CODING AND MARKING

REPORTS ON DEVELOPMENTS IN PRINT-APPLY LABELLING, INK JET PRINTING, LASER MARKING AND SOFTWARE FOR CODING AND MARKING OPERATIONS

PRINT-APPLY LABELLING

Higher speeds cope with packs in a bunch

One of the limitations on print-apply labelling speed – the fact that labels are usually printed in the interval between arrival of cases of other packs – is now being tackled by Danish manufacturer Easyprint with the introduction of the Communicator continuous motion thermal coder.

The system prints labels as others are being applied, which means that even if packs are bunched up and touching, consecutive labels can be applied by the host labeller at line speeds up to 40 metres a minute, points out UK and Eire distributor On-Line Coding.

In fact, print-apply speeds of 300 labels a minute are possible and, with print speeds up to 1.4 metres a second, the Communicator can also be employed coding directly onto film on web-fed equipment such as flow-wrappers and vertical form-fill-seal machines.

The printer has a touch screen controller with Windows-based on-board format design software, including full "qwerty" input, allowing the user to generate print formats via the screen with no need for design software or laptop PCs. Once written, the label format can either be saved to the 64Mb internal memory or to an external flash card, also 64Mb.

On-Line Coding and labelling machinery specialist Pals Labelling have worked together to integrate the Communicator into a conventional intermittent motion applicator, more than doubling print-apply speed of the Pals 50HSH machine.

"The new GPX system has been developed following requests from our customers in the food industry," explains Pals' sales director Peter Lees.

"They typically use the 50HSH labelling machine with a variety of thermal transfer print systems and are encountering problems of line stoppages due to packs passing too close together on the conveyors. Despite attempts to impose line discipline, some packs will arrive adjacent to each other, with the inevitable consequences," he points out.

Improvements in productivity

"Our new system overcomes these problems and when linked to our existing multi-head machines with auto-changeover can lead to significant improvements in productivity. Potentially, these can be as much as 100 per cent. Perhaps as important, this can be achieved at a relatively low level of capital investment and with little or no impact on existing line equipment."

The new GPX system can be fitted to all new Pals 50HSH machines and retro-fitted to existing units on site.

Meanwhile, while Sato remains one of the most commonly used print engines in other integrators' print-apply and thermal/thermal transfer printer ranges, the company is reinforcing the range of equipment under its own name.

Sato UK has initially introduced three application systems on its 900 range. The 910e uses a non-contact air-blow system for more easily damaged products, but remains an accurate means of label placement, says the company. Speeds reach up to 80 labels a minute.

Print-apply: *Above: Sato 920e. Left: Pals GPX with Communicator printer*

For tamp application, the 920e has a longer reach than the other two series 900 variants. More suitable for outer case labelling, this unit can apply labels at speeds up to 40 a minute. The 930e has a similar maximum speed, but this time uses touch application. This makes it especially useful for handling long or unusually-shaped labels.

Predictably, there is a choice of print engine. Sato's 900 series spans a thermal transfer printer with a resolution of 203dpi, offered with the option of 4 or 6in print widths, a 306dpi thermal transfer printer with 4in print width and a 203dpi direct thermal printer with 4in

print width. All applicators are available in left-hand and right-hand versions.

Imaje has continued to build on the range of print-apply systems it acquired from Markpoint a few years ago. National sales manager Steve Ellison explains: "In September we launch our new 2000 range, including some world-firsts which should make life much easier for a lot of people."

These features include an ability to switch between 4 and 6in label widths, or 200 and 300dpi, without having to buy a new machine.

Future proofing

Says Mr Ellison: "The Imaje machine can take either size head, which itself is a low-cost part. It gives customers great future-proofing. You can change the head in under a minute, and the machine configures itself automatically to the selected printhead width and resolution. I've never seen this feature anywhere before."

Changing the drive roller in the 2000 series is equally problem-free, Mr Ellison claims. "These have traditionally taken a long time to change, and on other systems tend to get attacked by knives! Here, it can be done in less than a minute."

Imaje makes much of the fact that it uses its own technology at both the 'print' and 'apply' stages. Mr Ellison notes: "There's a trend for more and more suppliers to use commercial print engines, so you're really dealing with a re-seller or an integrator. We've said we'll develop our own technology and monitoring systems. We are the manufacturer as well as the sales and support team."

