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## ASIAN PACKAGING EXCELLENCE AWARDS: 2025



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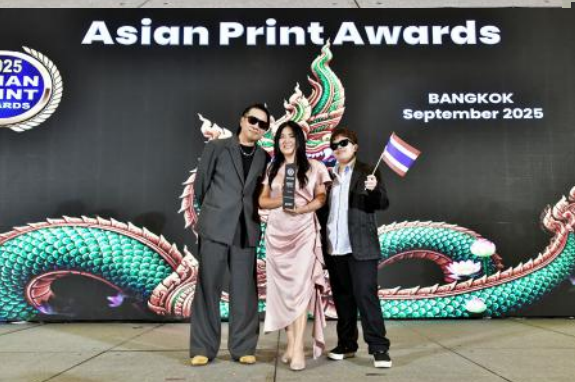
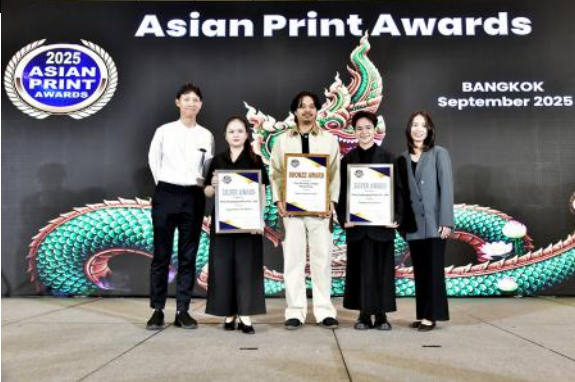




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Click on the logo below to see all the winners jobs and hundreds of photos from the 2025 Asian Print Awards Presentation





# From fast-moving consumer to security and commercial

Customer expectations have shifted dramatically in recent years. Speed, flexibility, and shorter run lengths are now the norm. We talk to industry veteran Paul Myatt from Domino Digital Printing about how he sees the market in today's conditions.

**Q: Please introduce yourself and your industry experience**

I'm Paul Myatt (PM), APAC Regional Service & Support Manager for Domino Digital Printing. I've worked in the print and packaging industry for more than 35 years, starting in traditional print engineering before moving into digital as it reshaped production workflows.

My background spans sales, service, operations, and regional business development across APAC. Today my focus is ensuring customers, distributors, and partners maximise uptime, consistency, and ROI from Domino technology.

**Q: Please introduce your company and the sectors you support across the region, along with the machinery you supply**

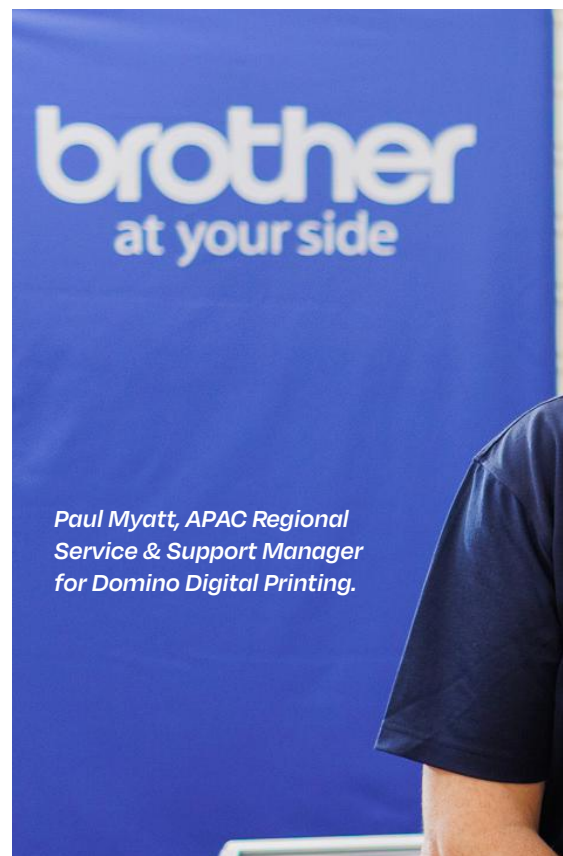
**PM:** Domino, part of Brother Industries, is a global leader in digital printing

technologies. In APAC, we support fast-moving consumer goods, packaging, security printing, and commercial print.

Our portfolio includes the N-Series digital label presses, the K-Series high-resolution monochrome inkjet platforms, and hybrid solutions with OEM partners such as Nilpeter, Rhyguan, and GM. This enables us to support both mainstream converters and specialist producers.

**Q: How have your customers changed, and what are your mainstream customers like today?**

**PM:** Expectations have risen sharply. Converters now demand high quality with rapid turnaround times while managing an ever-expanding SKU mix. They're also moving deeper into value-added offerings such as variable data, security print, and serialisation.



*Paul Myatt, APAC Regional Service & Support Manager for Domino Digital Printing.*

**Q: What special technology do you have for your customers, and do you serve markets beyond packaging?**

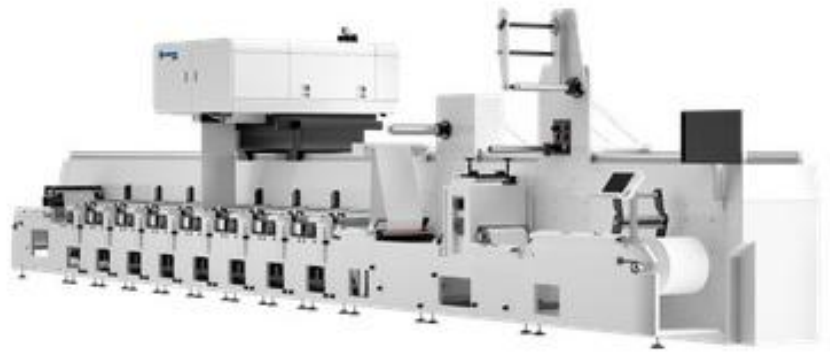
**PM:** Packaging is our core, but Domino technology is built for versatility. Beyond labels and flexible packaging, we support security applications, transactional work, and niche industrial markets. High-resolution inkjet, LED curing, and advanced workflow automation give customers the flexibility to meet diverse production needs.

*Domino N410 LED inkjet label press*

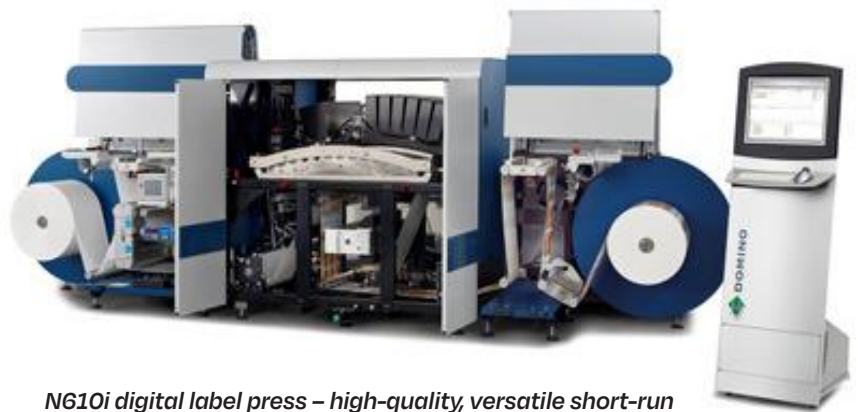




# er goods and packaging al print



*N610iR / N730i – 600/1200 dpi, high-precision monochrome/CMYK platforms for premium label applications.*



*N610i digital label press – high-quality, versatile short-run production for mainstream converters.*



**Q: What is your view of the general packaging industry? Are you seeing growth, and is digital becoming essential?**

**PM:** Absolutely. Packaging in Asia continues to grow, and digital printing is rapidly becoming essential. Brands want more variants, shorter campaigns, and personalised packaging – perfect conditions for digital. The real question now is not if converters should invest, but how quickly they can scale.

**Q: Looking into the near future, what plans do you have to keep Domino at the forefront and grow in the region?**

**PM:** Our priority is delivering reliability and consistency. Customers need

systems they can trust every day. Alongside that, we're strengthening local service networks so converters get maximum uptime and value. APAC is diverse, so flexibility and collaboration with our partners remain central to our strategy.

**Q: What is your opinion of AI and the industry – will this affect businesses looking ahead?**

**PM:** AI will transform the industry – predictive maintenance, quality inspection, defect detection, workflow optimisation, and automated calibration will all accelerate. For Domino, AI is an enabler: smarter presses, faster insights, and more proactive support. It won't replace people, but it will change expectations around reliability and efficiency.

**Q: If you had a crystal ball, where do you see technology in 10 years and beyond?**

**PM:** We'll see fully integrated digital workflows and highly automated production lines. Systems will self-diagnose, self-adjust, and run with minimal intervention. Closed-loop colour control, sustainable consumables, and energy-efficient curing will be standard. Speed will matter less—seamless factory integration will be the real differentiator.

**Q: Any final advice for readers – what should they be aware of and why choose Domino?**

**PM:** Don't just invest in equipment – invest in a partner. Long-term competitiveness depends on consistency, support, and collaboration, not just raw print speed. Domino has decades of expertise, strong backing from Brother, and a proven commitment to customer success. That's why customers choose us and stay with us.



# FUJIFILM Business Innovation Launches Flagship Revoria Press™ PC2120

**Achieving Advanced AI and Expanded Color Gamut with New Green Toner for High-Quality Six-Color Printing**



FUJIFILM Business Innovation announces the launch of Revoria Press™ PC2120 (hereafter "PC2120"), this is the flagship model in its Revoria Press™ series for high-end professional printing. Building on the success of the Revoria Press™ PC1120, the PC2120 introduces advanced AI-driven automation, an expanded color gamut featuring a newly developed green toner, and stable one-pass six-color printing using CMYK plus two specialty toners.

The expanded specialty toner lineup now comprises of eight types, including existing options like gold, silver and pink—caters to diverse customer needs and fosters greater creative expression. This enables vivid color reproduction comparable to the RGB displays on monitors. Sales will be rolled out sequentially in Japan and the Asia-Pacific region from December 19, 2025\*1.

Following the successful launch and widespread recognition of the Revoria Press™ PC1120 (hereafter "PC1120") across Japan, Asia-Pacific, Europe and North America, the PC2120 was developed as the next generation model. It enhances the PC1120's established strengths in high image quality and productivity by incorporating expanded automation

functions and a broader printable color gamut.

## **AI-Driven Automation for Prepress | High Quality and Productivity in Printing**

PC2120 simplifies complex workflows with proprietary AI features. In pre-press, the new Substrate Profiler analyzes loaded paper and automatically recommends optimal settings, reducing setup time and improving operational efficiency.

The Revoria Flow™ print server uses AI to scan documents and automatically recommends the best image quality

enhancements—such as sharpening text or fine lines. The AI also detects scenes within photos or images—such as people or landscapes—and applies appropriate corrections for consistent high-quality output regardless of operator experience.

During printing, even when using specialty toners\*2, the Smart Monitoring Gate\*3 continuously detects paper color variations and registration misalignments, automatically correcting them in real time without affecting print speed. This allows the machine to maintain stable, high-quality output without requiring specialized expertise.







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**UPM Communication Papers**







Comparison of CMYK, Green, Pink (top) and CMYK (bottom) To deliver more impactful prints, the PC2120 introduces a newly developed

**Expanded Color with New Green Toner**  
green specialty toner alongside the existing pink toner. Together, they expand the printable color gamut, achieving 93% coverage\*4 of the widely used PANTONE FORMULA GUIDE Solid Coated. The New Green Toner along with Pink Toner produce exceptional vivid colors that closely match those seen on monitor screens.

Moreover, the PC2120 simplifies wide-gamut specialty color printing with features like automatic color separation, converting RGB data into CMYK layers plus green and pink specialty layers—significantly reducing the time complexity of prepress editing.

As a global leader in offset printing, digital printing and DX workflow solutions, FUJIFILM Business Innovation is committed to driving industry growth through innovations like PC2120, empowering customers to create value and transform their operations.

The PC2120 is also scheduled for future release in Europe and North America, as well as in other regions, further expanding its reach in global production printing markets\*1.

#### Other key features include:

- In addition to CMYK toner, it can accommodate two specialty toner colors. It also offers robust support features for easily utilizing specialty colors.

- o Specialty toner lineup: Green, Pink, Gold, Silver, Clear, White, Custom Red, Textured Paper

- o When using pink toner, a simple operation automatically separates part of the magenta plate into a pink plate and converts it, achieving vivid and bright colours. The skin texture also produces a smooth and beautiful finish on the printed material.

- o The preview function allows you to check the color expression of specialty toners on the display. This reduces the time and effort required to check

colors and minimizes the number of test prints, enabling efficient design production. Furthermore, a viewer that can be incorporated into online printing sites allows you to check the finish of specialty toners before submitting print data.

