particularly for hard to handle products such as salad leaves.

The company is being asked to handle more soft, flexible or sticky products, which can create problems like resistance to feeding or low output.

Riley's F-T02 works at high amplitude and can maintain a high stroke and product travel speed, even when working with a significant head-load. The system has a capacity of up to 10 tonnes/hour. Other suitable applications include sticky fruits.  
T: +44 (0) 1332 275850  
E: sales@rileyautomation.com

# Robotics for cheese brings smiley face to Ilchester

RTS Flexible Systems' Pixcell™ robotic picking unit is being used to reduce product giveaway as well as labour costs on the Ilchester Cheese Company's cheese portioning line.

Manual picking operators had

found it hard to differentiate between varying thicknesses on nominal 20g portions at production speeds reaching 150 portions/minute.

The Pixcell™ can detect oversized portions and remove

them for recycling, claims the company. Sensors measure the height of each portion which is then fed into the Pixcell™ controller. This estimates the weight and combines it with information about the product position pre-determined by a vision system. Underweight or overweight portions are let through unpicked while correct portions are picked and placed into a vacuum forming machine.

RTS says the system can be adapted to a wide range of packaging applications including fresh produce of variable weights as well as bulk or individual portions.

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## INSTALLATION SNIPPETS

**Chronos Richardson** has supplied three new weighers to baling press manufacturer Planters Clayton as part of an expansion to a rubber crumb production plant in mainland Europe.

The latest weighers feature Chronos Richardson's new SpeedAC NXT controllers for enhanced operating accuracy and to meet stringent regulatory requirements, says the company. The machines also incorporate an innovative weigh hopper designed to provide clean, rapid discharge of the warm rubber crumb.

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**Waldner** of Germany has teamed up with Elopak to install a filling and cartoning line at Saxon Valley Foods, part of Bakkavor Group, to produce H J Heinz brand 'Farmers Market' soups in one pint Pure-Pak cartons.

A Waldner Ultimate 4, four head filler is working in tandem with an Elopak Shikoku US-120 twin lane cartoning machine. The companies say they are working on several other joint projects.

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# Pharma cream mixer gets the thumbs up

BPT Skerman has completed the installation of a pharmaceutical cream line at Molnlycke Health Care's plant in Oldham. The company started the project in 2007 when it designed and began building the new line for emollient creams.

It comprises a 1000 litre stainless steel Vac-Mix vessel,

instrumentation, pumps, a CIP system, operator platform and a control system with full data collection functionality.

Software utilised is validated in accordance with GAMP 5 guidelines.

Tom Varga, chief engineer for Molnlycke stated, "The new mixing system gives us greater control allowing us

to increase throughput by 20 per cent."

BPT Skerman has also supplied additional brat pans to Emirates Airlines Catering Division - Food Point - extending the £1m contract won in 2005 for cooking and cooling systems.

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# One potato, two potato ...

One of Europe's largest potato processors, Aviko, is using Ishida multihead weighing technology to help meet increasing production targets at its facility in Bavaria, where it produces frozen French fries.

450g packs are being produced at 75 weighing/minute, while 2.5kg foodservice packs run at up to 40/minute.

Typical individual product

thickness is around 7mm. However, the machines are weighing 300 different products with variations in weight, thickness and cutting patterns.

In the six years since Aviko purchased the first of its eight Ishida weighers production has increased by 56 per cent without the need to increase operator numbers. The company now sells almost four



million daily portions in the European take-home market.

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A Starwheel machine, one of a range of volumetric fillers from **Packaging Automation**, has been supplied to Vending Revolution to fill mini-cans of confectionery and nuts. Product is packed in composite cans with air tight heat sealed aluminium foil lids at speeds of about 35packs/minute for vending operations throughout the UK. Depending on format the machine has a top speed of 100 packs/minute.

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### INSTALLATION SNIPPETS

**Excel Packaging Machinery** has supplied a new Axomatic 1000 tube filler and a Pentavac 2100 vertical bagger as part of a complete line installation to pack fondants, icings, caramel and chocolate cake decorations for Cake Décor.

The bagger has been fitted with a volumetric cup filler and is packing cake decorations and confectionery at up to 50 bags/minute for bag dimensions from 55mm to 290mm width and 450mm length.

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excel-packagingmachinery.com

A leading hardware manufacturer in Southern Europe is using a Shanklin® HSI-750 machine supplied by **Sealed Air** to shrinkwrap ironing boards.

The Cryovac® IMPACT™ film, supplied by the same company, produces an effective wrap despite being only 19 micron.

The combined machine and film performance is improving line efficiency and reducing costs, it claims.

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**Riggs Autopack** has supplied a further transfer pump to Zorba Delicacies thanks to ongoing expansion.

Zorba manufactures fresh dips and already uses 16 transfer pumps of various sizes to fill its product range of more than 200 items.

Good suction strength and adaptability in terms of product viscosity make these pumps ideal for this type of product, says Riggs. Additionally, they are not aggressive which ensures there is no product breakdown.

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# Potato peels and eels!

Packaging Automation has linked up with printers Ken Wilkins and QV Foods to develop a new packaging concept for potatoes and parsnips for Tesco.

The products are being supplied to the supermarket chain in both foil trays and board based boxes, using a PA182 hand turned, semi-automatic rotary table tray sealer.

This is QV Foods' first venture into tray sealing but has enabled the company to "keep the project on schedule and impress the customer", according to business development manager at QV, Kevin Woods.

The machine seals both foil trays and board-based trays at 10/400g foil trays and 8/400g board-based trays a minute respectively.

Another PA182 has been



supplied to seafood producer F R Bradley to cope with a huge increase in demand for its jellied eels. Packaging Automation had to carry out extensive tests to come up with the correct combination of sealing pressure and tooling to maintain a secure seal in a wet environment. The machine is now filling and

sealing 10,000 pots of jellied eels each week.

The PA182 can accommodate trays up to 100mm deep as standard and use numerous films including CPET, PVC and PP, as well as board and foil, says the company.

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## Re-think prevents re-write

Siemens Automation & Drives has enabled HayssenSandiacre to upgrade the control systems on several of its existing vertical form fill seal machines, said HayssenSandiacre Europe's managing director, Simon Lagoe.

Siemens technology was specified by a major food manufacturer. The companies conducted detailed analysis of requirements, including the need to replicate as much of the

existing controls as possible, to avoid the need to completely re-write documents such as operator manuals or installation and maintenance guides.

The Siemens solution was to combine a Simotion D machine controller with a Sinamics S120 four axis drive platform, 1Fk7 servo motors and planetary in-line gearboxes.

This also reduced the overall footprint of the bagger.

Jim Goodwin, engineering

director at HayssenSandiacre commented, "It surpassed any previous machine development timescale. The first upgraded machine was shipped within three months."

Upgrades are being phased in across HayssenSandiacre's intermittent bagging machines and will be extended to its continuous motion range next year.

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## Production through the roof

Blackwells Butchers of Stockton-on-Tees has taken delivery of a new, five deck, 15 tray oven to produce its range of pies, from Tom Chandley.

The one tonne oven, which had to be lowered through the

roof, replaces a 10 deck model from the same company which was purchased second hand 20 years ago and has run without problems until very recently, says Blackwells.

The new model will enable

the company to increase its output by 50 per cent as it is capable of producing up to 375 pies in each 50 minute baking cycle.

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# Trend spotting in Dusseldorf

interpack celebrated its 50th anniversary in some style. While there were no obvious great leaps forward in technology almost every stand had some new developments to show off and plenty of these should excite machinery buyers and specifiers.

One major horizontal and vertical ffs machine supplier recorded 40 per cent more enquiries in the first three days of 2008 than in 2005.

The drivers for innovation clearly remain those that are already familiar: flexibility, reliability and consistent performance at required speeds of production. The facility to integrate machines with each other is also high on the agenda.

These have certainly made the servo drive an imperative for most new models, whatever the machine.

However it was clear that machinery builders in Europe, Japan and the USA are now taking a more aggressive stance over the onrush of cheaper equipment from China, India and other Far East suppliers, with several



demonstrating 'entry level' machines.

Companies such as Oystar, OK International, Marden Edwards and many more showed their intention to protect that segment of the market as well as helping smaller end users with 'affordable automation' as an alternative to manual operations.

Indeed Ishida went a step further successfully obtaining injunctions to stop several Chinese exhibitors from demonstrating their machines.

Perhaps the most intriguing theme to surface was that sustainability issues are now being addressed in machinery design and construction, and not just by finding ways to use recycled or eco-friendly materials. Factors such as energy and water consumption are now coming to the fore and almost every machinery manufacturer is saying its equipment has a smaller footprint.

**interpack development news pages 15 - 26**

## Baggers and cartoners take centre stage

The new VPL-260 mid-range vertical bagger from Rovema is capable of speeds up to 200 bags/minute for flat bag formats from 60-260mm and block bottom bags of 320mm.

The servo driven machine is easy to service and maintains high quality sealing at high speeds, even on difficult films, according to the company.

A product detection device

prevents contamination of the seal area and an additional feature is tool-less changeover for different bag sizes and formats.

Rovema also featured a new generation continuous motion cartoner (CMC) with an integrated product levelling system which it claims is ideal for gentle and efficient handling of flexible bags. It has an

adjustable carton size range up to 400mm height.

The SBS 250 block bottom bagger is an 'economic' machine with quick changeover and high flexibility producing a variety of different bag top shapes. It can also be used as a conventional ffs machine.

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## SHOW QUOTES

“The high levels of visitor traffic and the international mix reflected the range of our target markets”

*Wolf-Dieter Baumann  
CEO  
Oystar*

“Compared with the previous event, there has been another increase in both visitor quality and quantity”

*Frieder Grimm  
Director Corporate Marketing  
Multivac*

“interpack is the most important trade fair for us and interest in Bosch remains at an undiminished high”

*Friedbert Klefenz  
president  
Bosch Packaging Technology*

“We had lots of customers from all over the world. In particular about 15 per cent each from America and Asia, which is very good. A lot of them were interested in our aseptic filling machine and also in our end of line solutions. In terms of visitor numbers, it is better this time than three years ago”

*Paola Mignani, Business Communication Director  
Sidel*

“There is always a hunger for new machines at interpack and 2008 has proved no different. It is definitely the place to release new equipment and there has been particularly big interest in automation and integration”

*Shane De La Force  
Global Marketing Manager  
TNA Europe*



SHOW QUOTES

“As the only UK company to have attended every interpack since its inception, we know it delivers results. It is the largest show we do for any sector we work in and also where we invest the most time, effort and money. Visitors are in the right industry, highly influential and decision makers”  
*Keith Graham  
 Marketing Manager  
 Baker Perkins*

“We always get good quality leads at interpack and this year is no exception. However for us it is quality and not quantity”  
*Karen Simpkin  
 Marketing Manager  
 Lock Inspection Systems*

“We had an influx of visitors from Eastern Europe, the Middle East, South America, India and China and were very busy. Masterfil is big on exports so this was brilliant”  
*Jean-Claude Krief  
 Northern Sales  
 Adelphi – Masterfil*

“Good show with a semi-automatic bag filler feature on the stand soon off to Insula of Germany to fill spices”  
*Mike Warmington  
 Sales Director  
 All-Fill*

“It seems to be moving East! We received numerous good leads from China, India, Pakistan and the Middle East. This was backed up by many visitors from the blue chips”  
*George Smith  
 BCH*

# Packaging legend has PPMA exhibitors crying out for more

interpack is a legend among members of the packaging community and in a climate in which the industrial business to business show is not booming it would not have been a surprise if this year’s event had lost some of the ‘buzz’, said PPMA chief executive Chris Buxton.

The PPMA took 23 members to its British Group Stand and they collectively took a total of 3,331 enquiries. And 21 companies in the group said that

they would exhibit again in 2011; of these 19 said that they would exhibit on the PPMA Group Stand. The remainder said they would prefer to exhibit in the same area as their competitors.

There were also a further 27 members exhibiting around the 16 halls.

“This year’s show was differentiated by the vast increase in the number of enquiries coming from Eastern European nations and the

Middle East,” he added.

Sadly UK visitors were conspicuous by their absence while Asia Pacific visitors were more in evidence; “an inevitable consequence of ever increasing globalisation”.

