# LABELEXPO EUROPE BREAKS RECORDS

L&L's global team covers the major technology breakthroughs at Brussels show

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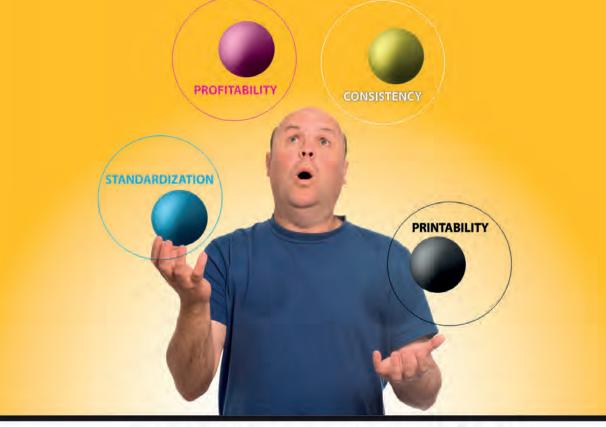
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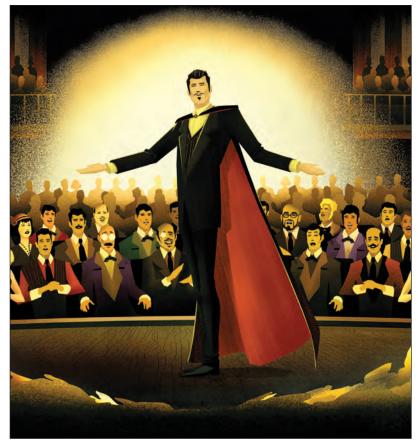




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#### CONFIDENCE BOUNCES BACK

Labelexpo Europe breathed new life into the labels industry, a welcome sign that a corner seems to have been turned in Europe following years of gloom. All the major press manufacturers reported unexpectedly high levels of sales and good leads, demonstrating, as Nilpeter's Jakob Landberg points out, that converters are now increasing capacity and not just replacing existing capacity as they were two years ago.

The roots of the new optimism are numerous. The Euro currency crisis seems to have blown over, at least for the time being, and more European economies seem set on a path of solid, if limited growth after years of austerity.

In addition, Labelexpo Europe attracts leading converters from developing nations, and there were significant heavy machinery orders placed by players including Baumgarten from Brazil and Ajanta Packaging from India.

The influence of global visitors should not be exaggerated however. Over 68 percent of visitors are from Western Europe and 12 percent from Eastern Europe.

There is also a sense that technology is moving so fast, that converters need to keep investing to avoid being left with equipment with unacceptably high levels of waste and which cannot be integrated into a Lean production environment.

Take conventional printing advances seen at this year's show. We saw two types of machine emerge: super-efficient pressure-sensitive converting machines without multi-substrate capability and advanced automation, but with very rapid changeover and short web paths cutting waste to minimal levels. On the other hand were fully automated, multiprocess models combining sophisticated pre-setting and closed loop control with the ability to switch seamlessly between label and packaging substrates. Both types have the potential to obsolete less efficient models and less automated models respectively,

Digital continues to evolve rapidly, but more in the direction of a maturing technology rather than a revolutionary one. With no real breakthrough in imaging systems, we saw presses that were wider (HP being a notable example) but more importantly were more tightly integrated into fully automated workflow systems with a definite tilt towards in-line processing, including laser die-cutting and turret rewinding.

Read our in-depth review in this issue and let us know how you see technology trends developing.

ANDY THOMAS GROUP MANAGING EDITOR athomas@labelsandlabeling.com





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# INBOX



The Herma UK bicycle team received backing along the way from Newbury to Brussels



Colin Phillips presents the special yelow jersey to Nilpeter at Labelexpo Europe 2013

# Herma rides into label industry hearts

**THE UK ARM OF MATERIAL SUPPLIER HERMA** more than doubled its fundraising target by the time it rode into Brussels after a four-day, 300-mile charity bicycle ride. David Pittman spoke to Colin Phillips for the inside track

While many of those in the label industry look forward to the biennial Labelexpo Europe as an opportunity to secure business, pick up new leads and get reacquainted with old friends, a team from Herma UK made 2013 an extra special year by raising an extraordinary 38,000 GBP when they set themselves the challenge of riding from Newbury, Berkshire in the UK to Brussels, Belgium in the name of charity.

Two years in the planning, the initial target was to raise 15,000 GBP for Cancer Research UK, Breast Cancer Care and Namuwongo, a children's charity in Africa. This target was safely surpassed well before the halls at Brussels Expo were being prepared for the label industry's biggest show. As early as last summer, the 15,000 GBP target was within reach.

#### **INDUSTRY SUPPORT**

Herma's charity drive was aided by a number of industry partners and peers that donated and had their logos featured on the jerseys worn by the cycle team. A special yellow jersey, similar to that worn in the Tour de France, was also commissioned, with the biggest donator having their company logo displayed exclusively. This position was claimed by Nilpeter, who had the special jersey presented to them as the Herma UK team arrived at Labelexpo Europe 2013.

Nilpeter was not the only supporter visited once the team reached the show, as the riding team toured the halls to visit all of those exhibitors who had backed the bid.

Supporters from the industry, that had their name on the shirts, included AB Graphic, AJS Labels, All Labels, Alphasonics, Amberley, American Paper & Film, Aro Spa, Ashland Specialties, AV Flexologic, Aztec Labels, Baker Self Adhesive, Banjo Cycles Newbury, Bar Graphic Machinery, Barcode Data, Berkshire Labels, Bourne Produce, BPIF, Brownett, BSP Labels, Chesapeake Pharmaceutical, Classic Labels, Cogent Electrical, Colorgen, County Labels, Crown Labels, CS Labels, Datamark, Days Labels, Dpack, Edale, EFIA, Elite Cameron, Eurohill Labels, Excel Labels, Fairfield Labels, FA Supplies, FINAT, Flint Group, Gallus Group, GEW (EC), Go Labels, Herma, H&M, HP, IFS, Informa Exhibitions, Innovia Films, IST UK, JFM Plates, JTS Corporate Supplies, Jack Kenny Media, Kelgray Products, Kocher & Beck GmbH, Label Apeel, Label Connections, Label Traxx, Labels Unlimited, Mark Andy, Marsh Labels, Mida, Mission Labels, MPS Systems, New Page, Newbury Metal Products, Nilpeter, North & South Labels, Notarianni, Novamelt, Olympus Labels, OPM Group, Packaging Partnership, Paragon Inks, Park Group, Pilot Italia, Positive Computing, Print Media Certification, Print Tech Solutions, Prolatio Health, Pulse Inks, QS Pac, QTR Transport, Riviera Labels, Rotoflex, RotoMetrics, Sandon Global, Scion Communications, Sharp Labels, Skanem UK, Specialized, Springfield Solutions, Swift Couriers, Systems Labelling, Tarsus Group, Thermal Transfer Solutions, Thomas Graphics, TLMI, Total Labelling Solutions, TS Converting, Vale Labels, Xeikon, Zeller+Gmelin.

There was also online fundraising page, as well as personal fundraising by the cyclists that completed the ride.

As a result, Herma's total upon reaching Labelexpo Europe 2013, and performing the opening ceremony with Labelexpo Global Series managing director Lisa Milburn, stood at more than 35,000 GBP.

'It is a tremendous amount to have raised for good causes, and shows how generous and thoughtful the label industry is,' said Colin Phillips, Herma UK division director for self-adhesive materials.

All the jerseys are now up for sale at 40 GBP each, with a quarter of that going to charity.

#### A LABELEXPO ODYSSEY

Phillips led the Herma UK team in its journey across northern Europe, which included visits to customers and industry peers that had given their backing to the charity challenge.

The cyclists allowed four and a half days to complete the 300 mile journey.

# NEWS

#### THE INSIDER

A ROUND-UP OF THE LATEST GLOBAL LABEL STORIES

#### FINAT CONFIRMS YMC DATES

The FINAT Young Managers Club (YMC) has confirmed details of its second summit. Open to both YMC members and nonmembers under the age of 40, this year's edition will be held at the Hilton hotel in Warsaw, Poland on November 7-8.

The congress theme is 'Great Ideas with Limited Resources', reflecting the economic situation in which young industry managers are operating. The two-day program includes a workshop on business model innovation and lean manufacturing.

Kurt Walker, FINAT president, said: 'Participating in educational events such as the YMC summit brings an excellent foundation for the exchange of ideas, forges strong professional and personal relationships, and helps contributing to the growth and success of their businesses.'

Dana Kilarska, newly appointed president of the FINAT YMC and second generation label converter professional at Purgina in Slovakia, added: 'The YMC members are passionate about the industry and their work, and passion is infectious in young businesses, as it is in life.'

The FINAT YMC now has 73 members representing both suppliers and converters.

#### AVERY RELEASES SUSTAINABILITY REPORT

Avery Dennison has released its second Sustainability Report, which sets out the Fortune 500 company's progress towards a range of environmental objectives.

At Labelexpo Europe Avery Dennison CEO, chairman and president, Dean Scarborough said: 'We want to lead the industry in adopting certified forest paper as a standard, and this shift will happen. For 2014, almost 40 percent of our facestock materials in Europe will be FSC certified at the same cost as traditionally supplied materials. We know that our company can make this business a lot more sustainable and we're eager to make a huge difference around the world.'

Also at the show, Avery Dennison won a Global Label Industry award for its film and adhesive portfolio designed to make PET bottle recycling significantly more effective. Avery Dennison CleanFlake is a patentpending adhesive technology that 'switches off' when submerged in a recycling bath so the label cleanly separates from the PET flakes.



JOHN WATSON team pictured in 2011 announcing the UK's first Gallus RCS330

## MCC ACQUIRES TWO EUROPEAN CONVERTERS

**JOHN** Watson & Company, based in Glasgow, Scotland and Gern & Cie, Switzerland, added to MCC portfolio

Multi-Color Corporation has entered into agreements to acquire John Watson & Company, based in Glasgow, Scotland and Gern & Cie SA, based in Neuchatel, Switzerland. Combined annual revenues of the two companies are approximately USD 20m.

Wet glue spirit label specialist John Watson & Company is complementary to MCC's existing Glasgow business, formerly Labelgraphics, which is a pressure sensitive spirit and wine label producer.

Wine label specialist Gern & Cie SA is located in the French speaking wine

region of Neuchatel with the same customer base and technologies as Multi-Color's existing French operations.

MCC president and CEO Nigel Vinecombe stated: 'These acquisitions strengthen our leadership position in the large European wine and spirit label markets. We are delighted that both management teams will continue to run the businesses, allowing for the current owners, John Watson and Michel Quinche to retire after successfully leading their companies to the best in their markets.'

## I.D. IMAGES ACQUIRES HI-TECH PRINTING

Ohio, US-based I.D. Images has acquired Hi-Tech Printing – the fifth strategic acquisition made by the company in the last four years.

I.D. Images is a pressure-sensitive label converter based in Brunswick, while Hi-Tech Printing – operating out of a 48,000 sq ft, state-of-the-art facility in Cincinnati – specializes in custom printing through sheet-fed, web-fed and flexographic printing. The Hi-Tech operation will continue to operate in its current location. I.D. Images plans to consolidate its other Cincinnati-based operations into the newly acquired facility in the near future.

I.D. Images president and chief executive officer Brian D. Gale said: 'Hi-Tech's capabilities and high-value products align with our long-term strategic vision. We are excited about the value we collectively bring to our customer base.'



## LANDA PUTS BACK NANO PRESS LAUNCH

CARTON press to launch end 2014

The launch of Benny Landa's new digital printing presses is to be delayed until the end of 2014 as the company aims to achieve offset quality before they reach customers, *writes David Pittman*.

The amended launch schedule puts the commercialization of the press technology back by 9-12 months, but this has followed customer feedback and optimization of its technology, including a revised feature set and architecture.

They now feature an operator cockpit at the delivery end of the press. This is intended to make it easier for operators to monitor and control the press. The touchscreen interface, which made such an impression when the Landa Nanographic Printing process was unveiled at Drupa 2012, is included in this area, featuring press controls, live video feeds from inside the press and press performance indicators, as is a lit inspection table and an area for press operators to display personal items.

Other enhancements made to the Landa presses include new ink ejectors with a resolution of 1,200dpi, and an automatic paper handling system that supports both paper and plastic substrates.

When launched, the company said print quality was at about 25 percent of offset quality and is currently 'above 80 percent'.

The first presses to ship will be the folding carton variant of the S10 model, which has been enhanced further with optional in-line coating.

Landa founder, chairman and chief executive officer Benny Landa said: 'We have been working closely with our customers to ensure that our Nanographic Printing presses will provide the performance, print quality and feature set for high-speed production.

'The new Landa operator cockpit will set a new standard for operating any press, whether digital or offset.'

## ETI APPOINTS NEW PRESIDENT AND MANAGEMENT TEAM

ETI Converting Equipment has named Maxime Bayzelon as its new president. Bayzelon started work for ETI in 2007, where he has been involved in new product development, engineering and manufacturing. He was most recently vice-president of sales.

ETI Converting Equipment has also appointed Yves St-Amant to the position of vice-president of operations, and named Michel Houle as financial director.

He has worked with ETI since the turn

of the century, initially as engineering manager before being promoted to vice-president of engineering in 2005 and vice-president of research and development in 2007.

Before joining ETI, St-Amant worked for Aquaflex System over a 16-year period.

Houle joins ETI Converting Equipment with nearly 25 years of financial, organizational and management experience. He managed his own accounting firm for over 15 years.

#### HOT OFF THE PRESS

A ROUND-UP OF THE LATEST GLOBAL LABEL STORIES



#### **NEW XEIKON CEO CONFIRMED**

Xeikon has confirmed the appointment on Wim Maes as its new CEO following the takeover of the company by investment groups Bencis - which owns 80 percent of the shares - and GIM<u>V.</u>\_\_\_\_\_\_

Maes said the companies acquired Xeikon because they saw a good growth potential. 'We want to be among the top three players in our chosen markets, which includes becoming a preferred partner in the label and packaging sectors,' said Maes.

Xeikon successfully launched its ICE toner at Labelexpo Europe, a breakthrough technology allowing heat sensitive materials to be processed on its digital presses, and demonstrated in-line digital carton printing and finishing in the Package Print Workshop.

#### **GRAFOTRONIC APPOINTS PRESSTEC AS SA AGENT**

Grafotronic has signed an agent agreement with Presstec, based in Cape Town, South Africa, as part of a strategy to globalize its product offering. Presstec also has sales and service offices in Johannesburg and Durban.

Antron Hendricks, chief executive officer of Presstec, said: 'We have just finished our first tour together with Grafotronic in South Africa. The response from our customers across the country is fantastic and we believe that we are offering something new that our market needs.'

#### THE INSIDER

A ROUND-UP OF THE LATEST GLOBAL LABEL STORIES

#### GOSS OPENS PACKAGE

**PRINT DEMO CENTER** Goss International will open a specialized facility in January 2014 to demonstrate its Sunday Vpak web offset packaging presses. The Packaging Technology Center at the company's headquarters in Durham, New Hampshire will also be used for print, technology and consumables testing. The 650 sq m (7,000 sq ft) Packaging Center will be equipped initially with a Goss Sunday Vpak 500 press system configured for printing on film and paper substrates.

This will feature seven web offset printing units with a web width of 850mm (33.5in) and a repeat range of 406-812 mm (16-32in). The system will be equipped with a flexo unit and UV and EB curing capabilities, and will accommodate film substrates from nine to 75 microns thick and paper products as heavy as 100gsm.

Rick Nichols, president and CEO of Goss International, said: 'Our investment in the equipment and the resources to staff this center demonstrates our commitment to the packaging sector and our confidence in the advantages that web offset can deliver over traditional gravure and flexographic systems.'



(L-R) Mike Fairley, Tomas Rink, Dean Scarborough

## TOMAS RINK LEADS HONORS IN BRUSSELS AWARDS CEREMONY

Ritrama's Tomas Rink received the 2013 R. Stanton Avery Lifetime Achievement Award at Labelexpo Europe. Recognizing the vision and values of Stan Avery and his pioneering efforts, Tomas Rink joins fellow label industry leaders including RotoMetric's Steve Lee, Helmut Schreiner and Lars Eriksen from Nilpeter. Other award winners announced on the night included Mark Andy and Flint, joint winners of the Innovation award; Eshuis in the Netherlands, European Converter of the Year for its work with Coca-Cola; and Avery Dennison, which won the Sustainability award for its work with PET container recycling.

For a full report see page 24.





## HP SEES PACKAGING SUCCESS AT LABELEXPO

'CORRECT DECISION' to show 20/30000 machines at label show

During Labelexpo Europe, HP announced the sale of the first HP Indigo 30000 carton press to a customer in the EMEA region. Israel-based Heret Printing specializes in the design and production of folding cartons and packaging for high-end personal care products such as perfumes, cosmetics and skin care.

HP put a great emphasis on packaging applications on its Labelexpo stand, and this seems to have paid off in terms of the level of interest shown in both its 20000 and 30000 presses, which received their commercial launch at Labelexpo.

Commented Ronen Samuel, VP/GM HP

Indigo and Inkjet Digital Press Solutions EMEA: 'Labelexpo 2013 was a great show for HP. Not only did we close many important customer deals and launch new capabilities, but we also saw huge interest in our new packaging portfolio and in the many opportunities that digital printing presents to brands.'

HP made two significant announcements on the labels side of the business with a new Silver ink and low COF white for shrink sleeves demonstrated on WS6600 presses.

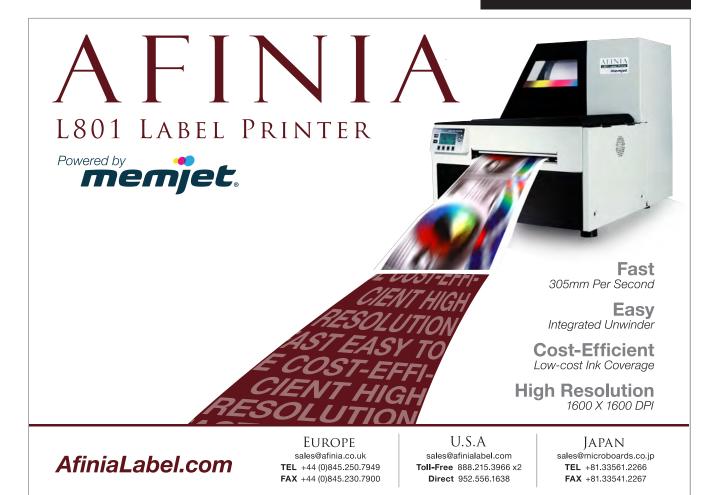
For full story see Labelexpo review in this edition starting page 106.

#### **NEWS IN BRIEF**

A ROUND-UP OF THE LATEST GLOBAL LABEL STORIES

#### **AB GRAPHIC ROWS FOR CHARITY**

Mike Burton, managing director of AB Graphic, and Tom Salt will take part in 'the toughest rowing race on earth' on December 2, 2013. The team of two will row 'Locura', a seven meter ocean rowing boat across the Atlantic Ocean, to raise money for the Generous Hearts Foundation (G.H.F) in Romania. Locura will be home to Burton and Salt for up to 90 days as the unique challenge tests their physical and mental endurance, through tropical storms and psychological stresses. Registered UK Charity, the A.M.B Charitable Trust has been nominated to collect donations and these funds will then be transferred to the Generous Hearts Foundation in Romania for distribution. Please help the team to reach their sponsorship target of 150,000 GBP by donating via their website. All the money raised will be used to aid improving the living conditions of orphaned children. Burton and Salt visited several of the orphanages early this year and saw the desperate needs of these disadvantaged children. They commented: 'Your help is urgently needed'. The G.H.F is run and organized by a long term business associate and friend of Mike Burton. Please see the team's website (http://rowtheatlantic. co.uk/?page\_id=815) for more information.





# Package printing picks up pace

WITH DIGITAL AND CONVENTIONAL PRESS TECHNOLOGIES demonstrating the opportunities for label printers to expand into other markets, the Package Printing Workshop feature area was one of the standout highlights of Labelexpo Europe 2013. David Pittman reports

Package printing had a prominent position across Labelexpo Europe 2013. Exhibitors around the seven halls were keen to talk about technologies and products applicable to narrow web printing applications beyond labels, especially flexible packaging but also smaller format folding cartons.

HP's impressive Print Your Future area included zones dedicated to package printing and featured the latest HP Indigo press technology suitable for flexible and carton package printing, along with dedicated finishing tools such as the Digicon 3000 jointly developed by AB Graphic and Edale for use with the HP Indigo 20000. A further wealth of packaging industry partners exhibited in the Print Your Future area, including Kama, Highcon and Scodix.

Many other exhibitors talked package printing at the show, from materials specialist Eurocast and Thomas Graphics, and pressroom consumables supplier Sun Chemical, to ancillary suppliers like Nanovis and software company PACKZ.

The biggest sign that package printing opportunities are becoming an ever-more important element of the modern narrow web printer's business strategy was to be found in hall 12, where the Package Printing Workshop feature area drew record crowds.

Presented jointly by Xeikon and Nuova Gidue, the feature area provided live demonstrations of both digital and conventional

printing technologies that can be used to produce printed packaging, as well as labels.

It also acted as a showcase for an award-winning carton display and flexible packaging from across the halls of Labelexpo Europe 2013.

Display cabinets housed flexible samples from the likes of Goss International - a first-time exhibitor at Labelexpo Europe 2013 and a relatively new entrant to the label and packaging markets - Flint Group, Taghleef Industries, Muller Martini and more. A further two cabinets showed off the recently named 2013 Pro Carton/ECMA Award winners, which had been named the week before and were making their debut appearance as part of a roadshow over the coming months.

#### DIGITAL PACKAGE PRINTING

On the digital carton printing side of the feature area, Xeikon produced a collation carton for three jars of honey bearing the My Moment label, with pre-prepared samples showing how the fully converted packaging would look on the shelf.

Xeikon presented a 'Roll2Carton' system featuring its 3500 digital color press running four colors and its Durable Clear toner, plus a Bograma rotary die-cutting unit cutting the cartons to size, stripping the waste, and then stacking them ready for

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D'ANNUNZIO says new technologies are allowing conventional printing to compete with digital

#### folding and gluing.

Cartons were printed using CMYK in one pass, with Durable Clear providing extra protection to the print in the same pass.

Xeikon says this drastically simplifies the production process with a one-step process, when compared to normal sheet-fed carton production that requires at least three steps – to print and varnish, die-cut and remove waste – while alternative digital systems would require four – printing, varnishing, die-cutting and waste removal.

Filip Weymans, Xeikon's director of segment marketing and business development for labels and packaging, described the print process it was showing as the, 'most compact folding carton solution in the world, certainly for digital.

'It is not only four-color printing but digital varnishing and in-line converting of the printed cartons to blanks. It is a very advanced system but quite unique.'

The digital carton printed was tied in with the label artwork



BOGRAMA rotary die-cutting and stripping line

being produced by the six companies on the Inkjet Trail (see report in next issue of L&L), with Xeikon acting as a seventh step on the trail offering a toner alternative to inkjet digital printing.

Xeikon also provided a further presentation, delivered by Jeroen Van Bauwel, its director for product management, looking at personalization using digital printing.

This included on-the-fly printing of personalized cartons for selected attendees using their own names, so creating cartons with the text 'David's Moment' or 'Charlotte's Moment'.

Van Bauwel spoke of the new paradigms in package printing, such as increased SKUs, customization, short runs and evolving supply chains, and how these are opening up new markets and opportunities with the integration of presses into back-end workflow technology, such as MIS and web portals, permitting the use of digital to quickly and efficiently produce bespoke and personalized packaging.



#### LABELS&LABELING | 17

Van Bauwel drew particular attention to Xeikon's own X-800 workflow technology which is able to integrate personalized data into the digital printing process.

He also drew attention to a number of notable case studies of brands using personalization on their packaging, such as Heinz, Coca-Cola and hazeInut chocolate spread brand Nutella, as a sign of the changing dynamics of the packaging market.

Weymans added: 'People have got an understanding of digital as a way to complement their flexo and offset environments, but awareness has also given brands confidence to experiment with digital and use it in different ways. We have seen a few big brands create packaging in new ways to create a closer link with customers.

'To demonstrate this, we have decided to personalize the carton we printed using the press at the stand, so to help printers understand the capabilities of digital, how simple it can be to implement and take it further.

'It is not gigantically complicated, but very straightforward to implement, and will produce a fully finished and personalized carton ready for the final stages of converting.

'We illustrated what the Xeikon digital process can bring to package printing, and the new opportunities it can create.'

Conventional package printing

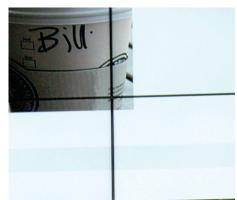
On the conventional side. Nuova Gidue was running a Combat M3 press fitted with its Digital Flexo system, which automates the changeover process on-press.

This system features automated print pressure, registration and inspection control to ensure the optimum print quality is achieved by the press, without manual input. Instead, the onboard hardware and software combine to raise the press to the optimum setting. These settings can also be stored on the press and recipes recalled to allow repeat work to be carried out to the same specification as previously printed.

Federico D'Annunzio, Nuova Gidue's managing director, led the presentation of this technology, and made clear its advantages. 'Replacing the operator's eyes and figures with "digital" fingers and eyes allows you to guarantee repeatability and quality, while also achieving a standardized amount of waste during press setup, always less than 10m, but waste generated during job changeovers throughout the week of Labelexpo demonstrations fell between 7.6m and 8.4m.

'This is a very important development in the next generation of flexographic printing presses, as it allows printers and operators to enhance their efficiency and operability."

The Print Tutor camera system is integral to this, as it is able to inspect





JEROEN Van Bauwel, Xeikon's director for product management

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#### PARTNERS SHOW DIGITAL PACKAGE WORKFLOW

HP Indigo, Highcon and Scodix joined forces at Labelexpo to provide a real-life example of how packaging can be successfully printed using a completely digital workflow.

Personalized cartons were on show, which were produced using the newly commercialized HP Indigo 30000 digital press, tailored for folding carton production with in-line coating, and converted using the Highcon Euclid digital cutting and creasing system.

These cartons were embellished with the use of Scodix's technology to add sensory elements to the feel of finished packaging.

Scodix recently launched its Ultra digital press, based on its Sense technology and capable of producing 1,250 B2 format sheets per hour.

Highcon has installed its first beta units with Glossop Cartons in the UK and Antilope in Belgium, with both recording immediate success. Antilope was honoured with a 2013 Pro Carton/ECMA Award for its work on the packaging for Mylène's Femme Fatale eau de parfum. Glossop Cartons has meanwhile won a regional business award in the UK for the marketing of its recent investments, including the Euclid, and is in the running for further awards in the coming weeks and months.

Aviv Ratzman, chief executive officer and co-founder of Highcon, said: 'There is a need to provide added value to brand owners and to run away from price competition. Value can be created by meeting the demand for better shelf appearance, shorter runs, versioning, private label, reduced inventory and sustainability.

'All of these demands are supported by HP Indigo digital presses, Scodix digital enhancements and Highcon cutting and creasing, and will be an important part of our joint vision of transforming the way cartons are converted.' the full width of the press to ensure registration and print pressure are correct and consistent.

He noted the technical differences between running paper label stocks and filmic substrates, and acknowledged some of the challenges printers may encounter when faced with the two substrates, but which they need to find ways to overcome.

'There is a lot of crossover happening in the narrow web market, with customers wanting a one-stop-shop for printing, and their suppliers to be able to produce different packaging from labels to stand-up pouches.

'However, the flexible packaging market offers some very unique challenges. A very small temperature change can have a big impact, from as little as one degree Celsius. Flexible substrates are extruded from a liquid into a solid, and will look to revert back at the first chance, so do not underestimate the importance of temperature and the impact it can have.'

Tension also plays an important part in the process, and can affect flexible substrates by overstretching the material and causing plastic deformation, while print pressure is an ever-present issue with printing, but is again monitored using the camera system.

The Combat M3 is equipped with chill drums on each print station to maintain the substrate's temperature. Servo-driven motors allow the precise control of pressure at each printing station, and an inertia compensation system is fitted into the press to aid with the management of tension control during unwinding and rewinding.

'Servos can provide the exact amount of pressure from the rolls, and allow just enough tension to move the substrate through the press without mechanically

PPW'S Nick Coombes takes questions during a workshop Q&A session

stretching it, so providing a flowing movement to progress the job steadily,' D'Annunzio said.

In fact, D'Annnunzio says, the tension required to handle polypropylene is almost nil, while heavier fiber-based stocks require significantly more.

D'Annunzio concludes: 'The ability to control the temperature and automatically adjust the tension is an important element in modern package printing.

'We are entering a new frontier, and the ability to handle multiple substrates, change jobs quickly and automatically adjust the press is allowing conventional printing to compete with digital.'



**XEIKON'S** Filip Weymans presented digital carton printing in the Package Printing Workshop feature area

# ENVIRONMENT NEWS

#### THE INSIDER

A ROUND-UP OF THE LATEST GLOBAL ENVIRONMENTAL STORIES

#### AVERY DENNISON EXPANDS PET RECYCLING PROGRAM

Avery Dennison has expanded its PET recycling program with the addition of two new collection facilities in Europe. Waste PET liners can now be sold directly to Avery Dennison's recycling partner Morssinkhof Rymoplast, either at its main plant in Zeewolde (the Netherlands) or at collection facilities in Lichtenvoorde (the Netherlands) and Przeczno (Poland).

'Our program reflects our longstanding commitment to facilitate easy and effective recycling of PET release liner,' says Stephan Reis, who is responsible for sustainability at Avery Dennison Materials Group Europe. 'Not only is sustainability an increasingly important element of a brand, the owners of brands can generate significant income from liner recycling by eliminating the need to pay for landfill or incineration. For example, five million square meters of release liner waste is currently worth anything from 16,000 euros to 26,000 euros. Our goal is to link brand owners to the largest number of recycling facilities and make it as easy as possible for them to realize these returns.

With these two new facilities, more brand owners across Europe can directly benefit from the Avery Dennison recycling program. Quantities as low as 500kg are accepted – far less than the current five-ton minimum quantity for waste pickup. Morssinkhof Rymoplast will reimburse brand owners directly with the material's value.

Recycled liner material is converted to RPET granules, which find their way into a variety of applications such as textile production and manufacturing.

'PET liners meet brand owners' demands for more sustainable label materials and offer label converters major productivity benefits such as high line speeds and fewer web breaks,' says Stephan Reis.

For more details on current PET recycling facilities across Europe, go to label. averydennison.eu.

#### SONOCO LISTS ON DOW INDEX FOR FIFTH YEAR

Sonoco has been listed on the 2013/2014 Dow Jones Sustainability World Index (DJSI), marking the fifth consecutive year it has received the prestigious recognition.

Launched in 1999, DJSI were the first global indices to track the financial performance of the leading sustainabilitydriven companies worldwide.



## MUNKSJÖ WEBSITE SHOWS RECYCLE OPTIONS

LINER specialist makes logistics information available

Munksjö has launched a website which aims to make it easier to find information, and to register for, its paper liner recycling service. The website, www. full-circle.eu, supports the Full Circle program, which was launched at the end of 2012. The company's paper liner recycling program aims to provide label printers, brand owners and retailers with a sustainable end-of-life option for paper release liners once they have been used as carriers of PSA labels.

Full Circle is a closed-loop recycling program. It collects silicone coated glassine release papers and recycles them into the production of new paper. Paper release liner is collected free of charge in Belgium, Germany, Luxembourg and the Netherlands, through one or more logistics partners.

Developed in English, French and German, the new website makes it easier

to share information about the Full Circle initiative with label printers and end-users. It provides details about the program and enables companies to submit online their recycling needs and get feedback on the best logistics option.

'Any end-user using PSA labels is welcome to use our Full Circle recycling service, regardless of the origin of the release paper or label-stock laminate,' said Marco Martinez, product manager for release liners and sustainability at Munksjö.

'At Munksjö, we are strongly committed to support the labeling industry growing their business in a sustainable way. We believe that, together, we have a unique opportunity to increase the amount of paper release liner which is recycled and to divert waste from landfill or incineration.'

For full story see p114.

### **UPM RAFLATAC INTRODUCES LCA TOOL**

Munksjö has launched a website which aims to make it easier to find information, and to register for, its paper liner recycling service. The website, www. full-circle.eu, supports the Full Circle program, which was launched at the end of 2012. The company's paper liner recycling program aims to provide label printers, brand owners and retailers with a sustainable end-of-life option for paper release liners once they have been used as carriers of PSA labels.

Full Circle is a closed-loop recycling program. It collects silicone coated glassine release papers and recycles them into the production of new paper. Paper release liner is collected free of charge in Belgium, Germany, Luxembourg and the Netherlands, through one or more logistics partners.

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## FLINT PUBLISHES SUSTAINABILITY REPORT'

**INK-TO-PLATES** group makes report publicly available

Flint Group has published its first externally available sustainability report, which provides comprehensive economic, social and environmental data detailing the group's performance.

Aligned to the Dow Jones Sustainability Index, the report outlines Flint Group's performance in three key areas – social, economic and environment – and details the way in which Flint Group has incorporated sustainable business practices into its daily activities.

Antoine Fady, chief executive officer of Flint Group, said: 'The introduction of this first Sustainability report is a key building block for the organization and one which will provide a source of constant evolution for us.

'While this is the first public and

external sustainability report for the group, it is important to note that this has been built on many years of focus and management of the elements that remain critical to the sustainability agenda.

'Flint Group has been built from companies with roots stretching back over 230 years – and has been able to draw from experience to mix and match values based on "best practice" to integrate sustainability into the way we run the business, rather than a separate initiative.'

He added: 'We know we are not there yet; we also know that there will always be room to improve. We do, however, believe that our current understanding and status of our sustainability efforts forms a great starting point and basis to work from moving forwards.'

## SONOCO LAUNCHES RECYCLING RESOURCE

Sonoco Recycling, a unit of Sonoco and one of the largest packaging recyclers in North America, has launched a new website to provide searchable customer service content and recycling resources.

The microsite, at www.sonocorecycling. com, includes: a contact form for site visitors to request information; a new locations database, where visitors can more easily identify Sonoco Recycling facilities near them; and videos, including those on how recycling works.

The site is formatted to be accessible from a number of devices, including mobile phones and tablets, and features a home page that rotates content to allow visitors to quickly learn about available services and resources or news announcements. A recycling leader with 50 locations worldwide, Sonoco Recycling annually collects nearly three million tons of old corrugated containers, various grades of paper, metals and plastics. Currently, Sonoco Recycling operates five material recovery facilities and serves nearly 150 communities in which curbside-collected residential and commercial materials are processed.

The company also provides recycling programs that identify waste reduction opportunities for many of the largest consumer product companies in the US.

Ray Howard, general manager of Sonoco Recycling, said: 'Our new microsite makes it easier for customers to find us.'

#### **ENVIROMENTAL NEWS**

A ROUND-UP OF THE LATEST GLOBAL ENVIRONMENTAL STORIES



#### HARPER WINS Thai green Award

Global anilox roll supplier Harper Corporation of America has been granted the Green Industry Award by Thailand's Ministry of Industry.

The award recognizes Harper Asia Pacific's commitment to green system management, reflecting the company's strong belief in social responsibility and environmentally-friendly operations. It was chosen as one of the top 10 companies in Thailand out of thousands of candidates.

Lee Kluttz, vice-president of operations at Harper Corporation of America, said: 'I am very proud of the hard work and effort that the Harper Asia Pacific plant continues to show. The Harper Asia Pacific facility is a mirror image of all Harper manufacturing locations, which provides the highest in consistent anilox quality, products and services to our markets.

'Congratulations to Harper Asia Pacific and the employees who have earned this welldeserved and highly honorable award.'

#### AVERY EXPANDS FSC PORTFOLIO

Avery Dennison is once again expanding its Forest Stewardship Council (FSC)certified portfolio of paper label materials available in Europe. 'Label converters and brand owners are looking for innovations that improve sustainability credentials,' said Angelo Depietri, vice president and general manager, Avery Dennison Materials Group Europe. 'As a market leader, it's our responsibility to develop, produce and promote products that help decrease environmental impact. Expanding our FSC-certified portfolio reinforces Avery Dennison's commitment to offer more sustainable label and packaging solutions and is an important next step in our effort to make our industry more sustainable.3

Since the beginning of this year, Avery Dennison has added more than 50 new FSC-certified label materials to its product portfolio. The portfolio now totals more than 150 different constructions, with more expected before the end of the year, that will feature core face stocks used in food, wine, spirits and dairy applications.