- Achieves high-quality printing with Super EA-Eco toner, featuring one of the industry's smallest toner particle sizes, and 2400 dpi high resolution, along with high-speed printing of up to 120 pages per minute\*5.

- The Revoria Flow™ print server enables high-quality image data generation through 1200 × 1200 dpi RIP processing. Support for the Fiery print server is planned for the near future.

- Equipped with the Air Suction Feeder Tray\*3, which ensures reliable feeding even for coated papers that tend to adhere easily. Additionally, the Static Eliminator D1\*3 removes static electricity from output sheets, preventing adhesion between sheets and allowing seamless transition to the next process—even when using film or metallic papers prone to static buildup.

- Supports a wide range of paper types, from thin paper (52 gsm) to thick paper (400 gsm) \*6, and paper sizes from postcard size (98 x 148 mm) to long sheets (up to 330 x 1,300 mm) \*7, enabling high-quality output for diverse printing jobs.

- The Print Inspection System\*4 automates post-print inspection. It compares printed output with RIP images (reference images) in real time to detect defects such as black spots, smudges, missing areas, streaks, and paper folds. It also performs reading inspections for text and 1D/2D barcodes. The system includes functionality to compare with CSV reference files and verify sequential numbering and front-back text consistency across pages.

• \*1Please check with your local FUJIFILM Business Innovation office on the availability of the devices.

• \*2Green, Pink, Gold, Silver and Custom Red.

• \*3Optional products.

• \*4Verified by Pantone LLC (U.S.), indicating that 93% of the reference colours in the PANTONE FORMULA GUIDE Solid Coated have a colour difference (E<sub>00</sub>) of 3 or less when printed.

• \*5When printing on A4 uncoated paper at 52–400 gsm.

• \*6When using the Air Suction Feeder Tray.

• \*7Requires optional feed and output trays compatible with long-sheet printing.





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# Case Study: Qingdao BEIQI Industry Co., Ltd. — Innovation in Metal Packaging with CGS ORIS

Qingdao BEIQI Industry Co., Ltd. (part of the BEIQI Group) is headquartered in Qingdao, China, and spans over 160 acres with an investment exceeding 600 million yuan (≈ 84 million USD). The company employs more than 400 people, including over 220 professionals, and is a leading provider of integrated packaging and printing solutions, specializing in metal and paper packaging.



BEIQI serves some of the world's most recognized brands—Nestlé, Danone, Wyeth, Abbott, Yili, Junlebao, Shengyuan, Huishan, Yipin, Oenbe, New Bayzi, Duojiaduo, Wanbao Dairy, and others—delivering packaging solutions that combine functionality, aesthetics, and sustainability.

The group's rapid expansion is driven by a strong international strategy, which includes subsidiaries such as Qingdao BEIQI Industry Co., Ltd. and Qingdao BEIQI Precision Manufacturing Co., Ltd., among others, operating across China and France.

With dedicated R&D and customer service centers, BEIQI aims to become China's most innovative and professional packaging and printing group, recognized for its comprehensive service and brand strength.

BEIQI's portfolio covers a wide range of metal packaging products, including:

1. Standard Metal Cans – Ideal for food and milk powder packaging requiring high-level sealing performance. Available in multiple sizes, including 502#, 401#, 307#, and 300#.
2. Custom-Shaped Metal Cans – Designed to enhance shelf appeal and strengthen brand identity, offering consumers a unique experience and giving brands a competitive edge through personalized packaging.
3. Easy-Open Lids (Iron and Aluminum), Bottom Lids, and Pry-Off Lids – Combining functionality with precision engineering to meet diverse customer needs.



## Partnering with CGS ORIS

BEIQI began collaborating with CGS ORIS in 2022. Today, the company relies on the XGAMUT smart color separation system and the FLEX PACK proofing system, including color management software and an Epson S80600 inkjet printer.

## CGS ORIS FLEX PACK – Proofing Made Efficient

Since adopting the FLEX PACK proofing system, BEIQI has dramatically reduced the need for on-press





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proofing—saving over one million yuan per year ( $\approx$  140,000 USD).

#### Cost breakdown:

20 proofing sessions per month  $\times$  20,000 yuan ( $\approx$  2,800 USD) per session  $\times$  12 months = 4.8 million yuan ( $\approx$  672,000 USD) saved annually. This efficiency directly translates to faster turnaround, reduced waste, and more predictable results.

#### Pioneering Technology – The KBA MetalStar 3

In October 2021, BEIQI installed the world's first KBA MetalStar 3 ten-color metal press, a major milestone in metal printing innovation. The new press shortened setup times and significantly improved both print consistency and quality—setting a new benchmark for performance and precision in the sector.

#### ECG Printing with CGS ORIS XGAMUT

In conventional printing processes, particularly with the KCMY+N spot color configuration, the highly competitive market demands frequent press washes and color changes, which drastically reduce our production

#### Traditional Printing Methods for Handling Multi-Spot Color Jobs

In traditional printing, jobs are produced one after another — print job 1, then print job 2, then print job 3, and so on. Each order change involves formulating spot color ink, cleaning, changing ink, and fine-tuning color, resulting in a lot of make-ready time.

ECG printing (CMYKOGV) has a wider color gamut than traditional CMYK, providing richer colors. It captures and reproduces the original colors more accurately, improving print quality and efficiency.

Using the X GAMUT multi-channel color separation software, the printing process is fixed at a 7-color setup, achieving spot color reproduction without the need for spot color ink formulation. This greatly reduces time spent on press color adjustments and eliminates the need for multiple spot colors. Different spot colors can now be printed in one single pass.

In traditional printing, each order change requires a washing cycle, consuming approximately one hour

of time and resources. Changing eight orders in one shift results in a total time loss of about eight hours, limiting production to around 20,000–30,000 sheets per 12-hour shift.

ECG printing, on the other hand, eliminates the need for washing cycles and color changes—requiring only plate changes—which significantly boosts productivity. This method achieves a capacity of 30,000–40,000 sheets per 12-hour shift.

Most notably, this approach aligns with the national carbon neutrality policy, emphasizing ecological protection and effective control of greenhouse gas emissions. With hourly VOC emissions at 0.34 kg, completing a workload in four hours instead of eight reduces emissions by 1.36 kg, demonstrating a substantial environmental benefit.

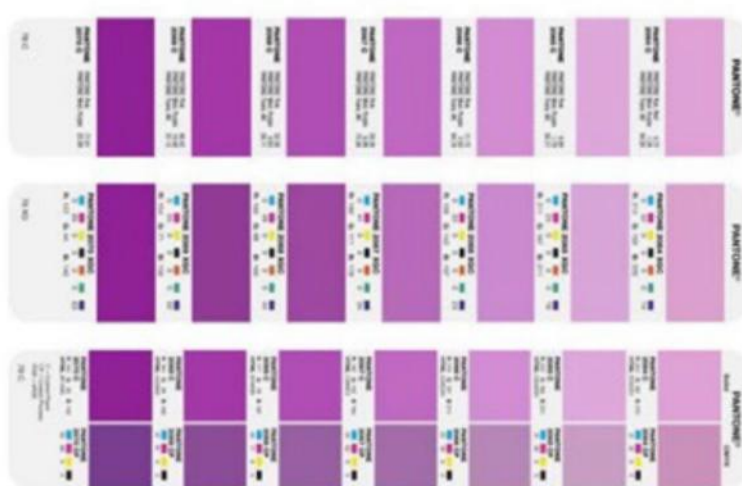
#### In Summary

Through the collaboration with CGS ORIS, BEIQI has not only improved printing efficiency and reduced costs but also strengthened its commitment to sustainability and innovation in the metal packaging industry.



专: means spot color

capacity and efficiency. Additionally, the waste of raw materials during these washes and color changes means that our production costs have no advantage compared to our competitors.



By spot colors

By ECG printing

By CMYK printing



**CGS ORIS wishes you a brilliant holiday season and a colorful start to 2026!**

Thank you for trusting our solutions

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# Hybrid Software Helix launches world's first GPU-native industrial inkjet RIP

SmartRIP™ is an innovative industrial inkjet RIP for OEMs and integrators. The world's first GPU-native RIP, it delivers exceptional performance and scalability for a wide range of industrial printing applications.

Hybrid Software Helix (formerly Global Graphics Software) has launched SmartRIP™, an innovative industrial inkjet RIP (raster image processor) for OEMs and integrators. SmartRIP is the world's first GPU-native RIP, delivering exceptional performance and scalability for a wide range of industrial printing applications. It offers a streamlined feature set and optimized pricing designed specifically for the broader industrial print market rather than high-end digital presses for label and packaging applications.

SmartRIP is purpose built for system integrators who need to embed advanced print capabilities into industrial solutions quickly and securely. It features an industrial OPC UA standard interface, ensuring secure and interoperable communication across modern production environments. Its GPU-native

architecture is lightning fast and frees up the CPU to perform other tasks in parallel. SmartRIP is therefore flexible and highly scalable, maximizing controller hardware performance, while its streamlined integration process enables users to get up and running in hours, not months.

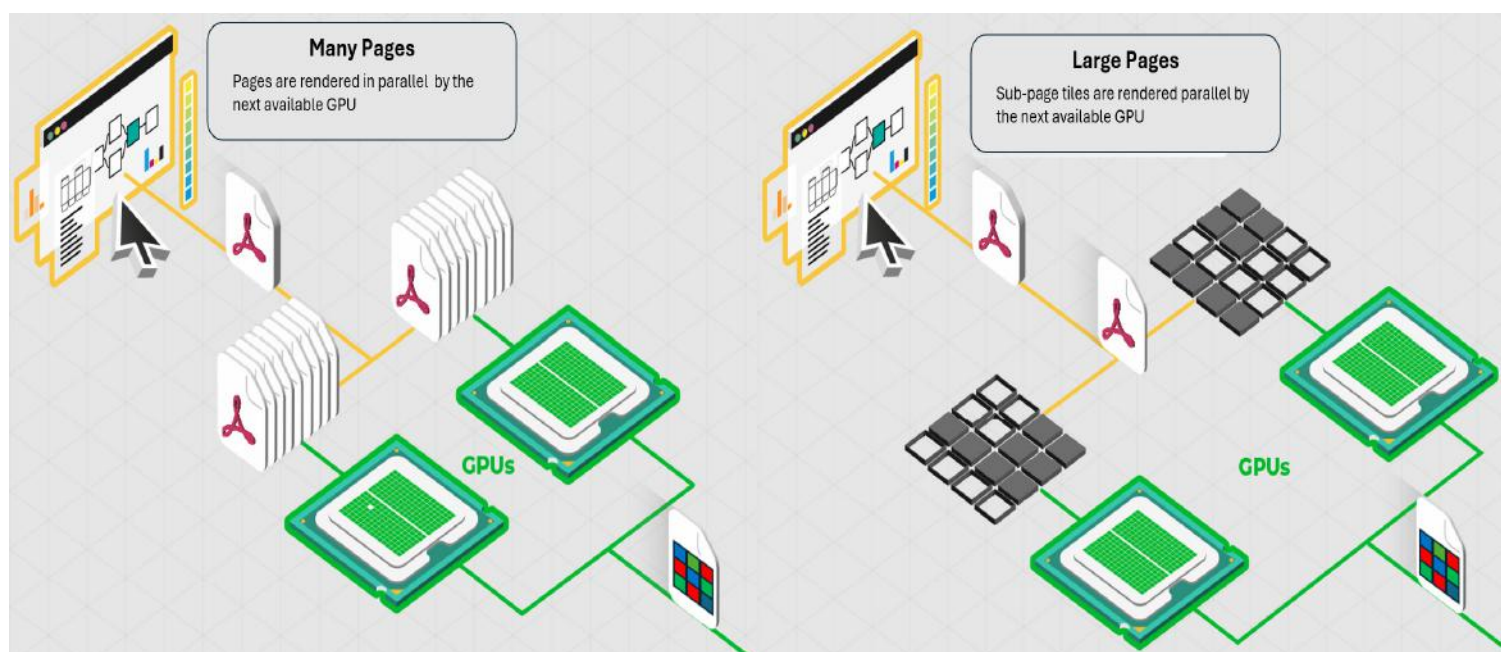
In addition, SmartRIP offers advanced print quality technologies, including color management from ColorLogic. These technologies are in a user-friendly, automated system, enabling any operator, regardless of their level of expertise, to achieve excellent print quality with ease and confidence.

Managing Director Justin Bailey said: "With SmartRIP, we've taken the award-winning, proven technology from SmartDFE™, which powers high-end digital presses, and streamlined it for a wider range of industrial applications.

OEMs and integrators can now deliver exceptional print quality faster, with less complexity and at a lower cost. Additionally with its embedded OPC UA, SmartRIP is secure by design, making it ready for the rigor likely to be required to comply with the Cyber Resilience Act that comes into play in Europe in 2027."

SmartRIP was on show for the first time at the Industrial Print Integration Conference in Düsseldorf-Neuss, Germany (November 2025).

