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# Back to Brussels

The time has come round again that the narrow web industry descends upon Brussels, Belgium for Labelexpo Europe.

Package printing made its official debut at the last Labelexpo Europe, in September 2011, with the Package Printing Zone playing host to a number of speakers from suppliers up and down the package printing supply chain, such as Esko, Flint Group and Xeikon. This was followed a year later by the Package Printing Workshops, which took place across all three days of Labelexpo Americas 2012, where Esko and Xeikon again showcased opportunities for label printers and converters to extend beyond their markets into carton, tubes and in-mold labels.

In 2013, package printing's presence at Labelexpo shows will continue with hall 12 one of "seven halls of wonder" at this year's event, as part of an overall magic theme

This will see Xeikon again showcase digital printing in relation to packaging alongside Nuova Gidue, who will be demonstrating what can be achieved using conventional printing processes. Nuova Gidue will also show how its Digital Flexo concept can help printers achieve efficiency gains during the printing and converting of different packaging types.

Package printing's presence at Labelexpo Europe 2013 will extend way beyond hall 12 however, with a number of exhibitors spread across the show floor exhibiting and launching products applicable to the artwork origination, pre-press, printing and finishing of folding cartons and flexible packaging

HP Indigo is chief amongst those showcasing package printing systems and options to visitors to Labelexpo Europe 2013. This will take the form of its biggest presence ever at a Labelexpo event with the Print your Future area accessible from both halls 5 and 9.

This includes the likes of finishing specialist AB Graphic, flatbed die-cutting machinery manufacturer Kama, digital carton cutting and creasing innovator Highcon and image enhancement supplier Scodix.

If you're attending Labelexpo Europe 2013, make sure to make the most of these resources and fully understand the latest on one of the fastest growth markets in printing, packaging, and make sure to attend one of the daily sessions on package printing in hall 12, which take place at 11am and 3pm.



Andy Thomas Group managing editor, Packprint World and Labels & Labeling editor@packprintworld.com

# NEWS

# DSCOOP EMEA HEADS TO ROME



# DSCOOP GRAND PRIX TO MEET IN ROME

Dscoop EMEA is to host its second conference in Rome on November 6-8. Entitled "Print Grand Prix", the event will again provide a meeting place for HP graphic arts customers in Europe.

Dscoop is an independent global community of graphic arts business owners and technical professionals who use HP equipment and systems, including HP Indigo and Scitex.

Dscoop EMEA was founded in 2011, and comprises HP Indigo customers in the commercial, and label and packaging segments. The first Dscoop EMEA conference, Print United, took place in Barcelona in 2012.

This year's event will include four educational tracks covering business, sales and marketing; label and packaging; operations and technical; and commercial. Operations and technical is a new educational track for the 2013 conference.

More than 30 sessions will be presented in English with live translations into Spanish, German, French and Italian.

The event will also include a solutions showcase featuring systems and technologies from HP

and third-party suppliers.

Peter van Teeseling, Dscoop EMEA director, said: 'We are pleased to once again offer an opportunity for colleagues across all regions to come together to hear top-notch education addressing the unique needs of HP graphic arts users.

'This year's event includes a fourth education track to accommodate our members' growing needs.'

Dscoop has also appointed Mike Fogarty as its new global executive director.

As global executive director, Fogarty will oversee the day-to-day management of Dscoop, including oversight of the organization's strategy, financials, operations, marketing and strategic initiatives around the globe.

Fogarty said: 'I am certain my passion, international experience and first-hand industry knowledge is a great fit to continue Dscoop's expansion and ensure this cooperative's status as a great, enduring organization.'

The inaugural Packprint Summit is taking place in Miami, US on November 5-6.

## WIKOFF INKJET INVESTMENT



# WIKOFF MAKES INVESTMENT IN INKJET

Wikoff Color Corporation has made a large investment in the inkjet market with the appointment of a new business development manager for inkjet inks and a substantial investment in its manufacturing capabilities.

Wikoff has invested in its inkjet ink manufacturing in the US by converting a space at its Fort Mill, South Carolina plant into a state-of-the-art energy-cure inkjet ink manufacturing facility and cleanroom.

Wikoff said the new facility is suitable for the demanding requirements of producing inkjet inks, and features advanced manufacturing and test equipment. This includes: a HVAC system that uses sophisticated airflow control to prevent potential airborne contaminates from entering clean zones; cleanroom-rated ceiling tiles that do not shed or produce contaminates; and ground and polished floors to minimize dust and debris providing smooth cleaning surfaces.

Further, Wikoff said inks are filtered and packaged in a cleanroom environment into cleaned and sealed containers to eliminate any chance of outside contamination, and are manufactured and tested under tight process controls to meet every key product parameter to meet each customer's specific requirements.

Employees are also required to dress in non-shedding cleanroom attire with hairnets and gloves.

Geoff Peters, Wikoff president and chief executive officer, said: 'Wikoff is making a major investment to manufacture inkjet inks of the highest quality with the expectation of becoming a strong competitor in a growing segment of the graphic arts industry.

'We are bringing our well-known, industry leading service and custom product formulation to serve the existing digital market as well as support our current customer base entering that arena.'

In support of this investment, Wikoff has named Chris Cudzilo as its new business development manager for inkjet inks. He will work with inkjet integrators and printhead manufacturers to develop custom ink solutions for Wikoff Color's industrial printing customer base and those looking to add custom inkjet solutions.

## IGGESUND INVESTS IN BIOMASS



# IGGESUND INAUGURATES NEW BIOMASS CHP PLANT AT WORKINGTON MILL

Material supplier Iggesund Paperboard inaugurated its new biomass CHP plant in Workington, England at the end of May.

The plant came on-line in March but was inaugurated at the end of May in the presence of the board of directors of the Holmen Group, the forest industry group to which lggesund Paperboard belongs.

With the biomass CHP plant, Iggesund Paperboard has switched its energy source from fossil natural gas to biomass. The new biomass boiler involves an annual reduction of fossil carbon emissions equivalent to the emissions from more than 58,000 cars, each driven 20,000km per year.

As well as now being self-sufficient in electricity and heat, the mill will also be able to supply both green electricity and heat to local residents. It is also Cumbria's tallest building.

The Iggesund Paperboard mill in Workington is the UK's only producer of folding boxboard. Incada, the paperboard made at the mill, is constructed of a central layer made of mechanical pulp produced at the site, which gives a low weight combined with high stiffness. The outer layers are made of purchased chemical pulp to create high whiteness and good printability.

Incada is used for packaging, book and brochure covers, and other graphical applications.

Ola Schultz-Eklund, the mill's managing director, said: 'For more than a decade now Iggesund Paperboard has invested to raise the standard of what was originally a very ordinary paperboard mill to one that is state-of-the-art.

'Including the £108 million spent on the CHP plant, we have invested more than £200 million in this transformation.

'In our investment in this new biomass CHP plant, profitability and reduced climate impact go hand in hand. We know that the cost of fossil-based energy will increase faster than that of biomass, so we regard this investment as a way to stabilize our energy costs.

## **BUSINESS AS USUAL AFTER MBO**



Tenza Technologies recently launched a range of pre-formed stand-up pouches

# TENZA ACQUIRED IN MBO

Tenza Technologies has been acquired in a management buy-out (MBO), alongside sister company Advanced Coated Products.

Co-Spec, a company owned jointly by Phil Meadows, Penny Thorne and Tri-Q Group, has purchased the entire share capital of Tenza Technologies and Advanced Coated Products from parent company Tri-Q Group in the MBO.

Despite the change, Tenza Technologies said it is "business as usual" as Co-Spec has developed a business strategy that "offers an exciting future for the businesses, a continued reliable source of quality products to their valued customers and a significant customer to their loyal supplier base".

Tenza Technologies recently launched a range of pre-formed stand-up pouches, which it exhibited at Packaging Innovations.

Meadows and Thorne, who already fulfill the roles of managing director and finance director at both Tenza Technologies and Advanced Coated Products, have been appointed directors of both companies.

Shaun Ede, head of compliance, quality, and health and safety, is also appointed a director of both companies.

Alan Lomas, commercial manager at Tenza Technologies, said: 'The change of ownership to Co-Spec is incredibly positive for Tenza and Advanced Coated Products.

'Phil has been involved with both for nearly 30 years, so to have that degree of experience at director level is a massive attribute for both companies.'

# ANTILOPE DEMOS HIGHCON

Belgium's Antilope Group has hosted a demonstration day to showcase the potential of the Highcon Euclid.

This included the production of a package, printed on Tullis Russell Trucard 2 and printed on a KBA Rapida 105ZF-6+L offset press. Delivery of cutting and creasing details to the Highcon Euclid was made in a DXF format from Esko's ArtiosCAD software.

Linda Corremans, CEO of Antilope Cardboard, said: 'We are eagerly looking forward to customer reactions to the new capabilities we can now offer.'

# NEWS



# INAUGURAL PACKPRINT SUMMIT TO HIT MIAMI

The inaugural Packprint Summit event is to take place in November in Miami to help printers and converters in both North and South America maximize the business opportunities presented by the growth in packaging

he US packaging market is due to grow at a steady rate for the foreseeable future, with various reports and analysts, such as Freedonia (see *p10*), predicting demand to increase in various sectors.

Packprint Summit Americas, taking place on November 5-6 at the JW Marriott Marquis Miami Hotel, Miami, will present the latest trends and topics affecting the market, driving this growth and defining the future of the market.

The two-day summit will include input from representatives from across the packaging supply chain, with designers and brands well represented, as well as suppliers and printers themselves.

Day one will put more of a focus on the expectations of those both up and down the supply chain, with designers and brands on hand to give their thoughts on topics such as structures, materials, the environment, and personalization and short-run printing.

The day will open with an editorial panel discussion to set the scene, before a panel of brand owners take to the stage to give their thoughts. Sandwiched between these two panel discussions will be a presentation from Evelio Mattos, creative director of agency Design Packaging, addressing how packaging design is integral to establishing a brand identity.

Day one will conclude with an organized networking event to allow attendees to meet each other, share ideas and discuss what they have heard so far.

The morning of day two will have a more production-orientated feel, and see suppliers to the market deliver the latest trends and topics affecting their area of the market.

This will cover pre-press and MIS software, the latest in inks and coatings, digital printing and the finishing and converting of short-run jobs.

A keynote presentation will open the second day, before the likes of EFI Radius and Xeikon address hot topics in the package printing marketplace. Day two will also look at the business opportunities for those looking to make the move from labels into package printing, with a printer panel to detail the challenges and opportunities for those taking such a path.

The conference program is supplemented by a table-top exhibition featuring suppliers from across the package printing market.

This will include conventional press manufacturers Goss International, Nilpeter, Omet, Nuova Gidue, Mark Andy, Müller Martini and MPS, their digital counterparts Presstek and Xeikon, ink suppliers Flint Group and INX, and others, such as Wilson Engineering, Accraply, Karlville, RotoMetrics and GEW.

Tasha Ventimiglia, event director for Packprint Summit Americas, said: 'This is an exciting new event for us. The package printing and product decoration markets are experiencing strong, fast and sustainable growth thanks to the ever-increasing demand for short runs and variation across FMCGs.

'Our focus will be on delivering an event that taps directly into the heart of this lucrative growth area and show how businesses can increase profitability and add value to their customers.'

Packprint Summit is organized by the team behind Labelexpo Global Series, in association with *Packprint World* and *Labels* & *Labeling.* 

Labelexpo Europe 2013 will prominently feature opportunities in package printing to the label market (*see pp. 32-41*), and of the forthcoming show, Lisa Milburn, managing director of the Labelexpo Global Series said: 'As the label industry's largest dedicated trade show, there is nowhere better to see the latest product launches, compare technologies, network and do business. Even though we're a mature show, we continue to experience strong growth year-on-year, which is a firm indicator of how buoyant the label and package printing industry is and how much innovation is going on in the marketplace.'

# CONSTANTIA FLEXIBLES TAKES STAKE IN PARIKH PACKAGING

Constantia Flexibles has taken a 60 percent share in India's Parikh Packaging, as it looks to further its presence in the growing market.

Parikh Packaging serves the food, health and personal care, and nonfood industries. The company is well established in the market operating from Ahmedabad, north of Mumbai in the state of Gujarat.

Constantia Flexibles has acquired 60 percent of the shares in Parikh Packaging, with the remaining shares to stay with the Parikh family.

Constantia Flexibles has made a number of investment in 2013, including in its US production capabilities and moving into the label market with the acquisition of Spear.

The acquisition is part of the international growth strategy of Constantia Flexibles, and constitutes another important step for further growth and expansion in Asia, as the deal gives it a "strong position in the world's fastest growing flexible packaging market".

Read more about Constantia's aims for growth on p13

# PRAGATI PACK CARTON WINS LABEL AWARD

India's Pragati Pack has been selected as a winner in the FINAT 2013 Label Awards program.

Pragati picked up the prize in the carton category as part of the nonadhesive applications group, for its Fiama Di Wills entry.

A total of 245 entries were received in the 2013 Label Awards program from 52 companies in 29 countries. Awards were presented in a series of categories in four groups; marketing/end-uses, printing processes, nonadhesive applications and innovation.

# JPFL CREATES GLOBAL BOPP GIANT

Jindal Poly Films Ltd (JPFL) has completed the acquisition of ExxonMobil Chemical's global BOPP films business for US\$235 million.

JPFL signed a framework agreement for the acquisition in October 2012, with the deal signed on May 3, 2013. The transaction is expected to close by the end of July.

The deal covers five BOPP production locations in the US and Europe, including Georgia and Oklahoma in the US, and in Italy, The Netherlands and Belgium in Europe. The transaction also includes a technology center and sales office in Rochester, New York, and an office in Luxembourg.

JPFL already operates the world's single largest site for production of BOPP and BOPET films at Nasik, India. Its current combined capacity of BOPET and BOPP is 337,000tpa, and its annual sales turnover as of March 2012 was US\$452 million.

JPFL is a part of the diversified BC Jindal group, with interests in flexible packaging, photographic products, thermal power generation and steel products. The flexible packaging producer has a network of agents and distributors around the world, from Australia to Venezuela.

The acquisition will make JPFL one of the leading manufacturers of flexible packaging films globally, with a combined capacity of approximately 445,000tpa for BOPP films.



# NEWS

## COMMERCIAL PRINTER MOVES INTO PACKAGING



# CENTRUM MOVES INTO PACKAGING WITH KBA

Centrum Printing in Sydney, Australia, has ordered a new a six-color plus coater KBA Rapida 162 in its biggest ever press investment as the company makes a move into packaging and point-of-sale (PoS) printing.

Centrum Printing carries out a range of commercial printing work, as well as production of promotional material and PoS products. Its clients include blue chip corporations, government departments and design agencies.

Centrum has two existing medium format presses from another German press manufacturer, but opted to invest in a KBA press.

The KBA Rapida 162a can print either conventional or UV inks and coatings. Percy Vij, managing director of Centrum, said: 'We see opportunities in niche markets, such as packaging and PoS.

'The new KBA Rapida 162a will enable us to enter these markets. We will also be setting up a trade print service to enable other printers to serve that market.'

Centrum general manager Sandra Mascaro said: 'We already have promises of several million dollars' worth of packaging work from existing clients and believe that as one of the few printers in the country with this size of press there will be plenty of work out there.'

# CONVERTERS TAKE NEW HP INDIGO PRESSES

Four printers have been named as the latest early adopters of HP Indigo's new presses optimized for package printing.

Multi-Packaging Solutions (MPS) and AGI-Shorewood Group (ASG), both in the US, have signed up as customers for the 30000, a 29in-wide digital sheet-fed press for folding carton production, while RAKO-GROUP and Innovative Label Solutions (ILS) will install the HP Indigo 20000, a 30in-wide unit for printing flexible packaging.

RAKO-GROUP is one of the largest and most advanced producers of self-adhesive labels in Europe and ILS is a leading US company in the pressure-sensitive label industry. Both companies are already using HP Indigo presses to produce labels and flexible packaging.

Nosco, another US printer, has already been named as a customer for the HP Indigo 30000.

Both presses were shown initially at Drupa 2012, and John Cote, vice-president of innovation and manufacturing technology at MPS, said: 'Since first seeing the HP Indigo 30000 at Drupa 2012, I have truly believed that this press has the functionalities to fulfill a market gap in digital print that has lingered for years.

'As the needs of our customers have evolved in complexity, size and scope, we at MPS have searched for a press that is flexible wth end-to-end in workflow, and supportive of critical data driven brand security measures without sacrificing quality.

'The HP Indigo 30000 digital press is the only solution that we found to effectively meet all of these criteria and provide us with the added values of cost savings and efficiency.'

Both presses have now been made commercially available and were shown at a global event in Israel this week, alongside a host of other technical and product developments, such as upgrades to the WS6600 platform, a new in-line coating unit from Tresu, the iCoat 30000, for the 30000 and the AB Graphic Digicon 3000, developed in partnership with Edale, for the 20000.

Read more about the HP Indigo 20000 and 30000 presses on pp. 18-19

# DAN MAFFEO TO LEAD FFEI US EXPANSION

FFEI has appointed Dan Maffeo as vice-president of sales in North America, in support of its North America sales drive.

Maffeo is a US-based graphic arts industry veteran with more than 30 years of experience in the printing industry.

He recently served as Kodak's worldwide segment manager for commercial and transaction print, and as director of field operations at Agfa.

