P3

Paper Print Packaging

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Customized QualiFlex Press Sleeves

Higher Dry Content, Lower Energy Use

Cavitation Technology

Comprehensive Recycling Concept

75 Years TBP

"Constantly Learning Keeps Us Young"

Grafiche Milani

Quality and Efficiency with Kodak

3-4/2025

Photo: technotrans / Druckerei Thiekötter / Design: Stefan Breitenfeld

Editorial

We're in a decidedly good position; the others starve to death two days earlier!

(Stefan Breitenfeld)

Dear readers!

The industry barometers and other charts depicting the economic situation in the various sectors of the printing and paper industry have been looking like bad teeth for some time now. They point up, down, left, right, forward, and backward. And they shimmer in a variety of colors. Creating truly reliable forecasts is almost impossible at the moment; the previously used, sometimes quite outdated, calculation models no longer seem suitable for the world we currently find ourselves in.

The same is true of weather forecasts, by the way. The extreme heat and drought of the past few weeks – particularly in Europe and the USA – has clearly demonstrated the catastrophe we are heading towards. The storm damage is almost impossible to quantify; supercells form within minutes; most recently, an entire forest was "simply blown away" by a storm.

This is also critical for the paper industry. Now, there are plans to make further changes to the EU Deforestation Regulation (EUDR), which has still not entered into force; changes that only benefit the industry. A zero-risk category is back on the table, as are simplified documentation requirements. Fresh from the handbook: "Constructing Loopholes – Short and Sweet." Wherever they exist, they are known to be exploited. Lobbying of this kind sets a precedent that will further undermine consumer confidence in the industry's green efforts. We really can't afford this.

Have a great read & stay safe!

Your

AUTHOR: SBR

P3 - Marketplace

PLACE OWN AD?

Imprint

p3 / imprint

P3 – Paper, Print & Packaging
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U3

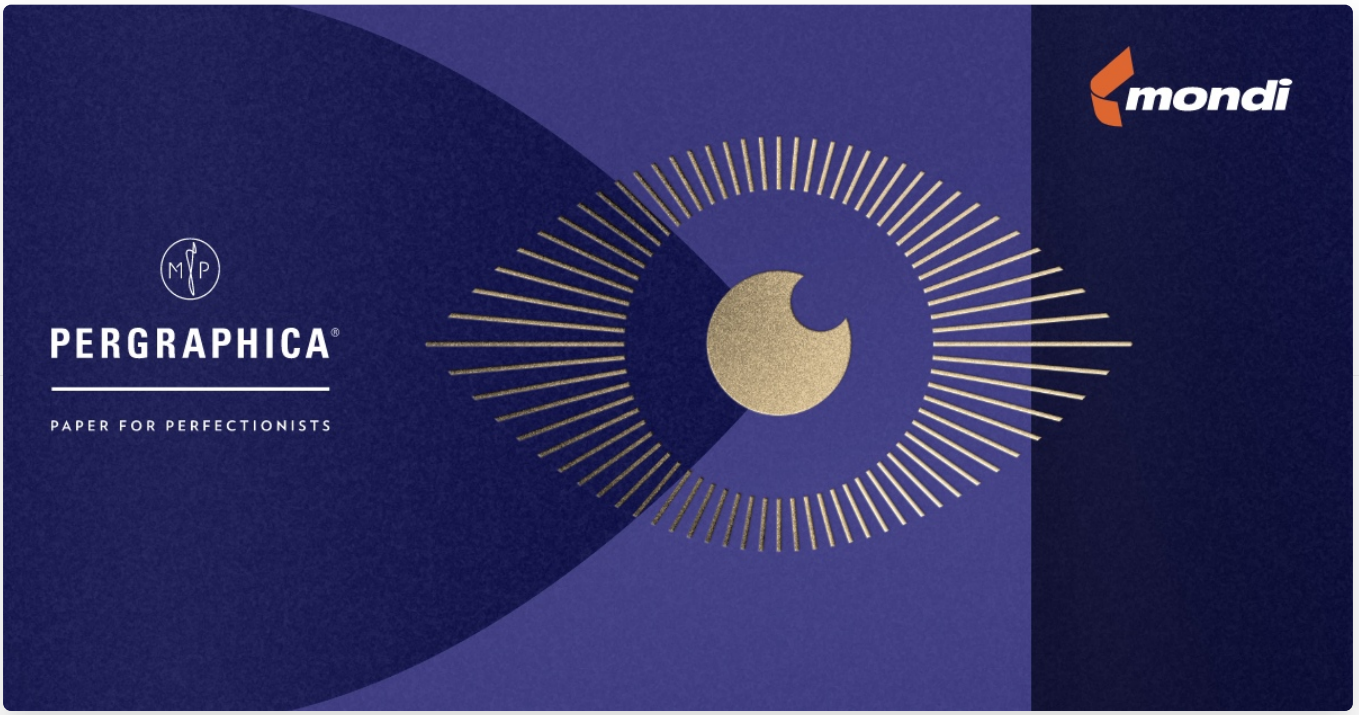
Art Nouveau

Coloured Etching

Vojtech Preissig: Coloured Etching on Paper. New York, 1906. Museum of Applied Arts in Prague, Inventory Nr. G 1885_A_01, via eSBÍRKY.

EDITOR: SBR

Premium Print Projects with PERGRAPHICA®



Spectrum of Impressions: The Print Book features a full spectrum of colours, countless eye-catching details executed to perfection and a luxurious feel across five print techniques and special finishes.

Mondi proudly launches Spectrum of Impressions: The Print Book, the centrepiece of its new PERGRAPHICA® Full Spectrum Feels campaign. The campaign redefines the boundaries of premium print and design to create a multi-sensory experience, brought to life through colour, texture and detail on PERGRAPHICA® papers. The Print Book is created to help printers and converters showcase the full scope of

their expertise to their customers, including creatives and brand owners. Compact yet powerful, it supports print sellers in promoting high value print projects and enables print buyers to explore the full technical and creative potential of PERGRAPHICA®.

An essential guide to confident paper selection

PERGRAPHICA® is Mondi's uncoated premium design paper range, offering four shades of white in smooth and rough surfaces, alongside 31 PERGRAPHICA® Colours. Designed to meet the most demanding print designs, it is the ideal choice for creative and corporate design, premium publishing and luxury packaging. With a full spectrum of options, selecting the perfect paper becomes an opportunity to shape the look, feel and impact of every printed piece. To accompany this decision-making process, Spectrum of Impressions: The Print Book serves as a trusted companion to help printers and their customers navigate the paper and print selection journey to create a high-impact, multi-sensory and memorable project that stands out.

Spectrum of Impressions: The Print Book features a full spectrum of colours, countless eye-catching details executed to perfection and a luxurious feel across five print techniques and special finishes. From intricate embossing and laser engraving to innovative foiling and tactile varnishes, it reveals what is possible when exceptional design meets exceptional paper. The Print Book is thoughtfully structured to guide readers through the creative and technical dimensions of premium print. Across five chapters, it explores the key levers that influence high-quality print, including paper selection, surface choice, print techniques, finishing and sustainability.

Spectrum of Impressions: The Print Book is generously but purposefully filled with examples of special inks and special finishes, designed to help print buyers select the best options for their project and make a lasting impression. To make it easier to tailor each project to perfection, the Print Book presents multiple techniques side by side so that readers may compare and contrast colour, print finish, optics and haptics, as well as visual finishes including matte, gloss and a range of metallic looks. Additionally, the Print Book incorporates multiple die-cut and laser-cut windows between pages for ease of comparison.

High-quality, high-impact print on sustainable paper

Sustainability is a central theme in the Values chapter of the Print Book. As environmental responsibility becomes increasingly important for creatives and brand owners, the print book delves into the values and paper-making heritage that define PERGRAPHICA® paper, produced in Austria at Mondi Neusiedler. It also highlights its extensive list of product safety and environmental certifications such as EU Ecolabel, Cradle to Cradle Certified® and FSC ® certification which attest to sustainable forest management, giving users confidence that their print projects are aligned with sustainable values.

Full Spectrum Feels: Rediscovering the power of print

Building on the success of the Catching Feels campaign, Full Spectrum Feels takes the sensory experience of print one step further. It explores how carefully chosen papers can heighten emotional response, amplify design intent and bring lasting value to premium printed projects.

"This visually rich and emotionally charged campaign celebrates the tactile, aesthetic and functional power of PERGRAPHICA®, inviting users to rediscover what print can do."

Bernhard Cantzler, Marketing & Sales Director, Mondi Uncoated Fine Paper.

"This visually rich and emotionally charged campaign celebrates the tactile, aesthetic and functional power of PERGRAPHICA®, inviting users to rediscover what print can do," says Bernhard Cantzler, Marketing & Sales Director, Mondi Uncoated Fine Paper. "PERGRAPHICA® papers perfectly unite creative potentials with printability, peace of mind, and safe, sustainable practices, making it the perfect choice for creative design, premium publishing, and luxury packaging projects," adds Bernhard.

"We wanted to show that paper is never just a background. It is a creative tool in its own right," says Laura Jane Boast, designer of Full Spectrum Feels campaign assets. "Every decision, from surface, texture to colour and shade, influences how a message is received. It was important that the book felt premium and intentional in every detail, while still inspiring freedom and experimentation."