Also attending are Hybrid Software's Meteor Inkjet business, showcasing its electronics, software and tools for industrial inkjet systems, and Hybrid's Color business unit which will introduce the ColorLogic Core SDK, an ICC-compliant software development kit designed for printer OEMs.

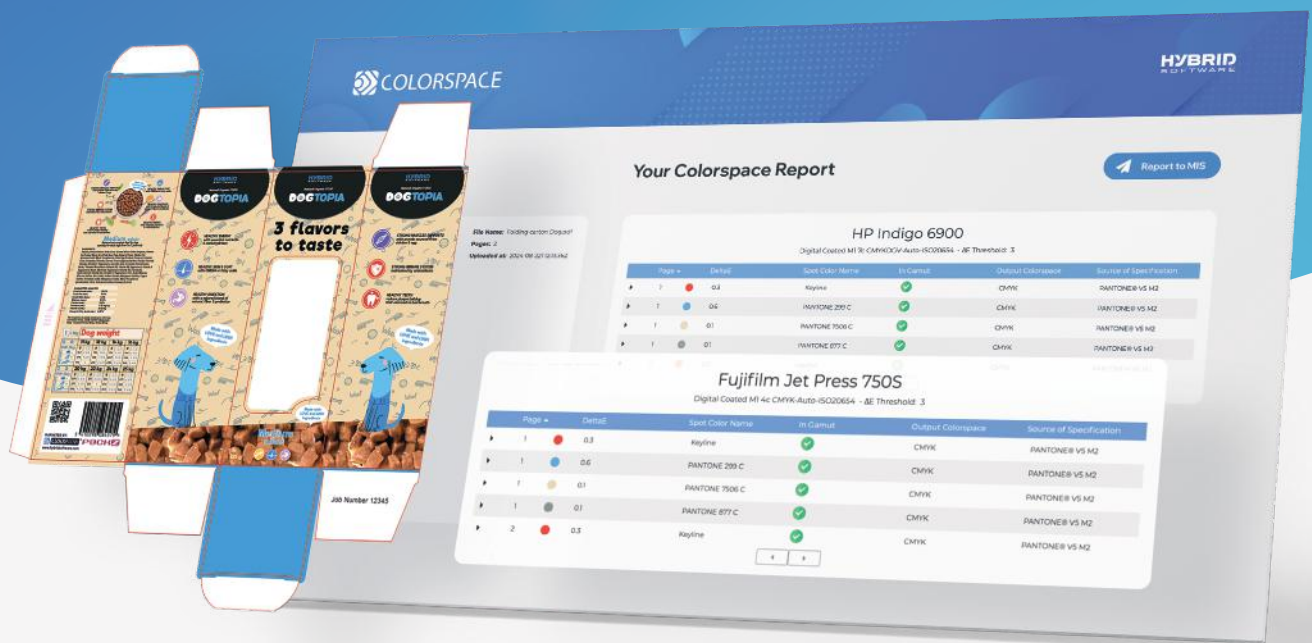






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# Saravana Graphicss expands Speedmaster CX 75

**Saravana Graphicss, a trusted name in garment packaging and commercial print, has strengthened its production capabilities with the installation of a Speedmaster CX 75 4-color plus coater press.**

This marks a key upgrade for the Tirupur-based company, known for delivering high-quality cartons, labels, and tags to both domestic and international clients.

The new Speedmaster CX 75 installation supports the company's growing demand for short-run, high-value packaging jobs - especially for export markets.

"We've always focused on delivering quality and reliability," said Saravanan, Managing Director. "The Speedmaster CX 75 gives us the flexibility to handle a wide range of substrates and applications, while improving turnaround times and reducing waste. It's a smart investment for our future."

## **Built for Garment Packaging Needs**

Saravana Graphicss installed its first HEIDELBERG press, the Speedmaster SX 74, in 2019 - an investment that streamlined operations and elevated print quality across its garment packaging portfolio. Building on that success, the newly commissioned Speedmaster CX 75 introduces advanced automation and substrate versatility, making it ideal for producing garment tags, labels, and cartons.

Serving both export and domestic markets with a balanced 60:40 ratio, Saravana Graphicss reinforces its position as a trusted partner in the global garment supply chain. The company also benefits from the support of its two sister concerns,

Varnam Printers and Texas Labels, which specialize in commercial, packaging and labeling solutions for the garment industry.

The Speedmaster CX 75 from HEIDELBERG is a compact B2-format press that combines high performance with space-saving design. It supports sheet sizes up to 605 × 750 mm and runs at speeds of up to 15,000 sheets per hour. With a substrate range from 0.03 mm to 0.6 mm, the press handles everything from lightweight papers to rigid boards with ease.

Key features include AutoPlate Pro for fast plate changes, Intellistart 3 for intelligent job setup, and double-diameter impression cylinders with



*Saravanan, Managing Director, and Sathish, Director of Saravana Graphicss, with Prabaharan Annamalaichami AGM – Sales, HEIDELBERG India, at the inauguration event.*



# s print efficiency with



*The new Speedmaster CX 75 from HEIDELBERG, a five-colour press with coating unit inaugurated at Saravana Graphicss.*

Venturi nozzle technology for smooth sheet travel. The Prinect Press Center offers intuitive touchscreen controls and seamless workflow integration, helping Saravana Graphicss maintain consistent quality while optimizing production time and minimizing waste.

added Saravanan. "Their technical support is prompt, professional, and always available when we need it. That gives us the confidence to push boundaries and take on more complex jobs."

SaravanaGraphicss continues to invest in technology and training to stay ahead in a competitive market. The Speedmaster CX 75 from HEIDELBERG is a step forward in its journey to become a comprehensive solution provider for garment packaging and commercial printing.

## **Serving a Global Clientele**

With a strong customer base across India and overseas, Saravana Graphicss supplies garment packaging to leading fashion and apparel brands. The Speedmaster CX 75 installation reinforces the company's ability to meet international quality standards while staying agile and cost-effective. "Our overseas clients expect precision and consistency," added Saravanan. "This press helps us deliver on that promise - job after job."

## **Looking Ahead**

"One of the reasons we continue to invest in HEIDELBERG is the dependable service team here in India,"





# High-quality plates that provide measurable benefits

New study confirms faster exposure, improved plate uniformity and print quality across multiple plate types

Miraclon, in partnership with US-based trade shop, SGX, has concluded a recent study that confirms the Shine LED Lamp Kit, innovated by Miraclon, produces high-quality plates that provide measurable benefits for a full range of LAMS flexo plates over fluorescent exposure. The results from the collaboration, which included comprehensive testing of five different LAMS plate types, have been published in a technical paper – available from Miraclon.

"Many platemakers have been asking whether Shine LED Lamps could deliver the benefits of LED exposure beyond FLEXCEL NX Plates," said John Prindl, Director of Global Product Support at Miraclon. "This study proves that these lamps not only work but excel; offering faster exposure, improved uniformity, and better dot reproduction across a wide range of LAMS plates."

## Proven results across variety of plate types

The LAMS flexo plates tested included both round-top and flat-top dot configurations, plus a thicker plate for corrugated printing. Using four identical exposure frames, two fitted with traditional fluorescent bulbs and two with Shine LED lamps, the study results demonstrated that Shine LED lamps delivered:

- Up to 5x faster exposure times (combined back and main exposure)
- 2x better plate floor uniformity
- Sharper, more consistent highlight dots and tonal transitions
- Stable light output, eliminating the degradation issues common with fluorescent bulbs

Subsequent print trials demonstrated that plates exposed with Shine LED lamps matched or exceeded the print quality delivered by fluorescent-exposed plates. Notably, round-top dot plates showed a significant improvement in dot shape and consistency — a key factor for smooth highlights and tonal control.

Rick Best, Vice President Innovations & CI at SGX commented: "We're a long-term user of FLEXCEL Solutions and became an early adopter of Shine LED Lamps to take advantage of the vast variety of benefits it offered us and our customers."

As a full-service prepress provider, we utilize a variety of flexo plates so we wanted to ensure Shine LED lamps produce optimum results across our whole portfolio. Working closely with Miraclon, we were successfully able to







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confirm that it does. It makes the Shine LED Lamp kit a compelling upgrade option for all flexo platemakers using fluorescent exposure systems."

#### **Award-winning benefits of the Shine LED Lamp Kit delivers real ROI**

Unlike fluorescent bulbs that degrade over time — leading to inconsistent exposure and eventual replacement — Shine LED lamps provide consistent UV output, reducing waste, downtime,

and plate reworks. The lamp kit installs easily into existing fluorescent exposure frames, providing a low-barrier upgrade for trade shops and packaging printers alike, and can be retrofitted in the field in a few hours.

For a fraction of the cost of a new LED exposure unit, users benefit from consistent, predictable intensity over a much longer operating life (more than 5,000 hours compared

to 800 hours for fluorescent tubes), faster exposures, and enhanced sustainability performance.

These features won the Shine LED Lamp Kit a unique double at the 2024 FTA Excellence in Flexography Awards in North America, winning top awards for both Sustainability and Technical Innovation, as well as the German FTA (DFTA) Sustainability Technology Award.

## Miraclon announces FLEXCEL NX Central Software 3.0 to supercharge FLEXCEL plates

Miraclon announces the release of FLEXCEL NX Central 3.0, the latest evolution of its centralized software hub for FLEXCEL plate production. Designed to streamline operations and maximize plate performance, the release introduces powerful new capabilities that reinforce Miraclon's commitment to driving innovation in flexographic printing.

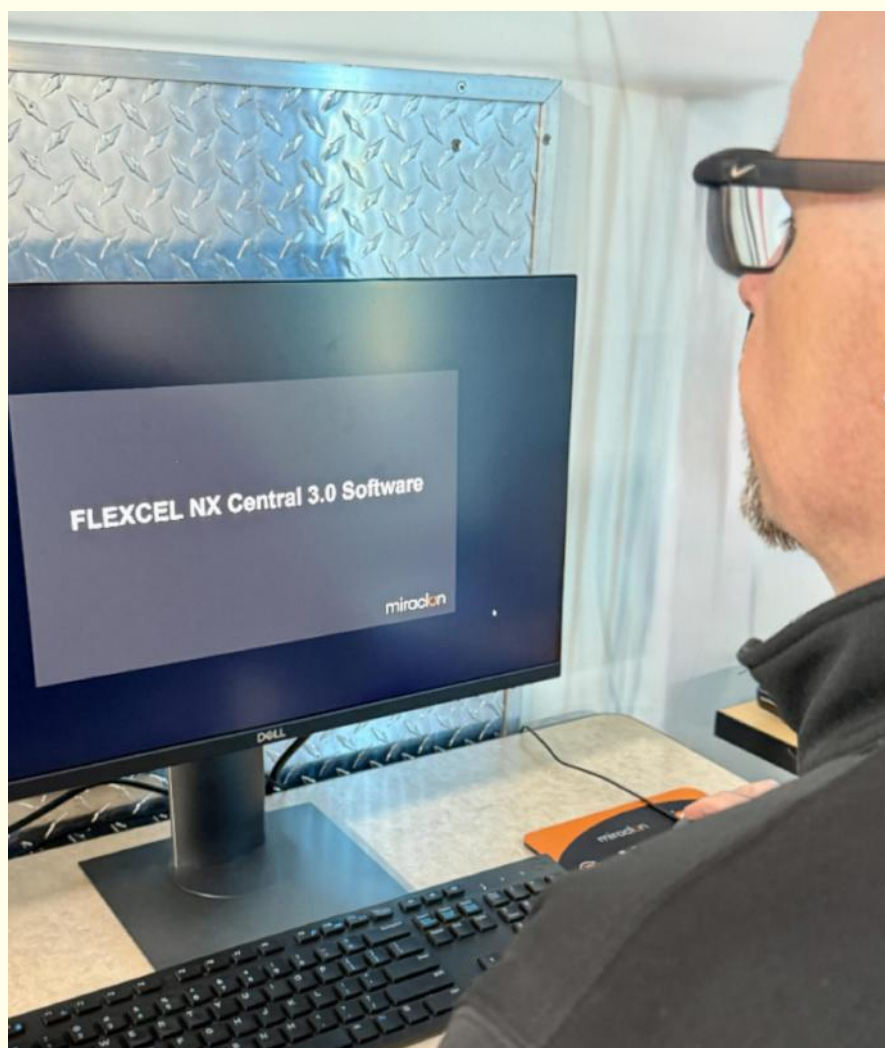
At the core of the release is the Automated Calibration Tool, an intelligent feature that replaces manual calibration with a smart, self-service solution. By continuously validating and adjusting system settings, it ensures optimal platemaking conditions, significantly reducing variability and delivering consistent, high-precision plates that perform flawlessly on press.