Whether blow-apply, tamping or another system, the label applicator options are all attached at the same point. Just three bolts hold each applicator head in place, says Mr Ellison, with a fourth for the appropriate connections, such as air and power. Importantly, he adds, this means that any change can be made without skilled personnel.

The 2000 range comes with two communications points, a USB port, wireless LAN slot and retrofittable RFID, all built-in. The 300dpi printer manages print speeds up to 300mm a second.

The reduction of operator intervention is increasingly a priority for manufacturers in all high-volume industries, but it becomes an even higher priority where labelling takes place in an area with a level of radioactivity. This was the case with a recent installation by Sessions of York, where a major pharmaceutical customer wanted to apply labels at various stages on the line, while keeping operator involvement to an absolute minimum.

Pallet labelling: *New Logopak 920PFM machine can handle 150 pallets an hour*

A bank of four SPA 924 print-apply machines in twin configuration generate and place hazard-warning labels to products of various sizes. PLC controllers and automatic pack recognition systems mean that format changes can be initiated automatically. Once sealed, packs have final destination details applied by a fifth SPA 924, and pre-printed consignment details are added by a Sessions SA350 applicator.

Turning to print-apply

Manual labelling – even with large labels – is increasingly turning to print-apply. For example, Atwell Self-Adhesive Labellers has recently supplied an animal feed producer with one of its Series 3000 print-apply machines to identify 25kg sacks, previously labelled by hand using sheet labels printed off line.

Installed over the bag handling conveyor, the machine incorporates a 300dpi thermal transfer printer with print width up to 100mm and is linked directly to the customer's main information database.

At the start of a production run the product description, list of ingredients, batch number and date, together with a bar code, are sent direct to the labeller, which then automatically prints and applies the labels, which measure 100 x 210mm.

One specialist area of print-apply, pallet labelling, has always had its own particular needs. For example, pallet labellers to handle stacked pallets and to provide high speed adjacent side labelling have recently been added to the Logopak 920 range.

The 920TPF can label double or triple stacked pallets with up to six labels per load – two on each pallet – at speeds of 60-70 an hour, using a raising and lowering device that aligns the application head with each pallet. The 920PFM provides adjacent side labelling from a single machine, using just one pallet stop position, at speeds up to 150 pallets an hour.

It has a slide arrangement to move the print apply head accurately and with minimum stress from side-to-front or side-to-rear labelling positions. As a result, no additional air cylinder is required for front or rear of pallet application, eliminating stress on the applicator arm and improving reliability.

Both machines use one or two pallet stop positions to maintain labelling security, as Logopak UK general manager Wilson Clark explains:

"Rather that use 'on the fly' labelling, Logopak machines use pallet stops to ensure security of application or bar code scanning. In addition, unlike 'on the fly' labelling, there is no risk of applying two different SSCC numbers to the same pallet and being penalised by retailers," he says.

The latest pallet labeller from Advanced Labelling Systems (ALS), the PLU 4138, prints and applies up to three A5-format EAN labels onto adjacent sides of a pallet at speeds up to 120 pallets an hour. Its tri-axial applicator allows loads to be labelled with just one stop of the pallet. A scan then confirms each code.

For a wider range of applications, from case to pallet labelling, ALS has its ALX 3038 and 3188 high speed, heavy-duty systems. Using tamp-blow and air-blow systems, they are said to be capable of applying case labels at speeds up to 100 a minute.

INK JET PRINTING

Quality focus for coding on outer cases

It is no longer enough for suppliers of direct outer-case coding systems to dwell on 'code quality' in the abstract. There is a widespread understanding in the industry, both among suppliers and their customers, that the overall reliability of scannable codes depends on the complete

system: which means handling and validation as well as the coding itself.

Indeed, suppliers have to spend just as much time stressing the more mundane business of transporting the traded unit securely and accurately to the print head.

Validation packages

The same is true for validation packages, which only a few years ago might have been considered an optional, and rather unnecessary, extra. But with most consumer goods companies having suffered at the hands of punctilious retailers – or knowing someone who has – these types of feature have shifted from the 'optional' category to 'essential'.

Alpha Dot says it has upgraded its Bar Code Validation Kit to "ensure 100 per cent bar code readability on all cases". Because checking takes place immediately after printing, damage from faulty bar codes can be limited. The company adds that this on-line system can be supplemented with its own off-line analysis equipment for checking overall bar code quality.