# Industry celebrates Award winners

**THE LABEL INDUSTRY GLOBAL AWARDS 2013** reached their tenth anniversary at Labelexpo, celebrating a range of outstanding industry achievements. Andy Thomas reports

The Label Industry Global Awards are held every year to celebrate the achievements of the companies and individuals who have been instrumental in pushing this vibrant industry forward.

The judging panel consists of the editors of the three leading industry magazines: this writer for Labels & Labeling; Steve Katz for Labels & Narrow Web, and Wolfgang Klos-Geiger for Etiketten and NarrowWebTech. Joining them were Kurt Walker, president of FINAT, and TLMI president Frank Sablone, with Mike Fairley in the chair.

As previously announced, Ritrama's Tomas Rink received the 2013 R. Stanton Avery Lifetime Achievement Award, sponsored by Avery Dennison and reflecting the values and vision of industry pioneer Stan Avery.

Tomas Rink joins an illustrious rota of winners including most recently RotoMetric's Steve Lee and Helmut Schreiner. Tomas joined \* his father's business when it had no more than 15 employees and built it into a global pressure-sensitive lamination business. There will be a full appreciation of his remarkable career in the 2014 L&L Yearbook. Be sure as well to check out Mike Fairley's excellent video interview

The three other award winners were announced during the ceremony, held on the first night of Labelexpo Europe and attracting 600 guests.

Peter Overbeek, managing director of Dutch converter Eshuis picked up the European Converter of the Year award, sponsored by Flint Group. The judges were impressed by how Eshuis played the lead role in co-ordinating the label printing segment of Coca-Cola's highly successful 'Share a Coke' marketing campaign. Overbeek and his team brought together 18 European conventional and digital label converters and co-ordinated a complex workflow from design

#### LABELS&LABELING



























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GUILLAUME CLEMENT, global business director, Narrow Web business unit at Flint Group presents award to Peter Overbeek, md Eshuis

XEIKON'S FILIP WEYMANS gives Sustainabilty award to Avery Dennison's Don Nolan

and approval to print and delivery to the bottling sites. Gregory Bentley, Coca-Cola Europe's innovation manager, was also present at the awards and congratulated Overbeek on his 'indispensible contribution' to the success of the project.

The Award for Sustainability, sponsored by Xeikon, was presented to Avery Dennison for its Bottle-to-Bottle Portfolio of pressure-sensitive labels. Developed to address critical barriers to the effective recycling of PET bottles, the 'B2B' portfolio utilizes a new generation of pressure-sensitive adhesives, developed by Avery, which incorporate a 'switchable' adhesive which adheres to PET surfaces until a bond is broken at the recycler, so cleanly releasing the label from the PET. The judges saw the innovation as offering major sustainability benefits for global consumer products end-users.

The Label Industry Global Award for Innovation, sponsored by Labels & Labeling, NarroWebTech and Label & Narrow Web magazines, was jointly won by Mark Andy and Flint Group Narrow Web for their efforts in commercializing UV LED curing. Flint Group was honored for its Ekocure UV LED ink technology and Mark Andy for its complementary ProLED ink curing technology. Taken together, the ProLED curing system generates savings in excess of 50 percent when compared to traditional HgUV systems and has advantages in areas such as heat management. Although the components of UV LED technology has been around for some, this is the first time a commercially available system has been seen operating on each print station of a flexo press running at full speed.

This award attracted a record number of entries, and the judges also singled out Nuova GiDue's 'Digital Flexo' technology and JM Heaford's new plate mounting system for particular praise.

Mike Fairley, chair of the judges commented: 'Congratulations to all of the finalists and winners. The label industry continues to serve as a shining example of innovation and passion for best practice in business. Striving to set the highest possible standards and raise the bar across the printing industry, the label sector is one of the most exciting, inspiring and vibrant marketplaces to work in and everyone who took part in this year's awards program should be exceptionally proud of their achievements.'

#### **VIDEO HIGHLIGHTS:** Mike Fairely interviews tomas rink

WWW.LABELSANDLABELING.COM/VIDEO/MIKE-FAIRLEY-SPEAKS-TOMAS-RINK



#### WLA PRESENTS 'BEST OF BEST'

To celebrate the 21st year of the World Label Awards the L9 group of label associations has inaugurated a 'Best of the Best' competition, the winners of which were announced at the start of the Global Label Awards evening.

The winners were selected from the winners of the World Label Awards competition held each year just before Labelexpo Brussels and Chicago.

The awards were presented by FINAT president Kurt Walker and Tony White, chairman of the World Label Awards judges.

#### The Best of the Best Awards were:

h

- Combination Printing: 'The Colour Pinot Noir 2009', printed by Rapid Labels, New Zealand
- Letterpress Printing: 'Pates de Fruits' printed by Chugoku Seal Printing Co., Ltd., Japan
- Offset Litho Printing: 'Diamond Wax' printed by Yamada Fine Art Printing Co., Ltd., Japan
- Flexographic Printing: 'Rennie Estate Winery 2009 Gaia' printed by ASL Print FX, Canada
- Digital Printing: 'Buy 3 Tires promo' printed by Digital Label Solutions Inc., USA

**ABOVE IMAGE:** Flint Group and Mark Andy win innovation award (L-R) Steve Katz, L&NW; Andy Thomas, L&L; Niklas Olsson, Jennifer Joyce, Guillaume Clement, Flint Group; Greg Palm, Mark Andy; Wolfgang Klos-Geiger, Etiketten

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# Xerox choses Berkeley for pack printing

**XEROX** has installed a Berkeley Machinery Autoflex Excel XT narrow web press to improve print quality and production efficiency on its product packaging. Nick Coombes reports

Xerox has installed an Autoflex Excel XT narrow web press at its production facility in Limoges, France, to improve print quality and production efficiency. The Autoflex, which is manufactured by UK-based Berkeley Machinery, was chosen for its ability to meet Xerox's stringent colorimetric tests on the printed packaging that it produces for its portfolio of leading international brand owners.

Print production first began at Limoges in 1999 when a locally based industrial company contacted Xerox with a view to rationalizing its costs and improving the planning of its core business by outsourcing. Initially, using simple flexo and digital presses, the company supplied self-adhesive labels and instruction leaflets, and the working partnership endured for six years on this basis. But, in 2005, with the arrival of a new operations manager, Jean Michel Moreau, at the Limoges plant, Xerox began to develop a more commercial approach to its operation, which led to the installation of an iGen3 digital press and associated finishing technology, designed for quadricolor page-to-page printing. This gave the Limoges plant an opportunity to extend its markets for commercial documentation in France and abroad. "Xerox began to develop a more commercial approach to its operation, which led to the installation of an iGen3 digital press and associated finishing technology, designed for quadricolor page-to-page printing"

The year 2005 also saw the introduction of an offer to customers of 'Performance Bonds' that guaranteed the quality level of work being delivered. To ensure the company was able to meet the performance criteria, Xerox began to search the market in 2011 for the latest flexo technology, and initially was interested in sourcing a nearly new press. When one of the right age and specification proved difficult to find, the company turned its attention to new machinery, and via UK company Polygraphica, Berkeley Machinery's business partners, a new press was considered after Matthew Berkeley-Hill spoke direct with Xerox.

The new Autoflex Excel XT at Limoges is an 8-color flexo

press with a 340mm web width and line shaft drive. It is fitted with a closed-loop tension system, web guide, a corona treater, automatic electronic register, and an overhead rail system with moveable turn bars and a cold foil unit. The eight flexo printing units and three die-cutting stations, which all have motorized advance and retard, are followed by a matrix rewind, and UV/ Hot Air combination drying that accommodates water-based, UV and solvent inks. The press, which has 50mm side frames and weighs in at 23 tons, is designed to print substrates from 20-micron film and foil to 350gsm lightweight board, at speeds up to 230 m/min.

Installed when Xerox moved into its new 1,200 sqm facility in rue Bernard Lathière, on the outskirts of Limoges, the Autoflex is currently working a single shift pattern. Speaking for the press manufacturer, Matthew Berkeley-Hill comments: 'We design our presses with the operator in mind and make them easy to run and quick to change over between jobs,' which supports the views of press operator Jean-Marc Mandon, who says: 'The Autoflex is a stable production platform that holds exceptional register even during slow down and ramp up back to full speed.' The move to the new factory also brought the installation of a second iGen3 press.

According to Jean Michel Moreau: 'The additional printing capacity we now have allows us to service our existing contracts more easily and offer a wider range of quality products to a more diversified list of companies, mostly in the food and pharmaceutical markets in France and elsewhere.' In 2013, Xerox launched its new 'Label' service to existing and potential customers. Based on the knowledge and technical expertise at the Limoges plant, it has become part of the company's sales department's business offer, and is a perfect complement to the full business process solution its provides. Claimed savings of up to 30 percent in print and output costs on jobs from leaflets to short, medium, and long run label work, "The additional printing capacity we now have allows us to service our existing contracts more easily and offer a wider range of quality products to a more diversified list of companies"

have transformed the Limoges production unit into a facility that produces 250 million labels each year, and it has the capacity to produce many more.

'Our aim is to provide simple answers to today's complex business problems,' explains Moreau, who says that Xerox now operates in over 160 countries worldwide, and employs more than 140,000 people. Last year, it generated annual revenue in excess of 23 billion US dollars, making it the world's largest provider of business process and document management services.

Commenting on Xerox's choice of the Autoflex press, Matthew Berkeley-Hill states: 'We feel proud and privileged to be one of Xerox's approved suppliers, and have built a very close working relationship that will benefit both companies going forward. We are well aware of the great potential for growth at Xerox, and will design and adapt our technology to meet their specific requirements.'

Concluding, for Xerox, Jean Michel Moreau adds: 'When we put out the tender for a new flexo press, only Berkeley was able to fulfill all of our requirements. It is essential that we can meet our customers' expectations at all times, and the Autoflex has allowed us to do this without the need to call on subcontractors for the more complex and long run label jobs. This allows us to provide our customers with better productivity and costings.'





**THE** Autoflex Excel at Limoges is an 8-color flexo press with a 340mm web width

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**MÜLLER MARTINI** 



# Inline with sheetfed

**ONCE IT WAS EASY TO MAKE A DISTINCTION** between inline narrow web presses and stand-alone sheetfed offset. But as Matt Rockley, product manager for presses at Heidelberg UK, explains, sheetfed is evolving its own inline options

The second generation Cooper and Cooper 'S' sports hatchbacks offer more than 100,000 options and accessory combinations. Buying a car was once so easy, focusing on issues like whether to buy manual or automatic, standard hubs or spoilers and selecting from a limited number of colors and finishes. Now it takes more time, an eye for detail and good advice from informed sales staff to 'design' your perfect car .

Buying a packaging press is no different. It has become a highly technical and detailed process as carton and label producers look to configure a line that will provide current and future customers with the range of products they require at the quality and speed they need it. Added value exclusivity is at a premium, as is the ability to run leaner, more resource efficiently and optimize the cost-price ratios to improve profit margins.

In both the carton and labels sectors presses have become longer and more complex. You only have to think of the Chesapeake Branded Products installation at East Kilbride – that is a Speedmaster XL 106 perfector with a record-breaking 17 print units: 10 printing units, three coating units, four drying units and an inline cold foiling option. In a smaller format, label printer John Watson also has an incredibly long press in the Speedmaster CD 74-LY-9+LYYLX (UV) which boils down to a UV machine with nine printing units and pre- and post coating and drying. "Today presses are offered with a wide range of inline options including UV, perfecting, coating, cold foiling, numbering, perforating and die-cutting"

Packaging has quite distinct requirements because it has both a functional and promotional role. Cartons must protect and be transportable. Labels must give accurate and legible information. Both must grab attention and communicate brand values. This combination alone provides challenge enough, but add into that mix an increasing demand from the retail and corporate sector – and print management buyers – for sustainability credentials to fit their Corporate Responsibility requirements and cost-effectiveness and it makes clear just why creating the dream press can be a challenge.

Today presses are offered with a wide range of inline options including UV, perfecting, coating, cold foiling, numbering, perforating and die-cutting.

UV is commonplace in packaging, particularly in sectors where low odor and high gloss count and it has the side benefit of being a very clean production method. Packaging



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has tended to print one side of a board traditionally but now, in areas like retail and pharma, there is an increasing use of box interiors for promotional or information messages or enhanced aesthetics. With the latest XL technology, perfecting can be added without compromising the press speed.

Coating, too, has been around but there are new trends here. Certainly sales of pre-coaters and double coaters are on the rise. Pre-coaters allow a printer to create their own special boards with pearlescent, mica, metallic or opaque white finishes. This can be a cost-effective alternative to buying special boards as well as a way of offering something competitors can't.

Drip-Off Christala coating effects are already available but R&D at Heidelberg is still evolving ways of producing even more geometric shapes, textures, ornaments, contone gradations and typographical effects. Investigations into special 3D and holographic coating effects are also under way.

Double coaters allow printers to combine gloss and matt, UV and IR, metallic and standard coatings or other variations that can enhance the aesthetic look of print, vital in high value sectors like the spirits and perfume markets.

Drying coatings can involve high energy consumption. Because the UV lamps of the DryStar UV use dichromatic reflector surfaces and are positioned 20mm closer to the substrate than any other system, energy efficiency is increased by about 15 percent, saving about 40 tonnes of carbon a year. Heidelberg products with Star in their name denote a particular environmental advantage and related to issues like chemistry, inking, wash up, etc.

Paper and board remains the single biggest carbon sapper in printing and Heidelberg has done a great deal to reduce wastage, not least by introducing spectral color measurement systems (yes more options!) and workflows that minimize start up waste and keep color consistency within stringent deviation parameters on the run. Here a major impact can be made on

#### "Heidelberg's foiling system lays down the foil, gold, silver or a range of other colorful and patterned effects, and then prints"

efficiency, sustainability and quality. Heidelberg was the first press manufacturer to offer a Carbon Balanced option on its full range of Speedmaster presses and it is not alarmingly costly.

Waste and cost has also been reduced with the introduction of indexing – using only the length of foil required not one full Cylinder's worth – for inline cold foiling. Heidelberg's foiling system lays down the foil, gold, silver or a range of other colorful and patterned effects, and then prints. Full or spot foil application is equally easy but entry into this area requires two additional printing units, one for applying the adhesive and the second the foils. These can be switched back to print when required. There has been strong international take up from companies with the foiling volume to justify the investment and Heidelberg also offers an offline foiling option on its die-cutters.

There is a trend to provide options that can be run on press or at the converting stage or production. There are inline die-cutting options – Cito or Kocher + Beck, for instance – but the dedicated Dymatrix and Varimatrix systems also give a range of offline choices.

Inline quality checks on press with the proven Prinect Inspection Control – which can differentiate between a six pt comma and full stop as well as distinguishing between the saleable and waste areas – are also being offered as an option on the Diana folder-gluers, so checking the positioning and accuracy of data on the pack or sheet has never been easier. This is great where there are security elements or commercially sensitive issues.

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What to run line inline depends very much on the technology, the volume of finished work, run lengths, speed and quality required. Adding value and creating new services has to be cost balanced. The very fact that Heidelberg offers many value-added tools both online and offline makes it an 'honest broker' and there's no charge for asking for advice. By standing out you can become outstanding - and more profitable.

### PERFECTING IMPACTS PACKAGING

At a press conference in the historic Stationer's Hall in London, Heidelberg UK announced it has delivered 110 B1 Speedmaster perfector units since Drupa with increasing interest from packaging printers.

The installations include the world's longest B1 press, the 17 unit Speedmaster XL 106 perfector at Chesapeake East Kilbride, consisting of 10 printing units, three coating units, four drying units as well as an inline cold foiling option.

Commented Jim Todd, Heidelberg UK sales director, 'The Speedmaster XL 106 has taken productivity to a whole new level. Some of our customers believe it could easily achieve 75 million impressions when running at 18,000sph and combined with Inpress Control automated spectral and register measurement and Autoplate XL simultaneous plate-changing.'

Todd believes that more packaging printers will look at perfecting in this format as demand grows for printing information inside packaging in addition to brand-conscious print outside.

Looking at broader trends in the packaging sector, Todd said consolidation and globalization continue to be key factors. At the same time single pass processes are replacing multi-pass processing, presses

are getting longer and finishing technology has become more efficient and capable of matching the performance of the new generation of presses.

Looking to the future, Todd said packaging printers would have a key role in global color management using spectral standards. And in food packaging we see a move away from UV inks to low migration inks."

Legislation changes are also changing the package printing landscape, and Todd cited the changes in pharma leaflet font size, braille and sustainability as both key challenges and opportunities to offer new solutions.

For carton converters the issue of 'no brand' cigarette cartons remains a major cloud on the horizon.

Todd said Heidelberg has had some success with its B2 Anicolor 'short inking' press in the packaging sector because of its ability to produce short runs economically with fewer variables.

Heidelberg's statistics show that the global volume of printed products by value has remained remarkably stable since 2000 despite the advance of the internet, and by 2017 volumes are actually expected to exceed 2000 levels. Sheetfed offset packaging is expected to be worth over 131 billion euros by 2020, accounting for some 28 percent of total global sheetfed print volumes.

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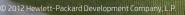




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that they taper to become narrower and narrower in parallel, without crossing or changing position

# Printing at the speed of light

**PHOTONIC IMAGING** has been around for a while, but a young company is promising to unlock new applications for the inkless printing process. David Pittman reports

LumeJet was founded in January 2010 to explore and develop commercial opportunities for new photonic technology developed at Warwick University.

Photonics is the branch of technology concerned with the properties and transmission of photons. It was recently identified as one of the key enabling technologies (KET) critical to business-led innovation by the EU Commission's 2020 New Horizon program.

In terms of printing, it is a digital process that uses LEDs to interact with photo-activated media, as opposed to the inkjet process, whereby ink is jetted on to the substrate.

LumeJet's technology originates from a research project at Warwick University, sponsored and initiated by Trevor Elworthy, LumeJet CIO and founder, which was developed into the company's Digital Print Head (DPH).

The DPH consists of a fiber taper – fiber optics which have been evenly stretched

in such a way that they taper to become narrower and narrower in parallel, without crossing or changing position. Light enters at one end and exits at the other through an LED array, passing through a lens stack and beaming a tiny dot onto photo-sensitive media to print inklessly.

LumeJet's technology is tailored to suit specific applications; the LumeJet S200 ultra-high resolution photo printer has a twin DPH configuration, with two heads mounted side by side, and prints a dot size less than 0.005mm onto color negative roll paper. Both identical heads have 288 LEDs, 96 calibrated for each of the three colors – red, green and blue (RGB). In the LumeJet S200, the printheads are moving and traverse the media in a single pass, edge to edge.

LumeJet has now started work on a new system for high-speed industrial applications for photonic printing, such as inline labeling and packaging. LumeBar has clusters of LEDs mounted side by side across a static page-wide "LumeJet describes photonic digital printing as fast, clean, repeatable and micron-accurate, with the benefit that it can be applied to solid objects and flexible media."

digital print bar, which will print directly onto designated areas of photo-sensitive media on the product as it goes past on the production line.

LumeJet describes photonic digital printing as fast, clean, repeatable and micron-accurate, with the benefit that it can be applied to solid objects and flexible media.

Miles Bentley, LumetJet's commercial director, notes that photonic printing technology has been around for a

"LumeJet will need to work on increasing the speed of its photonic printing equipment, without impinging on quality. Current print speeds are at around 14 linear meters an hour, although Bentley says this is getting faster and faster as research and development (R&D) work continues."

while, and is widely used commercially to print photographs. However, LumeJet is now working to make the process economically viable for industrial applications, including labels and packaging.

'Photonics is an established technology, but it has never been approached in this way before. The LED array makes it highly accurate, and we're now working to make it cost-effective.

'The LumeJet S200 is proof of concept that the technology works, but has limitations in that it requires a very stable and flat surface. The LumeBar uses many times the number of LEDs than the first implementation of the LumeJet process, and is able to print on three dimensional objects as a result.'

'Light is also clean and is faster than ink,' Bentley adds.

LumeJet's research teams are developing bespoke LumeBar systems for use in joint projects with some of the market leaders in inline labeling. Individual LumeBars are custom-built, tailored for wavelength and spot size, and specifically designed for fast throughput and higher output powers.

Bentley himself identifies some recent case studies as showing the potential for LumetJet's technology. Coca-Cola's recent 'Share...' campaign is one that he draws particular attention to.

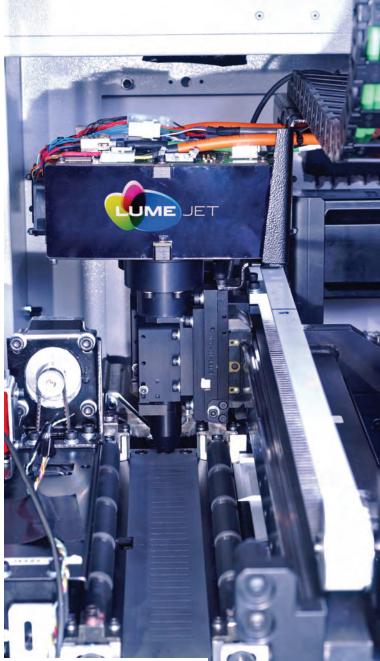
'Coca-Cola has shown how personalization will be an important part of the printing industry going forward,' he says. 'We see runs of one as a market for the technology, although we don't want to want to discount large-scale commercial applications.'

To achieve uptake in either market, LumeJet will need to work on increasing the speed of its photonic printing equipment, without impinging on quality. Current print speeds are at around 14 linear meters an hour, although Bentley says this is getting faster and faster as research and development (R&D) work continues.

R&D work on LumeBar is to be aided by a 250,000 GBP (387,000 US dollar) grant awarded to the company by the UK Technology Strategy Board's Smart program.

The UK Technology Strategy Board's Smart program supports SMEs with 'high growth ambition and potential'. To be successful, applicants need to show that they have an 'innovative idea, addressing a real market need, and have the ability to deliver their idea to drive economic growth'.

The development is further being aided by material suppliers that are developing new polymer



IN the LumeJet S200, the printheads are moving and traverse the media in a single pass, edge to edge

formulations suitable for photonic printing applications. Polymers that change color when exposed via IR or UV are at the heart of photonics, so their continued development and evolution will play a central role in the commercialization of the process in industrial applications. This is a two-way street, and Bentley says: 'There is a lot of work going on in terms of polymers and substrates, but these require an enabling technology to create products. We're one of the few able to provide this.'

Bentley predicts the commercialization of LumeBar to be three to four years away, although the first LumetJet S200 press has already been sold, with London-based Altaimage becoming a beta site.

This will provide further proof of concept, and show that photonics has the potential to become a viable digital printing process in industrial sectors, especially those where shorter runs are becoming the norm according to Bentley.

'There is a whole new generation of business leaders coming through that aren't so heavily concerned by cost and overheads, but are looking more at what the market wants. What the market is crying out for is the technology to allow hyper-short runs, and photonics can be the technology to deliver that.'

## QUALITY Wins!

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#### **GIDUE for Labels and Coupons market**

The new **Combat M1** displays an "open" structure to simplify the access to the famous Flower flexographic print unit and perform the shortest web path in the market. The converting section has been redesigned with independent servo motors for each die-cutting unit and easy access to the slitting section.





# KPG launches inkjet division

**BEST KNOWN** for its complex package printing presses, KPG has now branched out into modular inkjet systems with a new, dedicated business unit. Andy Thomas reports

KPG Europe has a long history in the label and package printing market. For over 30 years the company has been in partnership with ToyoKoki in Japan, which designed and built Ko-Pack presses for the label industry.

Although the Ko-Pack name has gone, KPG continues to work with ToyoKoki, building specialist presses for complex packaging applications including casings, tube laminates, films and booklet labels/coupons.

KPG Europe is now set to move into digital printing with the launch of an independent business division, Inkjet Solutions, offering customized inkjet print modules for retrofitting to narrow/mid web printing presses or offline converting and inspection machines.

KPG's expertise in web handling also allows the company to build complete standalone digital print converting platforms, from simple roll-to-roll solutions to complex modular finishing systems including UV flexo varnish and die-cutting.

Inkjet Solutions has adopted Kyocera heads for both its monochrome and CMYK units, printing at speeds up to 50m/min at full (600 X 600dpi) resolution. The monochrome unit is available in print widths up to 432mm and includes full variable data printing as standard. Typical applications would be for barcoding, QR codes, date and batch numbering.

The CMYK inkjet module comes in print widths up to 324mm and an optional white is also available. A pre-coating unit allows printing on a wider range of PS substrates.

'We are used to building robust industrial systems,' says John Richardson, technical services director at KPG and managing director of Inkjet Solutions. 'Our customers are worried that scratches on a nozzle plate or using the wrong inks could invalidate the warranty, so we are looking at selling systems designed to be as reliable as our presses.'

#### **STRATEGY**

'Initially we are concentrating on niche markets, starting with monochrome and allowing the CMYK market to develop still further,' says Richardson.

'The feedback from our customers is that 4-color inkjet is not yet commercially acceptable in terms of materials range and speed. Inline CMYK inkjet makes little sense – it creates issues with surface tension and the inks need pinning, so you are extending complexity. At the same time, quick-change flexo technology with auto register has brought waste down to eight meters and this has slowed down the advance of digital. It means CMYK digital inkjet needs to take the next step in terms of higher resolutions and better lay downs.'

For monochrome inkjet, typical niche applications include marking liner rolls, which allows the converter or the laminate manufacturer to brand their label rolls. 'Using the new Kyocera heads we would recommend printing at 150 m/min at 300 dpi for this application.'

Unique coding of pharmaceutical labels is another key application, and others include functional labeling, ticketing, tracking and distribution data, as well as security coding. 'Our current aim is to serve markets where the quality is acceptable and we are not banging heads with HP,' says Richardson.

A choice of inkjet heads is available to suit different applications. We chose Kyocera because the KPG side wanted the line speed, but we are not tied to Kyocera where another head would be more suitable,' says Richardson. 'For example, barcode printing is our most requested application, and here a full web width Kyocera is over specified.' Similarly a wide range of converting bases can be considered, from highly specified units with various modules to simplified roll-to-roll bases.

#### **MATERIAL CHOICE**

Inkjet Solutions has tested a lot of materials, particularly to define where corona treating is needed. 'The bottom line is that for CMYK printing you need to be like HP and either coat your own materials or buy dedicated coated material. The materials suppliers have not widely addressed this issue yet. Cast coated inkjet-ready stocks are not widely available, those that are tend to be at a premium price – without further development it is not possible for inkjet technology to achieve the same color density and quality as conventional printing.'

As long as substrates are uncoated and porous there is no problem. 'Materials with a rough surface, such as parchments, which are popular for wine labels, are ideal for inkjet printing, whereas conventional print processes struggle to achieve quality results. We have tested uncoated material, followed by a varnish and achieved image quality and color density comparable to conventional print,' says Richardson.



KPG will apply machine integration skills to digital



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## Security Specialist

**TRADE SECURITY SPECIALIST** SPS is aiming to transfer its expertise in high-end security print and finishing to the brand protection market. Andy Thomas reports

Since its founding in 1982, Security Print Solutions (SPS) has lived a low profile business existence as a specialist supplier of high end security print solutions to the trade.

This is set to change as SPS looks to transfer its security print and finishing expertise to the brand protection label market. 'We have grown our business by 50 percent over the last two years to a six million GBP turnover, and with this new direction we are looking for still higher growth in the next two to three years,' asserts director Graham McGuire.

The success of SPS has been built on the back of innovation. For example, in 1990 the company was the first to pioneer security holograms onto UK checks and other paper substrates. Spending on R&D annually exceeds a six figure sum, and SPS has demonstrated its expertise across a wide range of high security products including checks, tax stamps, visas, certificates, store gift vouchers, discount vouchers and event tickets.

It is not a huge leap from here to brand protection labels. 'Whilst our activity within the label market is small, we are quickly growing our security label capabilities in the tobacco, alcohol, auto and white goods market places,' says Graham McGuire. 'Over the past two years we have produced well in excess of one billion tax/revenue stamps for export, mainly to the Middle East.'

McGuire stresses that although any competent label converter can print basic security labels, they are not necessarily operating in a controlled security environment, with secured enclosures, audited and controlled waste management and so on. 'We are regularly vetted by check suppliers and we have ISO 27001 for secure information handling,' says McGuire. "The label can be applied to the packaging as a seal or on the product itself. Each application has its own specific characteristics to ensure the maximum protection of the product"

#### END USER FOCUS

This strategic shift to the brand security market will entail extensive market research to target the end sectors most requiring protection. 'The end use is the critical starting point – where is the label to be applied and how?' says Graham McGuire. 'This dictates the label substrate, adhesives and finished configuration of the label, whether sheet format, reels or banded individual items. Another extremely important point to understand is the types of fraud and the potential for alteration. Why would people alter? What would be the minimum or maximum security required? The final part would be design, not just a fancy good looking design, but a design which is very easy on the eye, provides great depth of protection and is easily authenticated. Our experience in bank note software means we can protect from alteration and counterfeit fraud in one.'

Once the overall strategy has been agreed, SPS will then look at the functional characteristics required: 'The label can be applied to the packaging as a seal or on the product itself. Each application has its own specific characteristics to ensure the maximum protection of the product, for example



MULTI-LAYERED security print from SPS

using adhesives specifically formulated to create maximum adhesion and tamper resistance. There are numerous substrates to adhere to, from plastic bags and cardboard boxes, to specific end user requirements for metal components.'

#### **UNDER ATTACK**

Counterfeiting techniques never stand still, and much has changed over the last two decades.

Security Holograms are now universally used in significant volumes. 'But this begs the question – how good is international security control of the billions of security holograms produced?' asks McGuire.

SPS has reacted to this by developing multi-colored UV security graphics printed over the holograms to create an additional layer of hologram protection. In recent years innovations have focused on security graphics in conjunction with the extensive use of multi-color UV and a system called Stealth Security Print to protect data. Some of these innovations have also been patented to protect the commercial interests of both SPS and its print partners.

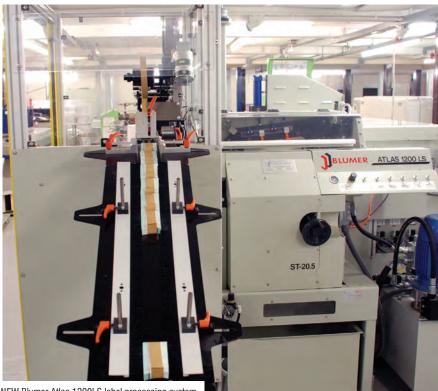
McGuire stresses that the physical label is only the first part of the secure system.

"The use of websites, numbers, barcodes and the reading of information by the potential buyer or end user guarantees and validates the label, creating a complete secure system"

'The second part is the validation, traceability and closing of the verification loop – the security system. Software and systems are available to work with the security label to validate them at various points for added protection. The use of websites, numbers, barcodes and the reading of information by the potential buyer or end user guarantees and validates the label, creating a complete secure system.'

During the last 13 years, SPS has focused on developing unique inline security printing techniques, installing a Rotatek offset press capable of up





NEW Blumer Atlas 1200LS label processing system

to 9-color security printing, hologram stripes or patches, numbering – including personalization and 2D barcodes – and die-cutting in one production process. The press is capable of producing over one million tax stamp labels per hour incorporating multiple security features.

An order has recently been placed for an additional and identically specified machine.

#### PROTECT AND SURVIVE

### In the view of SPS, security labeling is a highly diversified field, covering:

#### Brand protection -

- Assuring authenticity of product contained in labeled packaging
- Protecting brand reputation from counterfeit goods

#### Tax stamps -

- Revenue streams for governments, used on alcohol and tobacco
- Reduction in contraband
- Traceability of imported/exported goods

#### Pharmaceutical labels -

- Authenticity of prescriptions
- Security seal to products
- Product integrity

#### Tamper evident -

 Detection of opened boxes or packaging through tamper evident labels

#### Security visas -

- Genuine/legal entry into a country for border official verification
- Easy to read and authenticate on inspection
- Protect countries from illegal immigrants and unofficial entry

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# The changing world of label printing

**FINAT** has commissioned Mike Fairley to look at how label printing technology has evolved over the centuries and to consider some of the investment decisions facing converters today

It's now more than 400 years since the first recorded printed labels were being produced. At that time they would have been printed on hand-made paper using relief letterpress type or images cut into wood or metal, with impression pressure applied through a wooden hand press and simple screw mechanism.

#### THE 'PRE' HISTORY OF LABELS

It was a further 200 years before much began to change. Yes, the hand presses were now being made of iron with a lever system to apply pressure, but the paper was still made by hand. However, by the early 19th century the industrial revolution was bringing significant changes to the world of printing – the first cylinder printing presses (powered by steam), the offset printing process, continuous papermaking machines.

The 1800s also brought coated paper, the halftone process, color printing – and a whole host of new label market application requirements that were to see the early beginnings of what we now call the label industry. These new 19th century applications included automatic volume production of standard-sized glass bottles and bottle filling lines, the first canning factories, the rapid growth of pharmacy products, labels on boxes, labels on luggage, labels on cigar boxes and bands, matchbox labels and all at this time now being printed on sheetfed offset or letterpress presses.

The first part of the 20th century saw the introduction of the first narrow web presses for printing gummed and self-adhesive tape. The key innovations for the narrow web printer were developments by Stan Avery that enabled self-adhesive materials to have a backing carrier and be cut to shape on the press. It was die-cutting materials on a liner that now enables sticky labels to be produced on a roll. It was not long before press manufacturers such as Gallus, Nilpeter and Mark Andy were producing the early dedicated roll-label letterpress and flexo presses.

#### LATE 20TH CENTURY: EMERGENCE OF SELF-ADHESIVE IN EUROPE

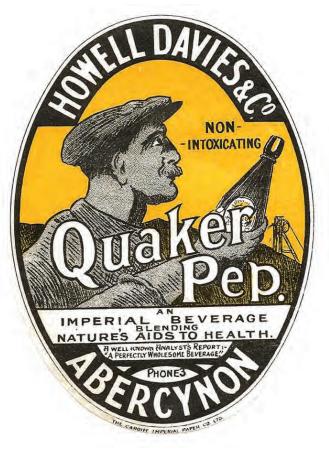
Later came narrow web screen, hotfoil and combination process presses, UV-curing inks and more advanced platemaking technology. By the late 1970s self-adhesive labels had already attained a seven percent share of the European label market – with all printing processes being used. Today, self-adhesive labels make up around 40 percent of label usage, fuelled by a whole host of technology and press innovations over the last 30 years that have enabled labels to be printed faster, on wider webs, using rotary and wrap-around tooling, servo-drive presses, and press controls that include web inspection, register control, color management, and much more.

Unbelievably, it was not until 1978 that the first retail barcodes were being produced for the Fine Fare Supermarket's own label products, and the very first time that a velocity code was incorporated on the film masters for the production of the dark vertical bars on the codes. Today, barcodes are an essential element of every label sold through retail outlets across Europe. At this time barcoded labels for labeling fresh produce in store and at pre-packers was being undertaken with heat-sensitive labelstocks. It was not until the 1980s that thermal direct and then thermal transfer printing of barcoded price-weigh labels using self-adhesive materials began to take place and grow rapidly by the later part of the decade.

At about the same time the use of new types of polypropylene and polystyrene (later polyethylene) film materials for more demanding label applications were being introduced. High quality printing of filmic materials used for labeling shampoos, toiletries, industrial products, etc, were now required by the leading brand owners. This presented more demanding label printing and converting challenges for press manufacturers and converters.

### THREE DECADES OF EVOLUTIONARY CHANGES IN LABEL PRINTING TECHNOLOGY

To meet changing label printing requirements over the past 30 years the dominant label printing technology of the time has undergone several changes: In the 1980s it was rotary letterpress that dominated new press sales. Then came growth in the flexo process during the 1990s. Much of the early part of the 21st century has seen UV flexo as the dominant





FINE Fare labels from 1978

technology for new label press sales. Since the mid-2000s, digital printing has also begun to evolve quite rapidly, initially with electrophotographic liquid and dry toner technologies and, most recently, with new generations of UV and water-based inkjet.

In the pipeline for launch in 2014 is the newly developed Landa nanographic printing process, an offset inkjet process that has already created significant market interest amongst label, folding carton and flexible packaging printers.

Without unduly wishing to worry the label converter, there is also considerable development work being undertaken at the present time with the longer-term aim of eventually using inkjet technology to print direct onto glass or plastic bottles or onto a variety of can shapes and sizes. Maybe not a concern for today, but possibly a more real threat for the future.

#### WHAT WILL THE FUTURE BRING? FACTORS TO CONSIDER

Put together, the key challenge today for any label printer is to decide what their new label printing press investment will be this year, next year or the year after. Will it be another conventional UV flexo analogue press? Or maybe an offset or combination process press? Some converters are perhaps still deciding whether to go digital. If so, will the investment be in toner or inkjet technologies?