To find out more about the limited-edition Spectrum of Impressions: The Print Book, visit https://fullspectrumfeels.pergraphica.com.

About Mondi Uncoated Fine Paper

About Mondi Uncoated Fine Paper Uncoated Fine Paper is a business unit of Mondi Group. At its operating sites, Mondi Uncoated Fine Paper produces pulp and environmentally sound office and professional printing papers tailored to the latest professional digital and offset print technologies. The company complies with the strictest international certification standards to support sustainable production processes through the responsible management of forest, water and air resources. As part of the Mondi Action Plan 2030 (MAP2030), Mondi is the first to offer an extensive uncoated fine paper portfolio that is Cradle to Cradle Certified® Bronze for meeting the high standards and demanding requirements of this certification scheme, marking the step from a linear to a circular economy.

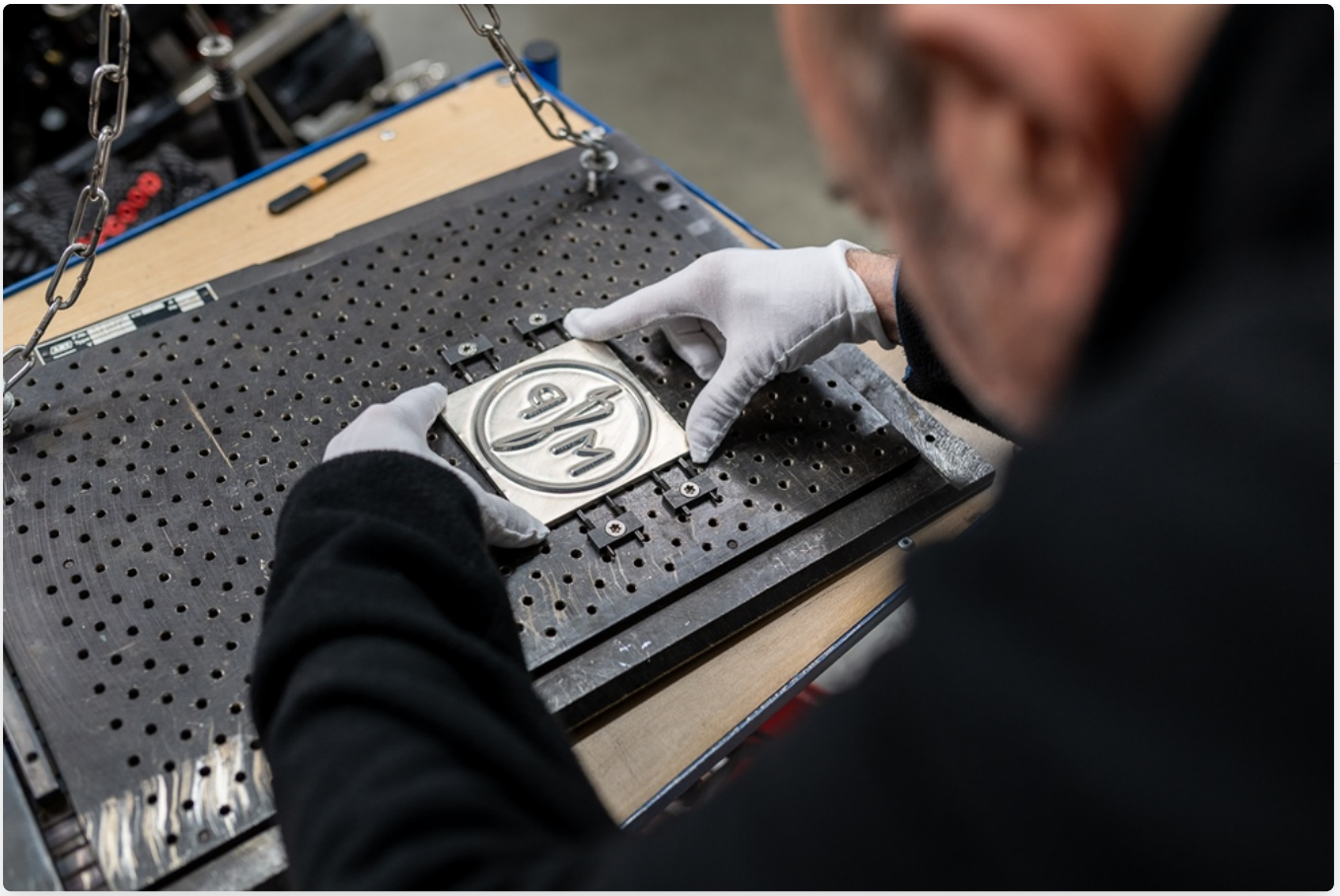
Its renowned brands such as Color Copy, PERGRAPHICA®, NAUTILUS®, IQ, MAESTRO®, BIO TOP 3®, DNS® or ROTATRIM are used in office environments on laser or inkjet printers and by professional printers on digital or offset presses to create brochures, transactional material, folders, invitations, business cards, letterheads or other high-impact communication. Converters appreciate the excellent printability and smooth handling of Mondi's professional printing papers.


SPECTRUM OF IMPRESSIONS
PERGRAPHICA


PERGRAPHICA® High White Smooth
PERGRAPHICA® Classic Smooth
PERGRAPHICA® Natural Rough
Feel
Process
Product
Values
SPECTRUM OF IMPRESSIONS: THE PRINT BOOK
HIGH WHITE SMOOTH 150 G/M²
SPECTRUM OF IMPRESSIONS: THE PRINT BOOK


PERGRAPHICA Mysterious Blue
Laser engraved
& laser cut
PRODUCT


Offset
LE-UV Offset
Digital
Inkjet
HP Indigo
Product
Values



EDITOR: SBR

CASE STUDY

Eye-catching designs from students at the British Columbia Institute of Technology were printed on Drytac ReTac Smooth 150 using an HP Latex 115 printer.

Students at the British Columbia Institute of Technology (BCIT) in Canada recently used Drytac ReTac Smooth 150 polymeric PVC film to create a colourful series of stunning wall murals, with support from approved Drytac distributor ND Graphics and regular customer Still Creek Press.

Western Canada's largest polytechnic institution, BCIT runs a Graphic Communications program as part of the School of Business & Media. The two-year diploma covers all areas of the print sector, including large-format print and signage, with students having access to specialist equipment such as an HP Latex 115 printer and a Summa F-1612 cutting table to support their learning.

Current second-year students were recently tasked with designing, printing, and installing a series of wall murals throughout the lab and office spaces at BCIT. Students pitched design concepts and locations, with the only requirement being that they had to be large enough for tiling. Once their designs were approved, students got to work on putting together their files.

For inspiration, BCIT arranged for both Cameron Wilson, Branch Manager at ND Graphics, and Tessa Michaelson, a former student now working independently as an installer in the Vancouver market, to host guest lectures.

To bring the final designs to life, BCIT selected Drytac's ReTac Smooth 150—a polymeric self-adhesive vinyl with Drytac's unique ReTac technology. The ReTac adhesive is permanently peelable, allowing for easy repositioning during installation and clean removal—even years later. This flexibility makes it a versatile choice for a wide range of indoor wall graphic applications.

"We were looking for a durable 6 mil (150µ) film suitable for wall installations," said Cam Rouse, Faculty Member on the Graphic Communications programme at BCIT. "Our rep at ND Graphics highly suggested we try ReTac Smooth 150 for this application. We printed all the designs in-house on our HP Latex 115 printer. Our entire faculty was incredibly impressed with the results, while our first-year students were inspired to create something even better for next year."

Cameron also paid tribute to ND Graphics, Still Creek Press and other parties that assisted with the project, adding that BCIT is constantly on the lookout for new partners to support its program.

"We're a small program and we effectively operate as a non-profit – we don't want to take work away from actual printers, so we cannot recoup the cost of purchasing materials by selling our products," Cameron said. "As a result, we're heavily reliant on donated materials to allow our students to complete projects like this. If companies ever have some inventory they want to purge, we're always grateful to take it off their hands so that our students can put it to good use."

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Editor: SBR

RICOH

Currently Under Development: The GR IV

CURRENTLY UNDER DEVELOPMENT, THE RICOH GR IV INHERITS THE BASIC GR-SERIES CONCEPT.

Ricoh is pleased to announce the development of the Ricoh GR IV — the latest model of the GR-series high-end compact cameras. Designed to be the ultimate snapshot camera in the history of the GR series, the Ricoh GR IV is a totally new breed of camera, one which will satisfy every photographer's demands and expectations.

Over a history of nearly three decades (since the introduction of the film camera, Ricoh GR1 in 1996), and two decades (since the introduction of the first digital-format GR Digital in 2005), the GR series has always kept the basic concept of pursuing the essential values of a camera: high image quality, quick response and portability. At the same time, the series has always incorporated the changes and refinements demanded to

meet emerging user needs. Because of this, GR-series models have been preferred by many photographers, particularly professionals and highly experienced amateurs.

Currently under development, the Ricoh GR IV inherits the basic GR-series concept, while also incorpo- rating totally new components, including a newly designed lens, a new image sensor and a new imaging engine, to further upgrade image quality. It also features more advanced communications functions and is compatible with a new application designed for smart devices to improve operability and functionality.

