

BOTTLING REPORT

DOWN-THE-LINE REVIEW OF THE LATEST EQUIPMENT FOR BOTTLING FROM PPMA MEMBERS.

PROCESSING AND BOTTLE CLEANING

Aroma control enhances flavour and quality

Last November's Brau-Beviale exhibition in Nuremberg featured some of the latest process, filling and packing systems for bottled soft drinks, wines, spirits and – above all – beer, the key focus.

Krones introduced the Calypso system, used in the early stages of the brewing process. Since the unit combines a whirlpool and a cooling in a single vessel, with a downstream stripping system, this might at first glance seem specifically designed largely for the mid-range brewery but, as James Johnson, Krones UK sales manager for the Steinecker range of brewing process equipment points out, it is more to do with flavour and quality requirements in the beer than the size of the operation.

"It's about eliminating aromas that may be considered prejudicial to the final flavour," Mr Johnson explains. In particular, he says, the presence of dimethyl sulphide (DMS) is minimised, a preference which is increasingly common in lager brewing.

According to Krones, with the Calypso some 45 per cent of the free DMS and other unwanted aromatics can be evaporated out of the wort before it is cooled, giving brewers greater freedom in selecting malts of varying DMS content. In broader terms it gives them a user-adjustable aroma profile, as well as enhanced ageing stability in the beers produced.

The Calypso is technically uncomplicated, avoiding the need for a vacuum or additional heat, is easy to clean, and offers "exceptional efficiency", says the company. The first unit has gone into the Bischofshof Brewery in Regensburg, Germany, where a Krones ShakesBeer mashing system was also installed in the new brewhouse.

ShakesBeer is said to cut the start-of-process mashing stage to less than two hours. At the same time, says Krones, the quality of the mash is improved and energy consumption reduced.

Throughout the bottling line, Krones is contributing to faster and more efficient changeover for breweries operating short or mid-length runs of different product. Its Raptec changeparts system features quick-release locks, and components are said to be lightweight yet sturdy. Krones claims that use of this system can cut changeover times by up to 30 per cent, giving significantly increased efficiency to the line as a whole.

Among other technology for smaller bottling lines that Krones showed at Brau-Beviale was the new K714 empty bottle inspector. The machine can scan up to 18,000 containers an hour using Distributed Architecture for Real Time (DART) technology. It is operated from a 15in touchscreen, is sufficiently compact to be integrated into existing lines and is also "particularly affordable," says Krones.

Challenge of conversions

When it comes to filling and packaging equipment, line conversions can be among the more challenging installations for equipment companies. Old and new machinery has to be integrated, yet the basic line configuration is likely to be fixed, and at the same time, cost expectations from the customer are probably going to be limited.

The benefit for the customer is that lines can be made more flexible to cater for possible future requirements, as well as current needs. This was the case with a recent KHS installation at Austria's independent Stiegl Brewery. Here, evolving demand meant that a former refillable beer bottle line needed to be redesigned to handle non-refillable 330ml bottles as well as refillable 330 and 500ml bottles.

According to KHS, current line speeds with



Empty bottle inspection: Krones' new K714 scans up to 18,000 containers an hour

the various pieces of new equipment are 28,000bph on non-refillable bottles and 24,000bph on refillable bottles of both sizes. But the company says there is no reason why output could not be raised to 40,000bph for 330ml and 35,000bph for 500ml bottles.

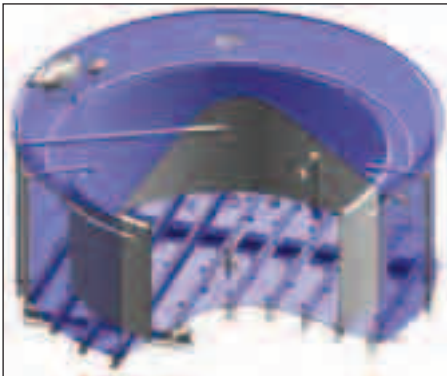
Up to the filling stage, bottles at Stiegl now follow one of two different routes. New single-trip bottles are depalletised, conveyed to the empty bottle inspector, and then directly to the

Consumption figures

Encouraging figures from market research company Canadean suggest that average per capita European consumption of beer has risen by over 2 per cent a year since 2000, and now stands at 66 litres. However, this includes the expanding economies of Central and Eastern Europe. Compare this average with France (less than half this figure at 32 litres) or Italy (31 litres). German consump-



New filler range: Ocme has introduced the Hydra range for PET and glass containers



Aromatics evaporated: The Calypso system from Kronos is said to give better hot-break separation

rinsing-filler-capper block. Refillable bottles are depalletised and removed from their crates before being washed, sent through a rinsing bypass, inspected and finally filled.