Previously, Maffeo spent 19 years with Fujifilm, holding a variety of positions including vice-president of sales, vice-president and general manager of Fujifilm Graphics USA. Further, he worked as executive vice-president of Enovation Graphic Systems, Inc., a Fujifilm distribution company subsidiary.

In his new role, Maffeo will be responsible for managing sales activities of FFEI's product portfolio, and has been tasked to source new business partners to support sales, establish channels and routes to market, and raise the profile of FFEI in the North American market.

Andy Cook, FFEI managing director, said: 'I've known and worked with Dan for many years when we both worked for Fujifilm.

'He has a deep understanding and experience in sales, marketing, channel distribution and OEM relationships. He really understands the importance of customer relationships in the North American market, which makes him a perfect fit for our North America strategies.

'We needed someone with a solid industry foundation with street-level experience to help us give renewed focus to this important region.'

Maffeo said: 'I'm thrilled to be back working with Andy and his team of talented professionals to represent an outstanding product portfolio including RealPro workflow and packaging software, CtP equipment and digital inkjet printing devices.'

# NAMPAK INVESTS IN AFRICA'S FLEXIBLE PACKAGING MARKET

Nampak Flexible has made a double investment in technology to advance Africa's flexible packaging market.

Nampak has installed a seven-layer co-extrusion film line from Windmöller & Hölscher (W&H) and a laser scoring machine from Micro Laser Technology (MLT).

Both pieces of equipment have been installed at Nampak Flexible's Pinetown plant.

The W&H line has been chosen to help Nampak Flexible overcome capacity restrictions with its traditional three-layer co-ex film production, where work has had to be contracted out.

Nampak Flexible said that, with global markets demanding specialty films and an increased shelf-life for products, there has been a trend towards moving to three-layer extruders to produce stronger and more functional films. While world trends are towards highbarrier films and superior moisture vapor, five-layer machines can't do laminates and high-barrier films at the same time.

The new W&H seven-layer co-ex line, the first in sub-Saharan Africa and the most advanced machine of its kind in Africa, allows Nampak Flexible to manufacture to world-class standards on high-barrier films.

It added that meat and cheese products are normally packaged in seven-layer films in South Africa, but all of this material has previously had to be imported. With the W&H line, Nampak Flexible is the first company to produce seven-layer packaging in South Africa.

The Pinetown plant had to be physically modified to accommodate the 18m-tall machine, with the height designed to ensure that the polymers being processed, which reach 200°C when leaving the extractor, cool down by the time they reach the apex of the machine.

Meanwhile, the MLT perforation system allows for the creation of easy opening systems on pouches, stickpacks and sachets.

The patented perforation system can puncture one hole every second with a diameter of  $50-300\mu$ m. The laser technology ensures a non-contact processing tool with minimum thermal influence on the film. There is also constant depth of laser on the scribing/ scoring line and scoring may be set to however many layers are required, such as two layers for a four layer laminate, without damaging the barrier properties of the packaging structure.

Clinton Farndell, managing director of Nampak Flexible, said: 'These two investments by Nampak Flexible in new technology open up huge possibilities within the flexible packaging industry in South Africa

and ensure opportunities for growth across Africa.'

# CHESAPEAKE ACQUIRED BY THE CARLYLE GROUP

The Carlyle Group has acquired Chesapeake, one of the largest global suppliers of value-added paper-based packaging products and services.

Headquartered in Nottingham, UK, and with nearly 5,000 employees across 38 sites in nine countries, Chesapeake is a high-quality and premium producer of paper-based leaflets, labels and cartons, primarily for the pharmaceutical, confectionery and premium drinks markets for a bluechip client base.

Chesapeake has grown significantly in recent years to produce revenues of €580 million in 2012.

This acquisition is the latest in a number of high-profile acquisitions in the packaging market in 2013, including Contego Cartons and A&R Carton.

Eric Kump, managing director of Carlyle Europe Partners, said: 'Chesapeake is a strong business focused on attractive growth markets.

'We believe the combination of Carlyle's global presence and network and the strength of the company's existing footprint and customer relationships will help drive significant growth and new market opportunities in the coming years.'

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# Specialty of tomorrow

Industry research firm Freedonia is predicting strong growth in the specialty films market in the US to 2017, and beyond. David Pittman spoke to analyst Brett Bias about the potential for packaging in this space, and around the world.

emand for specialty films in the US is forecast to advance at more than five percent a year to US\$8 billion in 2017, driven by the increasing need for high-performance plastic films that offer barrier properties, mechanical strength and chemical resistance in packaging applications.

This is according to the *Specialty Films* study, produced by industry market research firm Freedonia Group. Packaging is the largest market for specialty films, accounting for two-thirds of overall demand according to the Freedonia study.

Of the specialty film used in packaging, barrier films have the largest share with over 90 percent of the market. Freedonia says that growth in barrier film demand will be driven by the rapid rise in the use of vacuum packaging, oxygen scavenging and low-oxygen case-ready technologies in meat packaging, as these technologies utilize high-barrier films to maintain an optimum atmosphere inside the package.

'More and more products are transferring to flexible packaging from rigid types,' says Freedonia analyst Brett Bias. 'Growth will slow as specialty films become more commonplace and the wealth of new applications shrinks, which is to be expected, but we forecast that growth will continue to 2017, and probably through to 2022.

'Specialty films used to be cost-prohibitive for many applications, but they are becoming less expensive and more available.'

For Bias, the US figures are a good indicator of global trends, as many of those contributing to Freedonia's market research figures produce products for markets around the world.

'The US is good marker for other markets around the world as many producers In North America operate globally. These global operators are also driving innovation,' he says.

Innovations include an increasing number of multi-layer films being brought to market as a product offering enhanced shelflife and product protection, with increased mechanical strength and processing capabilities, but able to meet the needs of modern consumers.

'Specialty films of the future will be engineered to withstand heavy processing and be more responsive to treatment, but allow downgauging at the same time.'

Increasing use in small, but high-growth market areas, such as photovoltaic modules and biodegradable packaging, will also bolster advances.

Freedonia predicts that the growth in biodegradable and water soluble films will be the most rapid, which will benefit as the technologies improve and new applications are developed.

Demand for biodegradable films, which are used to produce compostable packaging and bags for organic waste, will benefit from environmental concerns and the increased commercialization of bio-based polymers. Water soluble film demand will receive a boost from the introduction of pharmaceutical and health products in dissolvable thin film form, as well as the introduction of edible, water soluble food packaging.

'Convenience remains king,' says Bias. 'Edible films are evolving and there are some products already out there, such as those manufactured by MonoSol.'

MonoSol's range includes AquaFilm laundry bags that limit human contact with soiled materials in the healthcare segment, and MonoDose, for delivery of detergents and other hazardous materials in a convenient way. Bias sees the at-home coffee market as a product category that can lead the adoption of water soluble packaging in the food market.

'Coffee culture exploded a few years ago, but has now matured and people are seeing that individual servings in small, rigid plastic containers that create waste are not ideal.

'Perception is the biggest barrier to adoption, but we expect fast growth once these types of film are out in the market and accepted by consumers.

'As the price of specialty films falls and their marketability increases, we'll see biodegradable and soluble films become more commonplace.'



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# Investing for growth

Constantia Flexibles is investing heavily in its global operations to support growth in both the flexible packaging and label markets. David Pittman reports

here have been a number of major merger and acquisition investments made in the packaging market in recent times.

This has included the purchase of Contego Cartons, A&R Carton and ExxonMobile Chemical's global BOPP film business.

Nicholas Mockett, of corporate finance house Moorgate Capital, outlined some of the drivers for this activity in the last issue of Packprint World. He wrote of Porter's Five Forces, an analysis tool that draws upon industrial organization economics to derive five forces that determine the competitive intensity and therefore attractiveness of a market: rivalry, the threat of substitutes and new entrants to the market, and supplier and buyer power.

'Most segments of the packaging industry have very low industry concentration levels compared with other similar industries,' said Mockett. 'The exceptions are glass and metal, which are more concentrated, probably reflecting the maturity of the product and the capital intensiveness of the process.

'These types of product tend not to be heavily printed and form part of the label market supply chain, whereas flexible and fiber-based packaging are more integrated with print.'

Amongst those making acquisitions in the packaging space, Constantia Flexibles, headquartered in Vienna, Austria with some 8,000 employees in more than 50 Group Companies around the globe has been one of the most prolific.

This has included its purchase of the Spear Group, cementing its excellent place in the labels market, and investments in growth markets, such as India and Latin America, by taking a controlling stake in Parikh Packaging and buying all of Globalpack, a leading flexible packaging and folding carton company in Mexico.

Of the Spear purchase, Alexander van 't Riet, executive board member for labels at Constantia Flexibles, said, 'Spear constitutes an excellent addition to our existing labels business. It will open new roads to attractive markets in the Americas and Africa and especially to the fast-growing premium beer markets around the world, where pressure-sensitive labels are key to success.'

Thomas Unger, chief executive officer Constantia Flexibles, said, 'We will be able to serve our customers even better together with Spear, a leading beverage labels business with a highly attractive, global, blue-chip customer base.

Of the Globalpack purchase, Unger said, 'With this transaction we significantly strengthen our market position in North America and will get access to the growing markets in Central America.'

The company is targeting growth across the world, through both organic means and acquisition activity. The key flexible packaging markets around the world that will be central to Constantia's future include Asia, the Middle East and Africa, North and South America, and the CEE region. This will be achieved through both organic and acquired growth.

The growth of the Constantia Flexibles business will be supported by changing demographics and trends amongst consumers around the world. In terms of markets, there are some key trends that will shape the future, such as: global population growth; the rise of middle classes in emerging markets, with increased demand for packaged consumer products; longer life expectancies, with increased pharmaceutical consumption and packaging requirements; smaller households; smaller sized packaging; and the substitution of rigid packaging for flexibles.

Flexible packaging products will also alter, as the market demands enhanced barrier and mechanical properties, more sustainable products and packaging that permits brand differentiation.

The underlying M&A activity is creating companies that can offer products and services to match this demand through a worldwide, one-stop-shop proposition for brand owners, with different products and systems utilized in bases around the world to deliver consistent package and label printing.

This will support both their growth, and that of the likes of Constantia Flexibles.



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# Flexible market on the up

Evan Arnold, product development manager at Glenroy, details the current state of the flexible packaging market, and how it is benefitting from the move away from rigid packaging formats.

lexible packaging has fared quite well despite economic downturns, and the market is continuing to climb upwards. We see more and more requests from companies who want to make the jump from rigid packaging to flexible packaging. This is due, in part, to the fact that significant cost savings can be achieved by brand owners choosing flexible packaging. For instance, depending upon the application, flexible packaging can weigh up to 95 percent less than rigid containers and take up less than 10 percent of the space typically used by rigid containers.

Accordingly, lower weight and space requirements lead to lower shipping costs. In addition, flexible packaging uses less material for the same product protection and provides virtually 100 percent product yield, resulting in less waste.

Stand-up pouches with spouts or fitments are rapidly becoming more and more popular as alternatives to rigid packaging likewise.

We see more and more requests for highly engineered materials that improve the consumer experience. More and more, we are utilizing fitments, laser scores and other features designed to improve usability for the end user. We are also seeing packaging take an ever-increasing role in the way products are used, and see the packaging is evolving to become the product. Flexible packaging no longer merely protects the product; it is now a key selling point for many products, and plays a key role during their consumption.

Digital printing is an area of growth for flexible packaging. Manufacturers desire high-quality printed pouches, along with the ability to order smaller quantities. With digital presses becoming wider and faster, they are an ideal solution to meet these demands (*read more about the Screen Truepress JetSX B2 format press on p. 26-27*).

We are on the verge of releasing ExpressWeb Digital films, a new line of pre-coated digitally printable flexible packaging films optimized for HP Indigo's growth in the flexible packaging market with its 20000 model on pp. 18-19). ExpressWeb Digital is certified by the HP Indigo substrate certification program with a rating of three stars – the top performance rating available.

It is important to choose flexible packaging materials that are compatible with digital ink systems, such as Glenroy's line of ExpressWeb Digital flexible packaging structures. It is equally important to select flexible packaging materials based on product/package compatibility testing and regulatory concerns.

As a flexible packaging converter since 1965, Glenroy has spent nearly 50 years accumulating expertise on flexible packaging compatibility and optimal materials to use for products within highly regulated markets. We provide this type of expertise to our customers purchasing ExpressWeb and ExpressWeb Digital flexible packaging films.

Flexible packaging is continually evolving, becoming easier to use, and providing more functionality, which makes this a very exciting time in the industry.



Evan Arnold, product development manager at Glenroy

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# Giving a feel to packaging

Food packaging specialist KM Packaging has launched a new film offering the luxury confectionery and high-end boxed goods markets a way to add sensory interaction to visual appeal. David Pittman reports

KM Velvet Feel is a coated polypropylene, which is available as a reverse printed heat-sealable film laminate for use on form-fill-seal or flow-wrap equipment, and can be laminated to board

> s the retail environment has become swamped with new products and more SKUs, so consumers have been faced with a barrage of carton and flexible packaging.

As a result, high-end brands are increasingly looking for a subtler way to make their products stand out on the shelf. This has included the use of matte finishes, new shapes and structures, and finishes that take advantage of consumers' senses.

Dr Catherine Barnes, director of the Faraday Consultancy at the University of Leeds, detailed the concept of quantified touch in the very first issue of *Packprint World*, published in September 2011, and discussed why the "feel of the pack" could improve consumer experiences.

She outlined how almost all packaging found in stores is handled and touched by consumers, but stated that the "feel" of the pack is rarely designed to improve the consumer's experience.

She wrote further about the work of Faraday and the University of Leeds to develop a process that delivered the technical specification of a surface that can convey brand values to the consumer.

Leo Luxe Packaging offers a range of packaging products that are designed to create sensory feedback, using touch and feel accents combined with pack structures to "invoke emotions" and create a connection between consumers and brands and their packaging.

Barnes said: 'Touching products and packaging has a significant influence on our perception of them. When our

"When we touch a surface, we experience a composite of three different attributes: the substrate material, any added lacquers or textures, and the shape or form of the pack"

fingers touch the surface of a pack, the many touch receptors in our fingertips trigger and send messages to our brain.

'These messages combine with our previous knowledge, and as a result we experience a series of emotions. Clearly, brand owners are keen to ensure that the emotions delivered by their products match the brand, but until now, there has not been a systematic way to achieve this.

'When we touch a surface, we experience a composite of three different attributes: the substrate material, any added lacquers or textures, and the shape or form of the pack. Because substrate materials and pack shapes are frequently predetermined in the many packaging development processes, the main opportunity to engage the consumer is to add a texture or lacquer effect to the pack surface. The real challenge then, is to determine whether the chosen lacquer represents the brand accurately, and delivers the right experience.'

It is with this in mind that food packaging specialist KM Packaging has launched KM Velvet Feel, a new premium packaging film with a unique feel and texture targeted at the luxury confectionery and high-end boxed goods markets around the world. "Shiny gloss sleeves are giving way to matte finishes that convey an element of discreet quality, and the next stage is enhancing the visual impact with an unbeatable feel of luxury that tempts consumers to touch and pick up a particular product."

Charles Smithson, KM Packaging managing director, says: 'Shiny gloss sleeves are giving way to matte finishes that convey an element of discreet quality, and the next stage is enhancing the visual impact with an unbeatable feel of luxury that tempts consumers to touch and pick up a particular product.'

A coated polypropylene, KM Packaging claims KM Velvet Feel reflects the current trend towards matte finishes and other subtly unusual features that emphasise the quality of the product inside and achieve shelf standout in a crowded sector, and can help brands to achieve shelf differentiation in a whole new style.

Graham Holding, commercial director at KM Packaging, says the move towards subtler ways to attract consumers creates new expectations on suppliers to the market.

'It's very important for our customers to be able to differentiate themselves on the shelf and in the eyes of the consumer. For those manufacturing films, it's very important to look for new ways to help them do this, and add value to their packaging.

'We are active in developing new products and systems for our customers, and KM Velvet Feel is about changing the look of their packaging, but more importantly the feel.'

KM Velvet Feel is available as a reverse printed, heatsealable film laminate for use on form-fill-seal or flowwrap equipment. KM Packaging is a supplier of printed flexible packaging, so will use the new product to give its own products extra appeal in the increasingly competitive global flexible packaging market.

Printing is carried out using either the flexo or gravure processes, with KM Velvet Feel sales samples produced using an Uteco Onyx eight-color CI press.

'It's important for suppliers to be different with their offering to brands in order to help them differentiate so we want to supply finished flexible packaging products specified with KM Velvet Feel.

'That's not to say that we're closing the door on partnering with other suppliers in this area but if the business case is strong, and it's the right scenario, we will look at possible partnerships in terms of producing flexible packaging with KM Velvet Feel.'

KM Velvet Feel can also be laminated to board for suppliers of luxury boxed products such as premium confectionery, and even perfumes and cosmetics. KM Packaging has no plans to move into the carton arena, and instead will work with partners to make the material available to the global carton market.

Holding draws attention to the coating used in the creation of KM Velvet Feel as being the real differentiator between it and other packaging films.

KM Packaging worked with an industry partner to develop the coating, as this is a complex





manufacturing process that the company wanted to ensure was properly carried out, and Holding says: 'In appearance, it's not too dissimilar from matt OPP; it's when you pick it up you notice the difference.'

'This product opens doors for potential customers of KM Packaging, and allows our existing client base to look at ways of making their products stand out from other food manufacturers and CPGs.'

KM Packaging has already seen interest from North America, Europe and South East Asia in KM Velvet Feel, and hopes to start supplying the market soon.