Based on this new GR IV, another GR-series model featuring an HDF (Highlight Diffusion Filter) is also under development.

Overview of the product under development

- Model name: Ricoh GR IV
- Launch date: Scheduled to be launched in Autumn 2025
- The HDF model is scheduled to be released after winter 2025
- The Sales Price is not determined at the moment

GR World (application for smart devices)

- Launch date: Scheduled to be released soon
- Supported models: All GR-series models released after the Ricoh GR II

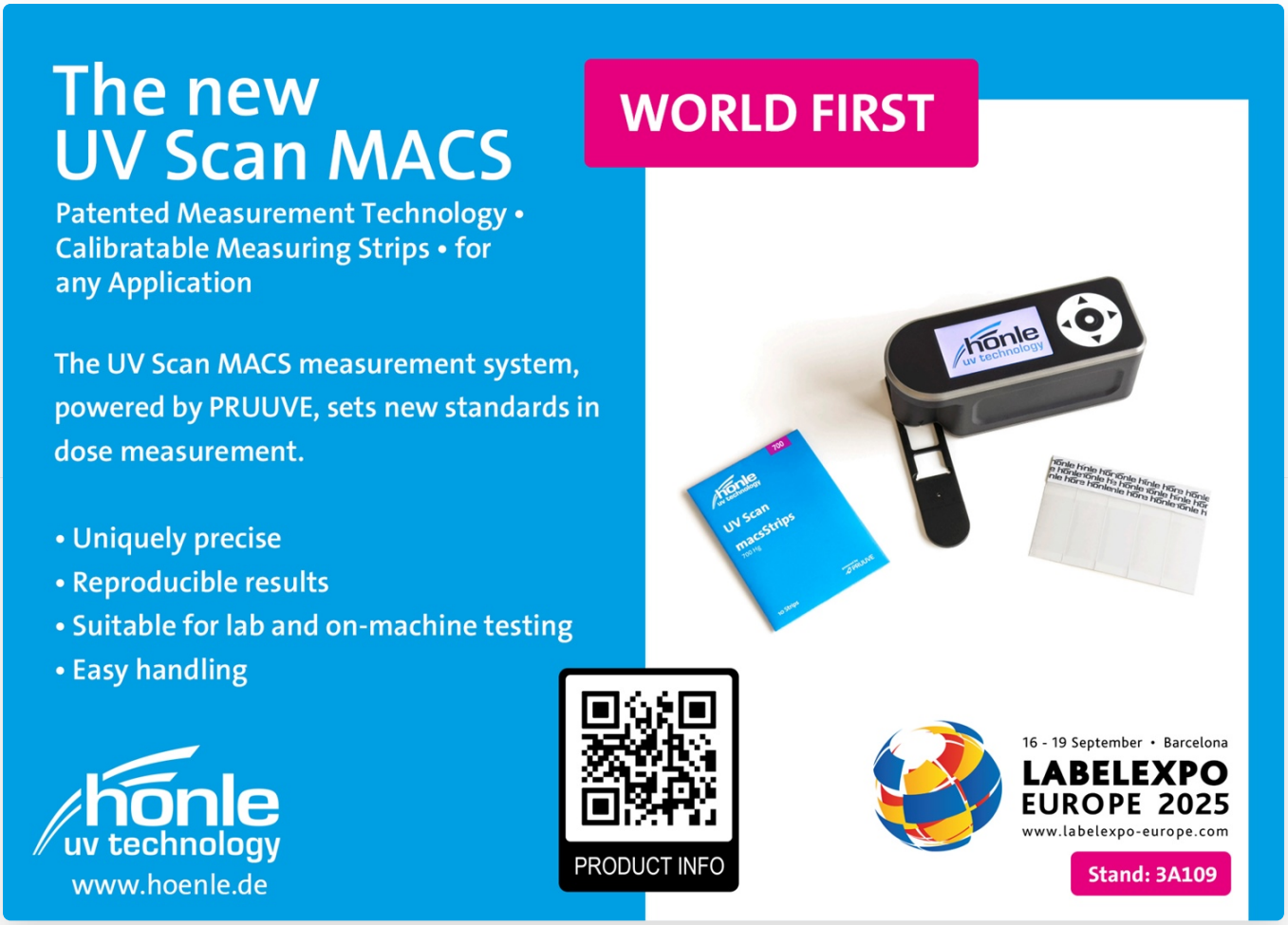
The production and shipment of the Ricoh GR III, currently on the market, are scheduled to be discontinued this July, due to difficulty in procuring of parts and components. However, the production and marketing of the Ricoh GR IIIx will be continued for the time being.

THE GR SERIES HAS ALWAYS KEPT THE BASIC CONCEPT OF PURSUING THE ESSENTIAL VALUES OF A CAMERA.

Supported file formats: RAW (DNG) 14bit, JPEG (Exif 2.3), DCF2.0 compliant.

Editor: sbr

Hoenle



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From tradition into the future.

At the heart of everything we do is a commitment to innovation, quality, and reliability – values that have driven us for 175 years, and will continue to guide us into the future.

As a leader in the packaging and printing industry, we develop solutions that set new standards, looking far beyond our core sector. Thanks to our expertise built on 175 years of experience, we are constantly providing new impetus and actively helping to shape the future.

We would like to thank all the customers, partners, and staff accompanying us on this journey.

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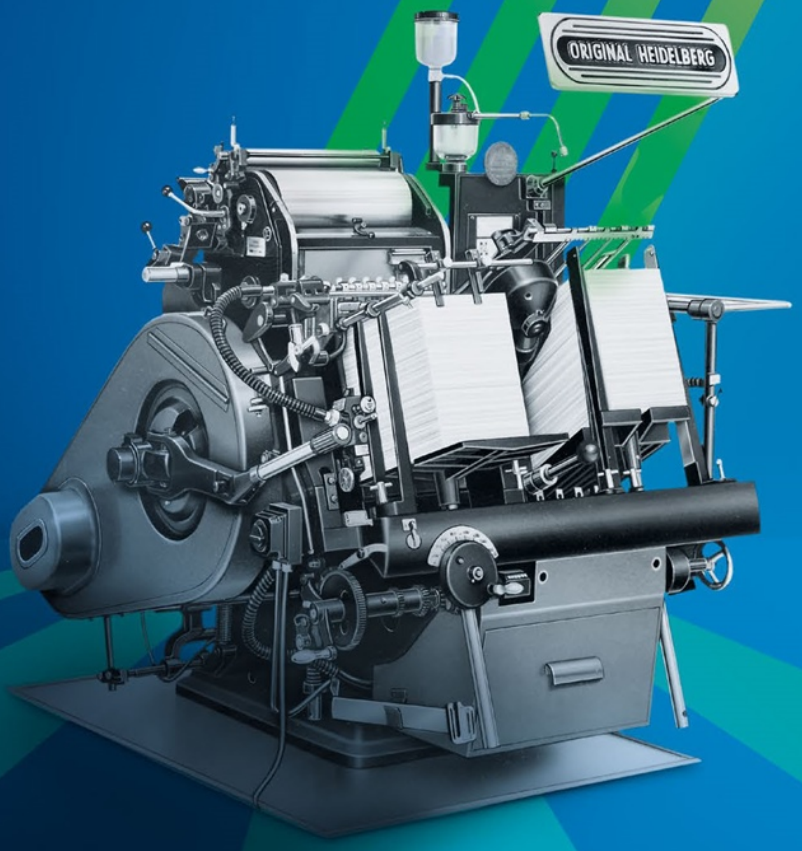