In the case of the non-refillable bottles, the Innoclean FR-ZM double-channel rinsing uses two different media: chlorine dioxide for disinfection and sterile water for rinsing. Although the rinsing time is pre-set, KHS says that an ability to select other programmes will allow

other sizes and shapes of bottle to be handled in the future.

For medium-sized beverage companies, KHS has developed the Innoclean EC bottle washer, a compact, single-end machine able to handle between 8000 and 25,000 glass bottles an hour. Features include electronic coupling of all machine drives and a carrier system said to save up to 15 per cent of heat requirements and 20 per cent of water compared with conventional alternatives.

The new spray system used to prepare bottles for the washing process and rinse them after the caustic treatment has been redesigned to make the programme longer and also more intense.

At the very beginning of the line, one option for small or medium-sized filling operations is the low level depalletiser from All Glass, Italy. Supplied in the UK by Intercaps, the Minidepal measures just 4 x 2 metres, and sits just 1 metre over the height of the pallet being unloaded.

The depalletiser can handle either glass or

PET, says Intercaps. Unlike some other compact systems, the Minidepal is said to use high-quality gripping tubes combined with a four-way set of clamps to lock the layers of bottles in place. Up to 10,000 bottles an hour can be depalletised.

FILLING AND CAPPING

Suppliers look to full turnkey capability

With the major international filling equipment companies rapidly plugging any gaps left in their in-house capability to produce full turnkey lines, notably at end-of-line, Ocme clearly thought it was time it reciprocated with some further diversification of its own.

Two years ago, the Italian company launched its Hydra filler and has produced models for water and soft drinks in PET in a speed range extending from 12,000 to 52,000bph. One recent order from Saudi Arabia's Makkah Water is for a tri-bloc rinsing, filler and capper as part of a complete 52,000bph turnkey line for 330ml, 500ml and 1.5 litre PET bottles.

From Ocme UK's perspective, a Hydra installation at Villa Soft Drinks in Sunderland is even more important. Here, 1.5 litre PET bottles are filled with soft drinks, still and sparkling water at speeds of over 12,000bph by the monobloc ISO40-60 10 filler, which uses an electro-pneumatic filling valve to manage the different filling phases. Ocme points out that, since the air return is separate on each valve, the risk of contaminating the main tank is avoided. Straight gravity filling is standard, allowing extremely light preforms to be used.

Now the Hydra range has been extended to include glass bottles. The Hydra S, designed for spirits filling, is very similar to the standard Hydra N, but includes an electro-magnetic actuator on the upper part of each filling valve. This activates the opening and closing to exhaust returned air.

Other features of the Hydra S include a light depression in the tank, to ensure that no product is wasted. For high-value product, the level in each bottle can be corrected automatically, returning any excess to the tank after the filling cycle is complete.

As Ocme points out, the level can be affected by ambient temperature ranges within a single

show upward trend for beer and wine

tion has, apparently, declined but is still at an impressive 115 litres a head.

When it comes to soft drinks, there are significant differences between Eastern and Western Europe. While annual per capita consumption of soft drinks in Western Europe is put at 240 litres, the average in Eastern Europe is just 94 litres. In this area, the growth in functional components, including

sensitive additives and ingredients, has favoured the rise of processing and filling options such as cold aseptic technology.

Wine industry statistics are also positive. Industry estimates forecast growth in global wine consumption to 31.66 billion x 75cl bottles by 2008. Some 60 per cent of wine production will come from France, Italy, Spain and the USA.

day or, more usually, from summer to winter.

Filling valves can be removed quickly and easily, says Ocme, with just a single half-turn on one screw required to remove two heads.