Buxton concluded: “A successful show is good for the industry as it underlines the effectiveness of the exhibition as a channel to market. This bodes well for the PPMA Show in September.”

## Machinery shines in inaugural iF Award

Winners of the inaugural iF Award for machine technology included the overall winner Theegarten-Pactec’s modular confectionery development, plus ALPMA’s SoftPack machine; and the Bosch automated system for Burgopak.

The new modular concept for confectionery from Theegarten-Pactec, works on the continuous-motion principle and features both flexible size changes and changes to wrapping styles. The MCC features belt feeding for top twist-wrap and MCH plate feeding for sweets in double twist wrap.

Alpma’s technology combines a traditional fold wrap with a longitudinal seal, which, says the company, enables products which were impossible to pack, such as very soft cheese, to be tightly wrapped despite their unstable form.

A typical example is Crescenza cheese which is



given a ‘second skin’. This helps to eliminate air pockets which can cause discolouration of the product, while SoftPack also extends shelf life.

The packaging material is fed into the machine using vacuum belts and is sealed by ultrasound. Using a cassette system designed by ALPMA the pack is tightened before the longitudinal seal is made ultrasonically, after which the end folds are made.

The Burgopak “wallet” features a folding carton with open ends. The machinery has specially developed feeding-



*Ralph Wiegmann, Managing Director, iF International Forum Design, takes the stage at the presentation ceremony of the first iF packaging award*

wheel technology, for fast and flexible pick-and-place operations, combined with a transverse product infeed chain that ensures minimum changeover time.

## Injunction hits Chinese exhibitors

Ishida mounted a successful legal challenge to prevent a number of multihead weighers from Chinese exhibitors being

shown at interpack. The injunction covered multihead weighers from High Dream, Jinyi and Saimo, which are claimed to

infringe Ishida patents. The machines were either removed from the stands or covered up, creating a rather eerie feel.

# Sustainability is high on Ilapak's agenda

Ilapak is taking the sustainability issue seriously with its factories now rated to ISO 14001. This theme continues into the new generation of Delta and Carrera machines which now incorporate eco features.

The Carrera 4000 eco has shaft and bearing patents for the sealing jaws which thermally isolates them from the jaws themselves. The rollers are also isolated from the heat around the sealing heads.

This produces several benefits, says the company, notably in improved safety for operators. But there is also a significant energy saving of around 60 per cent compared



Ilapak's Carrera 4000 eco

with the previous model.

The warm up time for the machine is also reduced from about 30 minutes to just eight minutes and there is less heat loss during major changeovers. This also means the machine is in production for longer.

Finally, as the whole sealing area radiates less heat, the ambient temperature of the building is reduced giving

savings on the cost of air conditioning in the plant.

Also demonstrated for the first time was the VacMap™ flow-wrapper which enables users to produce flow packs with the same shelf life and pack quality as thermoformed packs, but at lower cost, claims

Ilapak. It incorporates vacuum and MAP as well as flow-wrap functions.

The company also introduced its new electronic control platform using a Linux operating system. The platform can run on an industrial PC and offers detailed diagnostics and machine status information.

T: +44 (0) 20 8797 2000  
E: sales@ilapak.co.uk

## Holland punches its weight

I Holland, the specialist supplier of dies, punches and tooling products, showcased several new products for use in pharmaceutical, nutraceutical, confectionery and now, domestic applications.

The PharmaCote range of treatments and coatings for

tooling has been extended and upgraded to include Pharmacote HC+ and CN+ with improved ant-stick characteristics.

The PharmaCare Vision Inspection Scope allows assessment of finished tablets and the tooling inventory using a LED illuminated x6 microscope.

The equipment has a counterbalanced universal stand and a flexible swing arm, yet its small footprint makes it suitable for use with current SOPs and health and safety management systems, says Holland.

T: +44 (0) 1159 726153  
E: info@iholland.co.uk

## Space saving vacuum conveyor

The C2100-64 vacuum conveyor is a new, compact handling solution for powders and bulk products where space is at a premium, says PIAB.

The conveyor features COAX® multistage ejector technology which is claimed to consume less air and energy than other compressed air driven units. The design means that the flow of powders and

granules has improved by 25 per cent without affecting energy consumption. The C2100-64 can transport between 1.0 and 1.5 tonnes/hour of material.

Built in stainless steel for harsh environments, the conveyor can be fitted with a Mahle filter for powders with a particle size of 0.5 micron or greater, depending on properties. Operating ranges are



pressures of 0.4 - 0.6 MPa at temperatures from 0-60°C.

T: +44 (0) 1509 814280  
E: info@piab.co.uk



## SHOW BRIEFS

- **PKB** introduced three filling systems aimed at improving efficiency and reducing operational costs in the perfume and cosmetics markets. The Synchro filling and capping intermittent machine incorporates a patented servo-driven continuous motion filling facility which is claimed can improve output by up to 40 per cent. Also on show was the Eko filling and capping system for perfumes.  
T: +33 2 3237 9632  
E: g.potter@pkb.fr

- New servo technology featured on a number of new or upgraded machines on the **Meurer** stand. The new high speed, horizontal flow wrapper CM/HSS is capable of placing a full wrap of shrink film around groups of beverage packs at up to 160 packs/minute. Its balcony construction is easily accessible, says the company and all axes are servo driven for precision. The machine has reduced air consumption compared with previous models.  
UK representative:  
Fords Packaging Systems  
T: +44 (0) 1234 846600  
E: sales@fords-packsys.co.uk

- **Sollas UK** displayed its new Bandum S banding machine which can handle PP, PE and PE-coated paper with different film widths. It also introduced an upgraded version of its fully-automatic Sollas 20 overwrapper, featuring PLC/ touchscreen and servo film feed.  
T: +44 (0) 1256 896930  
E: sales@sollasuk.com



## SHOW BRIEFS

- **Bosch and Paal** are to expand their Bag in Box venture.

Under licence from Bosch, Paal produces cartoners for the food sector to increase sales of complete lines and expand the "bag-in-box" sector.

At interpack the Bosch bag form seal machine SVE 2515 was shown in action with the Paal Elematic 1000 HC-CBI horizontal cartoner.

Reportedly 10 units have been sold since the tie up in October 2007.

- **Bosch also introduced** a linear PME vertical pack maker for suppliers of free flowing dry foods such as sugar, tea, pasta, pet food and detergents.

It has a medium output level of 55 bags/minute.

Its modular design means that it can be adapted easily to packs of varying shapes and sizes: filling sizes range from 75 – 3710 cubic centimetres with weights up to 2.5kg.

Bag formats include flat or stand-up top, tin-tie, tape, or resealable labels.

The machine can also process "peelable" top seams with ergonomically shaped handles.

### FURTHER INFORMATION

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

Paal  
E: info@paal.com

# What credit crunch? Bosch sets out its growth agenda

**Confidence in the future remains high at Bosch Packaging Technology despite current economic trading conditions president Friedbert Klefenz told Machinery Update during interpack 2008.**

Bosch's business benefited from good trading conditions in 2007, said Klefenz. And he does not believe that the current economic downturn will affect the group's interests in pharmaceutical, confectionery and food industries "as long as there is not a world recession". Neither do forward order books indicate a tail off in business.

And this seemed to be confirmed by visitor interest during interpack. "Visitors were particularly interested in scalable automation, multi-functional product lines and modular machinery concepts," said Klefenz.

Other reasons for confidence lie in such statistics as 50 per cent of US sales are produced in the US thus making it easier to withstand US\$ fluctuations.

"We occupy a broad and international position and are exactly where the customer needs us. We operate in 14 countries from 30 locations and have 4,400 associates worldwide," explained Klefenz.

Results for 2007 show that

sales grew by 14 per cent to €650m with more than 50 per cent being achieved outside Europe. The rise is attributable to 8 per cent organic growth with the remainder coming from acquisitions.

In 2007 Bosch acquired the Pharmatec Group, which includes Schoeller-Bleckmann Medizintechnik, increasing its presence in the pharmaceutical sector.

This is reflected in the results which show that pharmaceutical is its best performing business at about 44 per cent.

In October it acquired Switzerland-based Kimaco in a bid to expand its presence in packaging and production technology for processed cheese. Food is now its second best performer at 39 per cent. However, confectionery lost ground in 2007.

During the year Bosch increased its activities in Asia expanding its operations in India and opening a new plant in Goa. Operations in Asia increased sales to \$100m plus.



This underlines the commitment to grow its businesses in the Asia-Pacific region which now accounts for 24 per cent of global demand; a year on year growth of about 7-10 per cent.

Importantly Klefenz stated, "Our facilities always serve local markets, for example, 90 per cent of products packed in Asia stay in Asia."

And he added: "Asian competitors are gaining in strength and future success will depend on our positioning in markets such as China and India, and in growth areas such as Russia and Latin America."

He also stressed the need for flexibility to help users cope with shorter product life cycles and reduced time-to-market.

Bosch showed off its expertise with 50 exhibits.

See pages 30-32

## Sweet smell of success

Adapting to meet trends in the coffee market Bosch Packaging Technology has combined its modular SVE 2510 QR continuous motion vffs machine with a CVA 3000V45 aroma protection valve applicator.

THE SVE 2510 QR allows quick and easy format changes between pillow and gusseted bags, corner sealed block-bottom bags and Doy-style



pouches. It operates at up to 180 pillow packs/hour.

The aroma protection valve applicator reaches speeds of 105 valves/minute and is positioned between the film infeed and the bag forming section.

Using servo-technology the perforating device is synchronised with the film infeed.



SHOW BRIEFS

■ The newly integrated **Markem-Imaje** company, part of Dover Engineered Systems, made its first public showing at interpack to demonstrate what it claims is the largest portfolio of product identification equipment available on the market. The combined group has 2,800 employees, 33 globally based subsidiaries, six R&D centres and worldwide manufacturing, logistics and repair centres. It aims to offer the same levels of technical expertise and service world-wide.  
T: +44 (0) 161 333 8400  
E: england@markem.com

■ **Ulma Packaging's** Taurus 300 'entry level' tray sealer is claimed to be ideal for meat packers or ready meal producers switching from manual to automatic packing. The Taurus 300 has a compact footprint, a maximum sealing area of 300x400mm and features a removable in-feed conveyor with rod bars to centre and push the trays. A pneumatic die lifting system enables easy changeover, says Ulma.  
T: +44 (0) 1909 506504  
E: info@ulmapackaging.co.uk

■ **Dansk Mink Papir** introduced PAL-Cut an automated sheet dispenser and cutter of intermediate layer sheets for use in automatic packaging processes. This system is said to provide considerable savings in operating costs for palletising. The patented Antim65 intermediate layer of the sheet stabilises the pallets during transport.

# USA machinery sector upbeat despite sluggish economy

Speaking at interpack PMMI president and CEO, Chuck Yuska, forecast challenging times ahead for the North American packaging sector as the US grapples with sluggish trading conditions.

But he maintained that the US will continue as global leader with domestic demand growing to US\$6.6bn in 2007, of which US manufacturers supplied 77 per cent. The USA remains the largest consumer of packaging machines in the world, followed by China (\$5.5bn) and Japan (\$3.5bn).

Globally sales from all sources were valued at \$31m (2006 figure) of which North American manufacturers accounted for 20 per cent of the total machines and systems sold in both domestic and overseas markets.

However despite these healthy figures, Yuska believes that trading conditions will impact on internal growth, with 2008 being sluggish at best and in decline at worst.

A positive for the US machinery manufacturer, he said, was that the current low dollar exchange rate should help grow the export market; exports reached \$707 million October 2006 – October 2007 and are expected to top \$1bn



by the end of 2007. However imports of machines into the USA rose to \$1.77bn up to October 2007, an increase of 11 per cent compared with 2006.

Turning to market forecasts, Yuska highlighted a series of findings from the PMMI's Trends Survey for 2008. Interestingly many of the significant trends seem to match those in the UK and mainland Europe, with increasing calls for more automation to improve efficiency, productivity and quality as well as cutting costs. There is expected to be increasing demand for 'entry level' equipment to fight off competition from Asian manufacturers and to encourage smaller companies to invest in automation, (something which was very visible at interpack).