This will be handled by its own processes and network, with the material manufactured in the UK and to be exported directly to customers by KM Packaging.

KM Packaging operates globally, and has regional warehousing capabilities spread across the world, as well as manufacturing partners in Europe. 'We handle all aspects of import and export, and have stock holdings available in many regions to allow us to service customers and any fluctuations in demand they may experience.

'This allows them to deal with us globally, but feel like they are receiving local service and support.'

Holding adds: 'Packaging is a very important spend, but often other issues are prioritized over it. As such, our customers require a trusted and reliable partner, as well as reliable products.

'Our customer base is global, and they are supplying supermarkets so need to be able to supply packaged goods reliably and consistently, and not cause issues in the supply chain.'





# Optimized for package printing

HP Indigo's new 20000 and 30000 presses have been designed to present printers and converters with optimized digital package printing options according to their requirements. David Pittman reports

n the digital label printing market, HP Indigo is one of the biggest players, with an installed base of more than 1,300 presses worldwide.

The roots for the business were laid in the early 1990s, when Benny Landa debuted his first digital press, the E-Print 1000 at Ipex 1993, before HP acquired the business at the turn of the 21st century.

More than a decade later and Benny Landa tried to replicate the splash he made with the first Indigo press with the launch of Landa Nanographic Printing (see Packprint World, issue #4 2012) at Drupa 2012.

HP Indigo also looked to make a splash at Drupa 2012 with its fourth generation digital printing presses. This included the 10000 sheet-fed press for commercial printing, as well as the 20000 and 30000 models for packaging applications.

In early summer this year, HP Indigo hosted an event in Israel for customers and partners, with around 400 attending from around the world, to officially show the systems to current and potential customers alongside its existing portfolio of digital printing equipment, such as the WS6600.

The HP Indigo 20000 is a 30in roll-to-roll press designed for the flexible packaging market. Support for 30in-wide webs permits a 29in-wide image format and a 44in repeat length. The press can handle substrates from 0.4-10 points, and is capable of printing on film, paper and aluminum.

The 30000 model is a 29in sheet-fed press for folding carton production, and can print on any substrate up to 24 points in thickness, including paperboard, metallized board and plastics.

Both presses use HP Indigo's Electrolnk technology to produce prints that match the gravure-like color quality standards expected by brands when it comes to package printing, especially on flexibles.

This is achieved with the help of a one-shot color process that collects all the print on the blanket before transferring it to the substrate, so permitting perfect color registration, even on heatsensitive materials, HP Indigo states. An in-line priming station means both can use off-the-shelf substrates that are prepared on-press for the application of the ElectroInk. HP Indigo sees the flexible packaging and folding carton markets as genuine avenues for growth, with predicted compound annual growth rates for digital printing of 31 and 50 percent in each market respectively.

Alon Bar-Shany, vice-president and general manager of HP Indigo, sees package printing as a largely analog process, so presenting HP Indigo with the potential to transform the market as it has done with labels.

But, he adds, the transition will be more rapid this time around, giving the example that it took some four centuries for a total of one billion books to be reached, yet Facebook took just eight years to reach one billion users worldwide.

Bar-Shany says: 'The pace of change is different in the 21st century; the internet and access to mobile communications are driving change for everyone all around the world.'

#### **Partners**

HP Indigo is working with its industry partners to support this rapid growth, and to develop additional options for both the 20000 and 30000 presses, including an in-line coating unit for the 30000 and a new finishing line for the 20000.

The Tresu iCoat 30000 allows for both UV and aqueous postprint selective coating. Designed to match the HP Indigo 30000 capabilities, this in-line coater will offer an optimized process for the digital production environment.

German die-cutting specialist Kama will also launch a new stripping and blanking unit (SBU) to work with its DC 76, a die-cutting and foil unit with automatic registration camera for a complete, digital compatible finishing solution. The new SBU contains programmable rollers to strip waste and blank printed boxes without the need for expensive tools or cumbersome manual processes.

For the 20000, AB Graphic and Edale have teamed up to develop the Digicon 3000, a 762mm-wide finishing system for digitally pre-printed webs.

The Digicon 3000 will be integrated in-line with the press, allowing one pass for optimized production of labels and flexible packaging. Its modular design will enable users to





produce labels and a variety of flexible packaging laminates.

Edale and AB Graphic together bring over 100 years combined technical expertise; AB Graphic having worked with HP for over 15 years, and Edale with AGFA Graphics for more than 12 years. Whilst the Digicon 3000 will be manufactured by Edale, the machine will benefit from the companies' combined intellectual property.

#### **Early adopters**

US printer Nosco has already been named as a customer for the HP Indigo 30000, but a further four printers have now been named as early adopters of HP Indigo's new presses optimized for package printing.

Multi-Packaging Solutions (MPS) and AGI-Shorewood Group (ASG), both in the US, have signed up as customers for the 30000, RAKO-GROUP and Innovative Label Solutions (ILS) will install the HP Indigo 20000 (read more from MPS about its decision to invest in the 30000 on p20).

RAKO-GROUP is one of the largest and most advanced producers of selfadhesive labels in Europe and ILS is a leading US company in the pressuresensitive label industry. Both companies are already using HP Indigo presses to produce labels and flexible packaging.

#### **Further advances**

Alongside the unveiling of HP Indigo's 20000 and 30000, HP Scitex gave the first showing of its new flatbed industrial press, the FB10000.

Officially launched at FESPA 2013, the FB1000 uses high dynamic range (HDR) printing to enable both speed and quality by combining industrial productivity with 16 grey-level printing.

This combines large ink drops, as associated with faster printing speeds, and small drops for quality printing on the same job. As well as POP, FSDU and other display applications, the FB10000 is suitable for high-quality box printing and eliminates the litho-lam process by permitting direct-to-board printing, with printed products able to be cut, creased and folded to accute angles without the print cracking or chipping.

A number of end-to-end workflow options and product enhancements that span the HP Indigo press portfolio for labels, folding cartons and flexible packaging have also been unveiled by HP Indigo and its partners.

The new HP SmartStream labels and packaging print server, version 4.0, powered by Esko, is designed for simplified color management and automated job preparation. This new color engine transforms existing processes by automating common procedures that are time-consuming. It also includes new imposition and variable-data tools, including dynamic marks.

Esko is expanding its digital front end (DFE) infrastructure to include dedicated packaging applications. This will enable seamless integration of the HP Indigo 20000 and 30000 digital presses into the production workflow through the Esko automation engine.

#### Pent up demand

Bar-Shany states that the folding carton and flexible packaging markets are more interested in the wider formats than other markets HP Indigo already serves, so the 30in 20000 and 29in 30000 provide it with an opportunity to grab the attention of new markets.

'We have a long-term strategy for digital,' says Bar-Shany.

'There is pent up demand in the packaging market, but we need to show customers the technologies we have to offer, teach them about those and show them the opportunities.

'We're not looking to flood the market, as we have a 10-year roadmap and want steady, sustainable growth. We want to go deep and build relationships with our customers.'





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The 30000 model has been developed and optimized by HP Indigo for the printing of folding cartons

# HP Indigo 30000: An early adopter's view

US printer Multi-Packaging Solutions has signed up to be one of the first to receive a new HP Indigo folding carton press. Danielle Jerschefske reports

ulti-Packaging Solutions (MPS) produces print and packaging, including folding cartons, labels, merchandising and special packaging for the cosmetics, healthcare, horticulture, media and consumer markets.

Headquartered in New York City, MPS has fourteen plants across the US and three facilities in Europe. The business is focused on investing in key technologies across all production areas to provide full service packaging management to multinational clients.

Within its digital division, the packaging converter operates seventeen digital printing presses from various OEMs, including a 13in HP Indigo 6000 capable of producing folding cartons from roll stock up to 16 points thick.

The company has now taken the decision to extend its relationship with HP Indigo, and has signed up to become one of the first to receive its new 30000 model for printing folding cartons.

The new HP Indigo 30000 digital press offers a more robust design in a 29in (75cm) sheet-fed format capable of printing on material as thick as 24 points. It has seven printing stations that utilize HP Indigo's proprietary ElectroInk technology.

Remaining consistent with the Indigo line of presses, the 30000 is equipped with Esko front-end management software and a Tresu iCoat 30000 unit for aqueous and UV spot coating.

MPS is still deciding on the facility location to house its latest investment, but expects the new HP Indigo 30000 to be installed by early 2014.

John Cote, vice-president of innovation and manufacturing technology at MPS, says: 'This new HP Indigo press fills a void in high-quality production of folding cartons.

'All of our customers have a need for smaller run items or other reasons for why digital makes sense beyond proofing and concept phases, such as serialization and SKU proliferation.

'The quality of digital print continues to get closer to that of offset and the HP 30000 goes a long way toward closing the gap.'

While some conventional equipment can efficiently produce lower volumes of about 3,000 sheets, MPS explains that more often orders it receives are for only 500 to 800 sheets. 'Using a 40in Heidelberg UV offset press to produce such low volumes is not ideal,' says Cote. 'Our operators would spend more time in make-ready, wasting more material than producing saleable product. This new Indigo press will allow us to effectively service this market gap.'

Increasingly too, the value chain is shifting in preference towards just-in-time delivery to improve inventory management and cash flow while reducing obsolescence. With digital print technology, lower volume orders of folding cartons, labels or any other printed packaging can be produced profitably and delivered on-demand.

Cote explains that MPS's customers are ordering more frequently, on a monthly or weekly basis, which is not an easy need to manage using conventional printing equipment.

In servicing the healthcare market specifically, MPS is eager to gain the ability to print sequential number codes on carton stock. Cote says: 'The emergence of serialization for track and trace purposes is massive and already integrated into many industries' logistics chains.'

In 2004 the state of California passed ePedigree legislation requiring unit-level tracking of pharmaceutical products using serialized codes so to minimize the entrance of counterfeit products within the market. The medicine manufacturers will be responsible for including these codes (2D barcodes or RFID tags) on 50 percent of their products sold in California by 2015.

Come 2016, 100 percent of pharmaceutical products sold in California, which accounts for nine percent of the US market, will be required to have this traceability through packaging. It allows the possession of a particular product to be verified and reported.





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Boxes on a roll

Bell Packaging's new initiative, Jetbox Packaging, hopes to capitalize on those looking for innovation in boxes. David Pittman reports

ell Packaging is a well-established manufacturer of plastic packaging under the names Jetran, Petran and Retran. Established in 1979, the UK-based

manufacturer of transparent retail packaging produces these products in continuous reels from PVC, PET and PP at its plant in Luton, UK.

#### **Flat-packaged tubes**

From the company's factory in Luton, Bell Packaging operates the world's largest production facility for Jetran tubes.

Packed flat, Bell Packaging states that the reels of material are economical to ship and store, and easy to handle. The reels can then be used to create packaging of variable lengths and, using a patented converting process, in a variety of shapes.

This process creates crease lines in the plastic that, when folded and glued, produce packaging of different dimensions, from squares and triangles, to ovals and hexagons.

Jetran is manufactured using PVC and PP in gauges from 100 to 500 microns, while Petran is produced from PET. Visually identical, the properties of the different raw materials make Jetran and Petran applicable for different markets.

For instance, PET produces a glass-clear film with excellent strength that does not turn white when creased, and has a slightly softer feel than PVC. It also requires less energy to produce than PVC, and does not contain any heavy metals or fluorochlorohydrocarbons.

Jetran's traditional raw material, PVC, offers clarity and strength, and is cheaper to produce than PET.

# "Secondary use is key, particularly when it comes to plastic packaging"

Both are suitable for printing, and applicable for food contact applications, as is PP, which also offers a softer feel than both PVC and PET can be supplied with a range of surface finishes and colors, and is 30 percent lighter, but is traditionally not as transparent as the alternatives.

Jetbox Packaging is supplied in a reel before being formed into its final shape

#### Extension of the brand

Retran is an extension of the Jetran line, made from post-consumer plastic waste. It contains approximately 70 percent post-consumer waste, including soda bottles and sandwich cartons that would normally find their way to landfill.

Alongside the plastic tubes, Bell Packaging has developed and patented closures to help protect the products and add additional rigidity to the structures created from Jetran, Petran and Retran.

This includes end caps, themselves available in different colors and shapes, and biodegradable versions to complement the environmental credentials of Retran. After use, these require constant contact with other biodegrading materials, such as those commonly found in home composting, commercial composting, landfill and any areas where the end caps will be buried or in contact with soil. Whilst in these conditions the plastic end caps will biodegrade and become some of the soil's organic components within a period of 1-5 years, which compares favorably to a traditional plastic carrier bag which take between 20-80 years to degrade.

Bell Packaging's latest development in this area has been Jetlok,

Jetbox Packaging can be converted into a number of shapes, and printed with numerous processes

a staple-free end cap system that can be secured to Jetran tubes without the need for any staples, rivets or self-adhesive

labels. The locking mechanism on the cap gives total security until the pack is opened, and after use the Jetlok cap can be refitted, resealed and the finished pack reused. As an added feature, hangers can be fitted to the top caps.

Bell Packaging's recent history has also included growth in international markets, notably India, where it has had a footprint for nearly 15 years. It recently extended its market position by partnering with Globe Print n Pack, and has recorded double-digit sales growth in the years since starting to work with the Mumbai-based packaging producer. Bell Packaging also has customers across Europe, the US and in China.

#### Sustainable growth

Bell Packaging's managing director Peter Lennie says he realized the potential for the established Jetran manufacturing process to be used with fiber-based material after investigating ways to capitalize on growing environmental concerns.

This led to the creation of the Jetbox Packaging brand, which delivers fiber boxes on a reel, which, as with the PVC, PET and PP versions, are converted to allow them to be shaped in a variety of different ways.

'Some people need a product that falls between a rigid box and a folding carton,' says Lennie. 'We're seeing a lot of interest in it, as the packaging market is looking for new environmental initiatives.'

Jetbox is currently manufactured in a 350-micron thickness from both virgin and recycled grades, and Bell Packaging is working on producing thicker versions, up to 700 microns.

The board is receptive to any printing process, and Bell Packaging works with a network of partners to add print to the Jetbox material. Bell doesn't have print capabilities in-house, although does carry out foil printing to add detailing to its plastic products, so works with converters like Bridger Packaging in Letchworth, UK, which specializes in folding carton production and operates KBA presses.

One of the key markets for Jetran packaging is in the display and retailing of DIY products, such as curtain poles and blinds, and fluorescent lightbulbs. With Jetbox, Lennie highlights the confectionery gift market as one that could benefit from the product. Noticeably present in retail environments around special occasions and holidays, such as Christmas and Easter in Western markets, consumer product groups often offer their main confectionery brands in larger, multi-pack tubes and cartons manufactured in heavier board stocks.

Presentation boxes for spirits and beverages could also be favorable towards Jetbox, Lennie said.

'Jetbox opens the doors to new markets for us, and offers Bell Packaging big opportunities.'It is a new concept for the market, so we need to educate it on the product and process, and get the market to buy into it.'

#### Secondary use

For all the products Bell Packaging produces, a secondary use is key to Lennie. From Jetran plastic tubes to the new Jetbox range, he sees it as vital that packaging is designed with a secondary use built in, such as a container after the main product has been consumed or used.

For instance, Jetran can be combined with a printed insert to create the highvalue printed appearance associated with conventional cartons and tubes, but this can then be removed to create an unbranded, see-through container for various items.

The use of Jetlok, which can be opened and resealed, means that these containers then become secure devices for holding foodstuffs through to homewares.

'Secondary use is key, particularly when it comes to plastic packaging. We need to be doing what we can to stop packaging going to landfill, and offering consumers the opportunity to reuse cartons and tubes is a primary way of doing this.'



# The past, the present and the future of ArtiosCAD

ArtiosCAD, Esko's flagship packaging structural design software, celebrated its 15th birthday in 2013, and David Pittman spoke to the man currently responsible for the system about the past, the present and the future of the software.

ArtiosCAD is recognized around the world as the leading structural design software for the packaging market, with tools dedicated specifically for design, product development, virtual prototyping and manufacturing, and is well suited for use in the folding carton and corrugated markets, as well as the creation of POP, POS and FSDU displays.

ArtiosCAD is one of Esko's core products and is seen as essential to the company's plans to help connect various stakeholders up and down the packaging supply chain, whether directly or through functions of the software that have found their way into other Esko products.

Its roots were laid in the UK during the late 1970s when Simon James and friends founded Lasercomb. This enterprise focused heavily on CAD/CAM work in the folding carton market, as well as dealing with tooling and plate making, and led to the establishment of Lasercmb Americas.

It was during this phase that James and the Lasercomb team decided to focus on their software activities, and spun out their tooling operations.

Lasercomb and its software eventually become part of the Esko family via acquisition by Barco Graphics and Esko.

Esko's structural design product manager Richard Deroo says it was this heritage that helped the ArtiosCAD software become so well established in the packaging sector.

'Their experience in tooling meant that they had a rounded knowledge of pre-press production, as well as existing contact with the market and potential customers.'

Since the introduction of ArtiosCAD in the late 1990s, the biggest change in the market, in Deroo's eyes, is the use of 3D in packaging design.

'When ArtiosCAD first entered the market, there was no 3D; all design was done in two dimensions.

'Now, 3D is the industry standard, as it has made the design process faster and more intuitive; production assets are

automatically created and are used throughout the pre-press and production process by relevant people and systems.'

A recent release of the software was ArtiosCAD Enterprise, where all assets are stored in a centralized – yet private – corporate database in the cloud.