When Austria's Stiegl Brewery came to choose a filler, it selected the KHS InnoFill DRS-ZMS pneumatic pressure system. This computer-controlled unit provides both sensitive filling for beer and options for bottling soft drinks should this need materialise in future. This flexibility includes bottle size and shape as well as the filling technology.

The InnoFill's 108 valves offer an extremely low-oxygen filling process, says KHS. They use probes to determine exact filling levels, preparing the way with triple pre-evacuation and double CO₂ purging. According to the equipment company, CO₂ consumption on the DRS-ZMS is an "outstanding" 230g/hr of beer, while oxygen pick-up is just 0.02mg/l.

Streamlined changeover times are said to be a further advantage of the filler when changing either product or bottle format, with central filling level adjustment guaranteeing high machine availability, says KHS. Stiegl also chose to integrate the machinery manufacturer's ReDiS remote diagnostic and maintenance system.

The need for different handling of refillable and non-refillable bottles surfaces again at the capping stage. At Stiegl, ring-pull caps are applied to the 330ml refill bottles, while standard crown closures are applied to the same non-refillable bottle size and 500ml refillable bottles. For convenience, and to target a younger audience, the 330ml single-trip bottles use the twist-off crown closure.

For induction foil liners on wide-diameter closures, Relco UK has introduced the MICS-2.1 automatic cap sealer. This joins the existing range of MICS models, but has a higher output power and a sealing head which is 700mm long, compared with the 400mm supplied by some other companies. As induction heat sealing has developed, says Relco, this trend towards shorter sealing heads has caused problems for larger closure diameters, where heat is required across the entire area of the foil.

The design of the MICS-2.1 means that longer dwell time under the induction head is possible, allowing the foil to heat up fully without burning the edge.

In filling equipment, Stork Amsterdam International has traditionally enjoyed a strong position in both the spirits and dairy industries in the UK. The first of Stork's new generation



Aseptic flexibility: Neck ring isolator from KHS allows a variety of container shapes to be handled

ultraclean machines for fresh milk will be ready for installation later this year and, while Stork UK managing director Tony Dignam cannot give too many details, he says that "a few machines" are due for delivery to Wiseman's dairy near Bridgwater, Somerset, in June of this year.

Cold aseptic

While working on this ultraclean option, Stork has also joined the ranks of those equipment suppliers offering turnkey aseptic filling lines, including bottle blowing. In Stork's case, the bottles produced and filled are three and six-layer HDPE. Three-layer tends to be used for low-acid milk drinks while the six-layer structure is more appropriate for fruit juices, where there is a need to protect the vitamin content as well as shutting out ultra-violet.

Five of these Tri-tec aseptic lines have been installed around Europe over the past year, says Mr Dignam: two in the Netherlands, and one in each of Poland, Spain and the former Yugoslavia. These are all for low-acid milk.

But the biggest European success story for Stork has been the Hero operation in Breda, Holland, producing the brand's single-serve fruit drink which has taken off in a number of countries. The original 12,000bph line was supplemented by a further 18,000bph line and now Stork is installing an additional 24,000bph line in order to help meet demand.

The problem for Stork in the UK is that, while milk processors have moved away from

the type of hydrostatic tower traditionally used for sterilising product, they have not yet made the move to aseptic. Instead, points out Tony Dignam, long-life milk is currently imported from the likes of Campina. It may take an independent entrepreneur to set up an aseptic contract filling line in the UK, he speculates, for branded flavoured milk drinks.

In the meantime, Stork will be spelling out the benefits of its system in industry seminars throughout the year aimed particularly at the low-acid milk market. In the UK, at least, Mr Dignam reckons this will be the first part of the beverage market to move this way, since the fruit juice market is so heavily dominated by cartons.

The Tri-tec line offers a number of optional features. Bottles can either be blown in-line or shipped in and sterilised before filling. If blown in-line, the bottles are conveyed into a temperature-controlled silo and the bottlenecks can then be trimmed inside the aseptic area of the filling machine. If bottles are shipped in, they are decontaminated in hydrogen peroxide solution, before being air-dried.

Post-fill, Stork has similarly extended the processes contained within the sterile area. Now, rather than necessarily sealing the filled bottle with a foil cap, before fitting a screw-top overcap in the non-sterile area, the screw cap can be fitted directly inside the filler enclosure. This allows manufacturers to distance themselves from a look that they may think is too close to that of UHT products, Tony Dignam explains.