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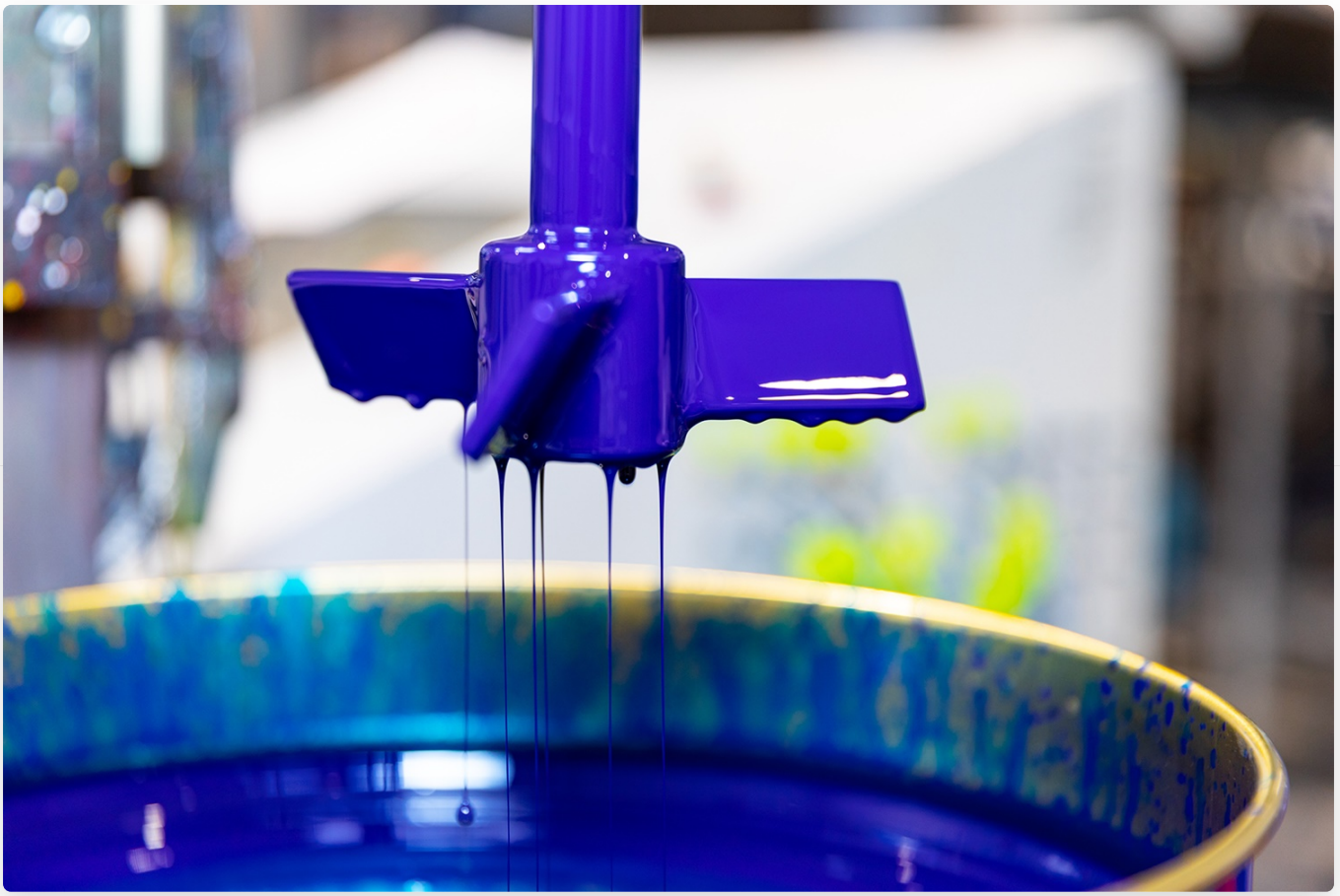
Pushing Boundaries: A Conversation with Nandini Chowdhury



HUBERGROUP: NANDINI'S JOURNEY IS A POWERFUL REMINDER OF HOW LEADERSHIP, TECHNICAL EXCELLENCE, AND A MINDSET OF CONTINUOUS LEARNING CAN COME TOGETHER TO CREATE REAL IMPACT.

In a sector where women remain underrepresented—especially in manufacturing and ink technology—Nandini Chowdhury stands out not only for her technical expertise but also for her leadership and commitment to innovation. As General Manager – Technology for UV-Offset, Flexo and Screen Inks at hubergroup India, she plays a key role in driving product development and advancing customer-focused solutions across regional and global teams. We spoke with Nandini to learn more about her professional journey, day-to-day approach, and her vision for a more inclusive and sustainable future in the print and packaging industry. What follows is a personal and insightful exchange on leadership, adaptability—and pushing boundaries in a traditionally male-dominated field.

Nandini, could you briefly tell us about your current role and how long you've been with hubergroup?

Nandini Chowdhury: I have been with hubergroup for a year now and currently work as the General Manager – Technology for UV-Offset, Flexo, and Screen Inks. My role is dynamic and multifaceted, requiring close collaboration with our global technology teams, particularly in Germany. I work closely with the German R&D

team to drive technology diversification and consolidation, ensuring the development of innovative, market-relevant solutions tailored to customer needs.

How did your journey in the printing and packaging industry begin? What drew you to this field?

Nandini Chowdhury: Given my background in Polymer Science, I was naturally drawn to the print and packaging industry - where materials science intersects with creativity. The impact of inks, coatings, and substrates on branding and consumer perception fascinated me, making this field an ideal space to apply my technical expertise. It has given me the opportunity to drive innovation and contribute to the development of more sustainable packaging solutions.

What has been the most important skill you've developed in your career?

Nandini Chowdhury: Learning to be a good listener. It may sound simple, but truly listening to customers has helped me understand even the smallest requirements—details that are essential for designing solutions that are truly fit for purpose. Additionally, the attitude of "leading from the front" has played a big part in helping me grow into leadership roles.

> *"Driven by a thoughtful blend of customer insights and technical expertise, we are constantly innovating to create products that align with market demands."*
>
> *Nandini Chowdhury, General Manager – Technology for UV-Offset, Flexo and Screen Inks, hubergroup India*

Are there any exciting updates or plans at hubergroup India you can share with us?

Nandini Chowdhury: Absolutely. Driven by a thoughtful blend of customer insights and technical expertise, we are constantly innovating to create products that align with market demands. Looking ahead, our focus remains on sustainability and safety – key values that shape our long-term vision and strengthen our partnerships with printers.

Could you describe a typical day in your role for young professionals considering a career in this field?

Nandini Chowdhury: My day starts with planning—I create a checklist of priorities and stick to it as much as possible. That said, flexibility is crucial in this industry. Unexpected production or market demands can arise at any time, so staying agile is essential. I also emphasize timeliness, delivering on schedule is critical because competition is always just around the corner.

What challenges have you faced as a woman in a male-dominated industry, and how can the sector improve in this regard?

Nandini Chowdhury: Initially, during press trials and shop floor interactions, I encountered gender-based communication gaps and limited access to information. Late working hours were also a challenge. But with persistence and consistent engagement, I gradually gained acceptance and trust.

To make the industry more inclusive, we need to normalise women's presence in technical roles—whether that's R&D, product development, or press trials. Creating equal opportunities, fostering open dialogue about

unconscious bias, and ensuring supportive environments can go a long way in attracting and retaining talented women in the industry.

Sustainability is a major focus area for hubergroup. In India, waste management continues to be a pressing challenge. In your view, how can more women be empowered to take on visible, decision-making roles in driving sustainable practices—especially in technical and manufacturing sectors?

Nandini Chowdhury: Sustainability is not just about products and processes - it's also about people. We need more women to become a part of this conversation, especially in areas like R&D, regulatory, and production, where critical decisions on materials, efficiency, and environmental impact are made.

Encouraging more women to step into these roles will bring diverse perspectives, which are vital when tackling complex issues like waste management or designing truly circular packaging solutions. To drive meaningful change the industry must take proactive steps - through inclusive hiring, mentorship programs, and workplace policies - to create pathways and empower women to lead sustainability efforts from within

Thank you for sharing your insights—and for the inspiring work you do every day to move our industry forward.

Nandini Chowdhury, General Manager – Technology for UV-Offset, Flexo and Screen Inks, hubergroup India.

Nandini Chowdhury: “My day starts with planning.”

Redaktion: sbr

GRAFICHE MILANI

Quality, Efficiency and Sustainability with Kodak Solutions

GRAFICHE MILANI: BOOKS, ILLUSTRATED BOOKS, CATALOGS AND COMMERCIAL PRINTS PRODUCED TO THE HIGHEST QUALITY STANDARDS.

Connoisseurs and admirers of books, illustrated books, catalogs and commercial prints produced to the highest quality standards are likely to be in high spirits when they look around the exquisite production portfolio of Grafiche Milani. Carefully selected materials in sometimes unusual combinations, high-end print quality, exquisite embellishments and immaculate finishing characterize the products of the print shop based in Segrate, Milan. Among its customers are top-class publishing houses, cultural institutions, as well as fashion, interior design and luxury brands from all over Europe and the US. Founded in 1906, this family-owned business employs 58 people and has sales offices in Paris and New York.

Grafiche Milani operates three Komori B1 presses: a five-color press, an 8-color perfector, and a 5+5 color press. The company is known as a European pioneer in the use of H-UV (LE-UV) and H-UV L (LED-UV) curing technology in sheetfed offset.

Kodak prepress technology and offset plates form the foundation for Grafiche Milani's top-quality performance in the pressroom, where production runs two shifts, six days a week. On average, 150 printing plates are required per day. A semi-automatic Kodak Trendsetter Q800 Platesetter has been in use in the prepress

department since 2006. According to Oscar Colombo, General Manager, the platesetter's Kodak Squarespot Imaging Technology delivers "the high level of precision and repeatability we need for reliable, high-quality plate imaging." As far as screening is concerned, Grafiche Milani uses 175 lpi or 200 lpi AM screening and stochastic 20-micron Kodak Staccato Screening, ensuring exceptional print quality and finer detail reproduction, which ultimately enhances the visual appeal and readability of the final product for Grafiche Milani's discerning customers.

Uncompromising CTP automation

Squarespot Imaging Technology was a must when the expansion of the CTP capacity, combined with the desire for automation, became urgent for throughput and backup reasons. Grafiche Milani purchased a Kodak Magnus Q800 Platesetter with X-Speed and an automatic Dual Multi-Pallet Loader (MPL) that can hold two pallets with each up to 1,500 plates. In this configuration, the Magnus Q800, which offers a throughput of 45 plates per hour, can operate fully automatically over longer periods without operator intervention. "Thanks to this CTP productivity and process automation, our plateroom staff save a lot of work, and plate imaging can run without manual intervention for longer," comments Oscar Colombo.