In the past, the decision of which press to invest in was perhaps rather simpler. Today there are even more factors to be considered – even with conventional analogue press technology. A press's environmental footprint and energy consumption might be an important factor. So might the press color gamut and the number of colors or print stations available on the press.

What added-value finishing options are available? What inspection or control technology is required on the press? What kind of output speed is demanded for the type of work being produced? How long does the press require to changeover from one job to another? Does the converter want to print other products as well as labels, such as flexible packaging, tube laminates, folding cartons, sachets, etc? These factors may well influence press investment. Each of the main press manufacturers undoubtedly has their own technology variations they wish to promote and offer.

#### GOING DIGITAL: ADDITIONAL FACTORS

When it comes to investing in digital there are various other factors to be considered as well as just investment in a press. Digital printing is all about new ways of working. It's about enhanced color management. It's about making decisions whether to go conventional or digital as late as possible. What throughput of different jobs can be handled each day without getting bogged down in administration and paperwork? All these factors are likely to require more sophisticated Management Information Systems (MIS). Yet another key investment decision to be made.

Then there is the additional challenge with digital of what dpi resolution to go for; does the work produced need a white ink in one of the printing heads; does the press have an extended color gamut. Press running speeds between all the digital label press technologies also vary quite considerably. How important is speed with many short-run job changes?

Go digital and the converter also needs to decide whether to invest in inline or offline finishing. If inline, every job change may mean a press stop to change cutting dies. If there are multiple short run jobs to be produced the die-changes can take up a considerable part of the press day and offer reduced press running time. That means reduced "Does the converter want to print other products as well as labels, such as flexible packaging, tube laminates, folding cartons, sachets, etc? These factors may well influence press investment"

output and potentially lower profitability. Offline finishing can mean that one finishing line can handle the output of several digital presses, so maximizing press production time.

Another finishing investment option for the label converter might be laser die-cutting; a higher-cost investment, but offering significant benefits where multiple short runs are required each day. Used with say, inkjet, laser cutting technology combined with inkjet (or Xeikon) technology where there is no fixed repeat length, offers the exciting potential of batching jobs across or along the web for maximum economics and performance.

#### ACCELERATING CHANGES IN TECHNOLOGY: WHAT WAS THERE TO SEE AT LABELEXPO EUROPE 2013?

Looking back, it seems that more changes in printing technology, particularly for self-adhesive label printing processes and technologies, have occurred over the past 50 years than at any other period in the last 400 years. Even today, change in label printing and converting technology is continuing to take place. This became evident at Labelexpo Europe this year, where new makes and models of label presses were launched, including ever more printing machinery emanating from Asia and the world of digital printing technology.

#### **ABOUT FINAT**

FINAT, founded in Paris in 1958 with headquarters in The Hague (The Netherlands), is a worldwide association for manufacturers of self-adhesive labels and related products and services. With 600 members in over 50 countries, FINAT offers to label converters and suppliers to the labeling industry information exchange and the opportunity to network internationally. www.finat.com FEW THINGS AT LABELEXPO HAVE CAUSED SUCH A SENSATION. THANKS FOR BEING WITH US.

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DARAGH Whelan, commercial director at Adare, with Combat M5 'digital flexo' press

## Adare takes HD digital flexo road

**INVESTMENT** in high quality flexography is propelling Adare into new markets in flexible packaging and labels. Andy Thomas reports

Adare describes itself as a leading provider of marketing and secure communication solutions, and is a major player in the labels and packaging space. With 30 locations across the UK and Europe, the company employs over 900 people and has an annual turnover of 170 million GBP.

It is also a company with a mission: to push flexography beyond its current limitations and challenge digital as the main short run package print technology.

When it came to its most recent investment, Adare evaluated a digital press, but also looked to see if current processes could be improved.

The Adare team set itself the task of analyzing which press would best fit the need for high quality, short run label and flexible packaging production.

Using its comprehensive management information system – which incorporates QTMS shopfloor data collection – the team carried out its own analysis using three months of real world production data.

Adare comprehensively researched many digital and conventional presses on the market and found that the 530mm-wide Nuova Gidue M5 Digital Flexo system came closest to a digital setup with all the advantages of inline finishing and a workflow they were familiar with.

Alongside the press, Adare carried out a parallel investment in HD (high definition) flexo technology, installing a CDI Spark 4835 imager and DuPont FAST thermal processor, able to produce 250lpi plates in 40 minutes. A new inventory of high cell count anilox rolls was purchased along with an innovative automatic plate mounter. The capital investment was topped off with a Prati 100 percent inspection system.

The combined eco-system of HD imaging and digital flexo printing was named by Adare 'Digital Flexo HD'. David Mills, managing director, says 'For Adare, digital flexo is not just a machine, but a process, and HD is now standard practice on our site. With Digital Flexo HD quality we can rival gravure and litho, and we are only starting out – this will get even better.'

#### PREDICTABLE PRINTING

'Nuova Gidue's Digital Flexo is a revolutionary change for the market, as big as digital printing,' states Daragh Whelan, commercial director at Adare.

The key component of the technology is Print Tutor, a dual camera system which maintains both register and print pressure using a closed loop measurement and servo adjustment system. Print pressure is controlled on both sides of the web by a traversing HD camera which measures the pixels in a printed patch. If the patch is too 'squashed' print pressure is backed off, while pressure is increased if the patch becomes too small.

At Labelexpo Europe in Brussels a Combat M5 was additionally shown with automatic die pre-registration.

On the back of the stability provided by Digital Flexo technology, Adare is pursuing the goal of 'print-by-numbers' – getting the right color first time, every time.

To predict print results accurately requires the ability to measure, 'This is a logical process, which involves sitting

down with your ink and anilox suppliers, understanding tolerances, then printing and repeating that result,' states Daragh Whelan.

Predictable print has a number of elements, including something as basic as accurate plate mounting. Adare recently purchased what is believed to be the first 530mm-wide fully automatic plate mounter in the industry, working to a tolerance of 0.3 microns and mounting one plate every 90 seconds.

Color measurement is currently carried out offline using an X-Rite SpectroEye, set to achieve a deltaE reading of two. In an exciting development, Adare is now working with Nuova Gidue and AVT on an inline spectrophotometric measurement system which will work with Print Tutor to control specific areas of the image. This was shown for the first time at Labelexpo Brussels.

The next stage for Adare will be to generate a graphical report for clients confirming that registration and color delta are in specification. The final element would be an agreed digital color matching standard. Adare has already evaluated PantoneLive, which promises to create such an objective, Cloud-based source of color data for the entire chain from designer to final inspection.

For Labelexpo Brussels, Adare worked with Nuova Gidue and Esko's Equinox software to demonstrate spot color replacement using a 7-color fixed palette, shown live on a Combat M5 press at the show.

#### **FLEXIBLE PACKAGING**

Adare is developing a new market in short run high quality flexible packaging, for which the Nuova Gidue Combat M5 press, with a substrate capability down to 12 microns, is well specified

Adare is using the labels business model of a short lead time and low migration inks, with no minimum order. A

"Adare is now working with Nuova Gidue and AVT on an inline spectrophotometric measurement system which will work with Print Tutor to control specific areas of the image. This was shown for the first time at Labelexpo Brussels"

minimum order for a wide web converter might be 250 kilos, but Adare is converting down to 10 kilos.

The M5 press is fitted with UV Ray lamps and 27 inch chill drums. This takes the heat away from the press, and Adare does not see any stretch even on PE backing liners, which can often present problems. The press also has an inline lamination system.

The flexible packaging samples seen by L&L – printed on 20 micron metallized OPP at 223lpi – were as good as gravure from a shelf impact point of view, including vignettes without a visible hard edge.

Adare is currently implementing a low migration (LM) ink system, working closely with Zeller + Gmelin and using the company's Uvaflex Y71 LM ink series, which conform to EC 1935/2004 standards. All press trials, including on the Combat M5, were conducted with LM inks.

When L&L visited Adare, operators were undergoing training on a newly installed LM ink dispenser, which will work with spectrophotometric job data supplied from Adare's central database.

Adare is implementing a full low migration ink system, 'as standard UV inks currently used in the industry are no longer recommended for food packaging.' The LM system includes aniloxes, ink trays and press cleaning, across all machines. Adare Haverhill already has category 1 BRC/IOP hygiene accreditation.



#### THE INSIDER

50

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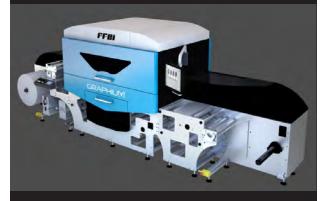
#### **STORK CELEBRATES 50TH AT LABELEXPO**

Stork Prints marked its 50th anniversary at Labelexpo Europe. The Dutch company first introduced rotary screen printing at the ITMA event in Hannover in 1963.

Bas Hoijtink, commercial manager at Stork Prints, said: 'Looking back in time I am proud to say that Stork Prints products and innovations created a standard in the textile and graphic printing industries. As of today our products create an added value solution in optical and functional design for end users.

'Looking at global trends in the market I am confident to say that we have chosen the right direction in the past and more importantly, for the future in digital and rotary screen printing.'

As well as the latest rotary screen equipment, Stork demonstrated its DSI UV inkjet label printer at Labelexpo, and introduced the variLEX hybrid direct laser exposer for digital pre-press.



#### FUJIFILM TAKES ON FFEI DIGITAL PRESS

Fujifilm is to handle sales of the new FFEI Graphium digital UV inkjet press in North America and selected European territories. Graphium is a modular digital UV inkjet press supporting up to five digital modules and six flexo stations and was launched by FFEI on the Fujifilm stand at Labelexpo Europe.

FFEI managing director Andy Cook said: 'We are delighted that Fujifilm will be our first major partner for Graphium. I doubt there are any other companies in the industry that can offer the label and packaging customers the service, support and overall positive customer experience than Fujifilm.'

John Kaufman, product marketing manager for digital in the Graphic Systems Division at Fujifilm North America Corporation, said: 'Traditional print processes are becoming a thing of the past and moving to digital printing is a necessity in order to survive. Graphium represents a new calibre of inkjet press, designed specifically for the narrow-web market, and it will change how printers work.' MICHELMAN<sup>®</sup> YOUR COMPETITIVE EDGE<sup>®</sup>



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#### **EKOFA Flexo**

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#### NEVER STOP IMPROVING

## Labelexpo Asia celebrates anniversary

L&L CHINA editor Kevin Liu reviews the history of the China Labelexpo show, which celebrates its 10th anniversary this year



Before moving to China, Labelexpo Asia was located in Singapore until 2002. The factors weighing against Singapore

included a small manufacturing base, which meant the country did not provide a growing domestic base of visitors that every show needs.

At the same time, China was growing fast. Recalls Labelexpo China show manager John Davy: 'We considered whether to use Hong Kong as an entry point for China. But then we found Hong Kong is also expensive and also had little manufacturing. So we realized that we'd better come to mainland China, and Shanghai was the best choice for us.'

Tarsus faced the same issues as other international companies moving to China. 'We are an English exhibition company. We know labels and exhibitions very well, but we didn't know about marketing in China. We didn't speak Chinese and we didn't know who to work with. We had to find the correct associations to work with, and we had to find the right partners. We had to find who was a trustworthy and sensible partner and avoid somebody who would take advantages of us.'

The first Labelexpo China show took place in the INTEX exhibition center, one of the smaller exhibition centers in Puxi, Shanghai, and attracted 5,000 visitors, totaling 3,200 sqm.

'Back then China's label market was very underdeveloped,' says Davy. 'We didn't see so many manufacturers. Label converters were small scale and widely scattered. Today the situation has changed completely, with the industry growing 15-20 percent year on year. The label supply chain has been completed, from end users, to a wide range of equipment manufacturers, suppliers of parts and consumables, operators and managers.'

Perhaps the most impressive aspect has been the growing number of domestic manufacturers, like press suppliers Ekofa, Weifang Donghang, Zhejiang Weigang, Zhongtian, and materials companies like Guangdong Guanghao, King Label and Shanghai Jinda. These companies not only have good domestic sales but are making an impact globally, taking part in Labelexpos in Europe and America.

Compared with Labelexpo Europe and America, the equipment on display is not so high-tech, dominated by intermittent letterpresses and offset presses. 'But there is growing interest from world-class suppliers such as Omet, Nuova Gidue and Gallus in the Chinese market,' says John Davy. 'Also HP Indigo and Xeikon have showed their latest digital technologies in China, while the country has also witnessed the emergence of its own new digital press manufacturers.'

The top-tier Chinese label printers are today using the most advanced flexo, offset and digital presses and manufacture to international standards using the latest self-adhesive materials from Avery Dennison or UPM Raflatac. In this sense, they operate at the same level as foreign converters.

There is a good case to be made that Labelexpo Asia has been largely responsible for creating the identity of the label industry in China – much as the show did in Europe in the 1980s. Bringing international suppliers to China, has to some degree, accelerated the development of this industry.

MACH

At the same time the Expo has itself reflected the development of China's industrial economy and its increasing requirements for high quality labels and packaging. The two trends are influencing and reinforcing each other.

#### LABELEXPO SOUTH CHINA

In 2010, Tarsus launched the South China Label Show in Guangzhou. John Davy explains why: 'China has such a large population and is moving so fast, it is not possible to cover both the north and south regions with one show. The show is already growing strongly, moving to the larger Guangzhou Pazhou International Convention and Exhibition Center last year. Visitors increased by 26.8 percent compared with the first expo, while the number of exhibitors also grew from 90 to 150, of which 26 were new exhibitors.

'This growing success means the show will become Labelexpo South China in 2014, complementing the Shanghai show in terms of geography and scheduling.'

Davy says that Tarsus is considering running Label Summits in second-tier cities like Harbin, Chengdu and Shandong, where the label market is developing fast.



STEVE Baker, managing director Baker Labels with new HP Indigo WS6600

## Celebrating in style

BAKER LABELS is celebrating its 40th anniversary with the move to a new factory, expansion of its digital printing capacity and the installation of Europe's first Nilpeter FB-3 flexo press. Andy Thomas reports

This year Baker Labels celebrates its 40th anniversary with an investment of over one million GBP. 'My father remortgaged his house and gambled everything to start this business in a time of recession,' says managing director Steve Baker, 'so it felt good that we should have a huge investment to celebrate the anniversary.'

Since the earliest days, Baker Label has been at the forefront of new technology. It installed the first Nilpeter 2400 in the UK and then the country's first HP Indigo WS6000 digital press.

The company has made its name as a trade printer, with 80 percent of its business in this demanding sector. 'Our job is to see how we can improve our customers' business - a completely different model to selling on the cheapest price,' says Steve Baker. 'We need to make a profit if we are to continue investing and make it easier for people to buy quality work from us.'

Over the last 10 years Bakers also built a strong reputation as a trade coater of digital materials, but this side of the business is less important today. 'There are more pre-coated materials on the market and these are close to standard grades in terms of cost. At the same time manufacturers have decreased their minimum order sizes. We still do business for smaller lots of higher value added products. The storage area doubles as our own materials handling area.'

#### **FB-3 FIRST**

Launched at last year's Labelexpo Americas, the Nilpeter FB-3 press purchased by Bakers represents the latest evolution of Nilpeter's Cincinnati-built FB3300 machine line and packs a lot of punch into a compact frame. Running at a top speed of 228 m/min (750 ft/min) on a web width of 350 mm (13.75 inches). the fully servo-driven press incorporates pre-setting and recall of all press parameter, automatic plate positioning (APPS), and Nilpeter's new print-to-cylinder (P2C) register system. The FB3

platform is designed to accept all Nilpeter's standard modules, including the new FP-4 flatbed hot foil and embossing unit.

The FB-3 incorporates Nilpeter's latest lean inking system. Compared to the FB3300, the web length in the press has been reduced by 50 percent by raising the material transport. A useful touch is the removable rods which go through each cylinder - different sized rods allow legacy rotary tooling to be used in the machine.

The Bakers FB-3 press is an 8-color machine purchased along with an HSR 330 slitter-rewinder from AB Graphics. The full UV press is fitted with four additional hot air dryers, so can handle both water-based and UV inks. A turn bar for reverse printing and de-lam/re-lam unit allow peel and reveal labels to be produced. Multiple, mobile towers can be used at any head for laminating, cold foil and introducing pre-printed webs, while triple die-cutting stations allow cutting on both the front, back and sheeting.

Commenting on this first European FB-3 installation, Nilpeter global sales manager Jesper Jorgensen says: 'Nilpeter's partnership with Baker Labels goes back many decades, and we are extremely proud to present the first FB 3 in Europe where efficient, high quality flexo printing is key.'

Bakers has used the opportunity of a new press and new factory layout to implement a Lean workflow, and has been working closely with Nilpeter's 'NilLean' program. 'We want this to be like a Nilpeter showroom for Lean working,' says Baker. This includes tooling trolleys for easy logistics around the press.

Full use of communications technology is made, with a webcam link to Nilpeter's Technology Center in Cincinnati. Recalls Nilpeter's Jakob Landberg: 'We actually did a full press demo for Steve and his staff - sitting in their office - and with the press running in our Technology Center in Cincinnati. After the demo he ordered the press!'

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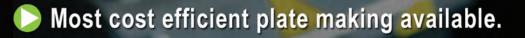
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THE Nilpeter FB-3 was launched at Labelexpo Americas

#### **DIGITAL CROSSOVER**

The FB-3 installation follows investment in a fourth HP Indigo press, a WS6600, in January of this year. Two ABG Digicon finishing units give a range of digital finishing options including foil blocking, flexo print/varnishing, overlaminating and rotary embossing.

These parallel investments in conventional and digital technology represent an interesting strategic decision by managing director Steve Baker: 'Both digital and flexo processes have unique qualities and it's important that we stay on top of both markets to ensure that we can deliver first class labels to our diverse customer base.'

Most importantly, the latest High Definition Flexo pre-press and plate technology, coupled with a state-of-theart flexo press, allows the quality of HP Indigo print to be closely matched.

'Our FB-3 press trials have shown the quality is finally as good as digital and in some ways better, particularly if you look at vignettes,' says Steve Baker. 'Customers now expect digital quality, and the last generation of flexo presses were not able to match it. Now the quality is compatible and we need to rebuild our reputation for flexo print.'

Both digital and conventional presses have a 330m (13in) web width, so can share common tooling and can be exactly color matched using Esko's AE10 software systems.

The next strategic move will probably be inkjet, but as a compliment to, and not a replacement for, HP Indigo technology. 'Inkjet has to have its own niche – a different one from the HP presses,' says Baker. 'We want to be able to say to our customers: "These are the niche areas where inkjet is good and here is where HP or conventional flexo is better suited".' He stresses the need to understand the variables of inkjet printing and how they interact – 'The software that drives the head, ink properties, coating and surface tension. It's far more complex than just the heads – a lot of substrates will still need a coating as a controlled surface tension is the essential.'

Baker's team is currently identifying products which could be converted to inkjet. 'In toiletries there are still products directly printed on the bottle, and with a strong white our customers could go after this work without the high expense of rotary screen. In fact they could go after any work currently being printed rotary screen! Inkjet white can knock spots off the HP, but the overall quality is still lacking in consistency to the HP.'

One senses a great sense of optimism and energy at Bakers today. 'A few years ago we were in rather a lull. But now it is exciting again,' says Steve Baker. 'We are 40 years old but we feel like it's still day one!'

#### OUT OF THE BOX

Steve Baker is constantly looking at digital possibilities, often well outside the box. 'It's a taboo to say it, but why do you need braille when there are better solutions like NFC where you tap the pack and your smart phone talks to the partially sighted or blind user?'

In the same way, Baker says the true potential of digital printing is still being ignored. 'Most people see digital presses as simply short run conventional presses and are not selling value added work. We only get a very small amount of variable data work for example, and we do more than most.'

Baker sees 'great new markets' just waiting to be opened up – 'Like proper personalization and not just



A digitally printed Sportstiks tattoo

changing a name. Just one example – we were involved in printing for the Olympic Games. All the sandwiches had bog-standard labels, but we could have been printing labels congratulating individual athletes on winning. We offered to keep our digital presses running through the night so in the morning people are reading and seeing something new and fresh and relevant.'

So frustrated did Baker grow, that he set up a team to look at these new opportunities. The result is Sportstiks (www.Sportstiks.com), a standalone business which sells digitally printed tattoos for triathletes, replacing simple black tattoos with designs incorporating colored sponsors' logos and a white line around the number which allows them to stand out against any skin color. The patented product is now selling all over the world - 'A great little niche area for digital print,' says Baker. 'We created a market where there was none before.' The laminated tattoo labels are tough enough to be used on ocean swimming events, extending the business still further.

Looking ahead, Baker says businesses will need to develop to meet the requirements of the Millennial generation - the new buyers. 'They demand instant gratification and have little loyalty. If you can't provide something, they won't wait around for you to develop it - they'll look elsewhere. If you say "two weeks delivery" they say "why does it take so long?" The challenge is how can I make sure they will continue to buy from my business.' To help towards this goal Bakers has also just placed an order for a Digicon Lite from ABG, 'We need to look at three to four day turnarounds to meet customer demand so the extra finishing capacity will certainly help us achieve that,' says Steve Baker.



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## Getting the best from anilox rolls

A RECENT BPIF LABELS seminar included speakers from Flexowash and Troika Systems discussing anilox roll performance and management. Mike Fairley highlights some of the key points from these two presentations

Few would argue that the quality and performance of flexo printing has improved significantly in recent years. Brand owners and the major retail groups that buy and specify labels have seen to that, with technology innovation and leading converters having to adapt their printing presses and quality control procedures to achieve the ever higher requirements, increased color gamut, density variations and print targets etc, that are now being demanded

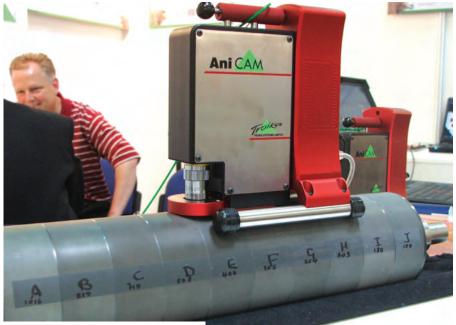
One only has to look at some of the improvements that have been taking place over the past five or 10 years: advances in printing press technology and press controls, significantly enhanced inks and inking methods and controls, the latest developments in plate imaging, plates and platemaking especially with the evolution of flat-topped dots and HD flexo and improvements in the design, production and use of anilox rolls. Much has been achieved.

However, such advances particularly for the latest anilox rolls and printing plates may in turn bring their own production and performance challenges. High density anilox cells for example with, say, a two micron cell wall may make the anilox more fragile and susceptible to damage; deeper cells can exasperate cell plugging issues, while pads, abrasive cleaners, brushes etc, can lose their effectiveness and cause damage to smaller deeper cells and plates.

Of all the technology improvements outlined, it is perhaps the anilox roller that has traditionally been the least regularly monitored, checked and maintained by print technicians and managers. Yes, systems and procedures for anilox roll and plate cleaning are now available and more commonly used, but how many flexo printers regularly measure and record empirical data that shows anilox roll history, reports on the roll condition and indicates when the roll needs intense cleaning or requires refurbishment due to wear? Probably not that many, but anilox roll management like this is becoming ever more an essential element of a converter's plant.

Many printers and converters certainly understand that plugged anilox rolls can cause poor color densities, inadequate ink distribution, difficulties in color matching, and wastage of ink, substrate and operator time. Traditionally the deep cleaning of an anilox roll would take place when the roll no longer performed. In other words, anilox roll cleaning was a 'Reactive' process.

Today, anilox roll cleaning has largely become a 'proactive' process. That is, the rolls may be cleaned after each job run, rolls might be cleaned as part of a regular maintenance schedule, rolls may



TROIKA demonstrating anilox measurement at drupa

be routinely cleaned after removal from the press and before storage. The target aim should undoubtedly be to keep all new rolls clean from day one.

Ideally, an anilox roll washing cleaning system, such as those offered by Flexowash, will be fully automatic, easy-to-use, quick and cost-efficient to use. Quite simply, the anilox cleaning system should be a daily tool used for regular roll cleaning. More than that however, anilox roll cleaning should be incorporated into a modern in-house anilox management system, such as that offered by Troika Systems, which provides a QC tool that has been proven to enhance productivity, improve profitability and converter competitiveness. According to the company's figures, savings of up to one to three hours of set-up time per press per day are achievable.

As part of an in-house anilox management systems all rolls should ideally be deep cleaned every two to six weeks, then checked for damage or cracking, and the volumes of rolls measured and compared using a 3D scanning microscope. Then the anilox rolls re-cleaned to ensure that the cleaning process has been optimized.

Regular management reports should show the inventory condition, the volumetric and lateral differences between anilox rolls, as well as identifying the roll condition and indicating when the roll needs refurbishing or changing. To do this however, it is essential for printers to know their anilox rolls are within an agreed and workable specification, whether old or new. In this respect, the label converter will need to discuss and agree with their anilox manufacturer what their stated tolerances are.

Put together, anilox roll sourcing, roll cleaning technology and systems, cell measurement equipment, cell and roll examination and condition reporting etc, are today more sophisticated than ever before. But then anilox performance with the latest flat topped dots and HD Flexo is also far more demanding than in the past. There can be little doubt that if the label converter wants to consistently deliver high quality flexo printing on a daily basis to their ever-more demanding brand owner customers, then it certainly pays to implement the best in anilox roll cleaning and anilox roll management systems and technology. Today, it is not really an option; it has become an essential tool in quality control and print performance.



# The first bite is with the eye

**THE** first bite is with the eye, so the saying goes, and confectionery brand owner Mondel z International is looking to use a special label to make its products appear delicious. David Pittman reports

This autumn, food and beverage brand owner Mondel z International rolled out new confectionery packaging across Norway that looked to use the latest label printing technology to maximize shelf appeal and help its product stand out on the shelf.

This saw a 3D effect label, produced using Rolling Optics' micro printing process, applied to pre-printed wrappers for the Freia Boble brand of chocolate.

Boble is characterized by its aerated structure that helps intensify the perception of taste due to the different melting experience compared to a standard chocolate bar. The 3D effect of the label is designed to create the appearance of bubbles as if floating off the packaging and to replicate the eating experience of the chocolate to the consumer before the pack has even been opened.

Patrick Poitevin, senior associate principal scientist for next-generation packaging at Mondel z International, says this is intended to create a link between the product, its packaging and the consumer. 'We wanted a label that offered a "wow" factor, something that was quite special. It's all about shelf appeal and making the product stand out.

'The first bite is with the eye after all so showing what the product inside the packaging is like is a big boost.'

The Rolling Optics label base foil providing the actual 3D effect consists of a top microlens layer and a micro printed pattern with sub  $\mu$ m resolution. The two layers in combination will, when highly registered together, provide a true illusion of depth. Certain pattern parameters can be varied to create variation in image design and offer various optical effects.

Rolling Optics' material can also be converted into several different applications such as labels, laminates, in-mold applications, hang tags and more.

Poitevin says: 'Micro optics printing creates a label that really stands out on the shelf, makes consumers look at the packaging, and pick it up and engage with it. The printing creates depth and consumers will stop and look at it as it is something they do not usually see, and this will increase the chance of them making a positive purchasing decision.'

Mondel z International itself was only born in 2012 after the change in the structure of Kraft Foods, and includes such well-known confectionery brands as Milka, Cadbury, Oreo, Prince, Marabou and Côte D'or in its portfolio.

However, Poitevin first saw the Rolling Optics product three years ago, and decided then that it was something that could be used with future packaging. Freia Boble provided it with an ideal vehicle to road test the 3D label, as it is a smaller brand in a market more accepting of innovation.

'Norway, and Scandinavia as a whole, is quite innovative and consumers are more accepting of these types of innovation.

'We did not want to launch the 3D label too fast in too wide of a market, as we did not want it to be seen as a gimmick. We want to make sure it fits with the brand and assess how much of an impact it makes, before looking to other products and markets where we could launch such packaging.

'Other markets are waiting for an assessment on how it has worked, as we are always aiming to sell more and packaging must facilitate this. We expect it to make a difference, so are very much looking to expand it into other markets.'

Rolling Optics creative director Farvash Razavi says: 'It's always great when we have a client like Mondel z, who not only recognizes the creative scope offered by what we do but also understands how to pitch it to their segment, while simultaneously challenging our



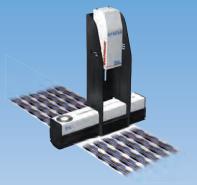
FREIA Boble has allowed Mondelez International to trial a new type of packaging featuring a 3D effect label

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of a top microlens layer and a micro printed pattern with sub  $\mu$ m resolution

studio in all respects.'

For her, a 3D micro-optical label is far from a 'gimmick' for the industry. 'It's a natural progression, a way of fulfilling what good packaging and point of sale has to offer both client and customer; a new way to reach out and interact emotionally.'

The labels themselves were converted by Sweden's AdhTech, a member of Rolling Optics' network of partners and a company that has worked with Rolling Optics since its very early days. As a result, AdhTech has worked on various projects involving Rolling Optics' technology, and its chief executive officer Peter Nilsson says this puts it in a strong position.

Much of the work it does with this type of label is for security applications, a market that Rolling Optics' technology lends itself well too, due to the high-tech nature of the product and its application as an anti-counterfeiting tool.

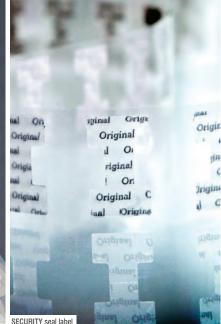
While chocolate is not such a renowned product category for counterfeiting, working in such demanding environments means AdhTech is well versed in the various technical issues that can arise in the production of these types of label.

'Registration and re-registration must be absolutely spot-on, and we must also be careful when processing the base material, which is a polypropylene so susceptible to temperature and deformation.

'Every job is a new challenge, but as every product is bespoke and tailored to the customer, it's quite usual for the work we do to be "unusual".'

The Freia Boble project was no exception to this. As an example, the adhesive had to be selectively placed on the printed and converted label due to its post-printing application to the finished packaging.

Mondel z International required the label



to be applied as an addition to the already existing packaging so as not to incur unnecessary costs and lengthy lead times when changing artwork and ordering packaging, as would have been the case had the 3D effect been integrated directly into the flexible packaging film.

It also offers the added benefit that the 3D labels can be applied to any packaging, so permitting unlimited SKUs to be given a 3D treatment.

As the label is positioned on top of the pre-printed packaging, it is necessary for the majority of the label to be transparent to allow the surface underneath to be visible. This helps the label to become part of the overall packaging's appearance, and to increase the impact of the 3D effect.

The adhesive also had to meet Mondel z International's requirements for food safety.

'Full adhesive coverage would have detracted from the appearance of the 3D,' says Nilsson. 'Partial placement of the adhesive around the edge of the label is necessary in this instance to make the effect work properly.'

The 3D label has already been present in the Norwegian market in select locations throughout the summer, but the project has now been taken nationwide, as of September 1. The timing of a national launch was also a consideration for Mondel z International and its effort to not have the 3D label seen as a gimmick. Launching at the time of school holidays would have likely increased this risk.

'We're in the business of collaborating with brands to create the premium level of brand experience so vital in today's market,' says Razavi.

'This is a good application of the technology as it introduces it to another area and shows how it can be used to help packaging stand off the shelf,' concludes Nilsson.



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combination press at GEWA

## Training in practice

**GALLUS** is offering a hands-on training and education package aimed at making label converters more efficient. Andy Thomas reports from GEWA in Germany

One of the biggest issues facing the narrow web converting industry is the shortage of dedicated training resources. When a new press is installed, there is generally a short period of hands-on training. But most press operators pick up their skills informally by working with more experienced colleagues, and there is little opportunity for increasing theoretical knowledge about technologies around the press which have a critical impact on print results.

Gallus has addressed this issue by setting up a dedicated, paid for, in-house training operation called Gallus Smart Production, which is run by Roger Oberholzer.

Labels & Labeling followed Oberholzer and his team in a typical day's training at leading German converter GEWA, based in Gau Bickelheim, near Frankfurt. GEWA runs two plants dedicated to sheetfed and roll labels and is a particular specialist in wine labels.

This was his second visit. The first was five weeks before, to make a three-day initial assessment. The second visit is for in-depth training, followed by a report of recommendations for company management to follow up.

GEWA has a range of Gallus machines including a T180 letterpress, TCS 250 intermittent offset, EM 340 UV flexo press – equipped with cold foil and a turnbar to print on the adhesive – and an RCS 330 combining offset, flexo, screen and foiling. RCS process modules are regularly exchanged throughout a typical shift and all flexo units now have chambered doctor blades for fast change.

Training takes two forms: hands-on training on the press is carried out by Oberholzer's colleague Uli Schwärzler, and is designed to improve the technical level of printing and workflow around the press. The interactive 'classroom' sessions involve small groups of press operators and make extensive use of samples. Because of GEWA's focus on wine labels, much of the theory concerned getting good results on structured papers, particularly when printing flexo.

#### **TOPICS COVERED**

To give a flavor of the subjects covered, L&L sat in on two of Roger Oberholzer's teaching sessions. Here are just some of the points discussed:

- 1. Plate hardness and tape selection are the key to quality in flexography. 'It's better to have one plate type and vary the tape hardness,' said Oberholzer. 'Limit yourself to one tape and plate supplier and make them profile their systems.'
- The influence of plate hardness on pin holing on wine-type papers – 'You need less plate hardness to allow the ink to flow into the rough surface of these materials.'
- Note the effect of mounting tape selection. 'The hardness of the tape affects raster and line work differently. You need harder tape to get better defined text but softer to get dots on structured papers.'
- 4. Beware the problem of hard plate dots not going into the anilox cell.
- 5. 'Treat your anilox like a baby! Remember that the same theoretical anilox volume leads to different ink film thickness for different colors. Ensure that in chambered systems there is even contact with the top and bottom blades.'
- 6. When looking at which process is best for which substrates, 'Offset should always be used for non-coated papers, but for film and coated substrates flexo is excellent.'
- 7. In offset, optimized ink/water curves will be different for each material, and should be calibrated separately.

Also covered were issues including keeping color standardized between offset and flexo and common troubleshooting issues, such as scoring and over-inking.

The reactions of the participants interviewed by L&L were enthusiastic. As one press operator commented, 'It is fascinating to understand what happens at pre-press and how that affects what I do.' 67



## Putting pre-press first

**GERMAN** label printer Erhard Küchler has invested in its pre-press operations, including the installation of a DigiFlex digital platemaking system, as it looks to optimize its production processes. David Pittman reports

Erhard Küchler, based close to Stuttgart in Germany, is a thirdgeneration, family run label printer that has its fingers in many pies.

From its facility, the company produces a broad range of labels for different industries in short and wide-web formats, and using a host of processes, from offset to water- and UV-based flexo printing.

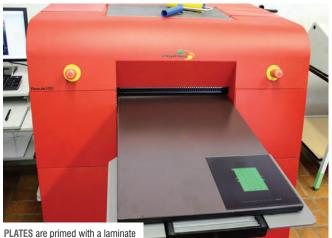
The wide variety of printing processes Küchler utilizes places a heavy burden on its pre-press operations, where more than a dozen different plate types need to be produced and exposed. Up until around a decade ago Küchler outsourced this, but has since brought its platemaking in-house. This saw it invest in a Heidelberg Suprasetter for its offset printing plates and a film-based process for all others.

'Bringing platemaking in-house has allowed us to be much more responsive to our customers' needs,' says Küchler managing director Dirk Handler. 'We're able to respond directly to address issues and fix problems in minutes, rather than having to wait for a third-party to be involved.' As part of the continuing evolution of Küchler, it is looking at new technologies to further optimize its production processes. This includes the latest developments in digital press technology, an area where it is keeping a keen eye on the latest in UV inkjet. 'We're always on the lookout for best practice systems, and want to invest in those that have the potential to boost our offering.'

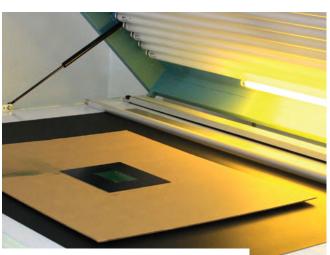
Digital forms the basis of its latest investment in pre-press, where it has recently purchased a DigiFlex computer-to-plate (CtP) system. The DigiFlex system images analog plates digitally for flexographic, letterpress, dry-offset and rotary silk screen printing technologies, and has been designed to meet the market demand for better quality and faster delivery times.

The DigiFlex system overall, and the specific FlexoJet 1725 installed at Küchler, uses a combination of ink and primer to digitally image plates. It is the chemical reaction between those two components that gels the ink and freezes the inkjet dot at a very small and precise size.