Uninterrupted labelling: New eight reel magazine allows Krones Controll labeller to run for four hours



Changing to p-s: Herma 400 slimline applicators can be installed on existing wet-glue rotaries

Once outside the aseptic area, the sealed bottles are labelled or – most probably – sleeved, date-coded and then placed in their secondary packaging.

Having in the past offered both wet and dry sterilisation processes for cold aseptic filling, KHS has chosen the more economic dry route with the neck ring isolator which it showed at Brau-Beviale. The class 100 cleanroom atmosphere is only required in and around the bottle mouth, says KHS.

The latest system reduces both the amount of hydrogen peroxide used in sterilisation and the consumption of sterile air, the company argues, and minimises the amount of chemicals used to clean the line.

LABELLING

Trialling unusual and diverse dress concepts

In labelling as in other areas of the bottling line, a supplier's ability to organise confidential production-type trials and simulations of a specific product can make a huge difference to clients and materials suppliers alike.

For example, during the early part of last year, Krones Germany added a labelling area to its filling and process pilot plant inaugurated in the spring of 2005.

The labelling area of nearly 700sq metres includes a conference room, staff offices and a laboratory where properties of the label, glue and container can be analysed. Thomas Lang, head of R&D at the labelling pilot plant, explains the increased demand for this type of analysis from bottlers and suppliers of label materials and adhesives.

"Dress concepts are getting progressively more unusual and diverse, but at the same time, bottlers want their labelling processes to be faster and more affordable," he says.

Tests can be run, for instance, on different types of glue, the dispensing properties of pressure-sensitive labels and web characteristics. Simulations can also include the removal of very thin labels from their magazines. "We can simulate almost all labelling processes, and in

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a further step concentrate on how the labelling, dating/coding and inspection functions interact," says Mr Lang.

As at other stages of the line, an ability to run uninterrupted for longer periods is a growing demand in labelling. Kronos has developed a magazine for its Controll labeller capable of holding up to eight label reels for up to four hours continuous running so, explains the company, extending to reel-fed wraparound labelling the benefits of automatic magazine feed already applied to wet-glue.

Move to pressure sensitive

One change that can have a massive impact at the labelling stage is the move from wet glue to pressure sensitive. Herma UK says that the compact Herma 400 Slim Line applicator allows bottling lines using wet glue to switch simply and cost-effectively to pressure sensitive by adapting existing rotary equipment.

Since the applicator has a built-in control unit, no separate control cabinet is required, says Herma. This means that up to eight application stations can be accommodated in a single rotary machine, so that front, neck, rear and additional special labels can all be applied. But it also means that a second applicator will always be in standby mode, ready to take over when the end of a roll is reached.

Depending on the type of take-up and unwinding method used, the Herma 400 can reach speeds of 120 metres a minute, which translates as around 60,000 x 120mm labels an hour. At all times, the applicators are synchronised with the rotary machine, even during acceleration for start-up and deceleration for shut-down, the company points out. Tolerances on positioning accuracy are put at ± 0.3 mm.

The newest entrant into the roll-fed labelling market is Ocme. Better-known as an end-of-line specialist, the company has built on its recent decision to launch a new range of fillers, and chose the Paris Emballage show to present its Sagitta labeller.

Flexibility is the key says Ocme, with no need for time-consuming parts changes to handle bottles between 330ml and 3 litres. Independent movement in the labelling unit and a synchronised fixing system in the transfer system mean that resetting is not required for format changes.

Features including temperature adjustment mean that a wide range of adhesives and film or paper label stock can also be run on the Sagitta. Controlled by three brushless servo



Coding while hot: Linx laser system creates a clean smooth mark on glass containers

drives, for machine speed, unit speed and label unwinding, the labeller will apply up to 30,000 labels an hour.

In print-apply labelling it can be a challenge to ensure all packs come off the line with correctly formatted labels. "Customers often want instant changes to labels to suit their logistics systems, and the print apply equipment at the end of the line is usually at a good distance from the control point," explains Codeway, which now offers a control system said to solve these problems.