"FLEXCEL NX Central 3.0 is another demonstration of Miraclon's commitment to deliver precision, consistency and repeatability in the platemaking process - key pillars of modern flexo printing," said Deana Conyard, Director of Product Marketing & Portfolio Management, Miraclon. "It empowers customers with greater simplicity and agility in their platemaking workflows, helping them achieve the highest levels of plate performance and print production."

In addition to the new calibration capabilities, FLEXCEL NX Central 3.0 provides seamless access to a suite of value-added features for the FLEXCEL NX System, including advanced triple-form surface patterning from Miraclon, Pure-

Flexo™ Printing which reduces unwanted ink spread and unscheduled press stops by up to 50%, and Automated Plate Layout, which eliminates 90% of the time spent manually producing plate layouts while boosting plate utilization by up to 10%.

New FLEXCEL NX System installations will include FLEXCEL NX Central 3.0, and upgrades for existing customers are now available.







# If you expect accurate brand colors, you'll love Multicolor

Spot colors are used particularly frequently in packaging printing. But how do you accurately reproduce spot colors in digital printing? And how can jobs be flexibly exchanged between

conventional- and digitalprint? GMG ColorServer Multicolor automatically converts all spot colors into the desired output color space.

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# Multi-Job in Saddle Stitching: Prinova saddle stitcher for both digital & conventional production

With the innovative multi-job function, the high-performance Prinova saddle stitcher can produce multiple orders in a row, printed both digitally and conventionally, without manual intervention or stopping the machine. When it comes to small orders especially, it helps ensure maximum efficiency and flexibility.

Producing at up to 9,000 cycles per hour, the saddle stitcher from Müller Martini is ideal as a high-performance solution for digital saddle stitching, also offering impressive flexibility and reliability for conventional production. The multi-job function, available both for the Prinova and its "big brother"

Primera PRO, enables the automatic processing of consecutively different orders. This is a major advantage for printshops working with varying covers but invariable content or frequently producing small runs.

Benefits of multi-job production for digital and conventional production:

- Automatic job change: No manual intervention required, saving time and boosting productivity.

- More production freedom: Ideal for hybrid production and custom print products.

- Higher net output: In conventional production, the feeders can continuously receive signature sheets (with the same format) for the new job without the need to stop the machine or clear the feeder manually, significantly increasing the machine's net output. The machine ensures correct compilation of the products.

Efficient and flexible: The Prinova saddle stitcher from Müller Martini, shown in the digital version in the image, processes both digital and conventional small runs fully automatically, without manual intervention, thanks to the multi-job function.

The Prinova is not only a state-of-the-art machine, but also provides for easy handling and high productivity.

## Technical highlights for maximum quality

In the digital version, a plow folder The Prinova is available as a completely thickness-variable configuration. Automatically adjusting to the product thickness, the stitching station controls the wire length fully automatically, ensuring perfect

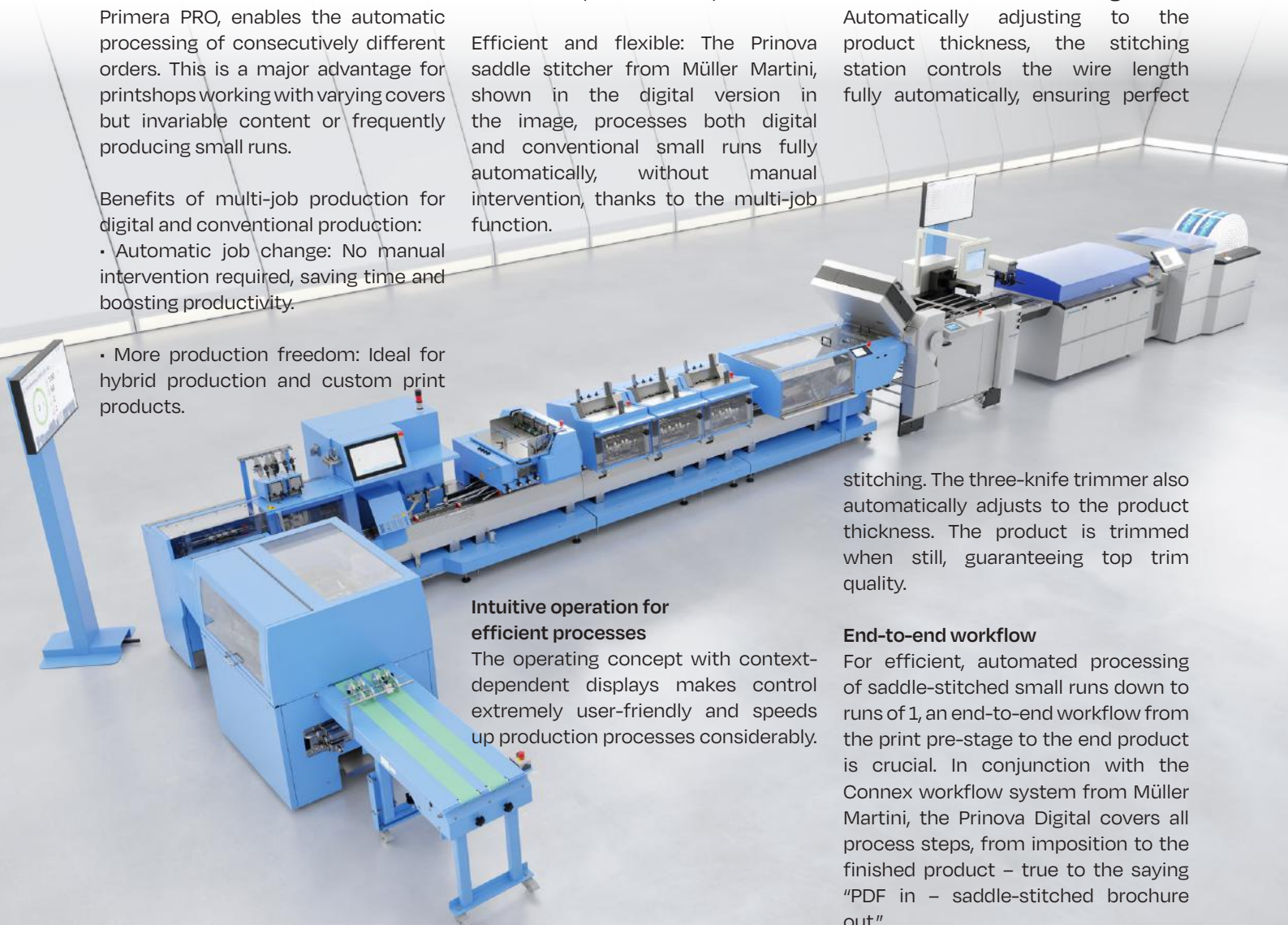
stitching. The three-knife trimmer also automatically adjusts to the product thickness. The product is trimmed when still, guaranteeing top trim quality.

## End-to-end workflow

For efficient, automated processing of saddle-stitched small runs down to runs of 1, an end-to-end workflow from the print pre-stage to the end product is crucial. In conjunction with the Connex workflow system from Müller Martini, the Prinova Digital covers all process steps, from imposition to the finished product – true to the saying "PDF in – saddle-stitched brochure out."

## Intuitive operation for efficient processes

The operating concept with context-dependent displays makes control extremely user-friendly and speeds up production processes considerably.







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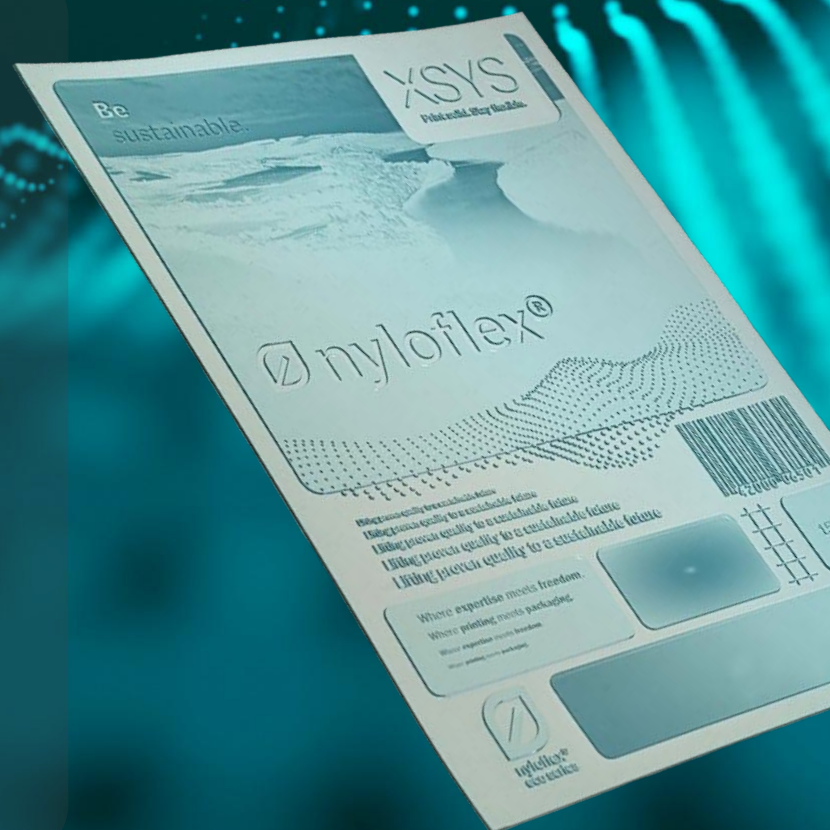


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# Xiamen Xinye Printing commissions new press

Manroland Sheetfed has announced the successful commissioning of a new ROLAND 710 Evolution press at Xiamen Xinye Printing Co. Ltd. in China. The installation marks another significant step in the company's strategic investment in advanced printing technology, reinforcing its commitment to quality, precision, and innovation.



The ROLAND 710 Evolution, known for its exceptional productivity and automation, is now fully operational and ready to support Xiamen Xinye Printing's growing production demands.

Xiamen Xinye Printing Co. Ltd. offers a wide range of professional printing services, specializing in bag printing, packing box printing, and other high-quality solutions. Serving customers throughout China, the company has built its reputation on consistency, customer focus, and reliability. By investing in advanced technology, Xiamen Xinye Printing continues to strengthen its ability to deliver value-driven solutions that meet the growing demands of diverse industries and clients nationwide.

The commissioning process was carried out under the close supervision of Manroland Sheetfed's experienced technical team, who ensured that the installation proceeded smoothly and according to schedule.

Every stage, from setup to final calibration, was performed with precision to guarantee optimal press performance from the very first print run. The collaboration between both teams exemplified professionalism

and technical expertise, resulting in a seamless transition to full production. The ROLAND 710 Evolution represents the latest generation of offset printing technology, combining intelligent automation with superior print quality and operational reliability.

Equipped with advanced features designed to enhance color stability, speed, and efficiency, the press is

ideally suited to meet Xiamen Xinye Printing's requirements for high-volume, high-quality packaging production. Its innovative design and user-friendly interface ensure consistent results across every job, reducing setup times and maximizing productivity.

The successful commissioning of the ROLAND 710 Evolution underscores Manroland Sheetfed's ongoing commitment to supporting its partners worldwide with state-of-the-art technology and dedicated service. For Xiamen Xinye Printing, this investment not only enhances production capacity but also strengthens its competitive position in the dynamic Chinese printing market. Both companies look forward to continued cooperation and shared success in advancing the standards of modern print.







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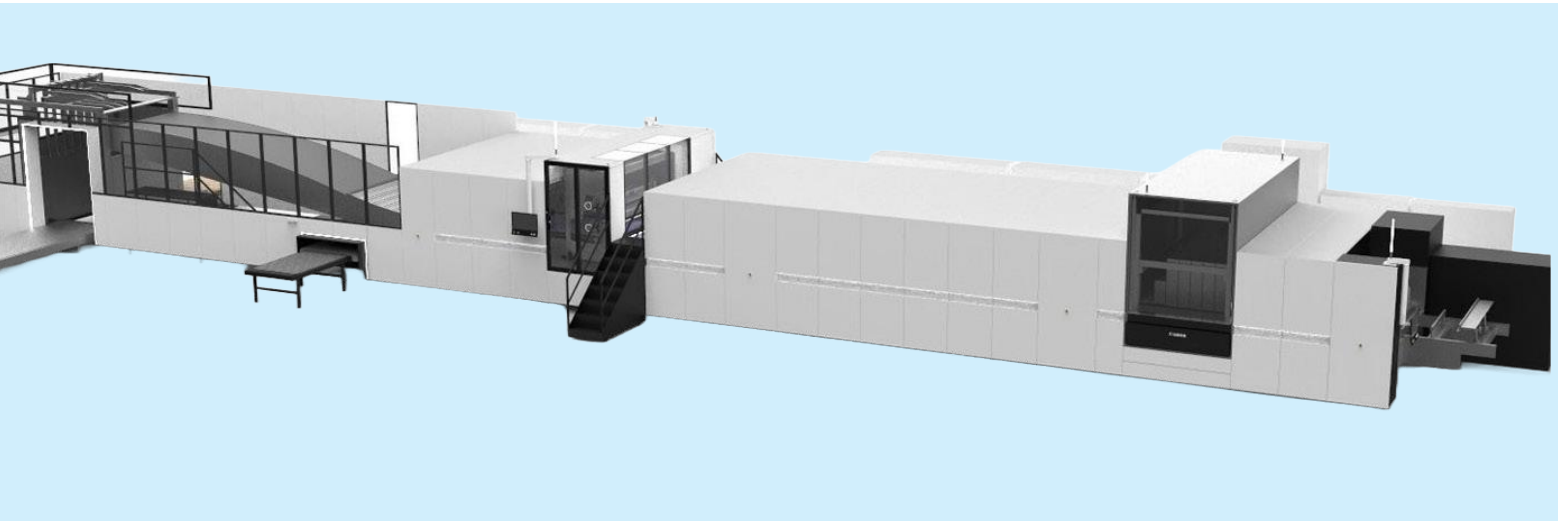


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# New digital press for industrial-scale corrugated packaging Printing

In line with its intention to become a leading force in digital labels and packaging production, the Canon corrPRESS iB17, is a next-generation inkjet press engineered for industrial-scale corrugated packaging production.