Built in flexibility for speed of changeover with the minimum of downtime is seen as essential for a widening range of packaging requirements.

Product security is another

burning issue, based on the growing number of product recalls and contamination scares. This is set to create increased calls for track-and-trace technologies such as RFID, as well as an enormous increase in the use of X-ray and other inspection systems, PMMI's report revealed.

It will also encourage adoption of anti-counterfeiting tools such as holographics, micro-print and tag-equipped packaging.

Robotics also comes high on the list of priorities with users citing lowering costs, better efficiencies, reduced labour costs and increasing manufacturing outputs as the main drivers. While the majority of packaging robots are used in food and beverage production, 100 per cent of the pharmaceutical and medical device companies surveyed expected to increase its use. Full report at: [www.pmmi.org/makesense](http://www.pmmi.org/makesense)

**Correction:** Machinery Update March/April 2008 published incorrect global figures for machinery value on page 19. The correct figures are: Global packaging machinery value: US\$31bn not Euro 400bn as stated.

## Krones turn it around for visibility

The Multiturner S from Krones AG is able to turn shrink packs, trays and shrink wrapped trays or cartons around their own axis for short side leading or long side leading, and vice versa.

When located, for example, at a palletiser infeed the unit can ensure the chosen composition of layer patterns or maximise label orientation on the pallet for

optimum visibility, says Krones.

Two paddles grasp and turn each pack under positive control. Different paddle heads are available for varying pack widths.

The turning unit is suitable for high output applications up to 4,500 packs/hour.

T: +44 (0) 1942 845000  
E: sales@krones.co.uk





**SHOW BRIEFS**

Jordy pack is a new hot, cold and aseptic filling system from **ACMA**, which makes poly laminate (light paper/polyethylene/aluminium) bottles from a reel and forms them via ultrasonic sealing prior to filling. After die cutting the sealing phase forms the body, base and cap into one solid piece, says the company.

Currently line speeds of 6,000 bottles/minute are being achieved and will increase to 12,000 with the addition of a second forming station. A one litre container juice filling version was on display at interpack. Represented in the UK by Integrapak  
 T: +44 (0) 1420 593680  
 E: integrapak@integrapak.co.uk

**OCS Checkweighers's** latest iNomyx X-ray system, the iX, is the most space efficient scanner on the market with a 600W output, claims the company. It features a highly advanced Time Delay Integration (TDI) camera for optimum accuracy and speed.

The scanner is able to detect glass, stone, plastic and calcium rich bone and metal impurities. With tool free belt exchange, optimum cooling performance with a water cooled system and electronic monitoring for maximum radiation protection the company believes it is their most user friendly scanner to date.  
 T: +44 (0) 1993 701970  
 E: info.uk@ocs-cw.com

# Military checkweigher designed to survive

Loma Systems launched what it claims is the toughest checkweigher on the market, the CW<sup>3</sup>.

Managing director Simon Spencer said, "This rugged military-style automatic machine is designed to survive and is particularly suitable for the wet end of the food industry."

The modular and all stainless steel checkweigher features multi-lingual control systems, PC interface and USB connection. It can weigh flexible and rigid packs up to 1.5kg, has a belt speed of up to 120m/minute and can operate in a temperature range of 0-40°C.

The small footprint

checkweigher is ideal for high volume production lines, said Spencer, as it meets the demanding specifications of industrial food production. "Its resilience to cold is crucial as many food lines run in near freezing environments," he explained.

The CW<sup>3</sup> rugged stainless steel construction meets IP69K harsh environment cleaning specifications. It also features improved usability and ergonomics and will fit neatly into most existing conveyor systems, say Spencer. The unit can be adapted easily for new or changing products and pack sizes, it is claimed.

The CW<sup>3</sup> Checkweigher is fully compatible with Loma's IQ<sup>3</sup>+ metal detector systems, the combination can store product weights and the contaminant detection requirements of dozens of products, says Loma.

The IQ<sup>3</sup>+ is the latest addition to its metal detector range and features an easy to use, icon driven, intuitive full colour graphical touch screen. The technology is report and data capture ready, meaning HACCP and retailer compliance is made simple. It has on-board Ethernet and a USB port to enable remote data collection.

T: +44 (0) 1252 893300  
 E: sales@loma-cintex.com

## Developments leave visitors open mouthed

Launching a series of new developments from Chronos Richardson and forecasting strong growth and acquisitions in the European market Premier Tech's Industrial Equipment Group president André Noreau said: "We are looking for partnerships and acquisitions to drive growth across our Chronos Richardson businesses."

He added that the group's

market driven approach to product development had already paid dividends, with an R&D spend of about US\$12m/year providing the basis to launch a number of new products at interpack.

The Chrono-Fill PTK 1700 series for pre-made open-mouth bags is said to be one of the fastest bagging lines worldwide. Operating at speeds of up to 1,500 bags/hour, it features a

continuous bag transfer system and changeover times between bag types of less than five minutes, says the company.

The new Chrono-Fill OML 600 open-mouth bagger is designed to fill feedstuff and grain at up to 900bags/hour.

The group also introduced its next generation of weighing and dosing systems. The high capacity E55 F1 has a capacity of 2,000 weighings/minute and is equipped with a servo-driven gate control, and state-of-the-art load cell technology.

Its Chrono-Weigh E56, designed for the hygienic bulk weighing in the food, pharma and chemical industries, features an easy to clean weigh hopper and internal recirculation for enhanced dust control.

The integrated feed hopper has allowed a significant reduction in overall height, says the company.

T: +44 (0) 1159 351351  
 E: info@servicechronos.com



*Chrono-Fill PTK 1700 open-mouthed bagger*

## labelling, coding &amp; marking

# Fibre laser developments raise the bar for coding

DataLase unveiled two labelling solutions for primary and secondary packaging - the two labelling solutions utilise dedicated high speed fibre laser technology and are the first on the market, claims DataLase.

Used for primary and secondary packaging on the company's CASEMARK and PACKMARK product range, the fibre laser and label combination is set to raise the bar in printing and coding, said Mike Willcocks, senior vice president Global sales and marketing.

"They will allow DataLase to produce consistent, indelible, traceable product identification of the highest possible quality at high speeds, in excess of conventional CO<sub>2</sub> lasers," he added.

The fibre optic laser technology creates indelibly marked products for applications such as track and trace and bar coding. As the laser does not



*The CASEMARK using high-speed fibre laser technology*

press on the substrate being printed, it is also aimed at the printing of delicate substrates.

The laser print head is 5 per cent of the size of a CO<sub>2</sub> laser and the 40W version prints at 3,500mm characters/second. It also gives a much higher resolution than CO<sub>2</sub> lasers creating much better symbology for product marketing opportunities.

"Customers are demanding speed and flexibility and the versatility of the fibre laser

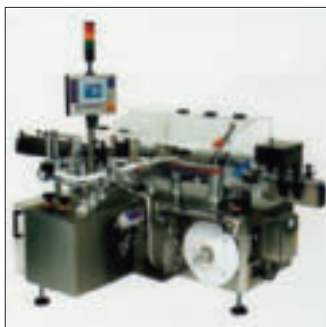
technology will enable us to provide coding and printing for 'mission-critical' product identification and to optimise supply chain costs," said Willcocks.

Key markets include healthcare where regulatory requirements are critical; food and beverage; and premium goods where anti-counterfeiting measures are becoming more important.

T: +44 (0) 151 423 9360  
E: info@datalase.com

## Designed for 24/7 operations

Designed to operate 24/7 at a true production rate of up to 300 containers/minute Newman Labelling Systems introduced



*The S350 has a true production rate of up to 300 containers/minute*

the S350 labelling system featuring high levels of efficiency based on DIN 8743.

Aimed primarily at the pharmaceutical market, the S350 is fully automatic and can apply both paper and clear plastic labels to cylindrical products made from glass, plastic, metal and composite materials.

The latest data-bus technology has been utilised within the machine to simplify the integration of security and ancillary devices, states Newman Labelling Systems.

Label and container size

changes can be achieved without tools, while digital scales provide repeatable container changeover within minutes.

Systematic line clearance is reduced to a minimum via the cGMP design and layout of the stainless steel machine.

Optional equipment includes a printout facility, vision system for OCV/OCR, continuous label supply from an Easisplice 470, queue switch control, rotary infeed and outfeed tables and a choice of thermal transfer, laser, ink jet or hot foil overprint coding.

T: +44 (0) 20 8440 0044  
E: sales@newman.co.uk



## SHOW BRIEFS

- **SATO** introduced a mobile direct thermal label printer MB4i, which is said to be ideal for fast label printing 'on site - on demand'. It has a print speed of up to 103 mm/second. The MB4i model is one of the fastest mobile printers on the market, says SATO. It has a print resolution of 203 or 305 dpi.  
T: +44 (0) 1255 240000  
E: enquiries@sato-uk.com

- **Logopak** launched its PowerLeapIII electronic operating system for use with Logomatic labelling systems. It features a 15in touch screen; dual 32-bit processors; 4mb battery-backed CMOS memory; error logging and analysis; RFID Tag-on-Demand; permanent dot checking; electronic components to RoHS standards; and integrated Ethernet connection.  
T: +44 (0) 1904 692333  
E: salesonweb@logopak.net

- Self-adhesive labelling specialist **Herma** showed its Herma Laser printing capabilities combined with the Herma 400 labeller. The laser light produces a colour change on the specially-coated label which means that the date and batch number can be applied within 15 milliseconds. The laser can also "write" under any layer of protective foil that may be applied to the base material. This, says Herma, guarantees extremely high wipe and scratch resistance and guaranteed traceability.  
T: +44 (0) 1440 763366  
E: sales@herma.co.uk

### labelling, coding & marking

*"We have been working closely with both brand owners and packaging machine manufacturers so we can best fit our printing modules into the production process," said Karl-Heinz Walther, senior vice-president special applications and head of sales, Linoprint.*



## Print giant Heidelberg drops into packaging sector 'on demand'

A move into packaging operations was singled out by German print giant Heidelberg during interpack with the launch of a Drop-on-Demand system – Linoprint. Field tests are set for the last quarter of this year.

The modular system was developed by Heidelberger Druckmaschinen, based on control technology used for its computer-to-plate image setter. It operates at a resolution of 720dpi at one metre/second in widths up to 288mm but can be expanded.

The digital system is infinitely flexible and can be integrated into almost any production process and print information such as logos with minimum cost in time and materials, it is claimed.

All technology is sourced from Heidelberg. However, Linoprint is an autonomous business unit.

Linoprint will focus on coding for the pharmaceutical

sector and its contract packers with an emphasis on blister packing. However, the optimised inks mean that the process can be applied not only to blister films but also to a range of substrates including labels and folding cartons.

It also hopes to sell the technology through OEMs making lines for packaging and filling machinery. Co-operation has already been agreed with one packaging machinery manufacturer with others in the pipe line.

The system incorporates drop-on-demand inkjet heads from suppliers such as Xaar, Konica, Minolta and Toshiba.

The technology is claimed to be suitable for individual printing of all run lengths; a batch size of one is possible. Additionally logos and other information can be changed at any point during any print run length, it is claimed.

It is made up of a printing unit and control software.

The print unit comprises a print head, cleaning unit and dryer.

Linospot, for single colour printing of blister films is due to be the first off the production line, with a version for labels and folding cartons next in line.

Linocolor, a 4-colour printing unit, is also in development and is being tested using Panasonic heads. It will be at least 600dpi for widths from 50 - 150mm with print speed up to 2.5m/second. Consumables for the colour version will be marketed under the Heidelberg Saphira brand.

The company claims that a significant development is Linoprint's scalability which can be adjusted by the use of multiple printing modules in sequence or in parallel to produce varying printing widths, speeds and resolution. The print system can be placed anywhere in the production line, says Linoprint.

Specially optimised screen technology allows any grey tone to be generated while special colours are also feasible.

Linoprint will also be exhibiting at other packaging shows around the world this year and in 2009.

T: +49 431 386 1290  
[www.linoprint.de](http://www.linoprint.de)



## labelling, coding &amp; marking

# Talking about the next generation

The next generation of laser coding systems, the D-Series plus, was launched during interpack by Domino Printing Sciences. This versatile range of industrial scribing lasers is designed to provide codes across a wide range of speeds, says the company.