Kodak Sonora Ultra Process Free Plates excel in several ways

Environmental sustainability is a top priority at Grafiche Milani, as highlighted by the company's own "Milani green" program. It includes numerous measures and certifications to protect nature and the environment. As part of this strategy, the print shop has begun transitioning from traditional wet processed plates to process-free plates from Kodak.

"We had been toying with the idea of process-free platemaking for some time because we were fascinated by the numerous sustainability, cost and efficiency benefits. The prospect of getting rid of the plate processing equipment and the associated consumption of water, chemicals and energy and getting plates onto press faster was very tempting," says Oscar Colombo. "When Kodak presented us with the new Kodak Sonora Ultra Process Free Plate, we were immediately willing to test it. What we particularly like about the Sonora Ultra plate is its high contrast after imaging, which is just as good as with a traditional plate. The significantly improved tolerance for handling the plates under white light also meets our operational requirements."

During the trial productions, the Grafiche Milani team wanted to test the robustness of the Sonora Ultra plate because it is no secret that the highly reactive inks and aggressive auxiliaries that are employed for UV printing present particular challenges as regards plate life. The Sonora Ultra Plate, which offers a run length stability of up to 100,000 impressions for UV-ink applications, demonstrated convincing performance – also regarding the high demands of the company and its customers on print quality. Due to the positive results, Grafiche Milani's management decided to completely switch to Sonora Ultra Plates by July this year.

At Grafiche Milani, another Kodak solution plays a central role – and has done so since 2007: Kodak Prinergy Platform is the digital backbone of production, increasing productivity through automation and reducing waste by minimizing human error. Kodak's automated workflow solution ensures that the pressroom is continuously and reliably supplied with printing plates. In addition, the print shop uses the Kodak Prinergy Insite Prepress Portal (IPP) in its daily dealings with customers. They can upload files directly into the digital workflow environment and efficiently handle proofing, correction and approval cycles. "The Insite web portal is an indispensable tool for us. It supports fast, smooth communication and cooperation with our clients, many of whom are based overseas," states Oscar Colombo, who is also very pleased with Grafiche Milani's long-standing partnership with Kodak.

With the commissioning of an automated Kodak CTP solution and the transition to Sonora Ultra Process Free Plates, Grafiche Milani has opened a new chapter in its technology history – true to the company motto: *Grafiche Milani è la stampa di domani, da sempre*.

Grafiche Milani purchased a Kodak Magnus Q800 Platesetter with X-Speed and an automatic Dual Multi-Pallet Loader (MPL) that can hold two pallets with each up to 1,500 plates.

Oscar Colombo: "We had been toying with the idea of process-free platemaking for some time because we were fascinated by the numerous sustainability, cost and efficiency benefits."

Editor: sbr

© Images: Kodak

GALLUS SCREENY PU

Universal Screen Printing Unit – Integrable Across Manufacturers

THE SCREENY PRINT UNIT SCREEN PRINTING UNIT IS AVAILABLE IN PRINTING WIDTHS OF 340MM (13"), 440MM (17") AND 580MM (23").

Whether on a Gallus press or another brand, the new Screeny printing unit enables rotary screen printing to be used across all narrow-web machines, regardless of the manufacturer, and delivers more than just modern printing technology. It unlocks new creative possibilities – because screen-printed labels and packaging truly stand out at the point of sale with their striking visual, tactile, and sensory effects.

Brilliant colors, high opacity, tactile varnish textures, or metallic effects – screen printing "speaks" directly to the senses, creating striking visual, tactile, and even olfactory experiences. No other printing process offers such a wide range of effects that not only capture attention but also significantly enhance brand perception. This creative potential is a key driver behind the continued growth of screen printing, even in emerging areas of application.

For converters looking to offer their customers high-end effects by retrofitting an existing narrow-web press

with a screen printing unit, implementation has so far been anything but straightforward. The market offers only a limited number of standardized solutions, while users are increasingly seeking alternatives that meet today's state-of-the-art standards.

Gallus Screeny Print Unit

This is exactly where the new Gallus Screeny Print Unit comes in. It was specifically developed for retrofitting and integration into existing narrow-web production lines – regardless of press type or manufacturer. The new unit features an attractive design and a carefully curated range of equipment options. The compact unit can be integrated on a rail system above the printing units – with no major modifications or extended down-times. Alternatively, installation on a separate frame between printing units is also possible.

As a standalone unit, it requires only a power and compressed air supply. No speed signal is necessary. It begins printing as soon as the web runs through. Alternatively, it is equipped with the necessary connections to be linked to a machine's start-stop signal.
The unit supports screen formats from 85T up to a maximum of 208T. It is available for print widths of 340mm (13"), 440mm (17"), and 580mm (23"), as well as a web width up to 600mm (23.6"). The screen is driven on the drive and operator sides, features screen break monitoring, and a large ink collection tray.

From a blank sheet to a high-performance screen printing unit

Oliver Vetter: "Around two and a half years ago, we embarked on an exciting journey. The goal was clear – we wanted to develop our own autonomous screen printing unit. Not just any unit, but one that truly meets the current demands of the market. And, as is often the case with new ideas, it all started with a lot of questions.

What does a unit like this really need? What functions are essential? What would be nice to have? And what features would simply be cool – the famous 'nice to have'? From all these considerations, we gradually developed a comprehensive set of specifications. Every function, every feature, every possible use case was carefully thought through, discussed, and documented.

The path to get there was anything but linear – there was experimenting, discarding, improving, and rethinking. And it was precisely this process that moved us forward. Because what ultimately emerged from all these ideas and requirements is not just another autonomous printing unit. It's our Screeny screen printing unit – a thoughtfully designed, modern, and flexible solution built for efficiency, precision, and long-term viability. It combines the highest standards of integration capability, technology, user convenience, and durability."

Oliver Vetter, Head of Screenprinting Business, Business Unit Label, Gallus Ferd. Rüesch AG

Operation via 10" color touch panel

The unit is operated via a 10" color touch panel, which shows the operator all main functions on one level. This color display allows the operator to monitor and control all operating functions at a glance.

For ease of use, the touchscreen includes a tooltip that indicates the function of the currently selected button. This saves the operator from having to search through the user manual during training or when questions arise.

The colored frame around the touch panel serves more than just a design purpose. It shows the operating

status in a simple way, no matter where he is at the machine. An orange frame means the unit is ready for operation. When the machine system starts and the printing unit is running, the frame turns green. A red frame indicates a fault and the operator must intervene.

Automated format and gap adjustment

Far from being just a “nice to have,” the automatic format and gap adjustment between the screen cylinder and the impression cylinder is a highly practical innovation. This adjustment is performed by two servo motors that automatically set the gap to 0.2 mm, replacing what was previously a manual process. The adjustment works for all printing cylinder diameters and is controlled by a specially developed software solution.

Screeny Print Unit is the only screen printing unit on the market to offer this feature – effectively eliminating operating errors caused by incorrect settings.

Diagonal register adjustment

In addition to the standard longitudinal and lateral adjustments, the screen printing unit also features a diagonal register adjustment. This proves to be a particularly useful function on systems where printing units can be flexibly positioned on a rail system. Minor deviations in parallel alignment caused by the web path can be compensated for via the diagonal adjustment—up to 0.5 mm.

Doctor blade system compatible with all common types

The doctor blade system is compatible with blades from all major manufacturers, regardless of their construction. Whether it's a classic rubber blade, a carbon-reinforced variant, or a strip steel blade with bonded rubber—any type can be used. The pneumatically adjustable blade height of ±5 mm makes operating the unit especially easy.

Standard RCS screen rings

The compact design of the standard RCS screen rings used is noteworthy. They have no gears and, thanks to their compact size, allow for space-saving integration of the screen printing unit directly onto the rear wall of a machine system. This means that the web path is not affected.

Features

- Fully independent screen printing unit
- Format size 85T - 208T
- Available in print width 340mm, 440mm and 580mm (13", 17" & 23")
- Web width 360mm, 460mm and 600mm (14",18" & 23.6")
- Speed and print register control
- Mechanical speed 1-120m/min (3-393 feet/min)
- Print substrate gauge 40-400mic (160 – 1600 gauge)
- Cross register +/-5mm (0.2")
- Diagonal register adjustment +/-0,5mm
- Squeegee positioning +/-5mm (0.2")
- Eye mark reader
- Dual driven screen
- Screen break sensor
- Ink collection tray
- Separate ink collection tray and holder for screen printing squeegee
- Screen rings without gears – RCS standard rings
- Automated screen gap setting (0.20mm)
- Format size in tooth, inch or mm, no limitation

- 10" color touch panel, all functions on first level
- Flexible squeegee system, Gallus, RKS or SPG

Smart mechanics prevent from damage

In a screen printing unit, errors when gluing the welded screen tube to the screen rings quickly lead to the destruction of the screen. The Screeny printing unit has a sophisticated solution to this problem:

When the screen is inserted, the two drive sides of the unit are mechanically decoupled for a short time. The screen rings, which are equipped with a precisely fitting lug on both sides, slide automatically into the designated locating pins of the drive coupling when closing. Even if the lugs are not exactly aligned during insertion, they are reliably locked in place - the clutch closes automatically for operation and the mechanical connection is precisely re-established.