Building on Canon's proven expertise and experience in commercial digital printing and following the development roadmap presented as a concept at drupa 2024, the Canon corrPRESS iB17 will address the evolving needs of corrugated converters that face increasing pressure to deliver shorter runs with more variants, faster turnaround times and premium quality, and all without compromising cost efficiency.

Offering industrial-scale throughput at up to 8,000 m<sup>2</sup> per hour, the corrPRESS iB17 allows converters to achieve cost-efficient production for runs up to 20,000 m<sup>2</sup>, extending digital printing viability well beyond traditional short-runs. Supported by automated printhead cleaning and quality control systems, the press minimises operator intervention while maximising production efficiency.

The system's design also reduces waste through efficient print on

demand and eliminates the use of printing plates and chemicals. Unlike conventional technologies, the corrPRESS iB17 does not produce contaminated water, which then has to be filtered or released into the wastewater system.

Featuring proprietary, high-performance 1200 dpi piezo printheads and specially formulated water-based pigment inks and primer, which provide an extended colour gamut with CMYK and later OVG, the corrPRESS iB17 achieves pre-print offset-like quality in the post-print process.

This improves production efficiency by eliminating the traditional lamination step while reproducing vibrant, accurate and consistent colours, sharp text and precise detail on both coated and uncoated topliners at rated speeds.

The system also uses an advanced spot primer that ensures optimal ink adhesion and colour reproduction across the full range of corrugated materials. The ink is jetted onto the board immediately after the primer application without any drying in between, minimising the impact of drying on the board and contributing to a highly reliable production process.

The sophisticated Canon drying technology in the corrPRESS iB17 has been optimised to minimise corrugated board stress and energy consumption and to increase production efficiency. Covering approximately 80% of retail packaging applications, the system supports coated and uncoated boards up to 1.7 m wide and 1.3 m long, and ranging from 1 mm to 8 mm thick, at a linear speed of 80 m per minute.

Unusually for a digital corrugated press, Canon owns all the key components in the printing process – printheads, inks and drying – enabling Canon to



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optimise the system's performance more easily. This high level of integration and synchronisation will result in exceptional levels of productivity and reliability.

Peter Wolff, Chief Marketing Officer and Senior Vice President at Canon Production Printing, commented: "The announcement of the Canon corrPRESS iB17 marks a pivotal milestone in Canon's journey to becoming a key player in the packaging industry and reflects our deep commitment to supporting corrugated converters as they navigate today's unprecedented challenges.

"By combining proven proprietary inkjet technology with an industrial board transport system, we've developed an innovative press that delivers offset-quality prints with outstanding productivity and digital flexibility, all developed for indirect food contact applications.

Designed for seamless integration into existing production environments, the highly automated corrPRESS iB17 extends the economic benefits of digital printing far beyond traditional short-run applications.

"Although Canon is new to the corrugated market, we bring decades

of industrial inkjet expertise which enables us to deliver a digital press that will empower converters to transform their operations while maintaining the reliability their businesses depend on."



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# 5 ways to boost efficiency carton converting workflow

The folding carton sector is undergoing a transformation driven by fast-evolving consumer preferences, market trends, and technological advancements.

Speed-to-market and shelf appeal vs competitors are critical factors for the success of many brands, driving the need for smaller batches, shorter runs and faster turnaround times. Converters are being asked to deliver more sophisticated folding carton packages that stand out on the shelves and engage with consumers in new ways. At the same time, sustainability considerations are changing market dynamics, for example with reusable and recyclable folding carton packaging replacing plastic packaging for single-use purposes.

Combining remote data setup with automated setup functionalities increases machine productivity and user-friendliness.

In this context, converters need greater efficiency throughout their workflows to meet the needs of their customers. Digitalization is bringing significant benefits here in terms of workflow optimization, digital printing, digital cutting and digital embellishment. Automation is helping to improve efficiency further and reduce costs, while also helping converters to manage the ongoing issue of skilled labor shortages in the packaging industry.

At BOBST, we have been focusing on our industry vision to shape the future of the packaging world through the four key pillars of automation, digitalization, connectivity and sustainability for several years. This focus has enabled us to create efficiencies throughout the entire converting workflow for folding carton, from the planning stage through the whole production process.

## Optimize preparation with BOBST Connect

They say preparation is the key to



success. With BOBST Connect, the all-in-one digital platform that enhances and improves packaging productivity, converters can prepare their jobs to enable significant efficiencies.

For example, users can create and manage job recipes in advance of production and send them to the machine where they are downloaded by the operator to set up the machine. This Job and Recipe Management Workflow streamlines the setup, improves precision, and ensures consistency across shifts and operators.

By preparing job recipes in the back office, operators can focus on production rather than setup, leading

to faster and more efficient operations. Any changes made during production are then transferred back to the platform. This ensures data is updated to guarantee production continuity.

We know how important it is for converters to be able to create innovative and eye-catching packaging solutions, including embellishment. On hot stamping transfer machines, OACS (Optimal Advance Computing System) Connect can be used to calculate the best film advance options ahead of production in back office and – just as the job recipes – sent the machine. This allows to plan film supply, reduce changeover times and contributes to optimize foil use.



# throughout the folding

W



Data transfer also happens between tools and machines. With TooLink, a microchip connects the cutting die to the die-cutter's HMI, which enables instant retrieval of job data for machine setup. The chip saves any data changes for the next run.

BOBST Connect not only allows converters to prepare and follow-up jobs. With Equipment Monitoring and Performance Management as part of the platform's features, users can gain invaluable insights on equipment, shift and job performance and energy consumption, optimizing sustainability and cost.

## **Automate and optimize setup**

Automation is enhancing packaging manufacturing at every step. For example, the EXPERTFOLD 50/80/110 is now available with a Matic setup of the main machine elements. Combined with the Job and Recipe Management, this allows to save 10 minutes during every changeover.

With ACCUPRESS, an additional 5 minutes can be saved when setting up the EXPERTFOLD. The system enables the different pressure zones in the delivery to be recalled through the HMI SPHERE and set up automatically. Changing from manual to digital setup ensures regular and precise settings and guarantees ideal glue adherence.

The setup times for the folding carton die-cutter range can be reduced with SPEED CHANGE, a range of features which increase setup connectivity, automation and machine ergonomics. And with ACCUPLATEN, patching time on BOBST die-cutters can be cut by up to 80%, simply by compensating platen pressure irregularities to minimize deformation.

By utilizing automation and time-saving machine features, we can make many incremental gains which add up to significant efficiency advantages for converters.

## **Support efficient and flexible production processes**

When it comes to the production process, BOBST boosts efficiency and productivity through process optimization and flexibility, with solutions that can be adapted to different needs.

For greater hot stamping transfer versatility, the NOVAFOIL 106 can be equipped with a cross-foil module to increase film application performance on added-value boxes. However, the machine is also available with up to 10 dedicated hologram modules, which can be set up and mounted individually according to specific production needs. This NOVAFOIL 106 Hologram version is ideal for flexible and highly efficient hologram applications.

On the MASTERCUT 165 PER, the Dual Stream delivery option allows to either deliver blanks in counted batches, or in piles on a pallet. Depending on downstream processing requirements, the machine can be adapted with the turn of a switch. Downstream processing has also been a major consideration for creating an inline banding solution for folder-gluer lines equipped with CARTONPACK 4 packer.

Instead of automatically packing the boxes loosely in containers, the banding of counted batches allows operators at packaging machines to transfer the boxes efficiently into the machines, without deteriorating packaging quality.

With ACCUBRAILLE, ACCUCHECK and GYROBOX, BOBST folder-glue also enable converters to adapt their machine to their production needs and integrate important production steps directly into the folding-gluing process, to simplify and accelerate the production workflow.

For short-to-midsize runs, there is now the option to utilize an all-in-one digital printing and converting platform with the DIGITAL MASTER 55, a new platform tailored for the folding carton industry, which drastically increases opportunities with short lead times and high product quality. Combining printing, embellishment, quality control, and die-cutting inline at 100 mpm, the DIGITAL MASTER 55 ensures the shortest time to market (even offering same-day delivery) and the best Total Cost of Ownership (TCO) among printing and converting solutions.

There really is an option for every need and requirement – and all of them greatly increase converter efficiency.

#### **Boost non-stop production**

Once production is up and running, converters need to maximize uptime and throughput.

Introduced recently on the NOVACUT 106 and VISIONCUT 106, the ACCUREGISTER – a “non-edge-contact” registration system – is designed to enhance die-cutting accuracy in packaging production. High-performance cameras align sheets precisely, either by the edge or a print mark. This guarantees optimal sheet alignment and die-cutting quality, while minimizing feed-related stops.

When it comes to facilitating die-cutting logistics, the BOBST Automatic Pile Transfer (APT) system optimizes the material flow by continuously supplying full pallets to the feeder, while pallets are transported to the machine's delivery to be loaded with blanks.

Meanwhile, peripherals for the folder-glue range ensure continuous material flow which optimize the production capabilities of the machines. With the EASYFEEDER 4 pre-feeder and the BATCH INVERTER 4, blank feeding on folder-glue is continuous, without constant operator presence, and ensures the highest productivity at any given speed.

#### **Save resources with sustainable solutions**

With sustainability and cost-efficiency major focuses for all converters, BOBST is continually rolling out new initiatives aimed at reducing environmental impact and production cost.

The POWER REGISTER's register recognition capacities have been adapted to include very small square reference marks at the side of each sheet. This POWER REGISTER Plus saves up to 4mm of carton for the front register marks, reducing carton cost by up to 0.5%, which can save up to 1 ton of carton for 1 million sheets.

Meanwhile, the Energy Efficiency Pack is a set of features including energy-efficient air pumps and an Energy Recovery System, which transforms kinetic machine braking energy into electricity. These and other measures in the pack can reduce energy consumption by up to 20% on die-cutters and hot stamping transfer machines.

The new independent motorized glue unit on the EXPERTFOLD folder-glue helps converters to save energy, glue and maintenance time. The independent motor enables the station to run, even if the rest of the machine is on standby – the glue wheel continues to move, ensuring that the glue does not dry and that the following boxes can be produced without any impact on the gluing quality.

#### **Conclusion**

There are significant opportunities throughout the folding carton converting workflow to boost efficiency and productivity. BOBST is the go-to supplier to provide end-to-end solutions – including service and long-term production change requirements.



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# Offset vs. digital printing: *an overview of the fundamentals and future prospects*

In the printing industry, few topics are discussed as frequently as the question 'offset or digital printing?'. It often seems as if offset and digital printing are locked in a battle for supremacy.

But we can say this much in advance: in reality, both processes complement each other depending on the task and objective. To understand this, let's take a look at how the two printing technologies work, their strengths and their possible applications. Finally, we will consider the influence of current trends on development and what the future of the two technologies might look like.

## Offset printing: proven and precise

Let's start with the older of the two printing processes. Offset printing is an indirect process. First, the motif is transferred to a plate, which is then used to print onto the printing material via a rubber blanket. This technique ensures consistently high-quality prints with rich colours, and can be used with a wide variety of materials – from thin paper to sturdy cardboard.

The strength of offset printing lies in its reproducibility: once set up, an offset machine consistently delivers high-quality results across thousands or even millions of copies. Offset printing is unparalleled, particularly when using special colours according to Pantone or HKS. The colour density and brilliance that can be achieved on various

substrates make it indispensable for producing high-quality magazines, art catalogues, and premium packaging.

However, offset printing requires the production of printing plates, which involves preparation time and costs. These set-up costs must be amortised over the print run, which is why the economic advantages of offset printing only become apparent above a certain minimum quantity.