Available with 10, 30 or 55 watt lasers the modular D-Series plus comes with new browser-based control software and Ethernet interface to standardise connectivity with host machines.

The modular design allows flexibility, says Domino, as laser head orientation can be more flexible for easy integration in multiple directions. The control box and Ethernet web server are contained within a single housing for greater compatibility with standard 19-inch rack systems and control cabinets on many packaging machines.

These lasers can mark on a



D550+  
scribing  
laser coder

variety of substrates including paper, cartons, plastic and glass. High quality codes can be printed at speeds up to 400metres/minute and in fonts from 0.5mm up to 180mm high.

The company believes the new lasers will improve overall equipment effectiveness, reduce operator error and minimise changeover times.

Also launched was a Linerless model of its M-Series print and apply labellers. The M500 responds to waste reduction,

environmental issues and productivity improvement targets, claims Domino.

With up to 100 per cent more label material on each roll, due to elimination of the backing liner, the machine is able to run for twice as long between roll changes. The M500 can cut labels to the required size, eliminating the need for changeover between products.

An additional benefit of producing different sized labels from the same roll is that few variant roll sizes are needed.

Domino has co-operated with a materials supplier to develop specialised substrates which are compatible with case material, to aid recycling. Using paper labels on cardboard and plastic labels on shrink wrap means contamination of reclaimable materials can be avoided.

T: +44 (0) 1954 782551

E: enquiries@domino-uk.com

## Solvent saving solution

The new Linx 6900 Solver continuous ink jet printer from Linx Printing Technologies can help reduce solvent usage by up to 40 per cent the company claims.

Using a new ink system and specially created intelligent software the coder adapts to specific printing conditions by reducing solvent evaporation within the system and adjusts its operation according to the requirements of the code being printed.

It is, says Linx, a more

reliable method of solvent saving than the traditional 'condense and recycle' method. This can effect the quality of the ink, or the 'pulsed suction' technique which may mean ink deposits build up on the print head, requiring more cleaning and downtime.

The model is aimed particularly at large scale, 24/7 users where continuously running multiple printers means solvent costs are significant.

The company says there is no loss of functionality from the

6900 Solver and believes the reduced cost of ownership meets a key customer requirement.

T: +44 (0) 1480 302100

E: uksales@linx.co.uk



### SHOW BRIEFS

- **Logopak** has introduced a new print and apply labelling system, the Logomatic 410 T for real-time labelling of variable height products. It has several advantages over the current 500 model, including a more compact construction, simple service disassembly and a new control system with a built in service interval indicator. The machine has an email capability to aid diagnostics. A 410 TE version is available for 'round the corner' label applications.

T: +44 (0) 1904 692333

E: salesonweb@logopak.net

- **Herbert Industrial** announced that it has gained US approval for its range of Weigh labelling equipment, allowing them to market these to America's food processing sector. The company gained certification from the National Conference for Weights and Measures as well as from the Underwriters Laboratories Standards for safety of machines.

T: +44 (0) 1440 711439

E: industrial@

herbertgroup.com

- **Videojet Technologies** launched the 1510 small-character inkjet printer which features smart ink cartridges, which register if the wrong ink has been inserted for the programmed job and stop the machine. The printhead adjusts automatically to environmental conditions, such as temperature, humidity and ink type.
- T: +44 (0) 870 240 5543  
E: sales@videojet.com

### labelling, coding & marking

# Weber dancing to success

A range of modular printer applicators was launched into the European market by Weber Marking Systems.

The Model 5300 range can store 500-1,000 labels depending on the complexity of content and is aimed at the food, pharmaceutical and general manufacturing sectors.

Labels can be applied using six pressure-sensitive methods: air-blow, tamp-blow, direct-tamp, corner-wrap, swing-wrap and two label/adjacent panel printing. This means, says the company, that the 5300



range can be reconfigured to meet future labelling requirements without the need for a separate printer-applicator.

Multiple label printing formats can be stored in the system's memory and it can incorporate a variety of standard thermal/thermal-transfer printing engines to

produce text, bar codes and graphic images at 203 or 300dpi. It dispenses labels at up to 406mm/second.

The 5300 features Allen-Bradley Bus controls and can also be upgraded for RFID encoding.

And for the first time Weber has incorporated a web browser for remote diagnostics.

A dancer arm with built in sensors helps to keep constant tension during application. There is also a 'no ribbon no label feature'.

T: +44 (0) 1875 611111  
E: sales@weber.co.uk

## Hapa hybrid for health

Hapa introduced the 210 hybrid flex/digital system for applications such as unit dosing.

The compact narrow web printer is designed, says the company, for integration with conventional labelling machines to partially or fully print pre-cut self-adhesive labels in up to 5-colours at speeds up to 30m/minute.

It is also available in an off

line roll-to-roll version. No special label stock is required thanks to the instantaneous UV curing, says Hapa.

The 260 model boasts the widest web width in the range and has been developed in conjunction with a leading medical company. The machine prints onto intravenous infusion bag material and

UV curing ensures no ink migrates into the substrate.

Joining the BlisterJet in the 800 range are the CartonJet for pre-folded and glued cartons and the LabelJet for reel-to-reel on line applications. Each system has the facility for 4-colour (CMYK) printing.

T: +44 (0) 1480 414242  
E: paul.osborne@hapa.laetus.com

## Non-stop printer from Pago

The new PAGOmat 6/5 high-speed labeller processes material in a straight line from a fanfold label web instead of a reel. This enables thicker items such as multi-page information labels to be processed, says Pago.

Pagomedia labels with integral giveaways, tactile relief labels, RF or RFID labels and sample sachets,

can be applied. The liner is continuously extracted under vacuum during high speed labelling of speeds up to 120m/minute, or removed by a cutter.

Non-stop labelling is possible without a second labelling machine. The next label web is simply fixed to the end of the previous web during the labelling process.



Top labelling precision is guaranteed by the silent-running servo-motor drive, says Pago.

T: +44 (0) 1206 755206  
E: machines@pago.co.uk

confectionery

# Confectioners set their sights on a 'Healthy' image

Think high-tech packaging and processing machinery manufacture and among the first user sectors that will spring to mind is confectionery. One of the leading industries in the use of drive, control and automation technology and the second largest market for robot systems after the automotive industry, confectionery adds up to a horn of plenty for the machinery sector.

Fully automated and enormously productive, a new generation of packaging and processing machines is hitting the world confectionery stage as witnessed by the numerous introductions at interpack last month (see pages 15 to 26).

This, despite the growing trend for healthy products slowing sales in the confectionery sector; in the UK for example the market dropped in value from £4.41bn (€5.65bn) in 2006 to £4.31bn (€5.52bn) in 2007.

And with out doubt confectionery manufacturers are looking to processing and packaging companies for new technology, in order to create NPD aimed at creating "healthier" options.

According to the Confectionery Market Report Plus 2008, released by Key Note Publications, the drop is attributable to consumers opting to reduce their consumption of confectionery as well as to mounting competition from other markets offering sweet snacks, such as biscuits, cakes and fruits.

Despite market growth not being achieved in 2007, there have been some significant developments in the sector, such as changes to portion size and companies placing new focus on dark chocolate products (the only area to show market growth) and those free from artificial additives.

The report said investment in existing brands, combined with innovation to

target changes in the food market, would fend off a future downward spiral in the value of the confectionery market.

According to respondents to the exclusive industry opinion survey conducted by Business Insights for its latest report – Growth Opportunities in Confectionery – dark chocolate made from 70%-plus cocoa solids offers the highest growth potential for NPD over the next five years.

This is closely followed by chocolate made with 51-70% cocoa solids, which is also considered to be 'dark' chocolate. Single-origin chocolate (chocolate made from beans grown in one particular area of region) is also pinpointed as offering high NPD growth potential.



As part of the research for the report Business Insights conducted research among industry executives on the confectionery sector around the globe. Respondents were asked to rate innovation development on a scale of 1, which was least innovative to 6 which was NPD leader. The response average is an average of the ratings given along the scale. North America and Western Europe are regarded as world leaders in confectionery NPD by industry executives. Eastern Europe and Latin America have a lot to learn from the market leaders according to the industry survey: [www.globalbusinessinsights.com](http://www.globalbusinessinsights.com)

## CONFECTIONERY FACTS

- Chocolate claims the largest share of European confectionery market value. By 2010, the total European chocolate market will reach a value of \$35.4bn out of a total market value of \$61.2bn.
- The US confectionery market will experience stronger average annual growth compared to Europe reaching \$33.0bn by 2010.
- Twelve of the top 15 flavors used in confectionery NPD are natural. Fruit provides an element of healthiness that makes products more acceptable to health-conscious consumers. Business Insights industry survey confirmed that 'natural' will be the most important health trend in confectionery over the next five years.
- Mid-afternoon offers the strongest growth potential for confectionery products over the next five years. Over a third of industry executives rated the afternoon as having the 'most growth potential'.
- Growth in sugar confectionery is weak. Although it is the second largest category in US confectionery behind chocolate, it lags far behind in terms of both value (\$8.5bn) and CAGR (1.5% to 2010). Business Insights Confectionery Report. Visit [www.globalbusinessinsights.com](http://www.globalbusinessinsights.com)



confectionery

**Brand owners invest in style**

**Kraft Foods** is spending US\$15m to expand the chocolate production capacity at its plant in Hale, Belgium. The company expects the new production line to expand the factory's capacity from 60,000 tonnes to 80,000 tonnes annually.

It represents its largest single investment in European chocolate production for 15 years and reflects growing interest in premium brands. Sales of high quality chocolate products grew in Europe by 14 per cent in 2007 with demand in Belgium increasing by more than 25 per cent.

**Nestlé** has also signalled its intention to enter the premium chocolate market, announcing the launch of a number of new high-end products, some still under development. It has recently opened an R&D facility dedicated entirely to dark and premium chocolate. Nestlé plans to roll out the premium chocolates in Europe, the USA and Asia, although no timescale for the launch has been announced.

The company is the second largest chocolate company in the world with a 13 per cent share, but premium chocolate makes up only 4 per cent.

**In Western Europe** and developed economies confectionery demand is still growing rapidly. Despite a turn away from sugar-based confections in some countries the global confectionery market is set to grow by 15 per cent between 2006-11 to a value of US\$116bn (54 per cent currently being chocolate sales) and reach a volume of 15.1 billion kilograms.

# System suppliers show off the fruits of their technology

Confectionery companies are being forced to think healthy and with this in mind a number of companies introduced a series of developments at interpack 2008.

Bosch Group's Packaging Technology Division, for example, brought three new confectionery processing machines to interpack. These have been designed to reflect manufacturers' demands for greater customisation, energy conservation and simpler cleaning procedures.

The company is also said to be 'trailing' several new processing lines for healthy confectionery products as consumers, particularly in Western Europe, shy away from sugar-based candies. Latest research from Mintel shows that close to 40 per cent of shoppers now actively avoid these products in France and Germany with the UK not far behind at 34 per cent.

While many machines can handle both traditional and healthy option ingredients the recipes may change more dramatically in future as more vitamin additives, fruits and fruit juices are incorporated. So 'future proofing' seems likely.

Bosch's new, energy saving, dosing system for sugar-glucose solutions, the BDK 2000 A, can produce these with up to 90 per cent dry substance. It also addresses the current issue of energy consumption, plus it has the potential to deal with different formulations.

The BDK 2000 A's waterless boiling method dissolves sugar using the water content of glucose syrup. After mixing in the integrated TurboMixx the resulting paste has a dry-substance content of up to 90 per cent, 10 per cent more than a conventional system. This means that only a further 3-7 per cent water needs to be removed to achieve the optimum dry-substance content for hard or chewing candy.

Bosch claims that during production of 1,000kg of candy paste the unit will save up to 90 kilowatt hours. The dosing system is capable of producing 2,000kg/hour.

The basic system offers volumetric dosing while the gravimetric version uses flow control for precise and fail safe operations.

The TwinHead gentle touch, double twist wrapper from Bosch requires fewer interfaces with the product as two heads perform the entire wrapping process. A gripper integrated with the first head lifts the candy directly from the infeed disc to a second head where the twist occurs thus eliminating unnecessary transfer functions.