Alpha Dot says it is the first UK company to be awarded Accredited Solution Provider status for bar coding by e.centre, the body which co-ordinates supply chain developments and standards in this area.

The validation and handling systems can be integrated into Alpha Dot's Multi outer case coding range which as the name suggests, combines a number of ink jet coders. In particular, it targets the market for coding onto two or more sides of the same case.

Whether control is remote or local, Alpha Dot says its Connect software will help to ensure that inputted coding information is accurate, thanks to the use of password protection and user level security on the controller.

Multiple coding: *Alpha Dot's Multi system can print on both sides of the case*

Domino has announced a modular coding station that consists of three core elements: on-line digital printing with a number of coders or print stations, product handling and code validation. "By combining these three elements, Domino is providing a complete solution previously unavailable to our customers," says outer case coding business development manager Mike Hurst. "We have worked closely with industry bodies and retailers to ensure that the codes generated meet industry standards."

Increase in quality

Also taking aim at the direct outer case coding market is Imaje's new 4040 CIJ coder, said to represent a significant increase in quality.

Using a combination of high resolution and very dark, oil-based inks for high definition, the company believes the 4040 will induce many in industry to move away from using pre-printed cases. Like Alpha Dot, Imaje says its system complies with e.centre specifications, recommending the application of two bar codes on each case, on opposite sides, plus 100 per cent inspection of the code.

A data matrix coding option has been added to Imaje's S8 coder in a move designed to appeal to manufacturers of small items such as engineering components. The data matrix code is small, compresses more information than a traditional bar code, and even if up to one fifth of the code is damaged or missing, the data can still be retrieved.

Imaje is now combining low-level warnings for consumables on coders such as its S8 CIJ with what it calls "very efficient solvent-recovery systems". Emissions are condensed internally and reused, resulting in reduced running costs. "In head-to-heads with other suppliers, when solvent consumption is monitored, we come out offering noticeable savings," says national sales manager Steve Ellison.

Along with the other major suppliers in the coding market, Linx Printing Technologies can offer both ink jet and laser. Linx confirms that the new generation of scribing lasers has begun to offer affordable alternatives to CIJ. But as senior product manager Charles Randon explains, pigment options constitute a major benefit for ink jet: "Choices include inks of different colours, removable inks, fluorescent inks, food-grade inks, colour-change inks, u-v codes and many more."

Since these suppliers have begun to offer a range of laser, as well as ink jet, systems, they have also been more willing to acknowledge the cost of consumables with ink jet. As Mr Randon puts it: "It is vital when planning the purchase of a CIJ printer or laser coder that the true cost of ownership is taken into account and not just the initial cost of purchase."

Drop-on-demand remains an important area.

Pigmented inks broaden the choice

Most coding devices transfer ink in one way or another to the article being coded and, in practice, the formulation of the ink is as much about suiting the characteristics of the coder as it is about suiting the application of the ink to the surface being printed.

Cap Coder's 'Pulsar' system (right) avoids the use of solvent and dye-based inks, allowing pigment-based inks to be employed, which allows the use of specialised inks of any colour to be chosen to suit the application.

For example, a major tyre company in the US is now using the system to code tyres after testing, using a rubber-based ink that is subsequently vulcanised. This, says Cap Coder is a case of getting the ink right and devising the way to apply it, rather than the other way round.

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Here, Imaje has introduced its Crayon Plus low-cost unit. This is able to generate one or two lines of print, and can be positioned up to 15mm from the case, says Imaje, without compromising code quality. A self-contained system, it comprises a single module with built-in keyboard and print head, using a 400ml pre-pressurised ink cartridge.

Videojet continues to address the needs of industrial users with its 320Si, launched at the Total exhibition, aiming at the middle ground between CIJ and drop-on-demand. This system uses only one ink, rather than an ink/solvent combination as with CIJ.

"This ink can be specified to be either fast-drying or slower-drying," says large character marking specialist John Pritchard. "By combining this with up to four multiple heads, it takes us into core drop-on-demand territory." Unusually for this end of the market, the system can be IP65-rated, he says, and would be especially suitable for direct coding onto extruded products.

Needing to operate in similarly tough conditions, seven IP9000 printers from ATD Inkjet Systems have been installed by building supplier Jewson at its timber import facility in Hull docks. Another three have gone to a similar operation at Newport.

The length of each piece of timber is calculated and communicated to the coder. This figure, as well as a works order number, is coded directly on to the end grain.