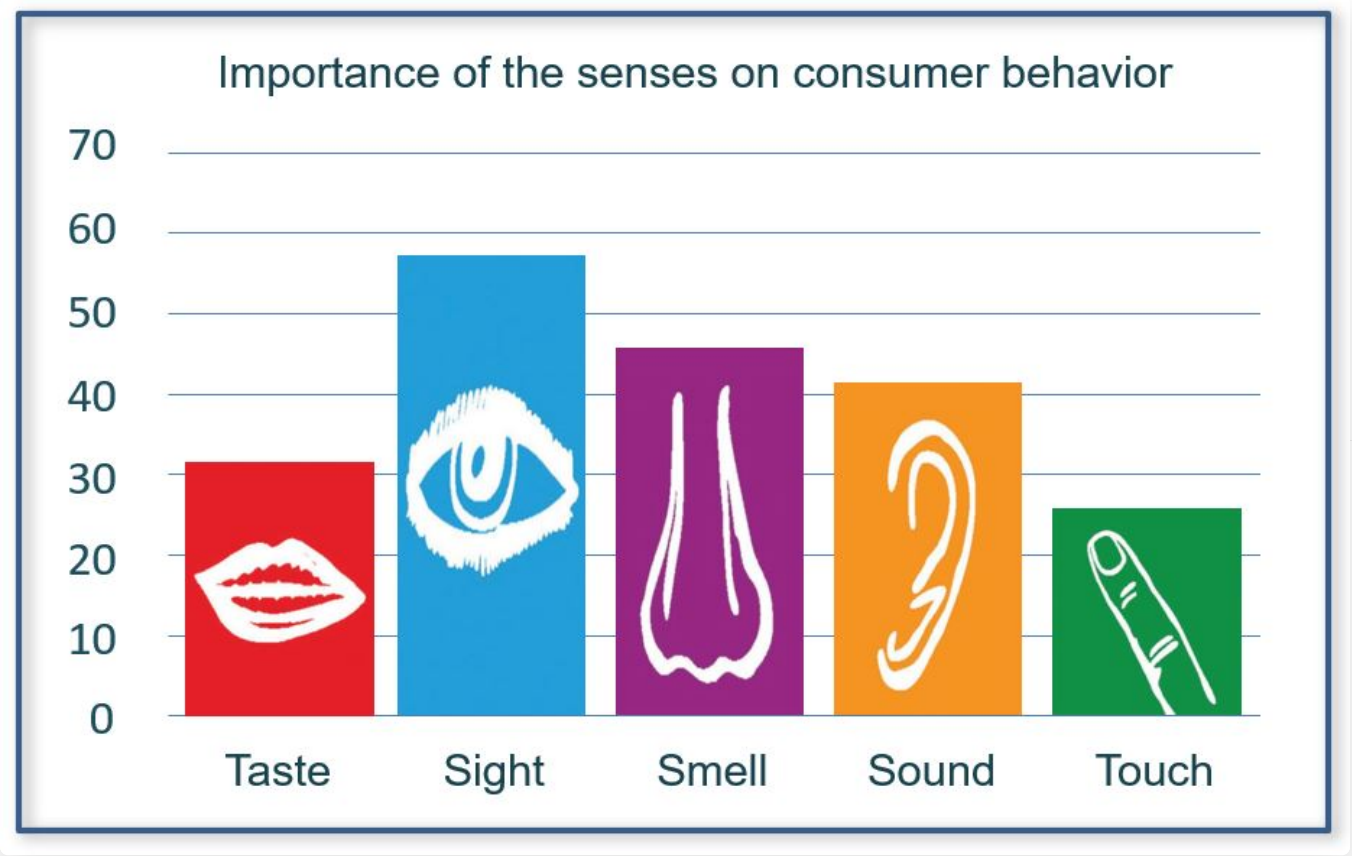
Configuration options for individual requirements

Among the practical options available for the screen printing unit is a GEW UV curing system with an integrated chill roller. The unit is prepared for both conventional UV and UV LED systems and features an efficient water-cooling system. For coating applications, an additional one-meter extension path can be integrated. Furthermore, the unit can be equipped with an integrated ink pump, which when combined with an automatic ink level control system ensures consistently high print quality and convenient operation.

Conclusion

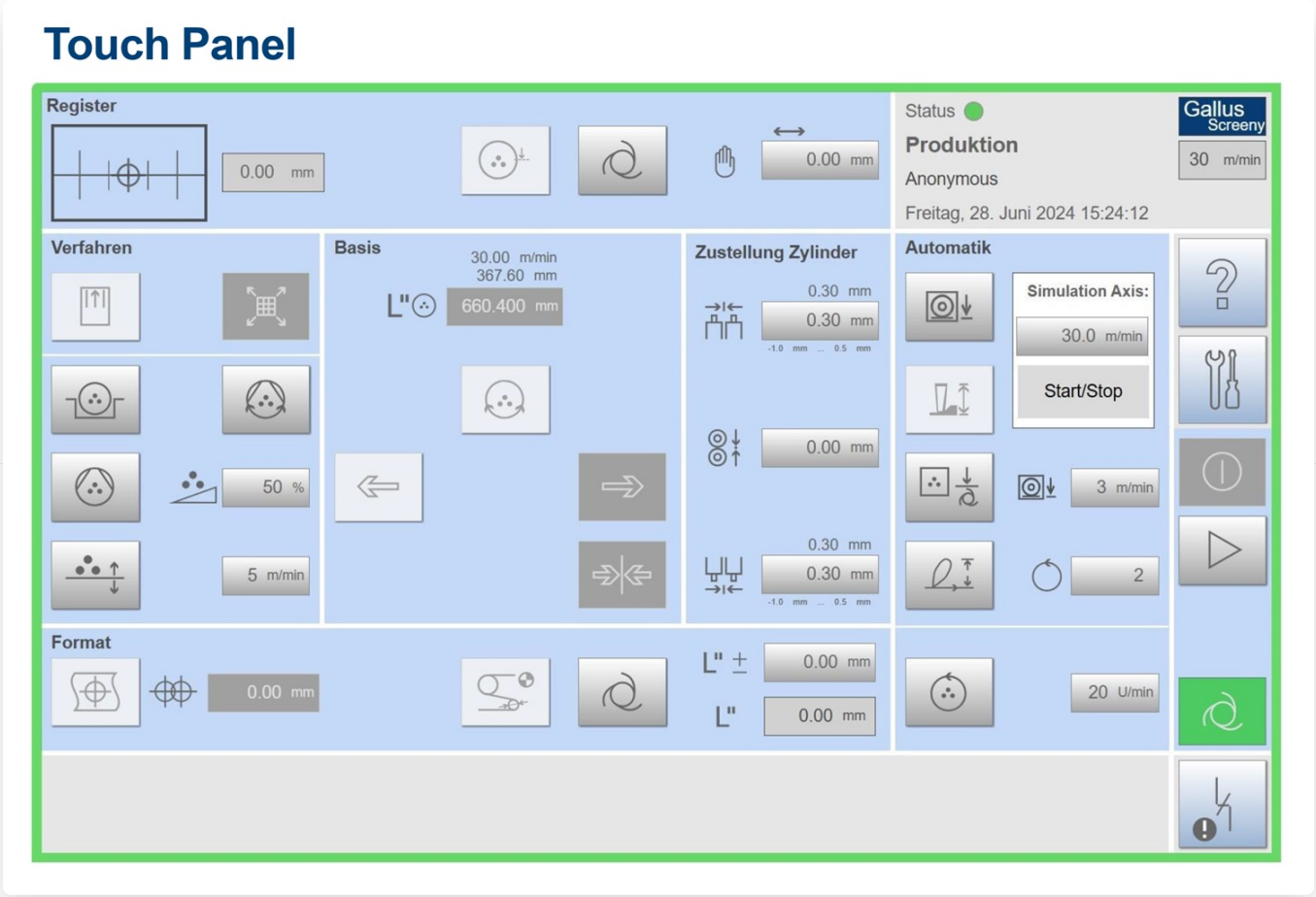
With flexible integration capabilities, robust technology, and proven print quality, the Gallus Screeny Print Unit positions itself as a forward-looking solution for rotary screen printing. It is suitable for cross-brand integration in diverse press environments, for retrofitted finishing steps, or as an efficient inline module.

Another strong advantage of the Gallus Screeny printing unit is its full compatibility with the established RCS technology and existing Screeny peripheral equipment. Converters already working with Gallus systems can continue using their existing stencil rings, cutting tables, welding devices, and mounting tools without any limitations—saving time, reducing costs, and preventing unnecessary system disruptions.



At 58%, visual perception has the highest significance in the influence of the senses, followed by smell at 45%.

Oliver Vetter, Head of Screenprinting Business, Gallus Ferd. Rüesch AG.



The 10" color touch panel with all main functions on one surface.

Wine label produced using screen printing, with tactile lettering.