It enables dynamic online collaboration between design groups, CAD and graphic designers, suppliers, brand owners and production.

'Our customers want all their processes to work seamlessly through multiple stakeholders but through a central point of contact,' says Deroo.

'With ArtiosCAD Enterprise, multiple stakeholders can be involved in the same project without duplication of information, and in a timely manner, allowing central assets to be changed and all to be made aware of the changes.'

This collaboration trend extends beyond stakeholders to the software itself, which must increasingly be able to freely work and communicate with third-party applications, such as MIS and ERP tools.

'This information is often important to each step in the process so needs to be passed along, but we also need to reduce the risk of duplication and human input error, so software integration serves a valuable purpose.'

Deroo says this is one of the main functions being asked of Esko and its products by customers. Esko receives feedback on what the next versions of ArtiosCAD should include from its global user base through events such as EskoWorld, its user conference. The 2013 event was its biggest to date, and Deroo notes that there are more than 14,000 licenses worldwide, so, 'there's no shortage of requests on the wish list.

'Our customers are asking us to help them do more and increase productivity, with integration central to this, and we're working on ways to seamlessly integrate all their operations and collaborate globally.'



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# Packaging to love

UK printer RCS is using digital printing to create short-run packaging work that appeals to the emotions of consumers. David Pittman spoke to its managing director Michael Todd about packaging to love, and how the trade can benefit.

K-based printer RCS is on a mission to create a love affair between consumers and personalized packaging.

This involves taking a product that has been commoditized, such as folding cartons, and making them a value-add to the item being bought that consumers are willing to pay for.

The market for personalized packaging is very minimal says RCS managing director Michael Todd, but he hopes it will be a big market in the future for the printer. RCS wants to be at the forefront of its development using digital.

'There are a huge number of printers using digital in a similar way. We've always tried to be different and use technology in innovative ways.'

Todd says personalization also negates concerns about the cost per sheet, which many printers and converters place over and above other issues. 'One of the first questions I get asked is: "What is the cost per sheet?". That's the wrong question; with personalized products you should be asking how much can I charge?

'Personalization of printed products creates an emotional attachment. That is where the real value lies, and will allow us to charge more per product.

'Cost should only be an issue if you're comparing digital against conventional litho presses, but if you're using a digital press to produce your everyday work you've not properly understood the potential.'

#### Potential of digital

Todd admits that RCS itself has previously slipped into this routine. RCS has long been a convert to digital printing, investing in an early version of the HP Indigo family, and working with other systems from a host of press manufacturers, such as Xeikon, Konika Minolta and Xerox. Todd states 'Some of these systems have been utilized in the wrong way to produce work that could otherwise have been printed conventionally. We're determined not to let this happen again.'.

RCS's most recent investment has been in a Screen Truepress JetSX B2 format unit. Launched at Ipex 2010, Todd was shown the ability of the press to handle sheet-fed heavy board stock, up to 600 microns thick, in a B2 size at Drupa 2012.

'B2 format digital presses are few and far between, and the ability to print flat is a big bonus as it means we're able to print thicker materials that are more suited to the packaging market. A lot of digital carton printing is currently done on thinner substrates, which are not always useful to the market.'

He was also shown how using inkjet, which effectively sprays the ink onto the substrate surface rather than rolling it on, the Truepress JetSX can be used to print



already cut and creased material.

By printing on material already converted, RCS is able to produce very short runs of different designs and sizes for different applications from carton blanks held in stock, which are then loaded onto the press in the required volume and printed as the final stage, compared to the traditional process of cutting and creasing a printed sheet, which requires set-up time and incurs costs due to the need to produce a diecutting plate for each version.

Wim Koning, Screen's EMEA business development manager for the Truepress JetSX, says: 'Die-cutting is the biggest issue in the production of digitally printed cartons as it does not sit well with the model for personalized printing. It's a recipe for disaster.

'Unless you have 20 die-cutting units, each set-up to a specific pattern and only producing that cut, then it is virtually impossible to handle the demands of personalization. I don't know anyone running 20 die-cutting stations, and I can't see any other way to create personalized packaging than to covert the material before printing.'

Koning likens the potential of personalized packaging to the market for photobooks. Introduced at the start of this century, photobooks are a relatively recent product that has been introduced to the market and has gone hand-in-hand with the growth in online retail.

'The market for photobooks didn't exist 10 years ago but is now worth hundreds of millions of Euros as consumers have become used to the fact that they can produce their own books with personalized images and text.

'The market for personalized packaging doesn't currently exist, but the potential is the same. It's déjà vu.

'Consumers don't see the cost as prohibitive, and why wouldn't they

personalize packaging for a little extra cost? For printers, how else can you add £5 to the price of packaging?'

Once more, the term "emotion" is central. 'Creating an emotional attachment is central to personalization.'

Koning points to gifts for new-born babies as an example of a product category readymade for the introduction of personalized packaging, as friends and family look to add emotional value to presents for new parents.

#### Reliability

Installed at the start of 2013, Todd notes that RCS has had no unscheduled maintenance periods with the Screen Truepress JetSX, with only scheduled stops for software upgrades and small tweaks held in the first few months of operation.

Todd says: 'Reliability is paramount for this type of machine. Much like we are determined to avoid running volumebased work on the press, we don't want it to be out of action half of the time.'

Koning adds that as the Screen digital press can print on unprimed substrates, the value chain is extended at both the start of production, and at the end by making printing the last stage.

#### Winning the market over

RCS is already starting to see a growing volume of personalized work being run on the press, which it is sourcing from its traditional print reseller customer base, direct orders via web-to-print portals, and through arrangements with overseas trade customers.

In the latter scenario, RCS has started working with a Dutch retailer to produce various products, such as personalized playing cards.

The ability to charge more for a personalized printed product has allowed RCS to print for this European partner as it can afford to take on the business and spend a small amount on shipping, a scenario that would be impossible for volume products and those that can be more easily produced locally.

This relationship was cultivated by Screen who has used its network of contacts to set-up the meeting between Todd and the retailer, and was able to help RCS thoroughly prepare its proposal.

Koning adds: 'Ultimately it is in Screen's interest for our customers to be doing well. RCS is very innovative and has developed many excellent new ideas and we are only too pleased to help them create a market for the products they can produce using our technology.'

Screen has also helped RCS manage the production cycle of personalized work by supplying it with workflow technology to support the Truepress JetSX. 'It's imperative to automate the production process, especially in print environments that are fed by web-to-print and web-topack portals,' says Koning.

'New technology creates new opportunities and applications, but the hardest part during the early stages of a market emerging is getting people to understand and see the potential.'

Todd adds: 'There is a level of education that needs to take place in the market. Many don't get digital, and don't understand the benefits it can bring. The packaging market in particular still thinks very much in terms of volume work.'

To aid this education, RCS demonstrated a number of personalized packaging and gift products at the recent North Print & Pack event. It also produced a calendar counting down the final week to the show, which was distributed to 3,000 of those who had registered for the event.

These products also showcased other digital production techniques, namely Scodix image enhancement and the Highcon digital cutting and creasing. The world's first Highcon Euclid unit has recently been installed at Antilope in Belgium, with fellow UK printer Glossop Cartons taking a unit as well.

'Like photobooks, it's difficult to explain the potential over the phone' says Koning. 'People need to see it to believe it.'

Todd concludes: 'We've got to build the market for personalized packaging and gifting, and cultivate demand. We're determined to make it happen, and will be working with the industry and with consumers directly to ensure it does.'







# The Perfume Princess' packaging

Sappi has helped German perfumer Julia John create the right impact with the packaging for her first own-brand fragrance.

nce upon a time, there was a little girl who was given an empty Chanel N°5 bottle to play with when she was in pre-school, with the scent of the fragrance remaining in the bottle and

inspiring her imagination.

That young girl was Julia John, who grew up in Stuttgart, Germany and went on to study business and information/ communications technology.

Two decades on, and the scent from the Chanel N°5 bottle continued to linger, and in 2009 she embarked on her career as a perfumer by studying the trade in Grasse, Southern France, before launching her own fragrance, animi.

'The creation of my first fragrance was like creating a symphony,' says John. 'It opened up a whole new world of scent to me.'

Animi, produced in France, was initially only available for purchase via her website, but is now marketed in selected perfumeries and boutiques in her home town of Stuttgart, before becoming available in London and Dubai.

For the packaging, John looked for a unique appearance that makes her perfume stand out with its elegant design.

This has been achieved with the aid of Sappi, which has worked to assist John in achieving her goal of creating a standout perfume product. 'As I heard this tale, I found the idea was so exciting and touching that we wanted to support the development of the packaging for the product,' says Lars Scheidweiler, product group manager for rigid packaging at Sappi in Alfeld.

Sappi provided Algro Design Duo, which is coated symmetrically on both sides, for the high-quality solid bleached board used for the perfume bottle packaging, as well as for sample vial cards, and Achilles contributed its expertise in package finishing to bring the luxury product to market.

From John's perspective, the packaging is a means to catch the eye of consumers, providing the all-important first impression. 'The right corporate design is the only way to deliver the message for a positive perception. With animi, I combined an outstanding scent with the best ingredients from the world of marketing.'

Around 30 samples, incorporating a wide variety of embellishment techniques, were evaluated by John, before deciding on a stripped-down, elegant version of the packaging that she believed would make it stand out.

As animi is available in two variations, a perfume and a lighter eau de parfum, with each available in 30ml and 50ml sizes, Achilles produced a total of four different carton types, plus a sample vial card, from Sappi Algro Design Duo. Both cartons are similar in their design, but have a distinctive look, with the eau de parfum in white and the perfume packaging in black. The sample vial card design is also black with a subtle background image.

To create the perfume box, Algro Design was printed in black, with knock-out animi brand name lettering, showing off the original Algro Design surface design. A scratch-proof protective Achilles special matte brand film was then applied and the lettering was finished in white UV gloss screen printing to emphasize the surface.

'There are virtually no matte black perfume cartons for women on the market, so this really enhanced the uniqueness of my perfume,' points out John.

For the white eau de parfum box, Algro Design in its original white form was printed with black lettering. Once again, the matte film from Achilles was applied. The lettering and the animi logo were emphasized with black gloss print. The reverse side of the carton for the inside of the box was also printed in black.

This has created packaging that is helping John achieve what she has been working towards since she was a little girl, by bringing together the fragrance, the minimalist bottle with a simple label and luxury boxes to create brand identity to take animi into Europe's top perfumeries, and beyond.



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# A new dawn for DGpS

What began as a renaissance of the former Drent Goebel company has blossomed into a new venture that supports existing users worldwide, continues to adapt and develop its machines, and is also now on the threshold of launching brand new technology aimed at the flexible packaging market. Nick Coombes reports

eing able to cherry-pick experienced staff from a defunct but well respected manufacturer was the easy part, according to Peter Kloppers, one half of the driving force behind DG press ServiceS (DGpS). Along with partner Remko Koolbergen, Kloppers has built a unique and highly specialized team that is effective as a service and parts supplier to existing Drent Goebel customers, a rebuilder of used Drent Goebel technology, often for different market applications, and now a designer and manufacturer of what many believe will set a new benchmark for web offset production of flexible packaging material.

In acquiring the intellectual property of the former manufacturer, DGpS also inherited a full list of the machines sold and installed in the previous two decades, including full specifications, service histories and software upgrades. With an estimated 800 presses in operation worldwide, DGpS can draw upon the experience of the more than 500 with whom they are now in regular contact. According to Kloppers, 'there are Gazelles and Visions out there, producing a variety of work.

'But, in particular, there are around 50 of the more sophisticated variable size sleeve offset press models running flexible packaging, so we know there is existing and potential demand for that type of technology.'

From a staff of 12, working from a small industrial unit, Kloppers and Koolbergen set their sights on refurbishing the former Drent Goebel plant, despite its size being way beyond what DGpS can currently utilize.

By January 2013, after a €1.3 million investment, the

building was ready for occupation, and the current staff of 32 moved in. The site, which offers 7,500 sq m of production and administration space, is where the new press technology has been created and will be manufactured in time for its launch under the brand name Thallo at Labelexpo Europe.

With much of the global demand for flexible packaging being supplied by gravure and flexo printing techniques, the concept of an offset alternative might appear to be a brave, if somewhat risky, gamble. Not so, according to Kloppers, who says: 'There are a number of market pressures that impinge on the decision of which press technology to install.

'Order sizes are decreasing at the same time as quality demands are increasing. Sustainability is sounding the death knell for solvents, and then there is the issue of ink migration in food packaging. Finally, time-to-market is becoming a deciding factor.'

Knowing that there still exists debate over the profit/payback of what are customarily known as "generation one presses", the new concept needed to offer a number of basics: a small footprint because floorspace (especially extensions) are expensive; a short payback on investment to appease the financiers; a high degree of production flexibility, by way of modular design for subsequent reconfiguration; and not least, the simple operation that the offset process provides. Understanding rotary technology well, and seeing offset as an attractive alternative for the converter, DGpS set about developing a feasible process to capitalize on the burgeoning demand for new capacity.



With the list of talents employed at DGpS including the former designers of the first variable size sleeve offset press, Kloppers and Koolbergen reckoned they had a head start over any rival. More than 40 years of experience in web offset technology, in all sectors from business forms to labels, and cartons to flexible packaging, allied to unrivalled knowhow in manufacturing, operating, maintenance and repair, were put to good use.

The result is a very sharp focus on what matters to those producing flexible packaging, and those buying it: a good price to performance ratio. 'The new Thallo will be more cost effective than any other machine on the market – it will waste less substrate – have a more stable production process for consistent print quality – and enjoy more up-time,' says Kloppers.

He highlights foolproof job changing and maintenance, as well as a set-up wizard as key elements in the Thallo's design. His point is that the Thallo will answer criticisms of, and doubts about generation one machines.

Available in web widths between 520-1,050mm, with a range of stepless repeats between 406-762mm (16-30in), the Thallo will be capable of handling materials from 12 to 200 microns. It has a new and improved dampening system and a rigid size change mechanism.

Designed for ease of operation, it has simplified HMI operating screens, a sleeve handling/order change support system, the wizard to assist job set-up and optional OEE measurement. Settings, which are pre-determined at the prepress stage are constantly monitored and fed back to ensure the press remains at its optimal performance level. The benefits include the requirement for a lower skill base to maximize results, the employment of fewer operatives, and an overall improvement in management control.

One feature that particularly excites Kloppers is the new design of sleeves for the Thallo. It will allow converters to use significantly cheaper sleeves that will be more stable and durable. The Thallo will also accommodate those converters who are currently using conventional offset sleeves and other proprietary sleeve technology.

Turning to the Thallo's modules, Koolbergen said the key

improvements to existing techniques will be found in: the web tension measurement, the motion control, the unwind/rewind technology, the cooling cylinders, the pulling cylinders, the guide rollers, the ink trays and ink train, and the option of flexo and rotogravure units, many of which, like register control, ink fountain, web video, curing systems and splicers, can all be specified by the individual converter.

What is also remarkable, according to DGpS, is the cooperation it has received in developing the Thallo from the Uteco Group, one of the leading global manufacturers of flexo printing presses.

Uteco will assist with the development of flexo and rotogravure units that can be integrated into the Thallo line, and will become an important partner for market penetration. Koolbergen says: 'Uteco has an established worldwide sales network in our target markets. We see their commitment as confirmation that our development is in line with future market demand.'

All in all, it's an ambitious project, but one for which DGpS believes it has set realistic deadlines.

Kloppers says: 'We will have design and manufacturing drawings ready in time to be able to build and show a static unit at the Brussels show in September. By the end of the year, or early 2014, we will complete two beta Thallo 850 machines and run them in production environments with selected customers throughout 2014 and into 2015, by which time the first series machines will be rolling off the line in time for us to launch fully at Drupa 2016.'

He adds: 'We have a shortlist of experienced companies who would make ideal beta sites, and have every confidence that these will turn into orders for series machines. For the others, it's a letter of intent to secure a production slot.'

To see what Peter Kloppers and Remko Koolbergen have achieved to date leaves you in no doubt that their confidence in the new Thallo series is well placed.

The market will have its first chance to see and discuss the technology at Labelexpo, and it would be a brave man to bet against it succeeding.

# Package printing makes return to Labelexpo Europe

2013 will see package printing return to hall 12 at Labelexpo Europe. David Pittman reports

abelexpo Global Series is to continue its look at the opportunities the package printing market presents the label market with the return of package printing at Labelexpo Europe 2013.

Labelexpo Europe 2013 has been given a magic theme this year, with "seven halls of wonder" showing "creative artistry and magical innovation".

Package printing is part of this mix that is due to make Labelexpo Europe 2013 the biggest yet, with more than 90 new exhibitors and a record amount of floor space to be occupied – more than 30,000 sq m (more than 323,000 sq ft).

This is the third Labelexpo Global Series event where package printing will have a defined presence, after debuting with the Package Printing Zone at Labelexpo Europe 2011 and returning at last year's Labelexpo Americas with the Package Printing Workshops.

This year, package printing will again be used to highlight new ways for label printers and converters to add value to their business, and demonstrate the production of folding cartons, flexible packaging and tube laminates.

Both digital and conventional printing will be showcased as part of the workshop sessions in order to provide label printers interested in growing into the packaging market with information on both processes.

This will see Xeikon showcase digital printing of carton packaging using a 3500 model, while Nuova Gidue will have a Combat M3 flexo press producing flexible packaging.