Nevertheless, modern developments such as computer-to-plate (CtP) systems have significantly reduced setup times and streamlined the process.

## Digital printing: flexible and direct

With digital printing, this intermediate step is completely eliminated. Print data is transferred directly from a file to a substrate using either toner (electrophotography) or inkjet





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## Dive into a sea of opportunities

Are you a packaging converter seeking a cost-effective way to print short runs of packaging? Capable of printing at killer speeds, the SpeedSet Orca 1060 sheetfed water-based inkjet press is set to make massive waves in the packaging printing market. With its stunning quality and its capability to handle a wide range of media, this cost-effective solution will enable you to dive into a sea of opportunities.

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technology. This process is ideal for short set-up times, small print runs and flexible content. As no plates are required, variable data such as names, barcodes and QR codes can also be easily integrated.

Technological developments in digital printing are rapid. Modern inkjet systems now achieve print speeds and resolutions that were unthinkable just a few years ago. UV inkjet technology enables printing on materials that were previously unsuitable for digital printing. Water-based inks reduce environmental impact, and LED UV curing reduces energy consumption.

Another advantage is that errors in digital printing can be easily corrected. If an error is discovered in the file, production can be adjusted immediately, eliminating the need to recreate expensive plates. This flexibility makes digital printing ideal for agile production environments where requirements can change quickly.

### ***Where each type of printing has its strengths***

#### **Costs & print runs**

As a general rule, digital printing is more cost-effective for print runs of up to around 500 copies. For larger print runs, however, offset printing is more cost-effective, as the fixed costs for plate production are spread over a greater number of copies. However, this depends to a large extent on the printing units themselves.

The boundary between the two processes is constantly shifting, though. Advances in digital printing, particularly inkjet systems, are making the process economically viable for medium print runs. At drupa 2024, machine manufacturers presented innovations that are redefining these break-even points. Some experts now estimate this threshold to be between 1,000 and 1,500 copies, depending on the format and complexity.

Another significant cost advantage of digital printing that is often overlooked is warehousing. Digital printing enables just-in-time production and print-on-demand. This means that companies do not have to produce large quantities in advance. This reduces storage costs, minimises the risk of obsolete materials, and improves cash flow.

#### **Quality & colour fidelity**

Offset printing is still considered the gold standard for colour consistency, particularly for special colours according to Pantone or HKS. The physical transfer of ink via the rubber blanket ensures a uniform ink layer thickness and brilliance, which is ideal for demanding applications such as art prints or premium catalogues.

However, digital printing is catching up fast. Modern inkjet systems offer excellent colours and a resolution that is perfectly adequate for most applications. Thanks to the development of extended colour gamuts, digital printing can now cover

a wider spectrum than before using CMYK combinations. Some high-end digital printing systems already use seven or more colours to digitally simulate special colours.

At drupa 2024, leading manufacturers demonstrated how modern digital printing technologies are closing the gap with offset printing. Breakthroughs in printhead technology and ink formulations were particularly evident in inkjet technology. These innovations take colour fidelity and durability to a new level.

#### **Speed & flexibility**

Anyone requiring small print runs or customised content quickly will benefit from digital printing. Print-on-demand for books or personalised advertising materials would be virtually unthinkable without it. The ability to go from order to finished product in minutes is transforming business models in many industries.

Offset printing, on the other hand, is highly efficient for large print runs. Modern sheetfed offset presses can reach speeds of up to 18,000 sheets per hour, but web offset presses are even faster. Once set up, they can produce large quantities in a very short time.

#### **Material diversity**

Offset presses are compatible with a wide range of papers and cardboards, including special substrates such as metallic papers and textured or





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Digital printing systems have become considerably more flexible in recent years, but remain limited in some areas. Modern UV inkjet systems can now print on a wide variety of substrates, including smooth films, corrugated cardboard and textiles. A recent breakthrough has been the development of improved primer systems that enhance the adhesion of digital inks to challenging substrates. These developments are continuously expanding the range of applications for digital printing, making it a viable option for jobs that were previously exclusively the domain of offset printing.

### ***Trends that are changing printing***

#### **Personalisation: the game changer in marketing**

One clear advantage of digital printing is the ability to produce personalised prints. Each copy can be different, featuring names, codes or unique designs. This capability has fundamentally changed marketing. Variable data printing (VDP) enables printed products to be tailored to individual recipients, and this has been shown to lead to higher response rates.

Major brands are already using this technology for innovative marketing campaigns on products such as beverage cans and collectible packaging. Nowadays, we are seeing an increasing number of campaigns where entire designs are personalised based on customer preferences and geographical data from purchase history, not just names.

At drupa, machine manufacturers constantly demonstrate how they are increasing the speed and quality of such applications. This also enables personalised medium and large print runs to be produced. Modern workflow software can automatically generate thousands of individual designs from database entries. This makes the production of highly personalised campaigns economically viable.



The next step is real-time personalisation. QR codes and augmented reality elements on print products link the physical and digital worlds, enabling interactive, personalised customer experiences.

#### **Hybrid solutions: the best of both worlds**

Projects are increasingly combining offset printing for stable foundations with digital printing for variable content. This enables large quantities to be produced efficiently while retaining flexibility.

For example, a company might produce 100,000 catalogues using offset printing. However, the final few pages featuring regional offers are added digitally, meaning that each region receives its specific information without the need for 20 different offset print runs.

Hybrid printing presses make this possible by combining offset and digital printing modules in a single production line. Intelligent workflow software controls this integration, automatically deciding which pages are produced using which process.

Another hybrid scenario is offset printing with digital finishing. Basic prints are efficiently produced using offset, while high-quality effects such as metallic accents, raised embossing, and individual personalisation are added digitally. This combination

enables the production of premium products at predictable costs.

#### **Why the future belongs to both**

Offset and digital printing are complementary technologies that optimally meet different needs. While offset printing continues to play a key role in quality and mass production, digital printing offers greater flexibility, personalisation and sustainability.

The future belongs to 'both/and', not 'either/or'. Companies that combine both processes intelligently are best placed to meet the growing demands of customers and markets. The boundaries between the two technologies are becoming increasingly blurred, with hybrid solutions becoming the norm.

Technological advances will further improve both processes. Digital printing is becoming faster and higher quality, as well as more economical for larger print runs. Meanwhile, offset printing is becoming more flexible, sustainable and efficient. These developments are making the printing industry more versatile and innovative than ever before.

For print service providers and their customers, this diversity means one thing above all else: more opportunities to implement creative ideas, optimise costs, and produce print products that precisely meet requirements, whether in small quantities or in large print runs.





# Flexo Plate Making Connected

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**Esko - Flexo Plate Making Connected**



# Artificial Intelligence Key to Securing a Co

*The future of the printing industry lies in seamless networking of customers all the way to the warehouse and back, and in intelligent data analysis and the implementation of AI-powered applications.*

AI can be harnessed to optimize the quality and efficiency of individual process steps and automate them. At the same time, it can help save on resources and capture new business segments.

The economic situation in the graphic design industry has been strained for many years. Digitalization in the media

landscape in particular is increasing the pressure on the printing industry. Advertising budgets have been reallocated to digital channels on a large scale. Meta, Google, and the like are the big winners, raking in about 80 percent of advertising expenditures online. This has resulted in a drastic decline in commercial and newspaper printing. One clear indicator is falling

paper sales. Since 2019, sales of coated and uncoated paper have declined by nearly half in Western Europe alone – with the trend continuing downward. The volume to be printed has gotten smaller, competition fiercer. In addition, energy prices have shot up drastically, which has a direct impact on the costs for paper and consumables, plus there is a growing shortage of skilled workers. But the current geopolitical situation, too, is contributing to general uncertainty.

## **Production designed for efficiency**

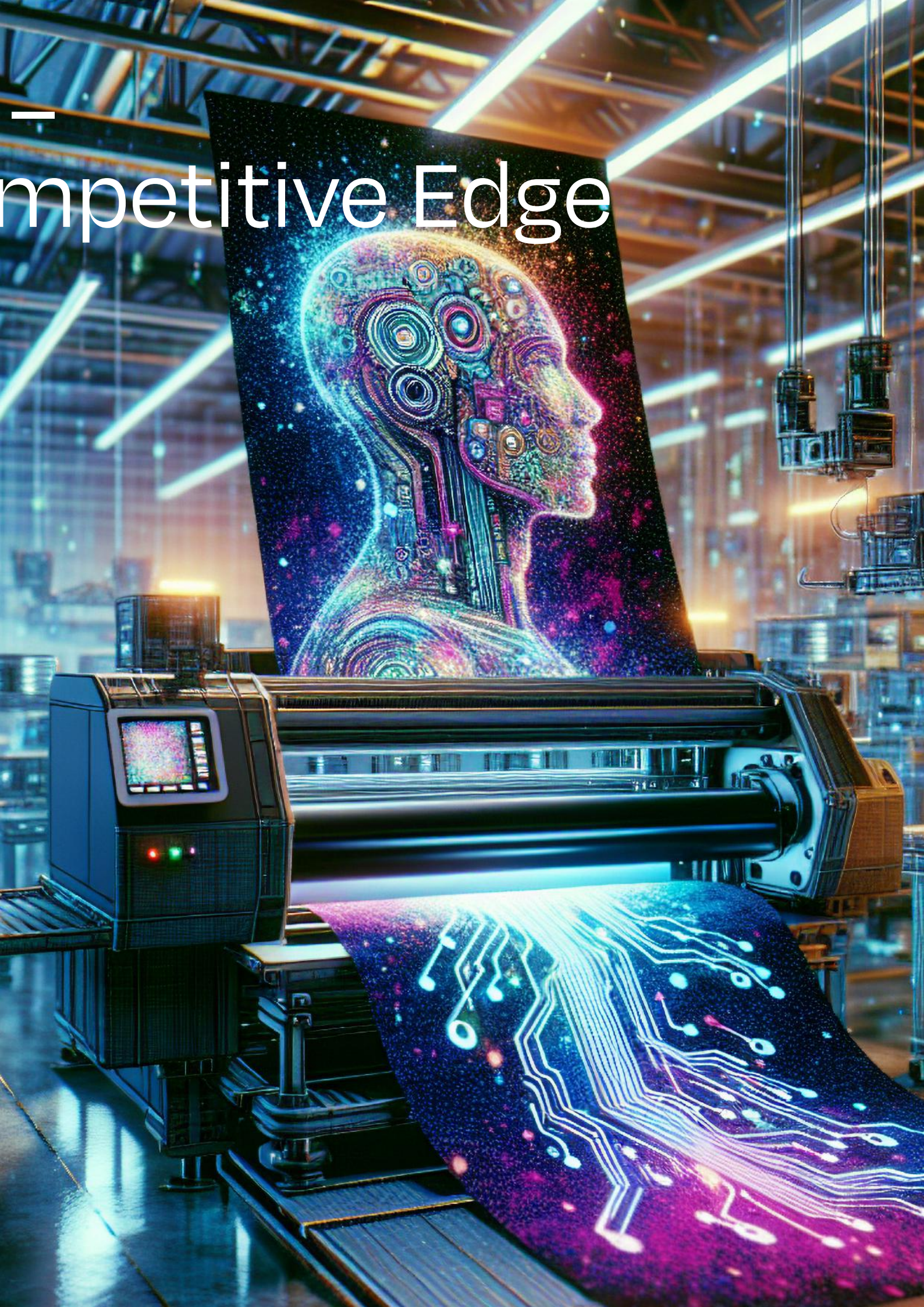
Despite these challenges, there are still businesses able to hold their ground in this demanding environment. What these companies have in common is a clear positioning, a targeted marketing and sales strategy, and networked production designed for efficiency. They have also expanded their range of products and services. Because there are new possibilities along the entire value chain, through digital enhancements. And this is where artificial intelligence (AI) comes into play.

AI can be harnessed to optimize the quality and efficiency of individual process steps and automate them. At the same time, it can help save resources and capture new business segments – such as graphic design or the creation of digital media. The potential associated with AI is huge and ranges from targeted marketing and sales activities to the design and production of print products all the way to proactive service concepts. All of this is based on algorithms that, thanks to machine learning, recognize patterns and derive actions from





# Competitive Edge







them – with a wide range of possible applications.

For example, it makes sense to search the data stored in the ERP system using an AI tool to find out what the customer actually needs, what is important for individual customers when it comes to pricing, and how likely the sale is. What factors play a role – price, delivery date, range of products, customer relationship? AI can also bolster customer support with chatbots. Within less than three months, this kind of AI model can be optimized and tailored to the situation of the respective print shop and ready for use according to different AI consultants.

#### AI creates new visual worlds

The potential of AI shines in content creation and image processing. These days, AI is already used by many editors as standard for research and editing texts. And AI has long been established in graphic design. Image databases are filled with AI-generated images and design platforms like Canva, Visacreate, or Figma support AI users in designing logos, banners, business cards, or signs.