Further, the primer prevents the plate from being exposed to



**PLATES** are primed with a lamina before imaging in the DigiFlex



IMAGED plates are exposed using Küchler's existing equipment

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A HEIDELBERG SUPRASETTER is used to produce offset plates at Küchler

oxygen during the platemaking process, resulting in a flat-top dot and zero dot loss as opposed to laser-based digital platemaking processes where the dot tops are rounded due to air exposure. 'It also prevents ingress of dust and other atmospheric variables which you need to control when using analog platemaking,' says Handler. 'The laminate helps make it a reliable process.'

The FlexoJet 1725 was supplied to Küchler by DigiFlex's European distributor Jet Europe and, more specifically, Jet's German agent FlexWell.

On demonstration, the DigiFlex system installed by Küchler is quick and simple to operate. The plate, either rigid or flexible, is laminated with the primer at 90 degrees C, using a roll-fed laminator or a sheet-fed system depending on the plate size. This is then trimmed down to match the size of the plate before the cover sheet is removed and the plate is imagined inside the DigiFlex unit and dried. Exposure then takes place and the plate is washed off.

It is a very quick and clean operation from start to finish, and one that Handler is quick to praise for a number of reasons. Firstly, he says it has allowed Küchler to achieve higher quality printing results without incurring the costs that it might otherwise have faced by implementing a High Definition platemaking process. 'Other HD processes are very expensive and more resource intensive, while this system is easy to use and requires minimal specialist training to achieve high-quality results.

'The consistent dot shape greatly enhances quality, and high-quality printing is number one to all printers as it is what our customers want to see.'

Secondly, it has helped Küchler achieve efficiency gains when dealing with such a wide number of plates, as well as not requiring the company to change or adapt any of its existing production processes or supply chain. 'Despite it being a digital process, we're imaging analog plates so are able to use all our existing supply channels and consumables with the system. We've also brought down our service costs as the unit automatically cleans itself each day, combined "The third benefit that Handler identifies is the environmental plus of no longer using a chemical-based film process. This has not only made the production process cleaner, but has also made the working environment a better place for employees"

with a weekly manual deep clean.'

The third benefit that Handler identifies is the environmental plus of no longer using a chemical-based film process. This has not only made the production process cleaner, but has also made the working environment a better place for employees.

The FlexoJet 1725 has now replaced the film process that Küchler previously used to image its non-offset plates, with the Heidelberg Suprasetter continuing to service the offset side of the company's printing operations. Küchler has integrated the CtP system into its pre-press operations much quicker than initially planned. Installed in February 2013, Küchler planned to run the new process alongside its existing platemaking equipment for a year, although imaging two-thirds of its non-offset plates using the CtP system. Although the film process is still available to the company's pre-press operations, it is rarely used, and within six weeks of installation the DigiFlex CtP system had taken on all of the work that was planned to be migrated to it.

'As we've not had to make wholesale changes to our pre-press process it has been quick to commission and implement,' says Handler. 'The process will continue to evolve as the technology develops. For instance, the laminator we use has not been specifically designed for the plate sizes we're producing, so there is some waste during that part of the process. In the future, I expect the equipment to be tailored to smaller sizes and eliminate this waste.

'Overall, the environmental and economic gains of the DigiFlex system make good business sense for a medium-sized company like ours.'



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## TLMI tackles label manufacturing issues

**TLMI'S** Biennial Technical Conference offered a wealth of content that hit the mark in Chicago last month, writes Danielle Jerschefske

Over 350 suppliers, label converters and value chain stakeholders convened in the Windy City in September for a technical conference co-chaired by Wade Fouts of Wilson Manufacturing and Michelle Shaieb of Whitlam Label Company.

Featured content included an in-depth review of labels in the primary container recycling process and contamination issues. Experts reviewed LED curing technology and discussed details of ink migration on a legal and technical scale. The trend towards thinner materials to reduce waste and cost proved complex when upstream performance is taken into account.

Each session at the event addressed precise issues relevant to converters' day-to-day operations. By the close of the two interactive days, it became clear that true innovation and collaboration is what will drive 'low cost, no cost ideas that make our business better'.

#### SUSTAINABLE LABELING SOLUTIONS

'Sustainability is good for economics and good for our kids,' said Darrell Hughes, VP and GM of Avery Dennison, North America, label and packaging materials, as the moderator for the opening panel of package recycling stakeholders. 'I can't tell you when your customers will ask for a more sustainable solution, if they haven't already, but I encourage you to listen to these speakers and be prepared for when they do. A label is a small piece of the package, but it can have a big impact on the ability to recover the material it's applied to.'

Tamsin Ettefagh is vice president at Envision Plastics, a plastics recycler with a national footprint focused on HDPE and PET containers and resins and APR (Association of Postconsumer Recyclers) member. The company is distinctive with two proprietary technology offerings. First, its EcoPrime

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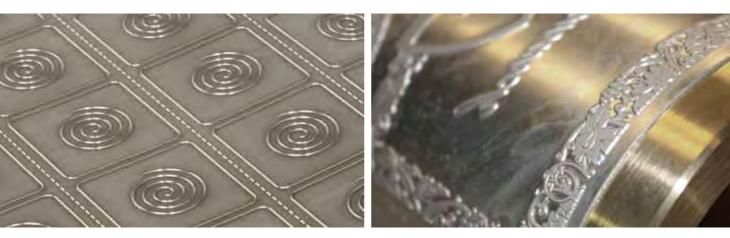
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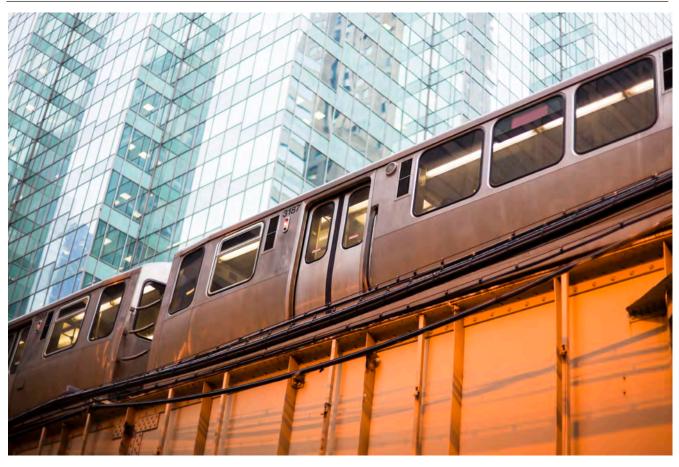
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process cleans HDPE plastic to create recycled content resins with a Letter of Non-Objection (LNO) from the FDA approving the material to be used in place of any virgin HDPE resin. This includes direct food contact packaging such as flexible films and bottles for vitamins and beverages.

Second, Envision Plastics offers stakeholders its Prisma technology that allows plastic colorant to be recycled and plastics to be made with color specifications to meet packaging design objectives. With Prisma, the recycler is able to sort 47 different shades of color. Colorants are costly, so there's a real advantage here. Ettefagh said, 'We saved P&G 57 percent of on its coloring costs by allowing them to reuse colorants.'

About 96 percent of all bottles in the US market are made of PET or HDPE. Ettefagh continued, 'The APR is privileged that TLMI has engaged us. We have learned so much from your group already about label constructions and ink implications. We're gaining a better understanding of how labels impact the recycling process. We want to continue sharing the issues that come up in recycling and hope that you'll be able to help us overcome the problems.

'Consumer product companies may need to pay more for labels that will catalyze the ability to recycle primary containers. There's great innovation to be realized here.'

Weilong Chiang of PepsiCo Advanced Research continued the closed loop recovery discussion into shrink sleeve labels designed for recycling. He said, 'Shrink labels are a problem because they sink with the plastic resin and contaminate it.' (Refer to Will Shrink Sleeve Growth be Stifled by Recycling Issues? in issue 4 2012 of Labels & Labeling).

Some recyclers are reporting eight percent or higher of bottles with shrink sleeve labels on them, so a solution must be found to keep the utilization rate (the yield of recycled flakes and resins) high along with profitability. Recyclers cannot afford to have any percentage of their collected plastics tossed away because of the label.

Chiang said, 'There are four principles when it comes to labels and recycling. The label cannot interfere with the sortation process; the entire label must be removed in the bottle wash; the label material must float; and the inks cannot discolor the flakes.'

The APR released Design for Recyclability Testing Protocols in 2012 and PepsiCo is busy testing the recyclability of its own labels. Herbold Meckesheim Label Remover machinery delivers a 70 percent to 90 percent efficiency rate, higher than any comparable offering, and is therefore a staple in leading recyclers' plants.

NIR (Near Infrared Red) reflective sorters with PET Boost Algorithm improve sorting accuracy at the recycling plant. Label design is being reviewed for opportunities to stop the sorters from kicking out bottles with shrink sleeve labels.

'At least a 20 percent clear window would need to be incorporated into a shrink sleeve label to have an accurate sort,' said Chiang. 'A UV cured overprint varnish will also help.'

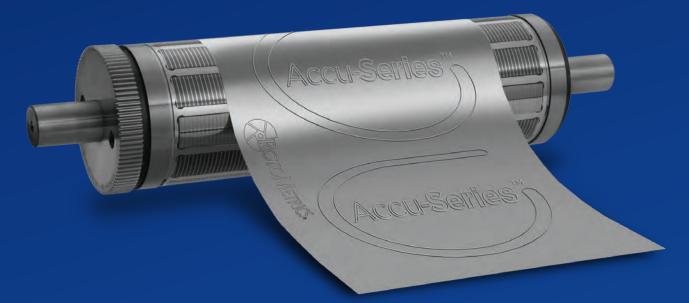
When it comes to pressure sensitive labels, the adhesive choice is critical because it can contaminate the PET resin making PET unusable in food contact applications. There are 31 PET recyclers in the US and Canada and more than 500 million recovered bottles are wasted due to incompatible labels.

Mitch Rackovan, a principle scientist with Avery Dennison leading product development for the beverage labeling space, said: 'We are working hard to transfer the economies of scale to make recycled PET resin less costly than virgin. For every pound of recycled PET flake used, energy use is reduced by 84 percent and GHG emissions reduced by 71 percent.'

Avery Dennison recently introduced SR3010 adhesive designed specifically to drive this shift in the market. The 'switchable' adhesive adheres to the bottle through its life cycle, is easily removed and allows the label to become buoyant and float to the top of the vat at the recyclers' wash water phase.

It was said that paper labels contaminate PET at recycling because pulp fibers contaminate the plastic. While this is a problem that hadn't been raised previously (and recycling has been around since the 1970s), converters are encouraged to consult with their customers on the benefits that can be found in film on film labeling and packaging with the right construction technology.

## PAPER PRESSURE THINFILMLINER IN-MOLD BORD THERMAL IN-MOLD PET COATINGS ABRASIVE INKS DIGITAL RUN GLASSINE DIGITAL RUN SHORT RUN QUICK TURNAROUND







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Jeff Sherwood, a technical sales representative for Flint Group, shared testing results of an ink contamination test for both paper and film labels in accordance with the APR guidelines. He said: 'While the results varied, generally paper constructions failed and films performed better. Constructions with a UV OPV or laminate performed best. There's less discoloration of the wash water. Yellow and black colors proved to stain PET the most.'

Joel Schmidt, market development manager for Outlook Group, encouraged TLMI's membership to 'understand and use the (sustainability) terminology that's relevant to your customers, and make sure that you're using the words that they use'.

#### THIN IS IN

Dr Kirit Naik, product manager for UPM Raflatac's prime films, said: 'We need collaboration from each party in the value chain in order to bring more advanced thin label technologies to fruition. Everything is being light weighted as brands like Coca-Cola and Unilever drive changes in the value chain to meet their sustainability objectives in packaging. Re-engineered films are lower cost, offer higher productivity and brand appeal, and reduce the environmental impact of the packaging supply chain.'

Flexcon's Rick Harris explained: 'All of the labeling aspects are coming together in order facilitate the successful use of thin films. As we go thinner, it's even more important to have good caliper across the web. And the film must dispense effectively on the old equipment found in the marketplace.'

While the market frequently uses semi-conformable facestock films at 2.2mil and rigid constructions at 2.0mil with a 1.2mil PET liner, thinner is rapidly evolving. Market leaders are currently working with and exploring liners below .92 gauge (23 micron), which are showing impressive results.

Testing continues to be done on .75 (19 micron) and .48 gauge (12 micron) films. 'Eventually we'll get to a point where there will be no benefit on the return of going thinner,' said Harris.

Thinner material means more labels on a roll which equals less label changes for the application provider. Silgan Plastics is a third party bottle manufacturer and label application service provider. Decoration specialist Ken Browning said: 'More labels on a roll gives us improved uptime in our process.'

Application issues can arise with regard to HDPE containers such as lifting of the label – edge lift, darting or a bubble. Browning continued: 'Thinner material applied to a hot bottle reacts differently. We learned to take the pressure off and increase the label speed in order to get the label down and deliver the performance required.

'Still, the biggest issue as a decorator is the fresh blown bottles. We have to inflate the bottles with air for proper application. Brand owners will not have the capability to inflate the bottles while labeling inline to give more consistency to the application process, which will prove to be a problem for thin films.'

Dennis Kuhlke, technical manager at Avery Dennison, said: 'The benefits of thin films – cost savings and environmental – will have film replacing some sectors where paper has been traditionally used.'

He continued to deliver tips for converters to help their customers in the next phase of production: 'Tamp and blow applicators are not good because they put too much air in between the label and container. A direct or wipe-on method is preferred.'

Kuhlke highly recommends supplying thin film materials on six-inch cores to help with winding tensions. 'It will prevent operators from winding the material too tight on press and will keep the rolls in better condition. You don't want to be winding faster than the press is moving. That will squish the material.'

Operators should be using lubrication on the press frequently throughout a shift to alleviate friction on the bearers that can deliver too much heat while die-cutting. Heating up the anvil or the die is a major issue to be aware of.

Heat from curing systems too will cause the anvil to expand – mostly in the middle – and operators need to have a way to get rid of the heat. They should be trained to review the curing



system settings to optimize the printing process.

The cutting pressure must be closely monitored. More pressure, which can cause friction and again, too much heat, is not better. Kuhkle said: 'Ideally you want your repeat size to be no more than the width of your press, otherwise the material will be more susceptible to deflection issues.'

#### LED UV CURING FOR INKS

Tom Hammer of Flint Group kicked off the discussion on LED curing technology. He said: 'LED is a deep penetrating light source that gives solid cure. In fact, in my opinion, the technology is equal or better than the UV alternative.'

Mark Andy, Flint Group and Phoseon announced their collaboration to bring LED curing to market at last year's Labelexpo. Since then, Mark Andy has installed a handful of systems in the US. Greg Palm from Mark Andy said: 'We came together to bring a solid state curing system. You don't have to worry about anything. There is nearly 80 percent reduction in energy used with LED systems and operators have consistently said it is easier to operate. They could do the things they needed to better and the operational benefits are real.'

The Tech Conference attendees were eager to learn more about LED technology. Many asked what the pitfalls were, but the panel did not have any really negative aspects to report.

A number of ink suppliers offer LED curable inks, which have a different construction than UV systems to allow for curing at a set wavelength. In addition to Flint Group, Sun Chemical, Siegwerk and INX were seen promoting such offerings at Labelexpo. Flint's system was developed to cure both under LED and under mercury lamps for a transition point and customer support.

Despite the overwhelming benefits found in LED technology, it is still new and requires an entirely new set up within a manufacturing plant, the storage of a completely separate ink

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system and likely a dedicated press, to fully ensure production efficiency. L&L will be covering a US installation in issue 6. You can read a number of technical stories in L&L issues 3 and 4 for support. Ink migration

Packaging attorney Catherine Nielsen of Keller & Heckman informed the group of legislative trends with regard to food packaging safety. 'Currently there is no legislation within the EU with details specific to printing inks,' explained Nielsen. 'However, the Germans are working on a printing ink ordinance.

'Switzerland, a non-European Union member, is the only country in Europe that has detailed printing ink laws in place. The Swiss Ordinance on Food Contact Materials and Articles was amended in 2008 to include printing inks and has been in effect since 2010. The addition legally applies to companies that are selling product into the country. European converters have since turned to the Swiss ordinance as the de facto ruling.'

The printing ink ordinance is a positive list of substances allowed to be used in printing inks and can be found in Annex 1 Lists I and II and in Annex 6. This means the substances have been evaluated for toxicological and migratory impacts. Annex 6 does not require polymers and pigment components to be listed. The European Commission may consider the Ordinance when creating further food contact legislation. The European Printing Ink Association (EuPIA) is a valuable resource to obtain further information.

Nielsen highlighted Prop 65 (California's Safe Drinking Water and Toxic Enforcement Act of 1986) as legislation to be aware of as a label converter. She said: 'It's basically a disclosure law that a consumer product or its packaging includes one of over 800 chemicals that are known to have reproductive toxins or cause cancer, such as Benzophenone listed in June 2013. Ultimately it's to warn the consumer. The warning statement must be included within one year of being listed.'

Benzophenone is a low molecular chemical substance that may be used as a photo initiator in UV curable inks. Often consumer product companies place the warning on products because they don't want to go through costs and time of the health exposure assessment. If it's tested and found to have no significant risk level (NSRL), then a warning is not required.

With regard to US FDA food packaging requirements, the definition for 'food additive' is very important. Printing ink

components that are considered a 'food additive' must receive FDA clearance before use in food contact packaging. This can include colorant and olefin polymers, and paper or paperboard additives that may come into contact with aqueous and fatty foods.

Flint Group's Tom Hammer explained ways for converters to manufacture labels and packaging within FDA compliance. 'Make sure that during the process set-off is not occurring. There is a specific migration limit (SML) of less than 50 parts per billion, sometimes even lower than 10 ppb based on toxins for inks and coatings to be considered no migration.'

#### **MIGRATION NOTES**

- Pigment selection is important because some can be more prone to migration
- Ensure every component on the label and packaging structure is accounted for
- Test often to insure full cure
- Make sure that the photo initiators are low molecular weight
- EB curing does not require photo initiators in the inks, but can be costly in narrow web







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## **PLATE** NEWS

#### PLATES IN BRIEF

A ROUND-UP OF THE LATEST GLOBAL PLATE STORIES

#### KODAK RENEWS PACKAGING FOCUS

Following Kodak's exit from Chapter 11, labels and packaging are a major focus for the company's future, with a heavy emphasis on both Kodak Flexcel NX plates and Kodak's latest Flexcel Direct Systems.

In a statement prepared for L&L, the company said: 'As the packaging segment grows Kodak believes there is a fundamental need for a far wider understanding of the implications and decisions about plate choice and technology. Packaging printers need profitable short runs and consistent, predictable print with vibrant colors, high contrast and clean print with photorealistic reproduction.'

For a full report on the new Flexcel imaging system see the Labelexpo review in this issue.

#### CONTITECH INTEGRATES COMPRESSION

At Labelexpo ContiTech launched its Conti Laserline CSC flexo plate with integrated compressible layer, which does not require foam adhesive mounting tapes. The Conti Laserline CSC can be directly engraved by high-powered YAG/Fiber or CO2 laser (DLE) and is universally suitable for printing with UV, solvent and water-based inks.

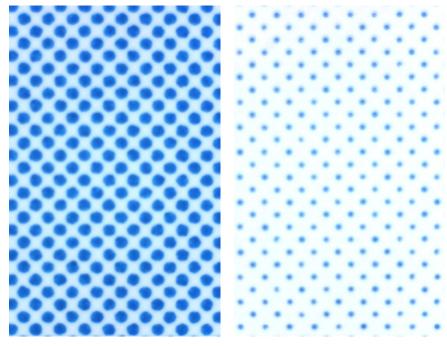
#### **COE ADAPTS**

COE has introduces the Q2 adapter printing sleeve system, which is added to the company's product portfolio of digital flexo, letterpress, offset plates, polymer sleeves (with HD) and Screeny screens.

#### MACDERMID OPTIMIZES DIGITAL PLATE FOR UV INKS

MacDermid Printing Solutions has developed the UVR digital flexo plate to be swellresistant to aggressive UV inks, along with low dot gain and high resolution capabilities. A 55 durometer plate, UVR products offer exceptional drape that allows the plate to wrap around a narrow web cylinder with smaller repeats with relative ease, reducing the risk of plate lift, says the company.

UVR is commercially available in thicknesses of 0.045 in. (1.14mm) and 0.067 in (1.70mm), and in format sizes up to 52 x 80in (1,321 x 2,032mm).



PERFORMANCE Plates show good highlight printing characteristics and good uniformity throughout the tone scale

### DUPONT INTRODUCES NEW CYREL DIGITAL PLATES

**AT LABELEXPO EUROPE**, DuPont Packaging Graphics introduced its new Cyrel Performance DFP and DSP plates optimized for flexible packaging and film label applications

Cyrel Performance digital plates are engineered with a textured surface for high ink density in solids and a broad tonal range to help flexographic converters more closely approach gravure print quality. They support a wide range of print media and are compatible with solvent-based, UV and water-based inks.

Cyrel Performance plates are available in versions with solvent development (DSP) and thermal development (Cyrel FAST DFP), and are fully compatible with standard LAMS-based platesetters and workflows.

DuPont says its Performance plates provide a solid ink density (SID) 10 to 20 percent higher on average than 'standard' digital plates used in labels and flexible packaging applications. The plates provide a minimum point size at 175 lpi with stable points at five percent on the plate and a range of eight to 10 percent for minimum points measured on the printed material. DuPont says Cyrel Performance plates produce smooth solids, resulting in a significant reduction of graininess and an ink laydown typically 50 percent lower than 'standard' digital plates, as well as minimizing pin-holing.

The company claims a chromatic variation of less than delta E 2 between print runs and an extended printing tonal range. This allows process printing with a fixed ink palette, reducing the time needed to obtain the required color at the beginning of the print-run, as well as minimizing press cleaning during and after a run, since the inks are unchanged between one job and the next.

These are true combo plates, meaning solids and screens can be combined on the same plate. The Performance plates are compatible with low volume anilox rolls, reducing ink consumption, increasing the density of ink in solids and at the same time reducing grain.

User reviews will follow in future editions of Labels & Labeling.

### Tau 330 UV Inkjet Label Press

A new dimension in digital label & package printing



The Durst Tau 330 is a Digital UV Inkjet Label Press designed for short and medium run narrow web applications covering web widths up to a max. of 33 cm (13 in.), running at a printing speed of up to 48 m (157 ft.) per minute.

For a complete digital end-to-end workflow, Tau 330 is now available with in-line digital laser finishing that incorporates state of the art laser die cutting technology from Spartanics, with powerful 1000 watt laser for highest productivity and automatic job changeover to handle multiple jobs in a single run. To complete the finishing process, optional UV coating and lamination can be added.

Depending on application requirements, customers may choose from 2 different Tau UV inkjet inks: The standard UV Inkjet Inks for all industrial applications or the very new Low Migration UV Inkjet inks suitable for food, health care and pharmaceutical applications.

The Tau LM ink components all appear on the Eupia and Swiss Ordnance positive lists and do not utilize material specifically excluded on the Nestle list, which when combined with the specially designed Tau UV curing system can achieve migration limits of <10 ppb. Tau 330 is now also suitable for applications with Non-PS materials. Thanks to its Chill Roller Option the press can handle unsupported films and foils.

All of this new features make the Tau 330 particularly suitable for applications such as:

- Short & medium run printing of a variety of label jobs such as food & beverage, body & health care, cosmetics, pharma, household chemical, industrial and security type labels, durable electronics and automotive labels, paint, DIY, ... and more.
- Printing on aluminum foils for blister packs, yogurt lids and other packaging applications on Non-PS materials
- Late stage versioning of preprinted label jobs in body & health care
- Printing on pre-die-cut label stock (blank labels)
- Variable Data Print jobs containing variable or sequential numbering, variable text, barcodes, matrix or QR codes as well as variable images.

**Durst.** The industrial inkjet specialist www.durst-online.com







## Flexo plate automation

**VIANORD**, the new start-up venture based near Nice on France's Côte d'Azur, is making rapid progress towards its declared aim of providing 'Automation with Modularity' for the flexo industry. Nick Coombes reports

From its modern high-tech headquarters in Carros, Vianord's team of leading industry specialists are developing a range of pre-press technology that, according to company spokesman Matteo Pecar, will revolutionize the way flexo plates are made, and set a new quality benchmark within the global industry for consistent performance.

The project, which has been named 'Easy to Plate', encompasses new designs for exposure units, plate processors, dryers, and light finishers for photo-polymer flexo and letterpress plates. The small size units have an 'All-in-One' concept, while the large size units are based on a modular system that allows each unit to be added as required, with the intention of creating a fully automated line. Design is a key element in the development of the technology, with the internationally renowned Albatech Monaco company engaged in creating the external appearance of the suite of machines, and the vast technical expertise of the 'dream team' of flexo experts, who own and run the company, taking care of the inner workings.

The machines are all labeled 'Evo' (short for Evolution) with a number attached according to the size of plates being manufactured. So, Evo 2 is capable of producing plates up to 660 x 860mm, Evo 3 is for sizes up to 920 x 1200mm, Evo 4 is 1200 x 1600mm and the largest, Evo 5 is capable of plates to 1320 x 2030mm. Already, several versions of the compact Evo 2A ('A' for 'All-in-One') and EVO 5 models have been manufactured and installed, and an Evo 2A was exhibited at Labelexpo Europe 2013 in Brussels.

'Our plan is to introduce the 'Easy to Plate' full line capability in four stages, or steps,' explained Pecar, who is in charge of marketing the new technology. 'Step 1 consists of a processor and an inline automatic eight-drawer dryer. This is already available and has been tested and ordered by customers. The processor can also be delivered as stand-alone unit, but "Vianord has created a unique component ID for each part, which, combined with online monitoring, provides the user with predicted life-cycle data"

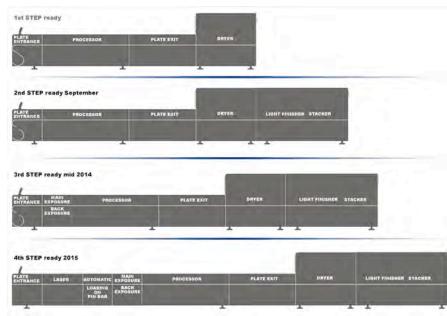
is designed to allow the automatic dryer to be added at a later date. Step 2, which adds the light finishing section and a stacker, will be available before the end of 2013. Step 3, which will include an inline LED exposure unit, will follow in mid-2014, and we expect to have Step 4, which adds a laser imaging unit and a punch and auto-feed facility shortly thereafter.'

The aim is to streamline the whole process, with as little handling of the plate as possible, to avoid damage. In the event of fault in the equipment occurring, Vianord has created a unique component ID for each part, which, combined with online monitoring, provides the user with predicted life-cycle data and allows preventative maintenance to be carried out during quieter production periods.

The Evo series includes an automatic integrated plate punch – this is claimed a first for the industry, and typifies the creative thinking that underpins the design of the new series. There are two types of processor, batch and incremental. Both can be attached to an automatic dryer, either at the time of installation or as a retrofit. This is the benefit of the modular system.

The processor unit has a separate pre-wash for digital plates with black (LAMS) layer running like a flow line. This is claimed an industry first on the compact Evo 2, and is

#### EASY TO PLATE



available on all sizes. The units have a new type of cooled bed that significantly improves their efficiency over other technology available on the market. It uses circulating water that maintains a constant temperature, without any time limit. Analogue plates have a vacuum system for exposure. The unit has a temperature probe, air-cooled high-powered UV lamps, a light integrator, and fiber optic lamp control. The wash out section has a new feature. Its step motor (servo drive) allows a soft start with progressive adjustment of the oscillating and rotating bruches that is governed by the speed

brushes that is governed by the speed of the plate. This provides a high degree of consistency across a variety of plates and thicknesses, and the controllability allows different production plants to "To monitor the internal workings, a visual system known as 'Live Process Control' is fitted to the drier. This consists of a large screen with four separate images that correspond to micro cameras installed inside the machine"

match plates for consistent performance. The unit's new volumetric pump provides high precision solid content analysis, and a very sensitive pressure sensor gives precise control of the polymer volume.

To monitor the internal workings, a visual system known as 'Live Process Control' is fitted to the drier. This consists of a large screen with four separate images that correspond to micro cameras installed inside the machine.

## High Speed Water Wash Plates & Processors

Aquaflex is Dantex's flexographic plate range. This revolutionary technology not only offers many great production advantages but could also form the foundations for a cleaner and more efficient working environment.

#### Advanced Technology - The Aquaflex Plate Range

Aquaflex plate material is created from a unique formula of NBR rubber and graft polymerised, plasticised, bi-functional monomers. Advanced technology means incredibly fast plate washout, excellent resolution, long press life and greater re-usability. It is compatible with all ink types including UV, Water and Solvent. It is also available in a digital format with unique super matt black patented black mask carbon layer.

#### Solvent-Free, High Speed Processing

There are high costs associated with solvent processing: the equipment, specialised air-conditioning & extraction and solvent recovery. Whilst there have indeed been alternative technologies available, quality has been a significant issue, until now. Dantex's Aquaflex plate range is achieving a print quality in flexible packaging that is successfully challenging all other current options. Consider the immediate and long-term impact on the environment the elimination of solvents and the introduction of high speed processing will have; a high quality, cleaner and greener solution for the Flexographic Printing Industry.



www.dantex.com



Two are located at the processor exit, to monitor the plate coming out and examine its surface, and two more are positioned on the plate transfer system, to show the sensitive mechanism that controls the transfer of the plate to the dryer.

'Plate transfer is a crucial part of the inline process,' explained Pecar. 'Although it may appear simple, the timing and mechanics have to be perfect. The cameras allow the operator to see this on the monitor, which also records the live image. This is important in the event of an error occurring, because it provides traceability. The advantage to the customer is that he can see the plate and the mechanism without the need to open the cover panels, and the pictures can be fed direct to Vianord for analysis. This feature is new and unique on the world market,' he added.

The drier also has 'intelligent plate transfer', which includes automatic aligning and selection of the closest empty drawer available to avoid unnecessary movement and loss of time. The drawers are sealed to prevent fume leakage, and each one is monitored to provide the operator with detailed information of what is being stored. The unit's automatic pre-heat system and the temperatures used, make for fast drying. Temperature uniformity is monitored and controlled by two separate control interfaces, and new high-speed air suction speeds up the process of plate drying. The light finishing section has automated control of UVA-UVC post exposure, either simultaneous, consecutive, or delayed, and the unit also features an air-cooling system and fiber optic lamp control.

'We have attracted a great deal of interest from the market, and a number of flexo printers have already visited our facility and placed orders for machines,' stated Matteo Pecar.

Vianord's new approach to

technology, and the facility it offers converters to build up to a fully automated line, will significantly improve the speed and quality of plate making, and at the same time offer savings in waste material and labor costs.

According to the company, the new Evo systems are all designed to be low maintenance, and each of the important parts is easily accessible. Combine this with online monitoring and the component ID system, and a feeling



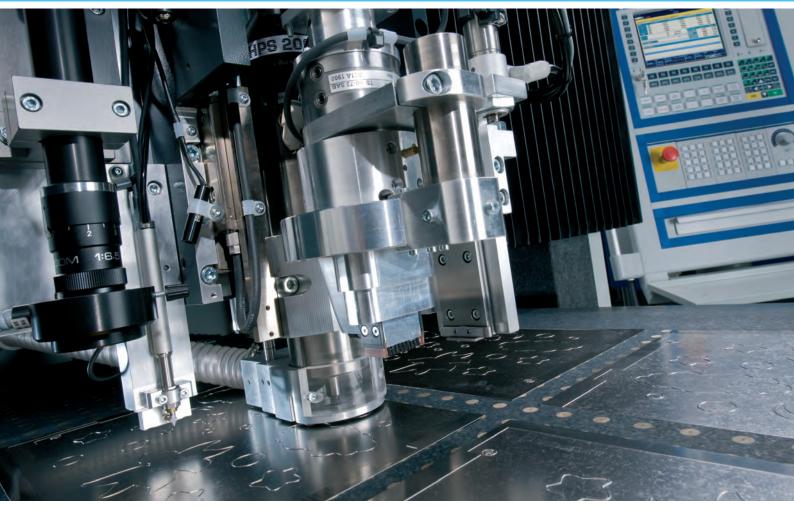
EASY to plate step 1



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Integrating Ink at 5/7

FRENCH CONVERTER 5SeptÉtiquette has installed an automated ink mixing system from GSE to cut waste and increase efficiency. Andy Thomas reports

Automated ink dispensing – mixing the spot colors on demand – has become an established fixture of the press room, and GSE Dispensing, of Brummen, Netherlands, is working with ink suppliers to help the label printer use inks without wasting materials or time.

Ink logistics is all about getting the right color available at the right time, as cost-efficiently as possible. Good control over a complex workflow is needed – sourcing the ink, storage, calculating the recipe and weight needed, dispensing, proofing, recalculating stock levels, not to mention the possibility of booking excess inks back into stock. While ink makes about six percent of the costs to a printing house, mistakes or delays in the workflow can dent profits because of the consequential downtime or remakes.

Maarten Hummelen, marketing director at GSE Dispensing, comments: 'The cost of color preparation and the risk of error have increased in recent times because of trends towards more colors and more complex spot colors on the package design, shorter production runs and shorter lead times. Given that half of setup times can be attributed to color, a smart logistics workflow can bring bright returns on investments.'

#### 5/7 CASE STUDY

5SeptÉtiquette, a flexo/offset label converter based in Courthézon, southern France, installed GSE Dispensing's Colorsat Match Dispenser and GSE/CERM integration software so it could adapt to the market's need for shorter, regular supplies of labels on an increasingly 'just in time' basis.

The majority of the company's orders increasingly fell between 2,000 and 4,000m and design lifecycles became shorter because of the need for short-lived promotional messages. And with lead-times typically at 24 hours, the laborious, labor-intensive and unpredictable manual method of ink recipe formulation was no longer suitable: automation became a necessity because there was no room for error and resulting remakes or production bottlenecks.

The GSE/CERM installment provided a smooth ink logistics solution for its flexo printing division, which comprises two Nilpeter FA4s (one 6-color; the other, 8-color).

'With the GSE dispenser, we are able to mix the exact quantity

of ink necessary for the job and have closer control of the quality of the colors,' says 5SeptÉtiquette's managing director Patrick Wack. 'We meet the customers' needs for high-standard, unique colors to an accuracy of within 1 E. This accuracy is vital to ensure a product has high impact on the retail shelf. For example our organic produce clients want specific and eye-catching greens for effective brand positioning.'

GSE's Ink Management Software (IMS) allows the printer to store a database of commonly used, complex ink recipe formulations and offers standard integration with other IT packages, giving the production manager real-time data about recipe availability.

5SeptÉtiquette's new recipes are developed with a spectrophotometer and formulation software from X-rite. The new recipes are then exported to GSE's IMS software, which in turn interacts with IT management software from CERM.

Using CERM's Management Information System, the user creates a library of printed products and describes the colors of each. When the customer service team enters an order for a product or a group of products with the same substrate/tooling/ cutting requirements, the ink requirements are exported to the IMS.

The CERM software calculates the number of labels and instructs the GSE software which recipe is needed, and in what quantity.

IMS calculates how much base inks are required and dispenses the ink batches for the order. Inks that return from the flexo press after the job is printed are weighed in and are subtracted from the order's ink consumption. This information is then exported to the CERM software, giving operators a real-time view of ink costs per order. Furthermore, with the IMS-CERM connection, production management can see in real time which recipes are available, to enable Quick Response Manufacturing.

'Each job is perfected due to the exchange between GSE software and the CERM business management program,' says Wack. 'We are developing what we think is a very interesting 'digital flexo work-flow', working on the creation of a color database and the connection of this database with our MIS and prepress system. The GSE system's ease of connection with the IT software was an important selling point. The two software platforms have enabled us to accurately work out the ink costs per job, giving us greater control of our prepress budget.'



IML specialist ramps up investment

**EFFICIENCY** across all areas of origination, print and finishing is key to the success of German converter Engelhardt-Etikett in IML and other label markets. Martina Reinhardt reports

It is very likely that a large number of German fridges contain products with Engelhardt labels. Engelhardt produces labels for many national and international beverage and food producers. There is a growing demand for in-mold labels (IML) – a market segment for which the Nördlingen-based business has upgraded its facilities, including its technical equipment.

Before you enter the production facilities of Engelhardt-Etikett, headquartered in Nördlingen, you have to put on a white coat and disinfect your hands. The label printing enterprise decided to achieve DIN EN 15593 certification to ensure a continuously high level of product quality. Hygiene management in food packaging manufacturing included implementing an HACCP concept. This acronym means Hazard Analysis and Critical Control Points – a preventive system meant to ensure that food is safe for consumers.