Originally developed for Silver Spring Mineral Water Co, the Codeway OCL Online Controlled Labelling system uses simple stainless steel IP64 terminals at each print-apply labeller, linked to the computer controlling the line. This PC has its own copy of a master label database containing all data and formats.

To set up labelling for a new batch, the operator enters its item code on the terminal through the keypad or by scanning a bar code.

When the Codeway OCL programme on the line PC receives a code, it checks the master database for any updates and synchronises its own local copy of the database. It then calculates best before dates and sends the label information to the printer.

At the same time the program also sets up a Codeway Checkrite system to scan the packs coming off the line and validate their bar codes. Local databases allow the lines to continue even when there is a server or a network failure while a hot spare computer can be switched to any line at any time.

CODING

Hot glass coding lifts legibility and security

Beverage brands looking for direct coding on glass for traceability, promotional or security reasons will be interested in a recent laser application at glass manufacturer O-I. The Harlow plant has installed Linx Xymark laser coders over its production line, where bottles are coded with a traceability code while they are still red-hot from the forming process.

Glass temperatures during production reach 650deg C, while the surrounding area is heated up to around 70deg C. With its IP66 construction, the Xymark BBH is able to withstand these gruelling conditions, while the laser optics are designed with a long lens-to-product distance, and a flexible arm houses an extended beam delivery system.

Mounted above the glass production line, the BBH is able to keep pace with manufacture, laying down a single-line code 2mm or 2.5mm high at speeds up to 50 metres a minute.

The principle behind this hot glass technology is that the best laser coding results are achieved when coding takes place close to the point at which the bottle or jar is formed, while the glass is still red hot. This generates a clean, smooth mark that helps avoid the creation of microscopic fissures that occur when lasers are used to mark cold glass.

The dot-matrix code is also unlikely to be confused with subsequently-applied production codes, says Linx, and does not run the same risk of damage as an ink jet code.

Represented in the UK by The Needham Group, Macsa Laser has extended its K-1000 range with the launch of a model aimed at high-speed bottling lines. The Macsa K-1060 SHS (super high speed) is said to offer laser coding speeds 60 per cent higher than the current industry standard. Its line speeds of 500 metres a minute on certain substrates make it certainly one of the fastest coders available, says Needham.

Also from Macsa is the KIP-1000, which offers IP65-rated protection for use in those harsh environments found in some beverage operations. Like all Macsa's lasers, these coders apply the company's own Crystal Font, designed for optimum legibility.

In continuous inkjet (CIJ), Needham has Citronix coders, including the new ci2000. Like Macsa's KIP-1000, this is designed with an IP65-rated enclosure, which withstands tough, wet environments and allows full washdown.

Looking for complete symmetry across laser and CIJ, Needham can also now supply the Citronix Ultra High Speed (UHS) system which, like Macsa's SHS, is said to break records in high-speed coding. As such, it is especially well-suited to the needs of bottling and canning lines, says Needham.

Like all Citronix coders, the UHS has SmartClean printhead maintenance as standard. Results are said to include cleaner start-up, more efficient operation, reduced downtime and improved print quality.

CARTONING AND SECONDARY PACKAGING

Tubes and cartons see growth for gifts

One of the fastest-growing sections of the drinks industry is premium spirits in cartons or tubes for the seasonal, gift and travel trade markets. Often, the secondary packaging uses sophisticated graphics and a special finish, and so needs to be handled with care on the packing line.

Now under development at Dutch manufacturer Langenpac is a vertical system for loading individual spirits bottles into this type of



In-fridge alternatives to board: Frizzpack for cans (left) and Geopak for bottles, both developed by Cermex

carton or tube. The aim, says UK agent Springvale Equipment, is to provide a mid-speed alternative to the 360cpm horizontal machine that it has been supplying to the likes of Diageo and Allied Distilleries for the past 15 years.

In fact, says sales manager for Langenpac equipment Victoria Marshall, with the order placed just a few months ago, the first vertical machine for tubes is currently under construction. Langenpac is also refining the design for a carton-loading version. "The next step is to go to a machine with two different infeeds which will handle both tubes and cartons," says Ms Marshall.

She explains that the top-loader is a cam-driven mechanical pick-and-place system, effectively turning through 90deg the mechanism used on the side-load cartoner.