LASER

Broader ranges answer multiple customer needs

There is a new vigour in the laser coding market, greater confidence and more of a competitive edge now that most of the major players have a number of different systems to suit the various segments of the market.

Videojet's acquisition of Alltec earlier this year is sure to galvanise the sector still further. Videojet UK managing director Howard Williams is understandably upbeat: "The laser market has changed. The cost for switching from CIJ to laser in a fairly basic application has really been reduced, if you look at the running costs."

He estimates a six-to-12-month payback period, and characterises laser – along with online thermal transfer – as the fastest-growing coding technology.

Steered beam: *Print from the Viodeojet S60 laser coder can be read by vision systems*

Taking into account the sales of the German company, Mr Williams now says that Videojet is "arguably world market-leader in terms of CO_2 laser sales". These will now include both Videojet's existing Focus range, which UK laser and large character marking sales specialist John Pritchard describes as catering for the "low-to-mid" end of the market, and the Alltec systems, tailored more for the "middle-to-high end".

Comprehensive range

Videojet claims the acquisition also gives it the most comprehensive range across the different laser technologies offered by any supplier. As well as CO_2 this range now includes Alltec's YAG-type lasers and mask systems for the highest-speed applications.

Customers needing a particular rating, up to IP65 or IP66, will find that the Alltec range can cater for this, too, says Mr Pritchard. "This detail, as well as the power and degree of environmental protection, can all be specified now," he says.

Mr Williams sees the mix of laser technologies strengthening Videojet's position in the beverage industry in particular. While the YAG is especially good at marking onto metal, and can be used to code pull-tabs on canning lines, for example, the wavelength used by the Alltec CO_2 laser means it leaves a frosted – and so legible – mark on PET, he points out.

At the Total Processing and Packaging exhibition, Videojet introduced a new addition to its own range, the S60. This 60W laser is designed to code PET at high line speeds, and will handle up to 72,000 bottles an hour, laying down 14 characters a line in twin-line mode. Fillers might choose to instal a lower-power laser coder on, say, a tray-coding line, says Mr Pritchard, and have the S60 on the bottling line.

"Some parts would be the same, and they could operate from the same user interface," he says. "It's another way of trying to simpify things and reduce errors."

Cost of compressed air

Mr Pritchard points out that, with the amount of heat generated by lasers, many suppliers use compressed air systems to cool them down. "But factories are starting to wake up to the high cost of compressed air," he says. "Our coders use high-powered fans, but still manage to keep their IP ratings, even though they drag in ambient air."

Meanwhile, Domino has extended its range of scribing lasers with the S300, the latest and most powerful addition to its S Series. Its 35W peak power will apply two lines of code to over 1000 PET bottles a minute, the company claims. On labels, this means speeds of up to 152 metres a minute, or 120 metres a minute onto glass.

But it is compact design rather than power which has been the headline benefit for Domino with the S Series. The range uses the "smallest laser head in its class", says the company, with the relatively low weight of 9kg.

UK laser business manager Trevor Nichols explains: "The new system is simple and easy to

Scribing laser: *Compact Domino S300 is able to code 1000 PET bottles a minute*

Logopak NEWS

Latest news on print-apply and RFID from the automatic ID specialists

Single pass identification with print-apply and RFID

Logopak iLeap64 print-apply labellers can now be equipped with RFID write heads which, for the first time, allows cases, trays, bulk products and pallets to be given a unique identification capable of being read by human eye, laser or via radio frequency – in a single pass.

Machinery covered includes all models in the Logopak range of industrial print-apply equipment, from the Logopak 901 machines with 104mm wide print heads up to Logopak 920 pallet labellers.

New machines to label pallets in stacks or on adjacent sides

Pallet labellers to handle stacked pallets and to provide high speed adjacent side labelling have been added to the Logopak 920 range of print-apply machines.

The 920TPF can identify double or triple stacked pallets with up to six labels per load – two on each pallet – at speeds of 60-70 an hour, using a unique raising and lowering device that aligns the application head with each pallet.

The 920PFM provides adjacent side labelling from a single machine, using just one pallet stop position, at speeds up to 150 pallets an hour. It has a slide arrangement to move the print-apply head accurately and with minimum stress from side-to-front or side-to-rear labelling positions.