#### FOOD AND DRINK LABELS

Take a look at the company's production facilities and the huge warehouse and you will see why such regulations are required for a business such as Engelhardt. The product portfolio of the Nördlingen-based company is reminiscent of a well-stocked supermarket – yoghurt tub lids, labels for various sorts of margarine or cream cheese, cocoa powder, instant and ready meals, herring salad, mustard and all kinds of drinks, mainly for the national but also the international market. The latter are mainly produced in Nördlingen.

'When it comes to beverage labels we are one of the major producers in Europe,' says head of operations Christian Martsch with pride. Engelhardt's sister company, Druckhaus Rahning in Bünde near Hanover, focuses mainly on preprinted foil lids and flexible packages. The two companies together supply the in-mold label market.

Its line of products includes wet glue labels, deep drawn foils and sealing lids as well as stretch-sleeves – wrap-around labels which adapt completely LABELS&LABELING

to the labeled product. The company processes paper from around 40 g/sqm, cardboard articles up to 600 g/sqm, aluminum-coated paper from 68 g/sqm, pure aluminum with a thickness of 35 to 80  $\mu$ m as well as different kinds of foils ranging from polypropylene, PET and PVC through to polyethylene. 'By selecting the right printing substrate it is possible to directly influence the barrier properties of the packaging and consequently the shelf life of a finished product,' says Christian Martsch. Engelhardt Etikett and Druckhaus Rahning produce 125 million labels or 290,000 linear meters per day.

According to Christian Martsch, the number of labels being produced is constant, but the company is noticing a clear trend towards product diversification. One and the same beverage is sold in various flavors, there are voucher campaigns or special, limited editions – and all these require customized labels. New runs may be necessary to change label information in response to new legislation or modify this information depending on the country of destination.

#### **IN-MOLD LABELS**

In-mold labels (IML) – printed matter included in injection molding processes – are gaining

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1



FINISHING on the Polar processing system

in importance for Engelhardt Etikett and Druckhaus Rahning. The printed labels are directly fed into the injection molding machine and fused with the base material. This procedure ensures a superior quality in comparison with direct printing. The colors are brighter, and the promotional effect at the POS is increased

In Nördlingen and Bünde in-mold labels are produced with offset and gravure printing processes which permit smooth gradation and very fine lines. Combined printing of multiple designs is also unproblematic. Very small quantities for promotional purposes can be produced with ease. Printing substrates range from white or metalized paper to white (foamed, cast or high-gloss) or transparent (cast and high-gloss) polypropylene foils, both from sheets or from the reel. By its own account Engelhardt is already the market leader in the field of IML on paper.

The IML portfolio also includes



A staff member fans the die-cut labels to verify their quality

specialties such as peel-off labels or labels produced with counterpressure processes. An increasing number of customers require alphanumeric coding for promotional products, QR codes or augmented reality codes.

In Bünde, in particular, the group can look back over many years of experience in the field of IML. Druckhaus Rahning already started to produce in-mold labels in 1992. The Nördlingen business has been active in this sector for almost 10 years. 'In-mold labels are an expanding segment which allows us to put out our feelers towards the global market,' comments Christian Martsch. 'And we have recently invested in some new machines such as two new counterpressure die-cutting machines as well as a new printing press.'

The new press, a Heidelberg XL106 8-color press which has been running at Engelhardt in Nördlingen since last year, has a rotary die-cutter adjustable to five thousandth of a millimeter. It permits die-cutting of even complicated shapes which can be fully adapted to the design of the labeled product. The individual printed sheet can be utilized much more effectively by interleaving several die-cut elements. In this way material losses can be minimized.



Engelhardt also employs the new Polar DCC-11 Label System for producing in-mold labels. This machine is intended for industrial inline production of banded die-cut labels. The DCC-11 employs the counterpressure process and is therefore particularly well-suited for metal foils and compressible materials such as plastic.

The pre-cut strips are aligned on the buffer/loading table before the Autocut 25 cuts them into labels. The finished label stacks are transferred to the system die-cutter. The material stack is aligned and locked on all four sides to prevent slipping. The counterpressure plunger piston subsequently compresses the labels and the stamping punch presses them through the cutting die. In this way, it is possible to die-cut up to 480 packs per hour. The fact that material stacks are aligned and locked on all four sides beforehand helps to achieve an excellent die-cutting accuracy, says Wilhelm Gerstberger, head of the finishing department.

Finishing of labels, and especially die-cut labels, is one of the skills that makes printing houses such as Engelhardt stand out from competitors. 'There is an enormous know-how behind this competence,' says Christian Martsch. In order to work flexibly and avoid any bottlenecks in this area, Engelhardt has invested in a space and cost-intensive workflow. The firm primes most of its labels and stores them as semi-finished products. Finishing is then carried out on demand. 'Fortunately we have sufficient space to work in this way,' reports Martsch. At peak times the warehouse accommodates 2,000 pallets loaded with semi-finished products. This method of operation certainly ties up capital, but at the same time there are cost-cutting potentials in print, because we can save on setup work.

'We aren't put under pressure by urgent orders, but can spread the print jobs in the best possible way,' says Martsch. 'If necessary, we can always have printing carried out by contractors. It is not easy to substitute our finishing know-how and technical equipment.'

LABELS&LABELING

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## WEB CONTROL NEWS

#### THE INSIDER

A ROUND-UP OF THE LATEST GLOBAL LABEL STORIES



#### NEW PNEUMATIC BRAKE FROM RE

At Labelexpo Europe Re Controlli Industriali launched the EXtreme XT7 pneumatic brake, part of the EXtreme family designed to precisely control and maintain desired web tension in narrow web applications. The company says XT7 delivers linearity and accuracy with low torque, high power dissipation and an extremely compact dimension of 205mm x 119mm thickness.

Developing the brake involved using new materials and air flow research, greatly increasing the pad's lifespan.

#### CEI DOUBLES PRODUCTION SPACE

Converting Equipment International has doubled its production space to meet increasing requirements for converters handling unsupported films.

Recently developments include a pharmaceutical machine with 100 percent inspection and eight lanes of on demand inkjet printing. A new program on the touch screen allows the operator to control individual lanes including nine digit counts either up or down, text placement, and maintenance functions.

In another development, CEI has a new model Reregister die cutter manufactured for the digital market completed. The CEI SDF (Streamlined Digital Finisher) takes pre-printed web-flexo materials through a UV treated varnish or self-wound lamination. The SDF has one to three die stations; the first streamlines both a kiss cut and has a support roller for the ability to undercut. The SDF also has the ability to utilize existing tooling or machine dies.



## E+L DEVELOPS PRINT TO CUT QC SYSTEM

To meet the challenges of label webs moving through the die-cutting station at speeds up to 200 m/min – far beyond the operator's ability to capture any detail or to carry out corrections – Erhardt + Leimer has developed the Elcam 'Cut-to-Mark' automated image processing system to integrate with web guiding and missing label detection modules.

Most label converting processes require the printing position to be precisely aligned to the longitudinal cut along the label web. To detect the printing or cutting contour or the dieline, Elcam is positioned at the delivery end of the press, after the die cut station. Measurements are made in terms of absolute position and distances and compared to the target values specified in the system to indicate any potential deviation.

In the event of excess tolerance, visual and acoustic alarms can be triggered to slow down or even stop the whole system and to channel out the defective labels. Measuring the print position in relation to the dieline can be done in parallel with controlling the web guiding system. 'This will ensure the print is at the correct position within the label contour,' explains Jürgen Bräu, head of inspection technology at Erhardt+Leimer.

Capable of frame rates of up to 60 fps and a tolerance of 0.02mm, the system can operate both in free image sequence and in trigger mode. 'Continuous materials without a repeat – without repeating patterns – are generally inspected at the maximum frame rate without external trigger signal,' says Bräu.

Repeating patterns enable a trigger signal to be generated based on the image or a print mark sensor. This is used to ensure that with every image acquisition the web is precisely positioned underneath the camera.

The system can be used in conjunction with E+L's Missing Label Detection module for enhanced process safety.

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## Paper label developments

**LABELEXPO EUROPE** provided a showcase for new developments in paper label substrates. Andy Thomas reports

#### MUNKSJÖ ENHANCES LINER PROPERTIES

Munksjö, the newly created global specialty papers business, exhibited for the first time at Labelexpo Europe and introduced Acti-V LEAF 50 g/ sqm, a lightweight release paper with superior mechanical characteristics for the production of thinner and lighter PSA labelstock laminates. With a tensile strength claimed comparable to that of much heavier standard release papers, Acti-V LEAF additionally makes silicone coating more efficient and reliable, says the manufacturer.

Acti-V technology, introduced in 2011, has been extended to the entire range of supercalendered release papers, for one or two-side silicone coating. Acti-V enhances silicone anchorage and provides significant savings on energy and catalyst cost in the silicone formulations. The product was tested with formulations below 20 platinum ppm and coated at speeds over 1,200 m/min.

Additionally, Munksjö introduced a

dedicated range of release papers for pre- impregnated composites materials used by industries such as marine, aerospace, wind-energy, leisure or automotive. This range of process papers includes supercalendered, clay-coated and SCK grades for silicone coating on both sides.

And in an important announcement, Munksjö launched a website (www. full-circle.eu) offering easy access to the company's paper liner recycling program along with in-depth background information. Launched at the end of 2012, this initiative provides to label printers, brand owners and retailers, a sustainable end-of-life option for paper release liners once they have been used as carriers of PSA labels.

Full Circle is a closed-loop recycling program. It collects silicone coated glassine release papers and recycles them into the production of new paper. Paper release liner is collected free of charge in Belgium, Germany, Luxembourg and the Netherlands, through one or more logistic partners. Developed in English, French and German, the new website makes it easier to share information about the Full Circle initiative with label printers and end-users. It provides details about the program and enables companies to submit online their recycling needs and get a quick feedback on the best logistics solution.

'Any end-user using PSA labels is welcome to use our Full Circle recycling service, regardless of the origin of the release paper or labelstock laminate,' says Marco Martinez, product manager, release liners and sustainability.

'At Munksjö, we are strongly committed to support the labeling industry growing their business in a sustainable way. We believe that, together, we have a unique opportunity to increase the amount of paper release liner which is recycled and to divert waste from landfill or incineration.'

Munksjö Oyj is one of the world's largest specialty paper companies

## Now the most innovative release papers are made by Munksjö



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Our commitment to environmental improvement is reflected in our Full Circle<sup>™</sup> release liner recycling program, which offers free collection of paper liner waste at end-users, retailers and printers.

It all adds up to a powerful combination of resources and expertise, unique within the industry.



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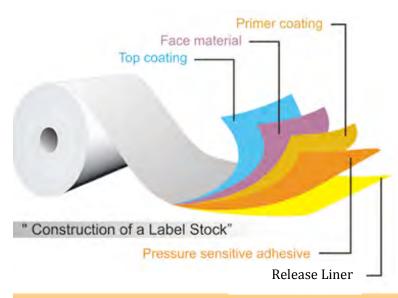
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#### LABELS&LABELING 97

#### PAPERS IN BRIEF

A ROUND-UP OF THE LATEST GLOBAL PAPER STORIES

#### **MANTER CHEERS**

Manter has unveiled its new Industrial and Synthetics label collection, along with the award-winning Craft Beer label collection.

#### **LECTA CELEBRATES**

Lecta group company Torraspapel launched its 'Labels to Celebrate' selection of Adestor brand pressure-sensitive label materials for the food and beverage industries. The range includes textured, coated and metalized papers, and permanent adhesives, in addition to new Adestor facestocks. Metalvac metalized paper, meanwhile, has a new swatch book with sections for wetglue labels, pressure-sensitive labels, and tobacco and packaging.

#### **SUPER ZUBER**

Zuber Rieder has a new range of label papers called 'Grains de papier'. Other new products include HP Indigo Certified papers and 'Master Process' technology for labels on bottles immersed for long periods of time in ice buckets.

#### **MITSUBISHI GOES HIGH TEC**

At Labelexpo Mitsubishi High Tec Papers demonstrated its full range of thermal papers, inkjet papers, cast coated label papers for wet glue and PS applications, and HP Indigo printable thermal papers.

#### **YUPO EXPANSION PLANS**

Yupo Corporation America has appointed Paul Mitcham as president and CEO of its Chesapeake facility and announced plans to expand capacity, add employees, and explore new markets in specialty packaging. Mitcham is now responsible for directing its strategic growth initiatives.

#### **MDV'S SYNTHETIC RANGE**

MDV used Labelexpo to demonstrate its Robuskin synthetic paper. The base films can be made from a variety of polymer films including HDPE, PP, XTP, PVC or PET. On coated stocks the printer can use normal paper printing inks that dry by absorption. Uncoated Robuskin ECO films are printable using film inks or UV-curing inks and are food safe.

#### **NO RESISTING APPVION**

Appvion, formerly Appleton Papers has launched Résiste 185-3.3, a light top coated direct thermal paper material for logistics applications. Targeted at the warehouse logistics segments, Résiste 185-3.3 was developed to produce darker images and barcodes, improved scan rates and increased resistance to mechanical scuffing, with strong environmental durability.



**THE** home page of www.full-circle.eu, promoting Munksjö's liner recycling program

created by the combination of Munksjö AB and Ahlstrom's label and processing business.

#### **UPM RAFLATAC GETS FIT**

UPM Raflatac has introduced the Raflacoat Fit PEFC mid-gloss paper label range for high-volume food applications, with a thinner 63  $\mu$ m caliper which yields up to 30 percent longer rolls. Adhesive options include the EU 10/2011 compliant RH6 hotmelt 6 optimized for chilled conditions. Liner options include PEFC certified HG65, HG45 glassine or ProLiner PP30. Other Fit grades include Retail Eco Fit PEFC for weigh price applications and Thermal Eco Fit PEFC, targeted at short life labeling applications on packaging films and most common cardboards.

### HERMA SHOWS NEW WINE LABEL PAPERS

A new addition, HERMAexquisite self-adhesive material range for wine and champagne bottle labeling was launched at Labelexpo. HERMAlux W label material (grade 326) is a cast-coated and high-gloss paper surface claimed to produce an excellent print quality



MDV Robuskin in action



MITSUBISHI giroform logistics form label

in all conventional printing processes. HERMAlux W is particularly suitable for high-quality labels. The material features good wet opacity, withstanding an ice bucket test over several hours.

The HERMAexquisite range includes high-quality structured papers with the 62W adhesive, with a multi-layered construction which provides particular benefits for cool/moist conditions.

#### POLYART LAUNCHES SYNTHETIC WET GLUE LABEL

Polyart has developed a quick drying synthetic paper label. With its water absorbent coating, Polyart Wet Glue labels can be applied to plastic and glass bottles with existing wet glue labeling equipment using conventional adhesives for paper labels.

The manufacturer says Polyart Wet Glue labels are wrinkle free and have a high quality appearance. 'As Polyart is water resistant the labels remain perfect even when the bottles are placed in an ice bucket or a freezer.'

Polyart wet glue can also be customized with security features to provide anticounterfeiting solutions. The range of applications includes wines and spirits, chemicals and fertilizers and motor oil.



**POLYART** Wet Glue labels can be applied using existing paper applicators



## **Mack Color** makes move

**RELOCATION** to a factory more than twice the size of its previous site – alongside continuing investment in new printing technology - means Brazilian converter Mack Color is well-positioned to continue its strong growth. James Quirk reports

In the middle of 2012, Brazilian self-adhesive label converter Mack Color began a move - more than a year in the making - to a new 4,400 sqm factory in the Sao Mateus area of Sao Paulo, 15km from its previous 1,800 sqm site in Tatuapé.

Coupled with significant investment in new technology - in equipment from HP Indigo, Nilpeter, AB Graphic and Karlville - the relocation has brought the company strong gains in both production efficiency and capacity. Not a single hour of production was lost during the process, nor a single member of staff.

The preparation stage - crucial in providing the smooth transition as well as the 100 percent retention of staff - was wide-ranging. The layout of the new factory was meticulously planned to improve workflow and increase production efficiency; staff were consulted every step of the way - and even had a say in the location of the new facility.

Indeed, says industrial manager Nelson Bafile, the social impact of the move on staff was closely monitored. 'It was an area we focused on. We surveyed staff to find out where would be best to move so as to reduce the impact on them. We have a highly skilled workforce and didn't want to lose them.' The plan paid off, with every staff member making the transition to the new factory. News jobs have been added, too, bringing the total to 132 employees.

The new facility's layout is further testament to Mack Color's due diligence, and has resulted in 'a fundamental change' in the company's operations, says Bafile. Raw material enters the factory at one end and exits the opposite side; in between, different areas dedicated to warehousing, printing, finishing and then storing the final product are lined up in order - allowing the material to pass through each with maximum efficiency.

'The factory's specific design streamlines the process between the material arriving and the finished product leaving,' says Bafile. 'This has increased our productivity and improved communication between the different departments. We need less time to turn a product around - it has been a fundamental change.

The new site allows Mack Color to serve existing customers better, and also to compete more effectively for new accounts. Less than a year into operations at the new factory, Bafile says new clients have been added, but that more time is needed to quantify the increase in new work.

'The transition was handled seamlessly,' he says. 'During the move, production was maintained at both sites so that not a single hour of production was lost.'

Sales and admin offices - as well as a pre-press department equipped by Esko technology - are located above the factory floor. The new site has been certified to ISO:9000 and certification to the Good Manufacturing Practices (GMP) standard is underway.

#### **INVESTMENT**

A further feature of the new site is an increased focus on environmental sustainability. Various energy saving initiatives have been implemented, including the installation of the company's own power generator, which protects it from interruptions caused by



MACK Color's industrial manager Nelson Bafile

#### power cuts.

Between five pm and nine pm in Sao Paulo, energy tariffs increase. Mack Color therefore reduces production during these hours, using its own generator when needed, in order to lower costs. Bafile describes the savings brought as a result of this policy as 'considerable'.

Mack Color works with various recycling companies to dispose of material and ink waste properly. No solvents are used during production, again for environmental reasons. Air-conditioning has been installed to increase the workers' comfort as well as to protect materials and processes from the hot Brazilian summer.

The move to the new site was complemented by investment in a raft of new machinery, as Mack Color took advantage of a weak dollar and euro against the Brazilian Real. The company upgraded its HP Indigo WS6000 to a WS6600 – two earlier-model HP Indigo digital presses are also run – and installed a third AB Graphic Digicon converting line. The company also invested in a third Nilpeter FB-3300, configured to handle PET liner. The trio of flexo presses from the Danish manufacturer are all of nine colors and provide silkscreen, cold foil and lamination capabilities, in both roll-to-roll and roll-to-sheet formats.

'This most recent FB-3300 has nine printing units, UV-varnish and cold foil, and a state-of-the-art register control system,' says Mack Color's owner Marcos Rossi. 'The servo-motors for each of the nine printing units guarantee a perfect register among different colors and complex, delicate images.'

'We expect to see a 100 percent production capacity increase, and, most importantly, to reduce our production costs, thanks to the high press speeds and fast change-overs,' Marcos Rossi says of the new installations. He describes the level of service provided by Nilpeter Brazil as 'outstanding'.

Seeing a trend towards PET liner usage within the food, chemical, pharmaceutical and cosmetics sectors, Mack Color also bought a Karlville Prolabel 350 inspection slitter rewinder for pressure-sensitive rolls with PET liner.

'The KSI-Prolabel 350 is a very productive and high performance machine, developed with a servo motor system that allows for easier operation. The slitter inspection works with multiple types of substrates,' says Rossi.

The new equipment is lined up alongside five Heidelberg 2-color offset presses and four finishing machines from Rotoflex. Space in the new factory has been set aside for more HP Indigo and Nilpeter presses in the future.

Materials are supplied by Avery Dennison, UPM Raflatac and Arconvert – all of whom manufacture in Brazil – while RotoMetrics and Brazilian supplier MLC provide rotary tooling.

#### MARKETS

Mack Color has achieved 10-12 percent annual growth in recent years, and expects this to increase with the relocation to the new factory. Fifty percent of production is flexo; 30 percent digital and 20 percent offset, though the latter still produces self-adhesive labels –the product to which the company is exclusively committed.

Nelson Bafile says that self-adhesive label consumption in Brazil is rising steadily, particularly in the cosmetics sector. He cites the pharmaceutical and food industries as also experiencing strong growth, while promotional work – ahead of the FIFA World Cup in 2014 and the Olympic Games two years later – is booming.

In-mold labels are also offered to clients, but no sleeve production takes place. 'Producing sleeves requires a different platform,' says Bafile. 'If you specialize in lots of things, you specialize in nothing. Brazil has a high consumption of self-adhesive labels so we prefer to maintain our focus in this area.'

The company operates in a number of end user segments. Food is the largest, followed by the cosmetics, pharmaceutical and beverage sectors, but the company's wide-ranging field of operations also extends to industrial, veterinary, and home and personal care products, among others.



#### **INNOVATIVE MARKETING**

Mack Color has long attached great importance to innovative and wide-ranging marketing campaigns, particularly in areas where label converters seldom venture. Under the stewardship of marketing director Fabiana Rossi, the company sponsors baggage trolleys at Sao Paulo's international airport, Guarulhos; radio jingles promoting the company's capabilities appear on various stations.

Its name is further promoted by supporting a number of government campaigns. The company produces promotional stickers rallying against dengue fever, light pollution, use of cell phones while driving, and many other causes. It leaves boxes of these stickers at hospitals and gas stations for free distribution.

Its latest initiative is to sponsor the shirt of Brazilian soccer team Ponte Preta. Mack Color's logo appears down both sides of the shirt. Though not one of Brazil's bigger clubs, Ponte Preta was recently promoted to the first division, and thus plays fixtures against the country's most famous names. Indeed, this year the team reached the semi-finals of the Sao Paulo State Championship; pitted against giants Corinthians and broadcast on television, the game provided Mack Color with huge national exposure.

The marketing initiatives are vindicated by the company's impressive record of seven consecutive awards for 'Best-known brand', organized by a local graphic arts magazine and voted for by end users.

Mack Color has also been recognized for the quality of its work with two HP Indigo Global Awards for digital printing; three Fernando Pini graphic excellence awards for flexo printing, organized by Brazilian associations ABIGRAF and ABTG; and a number of prizes from associations ABIEA and ABRE.



PICTURED with the new M0-5 offset press unit at Labelexpo Europe 2013: Jesper Jorgensen and Lars Eriksen of Nilpeter; and Fernando Gabel, Ronaldo Baumgarten and Ronaldo Baumgarten Jr of Baumgarten



L-R: Juan Pablo Patiño of Nilpeter, and Rosa Buena an Dante Joy Way of Logotex, ring the bell at the Nilpeter stand during Labelexpo Europe to announce the order

## Two Latin America firsts for Nilpeter

FIRST NILPETER MO-5 to be installed at Baumgarten in Brazil; Logotex of Peru orders Andean region' first FB-3

Brazilian converter Baumgarten has been revealed as the first customer of Nilpeter's new MO-5 offset press, launched at Labelexpo Europe, writes James Quirk.

The Blumenau-based company is a long-term user of the Danish manufacturer's machines, operating four MO-3300s, one MO-3 and two MO-4s. The new MO-5 – Baumgarten's eighth Nilpeter offset press – will be in installed in January.

Indeed, the close relationship between the two companies was the starting point for the machine's development. Baumgarten, seeking an offset press with a 22in web width, began discussions with Nilpeter a year and a half ago about the potential creation of such a press.

The resulting MO-5 has been developed with a focus on the flexible packaging market. It is designed for short-run packaging printing applications using technology developed for the label market for fast set-up with minimum material waste.

'We have a long partnership with Nilpeter; it's a relationship of mutual trust,' Ronaldo Baumgarten, the Brazilian converter's president, told L&L. 'The MO-5 is a very complete machine – practical and easy to use. It has a good width – 22 inches – and can handle a wide variety of substrates, which provides us with many different opportunities.'

Ronaldo Baumgarten said that the new press will be used to print the company's full range of label and flexible packaging products.

The 8-color MO-5 to be installed at Baumgarten features six offset units and two flexo, as well as die-cutting and lamination. Non-stop rewinding equipment is provided by Martin Automatic. According to Jesper Jorgensen, Nilpeter's global sales director, the press provides increased accessibility to the print units and features an enhanced dampening system. It has five oscillating rollers for temperature management, making it particularly suited to the low migration inks required by flexible packaging applications. An inking control system is provided by Eltromat.

The press is extremely sturdy, with one unit weighing 3,800 kilos. It can achieve speeds of in excess of 200 meters per minute.

'Baumgarten came to us with an idea for their perfect machine – and we built it,' said Jesper Jorgensen. 'There was enough mutual trust between the companies for us to carry out the project, which has resulted in a machine which fills a gap in the narrow web packaging market.'

He described Baumgarten as a converter competing at a 'world class level'.

#### **LOGOTEX ORDERS FB-3**

On day three of the show, meanwhile, Peruvian label converter Logotex finalized the purchase of the Andean region's first Nilpeter FB-3 press.

The 8-color machine – which features an integrated Servo 3000 infeed and register system from Rotary Technologies – will be installed in December. The servo-driven press also boasts relam/delam, cold foil, corona treatment, and chill rollers to allow shrink sleeve production. It is also the first machine in Peru to feature GEW's reduced energy consumption EC curing units.

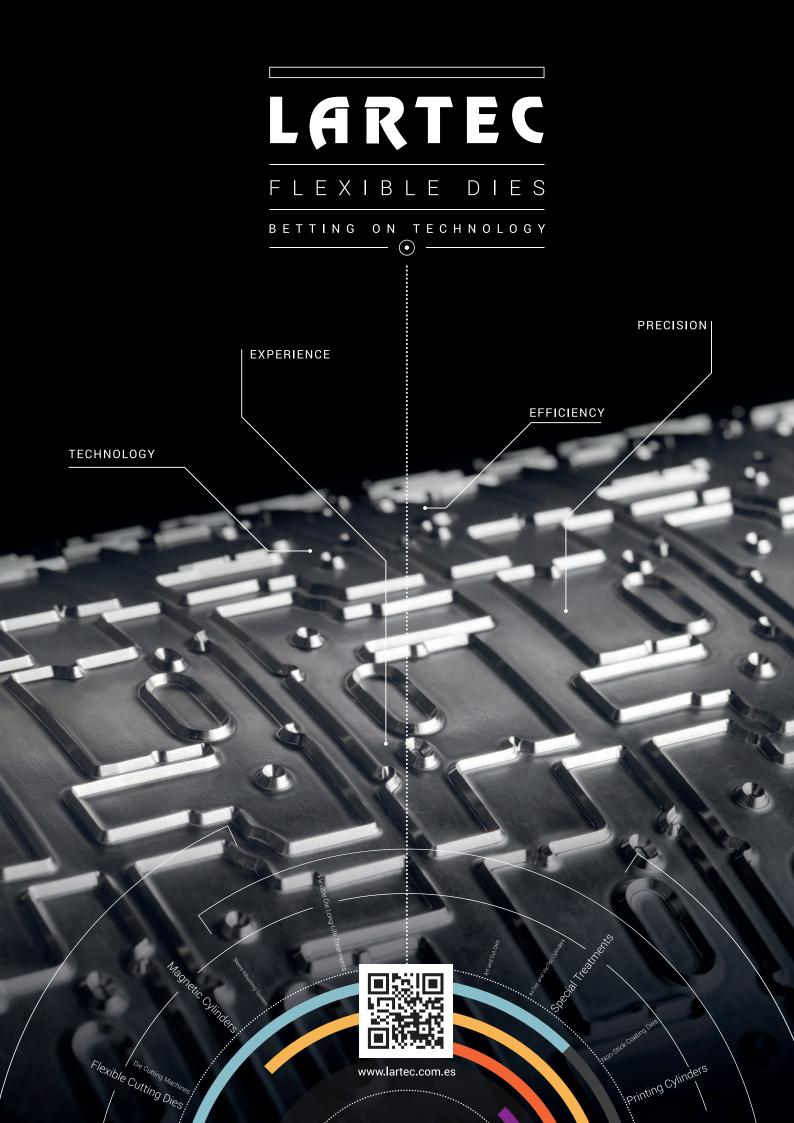
Logotex works with many brands who export their labeled products, to the United States, China and many other countries, so the company was in need of a productive machine which could quickly turn around high quality jobs, said general manager Dante Joy Way.

He also cited Nilpeter's local presence in Peru – the company's sales manager for the Andean region, Juan Pablo Patiño, is based in Lima – as an important factor. Rosa Buena, finance manager, revealed that the company had long coveted a Nilpeter press.

'Almost 50 percent of labels printed by Logotex end up being exported by the brands,' said Dante Joy Way. 'The press is the only one of its kind in Peru, which differentiates our company. It's a very versatile machine – with excellent register control – and this allows us to produce high quality work with short turnaround times.'

Nilpeter's Juan Pablo Patiño said: 'Logotex is a top narrow web flexo printer in Peru, so it is a landmark installation for Nilpeter in the region. The FB-3 is of the same high quality specifications as machines going into the US and Europe. With Lima's port and low production costs in the country, it's an attractive option for brands who are buying labels for foreign markets.'

Patiño revealed he has first learned of Logotex through an article in Labels & Labeling: 'One month before I began to cover the region for Nilpeter, I was doing market research and read about Logotex in L&L. That's how I discovered the company.'



## 5 GINISTANBUL 15<sup>th</sup> INTERNATIONAL ADVERTISING INDUSTRY AND DIGITAL PRINTING TECHNOLOGIES FAIR

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## Latin American visitors make strong impact at Labelexpo

THE TREND OF INCREASING IMPACT OF LATIN AMERICAN visitors to Labelexpo events – both in Brussels and Chicago – continues apace, writes James Quirk

Last year, Labelexpo Americas saw a 25 percent rise in visitors from the region. Though too early, as your correspondent writes this on the final day of the show, to quantify their exact numbers at Labelexpo Europe 2013 in Brussels (see next issue of L&L for full analysis), Latin American label and packaging converters have unquestionably made their presence felt. Visitors from Mexico, Brazil, Argentina, Peru, Colombia et al have appeared in droves, while a number of machine purchases have been made on the show floor.

Brazilian converting powerhouse Baumgarten was announced as the first customer of Nilpeter's new MO-5 offset press, and also ordered two Gallus ECS presses during the show. Peru-based Logotex finalized an order for the first Nilpeter FB-3 press in the Andean region. At the Cartes booth, two of the modular finishing machines on display will head to customers in Argentina and El Salvador after the event. By lunchtime on day three, HP had received five orders from Latin American converters for new 20000 and 30000 packaging presses, while also selling 10 digital label presses to companies in the region.

'There has been a continued increase in the strength of Latin American presence at Labelexpo Europe,' said Nilpeter's global sales director, Jesper Jorgensen. 'It has become an increasingly dominating market segment – one that is now on a par with the US in terms of the number and quality of machines being installed.'

Cristian Gentile, a technician for Cartes based in Brazil, who supports the Italian company's local agents in the region, said that the high numbers of digital press sales in Latin America have resulted in increasing interest in the company's finishing systems. Cartes has sold a number of laser die-cutting machines, for example, into markets such as Brazil, Mexico, Argentina, Chile and Venezuela in the last two years.

John Cavey, Latin America sales manager for Mark Andy, pointed out that Latin American converters turn out in high numbers at both Labelexpo shows, in Brussels and Chicago. He reported that last year Venezuela was a particularly strong market, while in Argentina – thanks to a government initiative which means banks have to lend to small businesses at low interest rates – sales have jumped this year.

As of this year, Mark Andy is now selling directly in Mexico, with newly appointed John Vigna handling sales in that country and in Central America and the Caribbean. Within a short time of joining the press manufacturer, he sold two machines in Mexico. During Labelexpo Europe, Vigna was finalizing a P5 press sale to another Mexican customer, as well as a 2200 to a Colombian company.

Francisco Soto, Latin American sales manager for Rotoflex, believes that the region has turned a corner in recent years with regards to the quality of machines being purchased. 'The demand for the latest technology has become very strong in the last two or three years,' he revealed. 'There is no comparison from what we sold five years ago, in terms of specifications of the systems, to what we are selling now. This year and last year have seen record sales for Rotoflex in the region.'

Soto reported having seen all the company's major customers from the region at Labelexpo Europe. 'There's a consistent trend of good visitor numbers from Latin America at this show. I've particularly noticed large numbers of companies from Mexico, Colombia and Peru.'

Ricardo Rodriguez, segment manager for labels and packaging for HP Indigo in Mexico, said that he'd seen at the show many Latin American packaging and carton converters who might not normally attend, interested in the company's new 20000 and 30000 presses. 'We've had a good flow of visitors from Latin America at our booth,' he commented. 'In terms of orders compared to market size, Latin America is punching above its weight and compares very favorably with other regions. We are sustaining our growth in the region in terms of digital press sales.'







LISA Milburn, managing director Labelexpo Global Series

# Labelexpo Europe beats all records

A RECORD NUMBER OF VISITORS AND EXCITING INNOVATIONS across all technologies marked Labelexpo Europe 2013. Andy Thomas reports

ith over 30,000 visitors, 600 exhibitors and seven halls, Labelexpo Europe 2013 was the biggest show to date, with attendance up by 11 percent compared with

two years ago.

Lisa Milburn, managing director of Labelexpo Global Series, confirmed this was a truly global show. Exhibitors came from 37 countries – with a rapidly growing presence from Asia Pacific – while visitors came from across the world.

Speaking at a press conference on the opening day of the show, Tarsus Labels & Packaging group strategic director Mike Fairley said the growth of the show is fuelled by the continued expansion of the global label industry, which today consumes 46 billion sqm of labelstock, expected to increase to 51.7 billion sqm by 2015. 'The share of emerging markets in that total had doubled over the last 10 years,' said Fairley.

Turning to the innovations to be seen at Labelexpo, Fairley pointed to a range of materials developments including wash-off labels, resealable adhesives, linerless innovations, low migration adhesives, adhesives for high humidity environments and silicone emulsions.

Digital printing continues to expand at Labelexpo, said Fairley, with over 50 digital press exhibitors. The growth of digital will be accelerated by new trends towards personalization and customization, variation and multiple languages. But although 20 percent of all new presses sold last year were digital, Fairley pointed that out only one percent of billable sqm printed worldwide are digitally printed labels.

The show floor demonstrated that the flexo press manufacturers have responded by automating and digitizing their technology, said Fairley, seeking to lower the cross-over point with digital.

Looking to future sources of growth for the labels industry, Fairley pointed to 'on-the-go' travel products representing a whole new market category. Growth in developing markets will continue – for example, over the next few years China will become the world's biggest wine producer, said Fairley.

At the same time converters are diversifying into packaging products including cartons, flexibles and blisters, accounting for the success at this show of the Package Printing workshop.

'Other trends we see are MIS systems to link from materials management and file input to printing and to the end user, and greater use of web-to-print portals,' said Fairley. 'Looking further ahead, Nanotechnology developments will not only include inks, but also waterproof papers and new sustainable solutions. We will see adhesives made from natural oils with lower costs, more interactive labels and growing use of virtual imaging technology.'

Fairley also announced the launch by Tarsus of the Label Academy, an

e-learning project which will be rolled out progressively over the next three years.

At the same press conference Kurt Walker, president of FINAT, laid out the organization's new structure, with a board representing national associations meeting every six months. 'This will become a driver of FINAT strategy,' said Walker.

Walker reported on the seventh meeting of the L9 grouping of global label associations which took place on the day before the show opened. Agreement was reached on the need for a common sustainability program and to create an internet forum where ideas can be exchanged.

Concluded Lisa Milburn: 'With the Eurozone now out of recession, confidence and optimism is beginning to return to wider global industry and converters are starting to invest in their businesses again. Continued innovation across the various product groups and strong, sustainable growth in demand across the labeling and package printing market are being translated into sizeable order books. We've again had excellent feedback from exhibitors underlining that Labelexpo Europe is the show to secure significant sales with numerous reports of many presses being sold.'



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# Press trends: analog and digital

**BARRY HUNT** looks at the analog and digital press trends helping shape the industry's performance and direction, with extra reporting by Andy Thomas

irst some facts. This year's Labelexpo was the best so far in the event's 33-year history. Helped by an improving global economic outlook, the show attracted a record-breaking number of 31,800 registered visitors. Around 600 exhibitors filled seven halls, bringing around 150 new products with them. Many of the conventional and digital press suppliers and their OEM partners achieved target-busting order levels. It was also a good show to assess some technical trends that will inform the industry's direction for some years to come.

Take LED UV curing for example. It was scarcely known a few years ago, but this lower-energy alternative to normal UV curing is now gaining acceptance. Benefits include operating and environmental efficiencies because infra-red radiation and ozone discharges are eliminated. LED UV curing operates within a narrow UV-A wavelength of 350-400 nanometers making it a much cooler process with an extended lamp life. Currently, most installations are on inkjet presses, allowing them to handle heat-sensitive substrates such as polyethylene. A few narrow web press manufacturers have also adopted the technology.