At 11am and 3pm of the first three days of the show, and at 11am on day four, the two presses will demonstrate their respective technologies and suitability to print packaging to attendees.

This will see them produce flexible and carton packaging to match the labels produced along the Inkjet Trail, which will show how different inkje technologies compare when producing the same labels on the same substrates.



From adhesives and inks, to materials and printing presses, numerous pieces of equipment for package printing will be on show at Labelexpo Europe 2013

"Package printing will again be used to highlight new ways for label printers and converters to add value to their business"

#### **Digital carton printing**

Xeikon's footprint in the feature area will look at the "most compact Roll2carton solution", as a part of its folding carton suite.

The Xeikon 3500 digital press will be equipped with a digital varnish print station applying Xekon's Durable Clear toner, and an in-line die-cutting and stripping unit built by Switzerland's Bograma.

The cartons will be printed in CMYK in one pass, along with Durable Clear to provide extra protection to the print in a single process. The web will then be sheeted, using a full rotary process with a variable repeat length to keep waste to a minimum. The sheets will then be fed into a rotary die-cutting station with magnetic plates, with waste stripped and the printed cartons stacked.

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.

# Conventional flexible package printing

Nuova Gidue's M3 has been upgraded to include the company's Digital Flexo technology for a wide range of supported and unsupported substrates. Digital Flexo is a system that transforms many of the press set-up and configuration operations from a manual to an automated process, meaning printers no longer need carry out certain pre-press operations and register adjustments.

Printing during set-up and production is automatically operated by the press. Digital "eyes" and "fingers", a Print-Tutor camera/servo





combination, on each print unit replaces the hands and eyes of the operator.

Nuova Gidue says this technology delivers closed-loop automation of press operations, standardization of press performances, digital flow networking and all-in-one-pass production.

Dot gain is also "digitally" controlled and adjusted to ensure print quality during production, and waste is reduced to "digital" numbers of less than 10m for an eight-color job.

In hall 12, the M3 will be used to print lids and pouches, and show how the Digital Flexo technology can benefit this production.

#### Award winners

The package printing feature area will also play host to the Pro Carton/ECMA Carton Award Roadshow, showcasing award-winning cartons from across Europe.

The 2013 Pro Carton/ECMA Carton Award winners will be announced at the ECMA Congress in Dubrovnik, Croatia the week before Labelexpo Europe, and this will be the premiere of the winners and finalists.

Categories in the 2013 awards program include beverages, confectionery, beauty and cosmetics, food, non-food, pharmaceuticals, shelf-ready and display, and volume markets. Special awards will be presented, including Carton of the Year, Most Innovative and the Sustainability Award.

Carton of the Year was claimed in 2012 by the Taittinger Rose Lens entry, produced by VG Angoulême using materials from both Iggesund Paperboard and Mayr-Melnhof Karton.

#### Package printing around the show

As well as the dedicated feature area in hall 12, there are numerous exhibitors around the show who will be presenting their product portfolios and launching products suited to package printing. This ranges from pre-press and print consumables suppliers, to press manufacturers and finishing equipment specialists.

Both Xeikon and Nuova Gidue will have locations separate to the package printing feature area, as will industry suppliers such as Prati, Nilpeter, Flint, BST, Unilux and Sistrade.

The biggest of these, by area, will be HP which is to host "Print Your Future", situated on the patio area accessible from halls 5 and 9. Here, it will present products and systems from HP Indigo and its partners, and explain how they are working to innovate the label and package printing market for the benefit of converters and their customers. HP partners that will be showcased in "Print your Future" include BG, Kama, Karlville, Highcon, Scodix, Tresu, Totani, Polar, AVT, Michelman, Pulse Roll Label Products, Paragon, Sun Chemical, Actega, Ashland, Prisme Technologies, Esko, CERM, Label Traxx, Theurer, ATT, ProofTag, Color Logic and Avery Dennison.

Many of these partners will also have a direct exhibition space elsewhere at the show, such as Esko in Hall 5 and Pulse in Hall 7.

Labelexpo Europe takes place in Brussels, Belgium on September 24-27. The show is open from 10:00 to 17:00 on day one, until 18:00 on days two and three, and until 16:00 on day four. The package printing feature area is located in hall 12.

Please turn over for a preview of those stands worth visiting if you're a label printing looking to expand into package printing.

HP Indigo will have a large presence at Labelexpo Europe 2013, showing its new technologies for the flexible packaging and carton markets, as well as that of suppliers

# Conventional press technology

## **Goss International**

## Stand 7L22

Goss International is to show its Sunday Vpak web offset presses for label, folding carton, flexible packaging and pre-print applications. The specialized Goss Sunday Vpak presses were designed from the ground up to allow packaging producers to fully exploit the productivity, print quality, process automation and low-cost short-run agility advantages of the latest advances in web offset technology. Quick-change sleeve technology allows infinitely variable repeat settings within the design range of each press model, while force-loaded cylinders extend the versatility, accommodating a wide range of substrates and callipers.



from the ground up to allow packaging producers to exploit the latest advances in web offset technology

# Nuova Gidue

# Stand 11R20 and 11Q28

Nuova Gidue will present a trio of new Digital Flexo press lines and a new entry-level model, featuring 18 enhancements. Based on the Nuova Gidue Digital Flexo project, the new technologies will deliver closed-loop automation of press operations, standardization of press performances, digital flow networking, all-in-one-pass production, and best-in-class productivity, waste and set-up times for the labels and packaging industries. The new M3 DF offers Digital Flexo technology for a wide range of supported and unsupported substrates.

## Nilpeter

#### Stands 7L60 and 7L90

Nilpeter is introducing two new flexo presses, and in-line ancillaries, including the FA-4\* for printing labels and flexible packaging. The FA-4\* has a web width of 420mm (16.5in), an extra short web path and a top speed of 175m/ min. (574 ft./min). It will also launch the FB-3, with a top speed of 228m/min (750ft/min) on webs up to 350mm (13.75in) wide.

# Omet

## 6H90

Italian press manufacturer Omet is to continue its 50th birthday celebrations at Labelexpo Europe 2013. This will include a major upgrade to its Varyflex platform, which are now available in larger widths, up to 850mm. Omet said this overhaul has the objective of bringing the Varyflex in direct competition with traditional larger presses for packaging printing. Omet will also show the XFlex X6 with offset groups with sleeves and the XFlex X4.



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#### MPS

#### 11Q40

MPS will use the show to expand its EF flexo press line to three versions; a standard model with a basic automation package, while two additional packages can be configured to increase the productivity of the EF press. MPS will also unveil its new EB cost-effective flexo press, and its UV LED dryer technology. The theme of the MPS stand will be "The Choice is Yours" to illustrate the range of presses now offered by MPS in response to market demand.

#### Edale

#### Stand 7M60

Edale will be showing its next generation label and flexible packaging press, the FL-3. Edale's priority when designing the FL-3 was to create a press tailored specifically to the label market, with the

scope to venture into flexible packaging applications should customer demands change. As a result, the FL-3 offers quick set-up times whilst generating minimal waste. The impression pre-setting system allows the operator to set the impression once they can then change between repeats without the need to reset. As well as this, the company will be promoting its Gamma machine - the Gamma is a highly versatile platform, with the "plug and play" converting section allowing users to swap in and out of different converting, laminating, winding or printing options to facilitate the production of value-added products. The Gamma press allows for printing on a wide range of substrates with typical applications varying from labels, flexible packaging and cartons.

#### Müller Martini Stand 5D40

Müller Martini will be showcasing the numerous options that its printing press range offers for the production of labels, shrink sleeves and flexible packaging. Visitors will learn first-hand about the latest developments for the VSOP and Alprinta V printing presses, with a focus on pre-press and print finishing, through to the printing process itself. Both variable size printing presses enable a high degree of diversity in offset printing. The integration of flexo, rotogravure and digital printing for package printing is possible, as are a wide range of in-line finishing processes for print products.









#### **Multitec**

#### Stand 7M58

Multitec will be showcasing its Ecoflex VSi press on its stand. The press configuration, as sold to a customer in Zambia, will include large diameter chilled drum impression rolls, UV mounted on the chill roll for unsupported film capability, short web path, quick-change plate cylinders, open access print units and a servo driven in-feed system. The latest development in this press is the new die-cutting unit, which is capable of cutting odd shaped dies and rewinding the complex waste patterns at high speeds. Also on display will be the movable cold foil, movable turnbar on rails and a newly developed delam-relam system, also on rails.

## Digital print technology

#### iSys Label

#### Stand 12U108

iSys Label will show the Edge 850 and Apex 1290, short to mid run digital printing systems to deliver high-resolution graphics, photos and barcodes on an array of die-cut, kiss-cut and continuous roll substrates for any market or industry.

#### **Xeikon**

#### 9H45

Xeikon will have it strongest presence yet at a label show at this year's Labelexpo Europe, and will show both technical and application developments. This includes the launch of ICE, the first dry toner capable of printing on PE; 3300 and 3500 digital label presses; and software. Further, printers who requested digital print samples through Xeikon's See the Proof campaign will be able to pick up their samples from the Xeikon stand in hall 9. Xeikon's digital printing capabilities will also be showcased daily in the package printing feature area in hall 12.

#### **HP Indigo**

#### Print your Future, Patio

HP Indigo will play host to the Print Your Future area, accessible from both halls 5 and 9, where it will showcase a number of printing solutions for the labels and packaging



markets, as well as allow key industry partners to present. This includes the likes of Highcon, AB Graphic, Michelman, Tresu and Kama. This will present visitors to the area with information on HP Indigo's own developments, such as the 20000 flexible packaging and 30000 folding carton presses, and the pre-press, finishing and consumables available to printers looking at digital printing as a way to enhance their operations.

#### Durst

#### Stand 9H57

Durst will launch the Tau 330 UV inkjet press with in-line digital laser finishing system at Labelexpo Europe 2013, as well as showcase the new Tau low-migration UV Inks from Sunjet. Durst says the Tau 330 together with the ink will expand the range of suitable applications for unsupported foils, such as blister packs and yogurt lids.

## Substrates

#### **Taghleef Industries**

#### Stand 5A75

Taghleef Industries will show a range of films for packaging and label applications, including its new Nativia generation of biaxiallyoriented packaging films made of PLA. Other products are to include BOPP and BOPLA bio-based films.

## Inks and coatings

#### Ruco

#### 11P70

Ruco will be showcasing its range of products for the decoration of high-quality, eye-catching labels, with a special focus on a new opaque white that is suitable for two different printing methods. 900UV1437 can be applied using both UV screen printing and UV flexographic printing, and comes in a low-viscosity and silicone-free formulation. It is highly reactive so that good curing and adhesion can be achieved even at high machine speeds. The ink has outstanding flow properties and is excellently suited for overprinting with UV flexographic, offset and letterpress inks. It offers good adhesion to a wide range of different substrates, including polyethylene, polypropylene, polyester and PVC, as well as paper and cardboard. It is also suited for over-embossing with standard hot embossing films.

#### Zeller+Gmelin

#### Stand 11P100

Zeller+Gmelin will show a range of UV inks developed for the label and packaging market for UV flexo, UV offset, UV waterless offset, EB offset, UV letterpress and UV screen. New developments include: UVALUX U70, a new UV offset ink offering designed to offer special adhesion properties on critical non-absorbent substrates like metalized film or cardboard; UV LED offset process inks, suitable for printing on temperature-sensitive substrates; and UVALUX varnishes and lacquers.

#### Flint Group

#### Stand 5B45

Flint Group will exhibit an expansive range of inks for all narrow web applications at Labelexpo Europe 2013, and will unveil new ink innovations including EkoCure UV LED inks and Lithocure Ancora low-migration UV offset inks for food label and package printing. The Speakers' Corner area of the Flint stand will see discussions on new ink innovations, industry trends and food packaging topics. Attendees will also have an opportunity to ask the experts about these topics, and more.

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Pulse Roll Label Products is to show new UV flexo inks, UV curable varnishes for wine labels and screen varnishes for high build, tactile or Braille applications. One of the new UV inks has been developed to give optimum adhesion on a wide range of impervious substrates rationalizing the use for just one ink, while the other is an ultra-high strength series developed to meet the demands of today's high speed printing presses using HD plates with very fine screen aniloxes. Pulse will also launch its own-brand UV flexo bright silver ink. Varnishes for digitally printed webs are available in gloss through to super-matte finishes as siliconized and overprintable/blockable versions. New screen varnishes have been formulated to optimize the adhesion properties for improved abrasion resistance. These varnishes can be used on a wide range

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of label and packaging substrates, such as antique wine label papers and synthetic substrates, using established flexo and rotary screen processes. UV rotary screen varnishes have also been specifically developed for Braille fonts. These include those used for pharmaceutical packaging, allowing the printed image to meet current CEN standards for dot heights, as well as other formulations suited for high build applications such as warning triangles.

#### Marabu 11P90

Marabu is to highlight its competence in rotary and flatbed screen printing, as well as digital, through inks. In the rotary screen printing sector, it will show the UltraRotaScreen UVSF and UVRS. Marabu is also responding to the growth in UV LED curing, with Ultrapack LEDC, applicable for both rotary and flatbed screen printing. Further new solutions presented at the show include extremely glossy 3D metallic effects through screen printing followed by hot stamping.

### Adhesives

#### Collano 12U75

Swiss adhesives specialist Collano will present its system for UV curable pressure-sensitive hot melt adhesives. Collano collaborated with UV lamp specialist Heraeus to develop a system that can yield 85 percent energy savings over conventional UV curing methods. The eco-friendly, UV curable pressure-sensitive hot melt adhesives are solvent-free, adhere to a wide range of substrates and are suitable for self-adhesive coatings, even on heat-sensitive labelstocks.

## Finishing and converting

#### API Foils Stand 6I10

API Foils will be displaying its latest hot and cold foil technologies, and promote the latest developments in cold foil technologies. API Foils' technical team will be on the stand discussing the considerations needed at every stage of the cold foiling process. API Foils will also be displaying its hot foiling products, as the company understands that decorative foil is never a one-sizefits-all solution. Hot foil is recognised as the premium solution, creating a true mirror-shine effect.

#### ITW Foils Stand 6J30

At Labelexpo 2013, ITW Foils is going to present its in-line decorative process, ITW EcoCast. EcoCast is an efficient holographic process in which effects are applied directly to printed sheets on press by means of a reusable holographic film





and a UV varnish, which is dried by UV light. Unlike other holographic options, this process creates an illusion, with no actual transfer of substance. UV-casted boards and papers contain no film, so they are recyclable and compostable, assuming all other products and processes used are sustainable as well. The production process itself also does not emit volatile organic compounds.

#### Rolling Optics 12W79

Rolling Optics has developed a new generation of micro-printed 3D foils to differentiate packaging and products in store, and to authenticate original products. Whether transparent or opaque, the 3D foil can be used in labels, over-laminates, window and sealing applications. Both overt and covert features can be integrated and the 3D foil used in security and authentication labels to eliminate the risk of packaging tampering and to protect against counterfeiting. The material is flexible and gives brand owners the freedom to decide motif, color, depth and size to match the look and feel of their corporate brand identity.

#### Delta Industrial

#### Stand 6J130

Delta Industrial will show Mod-Tech, a custom converting system for the die-cutting and lamination of challenging materials. The system will feature a variety of processes including multiple rotary die cuts, tight registration and lamination capabilities. Other Delta systems may include additional capabilities such as semi-rotary, full rotary and laser cutting.

#### Highcon

**Print Your Future area, Patio** Highcon is to exhibit at Labelexpo Europe 2013 as a partner of HP, and will be showcasing packages produced by the Highcon Euclid digital cutting and creasing machine. The Highcon Euclid incorporates the patent-pending DART system to produce creases and high-speed laser optics to cut sheets up to 760 x 1060mm (30 x 42in), enabling output from both conventional and digital presses. Highcon will also be arranging visits to see live demonstrations at the Plantin-Tetterode Highcon demo centre in Brussels, close to the exhibition centre.

#### Prati

#### 5C60

Prati's presence will focus on the new VEGAplus IML series and Jupiter 530. The VEGAplus IML is a converting machine for in-mold label production featuring an unwinder able to operate with large-size mother reels, die-cutting with insetting function and conveyor to take the finished labels to the stacker, where they are automatically pilled so as to make packaging easier for the operator. The Jupiter 530 is designed for processing film and unsupported material thanks to dedicated accessories, such as the Wizarm, capable of rewinding film substrates on a single winder. The spacers ensure precise rewinding of the material, while a flow of air exiting from micro holes eliminates any friction of the material being processed and preserves its integrity.

#### Matho

#### Stand 11R118

Matho will show a new baler press system, designed as a compact unit for

edge trims and/or matrix waste from one or more production machines.

## Plates and platemaking

#### AV Flexologic Stand 11S85

AV Flexologic will be exhibiting in cooperation with Toyobo, and showing its FAMM HS fully-automatic plate mounting machine with carousel. This machine can mount eight cylinders or sleeves with flexo printing plates in the correct positions in one sequence, meaning it can mount up to 800 sleeves or cylinders per day with a minimum of interference from the operator. Toyobo will show its Cosmolight and Printight printing plates.

### Tectonic International 5E35

Tectonic International will show both print inspection and plate mounting equipment on its stand, including systems from passive inspection through to 100 percent inspection of the whole web at full press speed, and the established Flexico V5 and V50 plate mounting machines. The patented V series plate mounting machines are the only machines available to provide a bed for the plate that has front to back and lateral adjustment for perfect registration, Tectonic says.