*Bosch's Contiline fanning-out system*

Handling 1,800 items/minute, the large disc infeed minimises centrifugal forces and allows gentler handling, which is further enhanced by the absence of brushes, distributor and deflector plates. As there is less chance of damage to the product this reduces contamination and residue in the machine, enabling simpler cleaning.

Bosch also introduced its latest Contiline dual roller former for shaping, coating, fanning-out and cutting confectionery bars. The fanning-out system positions fresh cut bars crosswise to prevent lateral cut surfaces sticking and ensuring optimum distance between bars prior to coating.

## Gum wrapper

LoeschPack, represented in the UK by Cornwell Products, demonstrated a new generation of machines for wrapping chewing gum and chocolate bars as well as other confectionery products.

The gum line comprises five machines: a SUPERLOGIMP grooving and breaking unit cuts between 35 and 38 sticks from one slab. Paper sleeves are then applied to each stick on a GW03 machine at rates above 2,000/minute using a tab fold developed by the company.

Sticks are then layered and passed loose to the cartoner; an alternative version can form groups. The LM/2-K dual cartoning machine then packs the sticks into cardboard sleeves at 160 packs/minute. The individual sleeves are glued together to produce a sophisticated opening and presentation mechanism, says LoeschPack. Finally the individual packs are placed in open display folding cartons on the WKM-1 cartoning machine which produces 40 packs/minute.

The LTM/2-G is claimed to be the world's first dual lane fold wrapping machine for chocolate

## confectionery

bars, with a sealed inner wrap. The parallel process lines allow up to 360 items/minute to be handled or 130/minute for multipacks when used in combination with the LTM-K-SA machine.

The LTM-DUO fold wrapping machine for chocolate bars has a special folding facility and is based on an open balcony design which features a completely separate drive system for improved hygiene and increased output compared with earlier models, achieving 180 bars/minute, says LoeschPack.

## Flexible bagger

TNA's robag® 3b fx 180 vertical bagger, with rotary triple jaw has been designed to deliver up to 300 bags/minute when producing 180mm bags for confectionery applications.

Four servo motors provide more flexibility of control and operation, TNA claims. As well as fine tuning the product transfer system to enhance performance the bagger has specially shaped chutes to concentrate the product more effectively, ensure less 'string out' and increase speeds.

Developments of interest to confectionery manufacturers include also TNA's kanga jaw technology on the robag® 3b vffs packaging system. "The kanga jaw configuration emulates a box-motion," said group marketing manager Shayne De la Force. It is powered by a linear motor adding an up and down motion to the rotary jaws which allows jaw path control so the jaws approach each other on a horizontal line. Formats can include TNA's Quattro and block bottom bags.

TNA has also patented its trenza® technology for producing bags on hanging strips, often used in the sweet or candy industry. The system can be fully integrated with the robag® 3b twin 180 rotary double jaw bagger. A modified knife is provided for the vffs system to produce a string of bags instead of cutting them individually. When fed into the trenza®, the machine simultaneously attaches the strip and cuts the bag.



## As easy as 1, 2, 3 ...

Cremer B.V. has solved a complex counting problem for major confectionery product contract packer Vetipak of the Netherlands. Normally counters are used in the sector to sort products into mixtures and assortments, where products vary in weight, are hard to separate or when small numbers need to be counted.

In this application Vetipak were asked to make a mixture of a number of products, packing in small batches, in various pack styles and to make matters complicated, each pack style has to be made simultaneously. While each pack style carries the same assortment of products they each require different counts.

Cremer's answer was to set up the system so every counting machine in the line is dedicated to



a particular product, as normal, but in such a way that every bucket on the elevator is assigned to a specific packing point, serving a particular pack style. The packing points in this case are two baggers and a cartoner.

The highly flexible system is easy to programme says the company, so that several mixtures with variable compositions are counted and discharged simultaneously without the need for major adjustments.

## Hotel Chocolat

High quality 'indulgence' products, such as dark chocolate with high cocoa content are seeing increased demand. In fact the global high-end chocolate sector shows an annual growth of 8 per cent.

So when Hotel Chocolat moved into the retail sector it was necessary for it to re-assess its packaging operations. The company decided a high quality end-fold overwrap was needed on its retail packs, while maintaining a traditional shrink wrap for its mail order products.

To facilitate changes it installed two B225FF machines from Marden Edwards, with an output of 40 boxes/minute, which is almost four times the output of its L-sealers and shrink tunnels.

## CONFECTIONERY NIBBLES

- The 755 ET cut and double twist wrapper, from **A.M.P. Rose** is the latest version of its 750 range. The new machine is designed to wrap long products up to 150mm in length and can handle products such as chewy candy, toffee and gum.  
T: +44 (0) 1427 611969  
E: andrewm@amp-rose.com
- An improved product separation facility is incorporated into the latest medium speed wrapper for hard boiled sweets from **Theegarten-Pactec**. This, says the company, ensures a gentle transfer of the product from the feeding plate to the first wrapping head at efficient speed levels. The MCH machine can also handle chocolate products wrapped in double twist, fold wrap as well as protected twist and foil wrap at rates between 600-1,200/minute. Top twist and side twist wraps can be applied at speeds of 700/minute.  
www.theegarten-pactec.com

## FURTHER INFORMATION

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**Cornwell Products Machinery Sales**  
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**Cremer**  
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**Marden Edwards**  
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**TNA Europe**  
T: +44 (0) 121 628 8900  
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ROBOTIC CLIPS

- The stainless steel **Roboxis** T-robot® AE pick and place, 4-axis machine robot, including a Z axis, has been installed at the Amstelveeld Bakery in Amsterdam where it works in tandem with a Rembrandt-Lantech case erector packing flow wrapped packs of bread rolls into corrugated cases at speeds up to 35 packs/minute. Represented in the UK by AMJ Maters.  
T: +44 (0) 1763 838164  
E: sales@maters.co.uk
- **FANUC Robotics** showed off its new high-speed M-430iA/2F robot suitable for primary and secondary applications. It has a reach of 900mm and five axes for both horizontal and vertical product placement positions. Its anthropomorphic arm design allows it to rotate or flip back on itself quickly covering an area of up to 12.8m in diameter. Represented in the UK by Pacepacker Services  
T: +44 (0) 1371 811544  
E: mail@pacepackerservices.com

FURTHER INFORMATION

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bakery & confectionery - robotics

# In search of the Holy Grail

Robotic systems are on the up and although the most common applications are still for palletising and de-palletising (see page 46) there is an increasing interest in their use for primary packaging.

However there is still very low penetration in the UK, standing at just 10 per cent, for pick and pack food applications, says Alan Spreckley, Channel Partner Manager, ABB Robotics.

The reasons why this should change seem obvious: reduced costs and higher efficiencies, less labour and more manufacturing flexibility.

As labour costs rise the "Holy Grail" must be automation, states Spreckley. "Automation should achieve production excellence: higher output, uptime, quality, hygiene and be flexible enough to change with demands."

Machine vision is an important area of development. Much faster than the human eye vision systems are essential for high speed pick and place robotic applications where detection and orientation are essential for fast, safe and accurate filling.

A 3-D vision based robot, developed by RTS Flexible Systems, has already proved successful in the baking sector. The system can, for example, be set up to reject cakes with air holes outside a certain size, or even overwrite iced cakes with, for example, "Happy Birthday".

Another 3-D system, the Sentinel Vision developed by Adpro and SICK, has a wide range of parameters: length, width, height, volume and surface. It has, says the company, already been proven in a bakery application where it is being used to solve a problem in tracking the height and shape of biscuit products prior to wrapping.

Biscuit profiles were straying out of tolerance leading to whole batches of product being wasted as they were difficult or impossible to pack. The solution, said SICK, was to install SICK IVP IVC 3D Smart cameras communicating with the Adbro PC Windows-based control interface to provide the operative with real-time values for a number of parameters - height, profile and centre or edges, plus dimensions and/or shape. The volume of the biscuit is then calculated and compared against a check

weight and volume to determine its consistency.

At interpack Sigpack Systems introduced a solution which combines its LDM Monopacker Delta Robot with its new LTE tray destacker. The tray destacking technology ensures high operational availability to the Monopacker, says the company.

The destacker operates with rectangular and square containers with widths from 50-300mm and lengths 70-425mm; and round shapes up to a 300mm diameter.

The Monopacker with its advanced vision controls systems is claimed to be ideal for filling containers with confectionery, baked goods and chilled and frozen foods. The Delta range of pick and place robots are capable of up to 150 picks/minute.

Paal introduced its new Food Picker Elematic 7000 F-5f capable of 100 picks/minute. Flexible mounting options mean it is easy to retro-fit, says the company, while its 5 or 6 axis mean that it can be used for tasks which require high flexibility such as vertical orientation once the product has been recognised and picked.

Finally, no visit to interpack would be complete without a look at some of the wonders of confectionery production. For example the new Hacos DECOROBOT uses a compact robot arm to create fine drawings in chocolate, to decorate pralines, cakes and biscuits. An automatic tool change option means that up to six different colours of chocolate can be used on each product, says the company. It features the new CHOCOCAD software allowing operators to easily create, scale and change designs.



Paal's Elematic 7000 food picker

## bakery - processing

# Small is beautiful



In an era when food processing has become dominated by fewer and fewer large manufacturers, the bakery sector illustrates a counter-trend, with SMEs and start-ups mounting a challenge particularly in speciality, ethnic and other niche product areas, *writes Paul Gander.*

But cost pressures remain high and margins low. Mike Wilkinson, managing director of The Food Machinery Company, says that although his company does not supply second-hand equipment, this is the route being taken by increasing numbers of price-conscious bakers who would normally not consider that option.

In the past, Wilkinson has focused on equipment from the European companies that it represents, notably Caplain of France, to meet the needs of customers in the bracket of 150 employees and a turnover of up to £5m. But like other PPMA members, he has more recently put time and effort into exploring the potential of the Chinese machinery market.

"There are factories turning out low-cost, but very high-quality equipment," says Wilkinson. "Over the next 12 months or so, we will be introducing bakery ranges from mixing all the way through to continuous ovens."

***"This is brand-new equipment, selling for less than the cost of 20-year-old second-hand machinery from Europe."***

If bakers are under pressure to reduce costs, this cannot be at the expense of product quality. The way the dough is prepared and handled makes a huge difference to final product quality.

Baker Perkins is among those suppliers emphasising gentler dough handling as a way of improving quality without necessarily incurring additional costs. It may even help reduce costs. In the latest changes to its equipment range its mixing, dividing and moulding processes have been upgraded and, in many cases, given finer controls, says the company.

Crucially, it argues, preserving the integrity of the dough structure through these separate process phases results in a loaf with a more pleasing texture.

Tweedy mixers, Accurist dividers and Multitex moulders form the backbone of Baker Perkins' high-output bakery plant portfolio. The latest generation Accurist 2 ram-and-knife dough divider is among those systems which can combine improved control and quality with lower production costs, the company claims.

At the same time, the fundamental benefits of the original machine are said to remain

*continued on page 36*

## BAKERY BITES

### Wheat facts:

- World wheat prices rose 120 per cent last year
- Excessive rain damaged UK and US crops
- Drought curbed yields in Canada and Australia
- In a good year, the UK can supply 80 per cent of its own breadmaking wheat
- It is predicted that there will be a record world wheat harvest in 2008/09 that could help to reduce wheat prices on global markets.

- **What is (really) old is new again** as the latest craze sweeping the food industry worldwide is ancient grains which has led to their use more than doubling since 2005. Packaged food and beverage markets are seeing a growing influx of new products featuring grains that were in favour thousands of years ago, according to Datamonitor's Productscan Online database.

- **National Doughnut Week** took place in mid May and was celebrated in bakeries across the UK. The event, which is supported by BakeMark UK hoped to raise £50,000 for the Children's Trust, beating the £40,000 raised last time. Bakers up and down the country produce limited edition doughnuts, including Townend Bakery in Liverpool which produces a special star shaped version. In Kent the enterprising son of one baker who works for AE Barrow & Sons sold doughnuts to his classmates and organised an art competition. Their artwork was displayed in a local café.