The potential for reducing curing costs and gaining operating efficiencies is hard to ignore, but these are early days. The current cost and supply of LED curing inks, which still have complex chemistries, is a major issue. Dirk Jaegers, managing director of IST Metz, says that until a critical mass is achieved, the LED-cured inks will remain more expensive than UV curing inks. 'As with the early days of UV flexo printing, the wider availability of LED UV-curable inks at a more economical price will be major factor in determining the pace of adoption.' He is optimistic this will happen. In partnership with Integration Technology, IST Metz has introduced a water-cooled LED UV curing system with an output of 12 W/cm and a spectral distribution of 385 nm. It shares the same quick-change cassettes used for the company's MBS-6 UV curing system, allowing a good degree of flexibility for adopters.

Gallus first demonstrated LED-UV curing two years ago on the varnish station of an ECS 340 flexo press. Things have moved on. Following testing in its St Gallen headquarters using Siegwerk's inks, it now it offers 16 W/cm FirePower lamps from Phoseon Technology as an option on all Gallus presses. This was demonstrated on an EM280 press on the Siegwerk stand. So far, their sole commercial usage is on Heidelberg Linoprint L inkjet presses. 'LED technology will play a major role, but we still have some hurdles to overcome', says Klaus Bachstein, CEO. 'The investment in the lamp systems is still very high. So we have to find applications where it makes sense, and those applications are there.'

Incidentally, the new Gallus Print Shop workflow concept allows users to optimize both conventional and digital technologies depending upon job characteristics. 'We have always said each print method has its own strengths, so we can add additional value with each process,' said Bachstein. 'We have now added digital to the list of print processes. It needs



NUOVA Gidue M5 Excellence Digital Flexo press



**OMET X6** offset combination press

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centralized MIS software, provided in this case by CERM, which helps users decide which route a job will take.'

Mark Andy showed its new ProLED curing system fitted to a Performance Series P3 UV flexo press. The company said the technology boosts production rates and gives energy savings of more than 50 percent compared to normal UV curing. The system gained Mark Andy the Label Industry Global Award for Innovation, shared with Flint Group Narrow Web, supplier of Ekocure UV LED inks. Mike Russell, international sales director, agreed with the widespread view that LED ink supply remains an issue, adding: 'I think the take-up will be much quicker than the industry experienced with the adoption of UV flexo inks.'

In respect of flexo technology, the company showed its new Quick Change Die Cut (QCDC) on P7 and P5 Performance UV flexo presses. Operators can change die cylinders in around 30 seconds, while giving more precise tuning of die-cutting pressures. Another benefit is that it streamlines matrix stripping. QCDC users can utilize their existing cartridges with some adaptations to existing tooling.

Similar techniques to reduce set-up and job changeover times are now an essential part of all levels of press design. Nilpeter, for example, promoted the inline Quick Change (QC) magnetic die module. Operators can ergonomically change cylinders in less than ten seconds. Solid die-cutting cylinders can also be incorporated. It was shown on the new sleeve-based FA-4\* for high-end labels and packaging. Other launches included the high-performance FB-3 UV flexo press. Aimed at the fast-growing market for flexible packaging, Nilpeter launched the heavy-duty, 520-mm wide MO-5 offset platform presses. Also new was the flatbed FP-4 hot-foil and embossing unit, and the G-4 gravure unit for printing metallic inks and other coatings.

In his post-show comment Jakob Landberg, sales director, said: 'Two years ago there was less hype and it was not so exciting as an exhibition. And now the hype is back and the show is vibrant and positive. This year we have had customers who have enthusiastically made buying decisions on the spot. Instead of concentrating solely on efficiency, the accent this year has been capacity. Heavy metal is back!'

With shifting crossover points, heavy metal is also competing with top-end digital presses. Nuova Gidue showed its Digital Flexo method of automating changeovers of the plate cylinders on the new Combat M5 Excellence UV flexo press. Operators place the plate cylinder for the next job behind the one that is running on each print station. On job changeover, the press slows and each print cylinder is sequentially ejected ready for automatically loading the next cylinder. The Print Tutor system automatically adjusts each plate for register and print pressure as the press ramps back to full speed. A job changeover involving



MPS EB370 press module



eight print cylinders and a magnetic die took 60 seconds and resulted in just 10 meters of waste. Gidue has also developed a system for automatically removing and loading flexible dies, although this was not shown at Labelexpo. The press was fitted with a new AVT camera which uses the PDF directly as a reference.

Codimag's six-color Viva 340 Aniflo waterless offset press – the final Stork screen unit used IST's LED UV curing – was used to simulate Pantone spot colors to reduce press time. As the company's Pierre Panel explained: 'We printed 18 customer-supplied jobs using Esko's Equinox software to replace PMS colors, reduced to CMYK + Orange. The jobs were set up quickly with less than 14 meters of waste to get up to color. Aniflo keyless offset has no variables for ink/ water settings so there is little risk to deviate from the file. As long as pre-press has respected the press profile you will always get the same result. This means you can compete with digital. The break-even point is around 500 meters (1,640 ft).'

According to MPS a growing number of label printers, including in emerging markets, want nothing more than a no-frills flexo press. Consequently it has introduced the new EB 370 flexo press. There is just a minimum amount automation and no multi-substrate capability. The press does however include key MPS technologies such as pre-register, non-driven chill rolls and a short web path. A process unit rail is standard, as are double die stations for front and backside cutting, sheeting and slitting. The EB 370 has a web width of 370mm (14.5in) and offers a choice of UV, IR cassettes or hot air dryers.

'This is a perfect emerging-market press,' said Vijay Pareek, who represents MPS in India. 'If a printer has a limited

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Partnerships Available T: +31-(0) 20-6733566 E: inquiry@lintec-europe.com www.lintec-europe.com budget and it's hard to get loans, he can still buy one of our machines.' It would still be hard to describe this as an 'entry level' press, points out commercial director Eric Hoendervangers. 'It is still more expensive than comparable entry machines from competitive manufacturers, as it is still an MPS.' The EB 370 presses will be batch built to reduce lead times.

Rotatek introduced the shaftless SmartFlex UV flexo press with a 350mm wide web, featuring a new register control system with digital sensors. Each servo-driven print unit achieves speeds up to 200m/min handling label stocks and flexible packaging laminates. A rail system allows positioning of turn bars, lamination and cold foil modules at any point on the press. Conventional or LED UV curing systems are offered, as well as hot air and IR. All press functions including job storage are carried out from a touch screen panel. The company also launched a 450-mm wide Brava offset combination press, ingeniously switchable between semi and full rotary modes

Celebrating its 50th birthday, Omet introduced the Xflex X6 sleeve-based offset press. With a web width of 530mm it signifies the company's move into high-volume flexible packaging. The use of a tablet to control the main functions indicates how far manufacturers have come with remote press controls. Others may think it's a bit of a gimmick.

Focus introduced its e-Flex Servo press series, featuring twin Servo drives to each print head with a drop-in print cylinder, pre-register and auto register.



The removable ink cartridges and anilox roll assemblies can be cleaned off press. A rail system allows flexibility to position a variety of converting platform applications in any order. The press is available in 330 and 430mm web widths.

#### **Digital toner systems**

Occupying an extra seventh hall, HP Indigo used its extra space to demonstrate two different packaging presses, first seen in prototype form at drupa, and now commercially available. The 30000 B2 format (750mm) sheet-fed press produces folding cartons. It ran inline with a dual UV curing or water-based Tresu iCoat coater. Kama units provided automatic stripping and blanking after die-cutting. The roll-fed HP Indigo 20000 prints flexible packaging, labels and sleeves at 31 m/min in four



ABG-EDALE Q3000 finishing unit

colors on webs up to 762mm (30in) wide. A new Digicon 3000 converting line from AB Graphic and Edale permits single-pass production.

Until now silver metallic printing was only possible with conventional print processes. The company's new ElectroInk Silver represents a breakthrough for owners of the WS6600 press. Also new is High Slip White for single-pass shrink sleeve production.

HP also demonstrated Esko's latest SmartStream Labels and Packaging Print Server on the WS6600, now on version 4. It offers simplified color management and automated job preparation.

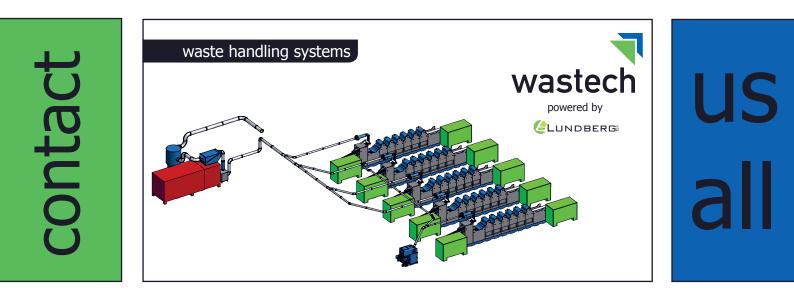
Commenting on the accelerating growth of digital printing on HP Indigo presses, Alon Bar-Shany, VP and general manager of the Indigo division, said label volumes grew by over 25 percent in Q3 2013 versus a year ago, significantly outpacing the wider market growth rate of less than 5 percent. The company has sold over 500 WS6000-series digital presses worldwide, with Rako Etiketten installing the landmark press at its plant in China.

Xeikon featured ICE dry toners developed for its electrophotographic printing on heat-sensitive label stocks. It augments the existing QA-I toner system and is also based on CMYK plus White and customized spot colors. Both meet FDA standards for applications involving indirect contact with food.

Along with Nuova Gidue, Xeikon jointly hosted the Package Printing Workshop, which ran well-attended sessions through the four-day event. It ran an inline digital carton production system, named Roll2Carton, comprising a Xeikon 3500 – which has a web width of up to 513mm (20.3 inches) – and a Bograma finishing unit. On its stand, the company underlined its presence in flexo prepress by showing the new Thermoflexx 80 plate imager.

#### finishing machines







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ADSI digital press-finisher

In a complete production sense, the company sees flexo and its toner-based digital system as being a perfect match.

Allen Datagraph Systems introduced the Centra HS Digital Label Printer. It uses a LED dry toner system (as do Xeikon presses) to print CMYK with stochastic screening at 1,200 x 600dpi. The press runs at 9.1m/min printing non-coated PS webs up to 327mm wide. Operated inline with the iTech Centra HS finishing unit, users can laminate and contour-cut labels of any size and shape on-demand without dies. The finisher also slits and strips the waste matrix for machine or hand application of labels. 'We sell to label converters and brand owners, who account for some 25 percent of sales,' said Marc Vanover, VP sales and marketing. 'Lately we have been refining and extending our digital label systems to give a complete product line that does not involve a large investment cost."

Serving the same market, the stand-alone Apex 1290 from iSys also uses a LED toner print engine for CMYK printing at a similar speed, print resolution and web width. Interestingly, cost comparisons with the much faster flexo process showed that on a run length of 51,500 four-color self-adhesive labels iSys claimed the price of USD \$735 was about the same for both methods. However, with plate preparation and set-up times, the job took 45 hours to with flexo, whereas the Apex 1290 took nearer seven hours for a same-day service. The Apex 1290 can also handle pre-printed labels requiring batch numbers and extra graphics, such as wine labels.

#### Inkjet technology

Inkjet suppliers make much of their process color capabilities for primary labels, but much of the growth comes from a variety of industrial applications, including pharmaceutical, hazard warning labels, brand-name decals and labels for components. Some can print banners and other display items. Memjet has targeted this market with its five-channel CMYK printheads using water-based inks. The Waterfall version with a native 1,600dpi resolution, powers RTI Digital's new desk-top Vortex 851R which prints CMYK on-demand labels at 1.8m/min to a width of 220mm. It costs under 7,000 euros and is aimed at businesses requiring a basic, but reasonably fast roll-fed printer.

Rapid Label Systems from Australia uses Memjet technology for the desktop Rapid X1 and stand-alone Rapid X2 printers. The latter has a large-diameter unwind and loop out-feed allowing it to run inline with post-finishing equipment, including the company's range of embossing, foiling and slitting machines.

The Colordyne CDT-1600 PC Laser Pro is a Memjet-equipped press, delivering



ABG Turret finishing unit for Domino N610i

a resolution of 1600 x 1200 dpi for CMYK and a spot color. It was shown by AzTech Converting Systems in conjunction with Delphax Technologies. The former manufactures the roll-to-roll platform and servo-controlled web handling system with touch screen control. The web width is 254mm. Options include a corona treater, UV varnish/laminator unit, UV flexo duplex operation. The inline LaserSharp single-head laser cutter from LasX Industries operates at 400 W/min.

INX showed an upgraded NW140 inkjet press with a water-cooled UV LED curing system, and an air-cooled UV LED pinning system. It prints PS materials at up to 24m/min using twelve Xaar 1001 printheads with six ink channels. It ran with an integrated Spartanics X-140 laser cutter.

Primera Technology Europe introduced the desktop LX900e Color Label Printer with a new ACS-216e Auto Cutter System for on-demand labels. Primera



BRIAN Filler (Screen Europe) and Richard Danon (Dantex) announce distribution deal for Screen L350UV

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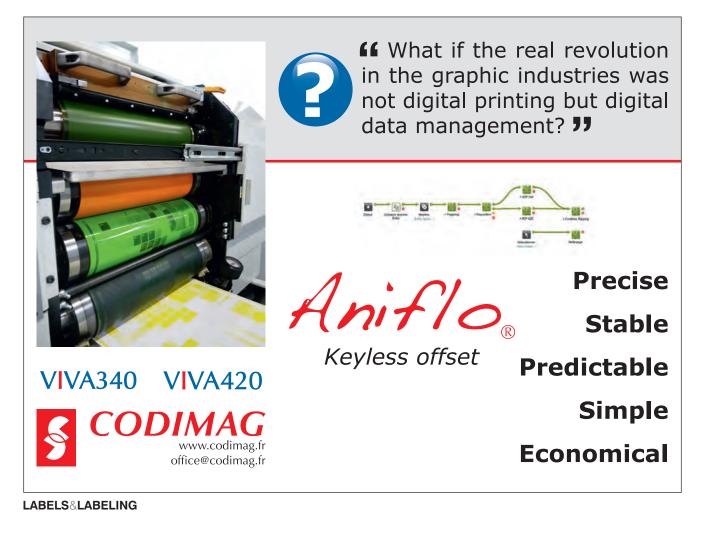


Imaging Perfection is claimed as a new printing technology that delivers high quality reproduction of text and graphics. The color droplet size gives a print resolution up to 4,800 dpi. Primera also launched the FX400e foil imprinter as a digital option for applying gold and silver borders, fonts and other graphics to inkjet-printed labels. The effect simulates metallic hot-stamp technology.

EFI Jetrion's 4950LX is its first model with full LED UV curing. It uses Phoseon lamps with a claimed life of 5,000 hours. The Xaar 1001 printheads use grayscale technology to achieve an improved CMYK resolution of 720 x 720dpi – capable of reproducing 2-point text. Opaque white ink, already available on earlier 4900 series presses and supplied by EFI's ink division, will be available from mid-2014. EFI's Fiery XF digital front-end provides high performance and color management at speeds up to 34m/min. The workflow can also include EFI Radius ERP/MIS system to integrate customers' job information with the management and production systems. The 4950LX can run with an optional laser cutter in single-head (500W) or dual-head (1,000W) from SEI Laser for end-to-end production.

The same module is a standard feature of the 4900M, which also prints webs up to 330mm wide. An optional varnish/ laminating module was introduced at the show. The inline laser approach is taking hold, says Stephen Emery, EFI Jetrion's CEO. In the USA it is proving ideal for handling short-run orders of, say, 40,000 labels for brand owners, especially those in the pharmaceutical and health care sectors. It presents a simpler operation and can be the key to a successful inkjet operation.'

Durst is the latest to adopt inline







laser cutting. It showed a 1,000-Watt system from Spartanics integrated with an extended Tau 330 inkjet press. The 330-mm wide press can include optional UV coating/lamination. The maximum printing speed is 48m/min using Xaar 1001 printheads. The company now offers low-migration UV inks for food and healthcare applications from SunJet. They allow users to produce unsupported foils, such as blister packs and yogurt lids, when running with an integral chill roller. This was shown on a second Tau 330 that incorporated a high-resolution Nikka video inspection system. Domino Printing Sciences now offers opaque white on the next-generation N610i. The Kyocera print engine prints CMYK + White at speeds up to 50m/ min. The claimed top speed printing CMYK is up to 75m/min with a 600dpi native resolution, which is significantly higher than the rated top speeds of most high-end digital presses. This expands the N610i range and viability for high-volume work. The press can run either stand alone or inline with an AB Graphic Digicon finishing line. The show press included an integrated AVT web inspection system. Also shown was Domino's K600i single-color, highresolution VDP printer integrated onto a rewinder.

Epson launched the long-expected SurePress L-6034VW. It is the company's first single-pass industrial press, the first to use its PrecisionCore linehead technology and the first product to use Epson's new LED-cured UV ink with in-line digital varnish technology. Web widths extend 80mm to 340mm. It is available in two models: CMYK with digital varnish and high-opacity white ink (SurePress L-6034VW) and without white ink (SurePress L-6034V). Each of the



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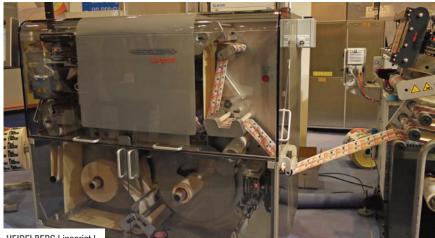
six PrecisionCore lineheads comprises eleven printheads (totaling 52,800 nozzles) printing at 600 x 600 resolution to a top speed of 15m/min. The L-6034 VW augments Epson's initial offering, the SurePress L-4033AW, a multiple-pass and seven-color inkjet label press with white ink. The water-based Epson AQ ink set includes green and orange inks.

Seiko Epson president Minoru Usui outlined the company's strategy for labels and packaging to L&L. He said Epson will continue to work on water-based inks for filmic substrates. 'At the moment we need to provide UV-LED inks for these applications, but water-based still has many advantages.'

The Graphium from FFEI received its European debut on the parent Fujifilm stand. The Xaar 1001 CMYK + White printheads incorporate XaarDOT (Xaar Drop Optimization Technology) with an eight-level grayscale capability. The color engine prints up to 50m/min on a 410mm (16in) wide web using Fujifilm's own Uvijet inks. This gives a perceived resolution of 1,080 dpi. The Graphium's platform and servo-controlled web transport are supplied by Edale. In an inline, single-pass mode, the Graphium can support up to five inkjet modules and six flexo units. FFEI continues to supply the Caslon print engine to Nilpeter, which in 2007 introduced an integrated inkjet and flexo printing line based on its FA-series print units.

The narrow web influence is also evident in Graficon Maschinenbau's new Puma iT inkjet press, which incorporates inline die-cutting and finishing. Existing T180/200 printing machines can be converted into a Puma iT with GM's new digital print unit. Opaque white is offered as an option. Users can combine the modular press with flatbed screen printing, UV letterpress printing, hot-foil stamping, embossing, varnish, laminating and insetting devices.

Heidelberg has held a 30 percent stake in Gallus for many years. This familiar brand name is now firmly established within the Gallus product range. Heidelberg's four-color Linoprint L inkjet presses come in 210mm and 315mm working widths. The top speed is 48m/ min with a 600dpi native resolution. UV LED curing facilitates the printing of heat-sensitive substrates. Features include reinsetting of die-cut rolls. A dedicated version of the Heidelberg Prinect Digital Print Manager Label features enhanced RIP performance that



HEIDELBERG Linoprint L

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allows variable data processing. The show model ran with an inline Gallus's ECS C digital finishing line.

Dainippon Screen already has a B2 sheet-fed inkjet printer for cartons, and has now moved into the crowded CMYK inkjet label market with the Truepress Jet L350UV. Using single-pass grayscale piezo printheads from Kyocera, it prints at up to 50 m/min (164 ft/min) on a 350-mm wide web, delivering native resolutions of 600 x 600 dpi. The color management system is based on Screen's Equios universal workflow. To provide a wider color gamut than is typical with the four-color process, the press uses Screen's proprietary highdefinition UV inks. Opaque white ink is an option for printing on transparent film and metallic foil.

Industrial Inkjet, the sole sales and technical support provider for Konica Minolta Inkjet outside of Asia, demonstrated its ColourPrint module, designed to fit simply and quickly to an existing flexo press. The unit prints with a resolution of 1200x1200dpi with 3PL drop size at 50m/ min and is powered by GIS Software with full variable image capability.

Stork Prints showed the latest version of the DSI UV inkjet press, which runs with up to ten printheads. Besides CMYK and opague white, users can extend the color gamut with orange and violet hexachrome colors. The line supports die-cutters, UV-cured laminator/varnish units.

Focus Label Machinery showed its d-Flex hybrid flexo/digital inkjet press using Konica Minolta print heads. The system is now available with dual heads, allowing speeds up to 70m/min printing four colors at 360 x 720 dpi resolution. Focus has also upgraded its servo software to allow the converting system to act as slave to the inkjet heads in order to improve pre-register setup times and reduce waste. A new formulation of magenta lnk has been introduced which increases the standard color gamut for a wider range of process and pantone colors.

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UV Printing Ink and Lacquer



# Press news in brief

#### Miyakoshi

The MHL13A-300 is a narrow web offset press with variable-sleeve technology and LED-UV curing, cutting energy consumption by around 70 percent and allowing printing of unsupported label films and flexible packaging as well as PS labels. The plate and blanket cylinders both use patent-pending metal sleeve technology. A range of options are available including varnish, lamination and foil stamping. Maximum print width is 330mm and running speed up to 100 m/min.

Miyakoshi also demonstrated two digital print systems.

The MJP13LX-2000 is a high-speed inkjet printer using specially developed water-based pigment ink. This machine runs at 50m/min and, says the manufacturer, benefits from cheaper water-based inks compared with UV. It can print on a wide range of substrates including mirror-coated paper, without pre-treatment.

Print resolution is 1200dpi, switchable between binary and grayscale modes. Eight color stations are available – CMYK plus four special colors.

The press has an in-line finishing unit, including rotary magnetic die-cutting and matrix rewinder for single pass production. An in-line laser die-cutter is optionally available.

The MKD13A-1000 is a compact digital printer using dry toner and laser cutting technology.

#### lwatsu/Lintec

Lintec Europe showed for the first time at Labelexpo the new lwatsu UV digital inkjet machine, which the company distributes.

The EM-250W LabelMeister inkjet press prints at up to 50m/ min at 600 x 600dpi, and at 25m/min at 600 x 1200dpi (in the machine direction), with four selectable droplet sizes for smoother gradations. Repeat length is up to 2 meters and maximum image width 220mm. The heads are all self-cleaning.

The press is CMYK plus White and uses a combination of LED pinning and UV lamp for final cure. An in-line intermittent finishing unit – designed and developed together with Iwasaki Tekkok – is optional, and the press can also print on pre-die-cut label rolls for late stage versioning.

Iwatsu provides its own LabelMeister RIP, incorporating ICC profile color management per substrate, and Label Bijin workflow software for functions including barcode generation, imposition and die-cut marks. The software can also calculate ink usage and cost per job.

Also on the stand was a Sanki SOF semi-rotary offset press. Optional modules include a patented adhesive kill unit – claimed the first time this has been applied on an intermittent web fed machine – flexo varnishing, cold foil and in-line UV laminating.

#### Labelmen

Labelmen showed its RS-350PS hybrid intermittent/rotary offset press, a machine fitted with the Ani-Print anilox inking system to allow shorter runs to be produced with minimum waste.

A special tension control system placed after the unwind allows the RS-350 PS to be fitted with corona treatment, web guiding and cold stamping units. The material can be fed smoothly with an intermittent action, and then rewound in full rotary mode after printing. A Martin Automatic non-stop butt splicer, turret rewinder and accumulator are included. Additional features include CNC 'one-touch' make-ready, a Technotrans dampening circulation system, multi-functional flexo printing stations, flatbed die station and remote monitoring and diagnostics.

Also on the stand was a PW-260-R6C rotary letterpress for printing a wide range of PS labels, unsupported films and tube laminates, and equipped with a Martin Automatic STS butt splicer-unwinder and STR turret rewinder.

#### **Smooth Machinery**

Taiwanese manufacturer Smooth Machinery showed its SPM-450OR shaftless offset intermittent/rotary press. The company claims the press has the largest print area  $-430 \times 410m$  – of any intermittent offset press, with a maximum print speed of 12,000 imp/hour.

A wide range of optional modules includes a second pass unit, hot stamping, rotary magnetic die-cutting, embossing, and laminating.

The press is equipped with an auto-positioning and registration system and auto wash-up, and optionally a fully automatic print register system.

#### **KG Digital**

KG Digital launched its desktop SwiftColor Label SCL – 4000D dye inkjet printer, a 4in-wide CMYK print system operating at 200mm/sec with a resolution of 1200dpi. Also shown was the SwiftColor Label SCL – 4000P, another 4in wide CMYK system but using pigment ink. Speeds are up to150mm/sec at 1200dpi. Typical applications include short run shipping case marks, address stickers, baggage tags, barcodes, prescription medicines and gourmet foods.

#### VIPColor

VIPColor introduced the VP700 digital color label printer. Powered by Memjet technology, the VP700 prints at speeds up to 18m/min.

Also on the stand was the pigment ink based VP495, which has been successfully certified to marine immersion label testing standard (BS5609). This allows converters to meet the demands of CLP/GHS labels (Globally Harmonized System of Classification and Labelling of Chemicals). Key applications include chemicals, fertilizers and other products facing outdoor and harsh environments.

#### Weifang Donghang

Chinese press manufacturer Weifang Donghang introduced itself to the European market with its German and Spanish distributors, with most interest being generated from the company's intermittent offset press, which has now reached multiple installations in southern and eastern Europe.

The company's DHS520 520mm mid-web flexographic press was shown with GEW E2C UV curing and chill drums printing PSA labels at up to 175 line screen and Asahi AWP waterwash digital plates. Weifang's new LED curing digital press was also on the stand.



#### ETI'S MINI-COHESIO

ETI Converting Equipment launched a more compact 330mm (13in) version of the established Cohesio modular coating and lamination system.

The Mini-Cohesio uses 50 percent less space, has a 30 percent shorter web path, a faster setup and is more affordable. The system is designed to convert labels, unsupported film or paper web previously printed in flexo, offset, gravure, digital or other printing processes.

The featured application at the show

was a reverse gravure pre-printed beer label being silicone and adhesive coated, as well as die-cut on an 18 micron (0.75 mil) PET liner – converted in one manufacturing process from raw material to finished product at a speed of up to 150 meters per minute (500 fpm).

This was achieved thanks to another ETI launch at the show, the Pellicut – a new die-cutting system which allows die-cutting down to 18 micron polyester film or 20 lbs SCK or glassine at speeds of 150m/min.

#### **VIDEO HIGHLIGHTS:**

WWW.LABELSANDLABELING.COM/VIDEO/INTERVIEW-MAXIME-BAYZELON-PRESIDENT-ETI-CONVERTING-EQUIPMENT

#### **FIXED COLOR PRINTING**

Both Esko and Kodak demonstrated fixed palette printing with key press partners at Labelexpo. The concept is that converters can match a wide range of Pantone shades without needing to dedicate printing units to special colors. This means there is no need to wash up print units between jobs, greatly saving on costs and makeready times, as well as matching more closely digital press ink systems, which operate exclusively with 4-7 color process.

Esko was promoting its Equinox spot replacement system both with Codimag on an offset Viva 340 Aniflo press, and with Nuova Gidue on a UV flexo Combat M5 Excellence press. In Codimag's case, one job had 14 PMS colors reduced to 5 colors, CMYK + Orange.

Kodak demonstrated Spotless fixed palette printing on an MPS EF410 APC Advanced UV flexo press, with pre-press and plates prepared by leading UK repro house Reproflex 3. Kodak Flexcel NX 1.14mm plates were imaged at 300lpi, matched with Apex GTT anilox rolls, using Zeller & Gmelin Iow migration inks. The offset quality jobs were printed with just four colors to demonstrate the gamut that can be reached.

'We want to start to change the mindset from seven colors to four, which means less costs in inks and plates for what is very close to the same result,' said Meike de Vos, business and category manager Flexographic Solutions at Kodak.





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# Materials

**DANIELLE JERSCHEFSKE** reviews the key materials trends at Labelexpo Europe, which included sustainability, advanced engineering for durables, and wine & spirits options for distinction and performance

#### Ashland

Ashland promoted technologies for surface and bonding enhancement for the flexible packaging and converting industries. Its focus at the show was on low migration offerings, both UVand water-based, which are REACH compliant to adhere to European regulations. Attendees had many questions about coatings and adhesives designed specifically for HP Indigo digital toner technologies. Ashland noticed an increase in interest around Canon toner technology and the popularity of Memjet Technology driven print systems.

#### Appvion

Wisconsin-based Appvion, formerly known as Appleton Papers, focused on its rebranding and communicating its continuation of technical support to the international audience in attendance at the show.

Attendees showed interest in the LABELS&LABELING

company's Resiste 185-3.3 top coated direct thermal product designed for the light logistics labels market. Delegates were also interested in the Resiste 900-3.0 product applicable for some linerless labeling systems.

Allison Garrity, marketing and research manager for thermal materials, said: 'We want to be the company that people think of for direct thermal technology.'

#### **Avery Dennison**

Avery Dennison published its second Sustainability Report after committing to be a more sustainable company five years ago. This latest report clearly shows that set targets for numerous environmental objectives are well on the way to being achieved.

CEO, chairman and president, Dean Scarborough, made the commitment that by 2014 almost 40 percent of Avery Dennison's facestock materials in Europe will be FSC-certified at the same cost as traditionally supplied materials. Avery Dennison won the Global Label Industry Award for Sustainability 2013 for its CleanFlake Film Portfolio designed with a 'switchable' adhesive to make PET bottle recycling significantly more effective. While the line of materials adhere firmly to PET bottles or containers during use, they detach readily in a conventional recycling facility and float to

### L9 MEETS

The day before the start of the Labelexpo Europe show, label associations from across the globe met in the L9 forum. The function of the forum is to formulate common strategies to promote and labels industry globally. L&L interviewed some key players.

#### VIDEOS

http://www.labelsandlabeling.com/video/ ametiq-discus



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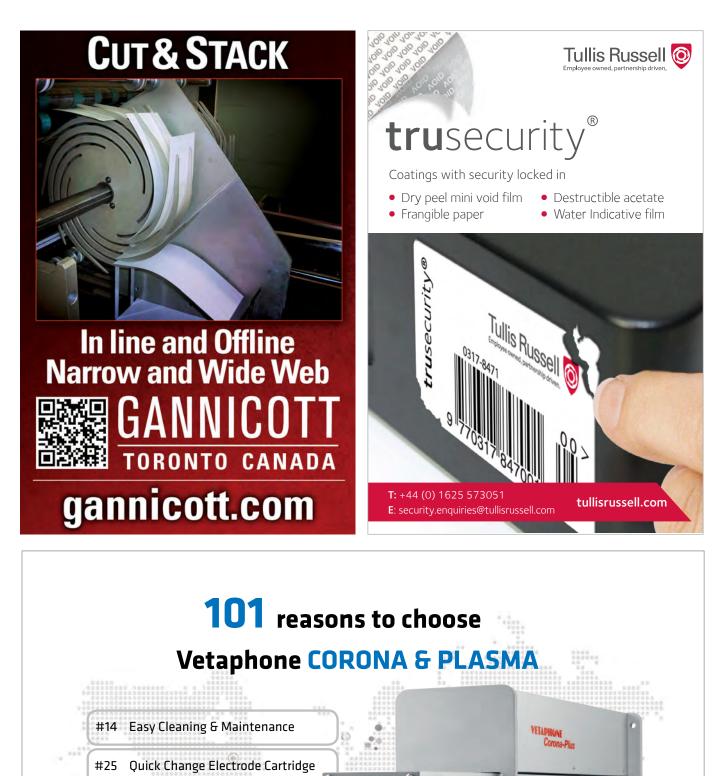


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MANTER'S stunning Labelexpo stand - wth live origami

the surface of the bath, allowing clean PET flakes to sink to the bottom.

The supplier demonstrated its durable label line of materials in a vivid way with a rotating tire on stand. Its new PP TYRE 55 / 60 Top White polypropylene products are designed to resist migration of low molecular-weight components and carbon black from the tire surface. This allows the label to stay on the tire and avoids curling away over time, which is a common problem in the industry. The high coat-weight TS8000 adhesive ensures good initial tack to the tire. The BG 45 liner is siliconized on the back so the label does not stick to the liner as it unrolls in the automatic dispensing process.

Its latest Z3338 wine label adhesive was also shown to exceed ice bucket requirements keeping the label intact throughout consumption. New Clearcut BOPP and MDO films enhance thin film productivity and waste reduction benefits.

#### **Dow Corning**

The silicone technology developer introduced its new Syl-Off SL 35 solventless release modifier as part of the Advantage product series. Kris Verschueren, market manager of the paper and pressure-sensitive industry for Dow Corning's Packaging Business division, said: 'This release modifier allows us to further reduce the platinum levels required and deliver better label release performance.'

Syl-Off SL 35 provides better control of the release force with a 'flat' release, so the liner pulls apart the same when it's running at slow or rapid application speeds.

Dow Corning also focused on two new emulsion coatings designed for film release liners. Syl-Off EM 7934 and Syl-Off EM 7935 allow laminators to move to thinner coat weights for applications including protective films for electronics and PS label constructions. Global market director, Chris Velasquez, said: 'These emulsions are targeted at the growth found in the film market. We are seeing a lot more inline coating at the film producer. Laying down a thinner layer of emulsion on films with less silicone is ideal.'

#### ExxonMobil Chemical

ExxonMobil Chemical introduced three new Label-Lyte oriented polypropylene (OPP) films. The new 58 micron solid white Label-Lyte 58SW247 OPP film should deliver high yield and consistent quality for pressure-sensitive

#### MATERIALS TRENDS

While walking round Labelexpo, some trends in materials make themselves clear, writes *Andy Thomas*.

An area like thermal papers continues to show technical development, particularly in multi-process printability and strength characteristics. An example was Jujo Thermal, which launched a top-coated multi-purpose thermal label face stock, AL60KT-LH, targeted at demanding applications in the retail, food, transport and logistics sectors. The new grade has a high wet strength and is suitable for deep freeze use. The top coat allows high quality offset and flexo pre-print, and a 12-year image stability is claimed. It is produced without BPA or BPS.

Filmic innovation continues apace. Just some examples are provided by MACtac Europe, which launched its TLL2511 filmic construction targeted at tire and other equally challenging applications. The company launched two new REACH compliant pharm-approved adhesives, MP318N and MP318N UV, while for wet wipe reclosure systems, a new hot melt adhesive was launched alongside the existing solvent adhesive MR980 family.

Taghleef Industries expanded its Injection IML range with LIM  $45\mu$ m, a high yield white voided film; for wraparound label applications, LXI  $38\mu$ m was introduced; a new self-adhesive label grade is the high gloss metalized LZP film. The company was also promoting in Europe the Vision shrink labels developed by its North American branch. These films are categorized as 'Low Shrink', targeting containers with contours of <5 percent and 'Medium Shrink' recommended for containers requiring <12 percent shrink. Vision is targeted as a cost-effective alternative to sleeves.

Hanita Coatings introduced a halogen-free Flame Retardant (FR) PET series in matte black, matte white and transparent. Also shown was a new range of 100-125 micron white PET films for the tire industry. The films are available with glossy and matte white printable topcoats for thermal transfer printing and track and trace capability in abrasive environments.

Innovation is also coming from relatively new suppliers to global converters, like Turkish film specialist İlkay Kağıtçılık, which showed its new Novita brand PS products.

L&L covered the Vietnamese-based start up laminator SAScoat earlier this year, and the company was showing a range of products including the recently launched SAScote plus and SAStherm ECO plus for sharp graphics reproduction on thermal printers.

Sanko group company Superfilm, based in Luxembourg, launched its Supmet 1132 CLC, a top coated metallized white opaque cavitated BOPP film designed for cut & stack patch labeling applications using water based cold/ wet glue technology for glass bottles and jars. The film is designed to replace paper labels with high water resistance, ink adhesion, improved graphics, no curl attributes and better durability.

Suppliers promoting paper-based substrates were out in force demonstrating the sustainability credentials of their products. Mondi, which promoted a liner manufactured from recycled materials in Chicago, demonstrated closed loop collection and recycling facilities for its liner products. Torraspapel stressed the environmental and sustainability certifications of parent group Lecta's mills while demonstrating its full range of one-side coated, cast-coated, metallized and thermal papers, together with range of self-adhesive solutions. UPM Kymmene showed its full range of release base papers and label face papers, with emphasis on environmental credentials.