#### Tresu

#### Stand 11S100

Tresu will show its new iCoat 30000 coater for sheet-fed digital carton that



enables selective varnishing using interchangeable coating agents. It will be exhibited at the HP Indigo stand in hall 9, working alongside the new HP Indigo 30000 printer where it will form a full digital process line. The Ancillary aznd Concept divisions of Tresu show other products, such as the F10 iCon ink supply system, sealed chambered doctor blade systems that enable direct foam-free transfer of ink/coating to anilox cells, and a modular, uniquely configured mid-web printing and converting line for label, film and carton and packaging in widths up to 1,300mm (51.2in).

## Cleaning

#### Flexo Wash Stand 7L45

Flexo Wash has redeveloped its FW Handy XLA anilox roll cleaner so it can now deep-clean four rolls at the same time. Flexo Wash's parts washers have also been improved, and can now be customized to a higher degree, and the company has developed a machine to clean flat screens. The PK flat screen wash system allows customers to clean two flat screens simultaneously. These products will be showcased by Flexo Wash, alongside its plate washers, which can clean 20m of plates in one hour.

#### Meech

#### Stand 6G112

Meech International is showcasing its full web cleaning and static control ranges, including the recently launched Hyperion bars, the 971IPS and 929 IPS, and CyClean, its non-contact web cleaning system. For substrates such as paper or board that typically carry higher contamination levels, there is the Meech VacClean contact vacuum system.

## Inspection

#### Advanced Vision Technology Stand 6H60

Advanced Vision Technology (AVT) will introduce its new hologram inspection system. The 100 percent automatic inspection system combines traditional print inspection technologies, holographic foils inspection and hologram print applications. It is comprised of a combination of unique illumination and optics developed by AVT, and will debut as the first 100 percent inspection system in the market 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 will also introduce the next generation of its established PrintFlow print quality database, with an upgraded user interface, a new roll map display and expanded production management capabilities.

#### EyeC

#### Stand 7N115

EyeC is focused on high performance inspection systems for the printing, food and drink, pharmaceutical and cosmetic industries, and its product line includes systems for the printing of labels, foils, folding boxes and package inserts. The EyeC Proofiler is an 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. Additionally, the Proofiler can check Braille and verify barcodes. EyeC ProofRunner is the in-line counterpart to the Proofiler. The ProofRunner offers automatic 100 percent inspection, content verification based on the previously approved image.

#### Eltromat

#### Stand 6H165

Eltromat will show a range of print inspection technologies, such as the webvideo star, twin check 2.0, inco check and work flow systems. The new generation of Eltromat's twin check 2.0 100 percent print inspection system will be displayed for the first time, and is based on a new illumination unit, including RGB line scan cameras, which doubles the resolution. Even reflective materials or holograms can be inspected without pseudo errors. For web viewing, the webvideo star is now equipped with a new processing unit that makes the system completely scalable. Customers can choose to add different modules, such as a barcode or sample inspection system, or, if 100 percent inspection is required, the webvideo star can be upgraded to a complete twin check 2.0 and/or in-line color measurement.

#### Troika Systems

#### 11P107 Troika Systems will show its quality

control products designed to save time in press set-up for all flexo and gravure printers, and will be including two new items: P2P HD and an anilox roll volumetric calibration system. Plate 2 Print HD (P2P HD) has been designed to be a simple to use optical microscope for quality control on both plates and print. The new P2P HD has a five-megapixel array, with three zoom levels for



The latest Martin Automatic LRD transfer rewinder handles 800mm diameter rolls as standard, with larger diameter models available

analyzing print from a distance, and progressively moves into the print for closer analysis. The second new product has been developed to achieve the correct color density. The Troika system allows accurate volumetric calibration based on the mathematical measurements of spheres. Other products to be shown are the Anilox QC with anilox management system, Gravure QC with cylinder management system and FlexoPlate QC.

#### **PC Industries**

#### Stand 7L125

PC Industries will be showing its Guardian PQV 100 percent print defect detection system, Guardian OLP off-line proofing system, Guardian Mini low-cost, customizable inspection system and Graphic-Vision GV500 series digital web viewers. PC Industries' Guardian PQV and Mini systems feature the high-resolution cameras, GS1 datamatrix barcode decoding and OCR capabilities needed to verify and certify pharmaceutical packaging under the EU Falsified Medicines Directive. The PQV uses high-resolution line scan cameras, making it perfect for a variety of narrow to wide web and sheet-fed applications. The versatile Mini uses area scan cameras to provide inspection for narrow web, sheet-fed and packaging applications, and focused fields of inspection for verification of print features. The Guardian OLP is used off-press to verify production samples against customer-approved artwork. It provides layout dependent verification of text and graphical elements. The newest additions to PC Industries' web viewer line are the Graphic-Vision GV500 series digital web viewers. These easy-to-use systems showcase high-tech features including higher resolution cameras for exceptional image quality, touchscreen interface and long-lasting LED lighting.

## Ancillary equipment

### Harper Corporation of America Stand 11P135

Global anilox roll supplier Harper Corporation of America will deliver briefings on how its programs, services, surface technology and engravings can enhance efficient print repeatability and improve profitability. Harper representatives will be on hand to provide answers to questions regarding the company's latest developments, including the new HEX division, HarperScientific products and anilox engraving technologies. Furthermore, Harper will have on display the highly popular patent pending Phantom QD ink proofing system, plate sleeve and bridge sleeve designed to decrease downtime and minimize make ready.

#### **Martin Automatic**

#### Stand 7K90

Martin Automatic, will be exhibiting the latest versions of its MBS unwind/splicer and the LRD rewinder. The new compact MBS is designed for the label and narrow web markets, and is capable of running a wide variety of substrates. The latest version comes with new standard features that include ultrasonic sidelay sensors and spiral grooved rollers for handling film, paper, pressure-sensitive label stock, paperboard, tube laminates and filter media. The latest LRD transfer rewinder handles 800mm diameter rolls as standard, with larger diameter models available. New touchscreen controls include recipe functions so operators can quickly and easily store and recall the winding parameters of repeat jobs. The optional in-line slitter package has been enhanced to offer lateral adjustment of the slitter and anvil roller assembly for quicker set-up, fine tuning and changeover between jobs. The LRD offloads finished rolls automatically via one of several standard doffing ramp designs for full width, multiple ribbon or loosely wound rolls, without the need of a cart.

#### Cheshire Anilox Technology Stand 6H45

Cheshire Anilox Technology is to launch a new engraving system for UV printing applications, MaxfloUV, which maximizes the ink flow within the cells offering higher ink transfer at high speeds. The new engraving is particularly suited to be used with the latest generation of high-strength UV inks offering a more even and consistent lay down without over inking and spitting. Other systems to be shown by Cheshire Anilox Technology include Proflo, an engraving specifically developed for HD printing, and EasyFlo HD, for high-opacity whites.

#### Apex Group of Companies

#### 11Q30

Apex Group of Companies will show its lightweight series of UltraCell anilox rolls, the ReadyRoll advance in-stock roll program and GTTLABEL. The patented GTTLABEL roller employs an open slalom ink channel geometry allowing ink to "flow" precisely onto a printing plate. For those printers who don't require the high quality and precision that GTT yields, Apex offers its UltraCell and UltraCell+ conventional anilox rollers with an improved ceramic layer and all surface engravings possible.

#### JM Heaford

#### Stand 5E85

JM Heaford will be exhibiting and demonstrating four of its mounters and proofers. Included is the award-winning FTS model design, which simplifies and speeds up the mounting process. Other mounters on the stand will include sleeve and cylinder versions, tape dispensing systems, tape and plate knife cutting options and stepped camera options.



# China in print

With over 180,000 visitors, the China Print trade show, held on May 14–18, 2013, in Beijing, showcased the commitment of the major package print suppliers to the Chinese market. Andy Thomas reports.

eidelberg's new SX press platform made its debut on the Chinese market at China Print in the form of the Speedmaster SX 102 eight-color perfecting press. The standard Speedmaster SM 52 and SM 74 four-color presses made at the company's Chinese production facility in Qingpu near Shanghai were also on display. For package printing, the Speedmaster CD 102 five-color press was added to the Qingpu production program in spring last year. Heidelberg is the only European press manufacturer to have its own factory in China. Since it opened in 2005, the factory has produced over 900 presses of various formats. The presses were shown in the context of a total packaging workflow.

Heidelberg generates around 16 percent of its total sales in China, making it the biggest single market for the company. And market growth is expected to continue in the future.

Roland showed a 700 HiPrint six-color press with coating in 3B+ format, sold to Qingdao Jiabao Printing Packaging Co. At a press conference, Rafael Penuela, CEO of manroland sheetfed GmbH said he was delighted with the overall success achieved by the company since being acquired by Langley Holdings plc. Sales of new sheetfed offset presses are 'exceeding expectations', said Penuela, especially in the packaging and high-end commercial printing fields. During the show manroland arranged visits to Tianjin Tingzheng Printing & Packing Material Co., Ltd, the world's largest manufacturer of instant noodles, which currently has four six-color Roland 700 HiPrint presses with coating in 3B+ format in their its facility.

KBA used the show for the Asian launch of the large format Rapida 145 press. with a maximum sheet size of 1,060 x 1,450mm. The five-color Rapida 145, configured with coater, DriveTronic SIS sidelay-free infeed and non-stop configuration, was shown converting packaging on both paper and board. The press incorporates energy-saving VariDryBlue IR/hot-air dryers – important with the growing ecological awareness amongst Chinese printers.

The second conventional press on the KBA stand was a

five-color Rapida 105 with coater, extended delivery and board capability. The press was equipped with ErgoTronic ColorDrive automatic color measuring at the console and QualiTronic Professional for in-line color control and sheet inspection, features which have not yet become standard in China.

On the carton finshing side, Kama was showing its B2 format ProCut 76 die-cut/creaser with hot foil stamping with the new AutoRegister option. This checks and corrects the alignment of each sheet using a camera, allowing die-cut and finishing to an accuracy of one tenth of a millimeter, according to the company. This helps make short run carton production more feasible.

CEO Marcus Tralau said the show demonstrated an increased interest in high-quality finishing from Chinese converters, and the Dresden company returned with orders totaling €1 million. 'Some 30 percent of Kama's business now comes from China,' said Tralau.

Nuova Gidue launched its new M3 DF press. The press incorporates automated setting of both print pressure and register, allowing a 'hands-free' set up of an eight-color job with less than 10 meters waste and constant monitoring through the print run. The M3 press can handle both unsupported flexible packaging films down to 15 microns and up to 350 gsm cartons, and will be the centrepiece of the package printing zone at Labelexpo Europe in September.

MPS announced at the show that is has appointed Jebsen as its Chinese agent as it makes a major commitment to the Chinese package printing market.

'Jebsen already represents a lot of high-end European industrial manufacturers in the converting industry,' explains Eric Blomjous, international marketing manager MPS. 'The people have a track record of selling the highest level of equipment and providing technical service and support. They have sales offices in Beijing, Shanghai and Guangzhou and a presence throughout China.

'The market here was not ready five years ago but today it is and there is huge demand for high-quality products. The



Chinese market is looking for quality and performance and we will come here with our most advanced presses.'

Continues Blomjous: 'The mentality in China has become more long-term under the influence of global brands. As the price of labor increases, you cannot afford to put four operators on a press, so converters here are now prepared to invest in automation.'

Taiyo Kikai launched STF 340 multi-substrate flexo press, able to handle paper, films and light cartons and equipped with a range of finishing options including cold foiling, screen printing and inkjet heads.

#### **Digital**

HP Indigo announced growing interest amongst package print converters for its B2-format 10000 sheetfed press. Avery Dennison has added an HP Indigo 10000 to its plant in China to strengthen regional operations and better service customers in the retail apparel industry; and US-based Matlet Group US acquired the press to produce both commercial and innovative packaging products.

The company demonstrated a new red-fluorescing invisible ink for the HP Indigo 7000, 7500 and 7600 digital presses. Currently available on the HP Indigo 5600, HP Indigo ElectroInk UV Red is valuable for tracking and anti-counterfeiting features. It is expected to be available worldwide in September.

DuPont Packaging Graphics highlighted new technologies to increase the efficiency and imaging accuracy of flexographic printing. Supporting the established FAST thermal platemaking system was DuPont's new Cyrel DigiFlow workflow. New plate offerings included the Cyrel DSP and DFP, formulated for high solid ink density combined with minimum dot size and low dot gain characteristics, and Cyrel DFR a high durometer digital plate, long-running and clean printing and suitable for most ink types and substrates. Especially important for the Chinese market, Branded HDC sees the DuPont Cyrel logo embedded into the plate to reduce counterfeiting.

Chris Miller, Esko vice president for China, confirmed: 'While the economy of Europe and North America has been hit by the global economic slowdown, China and South East Asia have continued to grow. Driving this is a rapidly growing middle class that is now more likely to buy branded goods. As such, brand owners are relying on local operations to meet shorter turnaround times while maintaining consistently high quality results. This is required to develop customer recognition and foster long term loyalty.'

Esko was demonstrating its digital flexo solutions along

with partners Siegwerk, DuPont and Tesa and majoring on the Chinese launch of its Suite 12 workflow. This adds 3D functionality and enables mobile collaboration and web-based management workflows. Featuring release 12 of Automation Engine, Color Engine, Studio, WebCenter and the flagship editors ArtiosCAD, PackEdge, ArtPro and DeskPack, Esko's Suite 12 allows all players in the supply chain to participate in more flexible and timely design and approval of artwork files.

On the stand was a CDI Spark 2530 digital imager dedicated to label, folding carton and small volume flexo plate producers. A CDI Spark 4260 digital imager, allowing 'entrylevel' processing for larger size plates, was showcased on the stand of Chinese flexo plate company Huaguang. Also Esko's next-generation HD Flexo technology was demonstrated, an innovative solution for making digital flexo plates that offers a valid alternative for offset and gravure.

Esko also showed its Kongsberg XN24 table for digital carton finishing along with integrated ArtiosCAD software for structural design.

Kodak showcased a range of offset and flexo CtP technologies including the new Flexcel Direct system which provides direct laser engraving for flexographic sleeve production. In addition the Achieve All-in-One CtP system and Sonora XP process-free plates were demonstrated.

QuadTech launched its Color Quality Solution for packaging printers, which simplifies color preparation by using a standard spectral color measurement throughout the ink dispensing and printing stages. It includes in-line spectral data obtained from QuadTech's SpectralCam, ink formulation data from X-Rite and ink dispensing technology from Huber Group or other ink dispensing system suppliers.

Also for the package printer, QuadTech's Color Measurement System with SpectralCam HD now enables continuous, in-line monitoring of virtually all web-fed package materials with QuadTech's patent-pending web stabilizer technology. It captures images at 2,500dpi.

Randy Freeman, vice-president and general manager of packaging at QuadTech, confirmed the views of other interviewees about the fast growth of a high-quality package print sector in China: 'There has been a lot of investment in packaging and converting equipment that can deliver more complex packaging and label designs, as major brand owners seek an identical look for their products globally,' said Freeman. 'As a result, print suppliers must deliver identical results throughout the print run and from one print run to the next.'



## Market prepares for Latin America growth

James Quirk looks at the latest package printing developments in Latin America, with both OEMs and printers targeting growth in the region.

atin America is a key market for both OEMs and printers, with both making large investments to support growth and the potential in the market. Workflow specialist Enfocus is expanding its presence in Latin America as it looks to achieve double-digit yearon-year growth, and to take advantage of opportunities presented by changing market dynamics in the region.

The company will initially concentrate its efforts in Brazil, and then expand its services to surrounding countries. To support this expanded geographic focus, Enfocus has appointed Heysler Hey as its business development manager for Latin America.

Hey will be tasked with identifying and reporting local business requirements, strengthening the Enfocus organization and expanding its market position in the region. He joined Esko, of which Enfocus is a business unit, in 2001. For six years he specialized in installations and training. More recently, his responsibilities have included various roles from pre-sales and area sales manager, to regional sales manager for software business.

In this last position, he worked with a team of pre-sales engineers to manage relationships with dealers as well as

regional sales managers, defining and implementing sales strategies. During the last four years, software sales in the region increased by 250 percent. He has also worked on a number of projects based in Brazil.

Fabian Prudhomme, vice-president of Enfocus, said: 'We see a lot of exciting opportunities opening up in the Latin American region, where economic growth is currently more robust than in Europe or North America.

'Much like other high growth areas, Latin America over the past few years is experiencing the effects of a number of trends; our solutions can help our local customers to address the resulting challenges.'

Prudhomme cites moves by brand owners to delegate more responsibility to in-country suppliers, while local populations aspire to standards of living that come closer to their North American and European counterparts.

This results in higher expectations for the brands, including pressure on margins. All of this requires a new approach to operations for brand owners and all their entire Latin American supply chains. Prudhomme also highlighted increasing labor costs in Latin America, which are encouraging businesses to deploy more automation and more effectively utilize employees' time. Press manufacturers Heidelberg and Koenig & Bauer (KBA) have both made moves to extend their presence in the South American package printing market also.

Earlier this year, KBA flew some 60 print professionals from Argentina, Brazil, El Salvador, Guatemala, Cuba, Mexico and Peru to Germany to visit the KBA sheet-fed offset manufacturing facility in Radebeul, and German users of Rapida sheet-fed offset presses.

The visit was split in two, with the first one-week tour at the beginning of April specifically for packaging printers, with a second in mid-April targeted at representatives of commercial printing companies.