Author: Dieter Finna (dfi)

Editor: sbr

Domino

Unlocking New Revenue Streams with 2D Codes

The growing demand for 2D codes presents a significant opportunity for converters to explore value-added services.

Brands are increasingly recognising the benefits of labels and packaging featuring 2D codes, including traceability, brand protection, and consumer engagement. Yet the implementation process can be daunting, with a potential disconnect between label/packaging design and understanding of 2D code applications and how to optimise the technology.

This presents a significant opportunity for converters to expand their services beyond the printing of 2D codes. Those who understand and embrace the technology will be well-equipped to meet brands' evolving needs and offer value-added design, digital marketing, and product authentication services – unlocking a competitive advantage and laying the foundation for long-term business impact, as Nigel Allen, Marketing Manager 2D Codes, Domino Printing Sciences, explains.

Addressing the knowledge gap

While many brands are eager to take advantage of the benefits of 2D codes, results of the Appetite Creative Connected Packaging Survey 2025 show that, for more than a third of respondents who do not currently use connected packaging, a lack of understanding of 2D code applications and the technology behind them is

holding them back.

This knowledge gap presents several opportunities for converters to adapt, support their brand customers, and grow their business:

- The addition of consolidated label design and printing services, ensuring their customers' static, dynamic, and variable 2D codes can be optimally printed and scanned.
- Differentiation through digital marketing and data solutions to support brands with QR code campaigns.
- Depth of engagement through the role of a trusted advisor, providing long-term support for brand customers, implementing variable or serialised 2D codes, and managing the data included in QR codes powered by GS1.
- Supplying secure QR codes to aid QR Code Product Authentication.

Label and packaging design services

Many brands already use an agency model for their packaging and label designs. For a converter to add this capability to their current printing services, offering a comprehensive label design and printing service is a logical extension – and a service already provided by many.

Outsourcing the end-to-end process to printing experts can offer significant value for brands, as agencies are not necessarily familiar with QR code printing requirements regarding size and optimal on-pack positioning – which may either require costly design changes at the printing stage or lead to suboptimal or unreliable scanning by retailers and consumers.

For converters already offering design services, adding digital services around 2D codes is a small step that could deliver significant benefits, with further opportunities to expand their capabilities and provide digital campaign solutions to their customers. Here, a converter could manage the whole process, from generating QR codes for label and packaging design to developing digital assets such as interactive apps and landing pages, alongside, of course, printing the final design. Capturing data from campaign QR code scans could evolve into a subscription-based service monitoring user engagement, enabling brands to identify regional trends and suggest new product variations and promotional campaigns.

There is also the opportunity to support brands taking advantage of data-rich QR codes powered by GS1. Regulatory applications, such as EU Digital Product Passports and electronic product labels, like the EU e-label for wine, often entail long-term responsibilities to maintain product data throughout an SKU's lifespan. Here, a converter could support the ongoing data management required, for example, by updating ingredients and nutritional information in e-labels on behalf of their clients when needed.

Variable and Serialised QR Codes

The benefits that variable QR codes powered by GS1 could bring to a brand's business are now widely recognised; increasing demand for more granular tracking of individual products and product batches via code serialisation is creating the need – and opportunity – for closer engagement between converters and brands.

When offering a variable QR code printing service – producing labels and packaging on a just-in-time basis, featuring variable batch, expiry, or serial numbers – accuracy is key. Converters must ensure that the correct artwork and codes match the brand's batch and expiry dates – crucial when producing packaging with serialised codes to support traceability.

Delivering the correct labels on the correct day for the correct batch – and with minimal production line downtime – will require close collaboration and data integration between the converter and the brand, with code verification a key element of any successful QR code printing service.

Verification via a vision system can help ensure that all codes produced are readable by retail, supply chain, and consumer scanners, detecting any errors that could render packaging unusable or, if undetected, lead

to costly and reputation-damaging recalls.

QR code product authentication

Brands operating in market sectors with stringent product safety demands or those affected by counterfeiting activity, such as luxury goods and electronics, can turn to QR code product authentication to provide traceability, enhance consumer confidence, and protect their brand.

While serialised QR codes are capable of identifying and tracing back counterfeit products, secure QR codes offer enhanced security. Secure QR codes feature patterns or micro-graphics to prevent copying and demand high print quality standards for successful deployment.

Converters looking to expand into these sectors will need to ensure their printing equipment can deliver consistent, reliable results, with some specialist providers of secure, trackable QR codes issuing print process certifications to safeguard the integrity of the secure QR codes they are supplying.

Finally, with new technologies such as NFC or RFID increasingly being deployed alongside 2D codes for traceability and efficiency in supply chain and retail applications, converters may also want to explore smart label services to add further value for brands.

Conclusion

The growing demand for 2D codes presents a significant opportunity for converters to explore value-added services. For converters already providing packaging design services as part of their sales process, adding a digital communications element to their offering is a small step that could deliver significant benefits in terms of revenue, as well as enhancing their relationship with their brand customers.

Of course, whether or not a converter decides to expand their remit into services supporting the adoption of 2D codes, high-quality print of any packaging codes remains paramount. Well-defined 2D codes, printed and verified by digital printing equipment backed by decades of advanced variable data printing expertise, will make a significant difference to a brand's – and converter's – 2D code success.

Nigel Allen, Marketing Manager 2D Codes, Domino Printing Sciences.

Author: Nigel Allen

Editor: SBR

LOGISTICS

COLBERT PACKAGING

Enhanced Quality and Efficiency with LearyVIEW by EyeC

"WE NEEDED A SYSTEM THAT COULD SCAN PRODUCTS BEFORE SHIPMENT WITHIN OUR COMPANY NETWORK."

Colbert Packaging, Kenosha, WI, USA, a company in the pharmaceutical and healthcare packaging industry, needed a robust solution to ensure defect-free shipments, improve operational efficiency, and maintain compliance with industry standards. To address these challenges, the company integrated the LearyVIEW Print Solution, powered by EyeC and W. H. Leary, into its production processes. This case study explores how this investment transformed Colbert Packaging's quality control, efficiency, and market positioning.

Colbert Packaging sought a vision system that could:

- Detect and eliminate defective products before shipment.
- Prevent costly returns from overseas customers.
- Meet stringent industry requirements for defect scanning and serialization.
- Improve operational efficiency through automation.
- Give them an advantage in the pharmaceutical packaging market.

Nick Stober, Director of Quality Systems and Compliance, from Colbert Packaging highlighted, "We needed a

system that could scan products before shipment within our company network. It is especially important before a shipment makes a journey overseas, to ensure defects are caught early and prevent costly returns." With pharmaceutical and healthcare customers requiring precise defect detection, the need for a reliable vision system became crucial.

The solution: LearyVIEW Print Solution with EyeC inspection technology

Colbert Packaging partnered with W.H. Leary to implement the LearyVIEW Print Solution due to its:

- Seamless integration with existing Leary gluing systems.
- Technologically advanced defect detection technology powered by EyeC's 100% inspection system.
- Compact size, requiring only 18 inches of additional space versus other solutions needing 6-8 feet. Strong technical support from both W. H. Leary and EyeC and ease of installation.

Wanda Speer, Marketing Manager, Colbert Packaging included, "By scanning all cartons, we are mirroring what our customers are doing. That is incredibly valuable to them."

Key benefits and outcomes

Competitive advantage and business growth

One of the unexpected benefits was its impact on sales. "We've used our system as a marketing tool," said Stober. "It has helped us win business that we might not have secured otherwise." Large pharmaceutical companies have chosen Colbert Packaging due to its superior inspection capabilities.

Operational efficiency and cost savings

Prior to implementing the vision system, Colbert Packaging, like many other carton producers, would run the risk of having to discard entire batches due to an inability to pinpoint specific defects. Stober explained, "In the past, it took a team to sort quality defects. Now, with the LearyVIEW Print inspection system we utilize technology and automation to verify quality standards are achieved."

The automated inspection system also allows Colbert to refine upstream processes. For example, adjustments were made to the printing process for certain customers to eliminate recurring defects, leading to significant efficiency gains.

Error prevention and continuous improvement

The system acts as a learning tool, enabling Colbert Packaging to identify defects early and implement corrective actions. Jeff Bates, National Sales Manager, W. H. Leary noted, "If you catch something in the middle of your process, you can correct it immediately, avoiding further waste."

By eliminating the need for human sorting, the system ensures accuracy, speed, and consistency— factors critical to pharmaceutical packaging compliance.

Return on investment (ROI) and sustainability

Wanda Speer explained that the investment has not only improved efficiency but also attracted new business. "Having these systems in place has directly contributed to new business opportunities, both fom existing and new customers."

From a sustainability perspective, reducing waste, minimizing rework, and maximizing workforce efficiency align with Colbert Packaging's long- term goals.

Strong technical support and future expansion

Colbert Packaging was highly satisfied with the technical support provided by Leary and EyeC. Stober explained, “Leary’s service response time is exceptional. With other vendors, we could wait up to two weeks for technical support, but with Leary, we typically receive assistance within 24 hours.”

Looking ahead, Colbert sees a future where every folder gluer in its facility is equipped with a LearyVIEW with EyeC vision system. “I think the market is heading in that direction,” said Stober. “As we look at our sustainability program, reducing rework and waste contributes to additional ROI.”