*The Food Machinery Company's FC1660 rack loading convection oven (left) and the Caplain FRP6 Rotary rack convection oven (right)*

### BAKERY BITES

#### Bread facts:

- The price of a loaf of bread has hit an all-time high as food price inflation continues to push up the cost of weekly shopping bills.
- British bread prices have risen by between 15 - 20 per cent in the past year as commodity and fuel costs bite, but a loaf of bread is still cheaper in the UK than in most of the rest of the world.
- The Economist Intelligence Unit's (EIU) Worldwide Cost of Living Survey found that the average price of a kilo of bread in London had risen to £1.45p ( at the end of last year) from £1.09 in September 2006.
- The rises in the UK had been compounded by the strength of sterling and weakness of the US dollar. But bread is more expensive in Poland, Turkey and Spain. The most expensive city for bread remains Vienna in Austria, with bread prices averaging £4.22 per kilo.

### bakery - processing

*continued from page 35*

unchanged. So scaling accuracy is as consistent as ever, achieving sustained standard deviation of just 2.5g-3.5g on an 800g loaf over 10,000 hours of operation.

But the introduction of servo control to the ram movement now permits low-pressure operation for reduced product damage and improved final quality. As Baker Perkins explains: "The lower the pressure, the higher the cell count - or the number of micro-bubbles retained in the dough structure."



*Multitex moulders form part of the backbone of Baker Perkins' high-output bakery plant portfolio*

This affects not only the feel and texture of the bread, with a finer and more resilient crumb structure, but it can also help to improve colour.

Moving down the line, the Multitex 4 dough moulder uses what Baker Perkins claims is a unique arrangement of four pairs of sheeting rollers. This configuration is said to improve quality by controlling the size, shape and importantly, the

length-to-width ratio of the dough sheet before coiling. This in turn allows more and tighter coils. At the same time, the gradual reduction in thickness reduces stress to the dough.

Mixing, dividing and moulding operations can be installed either as part of an integrated system or as stand-alone units to support an existing line. Retrofit enhancements to equipment that is already long in the tooth are also possible.

Earlier this year at the Baking Industry Exhibition, supplier of ovens, mixers and other bakery process apparatus Tom Chandley emphasised 'control'. Many of its customers will be wishing they had more control – not only over their ovens, but also their costs, particularly for energy and ingredients.

The concerns about energy costs may be one reason why customers are attaching more importance to oven controls. For use with its convection oven range Chandley showed the Turbo colour touch-screen controller for the first time and the programmable Dual controller, for use with the company's deck and rack ovens.

The Turbo controller has been designed with master bakers in mind. Integrated into Chandley's Convecta ovens, the controller can be pre-programmed with up to 20 different bake programmes. Consistency even when equipment is operated by semi-skilled staff is a key requirement; but access to the control module requires pass code authorisation.

The Dual controller allows rack and deck ovens to be set to any one of up to 99 bake programmes, again making it suitable for semi-skilled operation. The controls operate on three-step bake phases.

*continued on page 39*

## bakery

*continued from page 36*

Automatic steam and damper systems are standard, and there is a bake timer as well as a 24-hour timer for every deck.

Both the Dual and Turbo controllers have energy saving features that automatically switch them off when they are not in use. A maximum electrical load can be specified through the Power Limiter function. This, says Tom Chandley, can result in cuts in energy costs of between 20 per cent and 40 per cent.

Recent installations for Tom Chandley have included a Compacta oven for Scottish customer Shortbread House. This is the fourth oven that the company has purchased from the supplier.

## Packing it up ...

When it comes to packing loaves of bread, the established system of filling and closing preformed clear or printed bags continues to dominate the UK market. One key player is German supplier PS Mako, a partner company to Optima Packaging Machinery. Mako has machines in output ranges from around 45-90 bags/minute, says Optima UK sales director Peter Kierans.

"In the UK, we've tended to supply other bakery equipment companies putting in complete line installations," says Kierans. "But in the rest of Europe it is more common to sell direct to bakery companies."

Bags can be folded and sealed shut or bunched and tied, typically with a tamper-evident tape system. But one key recent development has been the ClipStrip closure, which uses a more rigid plastic system for full and effective reclosability. Importantly, as well as offering easier and more reliable reclosing it does not contain any metal parts, so avoiding a potential hazard for consumers.

At interpack, Mako showed lower-output fully-automatic versions of machines in its Rianta range, twinned with inline slicers or roll-feeding units. The line can be further extended with conveyors and checkweighers, metal detectors,

case packers and other end-of-line equipment, says Optima.

There is no reason why whole or even sliced loaves cannot be flow-wrapped rather than fed into pre-formed bags. PFM Packaging Machinery supplies many machines into the sweet bakery and speciality breads markets in the UK, but mainstream sliced loaves have remained an elusive target. This is despite the fact that it has tried-and-tested systems for handling and wrapping on-edge product, and the demand for PFM flow-wrap equipment from sliced bread producers in other parts of Europe.

Sales director Chris Bolton explains: "We have talked to the likes of Warburtons about this, but the feeling was that their marketing departments would not be keen on a change of format. However, in terms of speed and efficiency, I think there would be benefits in moving to flow-wrapping, particularly for smaller loaves."

For baked goods of various sorts, PFM offers the Swift mechanical machine as an entry-level option. It is flexible, says Bolton, and can take product up to 350mm long.

For higher outputs and potentially larger product, the Pearl can handle items up to 500mm in width, while the Hurricane stretches to widths of up to 700mm. Importantly, both these ranges integrate servo drives and offer no-product-no-bag and misplaced product detection. Slat conveyors can help with potentially unstable products.

For even higher speeds, automatic feeding can be combined with a Falcon menu-driven wrapper. The sealing speed of the particular film and the nature of the specific product will determine output, Bolton explains. But on small individually-wrapped items, the Falcon can achieve speeds of up to 200 packs/minute.

Of course, ethnic and speciality breads account for an increasing share of the overall 'bakery' market in the UK, and these items may lend themselves far more to flow-wrapping. Bolton cites the example of Mumtaz, of Bradford, where a Falcon machine is wrapping naan bread.

"We also get the odd request for modified atmosphere packaging (MAP) in the bakery sector," says Bolton. This can be applied using the Mistral and Scirocco machines, the latter is capable of matching the Falcon's speeds of up to 200 hermetically-sealed packs/minute.

Flow-wrapping has already carved out a niche in the sweet baked goods sector. Bolton says that PFM has sold a high-speed line to one of the UK's largest bakeries, where it will be wrapping bite-sized cakes. And Memory Lane Cakes in Cardiff recently rented a Swift machine to meet a spike in demand for its small celebration cakes.

## BAKERY BITES

- **Sara Lee Corp** announced third quarter profits up \$7m to \$249m largely on the back of improved sales in its global bakery enterprises.

In the USA product sales rose 11 per cent, due mainly to higher selling prices which also helped its international bakery turnover improve by 18.9 per cent to \$231m.

- **The FDF and London Technology Network** hosted an industry forum in April where United Biscuits, Cadbury Schweppes and Tate & Lyle outlined their carbon cutting programmes.

**United Biscuits** has implemented several changes including new oven burners at its Harlesden biscuit plant to reduce energy consumption. Changes will be rolled out across five other UB plants over the next three years. The company also wants to reduce waste generated in food production by cutting its use of water and landfill as well as reducing its CO2 emissions from transport by 22 per cent.

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PFM's Pearl for higher outputs and larger products

## bakery &amp; confectionery - automation &amp; control

# Handle with care

**Automation is critical to bakers and confectioners: from the high volume industrial producer to the small craft-based artisan operation, consistent productivity levels are critical if orders are to be fulfilled and customers kept happy. Here Bob Dobson looks at some recent installations and their benefits to the user.**

Bakery goods usually require special handling, since they are irregular in shape, delicate and easily broken. Manual packaging is still the norm, but intelligent, adaptable technologies are now emerging that can reduce dependence on manpower.

Tecno Pack specialises in the flow-packing of bakery goods and in particular, in the manufacture of packaging machines and packaging systems for croissants, snacks and breadsticks. It is steadily making greater use of robotics for duties such as muffin packing.

The customer had specified packing 350 muffins/minute, placed in trays of two and four, a rate that made robots essential. Tecno Pack's solution used four ABB IRB 340 robot pickers, specially designed for the rapid movement of consumer goods.

The use of a double unit ensures that the plant can operate both at full capacity and at half speed. In addition, the unit can pack two different

products – for example, a plain muffin and a chocolate muffin – in a mixed arrangement.

The equipment uses a viewing system combined with an ABB PickMaster control system that is capable of recognising objects set down on the moving conveyor in a random way and providing the proper input to the robot for high-speed pick-up. In this way it is also possible to carry out shape quality control.

ABB's electric motors division has developed considerable expertise in energy optimisation in bakeries. At Cereform, the only manufacturer of soya flour in the UK, all 120 motors are gradually being replaced with high-efficiency alternatives. The nine flour mills on site, for instance, each use two 22-kilowatt motors to turn the 80-kilogram plates that grind the soya beans.

The 18 new EFF1 motors are saving more than £10,000 a year in energy, thanks to their high-efficiency performance. A further annual saving of around £5,000 is made through reduced maintenance.

## German efficiency

To maximise production volumes, Riehle Maschinenbau GmbH & Co. KG in Aalen, Germany, has developed new lye application equipment for bakeries, which can be operated by a single operator.

Precision linear drives from Hoerbiger-Origa in the feeding station constitute the core of these systems. Here, the dough pieces are transported into the fully automated lye application machine. The linear drives, the materials and protection category adapted specifically to the relevant hygiene requirements, ensure precise movement of the lift table as well as throughput of 200 trays/hour.

The lye application machine utilises a fully automatic infeed. Carriers are simply docked and the dough pieces, pretzels for example, are automatically transported from the feeding station into the lye application machine.

The carts carrying the dough pieces are recognised by sensors in the feeding station and

*continued on page 42*

## A & C CLIPS

■ **Witt Gas** has started to equip its 'PA' gas analysis devices with built in thermal printers inside the housing. The benefit, says the company, is that the measured data is available immediately in printed form. It can be pre-set to produce the data at intervals between 10 seconds and 30 minutes.  
T: +44 (0) 1925 234466  
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■ The industrial coating division of **Nordson** has introduced the cScan+ film measurement gauge which can measure the varnish coating on the outside of metal cans and the internal lacquer on the inside between 20 nanometers and 200 microns, according to the company. Coatings may be both organic and non-organic and the data can be used to build a topographic map of the coating distribution on the substrate to identify where excess applications can be eliminated to save costs and maintain container quality. The gauge was launched at MetPak in Essen recently.  
T: +44 (0) 1844 264500  
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■ **An US bakery industry** expert says one of the main reasons for upgrading bakery ovens is to take advantage of the encoded control systems in new equipment. New ovens take advantage of PLC technology which offers recipe management systems to set up baking profiles for each product and aid changeover between different baked goods. Changing oven parameters automatically saves time as well as improving quality and safety.



*At Cereform, the only manufacturer of soya flour in the UK, all 120 motors are being replaced with high efficiency alternatives*



## BAKERY BITES

■ **Rockwell Automation** has introduced the Allen-Bradley Guardmaster SensaGuard family of non-contact switches. 4/SIL 3 rated they feature the latest generation RFID technology for coding and inductive technology for sensing.

It has also launched Connected Components to help meet requirements for controls on standalone machines. They are built around MicroLogix PLCs, PowerFlex 4 class drives and the new PanelView Component HMI.

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■ **The consumer obsession** with Health is set to hit the bakery sector according to Euromonitor's report 'Bakery Products: top trends for 2008 and beyond'. A priority for bakery ingredients and finished goods manufacturers is to boost nutritional and functional ingredients like plant sterols, says the report.

■ **Folic acid** should be used in more bakery products; the Government is currently discussing whether flour should be fortified with the nutrient by law.

■ **Fritsch** launched a filling machine for baked goods at interpack. It includes an integrated control cabinet and improved accuracy and hygiene. The Fritsch Universal Filling Unit, is designed to handle fillings such as jams and other chunky viscous fillings, says the company. It features an intelligent control system which ensures no dough sheet no filling.  
www.fritsch.de

## bakery & confectionery - automation & control

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locked in place by Hoerbiger-Origa pneumatic cylinders. A light barrier checks the position of the dough piece carriers and the operator releases them for transport once the correct alignment has been achieved.