The packaging printers were first invited to press demonstrations in the KBA customer and training center, where they were introduced to a five-color Rapida 105 with in-line coater, a Rapida 106 with double coating and cold foil module, and a large format Rapida 145.

They were subsequently able to experience both medium and large format Rapida presses in a variety of configurations for in-line finishing in actual production at the rlc packaging group in Rüdersdorf near Berlin and at Kroha in Barleben.

KBA said it expects considerable



growth in Central and South America. Last year saw the founding of KBA Latina in Mexico City as a sales and service subsidiary responsible not only for Mexico, but also for Venezuela, Columbia, Ecuador, Peru and Bolivia.

Alongside preparations for a further KBA subsidiary in Sao Paulo, Brazil, plans to strengthen the company's local presence are already bearing fruit. In its first year, KBA Latina was able to report record sales of 47 printing units to Mexican print companies.

Heidelberg has likewise seen uptake of its technology in Mexico, with folding carton printer Cartograf recently purchasing a pair of Heidelberg presses as its looks to cement its position in the South American market.

It opened a new 50,000 sq ft plant in 2012, and is already planning to expand it to 180,000 sq ft. Furthermore, it plans to open a paper mill in support of its printing operations.

This has been supplemented by the decision to invest in a Speedmaster XL 162 very large format press, and a Speedmaster CX 102 from Heidelberg.

Cartograf founder Juan José Paramo said: 'Heidelberg offers multiple benefits: long tradition, good service, high local service part availability, great customer support, the best components and superior mechatronical production. I know that with Heidelberg my company is built on a firm foundation.'

André Schneider, general director of Heidelberg Mexico said: 'The investment decision of Cartograf strengthens the development of packaging print in Mexico and simultaneously underlines the leading position of Heidelberg in both commercial and packaging printing in this market.'

Folding carton converting machinery manufacturer Bobst has likewise reported success in South America recently, "We see a lot of exciting opportunities opening up in the Latin American region, where economic growth is currently more robust than in Europe or North America"

including claiming an award from Brazilian packaging magazine Embanews for the third year in a row.

Accucheck was chosen as an award winner in the Machines and Systems category, with representatives of Bobst Group Latinoamerica do Sul Ltda on hand at a ceremony in Sao Paulo to receive the award.

Accucheck joins Accubraille, in 2011, and smartGPS, in 2012, as Bobst systems to have won an award from Embanews. The Embanews Awards recognize the best in packaging manufacture and the most innovative packaging technologies. The award process involves an in-depth examination and testing of entries by a committee of representatives from industry organizations.

Accucheck is an in-line inspection system for folder gluers, able to identify a range of print and print related defects including hickeys and spots, as well as color variance down to a level of 1 Delta.

The system also identifies missing or defective text, can spot print defects on codes such as EAN/UPC, color or pharmaceutical codes, can recognize physical defects of the carton such as scratches or rubs, and can identify inaccurate die-cutting.

Accucheck is designed to work with Bobst's own Masterfold and Expertfold folder gluers.

In the finishing arena, print inspection



specialist PC Industries has named ISA International as its new exclusive agent in Latin America and the Caribbean.

ISA International specializes in the international sales of industrial equipment for the printing, converting and paper industries.

ISA International currently has offices through its local partners in 11 countries throughout the region. It also has two service centers to offer full technical support.

To serve these markets further, ISA International has recently launched a new website to inform its clients about a wide range of products, suppliers, and professional services.

These investments are just some of the major developments to have taken place across South and Central America in recent times, with many more manufacturers and printers investing in their technologies and processes as the package printing market in the region grows.



# China's tobacco market rolling with the times

Kevin Liu visited Changde Goldroc Co., Ltd in China to learn more about how the country's tobacco package printing industry is benefitting by transitioning from sheet-fed to roll-to-roll production.

n late June, Swiss manufacturer Pantec GS Systems and Beijing Spande Co., Ltd, its distributor in China, held an Open Day at Chinese tobacco package printing company Changde Goldroc Co., Ltd, to showcase roll-to-roll hot foiling and the potential this offers the country's tobacco packaging producers.

Changde Goldroc was founded in 1995 as a small company with only one sheet-fed offset press, and in less than two decades has developed into a large tobacco packaging printing operation running four Bobst rotary gravure printing presses with annual sales of more than 2 billion RMB (around US\$32.6 million).

Since 2003, the tobacco industry in China has experienced a significant adjustment under government intervention. As a result, many smallscale tobacco factories closed and several large tobacco groups were formed with new big brands. One example is Furongwang, a tobacco brand of China Tobacco Hunan Industrial Corporation. In 2011, the sales of this brand were over 1.1 million boxes, which means a big volume of packaging and printing, as well as big challenges for post-printing processes, especially hot foil stamping.

Cai Huabiao, deputy general manager of Changde Goldroc, says that along with the consolidation of the country's tobacco industry and creation of new brands, the tobacco packaging printing industry is being asked to deliver higher production volumes.

It was in this climate that Changde Goldroc bought four e-pack 850 rollfed foil stamping units from Pantec GS Systems. This caused a stir in the market when the sale of the four units, featuring the Cheetah rotary hot stamping process, was confirmed in autumn 2012 as a means for Changde Goldroc to make efficiency gains. It was these units that formed the basis of the Changde Goldroc Open Day in June, and attracted more than 200 guests from the Chinese tobacco packaging industry and label printing industry.

The on-site demonstration highlighted the foil stamping speed of the systems up to 120m/min, which equates to more than 14,000sph, while the speed of the flatbed equipment used previously by Changde Goldroc was 5,000sph.

Huabiao says: 'We've been updating our printing equipment and post-printing equipment to meet the increased production demands. The e-pack rollfed stamping machines can fulfill our requirements on speed and precision as well as our future development.'

For a roll-to-roll high-speed stamping machine, companies want to know that overlay accuracy can be guaranteed at such speeds.

Peter Frei, chief executive officer of Pantec GS Systems, explains that the Cheetah hot stamping process



actually delivers higher overprinting accuracy than sheet-fed technology. The tolerance of a Cheetah rotary roll-to-roll machine is +/- 0.10mm.

Frei says: 'We have been aware of the demand on high precision and speed foil stamping machines from the Chinese tobacco packaging and printing industry. The Cheetah roll-fed foil stamping technology is able to fulfill this demand.'

Changde Goldroc is not the only Chinese tobacco packaging printer to have made a recent investment in rollto-roll production, with Yunnan Qiaotong Package Printing Co., Ltd adding two units to its printing process.

This investment was made, says Frei, also in pursuit of work efficiency gains and to improve overprinting precision.

'Changde Goldroc is very satisfied with the significantly higher performance of Cheetah in our e-pack reel-to-reel lines,' says Frei. 'The company's enthusiasm has persuaded other firms following a similar strategy to substitute sheet-fed systems by web-fed. We believe other similar companies will follow this road in the future.'

#### **Cost-saving**

For Changde Goldroc, the conversion from sheet-fed to roll-to-toll technology has not only increased its production capacity, but brought about significant cost savings. Steven Ye, the representative of Pantec in China, says seamless integration between the roll-to-roll gravure printing machine, die-cutting unit and hot foil stamping equipment is achieved, and saves material wasteage at the gripper edge compared to traditional sheet-fed printing. A servo-driven foil saver results in further waste reduction during roll changes. Changde Goldroc has estimated that this technology saves as much as RMB 10 million in material losses.

In the case of Changde Goldroc, even though the Cheetah process was a more expensive initial outlay than a sheetfed stamping machine, the final cost is lower when the economic benefits are factored in.

#### Other markets

The Cheetah rotary technology can be used both off-line and in-line, and besides the tobacco packaging and printing industry, the rotary hot foil stamping machine presents opportunities in other packaging Frei highlights confectionery packaging in Europe, which is similar in nature to Chinese tobacco packaging in that it requires large volumes and high quality printing and converting. This represents, Frei says, a huge potential market for rotary stamping technology.

At the same time, the Pantec Rhino system, targeted at the label printing market, has a range of applications in narrow web rotary hot stamping.

'In France and Australia, several cases show how this technology is used for wine labels. We believe the Chinese label printing industry will join us.'

Frei concludes: 'The amount of hot foil in chocolate packaging, combined with the volumes of these products, shows a similar potential to tobacco packages in China.

'For visionary people who care about the strategy of a company, it's definitely worth watching what's going in China and start thinking about production philosophies in the future.'



# Lasers to give packaging the edge

Lasers have a key role to play in the production of flexible packaging of the future, with Micro Laser Technology's Frank Wagner telling David Pittman about the possibilities for the technology.

he fundamentals of laser technology have been around for nearly a 100 years, with initial developments accelerating in the second half of the 20th Century.

Laser technology has evolved greatly since it was first written about, as have its applications. From surgery and cosmetic applications to CDs and barcode scanners, through to military, law enforcement and industrial uses, lasers are now a common feature in many parts of everyday life.

The uptake of lasers in the processing of packaging has not been as fast, with reservations about its suitability persisting well into the 21st Century.

Frank Wagner, director of sales and marketing at Micro Laser Technology (MLT), says that as little as seven to eight years ago there were large concerns about the use of lasers in the packaging market, especially with relation to food due to worries about contamination and a laser's potential to alter a product's composition, but today it has become more accepted as packaging converters and professionals understand the process in more detail, and learn more about the role it can take in producing packaging that stands out on the shelf.

He notes that a large majority of processes that could be carried out using lasers are still performed using conventional methods, and so sees huge growth potential for laser processing in the packaging market in the years to come.

#### **Evolving market**

Conventional means of scoring, marking and selective weakening of packaging materials have used knives, but as packaging has evolved so the requirements have become more complex.

Easy opening mechanisms are now standard in flexible packaging, and new shapes that require a clean and finely creased edge are being brought to market. The ability to open and reseal packaging is also now a more prominent feature, especially in food packaging, such as cheese.

Marking and embossing are other elements that are being used to enhance the visual appeal of packaging.

Underlying all of these is the need to ensure the performance of packaging, and to not compromise the overall characteristics of the material, such as its barrier properties.

MLT's systems can accurately and reliably weaken monolayer foils up to 60 percent, while the smallest hole that can be created is approximately 40 microns. Wagner says: 'FMCG producers are not looking directly at the opening, rather they are looking at how they can create nicer packaging that is also functional. Laser processing technology provides them with many options.'

Environmental concerns are also driving change in the market, with paper laminated to foil becoming more popular over foil on foil compositions. 'This is a big trend in the market,' says Wagner.

'These materials are easier to convert using lasers as you can more finely control a laser and its flexibility makes it ideal for processing different material types.'

#### **Tailor-made systems**

MLT was formed in Munich in 2000 to capitalize on the potential lasers could play in material processing, and over the years has provided systems to a portfolio of customers operating in markets from food and beverage, to pharmaceuticals, tobacco and automotive.

Each system it produces is tailor-made to the requirements of the customer and their application, and extends beyond simply supplying a laser unit to produce holes and score materials.

Wagner says this covers the choice of optics and laser wave length, to the cooling and environment management systems needed to regulate and stabilize the heat-generating thermal



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Lasers allow the creation of easy opening and complex shapes with flexible packaging

process, and the waste and dust extraction systems used to eliminate contamination of the packaging from particles produced in the laser process.

Milka

MLT's systems can be placed directly onto the converting line, working in-line after the slitting station, and be used off-line. They can also be integrated into filling and packaging machines, with tolerance compensation during the packaging process for fast response times to any product or format changes that may occur.

MLT's stand-alone laser systems can be implemented either during the film extrusion or the rewind process.

All established widths of material can be treated at an average speed of 400m/min, depending on the individual application and scribing/scoring process. To create an easy opening feature, materials can be processed in the machine direction, cross direction or in all variations of free-form contour scribing

'We are a whole system manufacturer,' he says. 'We talk with each customer about their requirements and what they are hoping to achieve, as the composition of the systems depends on each application.

'Different lasers are suitable for different applications, so we need to look at the wave length, speed and reaction to choose the right one, as we need to look for all other peripheral components and devices, such as optics, cooling and filtering aspects.

'This all needs to be integrated, and we look at the software to connect all these elements of laser material processing.'

#### **Industry dialog**

Wagner adds: 'In most instances we need to talk to three departments: marketing, operations and then research and development (R&D). The overall theme from these three is that they are looking to reduce costs but at the same time upgrade their packaging solutions.'

This open dialog also permits new developments in the laser processing of packaging. Suppliers such as MLT are constantly informing the market, through direct contact with customers and at tradeshows around the world, about the newest developments in the technology, and what the latest capabilities are.

MLT and Wagner were recently in attendance at Propak Asia in Bangkok, as well as ICE Europe in Munich, with Propak in particular permitting the company to promote its capabilities, and that of laser processing.

However, with developments in this space driven by the needs of the market, those producing packaging also inform the likes of MLT about what they need and want when it comes to the scoring, selective weakening and perforation of flexible packaging.

'For some applications, established conventional processes, such as perforating materials with a hot needle, are acceptable means of converting packaging.

'However, many applications could be well served by the use of lasers, and some are only possible with lasers. There is room for all technologies on the market, and they can complement each other.'

He concluded: 'Like most segments of the package printing market, our customers are looking to become more efficient and make cost savings while also offering new solutions to consumers.

'That's why, when I say tailor-made, I'm talking about 30 percent of a system being bespoke to the customers' requirements, and using MLT's knowledge and experience in lasers and their performance characteristics to make the most of this technology in the packaging market.'





LTG ovens can be gas- or oil-fired, or powered by hot purified exhaust air from a fume incineration system 

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# Making the environmental case for metal decorating

Metal decorating is among the older techniques used to print packaging, but KBA-MetalPrint has developed a range of technology that is thoroughly up-to-date and at the leading edge of this highly specialized process. Nick Coombes reports

o understand today's metal decorating technology, you have to go back to the late 19th Century and start to trace the history of the process. When Druckmaschinenfabrik Mailänder built its first production machine in 1888, it was the beginning of a process that, through a continual program of development continues to be a benchmark for the industry today. In 1932, LTG built its first metal decorating oven for the famous blue Nivea Cream can, and the two companies merged in 1994 to become LTG Mailänder.

The new company was the world's first complete system supplier, using LTG's highly efficient range of air purification technology that had first used environmentally-friendly production as early as the 1960s. Three decades later, in 1995, Bauer + Kunzi developed the MetalStar technology, the first range of modular printing presses, and brought multi-color to the market at speeds of up to 9,000sph.

The final link in the chain was made with the creation of KBA MetalPrint in 2006, which combined Bauer + Kunzi with LTG Mailänder as part of the KBA Group.

Today, KBA-MetalPrint is a leading name in metal printing, coating and drying technology, with each installation tailored precisely to the customer's individual requirements and factory layout, using KBA-CleanAir's technology that focuses on the recycling of resources and environmental protection.

This includes treatment of solvent-laden or odor intensive exhaust air, and the technology also has applications in the flexo print industry, rotogravure industry, dye and paint manufacturing, and the chemical industry.

Looking more specifically at the printing technology, the company's portfolio of presses divides into two broad machine ranges: the Mailänder and the MetalStar.

The Mailänder 122 and 222 range is a robust machine, as its use requires, and is capable of handling 1,200 x 970mm sheets of 0.12– 0.5mm tinplate and aluminum at speeds up to 7,000sph.

Simplicity of construction makes for high uptime, and

low operating costs with minimal maintenance. Standard specification includes alcohol dampening and motorized register control in both lateral and circumferential planes, with the latest model adding diagonal register to compensate for printing plate variation.

Designed as a modular machine, the Mailänder range can be easily extended to add extra print units as demand requires, and is available with UV curing and thermal drying systems working in combination. Options on the Mailänder include MechaTronic automatic plate change, quick blanket clamping, and auto blanket washing, with ColorTronic remote controlled ink ducts and a CIP link.

The MetalStar PR range is the company's latest technology for high-speed production, and is available in two- to 10-color formats.

Capable of handling 1,000 x 1,200mm sheets up to 0.4mm thick, the MetalStar is capable of up to 9,000sph, or 167s/min.

Specification is geared towards high performance, with the feeder capable of handling scroll or rectangular sheets, and the KunziMatic registration system allows easy switching from one to the other. A complete plate change on a six-color MetalStar can be accomplished in four minutes, and all major operations are via the ErgoTronic central console, which controls automatic sheet size setting, plate, blanket and print cylinder washin and ink washing via the EasyWash system.

Other standard features include automatic register control, adjustable gripper bars, disconnectable print units, and a fully integrated diagnostic system for remote service. But, what makes the MetalStar a high speed performer are features like its servo driven feeder for accuracy, the VariSpeed registration drum, a single piece main frame casting for rigidity and lack of vibration at speed, double diameter impression and transfer drums for a smooth sheet path, and a precision roller bearing system with pre-tensioned cylinders to prevent backlash.

There are two coating alternatives: a coating tower as an integral part of the press line, and a separate coating unit. On the coating tower, the sheet is registered once and remains





"Printing on metal is only part of the process, because unlike paper and board, tinplate and aluminum are unable to absorb any of the inks and lacquers. So drying/curing is a critical element in the overall production process"

in the grippers, which assures quality at high speed. Coating is performed with an easy to change anilox roll system that uses a chambered doctor blade and a screen roller for precise thickness of the lacquer applied. The MetalCoat 470/480 units can also be integrated with the press line to give single pass production or operate as stand-alone production machines. They will handle conventional solvent-based lacquers that are dried in a thermal oven, or UV varnish that is cured by UV lamps.