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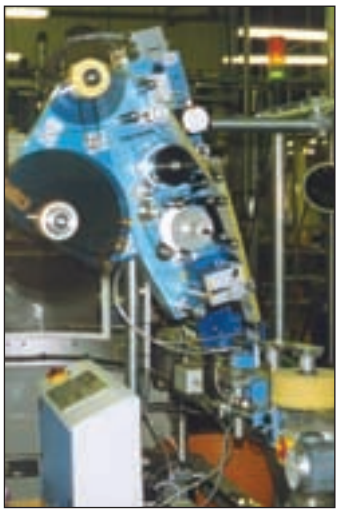
Case labellers for probably the best beer in the world

Three Logopak 906b90 /400 case and tray labellers have recently been installed on three high speed production lines at the Carlsberg brewery in Northampton. Each is capable of working continuously at speeds in excess of 90 cases a minute.



Above: *Smart label with RFID is produced at one pass.* ***Top right:*** *New 920 PFM pallet labeller.* ***Right:*** *One of three print-apply machines supplied recently to Carlsberg*

Replacing pre-printed shrink-wrap film, the labels carry standard information such as ITF bar codes, pack size, product quantities, best before and customer information.

Each system is fitted with an integrated bar code scanner with Logopak's unique 'In Ten' rolling software that monitors a moving window of ten scanned labels to ensure every case has been identified correctly and legibly.

These latest machines join two keg and five pallet labellers installed by Logopak in 1997.

Modems as standard open route to better service

Analogue Remote Service Modules that allow "dial-in" service and label layout or database manipulation and updates to be carried out remotely from any Logopak European service centre are now fitted as standard to all new Logopak print-apply labellers.

Up to 20 labellers can be serviced using just one incoming line and a telephone extension lead or RS232 cable.

Both digital and analogue devices are available on all Logopak machines and Tandem/Tri-dem controllers, with analogue provided free of charge and digital carrying a small additional cost.

The systems allow faults to be identified early and for site engineering staff to be given immediate assistance, pending the arrival of a Logopak technician.

Software links print-apply with SAP production monitoring

New software that allows Logopak print-apply systems to accept data in batch or real time mode from the increasingly popular SAP production monitoring software is now available.

Logosync is based on standard, proven Logosoft modules and features two main functions for automatic data exchange with Logopak labelling systems.

The Download function synchronises a file of SAP works orders or label data files between a directory on the hard drive of a local Logosync PC or a network directory and the chosen Logopak labelling systems.

The Upload function allows production data (Log) files to be uploaded at regular, configurable intervals from the labellers and saved on the local Logosync PC hard drive.

During periods when the pc is switched off or is offline these data files are stored in a buffer on each labeller then uploaded when connection is restored. Communication is via serial interface or socket services.

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use, with built-in features to simplify integration and the code set-up process.''

These features start with the straightforward size of the unit, says Mr Nichols: ''We can install in packaging areas where other suppliers would struggle to fit their systems in.''

He adds: ''Because the lasers are our own manufacture, we know exactly what goes into them. We've been in this industry for 10 years or so, and we've always built our own tubes, based on the DDC tube.''

Tube beefed up

While this basic tube technology is the same, says Mr Nichols, it has been upgraded and adapted over time. ''The tube has been beefed up so we can put more power down it, and so it can operate continuously rather than intermittently as with the DDC.''

The S300 is the latest addition to Domino's S range, first introduced a couple of years ago. But the company continues to offer its DDC3 for high-speed label coding, and the DSL, with power ranging from just 10W to 100W, and a large coding area of 300 x 300mm.

This makes it suitable for less common laser applications such as on-line barcode application, says Mr Nichols. In contrast, the S series-laser is able to code within an area of just 76 x 76mm.

Mr Nichols confirms the importance of the S series, especially now that it spans three different systems. Sales of the range account for an increasing proportion of Domino's overall laser turnover, he says, and customer anticipation meant that orders for the S300 came in immediately.

But, like Videojet, Domino attaches importance to the fact that it offers different laser technologies to meet a spread of needs. For both companies, it helps to demonstrate an across-the-board competence in coding.

For the moment, Imaje has made no additions to its laser range. But the company points out that its Lightjet Vector steered beam laser, with 200W power, is being taken up by mineral water fillers needing high line speeds without the solvents associated with ink jet.

National sales manager Steve Ellison claims: ''Lower-powered laser coders wouldn't have the power to code on to glass or even PET at these higher line speeds.''