Arconvert showed its specialty label papers while fellow group member Manter unveiled its new Industrial and Synthetics label collection, along with the award-winning Craft Beer label collection, targeted at premium applications. Manter enlisted a Barcelona-based artist to paint images heralding the four elements: earth, air, water and fire – live during the event, supported by a skilled origami artist.

Among other specialty suppliers Ravenwood was demonstrating its latest linerless solutions; Rogers Corp introduced its R/bak SA 2000 cushion mounting tapes with new adhesive properties and improved release characteristics; and ACPO extended its overlaminate range to include flexible packaging overlam, matte finish, laser printable, thermal transfer printable, UV screening, removable adhesive grades and overlaminates specifically for digital printers.

#### VETAPHONE TALKS TREATMENT

The Danish corona specialist introduced iCorona, its new system for automating corona treatment, and controlling, monitoring and logging each step of the process. EASI-Plasma is a new system developed in collaboration with French firm Coating Plasma Industrie to introduce nitrogen to the substrate to increase surface adhesion. Read more about EASI-Plasma in Labels & Labeling issue #6, 2013.

#### **DISPENSING WITH MANUAL LABOR**

GSE Dispensing introduced an automatic volumetric ink dispensing system designed to provide a fast, labor-saving way of dispensing process colors, coatings and ready-mixed colors.

The Direct Dispenser can send consumables that do not require blending directly to the press, replacing manual filling.

#### Video highlight: *http://www.*

labelsandlabeling.com/video/maartenhummelen-gse-dispensing-talks-leanmanufacturing



labels in the prime markets such as health and beauty, home care and beverages. Label-Lyte 52LLC247 film is a 52 micron bright white conformable facestock for pressure-sensitive label applications.

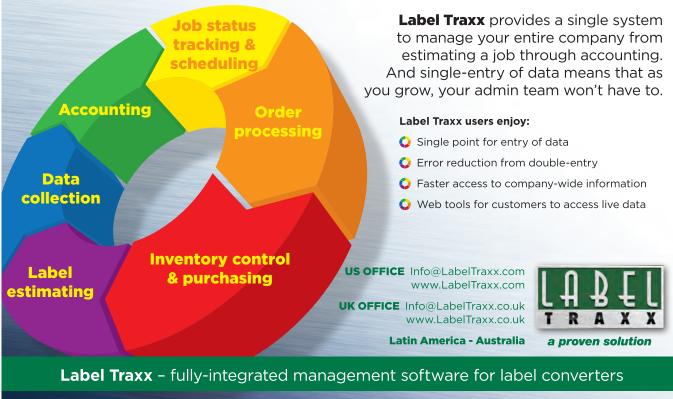
Its Label-Lyte 29LL410 29 micron film is designed for rapid, reel-fed labeling applications. This is an uncoated, transparent coextruded film with slip control on the untreated surface.

The materials supplier also promoted its shrink sleeve Label-Lyte 50TD200 film. Its low density allows it to float in PET container recycling baths, avoiding contamination. Label-Lyte 65LT500 is a thermal transfer film with a high level of printability and adhesive performance.

#### Flexcon

For durable and industrial goods labeling, Flexcon focused on its new 50 micron Thermlfilm Cast Vinyls in white, silver, clear and yellow. The series is designed for a range of abrasive applications in the automotive and chemical markets and can withstand outdoor elements for up to ten years.

# Streamline with Label Traxx





Its new 25 micron black polyimide film is engineered to handle high heat while retaining readability and scannability. It's designed to withstand fluctuating temperatures and abrasive chemicals. Visitors also reviewed the company's Compucal Excel Black PE, silver metalized and matte white films in 25-75 micron thicknesses.

#### Herma

The materials supplier promoted its HER-MAperfectPeel adhesives for the peel and reseal markets. Previously made with rubber based additives that would migrate through the material, the line is acrylic based. This new design leaves little to no residue during the converting process. Generally Herma is working to improve its adhesive technology in a move to total low migration offerings. It's carefully balancing the chemistry to provide premium adhesion with minimal migratory additives.

The new HERMA 65Tpc adhesive was developed specifically for the automotive tire industry. The construction meets EU regulation no. 1222/2009 and offers

#### JM HEAFORD AUTOMATES PLATE MOUNTING

JM Heaford demonstrated its FTS narrow web flexo plate mounter at Labelexpo Europe 2013, and reported strong interest in the technology.

Graham Harrison, the company's international sales manager, said the FTS, which automates the mounting process, was one of the key products drawing visitors to its stand.

On the FTS the plate is positioned on the table using laser alignment with an LED lighting system enhancing the register marks. Once the plate is positioned the cylinder or sleeve is brought down into contact with the plate by a precision air jacking system. The simple action of sliding the cushion table back and forth applies the plate around the cylinder or sleeve under constant balanced pressure providing perfect uniform adhesion eliminating the possibility of trapped air pockets that can occur with the traditional time consuming practice of hand pressure.



multi-layer, plasticizer free adhesive technology that reduces bleeding during die cutting. HERMAlux W is a cast coated, high gloss paper for the wine and spirits market that is ice bucket test passable.

#### Ritrama

As featured in Labels & Labeling issue 4, Ritrama introduced its Core Linerless technology, which is targeted at the high end HPC sector where it aims to revolutionize the usage of this technology. Visitors saw how the material is printed as a standard laminate by the label printer, then transferred to a specially built Prati converter, where the liner is removed, flipped over and applied to the top of the label film. Ritrama has pre-coated a silicone release onto the bottom of the release liner, which now forms the outer silicone coated side of a mono-ply linerless label. It is applied on a specially developed applicator which can be swapped with PS applicator modules in a matter of minutes.

#### Sekisui TA Industries

A supplier of acrylic pressure sensitive overlaminates and packaging tapes promoted its polypropylene and polyester self-wound products. This includes clear 'no label look' and matte finishes, thermal transfer printable material, UL certified, and silicone coated easy release options. With ISO 14001: 2004 manufacturing facilities in California and Tennessee, and warehouses throughout the US, standard sized rolls ship same day in North America.

Attendees were specifically interested in its new line of thermal transfer printable polypropylene overlams compatible with a wide variety of label printers and ribbons. Sekisui reports higher traffic and better exposure due to their more favored location. The company is actively looking for a European distributor and warehouser, particularly in the UK and EU nations.

#### **UPM Raflatac**

Materials supplier UPM Raflatac introduced show attendees to Label Life, a Life Cycle Analysis tool that provides an estimate of the environmental footprint for its materials. For the time being Label Life serves the company's sales team only,



but it is anticipated that the web-based software program will be translated for customer use as well, with transparency for end users as the final objective.

Already, over 300 products can be evaluated based on facestock, adhesive and liner combinations. The analysis includes raw material sourcing, labelstock manufacturing, delivery to converters and the end of life destination of the material. While the label printing process has been kept out of the evaluation, customers are able to request custom comparisons that can be used around a modeled process inclusive of gravure, flexography, offset and screen.

Label Life allows the end of life to be evaluated for the entire label construction inclusive of the liner: recycling, incineration and landfill. Environmental impacts on energy consumption, water usage and carbon emissions are delivered in an easy to review format.

UPM Raflatac also introduced its Fit range of substrates that combine increased production efficiency with sustainable benefits. The PEFC certified mid-gloss label facestock has environmental credentials and offers a thinner caliper with up to 30 percent more labels per roll to reduce downtime on-press. A 50 micron thick Raflex Pro series film with PET23 release liner was also launched. Available in both clear and white, the line is designed specifically for the personal care market.

The supplier also promoted its RP 30 XTRA adhesive for the wine and spirits market. RP 30 XTRA has better adhesion on glass, enabling smaller label sizes and more complex label shapes. It has strong resistance to humid conditions and water when the labels and bottles are subject to ice bucket conditions.

#### Univacco

The Taiwan headquartered foil supplier promoted a cold foil designed especially for shrink sleeve label decoration. The sample created for the show was made with 50 micron PETG material with 75 percent shrinkage. Curling and bubbling of the foil is alleviated with this new product. The supplier's biggest markets are Eastern and Western Europe. They also have a branch office in Los Angeles, California.



# TRESU JOINS DIGITAL REVOLUTION

Tresu formed part of the extensive HP Indigo hall with its new iCoat 30000 coater for sheet-fed digital carton printing, designed especially for the new HP Indigo 30000 digital press.

The HP Print Your Future area played host to a number of partner companies, including those like Tresu that have developed systems to complement its new 20000 and 30000 presses.

Tresu also showed other developments on its own stand in hall 11, including the F10 iCon ink supply system and sealed chambered doctor blade systems.

A modular mid-web printing and converting line for label, film and carton and packaging in widths up to 1,300mm (51.2in) was also being discussed.

#### NANOVIS TO EXTEND NWC CAPABILITIES

Nanovis is to extend the capabilities of its Nanocleaner NWC family of flexo press part washers to include an anilox cleaning module.

The Nanocleaner NWC family, including the 600, 800 and 1200, is based on the same functional principles, such as compressed air and electricity supply, as well as featuring a recycling system for the cleaning agent. They are used for washing parts used in the flexographic printing process, with the latest version, the NWC-1200, demonstrated at Labelexpo Europe 2013.

The NWC-1200 has the largest effective dimensions, and as such is to be the first to be offered with the new anilox module. This will be a removable component of the NWC-1200, so allowing it to clean both aniloxes and other parts from the press simultaneously. This will be followed by a scaled down version for the NWC-800, although an anilox module fitting the effective dimensions of the NWC-600 would turn it into an either/or solution, said Christoph Schönenberger, Nanovis sales manager.

The removable module will feature engineering to rotate the anilox during cleaning and a linear spraying system to provide effective clean, as well as air drying capabilities so the anilox can be taken straight from the NWC unit and placed back on the press.

'The NWC was launched in 2010, and has been enhanced in the years since. It was during this process that customers asked us if the machine could also be developed to clean aniloxes, and we realized it had the potential to satisfy this demand.



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# Finishing and converting systems

JAMES QUIRK rounds up the finishing and converting equipment on display in Brussels

#### **AB Graphic**

AB Graphic International launched two slitter rewinders at Labelexpo Europe 2013: the Omega SRI 330 and Omega SRI 430. The servo-driven machines both feature the company's integrated fleyeVision inspection systems and a new knife box.

The company also displayed two laser-cutting lines, one stand-alone and one integrated into a Digicon Series 2 platform. Both use ABG's new Digiflow and Digilase software, which identifies and loads job parameters automatically. The Digicon Series 2 is capable of reporting live production activity to an MIS system every 30 seconds through JMF files.

Ideally suited to pharmaceutical applications, the new Omega F3010 S has a Braille printing module and a fleyeVision inspection system.

New features for the Vectra automatic turret rewinders included an automatic core loader. Also on the stand were new vision inspection systems and a booklet label machine, the Omega B 5010.

#### **Ashe Converting Equipment**

UK-based Ashe Converting Equipment launched a new glue-free, 4-spindle Opal turret rewinder at Labelexpo Europe. The servo-driven system is fully supported in the turret winding offload position. All machine specifications within the Opal offline turret slitters and converting lines are available in maximum web widths of 420mm (16in) and 520mm (20in) as standard.

An offline model of the system with automatic label stick down was running throughout the show. Ashe also promoted the entry-level Opal EC inspection slitter and blank label production on an Opal 420 converter.

Ashe's Simon Godbold said: 'Orders for two sapphire s2 turret slitters were confirmed as well as a diamond duplex slitter and two new opal glueless turret rewind slitters were confirmed during four very busy days.'

#### Atlantic Zeiser (PIC)

Atlantic Zeiser's Digiline Booklet, a variable data encoding system dedicated to booklet labels used for clinical trials, is now in an advanced development stage and was being promoted on the company's stand. Digiline Booklet makes use of Atlantic Zeiser's Omega LED-cured inkjet printing technology.

#### **Bar Graphic Machinery**

UK-based Bar Graphic Machinery launched the 160m/min Elite Digiflex, a semi-rotary or full-rotary die-cut to re-register slitter rewinder developed to convert and finish pre-printed digital, inkjet or flexo media. The 550, wide Elite Multiflex, recently launched and also on display, is a multiple substrate inspection slitter rewinder capable of handling a wide range of unsupported and supported films down to 11 microns.

#### **Berhalter**

Berhalter showed its new B 500 die-cutting system for in-mold labels (IML), which uses multiple servo drives to regulate tension, allowing IML labels down to  $40\mu$  to be processed. A 'virtually non-contact' male-female die-cutting process with a punch/die plate system avoids adding static charges. Additional anti-static devices are placed before, during and after the die-cutting process.

Berhalter die-cutting machines can be equipped with additional options such as PRINTinspect 100 percent print image inspection and a WEBinspect 100 percent surface inspection system. For the first time, says the company, it is possible to check the print and material quality directly inline on a die-cutting machine and to reject faulty materials before cutting.

#### **Brotech**

Brotech introduced the Eurotech FSS label inspection slitter rewinder with AVT 100 percent inspection, operating at speeds up to 250 m/min. Widths of 330mm and 430mm are available with rewind and unwind diameter up to 750mm. Also new was the Eurotech SDF digital label converting and finishing system, with semi-rotary and full-rotary die-cutting mode, and semi-rotary and full-rotary flexo for spot vanishing, laminating, cold foiling or UV varnishing. Both UV and hot air dryers are options.

#### Cartes

Cartes highlighted its GT series of modular finishing systems which can incorporate silkscreen, hot stamping, embossing, flexo varnishing, flatbed die-cutting and laser die-cutting units. The seven machines on display at Labelexpo Europe had been sold to customers in Argentina, Italy, the United States, Spain and Russia.

#### Color-Dec

Color-Dec unveiled new, fully automated equipment to cast PU resin onto printed labels. The 660W is a dual axis machine with a 400 x 300mm vacuum working table and integrated degassing. It is controlled by a CNC console with integrated PLC for program storage. DomesXYW software is included. The two axes permit casting resin into both regular shaped labels (oval, square, etc) and complex shapes such as lettering, up to a minimum width of 8mm per letter. Accessories include palletizer and drying system.



#### **Daco Solutions**

Daco Solutions launched the new Daco D350 single rewind die-cutting machine fitted with one meter unwind and auto cut and apply system.

The latest 350mm PLD350 semi-automatic rotary die-cutter – also launched at Labelexpo – has a new drive mechanism, stronger die station and a heavy-duty auto cut and apply head. Both machines were sold off the show floor.

The DTD250 table top die-cutter has been upgraded with a back scorer.

#### DCM Usimeca

DCM Usimeca launched a new high capacity forming and seaming machine for the production of shrink sleeve labels. The Sleeve 4 generation is designed to meet the market demand for wider sleeves and features compact cantilevered single unwind and rewind stations. Standard specifications include a rewind diameter of up to 600mm (24in), layflat width of up to 400mm (15.75in), and speeds of up to 500m/min.

According to sales director Gérard Lansade, the company sold the Sleeve 4 off the show floor during Labelexpo.

#### **Delta Industrial Services**

Delta Industrial Services showed its flexible Mod-Tech converting line. The system was running a challenging polyurethane film, including multiple rotary die-cuts and lamination. Other options include semi-rotary, full-rotary and – in a recent development – laser-cutting.

#### DPR

Italy-based DPR introduced its new laser die-cutter. Working in both roll-to-roll and sheet mode, the unit is designed to cut a wide range of substrates including coated paper PP and PET. Fine control of laser power makes it possible to obtain half/full cutting, marking, braille, progressive numbering and barcodes.

#### **EMIS**

EMIS reported the 'most successful Labelexpo' in the company's history. The company showed the Flexor 440 2C/S system – an A4 laser sheet production machine which can produce two A4 sheets at up to 130m/min. This machine is claimed to be unique in the market since it can run roll-to-roll or roll-to-sheet with a 15min changeover time.

Also on show was the Flexor 440 2C semi which ran at 300m/ min producing blank labels – a double die-cutting, 440mm wide machine with a semi-automatic turret rewinder.

The latest addition to the wide Flexor range is the IQ Series Flexor 330SSD, which can cut preprinted web into A4 or A5 sheets inline with any HP Indigo Model..

#### Gonderflex International

Gonderflex International recently acquired the Rotoworx digital label converting and finishing line, and launched at Labelexpo Europe the Rotoworx 330 semi-rotary die-cutting machine, with a flexographic unit performing spot or flood coating with redesigned UV and IR dryers. The unit also features a new enclosed doctor blade system and equipment for cold foil lamination. Optionally, it can be fitted with rotary sheeting station, shingling conveyor, inline booklet labels production, semi-rotary hot foil stamping and rotary screen printing.

#### Grafisk Machinfabrik

Grafisk Machinfabrik showed the new FB330 flatbed hot foiling and embossing station, which can run inline or offline and uses low cost brass or magnesium dies.

A 400W drop-in laser die-cutting system for GM's series of DC330 converting lines was also on display. The laser system is compatible with Esko's PLT/HPGL file format and features a substrate database. The laser system can be fitted with a barcode reader for automatic job change and a serial number writing software package.

The DC330mini compact converting line features a new automatic knife and die cross register setting system for increased cutting accuracy.

A standard DC330mini was converting digital print on the Epson booth next to GM.

#### Grafotronic

Grafotronic launched the Digital Converting Line (DCL), a 4-color, 80m/min inkjet press which includes two flexo units for priming and varnishing and a combined semi-rotary/rotary die-cutting unit. The modular machine can also be fitted with lamination, sheeting and inspection.

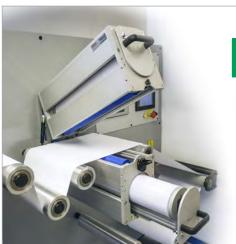
'The new Grafotronic Digital Converting Line was the right machine at the right time,' reported vice president Mattias Malmqvist. 'It was fantastic to see how well we were received

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as a new player in this segment and we can see that customers have been waiting for an alternative supplier.'

Also on display was the company's HI-Series of inspection machines.

Indian converter Ajanta Packaging confirmed a repeat order for the Grafotronic 440 HI slitter rewinder at the show, to be installed at its Baddi factory, as well as two new orders for similar machines, one for the Sharjah factory and another to be installed at a soon-to-open facility. The machines will be equipped with the Grafotronic semi-automatic turret rewinder.

#### Labelmate

Labelmate showed its full range of desktop rewinders, unwinders, label dispensers and slitters. Launched at Labelexpo was the PM-300-CS-Step, a reel-to-reel system which works at constant adjustable speeds, independently of the supply and rewind roll diameters.

The system is an ideal tabletop platform for programming and reading RFID tags. When not used for programming, the PM-300-CS-Step can be used as a reel-to-reel counter/rewinder.

Other options include a label counter or a more sophisticated counter that can be used to count labels or indicate the speed at which the labels are moving.

#### Labeltech

Italy-based Labeltech, celebrating the 10th anniversary of its IT range and the first time with its own booth at Labelexpo Europe, showed an IT450 inspection rewinder with the new FuruPlus MMLD inspection system, designed for converters printing different sized label formats on the same reel and finishing on a single rewinder. A dual counter permits the rewinding of two different label quantities and can automatically detect defects on different sized labels.

Labeltech also launched a stand-alone rotary die-cut unit, the Eiger, including die-cut to register function, for finishing printed webs. A Furu inspection system is integrated just after matrix separation to stop the machine after a label error is detected. This unit can work offline with its own unwinder or inline fed by a printing/coating machine.

A further slitter rewinder was running on PC Industries' booth with the latter's Guardian inspection system.

#### Lemorau

Portugal-based Lemorau, making its Labelexpo debut, showed the latest version of its EB-260 die-cutting machine. Available at web widths of 250 and 330mm and running at speeds of up to 200 m/min, the EB-260 features an automatic web tension control system and semi-automatic rewinding. Dual rewinding allows different labels of varying diameters to be handled at the same time. Die-cut to register is available as an option.

Pedro Teixeira of Lemorau said: 'Labelexpo Europe was a big success for us. We also reached several partnership agreements with new distributors to represent Lemorau around the world.'

#### Longford International

Longford International highlighted the newly updated OS700X Booklet Label Feeder, for the placement of booklet labels onto a web whether integrated on press or as part of an off-line finishing system for the creation of ECL labels. Placement tolerance is +/- 0.5mm at speeds up to 35,000 booklets per hour.

#### Lombardi

As well as promoting its range of converting equipment, Lombardi launched the Invicta flexo press. The gearless press can run the full range of label materials and incorporates three servo motors for each printing unit, sleeve technology with automatic positioning, and the pneumatic Hi-Dynamics system to control pressure of the blade on the anilox roll. The machine can be configured for web widths of 330mm, 430mm, 530mm and 630mm.

#### Martin Automatic (PIC)

Martin Automatic exhibited the latest versions of its MBS unwind/splicer and LRD rewinder. The compact MBS comes with new standard features that include ultrasonic sidelay sensors and spiral grooved rollers for handling film, paper, pressure-sensitive labelstock, paperboard, tube laminates and filter media. The LRD rewinder's optional inline slitter package has been enhanced to offer lateral adjustment of the slitter and anvil roller assembly for quicker set-up.

#### Multifeeder Technology

Multifeeder Technology launched its MFT 1300DHSL booklet-to-web system. The machine, which can be used inline or offline, is claimed to achieve 'submillimeter' precision in sheet-to-web tipping applications using patent-pending Leading EdgeRegistration technology, 'pulling' the product rather than pushing it. This system allows the feeding of product as wide as 400mm with a repeat of 25mm for a ratio of 8:1.

Marketing specialist Brady Haggstrom said the system had impressed leading

#### ALPHASONICS BENEFITS FROM PRESS SALES

Alphasonics reported an upturn in industry sentiment at Labelexpo Europe 2013, with buyers coming direct to its stand after purchasing new flexo press technology elsewhere to find cleaning technology to complement their latest investments.

Alphasonics had its biggest Labelexpo presence to date, and showcased new pressroom cleaning equipment, plate cleaning systems and parts washers. New technology introductions included Enhanced Alphasound, Betasound and Active Cavitation.

Chris Jones, the company's marketing manager, reported that the company had sold every piece of equipment on its stand, and more, with appointments filling the weeks after the show.

'There's a real difference in the people at the show this year than from two years ago,' said Jones. 'People are walking around with their heads held up and not afraid to invest. 'They are looking to be inspired and we want to make that a reality. There's a definite positivity about print at the moment.'

#### **DAETWYLER ON POINT**

Doctor blade manufacturer Daetwyler SwissTec AG reported a positive response to the latest developments in its MDC range.

The company was keen to promote five of its latest products in the range of MDC doctor blades: Optilife Plus, Ibostar, Ibostar Plus, Yellowstar and Rotostar.

Rotostar is available in two specially designed configurations for gravure package and illustration printing, while Yellowstar is for halftone printing. Ibostar is well suited for lacquers, with Ibostar Plus suited for the application of abrasive and water-based inks and lacquers. Optilife Plus offers 100 percent corrosion protection, with extra wear resistance for abrasive and water-based inks and lacquers, and coating applications for cardboard printing.

#### SWED/CUT LAUNCHES LABEL EDITION

Swed/Cut launched its Label Edition doctor blade series, which is optimized for UV inks and tackles ink spitting, provides low friction, has an extended blade life, offers optimal cylinder wiping and results in less cylinder wear. The blades are pre-cut, with quick set-up. The Swed/Cut Label Edition series is available in two qualities, MicroKote and MicroNox.

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SEN Shalfless Intermittent UV Rotary Letter Press Label Printing Machine-China Spec-Model:SEN HTL 300



SEN SRD 360 Shaftless High Performance Intermittent Multi-Function Digital Label Converting Machine -Japan Spec Max, Paper Web Width:360mm Max.Converting Width:350mm Min / Max Repeat Length:30-370mm Die Cuttling Speed:250 rpm

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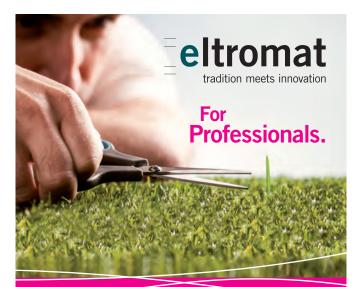
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SATHIS ABEYWICKRAMA, managing director of Flexiprint (Sri Lanka), confirmed another order for Martin Automatic equipment at Labelexpo Europe. He is shown here with Martin's Gavin Rittmeyer (left) and Hope Hu and David Ho (right)

multi-national pharma label converters during the show.

#### Newfoil

Newfoil showed a 2500 Servo hot foiling and embossing machine running for the first time with an inline MagJet inkjet printing unit from Memjet. The inkjet add-on can be retrofitted to existing machines and received a great deal of interest during Labelexpo, according to sales manager Geoff Buckland.

Another first saw a 5500 Servo machine incorporate an inline screen unit, while a 3500 Servo on display featured a Newfoil SF330 flexo unit, designed to overprint, varnish and coat webs up to 340mm (13in) wide. The latter was purchased off the stand during the show.

The fourth generation of Newfoil Servo machines, which incorporate flatbed hot foil stamping, embossing and die-cutting, can reach output speeds of 75 m/min.

Also new is a servo flat screen press with UV drying, built to work in conjunction with the high speed finishing system. When used with UV Braille type inks, a 3D embossed effect can be simply produced without expensive hard tooling.

Newfoil machines were also on display on the stand of the company's Benelux agent, StarFoil, where a 2500 Servo was sold off the show floor.

#### Pantec GS Systems (PIC)

Pantec showed its Swift add-on hotfoil saving device for label printing machines, as well as its Cheetah hologram insetting system and Rhino flatbed hotfoil embossing machine.

The new Swift foiling technology gives a competitive edge to hot foil stamping processes and challenges the cold foil market, says Pantec CEO Peter Frei.

Depending on the stamping design, state-of-the-art foil saving devices allow between 25 percent and 90 percent of the foil to be saved, and tool costs can be recouped within the first 15 hours of operation, says Frei.

The Swift system can process all types of foils, including standard hot foils, holographic foil and magnetic streams. Swift is designed to be movable to any printing station on the rail of narrow web printing systems.

Swift is powered by Pantec's pSave vacuum saving technology. The number of foil saving streams can be specified according to the job using multiple step drives.

#### Polar

Polar displayed a N78 Pro cutter with added features including a stack lift, RA-4 automatic jogger, counting scale, and P-Net networking. The company also demonstrated its DC-M stand-alone die-cutter.

Matthias Langer of Polar said: 'Our double commitment with our booth at Labelexpo in Brussels and the open-house event "LabelDays" in Hofheim at the same time has proved to be a success. The exhibited DC-M stand-alone die-cutter received great interest.'

#### Prati

Italy-based Prati launched the STARplus stand-alone glueless turret rewinder, designed to work inline with any printing press for processing blank or pre-printed labels. The unit will work with the latest thin materials, such as UPM Proliner and Avery PET23 and PET18 micron liners. It features automatic spindle change and ID labels for closing the rolls.

The new SA dual turret semi-automatic rewinding system was also unveiled, and can be mounted on the latest generation Saturn and Jupiter models, eliminating the need to change stop for finished reel removal. The Saturn machine can be equipped with an inline rotary die-cutter. Thanks to its double shaft, production output can reportedly be increased by 50 percent.

Alhena IML, another launch at the show, is a converting machine aimed at in-mold label production. It incorporates large mother reels, re-register die-cutting and a conveyor unit which brings the labels to the stacker, where they are automatically stacked to make packaging easier for the operator.

#### FLEXO CONCEPTS TARGETING GROWTH

Flexo Concepts used Labelexpo Europe to launch its new TruPoint Orange doctor blade. TruPoint Orange is engineered with a unique MicroTip to achieve fine and consistent metering over the life of the blade. The material is also safe to handle and claimed to last longer than steel.

The blade features a fine contact point but with the same deflection characteristics as steel, and is designed to prevent hydroplaning and blade strike. Various other developments have been made with the blade, including adjusting the dyne level to work towards eliminating UV ink spitting. The development of a polymerbased blade for high-quality applications, over a steel version which would normal be used for high-end printing such as flexible packaging and labels, was an area the company has been looking to work on in recent years.

Chris Nolin, the US manufacturer's vicepresident of sales, said: 'Our products are heavily used in the corrugated market, but there is a whole another tier of printing that we want to penetrate.

'We believe TruPoint Orange will allow us to achieve this.'

TruPoint Orange was selected by Mark Andy to join its Mark Andy Print Products blade offering last month. The blade is also shipping with all new Mark Andy Performance Series installations as a product that will deliver maximum performance overall.

Nolin added: 'We are investing in people and products, and are developing our distribution network in Europe. There will be many more advances from the company in years to come, and we're looking to expand globally with products that are suitable for label and package printers.'

#### API FOILS Extending Range

API Foils has developed new cold foil technologies in partnership with Mark Andy and Color-Logic. The new cold foil technology uses standard CMYK inks, which can be combined to create a broad color gamut, on a silver foil, with reflection off the backing producing the metallic effect and luminescence. A series of sample beauty product labels was on display on the API Foils stand.

The company's Ron McDonald said 'There is a lot of interest in this area. We are working on optimizing this process, and making it able to achieve similar levels of brilliance that you can achieve with hot foils.'





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#### **Primera Technology**

Primera Technology launched the AP550e Label Applicator and LP130e Laser Marking System.

LP130e enables in-house production of labels and tags for use in a wide range of severe and harsh-duty applications without lamination. Finished labels and tags will withstand extended exposure to UV light, chemicals, liquids and temperatures of up to 300 deg C.

AP550e is a new semi-automatic label applicator that makes



#### **ROTATEK OFFSET DIGITAL CONVERTER**

Rotatek launched the first digital label converting unit to incorporate in-line offset printing.

The Digitalis converter – the first of which has been sold to leading Austrian converter Marzek – combines Rotatek's rotary and semi-rotary technology expertise, and is available in formats up to 400mm.

The offset unit is semi-rotary and equipped with motorized inking for quick set-up and job storage. 'This is ideal for printing fine text, metallic inks and structured materials,' said Bibiana Rodriquez, Rotatek managing director.

Other modules include semi-and full rotary hot stamping with Rotatek's own Advanced Ultra foil saver (which also works with magnesium plates); a new flatbed Screen unit; semi- and full rotary die-cutting; and a semi- and full rotary flexo coating unit. A sheeter is optionally available. it 'fast and easy' to precisely apply product and identification labels onto a wide range of flat surfaces. AP550e is pitched as an ideal accessory for labels produced by Primera's LX- and CX-Series color label printers and digital label presses.

#### Rotocontrol

Rotocontrol launched the fully automatic FastChange 4-spindle turret rewinder, the result of a partnership with German process automation specialist F+V Automation.

Marco Aengenvoort, managing director of Rotocontrol, said: 'Future Rotocontrol/Leomat and F+V Automation collaborative projects are planned to efficiently link the expertise of both companies and enhance the automation of finishing machines.'

#### **Rotoflex**

Rotoflex introduced the Tracker inspection rewinder with a horizontal web path, complementing the existing Rotoflex vertical systems.

A redesigned VSI film rewinder with 700mm width was shown along with the latest VLI machine. Both feature the new URC 2.0 control system, controlling a wide range of parameters including defect detection and automatic sensor calibration. A DSI 330 13in die-cutting machine was also shown.

At a press conference during the show, Rotoflex's Kevin Gourlay said the company had experienced 30 percent growth this year.

#### **Schober**

Schober showed its RSM rotary die-cutting machine with V-Stack (Spider) for the manufacture of IML products at continuous web speeds up to 50 m/min. Exchangeable product-specific Pick-and Place fixtures allow for rapid changeover. A 100 percent inspection system with integrated waste separation is also available.

The standard configuration of the IML rotary cutter includes an M-Stack delivery system. S-Stack or the high-speed robot 'Spider' deliveries are available as options. Additional optional equipment are an adjustable de-nesting station for several products across, as well as an antistatic device and a gap control system (GCS) for wear compensation of the die. Additional technologies highlighted at the show included laser cutting.

#### **Spartanics**

Spartanics demonstrated the L-350 laser-cutting system showcasing converting options such as lamination, slitting and on-the-fly job changeover. Running at up to 100m/min, The L350 is also equipped with Spartanics Optimization Software and XY registration, as well as barcode automatic changeover capabilities.

The company also showcased the NW140 UV digital narrow web press powered by JetINX running inline with the Spartanics X-140 laser station at speeds of over 80 m/min (see digital review). On the Durst stand, the Tau 330 UV inkjet label press was operating inline with Spartanics' laser-cutting system.

Spartanics' Jeanette DesJardins said the company had qualified over 20 0 leads at the show.



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L-R Schober's Gerald Glaas and Denis Stephan with the RSM die-cutting machine for IML

#### Spilker

Spilker showed its S-CON Starline 350 line combining cutting, embossing and laminating processes, and S-CON Vert 350 with the newly developed Labelshifter Plus, which allows easy stripping of very difficult shapes. It offers digital adjustment of the longitudinal cutter.

#### Valloy Incorporation

Korean company Valloy Incorporation unveiled its combined Anytron digital roll label printing and laser cutting system. The Anytron label printer, running at 9.3 meters a minute, is a desktop-sized digital roll label printer using a single-pass LED color laser engine. The Anytron digital CO2 laser-cutting machine is a desktop-sized (220mm web station) system using an air-cooled CO2 laser unit. The machine has a vision system as well as cutting mark sensors to compensate for registration errors in the printed label.

The machine supports cutting on the fly at speeds from 5-18m/ min. The Anytron laser-cutter supports half-cutting, full-cutting and hatch marking at the same time, as well as supporting variable data. It is provided as full-featured package including software, table, screen display, computer, dust-collector, blower and air-compressor.

Label size can be up to 20.5cm x 1.2m. The machine has inline laminator and matrix removal together as a complete label finishing system.

#### **ROLLING OPTICS TAKES CHANCE TO SHINE**

Rolling Optics generated a great deal of interest as show visitors were drawn to its micro optic printed labels.

Rolling Optics' labels produce a unique three-dimensional effect for enhancing shelf appeal and security applications. These applications were shown on its stand with the work it has done beverage brand Hennessy and the Freia Boble brand of chocolate (see pXX for more on the Freia application).

The company's chief executive officer Chester Anderson said: 'People are very interested to see the different way our technology can be used to enhance packaging, and to provide a new level of security.'

#### ROGERS

Rogers Corporation promoted its SA series 3000 and 2000 cushioned plate mounting tapes in 0.38mm and 0.55mm thicknesses, the latter more for flexible package converting. The supplier's lines are made with Polyurethene, an open cell technology that is compression resistant, maintains pressure in the print process and delivers consistency in print quality. The SA series has been proven to reduce and even eliminate gear banding and bounce to give operators the ability to increase press speeds.

LABELS&LABELING



Ink makers push low migration and LED

DANIELLE JERSCHEFSKE looks at trends in inks and coatings

f suppliers at Labelexpo Europe didn't have UV-LED or low migration ink systems, they were in the works.

Flint Group Narrow Web inks division was awarded the Global Label Industry Award for Innovation 2013 for its UV LED curable ink series EkoCure. Developed in collaboration with Mark Andy and Phoseon, the system was demonstrated for the first time at Labelexpo Americas last year. The inks are intended for combination printing.

'LED is here and now, and we offer all of the products that converters need to convert their press to exciting technology,' said Jennifer Joyce, global product director, narrow web.

Guillaume Clement, global business director, narrow web, was excited to announce the investment in a new 16-inch Nilpeter combination press for Flint Group's Center of Technical Excellence in Trelleborg, Sweden. To be delivered in early 2014, the complex machine base is a two station MO-4 offset press with three FA-4 flexo

modules. Flexible in design for different substrates, the press is equipped to rigorously test UV flexo, offset and screen ink systems together with UV LED, traditional UV, nitrogen curing and heat drying systems.

Said Clement, 'As a global player, this expansion is an important part of our innovation focus on PS, shrink and flexible packaging.'

Niklas Olsson, global brand manager, narrow web, added, 'Already we have tested many substrates with our existing UV LED systems. With the new press we show our commitment to valuable R&D and will offer training seminars to help our customers improve their performance.'

Siegwerk/Environmental Inks also demonstrated its UV LED ink systems (Sicura Flex LEDTec and Sicura Screen LEDTec), carrying out two live demonstrations a day on a Gallus EM 280 press The press was equipped with five flexographic units and one screen unit all cured by Phoseon lamps.

Siegwerk now offers low migration

### **INKS IN BRIEF**

- The UK-based inks and coatings supplier ColorGen focused on its UV Flexo CG Flex LM7 low migration ink systems, which meet the guidelines of the Swiss Ordinance list and the EuPIA.
- Rowat, the European distributor for Toka inks from Japan, showed its lines of UV and waterless offset and UV flexo ink systems, specialty and security inks. It produces its own water based flexo inks and is developing low migration and UV LED curing systems as well. The company reported good leads at the show.
- Ruco showed its opaque white and barium-free 965UV/MA low migration screen ink. It also solicited interest in its low migration UVFX-LM flexo printing series. It promoted its silicone-free inks, including the new 900UV1437 opaque white suitable for UV screen and UV flexo printing.

ink systems for UV flexo, UV offset and screen ink systems. Sicura WL Nutritec is a new UV offset waterless low migration ink series designed to meet stringent requirements for printing odor and migration. The series has tested well for scratch and rub resistance and will be available in November. Also new are low migration matt varnish, LM laminating adhesive and LM relief varnish.