The sheet management system (SMS) unit allows sheets to be ejected for inspection at selected intervals. It can eject and reinsert at high speed without damage, and allows waste tinplate and aluminum sheets to be stored for re-use. The system is programmable, which allows the operator to eject a preset number of sheets into the container with one good sheet into the inspection tray – this avoids mixing good and bad sheets.

The modular non-stop stacker unit uses wide belts for sheet guidance and has a horizontal sheet path. Available as a single, double or triple box stacker, and easily upgraded from one to two or three, it has a sheet counter and automatic lowering of the full stack when switching from box to box. Finished stacks are then automatically conveyed to the exit. The system has vacuum sheet control device for single box operation as standard, and is also available with overhead brake systems. MagStack use electro-magnetic control for impact-free handling with very low noise levels, while VacStack uses vacuum.

But, printing on metal is only part of the process, because unlike paper and board, tinplate and aluminum are unable to absorb any of the inks and lacquers. So drying/curing is a critical element in the overall production process.

KBA MetalPrint's LTG thermal drying ovens are designed to ensure high production output with top quality in one costeffective process. Offering fewer stoppages (and consequently low spoilage) even on lightweight sheets, the vacuum dynamic sheet speed control on the loader and unloader provides damage-free handling, while the slow-down control allows the finished sheets to drop vertically into the stillage, avoiding the risk of scratching or jamming. The High-Econ model concept has an integrated incinerator (ECO-TNV), with a number of energy-saving modules. These include automatic adjustment with flexible heat exchanger, more fresh-air heat exchange, automatic exhaust air volume reduction when in stand-by mode and auto volume control from maximum to minimum on the run, and the minimization of energy loss with optimized ducting, thicker (150mm) insulation on the oven panels, and the use of more efficient motors and drives. According to the manufacturer, gas consumption of a coating oven can be reduced by 70 percent when using a High Econ oxidizer in combination with an LTG wicket oven.

KBA-MetalPrint's latest generation of two-piece drying ovens for the beverage can industry offer curing quality and energy efficiency, and low maintenance, by optimization of the oven's thermodynamics.

By analyzing customers' specific requirements, and using advanced airflow techniques, it is possible to reduce energy consumption by up to 30 percent. At the same time, by reducing condensate accumulation in the heating zones, spoilage is reduced and maintenance requirements kept simple. The venturi jet system incorporated in the oven ensures a good blend of fresh and recycled air, which assists temperature distribution in both lateral and longitudinal direction to within  $\pm$  two degrees C.

The ovens come in two model types: Beltstar, and Pinstar. Beltstar has symmetrical exhaust ducts, which allows individual zone airflow, with constant pressure over the full belt width at a reduced level to save fan power. Pinstar has a new design of air delivery plates with optimized in-feed and discharge areas.

The benefits are better heat transfer to the can, easy maintenance, reduced cold air intake at the oven infeed, and less fuming at the discharge. Both designs reduce power consumption by adjusting the oven exhaust to the minimum flow for safe operation. KBA estimates that most ovens run at two or three times the volume needed to meet EN 1539, and consequently waste expensive energy.

The company's latest oven technology has been designed for the metal drum market where spray-painted or lined drums in up to four rows need to be cured. These are single or double tunnel ovens for curing inside and outside, wicket type for sheets and ends, and ovens for drum ends in racks. They have integrated ECO-TNV air purification, with a flexible main heat exchanger to clean exhaust air from the oven and spray booths by using excess energy for the drying process. An RTO (regenerative oxidizer) system may be used to purify the exhaust air from the overall plant, as an alternative.

The key is maintaining a precise temperature, irrespective of whether solvent- or water-based paints and lacquers are used. This is achieved with hot air convection via injection nozzles that deliver a greater air volume than normal size hot



air fans, allowing smaller fans to be used to reduce energy consumption. Faster air circulation inside the oven offers improved heat transfer to the drums. The LTG ovens can be gas- or oil-fired, or powered by hot purified exhaust air from a fume incineration system. Depending on whether water or solvent paints, and low- or high-bake lacquers are used, the ovens can be equipped with one or several heating units.

The drum ovens can handle up to four rows, or, as a double tunnel, two double rows of drums. For standard 55-gallon drums conveying is by a chain – smaller drums and pails also have lateral conveyors. Drum sheets that are roller coated and heavy, require wicket ovens, while drum ends (or lids) can be dried in a wicket oven or in racks. The most energy-efficient system is the ECO-TNV with its flexible main heat exchange. By responding to each production requirement, it always provides the maximum heat recovery.

KBA-MetalPrint recommends thermalregenerative air purification where high volumes with low solvent content are being produced. One potential problem for the finished drums is the possibility of vacuum build-up after being closed and shipped. This is caused by inadequate drying, so the company recommends using single or multi step coolers to increase the air flow. Actual cooling time and capacity will depend on the ambient climate conditions of the plant's location – hot country, cold country, high humidity, low humidity etc.

Air purification is a leading topic, and a market sector in which KBA-CleanAir, the brand name for the energy and air purification activities of KBA-MetalPrint, sees itself as a pioneer, with more than 1,400 systems installed worldwide. Broadly divided into four categories: regenerative-thermal oxidizers (RTO), thermal oxidizers (TNV), catalytic exhaust air purification (KNV and H-KNV), and ZEROclean rotary absorber for solvent concentration, the type required is recommended once KBA's team of specialists has assessed all aspects of the site and production procedures.

The TNV system passes air over naked flames and the solvents are oxidized at 650-750 degrees C to form carbon dioxide and water vapor. The process is best suited to high solvent concentrations or high waste heat requirements, and copes well with heavy dust loadings and



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condensation. A version without internal heat exchangers is available where waste heat requirements are very high or operating periods short.

RTOs represent state-of-the-art technology in the industry. Economical to run, flexible to operate and durable, RTO technology is very reliable, has low maintenance needs and the lowest energy consumption. There are three types available: RTOcompact, RTO 2-Canister and RTO 3-Canister. The RTOcompact is designed for low flow rates, and being mainly pre-assembled, requires a smaller initial investment. It is also economical to run with its XtraComb heat storage system. The RTO 2-Canister is designed for low solvent concentrations, while the RTO 3-Canister, the best-known type, includes a purge canister in addition to the heat canisters that allows it to handle the highest levels of concentrates, and avoids the release of any unpurified air to atmosphere. With these types of RTO systems, applications from 3,000 up to 300,000 cubic meters per hour exhaust air and solvent concentration from 0.5-15g per cubic meter can be covered.

The ZEROclean concentration system with thermal post treatment is a costeffective means of purifying high volumes of air that have low solvent concentrations. Catalytic exhaust air purification (KNV and H-KNV) types use a mix of heavy-duty catalysts based on mixed oxides and precious metals, and have low energy needs. Used for conventional VOC reductions and special applications like NOx reduction, exhaust air purification, and CO removal, these systems are best suited to widely ranging solvent concentrations with little need for waste heat. One machine type, known as OzoneCat, has been developed to collect and purify emissions from UV curing systems and corona treaters, and usefully, can be retrofitted.

The latest "hot topic" in the industry is the ability to reduce sheet thickness from its current stand of 0.13mm to 0.1mm. The project is a joint development between KBA MetalPrint, ThyssenKrupp and Soudronic, and is aimed at reducing the volume of material used and the process carbon footprint. The result is higher productivity that offers converters a competitive edge and more sustainability.

The MetalCoat 480 unit has a double sheet detector with a stepless pile lift, vacuumatic infeed, and a lacquer conditioner for both heating and viscosity control. It is also fitted with a registration guide for thin sheets and a start-up cycle to prevent sheet sticking. Its memory function is calibrated to handle 0.1mm sheets.

The MetalStar printing unit has a single grip action with a gentle sheet-travel with sheet separator and a grip setting down to 0.1mm. Drying is handled in a chain type oven, which has frequency controlled hot air circulation, and is fitted with dynamic sheet control and sheet acceleration in the oven unloader. The KBA VacStack (vacuum) or MagStack (electromagnetic) stackers both have dynamic overhead sheet control. According to the manufacturer, the installation can be tailored to specific customer requirements, and will reduce CO2 output significantly to offer greener packaging.

The KBA-MetalPrint operation is a technical "tour de force", and this very simple outline of its technology serves only to highlight the specialization involved in metal decorating – it is in fact a study all of its own.

So, the next time you visit your local supermarket or department store and see the beautifully printed cans that contain luxury confectionary or virgin olive oil, or buy cans of paint from your hardware store, spare a thought for the 140 years of technological development that has gone into producing today's high-quality metal packaging.

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## Thin and tin = lean and green

To find out how metal decorating has adapted to meet the demands of the 21st Century, Nick Coombes visited The Huber Packaging Group.

"Metal is forever" – or so Huber would have us believe. But, if you stop and think about what for many, especially the younger generation, appears to be an old fashioned way of packaging goods, and then delve into the facts behind Huber's bold statement, it all starts to become clear, and highlights how the company has built a very successful packaging business on tinplate.

All metal products, regardless of their form today can return to the market in a variety of forms – and can do so many times over, with no loss of quality. Recent statistics show 74 percent of steel cans are recycled in Europe, and the figure for Germany is higher, at 94 percent.

No other medium can match these percentages. Glass comes closest at 70 percent, while both cartons and plastics linger in the 30-35 percent range.

Around 2.5 million tons of tinplate is recycled in Europe each year, saving 4.7 million tons of CO2 emissions. This reduces the energy required for new steel production by 75 percent and cuts greenhouse gases by 80 percent. One ton of steel scrap saves 1.5 tons of iron ore, 0.65 tons of coal, and 0.3 tons of limestone, the three raw materials required for steel production.

So, what of the metal packaging itself? It's light, resilient, impermeable, and above all well proven. But what does it offer to the sophisticated consumer market of 2013?

Durability is probably the first quality that comes to my mind,

but Thomas Stock, executive vice-president, service centre point at Huber Packaging Group, goes further. 'Tins, pails and canisters are all proven as reliable packaging,' he says. 'Their mechanical resilience even under high stress is unmatched. Exposure to heat, cold, sunlight, salt water, and any other external influence does not affect the contents, and they cannot be contaminated by oil, fat, gas, fragrance, flavorings, pests or any other agent. Metal packaging has everything going for it.'

Huber has made a specialist study of the process at its production facility in Öhringen, near Stuttgart. Founded by Karl Huber in 1871, and currently under fifth generation family management, the company has two divisions: industrial, which includes metal decorating and accounts for around 75 percent of sales; and beverage, which specializes in five-litre beer kegs. The industrial side manufactures metal packaging for the chemical, paint, and food industries, and lists many household brand names amongst its customers, including: AkzoNobel, BASF, DuPont, Flint Group, Henkel and Sun Chemical.

The beverage sector manufactures a Huber patented product known as easyKEG. There are three types, and each one has an integrated tap. The first one taps with gravity, the second incorporates an extra CO2 cartridges to keep the beer under pressure to preserve its fresh taste, and the third has its tap on the top and the beer under CO2 pressure. Customers include most of the well-known brands like Becks, Bitburger, Carlsberg,





"We set out to offer our customers all they need to fulfill their branded packaging requirements, from a consultancy service that studies and evaluates each individual company's needs through design, product development, printing and finishing, using the latest intelligent logistics for cost-effective production, and just-in-time delivery"

Coors, Grolsch and Kronenbourg 1664.

Huber Packaging has six production sites in four countries. Öhringen and Bottrop in Germany are joined by facilities in Ansfelden, Austria, Gyoer, Hungary and Moscow. Beverage production is entirely based at Öhringen.

Stock says: 'We set out to offer our customers all they need to fulfill their branded packaging requirements, from a consultancy service that studies and evaluates each individual company's needs through design, product development, printing and finishing, using the latest intelligent logistics for cost-effective production, and just-intime delivery. We even have our own tool manufacturing facility in-house to allow us to respond to any changes, in the shortest time possible.'

Production facilities at Öhringen include digital image processing with full prepress workflow and CtP. Printing is carried out on a bank of printing presses and coating lines from KBA-MetalPrint, which according to Huber Packaging offer brilliant photo-quality printing.

The four- and six-color printing presses are equipped with CNC format setting, automated plate change, remote ink control system, and automatic washing systems to produce the small job sizes with short set-up times.

The LTG wicket ovens have been upgraded in recent years with ECO oxidizer systems to meet the latest emission laws, and to reduce gas consumption. Further upgrades from KBA-MetalPrint include vacuum dynamic sheet control units for loading and unloading the wicket ovens, new stacking units and pile turners. To ensure quality control for customers, the company has invested in the latest digital proofing technology that allows sampling on the actual tinplate used for the commercial job. This provides the opportunity to match colors precisely with Huber ColorMATCH, which the company says sets a new standard for spot colors, offers more than 1,000 shades, and is both quick and reliable to reproduce.

This attention to detail has its rewards, for in addition to a portfolio of satisfied customers, it has earned Huber ISO 9001:2008 accreditation specifically for quality management of tinplate package printing and sealing.

In addition, the company has BAM GGR 001. This internal/external monitoring governs the functionality of seals and closures, leak proofing, and the long-term resistance of metal packaging for dangerous goods.

'It's all part of the company's commitment to providing a quality service and product, because we know how effective packaging can be at selling a product. It is the brand's first visual impact on the consumer at the point of sale, and as well as needing to appeal to the shopper, it needs to convey information too,' adds Stock.

To many consumers, metal packaging is almost invisible. Is it because it's always been there and is not considered to be fashionable and leading edge, or is it because it's often a matter of function over form – after all, how else would you package paint? But metal packaging is more than just cans that you see and buy in hardware stores.

Take a look around your favorite

supermarket, or browse the duty-free when you're next at an airport, or shop online for premium quality gifts, and you'll soon see what today's metal decorating technology has to offer.

Look closely at the graphics, count the number of colors used, and think of the difficulty involved in drying all those inks and lacquers on a substrate that is non-absorbent. Premium products like malt whisky and high-quality chocolate demand premium packaging. Metal packaging offers that aplenty, and provides long-term protection for the contents too.

The Huber Packaging Group has a long and distinguished heritage in the industry, and the with the onward and upward growth in demand for consumer products from the emerging markets, where brand awareness is still in its infancy, Thomas Stock is optimistic that the company can stay at the forefront of development, and maximize on the opportunities as they present themselves.





## Making it in MENA

Swiss die-cutting system manufacturer Berhalter has made a number of gains in the Middle East in recent times. David Pittman reports

he Middle East is a large and diverse market, offering many business opportunities to suppliers and the printers they serve.

April's Gulf Print & Pack event highlighted the potential of the market, with visitors from across the region, India and even further afield seeing the latest product developments and technical innovations from Middle Eastern, European, American and Chinese suppliers.

Swiss die-cutting specialist Berhalter was one of those on display at the Dubai printing tradeshow, where it was represented by XOL Automation, its partner in the region. The partnership between Berhalter and XOL Automation was put in place late summer last year, and since then has helped the manufacturer strengthen its position in the Middle Eastern package printing market.

Headquartered in Lebanon, XOL Automation provides web handling products and services, with its operations mainly focused in the Middle East and North Africa.

It has similar agreements with several other companies, such as Martin Automatic and Stanford, and represents numerous machinery brands to help its customers improve productivity and eliminate waste. In addition, it offers onsite service, installation and training.

Many of its partner brands were shown directly on the XOL Automation stand at

Gulf Print & Pack 2013, including: Unilux stroboscopic inspection equipment; Maxcess products, such as those from Fife, Tidland and Magpowr; Hildebrand electrostatic equipment; and Maier Heidenheim rotary joints.

The stand, however, was dominated by a Berhalter B 500 die-cutting machine. The unit is able to work at a mechanical speed of up to 400 strokes per minute, and carry out various additional processes, such as embossing and inspection. It also has a unique ejection system that allows the male and female elements of the die-cutting system to be positioned closer together.

The B 500 on show had been sold to Saudi Arabia's Napco Compact, while a second B 500 sold into Dubai.

'Teaming up with XOL Automation to engage this region in die-cutting industry is an exciting development for our company,' says Dalibor Schuman, Berhalter's managing director. 'With a local sales and service partner we can offer to our customers a highly professional support with immediate response.'

Schuman adds: 'To survive in the current market environment, a flexible, efficient and innovative die-cutting solution is needed.

'For us it's absolute clear how important the fact is to be flexible and able to react fast to market requirements. Our highly valued customer Future Pack, a division of the Emirates National Factory for Plastic Industries (ENPI) Group, is a good example of future-oriented and innovative thinking.

'Future Pack was the first company in the Gulf area who started working with a Berhalter die-cutting machine with in-line print and web surface inspection systems, and could thereby raise the bar.'

Future Pack was started in 2006, specializing in the printing of packaging on a wide variety of substrates and using multiple printing technologies to handle short to high volume orders.

Future Pack has been working with Berhalter die-cutting machines and punching tools for more than three years, and Chinna Durai the director of the ENPI Group, says: 'Right from the beginning, Berhalter impressed us with its efficient, professional manner - an approach that not only inspired confidence, but generated the results we were looking for.

'We needed a very effective and easy to operate solution for efficient die-cutting of aluminium lids. Furthermore we had to solve the issue of sorting out lids with misprints or pinholes. By partnering with Berhalter, we have been able to increase our output and to eliminate non-conforming lids thanks to the in-line PRINTinspect and WEBinspect systems.

'Because of its years of experience and worldwide support, Berhalter has been able to provide Future Pack that kind of die-cutting equipment and first class service we needed to bring our converting production to a new level.'

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what appears simple is often the most difficult to realize



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#### Commitment to the planet

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