Perrier in France has installed the coder, requiring quality coding directly on to its bottles at high line speeds. Coca Cola in Germany has also installed the Vector for coding on to PET.

Smart label: *Logopak machines can now produce print-apply labels with RFID in one pass*

THERMAL TRANSFER

On-line coding with RFID raises the tempo

For some time now, the industry has been eyeing up radio frequency identification (RFID) technology, and wondering how it might integrate with existing data systems. Clearly, it can compress far more information than traditional bar codes, and can bring together data and security tagging. But it has been handicapped by the lack of international (or even national) standards, the cost of transponders and the significant entry cost for all in the supply chain.

Nevertheless, the first automatic print-apply labeller to be capable of writing simultaneously to an RFID transponder within the label was launched by Logopak at the Total Processing and Packaging exhibition earlier this year.

As a result, traded units and pallets can now be given a unique identification capable of being read by human eye, laser or via radio frequency.

Two technologies in one

''The new 901 TR print-apply labeller gives users the opportunity to have two technologies in one operation,'' says Logopak UK general manager Wilson Clark. ''With RFID's flexibility, batch reading capabilities, re-write functionality and durability, this labeller will provide added value to users.''

Currently 13.56mHz write technology is offered although development work at Logopak has already prepared the system to operate with UHF write heads as they become available from various manufacturers.

Zebra Technologies is another coding equipment company to have bitten the bullet and decided to integrate RFID into its thermal/thermal transfer coders. The R4Mplus coder, now supplied by Weber Marking Systems, combines the two technologies, as well as verification, in a single unit.

The more conventional part of the machine prints on to labels up to 4.5in wide and 39in long at a resolution of 203dpi. Print speeds can be up to 10in a second, says Weber.

For RFID, the system encodes information on to thin ultra-high frequency (UHF) transponders embedded in pressure-sensitive labels, also supplied by Weber. This is followed by automatic verification. Zebra has designed the encoder to support Electronic Product Code (EPC) standards in RFID as they develop.

UK sales and marketing manager at Weber Richard Castle-Smith says of RFID: "Most customers have wisely delayed making any major investments until the technology has been proved and its benefits demonstrated." But as he notes, any system installed today has to be sufficiently open to allow adaptation as the technology and supply chain requirements evolve.

This wariness is echoed by other equipment suppliers, even where they have recognised the need to be active in the RFID area. As Imaje national sales manager Steve Ellison puts it: "EPC may be the de facto standard now, but there are other systems around as well, and there are no current definable ISO standards. So it's difficult to know what's going to happen tomorrow."

Imaje says that the open architecture used in its RFID-compatible thermal transfer coders means they can be instantly upgraded to cope with different chip configurations, frequencies or protocols.

The company has thermal and thermal transfer coders for mobile industrial and desktop applications, including printers which can be mounted on to warehouse forklift trucks. Says Mr Ellison: "This uses the DC power supply from the truck itself, rather than wiring them up for AC supply, which is dangerous."

For desktop applications, Imaje offers the Compact and Nova ranges. Both are housed in metal rather than plastic casings, giving them longer life than standard desktop systems. The 4in Compact printers can be used for anything from printing out tickets for events to coding airline luggage tickets. The Nova range is available in 4, 6 and 8in widths. Both ranges are able to generate data matrix codes.

But perhaps it is its capability in thermal transfer on-line coding which Imaje is currently most excited by. Its new 5000 series, first launched in Spain two years ago, is now available in the UK. It can be used to code directly on to any type of film, including OPP, PE, PET and laminates. The available printing area can be as small as 53 x 107mm or as large as 107 x 133mm at a resolution of 300dpi.

Complex graphics downloaded

Controls and settings are accessed through a back-lit touchscreen, where simple messages can be composed directly. More complex graphics or logos can be downloaded to the printer using a PCMCIA card or an RS-232 serial link. The 5000 uses a Kyocera Corner Edge printhead, and is said to offer easy ribbon loading.

Videojet has focused on how often the ribbon has to be changed, rather than how it is changed. Says thermal transfer sales specialist Andy Platt: "Users are trying to increase their efficiencies and reduce consumables. We can leave a maximum 1mm gap between codes on the ribbon, and also use a much longer ribbon than anyone else. This means fewer changeovers and greater efficiency."