A lift table, driven by two Hoerbiger-Origa electrical linear drives, moves vertically to the upper level of the cart. For the automatic transfer of the dough pieces, the lift table is extended horizontally by two pneumatic linear drives.

The conveyor belt then starts up and takes the dough pieces from the first carrier. Once all pieces have been transferred, the pneumatic linear drives retract again. The lift table is then lowered by the electrical linear drives to the transfer position for the lye application machine, the dough pieces are conveyed, and the unloading process continues with the next cart level.

At the same time, the lye and optional salt is automatically applied to the dough pieces, which are then deposited onto a baking tray. This fully automated system, which is operated by a single operator, processes more than 200 trays/hour.

### Dough balls

Hull-based Apple Engineering was asked to develop an automated dough ball handling machine which would deposit accurate amounts of garlic butter in the centre of a dough ball, at a rate of four dough balls/second.

As a dairy product, garlic butter is temperature critical: it needs to be handled at the lowest possible temperature to minimise health risks and maintain product consistency. And that makes it far harder to pump and dispense accurately.

A nested conveyor transfers the dough balls from a buffer hopper at the end of the bakery's production line to the garlic butter injection stage.



*Apple Engineering's automated dough ball filling machine*



*Festo CDVI control valve terminals used in Apple Engineering's automated dough ball filling machine*

Here, an indexed conveyor ensures that each batch of dough balls is accurately aligned with the machine's multi-injector depositor before the garlic butter is dispensed. Then, it's over to the filling process.

Apple's customer specified that all pneumatic parts should be from Festo. Most of the cylinders selected are Festo DSNU models, with custom stroke lengths. For the control valve terminals, Apple chose Festo CDVI models, with environmental protection ratings up to IP69K, smooth easy-clean surfaces, and the ability to tolerate the type of washdown chemicals used in the food industry.

### Across the pond

A hearth bread and roll processing line at Pepperidge Farm bakery in Florida has reduced scrap thanks to a British developed motion controller.

Dough will move sideways of its own accord when it's being conveyed along a process. So, photoelectric sensors are often used to detect if dough balls are off-centre and could cause a problem. But this technique is crude, so slightly off-line dough can end up being scrapped unnecessarily.

Pepperidge Farm replaced the photoelectrics with an LED beam array to provide precise data on the actual position of each dough ball, and corrected the problem by shifting a conveyor section in real-time using a servo-driven cylinder.

Baldor's SmartMove was a natural choice for the motion controller, because of its built-in analogue I/O, and its Mint high level programming language. At Pepperidge Farm, a 100-line program is loaded into SmartMove's non-volatile memory to automatically correct dough position on a short conveyor section before it reaches the

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## BAKERY BITES

- **Genes** that may help produce frost tolerant wheat have been discovered by researchers at the University of California.
- **An ultrasonic** sheet cake cutter for all sorts of cake when in trays has been launched by cutting machine manufacturer Döinghaus, of Germany. It can cut shapes from triangles to portions of round cakes. It has an integral cleaning system which uses UV light to kill bacteria.
- **Barbel Quattro** has developed a vegetable preparation machine with 40 different blades. It can process up to 30kg of vegetables or fruit/ hour.
- **The Six Big Losses in processing**
  1. Equipment failures
  2. Set-up and changeovers
  3. Idling and minor stoppages
  4. Reduced speed operation and performance
  5. Scrap and rework
  6. Start up losses: yield and quality

Japanese report from CDC Factory

### FURTHER INFORMATION

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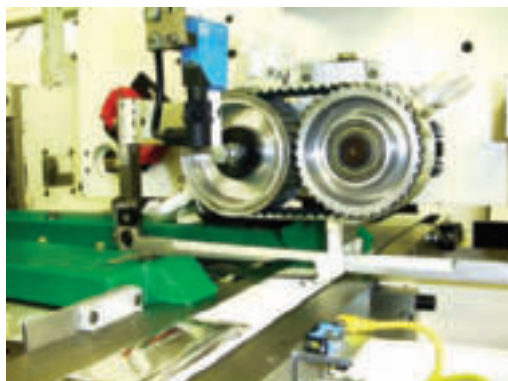
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## bakery & confectionery - automation & control

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*Baldor motion controller in use for flow-wrapped chocolate bars*

'stretcher board'. This program detects the edge and the width of the dough ball as it passes the beam array, then uses Mint's maths capability to compute any necessary correction, and move the cylinder.

### Cadbury's Dairy Milk

In another project, Baldor has supplied three multi-axis motion control systems to Premier Packaging to upgrade three Cadbury chocolate bar wrapping/cartoning machines.

The refurbished machines are destined for Canada, where Cadbury is introducing flow wrappers on its popular Dairy Milk bar, in place of the traditional foil wrapper and paper label. The project was extremely time sensitive, and Premier Packaging refurbished the machines in around four months. It imposed an even tighter schedule on its sub-contractors - which Baldor met by employing the multi-tasking features of the Mint motion control language.

Baldor's role in this project was to provide a motion control sub-system to transfer and carton flow-wrapped chocolate bars. Three servo motor axes are employed: one controls a 'paddle', which sweeps bars through 90° into a flighted conveyor; two further axes collate bars into groups on a feedchain and then actuate paddles, which transfer the group into a 'lowerator' - simultaneously moving the lowerator on a step for depositing the group into a carton.

The system is controlled by the Mint-compatible NextMove-BX, a standalone motion controller that comes with I/O, allowing it to also handle the various sensors in this application.

In this instance older machines were renovated with advanced electronic controls supporting software-based reconfiguration, for a fraction of the cost and time it would have cost to develop a new solution from scratch.

Packs of bakery and confectionery with card sleeves are much in demand by major retailers, but applying those sleeves has, until now, been difficult. To address this Keymac Packaging Systems developed a versatile and affordable automatic pack sleeve.

The machine had to be able to handle packs in a variety of sizes and shapes; capable of accepting the packs either continuously back-to-back, or presented at random intervals; and be compatible with full sleeves, band sleeves and narrow watchstrap sleeves. Finally, it must have a high enough throughput capacity to match the output of a typical food production line.

Meeting these requirements meant that the machine would need a sophisticated motion control system. Keymac's engineers surveyed two options and chose the Trajexia motion control products from Omron.

A modular system, Trajexia supports up to 16 servo axes with independent position, speed or torque control for each axis. In addition, inverter drives and remote I/O can also be added. Its powerful software is designed to make programming intuitive and straightforward, and it features an advanced 32-bit digital signal processor (DSP) allowing it to handle demanding motion control tasks, including electronic camming.

The Omron equipment and, in particular the Trajexia controller, has played a big part in helping to achieve the objectives of producing a machine which is electrically and mechanically simple, easy to maintain and attractively priced, while offering the high standards of performance and reliability which food manufacturers demand.

The Keymac Autosleeve K101 machines are now in service, and are consistently achieving throughput rates of 60 packs/minute, even with the largest packs. This compares with typical manual sleeving rates of around 40 packs/minute with two or even three operators working simultaneously.



*Trajexia motion control products from Omron*

# interpack provides fertile ground for changes to palletiser standard

Inevitably almost as soon a standard is published it starts to become outdated. Consequently all CEN standards are reviewed after they have been published for five years or so to see if they need revision.

So it was good news for the working group charged with the revision of the palletiser and depalletiser safety standard (EN 415-4: 1998) that it fell in an interpack year.

In the case of this safety standard not only have a substantial number of references changed, technology has also altered quite significantly. For example back in the mid-nineties very few palletisers and depalletisers incorporated industrial robots and these were excluded from the standard and users were directed to the general standard on industrial robots ISO 773.

Today the decision to exclude machines incorporating industrial robots seems rather

odd, as a substantial number of machines are either based on one industrial robot or incorporate one or more industrial robots to carry out palletising or depalletising functions.

## On the up

The results of the visit to interpack were very interesting, because while the increased use of industrial robots was very obvious, it was still possible to see the classic types of palletiser:

- low-level palletisers with a moveable transfer plate to take layers of products to the pallet;
- high-level palletisers with fixed position layer forming mechanisms positioned above the pallet;
- simple pick and place palletisers with a pack holding head supported from a gantry;
- column pick and place palletisers with the pack holding head supported on a rotatable column. The classic types of depalletiser were also evident - pick and place depalletisers with the layer of products picked up from the pallet and transferred to an accumulation table;
- low-level sweep-off depalletisers where the layer is transferred from the pallet onto a transfer plate and then lowered to an accumulation table;
- high level sweep-off depalletisers where the pallet is lifted up for each layer to be swept off a fixed high-level.

## Innovation

The committee also saw several innovative uses of classic palletiser and depalletiser mechanisms to produce radically new palletising and depalletising systems. For



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example several manufacturers have taken the roller curtain mechanism, typically found on high-level palletisers, and attached it to both industrial robots and column pick and place palletisers. In addition several manufacturers are now using industrial robots and pick and place mechanisms to form products into layer patterns.

So the challenge for the working group will be to redraft the standard so that not only will it be useful for manufacturers and users of classic machine types, but also for manufacturers and users of the new generation of innovative machine designs.

When EN 415-4 was first written, it was assumed that specific issues for industrial robots would be answered by ISO 773. For example:

- What happens when the power fails and the robot drops its load?
- Do you allow someone to enter the danger zone to 'teach' the robot?
- Does the guarding have to be set 500mm outside the furthest reach of the robot?
- Does the robot head need to incorporate a collision detection device?

However industrial robots are used to perform so many tasks that the general standard cannot be that specific so the committee



Newtec launched its new high speed Case Palletiser the PAL-PACK 4900 at interpack full story page 48

decided that it would deal with all these issues in detail in the new version of EN 415-4.

Another issue that will be looked at in detail is the use and positioning of light curtains and in particular the muting of light curtains. These issues have been brought into sharp focus by two deaths caused by palletisers in the UK in recent years.

In one case the customer had asked the palletiser manufacturer to provide a switch to disable the light curtain and guards and needless to say the death occurred when someone entered the machine while the light curtain was disabled. The second case was similar but in this instance the light curtain had been linked out by maintenance staff because it was faulty.

## Safety

The current version of EN 415-4 only deals with stand alone palletisers and depalletisers and does not look at the additional safety issues that can arise when palletisers are linked to extensive product or pallet conveying systems or when several palletisers are combined in a palletising system.

Where the products are conveyed to the palletisers from a high level there are frequent safety issues if no fixed means of access is provided to enable faulty products to be removed from the conveyors. People can fall off temporary ladders and steps, and when standing on steps they may be able to reach danger zones which would have been well out of reach if they were standing on the floor.

Bringing this into sharp perspective, a recent analysis by the HSE found that ladders accounted for 40 per cent of accidents and that fatalities can occur falling from heights of less than 2 metres.

The revised standard will make it clear that the palletising system integrator is responsible for identifying hazards and

providing suitable means of access and safe guarding to reduce these risks.

When palletising systems combine more than one palletiser or transfer car system hazards may arise if people move from one isolated danger zone to another active danger zone. The new standard will give advice on methods to overcome this problem.

## Clarity

The standards committee will also try to provide clarity on situations when palletisers and depalletisers should be isolated and locked off before someone enters and when it is acceptable to rely on the machine's interlinking system to provide safety.

This issue creates much debate among machine users and manufacturers.

The committee's current thinking is that for "unplanned" operator interventions to remove damaged products or pallets, the operator should be able to rely on the interlocking system and if there is a risk that the operator may not be seen when he is in the machine that a captive key or presence sensing interlocking system should be used.

## Lock off

However the committee plans to emphasise that during a "planned" intervention, for example, isolation and lock off procedures should be used.

So CEN/TC 146 Working Group 3 has got quite a lot to do in a relatively short time - current CEN rules require the revision to be completed within 24 months.

● If you would like to contribute to this process you can do so through the UK shadow committee for CEN/TC146, BSI/MCE 3/3 by contacting Anita Attra at BSI Standards. T: +44 (0) 208 996 7603



End-of-line flexible conveying supplied to a major bakery by Conveyor Systems

# Flexibility for bread rolls

Conveyor Systems has supplied a major bakery with an end-of-line conveying system for packaging various sized bags of flavoured bread rolls into cases or supermarket trays.