A current design focus for Langenpac is the gripper head. "Any system for the whisky industry needs to be able to handle the weight and the line speed," she adds, pointing out that cartoning concepts transferred from other industries have not always addressed these issues.

Another feature which will endear the Langenpac system to the independent distillery market is the leaflet/booklet inserting station giving brands the opportunity to create added value with a booklet about the product. Rather than simply slide a small leaflet down to the bottom of the carton or tube, the system curls the booklet around a mandrel, then releases it to sit around the shoulder of the bottle.

Many of the successful premium spirits brands are filled and given their prestige outer packaging in relatively small operations. "We recognised that the big, side-load machine was

over-the-top for them," says Victoria Marshall. The vertical machines will be able to maintain speeds of up to 250bpm, she says, although some lines will only require 150bpm or thereabouts.

Another automated solution currently in development is at the opposite end of the bottling market, where small PET or glass bottles for soft drinks or water are bought and stored in multipacks. The new system, called Geopak, is from Sidel company Cermex, and aims to provide an alternative to the all-board Fridgepack.

Board box expensive

The completely enclosed printed board box is expensive, says Cermex. For bottle multipacks, it can be replaced with a combination of a traditional shrinkwrap with pre-cut punchline and a printed sheet lying over the top of the bottles. As the company puts it: "You no longer have to tear open the whole pack to get at one bottle." A similar concept, called Frizzpack, has been developed for cans.

Concerns about the quality, convenience and branding potential of secondary packaging were also behind a new launch for KHS at the Brau-Beviale show. The new partition inserter is mounted above product conveyors, and can be used to place partitions into collations of 6, 12 or 24 bottles.

The system can be used on wraparound case-packing lines or tray/shrink combinations, helping to protect the product and stop labels and packs rubbing against each other. KHS says the inserter will run at speeds of up to 60 partitions a minute.



High speed sleeving: Cama machine produces 'upper bridge' style multipacks at speeds up to 250 a minute

Machine suppliers have also been working at ways of ensuring that the basic quality of the shrinkwrap itself is high enough to satisfy brands and retailers.

For example, Ocme's medium-to-high-speed Vega shrinkwrapper series has been given an improved shrink tunnel. This is especially important in the beverage industry, says the company, where the trend is away from cluster packs and towards shrink multipacks. The tunnel is also available in a wider version suitable for film-only packs. Running across three-lanes, the Vega is capable of wrapping 450 packs a minute, according to Ocme.

For small-size plastics bottles containing dairy and juice products, material-efficient multipacking systems include Cama's "upper bridge" sleeving machine. This grips the neck of each bottle through die-cut apertures in the blank, which is folded round and hot-melt glued to form an upper surface for branding.

The sleeving machine is operated by six servo motors. Since timing belts are used in the transmissions and drives, this ensures high speeds and low noise, says Cama. The product infeed uses starwheels and a clamping system, with semi-automatic size change. An IP65 washdown model is available, and speeds can be up to 250 packs a minute on the version with a rotating feeder.

Dutch manufacturer AmbaFlex, represented in the UK by Conveyor Systems, has been developing new versions and applications of its spiral conveyor.

Starting out with systems for secondary packaging, the company diversified into spiral conveyors for individual packs – including

unstable petalloid-base PET bottles – in 2002. The SpiralVeyor uses up to four separate belt tracks. "Having four tracks adds cost," managing director Wouter Balk admits, "But it also means you have four times the strength."

At Brau-Beviale, AmbaFlex introduced AccuVeyor, which sees the company striking out in the new direction of accumulation conveyors. The system can act as a buffer either for bottles and cartons post-fill, or for secondary packaging. Here, the separate belt tracks can be used to accumulate successive rows of product, and can offer between two and five minutes of accumulation time.

END-OF-LINE EQUIPMENT

Beer bottles next on retail-ready agenda

The UK's retail-ready packaging (RRP) agenda, favouring smaller unit loads which can easily and quickly be stripped down to a shelf-ready tray, has so far hit food and household goods hardest. Many beverage cartons are already in merchandising units, and for soft drinks and alcoholic beverages in glass and PET, retailer pressure to provide RRP cannot be far away.

One corrugated supplier predicts that the push to enlist ales and other beers in individual bottles will start early in the New Year. The same category managers at the leading retailers will then turn their attention to wines and spirits, according to these reports.