Marabu joined the list of LED curing ink suppliers with its Ultrapack LEDC series for rotary or flatbed screen printing. The silicone-free opaque white LEDC 171 is adapted for flexographic overprint.

The company said that 'every second conversation at the event was about direct food packaging'. It is currently in the certification process for a new line of UV rotary screen low migration inks and hopes to introduce this product at the beginning of 2014.

Also promoted were a spot varnish and tactile offerings for 3D embellishments and Braille printing, now required by law in the EU, as well as digital inkjet lines for Mimaki, Roland, Konica Minolta and Xaar printing systems. In cooperation with Eckhart Marabu now offers metallic inkjet inks.

Zeller + Gmelin had a new UV-LED curable offset inking system at the show. In cooperation with Müller Martini, IST Metz and Integration Technology, Z+G Germany tested the performance of these UV LED offset inks, with advantages including lower energy consumption and improved conversion of temperature sensitive substrates.

The company at the same time promoted its new Uvalux U70 series of conventional UV offset inks designed for adhesion on non-absorbent substrates like metalized film, along with Uvalux primers and overprint lacquers.

Zeller + Gmelin created a special giveaway using its 7-color MP system with CMYK process inks plus orange, green and violet. Four different labels were applied to plastic cups filled with fruit gums. To cover food safety requirements, the supplier's low migration UV flexo Uvaflex Y71 ink series was used. The project was run together with MPS, Apex and Athena Graphics.

'There were two objectives met with this project,' said Z+G's Andi Rascher. 'First, to show converters how to standardize processes to reduce downtime and ink changeovers while achieving the larger gamut ranges required by international brands.' Secondly, the 7-color process gives more opportunity to match color to digital print systems also using 7-color expanded gamut systems.

Sun Chemical launched its new

### "ZELLER & GMELIN CREATED A SPECIAL GIVEAWAY USING ITS 7-COLOR MP SYSTEM WITH CMYK PROCESS INKS PLUS ORANGE, GREEN AND VIOLET. FOUR DIFFERENT LABELS WERE APPLIED TO PLASTIC CUPS FILLED WITH FRUIT GUMS."

SolarFlex Neutron White UV flexographic ink. This brand new technology offers label and package printing manufacturers the opportunity to lay a first down high opacity white with high printability, gloss and overprintability features. The system is available in Europe, the US and Canada.

Mark Walkling, European product manager for narrow web labels, said, 'Our ultimate goal is to match the quality of UV screen and testing has shown that Solarflex is already outperforming competitive offerings. It's a better alternative to screen inks and is more cost effective.'

The supplier is also promoting Pantone Live, a cloud-based color service designed to bring consistent color management to the whole packaging chain. There are currently 22 libraries in Pantone Live classified by substrate and process.

Patrice Aurenty, business leader of color management for Sun Chemical said, 'In the next two to three years, a good piece of the packaging industry will be using this system to deliver more consistency in their packaging color across processes and materials.'

SunJet, the global inkjet division of Sun Chemical and its parent company, DIC Corporation, introduced low migration UV inkjet inks for non-food contact primary packaging. The SunJet LM ink system complies with the Swiss Ordinance list and Nestlé's standards for food contact materials and packaging inks. Various substrates are compatible including PP and PE, foil and shrink sleeve films. An opaque white makes clear film printing possible. Demonstrations were seen live on a Durst Tau 330 on the Durst stand.

SunJet global product manager, Rick Hulme, said: 'SunJet has worked in partnership with Durst on a vision to deliver a state-of-the-art UV inkjet chemistry to the food packaging market. Our ambition was to establish a unique solution to lead the market and meet the challenging legislation of this sector.'

### GEW GEARING UP FOR THE FUTURE OF CURING

GEW showed its new generation E2C lamphead, a new power supply option and LED curing developments.

The E2C energy-efficient UV lamphead allows converters to use as little as 90 W/cm of UV power to cure labels at full production speeds. The Rhino electronic control is designed to work with the E2C lamphead. Two years in the planning, GEW said the combination of the two can provide printers typical reductions of 46 percent in their power usage and  $c \neg$  arbon footprint, whilst maximizing press uptime.

The Rhino control package includes new electronic power supplies of militarygrade design, and a touchscreen interface and software package that facilitates maximum operating efficiency. The UV drying system is said to withstand daily use in high ambient temperatures and humidity. The Rhino power supplies are immune to damage from mains power spikes, dips, dropped phases and shorting to ground.

Rhino is also compatible with GEW's latest LED UV curing technology, which integrates high intensity LEDs into arrays with enhanced cooling properties that see more UV energy released at higher web speeds, with less heat radiated. This is to suit the need for high production speeds using heat-sensitive materials.

This technology can be seen at GEW's Magic Carpet precision lab unit, designed for the development and optimization of LED ink formulation. The Magic Carpet system transports ink samples and power measurement devices accurately at the desired speed so that curing tests are repeatable and reliable.

LEDs are also customizable, with a compensation system monitoring the LED brightness across the array and allowing selective curing.

GEW managing director Malcolm Rae said: 'There is a real buzz about UV LED. It is a market that continues to develop, but we want to adopt a leadership position and help it advance and increase the understanding of it in the market. That is why we have worked to develop LED options, as they have a great future but the market needs careful management.'

### FRITZ GEIGER

The supplier demoed live its Primus braille printers for labels and folding cartons. Each system can print 50 braille letters long and 12 braille letters across, and includes a camera and UV drying system.

# **Thermal Transfer Ribbon News**

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# Inspection

### JAMES QUIRK rounds up some of the inspection highlights at Labelexpo Europe 2013

### AVT

Advanced Vision Technology (AVT) introduced its new Hologram Inspection System. The 100 percent automatic inspection system combines traditional print inspection technologies, holographic foils inspection and hologram print applications.

AVT claims it is the first 100 percent inspection system that can inspect all foils and holograms without the need for a second or third optic head on a printing press or doctor machine.

AVT has meanwhile collaborated with HP to integrate its PrintVision/Apollo into the new HP Indigo 20000 Digital Press, demonstrated at Labelexpo Europe on the HP stand.

The integration of AVT's automated workflow enables complete quality and process control over the wide variety of packaging substrates that the press is capable of printing. The PrintVision/ Apollo provides 100 percent inline job quality validation, comparing fixed image, variable data, print color and many other features to the job PDF/database as well as to the desired quality reference. In parallel, the system automatically records all quality information for process improvement, quality assurance and downstream automatic defective material removal.

Another example of HP Indigo and AVT's joint development program is ZeroSet, developed in collaboration with Esko, which eliminates the need for inspection set-up or press stop. ZeroSet is available for both HP Indigo 20000 and HP Indigo WS6600 presses.

### **Beijing Luster LightTech**

Chinese company Luster LightTech group unveiled its LabelRoll 330T off-line label inspection system, operating at speeds up to 150m/min to an accuracy of 50 microns.

The high resolution 4k line scan camera will detect a wide range of defects including die-cut problems, misregister, color alteration and missing labels, with an optional 3D module able to inspect braille and identify defects such as bubbles and scratches. A barcode inspection module is an additional option.

The company's Printing Plus 4.5 software builds a virtual 'model' of the label and defines areas to be controlled and defect tolerances. Audible and visible alarms can be set. Defects can be edited on a virtual defect roll before automatic positioning of the defects on the splice table. This means that the inspection system is not stopped when a defect is encountered.

Luster LightTech developed its expertise inspecting circuit boards and banknotes and also produces systems to inspect flexible packaging and reflective surfaces such as golds and silvers on cigarette packs.

Multiple 330Ts along with flexible packaging inspection machines can be networked together and controlled via a central database.

### BST

BST showcased Qcenter, an intelligent, touch-screen based control center which can handle multiple quality assurance tasks simultaneously, including 100 percent inspection and inline color measurement.

Nyquist Systems joined BST on the stand and demonstrated the TubeScan, a combined digital strobe and inspection unit which will detect label defects even on reflective and metalized surfaces.

BST partner Deco Systems also shared the booth, showing its Scandiff offline file comparison system.

Following the acquisition of AccuWeb by BST's American subsidiary, the BST product range has been strengthened by AccuWeb's sophisticated web guiding systems. Along with the AccuWeb technology, BST showed its own digital commander, sensors and networking systems for web guiding tasks.

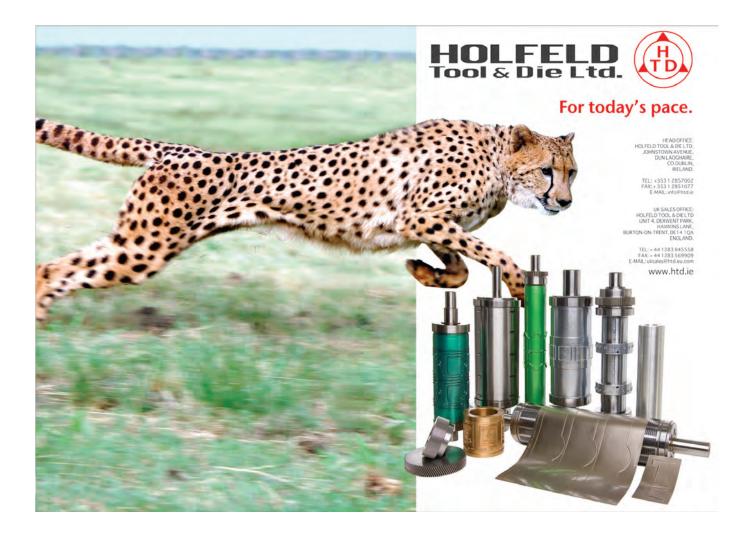
### **Crest Solutions**

Crest Solutions released PrintInspector 3.0, built for inspecting thermal transfer printed labels. PrintInspector integrates with Zebra, Sato and other printer models to inspect pre-defined label areas at the point of printing. PrintInspector 3.0 inspects all common challenges in label printing including 1D and 2D barcodes, underburn, overburn, streaks, presence/ absence, graphics and kanji characters.

### Eltromat

Eltromat launched its latest generation 100 percent print inspection system, the twin\_check 2.0. The system is based on a new illumination unit capable of detecting errors on reflective materials or holograms









and an RGB line scan camera which doubles the former resolution.

The size of the inspection unit has been halved, meaning less space is required within the printing press. Additionally, the camera module can be mounted either horizontally or vertically.

The new RGB line-scan cameras come with triple line sensors with 4096 pixels each. This means that the camera output signal is no longer interpolated, which results in a much better resolution and image quality. Illumination technology has also been improved to allow reflective materials to be inspected without false alarms.

The established webvideo\_star, also on show, is now scalable. Customers can choose to add modules such as a barcode or sample inspection systems; or, if 100 percent inspection is required, the webvideo\_star can simply be upgraded to a complete twin\_check 2.0 and/or in-line color measurement.

### **Erhardt**<sup>3</sup>Leimer

Erhardt+Leimer introduced its new ELCAM Pattern Guiding System, which allows the rewinder operator to check the print is exactly referenced to the slit position.

The system can simultaneously measure and control the position of the printed image in relation to the die. It can be integrated into any digital E+L web guiding system to allow accurate positioning during different stages of production.

The ELCAM's camera-based Matrix and Missing Label Detection System (MMLD) – also new – replaces conventional arrays of ultrasonic or optical sensors with a quick teach-in process.

In case of a defect the event is sent via a digital interface to the machine controller that stops the web in exactly the right position on the splicing table.

E+L also presented a new camera-based system that detects defects in the transparent coat of varnish applied to labels after printing. Using a camera system, the inspection actually happens on the transfer roller. The unit can link into a 100 percent inspection system and will display any faults in the roll call.

Finally, the company's new Real Time Editing (RTE) process allows the inspection results to be edited in real time on the printing press. Individual defects and areas of waste are defined depending on whether they are relevant or not. The total quantity and 'good' counters are continuously updated, thereby reducing overproduction to a minimum.

### EyeC

EyeC displayed the EyeC Proofiler off-line print inspection and proofing system designed for pre-press file-to-file comparison, press set-up, as well as incoming and outgoing quality checks. The EyeC ProofRunner is the in-line counterpart to the Proofiler and offers automatic 100 percent inspection and content verification based on the previously approved image.

### **Label Vision Systems**

Label Vision Systems (LVS) demonstrated a prototype of a new handheld barcode verification system. To be launched in December, the Integra 9580 was said by the company's Teri Demarco to be 'well received' during the show. The compact and lightweight system is designed for off-line verification of 1D and 2D barcodes to ISO/IEC standards.

The LVS 7000 in-line vision system, meanwhile, was shown with two new software enhancements – an Auto Scan program and the PDF Comparator. For off-line verification, LVS releases the Integra 9580 handheld verifier for ISO/ IEC and GS1 standards verification. The 9580 analyzes both 1D and 2D barcodes, including a wide range of direct part marked codes.

### Nikka Research

The company's established Alis L1 inspection family is extended with a new 250mm-wide model for pharmaceutical and digital printing applications while the L2 full inspection line adds 6K and 8K high resolution color options for precision inspection. On the low resolution end, a camera-based M1 missing label and basic inspection model is offered. The



ODRI product line with print-to-PDF verification now includes multi-artwork support, color consistency check and optional barcode grading. Nikka applets grow to include e-ticket, Variable Data, OCR, Holograms, 1D and 2D codes, Delta E, register monitor, web viewing and in-image measurement. These can be added on the base inspection system for additional functionality.

Ivan Bonev of Nikka Research said: 'A third of our product line is new or upgraded – faster, higher resolution cameras, apps, and simple entry level systems. Our new glass cockpit platform with two multi touch screens and gesture control showed brilliant quality images on a Prati Saturn rewinder and attracted numerous visitors. Visitors also complemented the one touch setup of our smallest camera – the Alis M1.'

### **PC Industries**

PC Industries showed its Guardian PQV 100 percent inspection system running on a slitter rewinder from Italian company LabelTech.

The Guardian PQV inspection system provides true 100 percent print quality verification using high resolution line-scan cameras, and can be installed on any type of printing press or inspection rewinder. It is designed for one-touch master image training to provide quick and easy setup of new jobs.

The company also showed its Guardian Mini, a customizable version of the full featured Guardian PQV.

Also on display was the Guardian OLP offline proofing system - which will detect printing defects such as missing or extra print, pre-press errors, plate defects and color variations - and the LM400 repeat length measurement system.

Holly Poplawski of PC Industries said: 'We received a great response to the international debut of our Graphic-Vision GV 500 Series Web Viewers, which offer long lasting LED lighting and industry standard barcode verification.'

### **Rheintacho Messtechnik**

Rheintacho Messtechnik introduced its latest products in the field of inspection and speed measurement. The complete product range of hand-held tachometers and stroboscopes was shown, with particular focus on the new hand-held RT Strobe qbLED stroboscope, with up to 30,000 FPM and 9,000 LUX and optional auto-sync laser function.

Also on display was the stationary stroboscope RT Strobe 10000 LED, claimed to feature outstanding light intensity for XXL-web widths.

#### Tectonic

Tectonic showed its modified Flexico V5 plate mounting system.

As well as new HD color cameras, the Flexico V5 features a magnetic locking system for the first plate, and lateral movement register for all subsequent plates.

The machine's design provides a rise and fall plate bed on which the plate is placed before being pulled forward underneath the cameras and gently clamped into place by a pneumatically powered holding bar. The operator's hands are then free to make lateral as well as forward/back/swivel adjustments. With the first plate set, no further setup is required for subsequent plates.

Tectonic also displayed its K3 digital print inspection system, a low cost system with an integrated color tool. The K3 gives an audio signal if color starts to drift.

### Unilux

Unilux's LED2000 Series strobe light family combines LED and xenon-based strobe technology. Inspection capabilities are enhanced by better control of flash rate and duration, softer light for highly reflective surfaces, and smaller size for more flexible mounting options. Power consumption is cut by 25-35 percent with longer lamp life.

The Unilux LED2000 range covering widths from 250mm (10in) to 2.9m (9.5ft).

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# **Managing Information**

s converters look to adopt Lean and automated approaches to increasing efficiency and reducing waste, Management information systems (MIS) and new file processing options were high on their Labelexpo priority list.

Portuguese MIS developer Sistrade unveiled a new process cost calculator that allows an optimized production route to be identified. André Oliveira, flexible packaging and labels solutions department manager at Sistrade, said label converting and finishing processes offer many possible combinations, and the Sistrade process cost calculator takes into account variables including consumables, materials and other assets to provide a cost per unit calculation, as well as a cost per thousand.

The system is also able to compare different production combinations, allowing converters to see the difference between each process.

Sistrade also announced Comex as a new customer on the first day of the show, continuing its advance into eastern Europe.

Comex is a Polish label printer, and Sistrade managing director Paulo Souto used it is an example of the company's on-going internationalization. 'We have had lots of interest at this show from around the world. We're also in the process of opening new offices around the world, including in Mexico.'

Label Traxx was celebrating 20 years work dedicated to the narrow web industry with the launch of the latest version of its MIS software. The company, established in 1993, has launched Version 7 with various new features and functionality enhancements, such as the ability to handle foreign currencies.

Said Label Traxx European regional manager Katy Nightingale, 'We are also having to make sure our software is compatible with a variety of equipment, given the flurry of new press types we've seen launched recently and at Labelexpo.'

This includes those by HP Indigo, with Label Traxx announcing details pre-show of a pricing package for those buying a press from the company at Labelexpo.

MIS and business automation specialist Cerm made the most of its place on the stands of key equipment manufacturers, particularly digital press suppliers.

Cerm demonstrations took place in the HP Indigo partners' corner, on the Gallus stand and in partnership with Advanced Vision Technology. Cerm also had its own stand, showing its full range of MIS options.

Its stand and presence in the HP Indigo partners' corner had a heavy tilt towards Web4Labels for the automated flow of information from production to shipping and invoicing. Web4Labels permits online quoting, online asset management, approval and ordering, and asset tracking.

New functions included mobile device accessibility and new management software for selling and producing narrow web products as 'kits'.

Peter Heyse, responsible for product management at Cerm, said: 'There are some great advances in digital happening at the moment from printing to finishing and die-cutting. MIS and business software is key to bringing all these components together and creating a workflow that enables the potential of digital to be fully maximized.'

Dalim Software launched new software to enhance the management and processing of print files.

This included new versions of the Twist, ES and Dialogue Engine tools. Twist, the workflow automation software, has been completely updated. Twist 7 is able to monitor FTP servers and receive files via email, extends its metadata handling abilities and provides new tools for the creation and conversion of a multitude of image files.

ES offers a system for the management and of multiple packaging services, regardless of final output. ES runs on a standard web browser and now includes an imposition module that allows for the import of CFF2 templates to automate imposition workflows for packaging.

ES 4 will now be able to work with referenced content – particularly useful for those who need to work with very large video files or external storage devices and other file system-based digital asset management systems.

In partnership with Square and bleuprocess, Dalim also launched PDF PerfectPreview as an easy way to comply with the mandatory electronic notification requirement for all products to the European Commission (EC) prior to a product launch.

From a print-ready label file, ES automatically inserts the expected preview of the label within the PDF file – without changing the print file. With this verified PDF PerfectPreview file, it becomes possible to use the same file for printing, as well as EC consultation, without error.

Hybrid Software used Labelexpo Europe 2013 to show Cloudflow, a modular system for running graphics workflows.

This system monitors and handles workflow from file processing through the production system to a customer web portal. It also handles pre-press using PACKZ Software technology. As well as being a cloud-based service, Cloudflow can be installed on servers for localized data management.

Hybrid Software UK and Ireland sales manager Sean Runchman said: 'We are looking beyond pre-press and bringing together the whole print production workflow.'

Newcastle-based Reproflex3 also signed a deal to implement Hybrid Software technology at the show. The order includes Hybrid Software's Facelift, which will be used to link order intake, planning and production systems in order to streamline order lifecycle and reduce administration.

First-time exhibitor Global Graphics used Labelexpo Europe 2013 to introduce its technology to labels and packaging printers. The software company has a quarter of a century of experience serving the commercial print, newspaper and wide format markets, with a decade of that supplying digital press vendors and OEMs with production technology.

The company introduced Harlequin Digital Hub to the packaging and labels market, designed to drive inkjet presses and provide tools to enable consistent, predictable output. Harlequin Digital Hub includes tools for developing digital front ends including Harlequin ColorPro and Harlequin SetGold for color management, Harlequin Dispersed Screening and Precision Screening, Harlequin TrapPro and Harlequin VariData.

'Digital changes everything, ' said Martin Bailey, chief technology officer at Global Graphics. 'Every step of the production process requires new ways of working, from color management and screening, to workflow and sales.'

PACKZ software made its debut at the show, a system offering a wide range of pre-press and packaging workflow functions.



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# Pre-press moves

ANDY THOMAS looks at new developments in imaging and prepress technology

ooking to raise the bar on flexo print quality, Esko launched Full HD Flexo for Labels at the show alongside a CDI Spark 2530 equipped with Inline UV2. Following on from Full HD for Flexible Packaging, this variant features adapted screening and standard operating procedures (SOPs) for the label and tag industry, with the aim of delivering 'impactful solids, smoother highlights and expanded color gamut'. It is claimed to deliver enhanced print stability as well as a reduction of gear marks when using gear-driven presses.

Esko is also driving forward software developments looking at process integration and automation, working with a wide range of integration partners including CERM, Codimag, DuPont, Durst, Epson, HP, Mark Andy, Nilpeter, Wink and X-Rite.

A major development is integration of pre-press systems with on-press cameras. In Suite 12.1, users can define areas on a job for inline visual inspection systems. This significantly reduces overall press setup time since the inline inspection system receives its setup data directly from the Esko Automation Engine via JDF. With the inspection area defined upstream and not by the press operator, it becomes easier to standardize the production process across multiple sites, presses and operators.

Another example of process automation is Combi-Press Support, where trapping tickets will automatically perform overprint calculations based on the combination of print processes used in a job.

New on the Kodak stand was the Flexcel Direct laser engraver for imaging press-ready sleeves. The system uses multiple laser diodes to engrave a seamless elastomer. Kodak's Flexcel NX is likely to remain the system of choice for most narrow web printers, and Kodak has now introduced a certification program for the system's 300+ global users.

Kodak has also announced a series of

technology partnerships with packaging press manufacturers Bobst Group and Uteco, in the latter case integrating Prosper mono inkjet heads into a wide format CI press to allow last minute personalization of flexible packaging. 'We could equally put mono or color inkjet heads on a Mark Andy or Gallus press,' said Meike De Vos, flexographic solutions category manager at Kodak MENA. Kodak also continues to develop its Prinergy Powerpack workflow.

New imaging systems were also launched by Stork Prints and Xeikon. Stork launched the variLEX hybrid direct laser exposer, a flexible system which can image rotary screens, flexo and dry offset plates.

Xeikon meanwhile demonstrated its commitment to the flexo industry with the launch of the large format ThermoFlexX

### HARPER CORPORATION OF AMERICA

Global anilox roll supplier Harper Corporation of America exhibited for the first time in Europe as a stand-alone company after parting last year with former licensee Inometa GmbH. The corporation has manufacturing plants in Thailand and the US to service Asia, the Americas and Europe.

Harper showcased its Phantom QD ink proofing system for color management, allowing operators to complete drawdowns prior to going to press, which was reported to receive lots of interest. The firm reintroduced its HEX division plate and bridge sleeves, with features including a patent-pending replacement notch system. Furthermore, Harper had the HIVE (high imaging volume engravings) anilox roll series on hand.

Said Alex James, director, Harper GraphicSolutions, 'the show went well, and proved to be great exposure to Harper Corporation. Feedback has been positive and visitors to our booth were impressed with the high quality of what we bring to the market.'



(L-R) Bernd Daiber, business director, and Yunuen Sanchez, marketing manager DuPont packaging graphics MENA

NOVEMBER 2013 | L&L



80, capable of handling the largest flexo plates of 2032x1270mm.

Xeikon has also made a series of improvements to existing ThermoFlexX systems, including easier plate loading with electronic clamping and drum holding; support for different image file resolutions, so 2400, 2540, 4000, 4800 and 5080 dpi are now all possible; and multi-plate imaging control and plate layout software has been revamped.

**DuPont Packaging Graphics introduced** its new Performance plates (see p. 100), engineered with an artificially 'rough' surface which allows superior results to be achieved on flexible packaging and paper substrates. The plates are available both for standard solvent and DuPont's own FAST thermal processing system.

The company was also promoting its modified UV main exposure Cyrel DigiFlow flexographic system, which can be engaged whenever a hybrid flat top dot is required. It optimizes the benefits associated with solid screening programs such as Esko HD Flexo Microcell.

'This means customers can choose whether or not they want flat top dots, and it works for all plate types,' said

Bernd Daiber, business leader, Europe, Middle East & Africa - DuPont Packaging Graphics. DuPont also promoted its In-the-round imaging system, designed for nested designs which do not allow a plate gap.

DuPont was also promoting its layered anti-counterfeit technologies with an example of a complex OVD with integrated 2D barcode with instructions for user verification of the security features.

Flint Group Flexographic Products promoted its nyloflex Next technology for flat top dots and surface screening. New on the market is the nyloprint Next Exposure unit for letterpress plates, which is targeted to the high-end segment of labels, tubes, cups and can printing as well as security and banknote printing. For flexible packaging, the nyloflex Next LED-based exposure enables an optimized ink lay down on press and exploits any potential to





### **CONTITECH SHOWS** NEW PLATE TECHNOLOGY

ContiTech demonstrated its Conti Laserline CSC flexographic printing plates for label printing.

The Laserline CSC plate incorporates an integrated compressible layer which does not require foam adhesive mounting tapes. The compressible layer guarantees good impact resilience - a major advantage ensuring that ink transfer is both stable and even, says the manufacturer.

'It's a system that has sparked the interest of numerous customers as well as other suppliers in the industry,' says Armin Senne, flexo business manager at ContiTech. 'This was also evident from the large number of promising new contacts that were established in Brussels.

'Labelexpo is a very important show for us because label printing is one of our key markets,' emphasized Senne. 'Visitors from the trade are especially interested in the interaction between the materials and the machines. This symbiosis was clearly demonstrated to booth visitors on the Premium Setter system from Hell.'

### X~RITE AND SUN ENHANCE PANTONELIVE

X-Rite Pantone and Sun Chemical Corporation have made it easier for smaller printers and converters to access PantoneLive libraries that cover the majority of substrates used in the packaging industry, including corrugated brown kraft, transparent film, carton board and labels.

X-Rite Pantone now offers several turnkey solution packages, including PantoneLive licenses so that any printer or converter can access the 22 PantoneLive libraries to meet the needs of customers that want to harness the efficiency of cloud-based, spectral color data.



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# The Partnership Prescription

A PARTNERSHIP CAN BE COMPLEX, but it can be extremely rewarding. There are opportunities to grow, customers to rally, and plans to develop, as Bob Cronin at The Open Approach explains

The recent economic challenges have inspired more relationships in the label space than match.com. Blindsided by the uncertainties of the marketplace, companies of all shapes and sizes are 'partnering' with other companies of all shapes and sizes, theoretically adding products and capabilities, while their competitors cut back. While this strategy proves fruitful for some, for many it falls flat. Scheduling becomes a nightmare, sales reps don't play nicely, and nobody really knows how the relationship is supposed to work. As to those combined profitability projections and synergies? Fuggetaboutit.

Enter today's reality. Many recent 'strategic partnerships' were shaped simply to save owners and businesses from pending doom and not to plot a long-term formula for success. When entered into like that, it hardly ever turns out well. Less formal than an acquisition or a divestiture, partnerships are often formulated without defined objectives, due diligence, and consideration for what to do if it doesn't work out. As time progresses, the challenges of this partnership can outweigh the factors that made you think it was a good idea in the first place.

These days, I am frequently counseling clients and fielding inquiries on the components, benefits, and legalities of strategic partnerships: Should we enter one? Do you think my neighbor is a good fit? What should be my top considerations? Do I really have to share my financials?

And then there's: How can I get out of my partnership? How do we assign a value on what we built together? Is it really 50/50 if my company sold more than they did? Will my original customers still be mine? What happens with our new prospects?

Forged quickly, too many of today's partnerships were not well-formulated, and many organizations are simply wanting to get out, while retaining everything they brought in and developed during the venture. Sadly, like a marriage, if you didn't plan for possible dissolution, all may be up for grabs. Before you panic, though, look through your partnership agreements. There may be an easy way out. What do your covenants actually cover? Can you wade through this with your partner owner?

In difficult cases, even if you didn't have legal/accounting/M&A counsel during the original arrangement, you may need their support now. Partnerships can be complex. Don't cheat yourself by scrimping on getting the professional guidance you need to see you through. Their experience and advice will far overweigh any outlay you have in contracting their services.

#### THE PARTNERSHIP PROMISE

Partnerships don't always end badly. Well-designed and planned proactively, they can be both professionally and financially positive: Shared resources. Shared risk. Shared reward.

Further, as clients continue to squeeze margins and banks remain tight on lending, a partnership could be a great option for growth. Indeed, many companies (who don't want to – or can't – sell or acquire) are drawn to the concept. 'If we partner with X Labels, we get their additional capabilities, visibility in Y industry, and presence in Z markets.'

But in order to truly get these and the other benefits of a partnership, you must have a solid (and legally binding) arrangement in place. This may be what you thought you could avoid, but it is the key to navigate you to new profits and opportunities. A partnership – on any level – is not risk- or cost-free. Too many do not work out because of lack of planning. You must have a plan of action, agreed-upon objectives, aligned workforces, and a strategy to exit, along with many other considerations.

Before entering any partnership, you need to address the current state of business (yours and theirs), capabilities, effects of merged resources, what you are willing to combine, and expectations – from both your and their perspectives. Thinking through these will help you in developing your plan, which you can then reference, review, and revise to suit your needs.

**THE PARTNERSHIP REALITY** While the adage of (1+1=3) is the hope for an acquisition, for partnerships, the goal is typically less aggressive.

With a partnership, you are not selecting the best of two options and streamlining as you would in an acquisition; you are maintaining everything from two parties. Then you are taking the new combined entity and reintroducing it, while trying to change the market's perceived value of each party individually. I realize that sounds confusing, thus, you can understand why the partnership promise can cause hardship.

You have two management teams, two owners, two sales forces, two sets of equipment, two cultures, two customer pools – and two brands. With a partnership, you are not crafting a lean, cutting-edge enterprise; you are essentially trying to convince your clients and competitors that you are something bigger and better, without physically becoming bigger or better.

Additionally, with a partnership, you are making the commitment to answer to or allay two different owners (or management teams).

Understand these facts beforehand – and embrace their reality. Also, know your partner owner for all his/ her strengths, weaknesses, and idiosyncrasies and consider your own. Are the potential issues acceptable to you?

#### THE PARTNERSHIP SECRET

There are few magic formulas for anything these days. Super Dream Away does not work, and those vitamin supplements will likely not help cure baldness. But with a partnership, there is indeed one tool you can use to maximize your success. And that is the agreement plan itself.

There are a few lessons I've learned over the years in creating partnership plans for companies I've headed up or for those of clients. Below are the highlights.

First, carve a realistic and detailed agreement. The more thorough your agreement, the better. If you can cover the majority of issues, you can focus your efforts on building the business and not endlessly rewriting and reworking your agreement around arising scenarios.

The vast majority of problems and issues start at the beginning, when the initial plan is formed on the premise that both parties are equal. With any friendship, marriage – or any relationship – there is never truly a complete equality of the parties involved. One will accomplish or earn more at particular times. The other may handle more of the administrative burden. One may be more inventive. The other may have more connections.

At any given point in a business partnership, one company will supersede the other. This will indeed shift back and forth, and you need to be comfortable with this. If you have done your homework and selected the right partner, then your partner will pick up the slack in the next season and balance things out. However, if your partner's variance is an effect of a lackluster sales effort or a sense of reliance on your sales guys and gals and their initiatives, then you have another problem. With your formal agreement, you can have all these issues accounted for.

Second, plan for problems. Though you believe nothing will go wrong, things happen. Personalities and cultures clash. Rising-star account executives become voices to be heard. New theories and thinking can put a crimp in where you are at today. Customers and prospect issues will change and will need to be addressed.

At the moment you are forming the partnership, you are likely filled with excitement and high hopes. Don't let these cloud your judgment. Think through possible obstacles, and write provisions for how you will jointly pursue their resolution. Over time, things will change with your partnership. For many, these will be positive. For some, though, such changes will cause irreconcilable differences. These might not be due to either party's performance or efforts. Sometimes market forces or customer industry issues can completely change what was once a good scenario.

Third, establish terms for an equitable dissolution. The main issue in dissolution tends to be financial, so start there. Agree on how you will determine fair market value of each entity, and what will be equitable buyout options or earnout strategies. Focus on which drivers and benchmarks you will use, rather than setting specific numbers. Values will shift with industry circumstances.

It may sound counterintuitive, but adding a provision for exit in your startup plan will actually improve your chances for success. With a 'partnership prenup', you can enter into the agreement – without worries – and give your full attention to ensuring you achieve. And, the contents of this provision will weed out any potential partner who is not 100 percent confident and committed to giving the venture their best efforts as well.

And finally, don't be afraid to enlist advisors. Ideally, companies should have legal, financial, and strategic counsel at hand throughout the partnership formation and tenure. Advisors keep everyone focused on what is best for the whole organization. If you've already



#### **ABOUT THE AUTHOR**

Bob Cronin is managing partner of The Open Approach, an investment banking/M&A firm focused exclusively on the world of print. The firm's proven results have made it the exclusive member-recommended firm of PIA/GATF and IPW. For more information, visit www. theopenapproach.net, email Bob Cronin at bobrcronin@aol.com, or call +1 630 323 9700.

started the process on your own, you may behoove yourself to get an outside opinion and expertise. If you're already established, take some time to find good ones in case you need their help later.

I hope the steps above are valuable to you as you move ahead. A partnership can be complex, but it can be extremely rewarding. There are opportunities to grow, customers to rally, and plans to develop. If executed wisely, it can be the start of many good things to come.



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# CORPORATE CULTURE



# Survive the three generation rule

EIGHT BEHAVIORS keeping your company in second place

Two-thirds of baby boomers in the US will inherit a total 7.6 trillion US dollars in their lifetimes - that's 1.7 trillion US dollars more than China's 2012 GDP. But they'll lose 70 percent of that legacy, and not because of taxes. By the end of their children's lives - the third generation -nine of 10 family fortunes will be gone. 'The third-generation rule is so true, it's enshrined in Chinese proverb: "Wealth never survives three generations",' says John Hartog of Hartog & Baer Trust and Estate Law. 'The American version of that is "shirtsleeves to shirtsleeves in three generations".

There are a number of reasons this happens, and most of them are preventable. How can the current generation of matriarchs, patriarchs and their beneficiaries beat the odds? Financial experts say the solutions involve honest conversations, the ones families often avoid because they can be painful, along with passing along family values and teaching children from a young age how to manage money.

Give them some money now and see how they handle it. Many of the 'wealth builders', the first generation who worked so hard to build the family fortune, teach their children social responsibility; to take care of their health; to drive safely. But they don't teach them financial responsibility; they think they'll get it by osmosis. If those children are now middle-aged, it's probably too late for that. But the first generation can see what their offspring will do with a sudden windfall of millions by giving them a substantial sum now without telling them why.

Be willing to relinquish some control. Whether it's preparing one or more of their children to take over the family business, or diverting some pre-inheritance wealth to them, the first generation often errs by retaining too much control.

If we don't give our successor the freedom to fail, then if they don't fail, they don't learn, so they're not prepared to step up when the time comes. In the family business, future successors need to be able to make some decisions that don't require the approval of the first generation.

Give your beneficiaries the opportunity to build wealth, and hold family wealth meetings.

The first generation works and sacrifices to make the family fortune, so often the second generation doesn't have to and the third generation is even further removed from that experience.

The best way they're going to be able to help preserve the wealth is if they understand what goes into creating it and managing it – not only the work, but the values and the risks. The first generation should allocate seed money to the second generation for business, real estate or some other potentially profitable venture.

Holding ongoing family wealth meetings with your advisors is critical to educating beneficiaries, as well as passing along family and wealth values. It also builds trust between the family and the primary advisors.

### **ABOUT THE AUTHOR**

John Hartog is a partner at Hartog & Baer Trust and Estate Law; Jim Kohles is chairman of the board of RINA Accountancy Corporation; Haitham Ashoo is the CEO of Pillar Wealth Management, LLC.

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