The customer required maximum flexibility with products being delivered from four bagging lines and in pack sizes of 4, 5 and 6 units, at speeds up to 50 bags/minute, to two independently operated manual packing lines located on the first floor.

Two continuous vertical spiral elevators are fed with erect cases or plastic trays from ground level towards the packing lines on the mezzanine floor. For maximum flexibility the trays can be split symmetrically if only one line requires trays or asymmetrically if both do. The system is configured so that trays and cases can be packed at the same time.

They are fed from the elevators along powered roller conveyors positioned on either side of a central conveyor carrying the bags.

Bags are fed via elevated belt conveyors which all have manually operated stainless steel dividing chutes to allow products to be split to either packing line.

The bags are then transported along a 13m long x 900mm wide stainless steel framed plastic slat conveyor where manual packers can pick and pack into either cases or trays positioned on the lower powered roller conveyors, which are run in parallel.

The system is interfaced with four high speed checkweighers and metal detectors.

Due to the continuous oven process the controls are configured so that the upper mezzanine floor conveyor system runs independently to the ground floor system so packing can continue in the event of an emergency stop.

After packing the trays or cases are carried to the ground floor for palletisation or to be packed into dollies.

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conveyorsystemsLtd.co.uk

### INTERPACK SNIPPETS

■ **Endoline's** aggressive campaign to grow the company's exports to 50 per cent by 2010 started in earnest at interpack.

The company has created a dedicated Export Sales Division and launched a number of models to expand its Standard Range of case erecting and sealing machinery.

On show at interpack were case formers, pre-set and random semi-automatic case sealers, plus a pre-set full auto case sealer.

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■ interpack saw the **Habasit Group** launch a modular belt with what is claimed to be the smallest pitch on the market.

Its Micro pitch M0870 Flat Top plastic belt is designed for tight and smooth transfers to ensure stability of tall and small footprint products. It is particularly suited for delivery to labelling machines and checkweighers.

The pitch of the belt has been reduced to 8mm from a typical 12.7mm, and provides improved tracking and product stability.

www.habasit.com

■ Hygienic edge sealing solutions for conveyor belts were introduced by **Forbo Siegling**. Its Smartseal and Hoteal processes for food packaging prevent oil, grease, moisture and bacteria from penetrating the conveyor belt, or pieces of 'fluff' from the tension tool protruding and entering the food. Forbo Siegling also introduced two intelligent fabric structures to prevent the need for edge sealing.

www.forbo-siegling.co.uk

### new at interpack

## Speeding up palletising

Taking centre stage on the Newtec Case Palletizing stand at interpack was the PAL-PACK 4900 high-speed palletiser for high throughput requirements. To optimise layer deposits a second elevator has been added. The new patented concept includes CLIPs software to ensure a wide variety of configurations.

It has an intermediate module so that layers are at the required level and a complete palletiser with elevator, sheet dispenser, sheet pallet elevator and an empty pallet dispenser with control system.

High speed robotic layering is conducted by accumulation which optimises layering and adaptability depending on infeed speed.

It can reach speeds of 400 layers/hour and accommodate a variety of pallet dimensions - 800 x 1200mm; 1000 x 1200mm; 600 x 800mm and 600 x 1000mm.

Features include brushless motors and belt transmission. Line tracking, as opposed to turning devices and orienting systems, is used for product positioning, one by one or by group.

Also on show was its new



Newtec's new stretch hooding machine

G300 robotic bag palletiser for low throughputs of about 300bags/hour for bags from 5 – 50kg. Bags enter at the bottom of the palletiser, are grabbed and turned through 90° or 180° depending on the palletisation scheme and a separator sheet is placed on the pallet. Each machine features a control terminal with touch screen and a modem for remote maintenance.

New to the Newtec stable is a stretch hooding machine launched by the company in response to customer demands. Doing away with the need for an

oven or shrink frame, stretch hood has ecological advantages compared with stretch and shrink as no heat source is needed.

Newtec's hood is manufactured from a PE tubular film, mechanically stretched over the load, at speeds of from 60 - 120 pallets/hour.

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Hooding machine: UK representative Inpac Automation

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## ...Turnkey system takes the biscuit

A fully automatic 'Turnkey' robotic palletising system has been supplied by Adpal to a major UK biscuit manufacturer. The system consists of two Newtec Palletisation Pal Vite 410i robots each handling three lines of different products.

The six pallet build positions are served by an automated pallet transfer car which delivers up to three different wooden pallets to the robots.

Cases of biscuits are fed on to a case conveyor to the robot infeeds which features bar code scanning. Cases are picked row by row and are deposited onto the wooden pallet.

Full pallet loads are collected by the twin position transfer system, and transported to an automatic pallet stretchwrapper.

Adpal has also sold a Tosa 115 series power pre stretch machine with fully automatic

rotating arm system to one of Europe's largest confectionery manufacturers.

It can wrap up to 60 pallets/hour, with the load remaining stationary during the wrap process. The machine comes complete with power pre-stretching of up to 250 per cent, plus an automatic film tail cut and heat seal system.

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## Driving functionality

Lenze has announced the availability of a new range of modular frequency inverters, the L-force 8400. The three models enable customers to purchase only the features and functionality they need, says the company.

The BaseLine entry level unit is designed for drive tasks with steady movement, such as conveyors. StateLine is for drive solutions requiring networking across BUS systems and HighLine has added features for more complex tasks. Initially the 8400 range is available in single phase up to 2.2kW and in three phase up to 11kW.

The company has also up-rated its MCS series of synchronous servo motors by up

to 60 per cent with the addition of an axial blower. Increased cooling airflow permits the continuous ratings to be increase.

Lenze has opened a new 'system house' in St Helens to provide support for panel building and automation to its customers in the UK. The facility mirrors existing services already available in Germany and Austria. The assistance offered includes application evaluation, technical advice, a structured proposal and panel building. Lenze application engineers can also write customised software.

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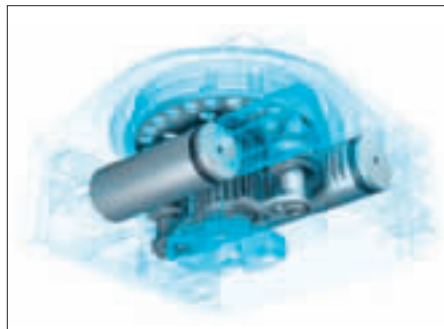
## Rotary index tables provide flexibility

Festo has launched a series of pneumatic rotary index tables which it says provide a flexible and cost-effective alternative to electrical versions.

The DHTG series is particularly suitable for semi-automatic operations such as assembly functions and in applications where a full servo-driven control mechanism is not required. Easy to install, the index tables are available initially in three sizes 90, 140 and 220mm.

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*Festo's DHTG series pneumatic rotary indexing tables provide a simple, cost-effective alternative to electrical models*

## SafetyBUS module saves costs

Pilz has introduced the SafetyBUS p input module which is sealed to IP67 standard. The PSS67 will enable machine builders and systems integrators to save costs and build time because it can be installed direct onto the machine, eliminating the need for a control cabinet, says Pilz.

The module features plug in leads and connectors to aid fitting and maintenance.

IP67 ingress protection is coupled with an extended operational temperature range of -40C to +60C.

Typical applications are in food and drink, and for processing and packaging machines and conveyor systems, says the company.

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## Meech kisses goodbye to static

Meech International's new electrostatic locator, the 983v2, is a lightweight pocket-sized device.

For use by production, maintenance, inspection and quality engineers it can measure static electrical changes over a wide range of voltages, claims Meech.

Among the features is a 'continuous' mode enabling the measurement of fluctuations in charge levels. The range is between 200kV and +200kV at a distance of 150mm.

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## Baking at five thousand metres!

What is claimed to be the highest bakery in the world is set up each climbing season at the Mount Everest base camp in Nepal. Dawa Steven Sherpa, who runs the bakery, produces everything from banana bread, croissants and doughnuts to chocolate chip cookies and apple pie.

The bakery is something of a social centre for base campers who come along to buy their breakfast and for a chat, as well as the warmth and the fine smell of baking.

Dawa says that cooking at 5,350 metres up involves lots of trial and error, although there is no problem with freezing unsold products. Just leave them outside!

The main tool of the bakery is a gas oven which has been designed to be lightweight and compact to enable porters to carry it up and down the mountain.

Nepalese authorities are 'lukewarm' about a commercial enterprise on their beloved Sagarmatha, (the Nepali name for Everest), but the profits all go to a trust fund for local people to help them prepare for the worst effects of global warming, says Dawa.

## //// BOOKSHELF ////

**Baldor** has published a new technical catalogue of its Dodge range of metric mounted bearings. The 380 page guide contains detailed technical specifications of all bearings plus information on accessories such as lubrication and filtration systems and housings. The free catalogue is available in paper or PDF forms.  
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**Bartosz Glowaki**



**Patrick Schmid**

## Who's done what and gone where ...

### S+S Inspection

S+S Inspection has appointed a new technical support engineer to meet the upsurge in demand for its metal detection and sorting equipment.

Electrical engineering graduate, **Bartosz Glowaki**, has been appointed to the new post of technical support engineer, to enhance service to users of S+S equipment.

A graduate of the Technical University of Opole, Poland, Bartosz has a Masters degree in electrical engineering and has considerable experience of industrial computer control and network systems.

### Hapa

**Patrick Schmid** has been appointed as Hapa's Marketing Director, with a brief to further develop the company's global marketing communications programme.

Based at the company's headquarters in Volketswil, near Zurich, Switzerland, Patrick will be leading the marketing team in various strategic and promotional activities. These include the development of the

company's communication channels for Hapa's portfolio of technologies for the pharmaceutical, cosmetics and healthcare industries.

Patrick speaks four languages and has a diploma in engineering. He joins from the High Voltage Division of ABB Switzerland AG

### Ulma Packaging

Ulma Packaging has appointed **Paul McMahon** as Business Manager for Machine Sales. Paul will be responsible for growing sales of the company's range of horizontal ffs equipment within the food industry, with particular focus on the poultry, meat, ready meal, bakery and cheese sectors.

Prior to joining Ulma, Paul spent nine years with Record Packaging starting as Engineering Manager and progressing to Sales Director. He also spent a number of years with Dresser UK and Lucas Aerospace.

### Endoline

Endoline has appointed **Paul Newman** as its new Regional

Sales manager for West and Southern England, handling blue chip clients such as Cadbury's, Mars and Dairy Crest. Previously he held a similar position with Sauven Marking and has 15 years experience in the packaging sector.

### CKF Systems

**Ten members of staff** from conveyor manufacturer CKF Systems' engineering team have successfully completed the Royal Institute of Public Safety and Health Award in Food Safety for Manufacturing.

The Award is designed for personnel working at all levels in the food and drink industry and provides a basic knowledge of food safety and procedures. These include: hazards and methods of waste disposal; the importance of food safety and hygiene practices; reporting procedures; and legal obligations.

CKF says this is part of an on going programme of staff training to ensure key personnel are aware of the latest food safety requirements.

## DATES FOR THE DIARY

**11 - 14 June**  
**Propak Asia**  
Bangkok, Thailand  
www.ppma.co.uk

**17 June**  
**Machine Safety Conference**  
Museum of Science & Industry, Manchester  
www.bara.org.uk

**9 - 11 July**  
**Propack China**  
Shanghai, China  
www.ppma.co.uk

**11 September**  
**New Machinery Directive**  
*PPMA Seminar*  
Marriott Hotel, Northampton  
www.ppma.co.uk

**30 September - 2 October**  
**PPMA Show**  
NEC, Birmingham  
**Including the PPMA's 21<sup>st</sup> birthday celebrations**  
www.ppmashow.co.uk

**9 - 13 November**  
**PACK EXPO International**  
Chicago, USA  
www.packexpo.com

**17 - 21 November**  
**EMBALLAGE 2008**  
Paris, France  
www.emballageweb.com

**20 November**  
**Machinery Risk Assessment**  
*PPMA Seminar*  
Marriott Hotel, Northampton  
www.ppma.co.uk