Videojet has no qualms about integrating big-name print engines into its on- and off-line thermal transfer coders. Growth in on-line coding in particular is booming, says the company, with digital printing allowing not only batch coding and best-before dates, but also time coding "to the second", and sequential numbering for real traceability. Increasing numbers of brands also use on-line thermal transfer to apply all variable data on to flexibles, says the company, often across broad ranges, operating sometimes four coders across a single web.

CODING SOFTWARE

No soft options in integrating coding systems

Software to link one coding system with another is often the last question that a customer addresses when looking at new coding systems, and yet it is both vital for the accuracy of the code – and so for keeping demanding customers happy – and potentially hugely beneficial to the efficiency and flexibility of the packaging operation as a whole.

Even so, the idea that different manufacturers would sit down and exchange information, allowing competitor software to run their own hardware in a customer's factory is frankly ridiculous, says Paul Lawlor, technical director at coding software specialist Claricom. And the customer doing the networking might respond similarly with: "Why would we want to do that?"

Videojet's view, that it is not often in a customer's interest to keep currently installed equipment and include it on the same network, is shared by many coding suppliers. The assumption is that the operation or line will opt

for exclusively new equipment, with new software as an added bonus. As managing director Howard Williams puts it: "A lot of the time, customers will presume it's better to stick with the equipment they've got. But in fact, changing can often be more cost-effective."

Order from two suppliers

Claricom concedes that there are often good arguments for single-sourcing coding equipment, with supplier software as part of the package.

Managing director James Butcher cites a single example of a customer trialling different ink jet coders, and finally opting for an order split between two suppliers. In this case, the end user wanted an opaque white ink capability on two of the lines, even though the other supplier's technology was preferred overall. Claricom ensured that the two types of equipment worked together.

On the other hand, says Mr Butcher, those managing different sections of a packaging line may think they single-source on coding and labelling when that is not necessarily the case. "There is often a wall in the factory between primary coding and secondary coding," he says, quoting an example of linking coding and print-apply equipment.

Claricom argues that the use of its Package Coding Management Systems allows end users to tailor centrally-managed coding rules to their own product needs, and also gives them the freedom to source equipment from different suppliers without compromising reliability or efficiency.

Linking everything

At Imaje, systems applications manager Carsten Soerensen says: "We don't limit ourselves simply to coding systems, or even to the packaging line. The most sophisticated software we offer will allow you to link everything from goods inwards, through production, to packaging."

He points out that this would not include complex process systems with their own high-specification control systems. But of most smaller-scale operations, he says: "If we need to track and trace ingredients from mixing onwards, the software will be capable of doing this." Indeed, Imaje sets great store by the fact that it develops its own software in-house rather than use external software houses.

According to Mr Soerensen, the available software modules – and hence the list of specific benefits – are too many to list. But he highlights a couple of examples.

He notes, for instance, that traditionally a central PC is used to drive individual printers. "But if you lose that PC, or have problems with Windows, you lose everything. A lot of businesses have said that's not acceptable, and the system we have is distributed. This means that the database is distributed to all the line terminals, and these can switch to a local database and independent production."

Another benefit, says Imaje, is the all-important security element: ensuring that the right data goes on to the right pack. One producer of delicatessen items installed a colour touch screen, which limited the operator's ability to change key settings. It also brought up a full-colour image of the product, and asked the operator straightforwardly if this was the product running on the line.

Mr Soerensen emphasises: "It's making these checks before you start the job which keeps your line efficiency high."

Like Videojet, Imaje sees no real demand for using its own software to link up other suppliers' equipment. Mr Soerensen believes that since Imaje has been offering its latest generation of in-house software, the company has seen a step-change in the type, and size, of customer it deals with.

Benefits of software

He goes on: "We have been successful in replacing hardware because of the benefits of the software." Integrating existing coding systems has never been an issue. "There would be a couple of buy-back proposals on the table before we got to that point," he explains.

Another coding supplier which is making an effort to innovate in software is Markem. The company has recently introduced its Software Solutions suite, which links together the Cim-Control connectivity software and the Composer image design package. According to Markem, this offers superior data integrity, along with simpler and more secure integration with different IT systems, thanks to the Microsoft.NET architecture.

Finally, new software that allows Logopak print-apply systems to accept data in batch or real time mode from the increasingly popular SAP production monitoring software is now available. Logosync is based on standard, proven Logosoft modules and features automatic two way data exchange with Logopak labelling systems. ■

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