Cases which need to be cut down with a knife will no longer be acceptable. Packs with perforated tear-out sections, or tear-tape to provide a clean edge, may offer short or even medium-term solutions. But if retailers hold out for a tray-and-hood combination, drinks companies that currently use shrinkwrapping for transit could be in for a nasty surprise.

Even parts of the spirits industry may be affected, says Dick South, area manager at Cermex UK. With some suppliers of retailer own-label spirits currently shrinkwrapping collations at speeds of 50 a minute or more, an enforced move to tray-and-lid operations running at a modest 25 cycles a minute would represent a substantial increase in costs.

Already, says Cermex, retailer preferences for smaller case sizes mean that demand for four- and even three-bottle packs is increasing, rather than the traditional six-bottle case. Clearly, this makes the case easier to manipulate. But the theory is also that the shelf-stacker is more likely to be able to put the entire contents on-shelf, rather than having to return surplus bottles to back-of-store.

With fillers looking for automated solutions which would allow them to produce interim as well as fully retail-ready packs, Cermex has launched new concepts for both erecting and side-loading cases and trays.

The recently-launched F550, for instance, will erect full and half RSC cases. But it will also assemble a low tray and half-case combination, which can be separated at point-of-sale to produce a low on-shelf tray. Speed is said to be up to 30 cases a minute.

Adding options to its own Altair wraparound case-packing system, Ocme is now offering automatic insertion of bottle partitions using robotic pick-and-place. This provides distinct space-saving benefits compared with traditional insertion systems, says the company, and also means that low-cost pre-formed inserts can be used.

Automated blank magazine

The Altair range includes models forming between 30 and 100 cases a minute. Like other suppliers, Ocme has responded to customer requests for longer uninterrupted running with the introduction of an automated blank magazine that can be loaded directly from a pallet. This has effectively reduced the need for operator intervention to zero, the manufacturer claims.

For crate-loading, KHS has the Innopack

PPZ twin-axis system. This not only allows for accurate control as collations of bottles are loaded into crates, but also provides easy changeover. The current gripper head and centering frame can be parked, and the new set of tools gripped and installed in sequence, all automatically. Manual intervention is only necessary, says KHS, in order to connect hoses for the power and air supplies.

The PPZ system was installed as part of the glass bottle line redesign at Stiegl Brewery, Austria. Here, the system layout allows for additional sets of gripper tooling in future, should the brewery introduce new bottle or crate formats.

KHS emphasises the fact that with the PPZ, as with all its dry-area packaging equipment, control is handled by a single PC. By using this single source approach, and transferring data to all other components via the latest bus technology, the supplier says that interface problems are eliminated. Potential trouble-spots can also be quickly pinpointed, it adds.

Palletising

As the distributor for French-based Newtec Palettisation, Adpal has been behind a few significant recent installations in the bottling industry. These include a Newtec Pal-Vite 1000 two-axis gantry robot commissioned earlier this year at William Grant & Sons near Glasgow. William Grant is one of the largest independent distillers of whisky in Scotland, Adpal explains, and pallet loads have to be of sufficiently high quality for export.

Andrew Lawless, sales director at Adpal, says: "The Newtec system has large grippers picking up a full layer of cases of bottled whisky on each cycle, from 20cl up to 4.5 litre bottles, at speeds of up to 220 layers an hour."

In a further Newtec installation, one particular UK bottler of soft drinks took its fourth Pal Pack 4700 layer palletiser. The machine is handling shrinkwrapped collations of bottles.

The customer was already happy with the previously-installed machines' ability to cope with 24-hour production, seven days a week, but also required fast changeover, since production runs can sometimes be short. Changes can be made to the 4700 via a 10in colour screen, which doubles as a diagnostic display. Euro, GKN Chep or half-pallets can be loaded, with or without layer sheets. Typically, the machines form around 35 pallets a minute.

Adpal also supplies robotic palletisers and moving systems from Costi, Italy. ■

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Relco UK

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Springvale Equipment

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Stork Amsterdam International

T: 01895 251621
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For full details of all PPMA members able to supply bottling machinery, consult the PPMA machinery finder service, tel: 020 8773 8111, or visit www.ppma.co.uk