Today, free-form select is possible or a background can be extended with a click of the mouse using generative AI. And if you formulate the right prompts, you can create new worlds of imagery in no time at all. The Adobe Cloud has a lineup of AI tools designed for content generation and creative composing. Other interesting tools for image generation include DALL-E, Midjourney, or Stable Diffusion – here, the images have even found their feet, filling the Internet with AI-generated videos.

#### Alarms sounding

AI has also now spread in the prepress workflow. It can provide suggestions

for enhancing the CMYK color space with one or more additional colors to get a handle on special colors. Another starting point is optimizing the signature waste – after all, different formats and paper types especially increase complexity. Based on the existing order pool, AI identifies the right waste arrangement to optimize use of the signature format.

Online printers have shown how it's done – and built their business model on gang-run printing. In the future, AI-supported workflow software will also decide which printing process is most efficient and cost-effective and initiate all the required steps all the way to printing.

#### Autonomous printing requires AI

No matter whether analog or digital printing, AI is a must to optimize processes. By integrating the machines into a cloud-based workflow solution, printers get an optimal job sequence for their shift based on the paper, signature format, colors, etc. right at the central console. This reduces setup times and waste rates significantly. Extensive networking, preferably throughout production, is essential. At the heart of it all is the ERP system. Evaluation of machine data generated enables internal and external benchmarking, delivering valuable insight into potential optimizations.

#### Preventive service

By continuously analyzing the machine data found in a print shop from the CTP system to the saddle stitcher, preventive maintenance concepts can be put into practice. This requires big data applications constantly supplied with new data via the cloud, enabling machine learning (ML). De facto, AI learns from every fault and troubleshooting to keep technology available and schedule service – a win for both sides. At Müller Martini, AI is also being used more frequently in service. With a know-how database of historical service data and specific customer requests, AI supports service technicians in resolving customer matters faster.

Müller Martini also thinks beyond the machine – towards workflow management and warehousing concepts. With its Connex, Müller Martini is ideally equipped to harness the potential of AI along the entire value chain.

The printing industry is under pressure. But businesses that recognize and take advantage of the opportunities presented by artificial intelligence can not only optimize processes but also set a new course. AI isn't a thing of the future anymore – it's happening now, and it's a crucial factor to remain competitive tomorrow.





# High-end book production

## Starbook Plowfolder

The automated Hunkeler Starbook Plowfolder enables extremely efficient production of digitally printed books starting from print run 1. Format flexibility for each print run is guaranteed by the completely variable page count and spine length per book, as well as semi-automatic changeover of different fold types within three minutes. Outstanding book block quality with perfectly straight, square, and flat book blocks make the Star Plowfolder the ultimate solution for the production of softcover and hardcover books.



More information:



[hunkeler.ch](http://hunkeler.ch)

Excellence in Paper Processing



# Why wash selection matters:

## *The hidden impact on print quality and press life*

When it comes to improving offset printing quality, inks, blankets, and rollers often take centre stage in discussions. However, behind the scenes is an unsung hero whose role is just as important – the press wash.

Without the right wash, even the best inks cannot deliver the consistent quality that brand owners and their customers expect. Wash selection plays a role in everything from supporting consistent colours to extending equipment lifespans, saving printers significant time and money in the long run. Solutions like our VARN® range are key players in advancing pressroom efficiency, offering intelligent wash solutions designed for the most demanding cleaning tasks.

### **The science behind clean presses**

Proper press cleaning means much more than just conducting routine maintenance. A clean press is fundamentally linked to print quality and production costs, as failure to keep up with cleaning means that ink residues, paper dust, and coating deposits can build up on blankets and

rollers over time. These contaminants cause print defects such as smudging, patchy colour application, hickies, dot loss/dot gain, and streaks, negatively affecting quality and requiring costly reprints.

In contrast, a press that is clean delivers far more consistency, reduces rework and waste, and minimises downtime from machine malfunctions caused by piling and abrasion.





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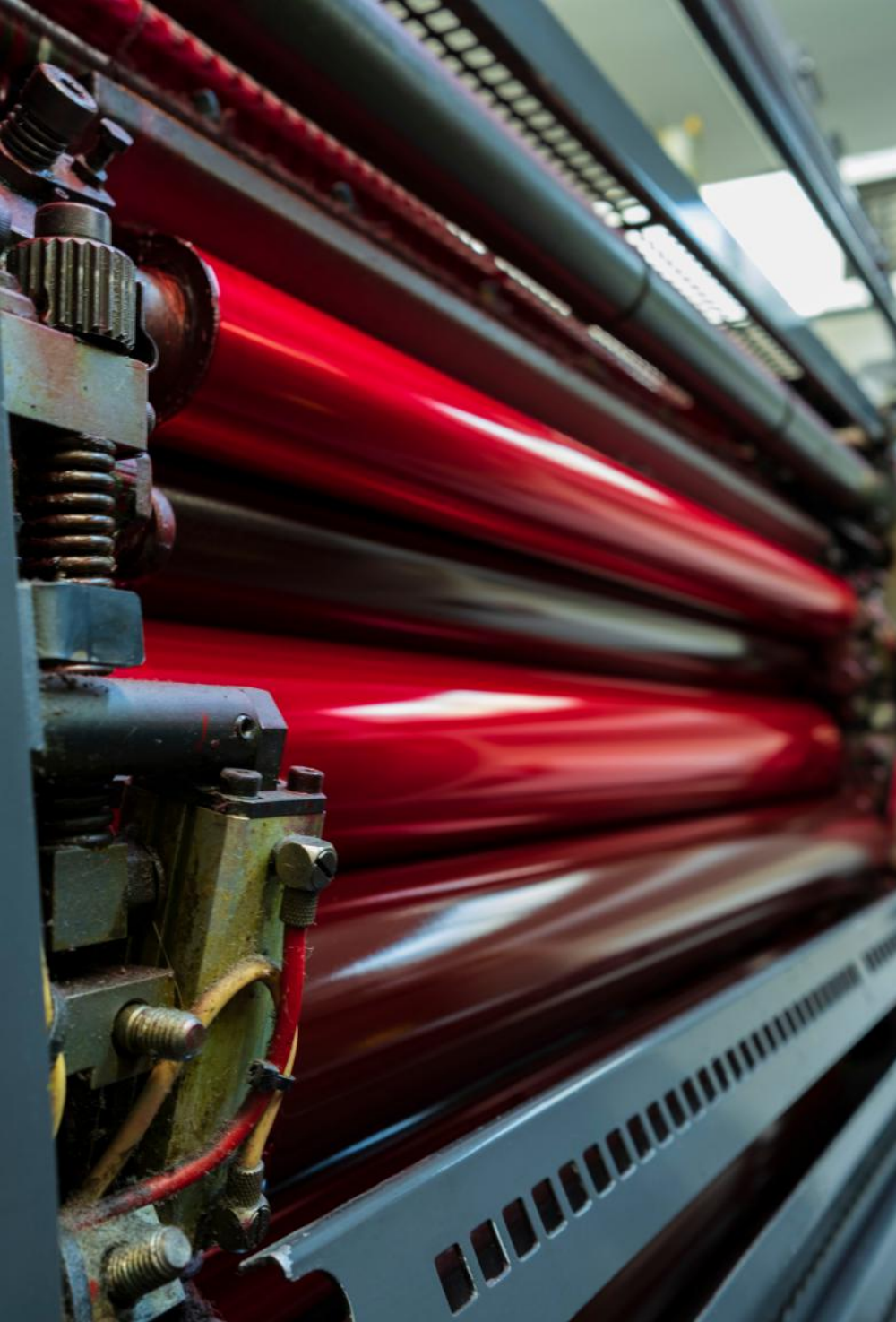
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A clean press also means longer component life and better return on investment. By preventing abrasions and chemical degradation on blankets and rollers, proper cleaning reduces wear and tear. This helps presses run smoothly and reliably for longer periods of time, supporting production schedules and lowering total ownership costs.

**Why choosing the right wash matters**  
Selecting a wash is not as simple as choosing the strongest or cheapest available solution. Aggressive or poorly matched washes can accelerate the degradation of rubber blankets and rollers – for example, although solvents in some washes can help release

dried ink, frequent or harsh exposure also may lead to inferior print quality through blanket and roller swelling or hardening.

Common print issues linked to incorrect wash selection include streaking, ghosting, roller glazing, and slower cleaning times. An unfit wash may also result in longer cleaning cycles or more frequent roller replacements, both of which undermine press uptime and increase costs.

#### **Understanding wash formulations**

Different wash technologies can affect cleaning performance and press health in distinct ways:

**Solvent-based washes:** These formulations dissolve inks quickly and powerfully but often have higher volatile organic compound (VOC) content that can be harmful to operator health and the environment. They also pose flammability risks and can be harsh on press components if overused, and require a second cycle of a water wash to remove water-soluble contaminants.

**Water-miscible washes:** These washes can be mixed with water to better remove ink and water-soluble contaminants in one cycle, and can be formulated to tackle stubborn inks and lint, gum, and glaze.

**Low-VOC washes:** Specifically designed to meet stringent environmental standards, these formulations balance cleaning power with reduced emissions and health risks. Performance is optimised through solvent blends to maintain cleaning effectiveness, but they may be slower acting or more expensive than other formulations.

#### **Matching washes to your pressroom needs**

Maximising efficiency and print quality means printers must select a wash suited to their unique operational objectives. Printers should assess priorities such as cleaning speed, environmental goals, and operator comfort to choose the best fit.

Our VARN® wash range ensures a range of solutions tailored to individual pressroom requirements:

The impact of choosing the right wash resonates through the production process. Carefully selecting wash chemistry is essential to maintaining high quality and protecting presses, keeping them running smoothly, job after job. Our VARN range provides a suite of powerful cleaning tools that help printers harness the hidden power of proper cleaning, meaning that whatever their requirements, they can take a smart step towards optimising print performance and extending press life.



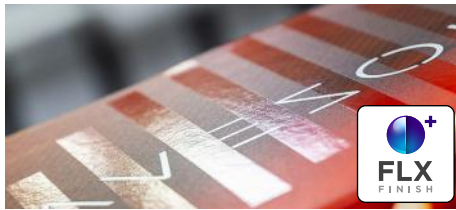
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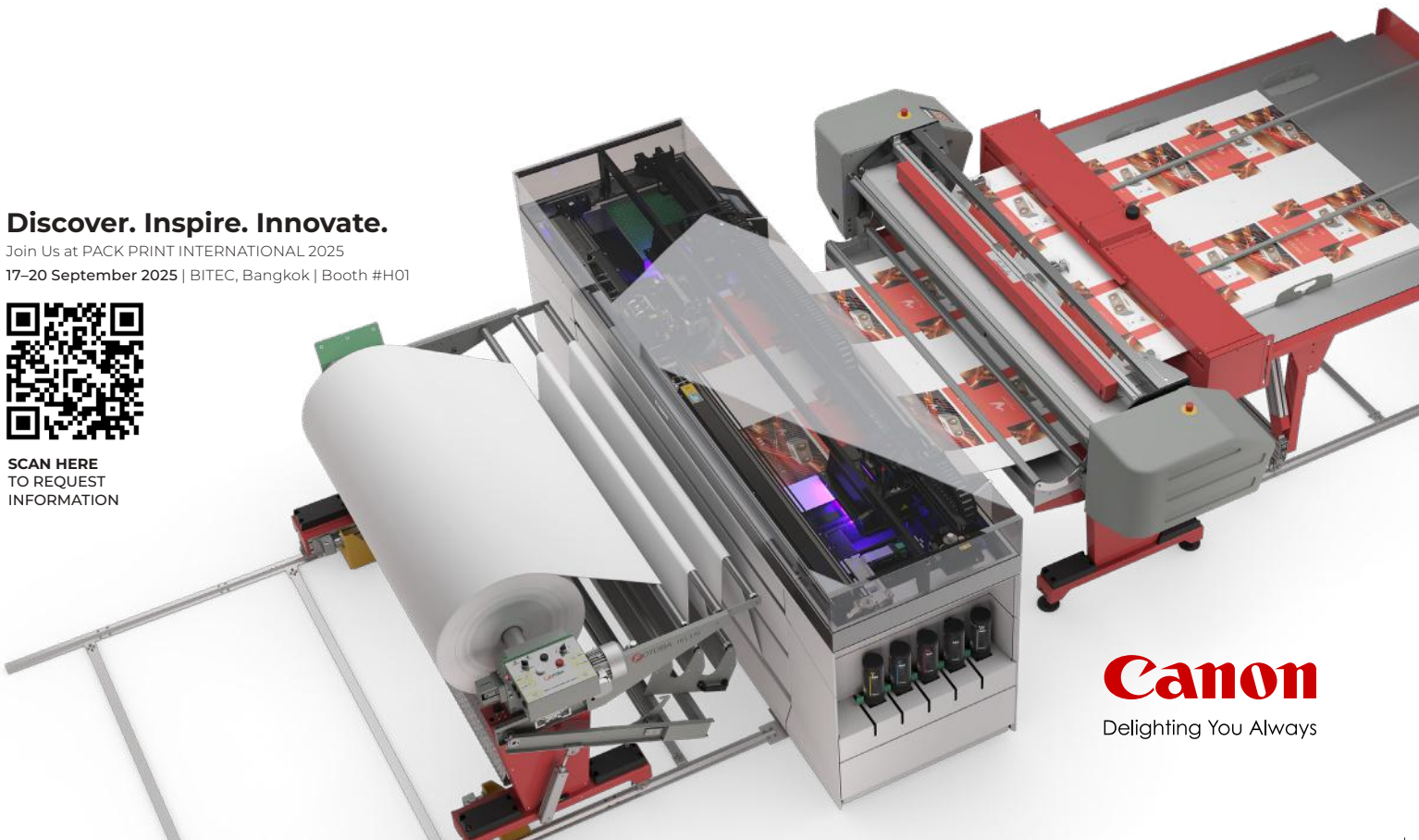
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# Unlocking opportunities with digital printing for packaging

Digital printing for packaging is no longer just an emerging technology—it is gradually transforming the packaging industry and creating significant opportunities for established brands, start-ups and converters alike.

At drupa 2024, exhibitors showcased the latest developments and demonstrated how businesses can use digital printing to create new revenue streams, enhance customer engagement, and stay ahead of the competition.

## Key benefits of digital packaging printing

Thanks to the flexibility and efficiency of digital printing, companies can respond to changing consumer demands and market trends more easily than ever before. These four benefits are key.

### Special designs on a large scale

Digital printing allows brands to create highly targeted, personalised packaging, opening up opportunities for:

- Limited editions and seasonal packaging - Brands can engage customers with exclusive designs tailored to specific events or seasons.
- Regional and cultural customisation - Customised packaging based on geographical trends can increase market relevance and consumer loyalty.

- On-demand production - Digital printing allows companies to respond quickly to market trends without tying up large inventories

Brands can use personalisation to enhance brand storytelling and strengthen customer relationships, a strategy that has proven particularly successful in FMCG sectors such as confectionery and beverages.

### Expanding market reach with short runs

For companies looking to enter new markets or test product concepts, digital printing offers an ideal solution by enabling cost-effective short runs.

This capability helps brands to:

- Test new products with minimal risk
- Short-run packaging allows brands to explore new designs and formats without significant investment.

- Serve niche markets - Small brands and start-ups can compete effectively by producing unique, eye-catching packaging that stands out on the shelf. Likewise, large brands can easily and cost-effectively launch smaller or exclusive products tailored to smaller audiences.





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- Streamline inventory management
- Reduce waste and storage costs by producing only what is needed, when it is needed.

This agility of digital printing gives businesses the freedom to innovate and respond more effectively to changing consumer preferences.

#### Strengthening sustainability efforts

Sustainability is a key driver in today's packaging industry, and digital printing offers new ways to meet environmental goals. Large brands in particular, who can afford the latest technology, can benefit:

- Reducing waste - Digital printing supports a lean production approach, minimising overproduction and obsolete stock.

- Using eco-friendly substrates - Many of the digital printing solutions on show at drupa 2024 are compatible with recyclable and biodegradable materials.

- Reducing carbon footprint - On-demand, localised production can reduce transport emissions and contribute to greener supply chains. By adopting digital printing, brands can demonstrate their commitment to sustainability, an increasingly important factor for eco-conscious consumers.

#### Faster time to market

Speed is of the essence in a highly competitive market. Digital printing eliminates the long makeready times associated with traditional printing

methods, providing opportunities for:

- Rapid prototyping and iteration - Brands can quickly refine packaging concepts and respond to consumer feedback.

- Faster campaign rollouts - New product launches and marketing initiatives can go from concept to shelf in record time.

- Agile response to regulatory changes - Brands can quickly update packaging designs to comply with new regulations without incurring excessive costs.

Digital printing helps companies remain agile and responsive, giving them a competitive edge in dynamic market

#### Will all packaging in the future be digitally printed?

The innovations showcased at drupa 2024 underscore the fact that digital printing is more than a technological change - it is a strategic tool that enables brands to be innovative, personalised and sustainable. Companies that embrace digital printing can unlock new growth opportunities, improve customer loyalty and remain competitive in a rapidly evolving marketplace.

And while digital printing will not replace traditional printing methods in the high-volume business any time soon, it has long since moved out of its niche and into more and more applications





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# What will tomorrow's printing inks need to deliver?

In the context of packaging, sustainability, food safety and compliance with evolving regulations are rapidly becoming key factors in ink development. In response to this, the NVC Packaging Centre, a longstanding drupa partner, commissioned an academic research project to assess the preparedness of ink technologies for the future.

The study was conducted by Teodora Taşip, a chemical engineering intern at NVC, as part of her graduation research project. She conducted a comparative analysis of four ink types, evaluating them using practical sustainability and safety criteria: water-based, UV-cured, soy-based and algae-based. The result is a clear, neutral and forward-looking perspective on the environmental impact of different inks on packaging.

When it comes to making packaging more sustainable, ink is not usually the first thing we consider. After all, it accounts for less than 5% of a package's weight. However, in practice, inks play a disproportionate role in recyclability, food safety and environmental impact – all of which are key issues as the industry faces increasingly stringent regulations such as the EU's Packaging and Packaging Waste Regulation (PPWR), which is due to come into effect in 2026.

A new comparative study by the NVC Packaging Centre and the Hague University of Applied Sciences has examined four types of ink – water-based, UV-cured, soy-based and algae-based – to assess their suitability for a more sustainable future.





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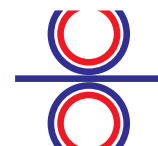
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#### The four inks at a glance

1. Water-based inks are widely used and offer relatively low VOC emissions. While they perform well on paper and cardboard, they can be difficult to remove during recycling and are not fully biodegradable.

2. UV-cured inks deliver vibrant visuals and durability, curing rapidly under UV light. However, concerns have been raised regarding their use in relation to food safety and recyclability, unless low-migration or EB-curing systems are used.

3. Soy-based inks are partly renewable and easier to deink than conventional options. However, they often still rely on petroleum-based additives and dry slowly unless blended, which complicates sustainability claims.

4. Algae-based inks are a new addition to the market. They are made from bio-waste and have the potential to be carbon negative. They show great promise environmentally, but are currently limited to black ink and large-scale adoption remains out of reach. What makes an ink "future-proof"? The study defined "future-proof" in terms of eight practical criteria:

- Ink characteristics (durability, printability)
- Energy usage
- VOC emissions
- Environmental impact
- Food safety compliance
- Recyclability
- Scalability for industrial use
- Cost-effectiveness

Each ink was assessed across the full lifecycle, from sourcing the raw materials to the recyclability of the finished product. The result? No ink scored perfectly. Each ink has its own strengths and requires trade-offs in other areas.

#### There is no silver bullet, only smart choices

Rather than selecting one winner, the report emphasises that different inks are suited to different types of packaging. For example:

- Water-based inks may be ideal for high-volume paper packaging where the necessary infrastructure is already in place.
- UV-cured inks are still a good option for applications that demand speed and visual appeal, but where recyclability is not the main priority.

- Soy-based inks are a good compromise, particularly for brands that are already active in North America, where these inks appear to be used more commonly than in Europe. Algae-based inks are still in development but could be a game-changer for branding and secondary packaging with low colour complexity.

#### Moving forward: Innovation, Compromise and Collaboration

The future of printing inks will not be determined by formulation alone. Scalable innovation will depend on factors such as how inks interact with substrates, how easily they can be removed, and how well stakeholders across the value chain — from ink producers to printers and recyclers — collaborate. A slightly greyer recycled substrate or a change in colour intensity may become part of the new visual language of sustainability.







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# The personal care market *Innovation meets*

The personal care market continues to be a dynamic and expanding sector. As of 2024, the global market size is estimated at €91.4 billion, with a projected CAGR of +7% through 2029, according to Euromonitor.

This growth spans across categories such as baby diapers, adult incontinence products, and feminine hygiene, driven by demographic shifts, rising disposable incomes, and increasing demand for personalized, sustainable solutions.

Regional trends in the disposable hygiene market show growth driven by population-heavy countries. Southeast Asia leads in baby pants

and sanitary napkins, Africa remains key for baby open diapers due to its young population, and North America and China see strong gains in adult incontinence products amid aging demographics and changing attitudes. These trends highlight how demographics and preferences are shaping global market opportunities.

**Meeting Evolving Consumer Demands**  
Today's consumers expect products tailored to their unique needs—age, weight, gender, and lifestyle. This has led brands to launch sub-brands featuring innovative absorbent substrates and customized designs. The rise of short- to medium-run customization, seasonal promotions, and versioning has created a demand for greater manufacturing flexibility and creative freedom.

Converters are seeking reliable, high-speed digital print systems that can integrate seamlessly with existing production lines. Traditional drop-on-demand systems have struggled with uptime and startup performance, leaving a gap in the market for more agile solutions.

#### Kodak's Inkjet Advantage

Kodak's PROSPER Imprinting Systems offer a breakthrough in digital printing for disposable hygiene applications.

These systems deliver:

- Inline integration with flexographic and OEM equipment
- High-resolution, durable print on non-woven substrates
- Lower total cost of ownership compared to traditional flexo
- Eco-friendly water-based EKTACOLOR Inks safe for direct skin contact

Kodak's nanoparticulate pigment inks provide a larger color gamut, enabling better brand color matching with four-color inks. EKTACOLOR Inks are not only market-tested for safety, but also support sustainability goals by reducing waste and energy use.

#### Partnering for Growth

Kodak collaborates with OEMs and press manufacturers to support printing on breathable films and non-woven substrates. These partnerships enable in-line integration and scalable solutions for converters and brands alike.

#### Unlocking New Possibilities

Whether integrating PROSPER Imprinting Systems into existing lines or installing a complete digital solution, Kodak empowers personal hygiene brands to:

##### • Launch customized products faster

- Conduct market testing and prototyping with ease
- Execute seasonal promotions and versioned content without compromising quality
- Achieve fast ROI—many customers report payback within 12 months

By leveraging Kodak's advanced ink technologies and collaborative approach, personal hygiene brands can achieve flexibility, efficiency, and sustainability in their printing operations. The ongoing innovation and commitment to quality, ensures that businesses remain competitive in a rapidly evolving market, delivering products that meet both consumer expectations and environmental standards.





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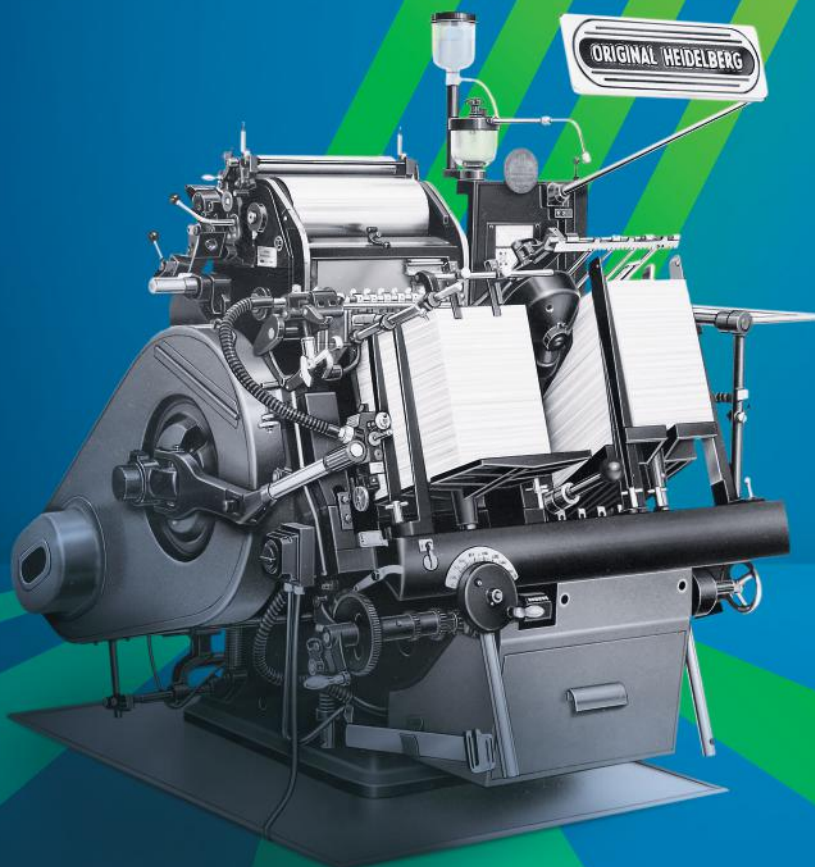
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