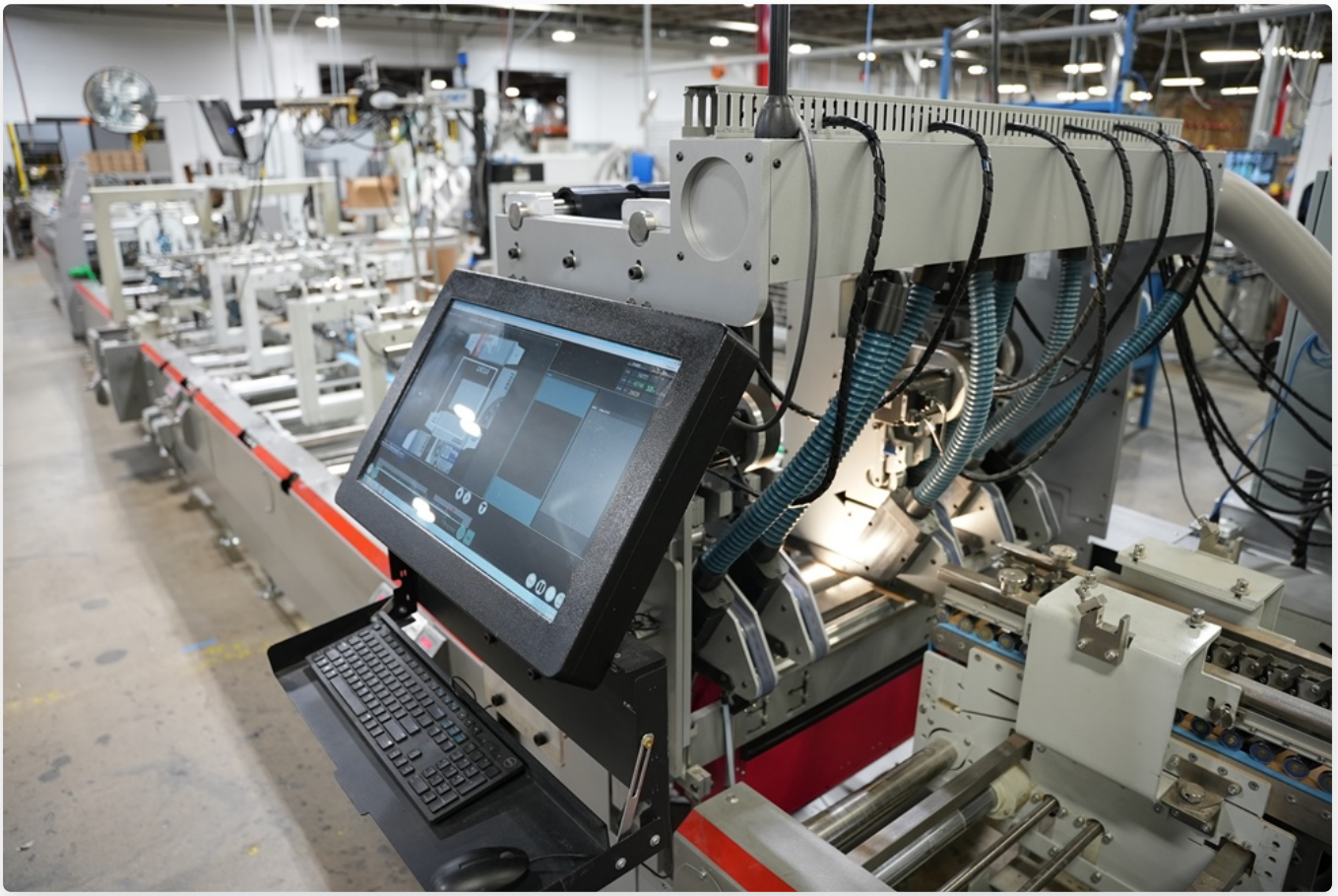
Conclusion

The implementation of the LearyVIEW with EyeC Print Solution has significantly enhanced Colbert Packaging’s operations. By ensuring defect-free shipments, improving efficiency, and providing a competitive edge, the system has proven to be effective. With strong ROI and continued support from Leary and EyeC, Colbert Packaging is well-positioned to maintain its position in the industry.

Through its commitment to quality and innovation, Colbert Packaging has set a new standard in pharmaceutical and healthcare packaging, demonstrating the power of advanced inspection technology in modern manufacturing.

One of the unexpected benefits was the impact on sales.

Adjustments were made to the printing process for certain customers to eliminate recurring defects.



By eliminating the need for human sorting, the system ensures accuracy, speed, and consistency.

Editor: SBR

Voith

VOITH

XcelLine

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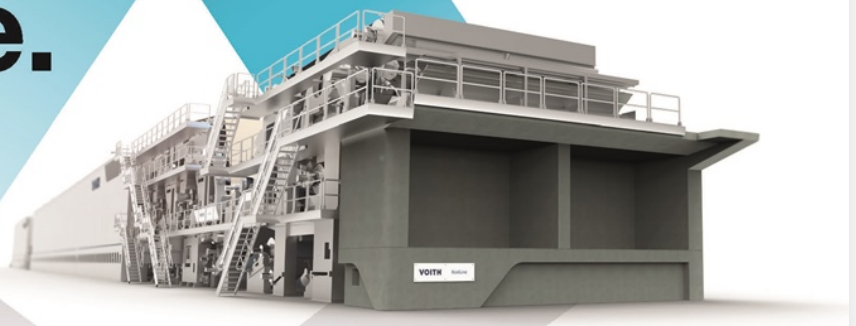
All along the line.



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75 YEARS TBP

“Constantly Learning New Things Keeps Us Young”

TBP TEAM WITH FIRST PAPER ROLL FROM NEW FACTORY.

75 years of TBP Engineering, 35 years of TBP Interprojekt, 25 years of TBP Upcon: Managing Director and shareholder Thomas Wimmer talks about TBP's fresh ideas, dynamism and innovative spirit in this triple anniversary year, but also about market developments, challenges and future issues.

Mr Wimmer: Sustainability, cost efficiency, declining international competitiveness: Europe's industry has a lot of homework to do. How is TBP facing up to these challenges?

Thomas Wimmer: I would like to mention the paper and pulp industry as an example of staying power. Paper had already been declared dead, but per capita consumption is rising. The packaging industry is coming back to life with online retail. Corona has caused a real boom here. We come from the paper industry and are still strongly represented there with a business volume of around 70%. Recycling and sustainability are in the DNA of the paper and pulp industry, which has always thought in terms of complete cycles. Optimising the use of resources is a competitive advantage, as energy and raw material prices are the cost drivers. With innovative engineering services in consulting, engineering and general planning, we make a decisive contribution.

TBP emerged from voestalpine Anlagenbau in 1950. That no longer exists, but TBP does. How do you do that?

Thomas Wimmer: One of our assets is that we are constantly learning new things and expanding our horizons. There are always innovations: new products, new product lines or the conversion of existing systems.

We are currently focusing on decarbonisation and are working intensively on solutions that help our customers to optimise their energy consumption structures.

Wherever pipes, pressures, heat, etc. are involved, we are there. We are, so to speak, responsible for the nervous system in the industrial plant body, connecting the individual parts to form a functioning whole. The expertise we have built up over 75 years in the paper industry is also used in the starch and sugar industry, the wood-processing industry and environmental technology - right through to the decarbonisation of energy generation. Our customers listen to us and we listen to our customers. Each year, our 120 engineers provide around 180,000 engineering hours and accompany our customers step by step from the initial idea to successful project realisation.

"Energy is the fuel for the economy's bloodstream. The war in Ukraine in particular, with its consequences, emphasises how dependent we are on a secure energy supply. As a result, the search for alternative energies and the necessary generation plants, as well as the optimal utilisation of existing resources, is the order of the day. This means that the planning of such plants is becoming increasingly important."

Thomas Wimmer and Thomas Füchsel

Which areas will play a major role in the future?

Thomas Wimmer: Electrical and industrial energy solutions will gain in importance. We are gradually building up expertise in this area, as the field of industrial power supply and distribution in particular is being increasingly neglected by established providers.

Decarbonisation is generating investment, but it also means that everything is being converted to electricity. Large heat pumps to utilise the last unused heat sources for energy are an area in which we are becoming increasingly involved. The aim is to increase efficiency by a factor of two to three by conserving resources. For example, it makes no sense to cool down waste water; it is better to utilise the energy from it. The same applies to the heat in the exhaust air from various processes. However, it is not so easy to plan a plant that requires an additional 5 MW or more of electrical power. It will be years before sufficient green electricity is available or the power grids are expanded accordingly.

Keyword artificial intelligence: does the human being still have a future?

Thomas Wimmer: IoT, the Internet of Things, has already established itself where constant measurements and regulations are taking place. AI is more of an issue for automation companies or large corporations that want to start up or monitor systems independently of humans. However, the question is whether a large number of sensors, including the necessary cabling etc., is more economically justifiable than an experien-

ced employee who intervenes to control the system.

> *"We really used to sit at our desks with pen and paper and draw the plans by hand. Nowadays, I don't even have to be on site. You're constantly working on a virtual model."*

Mario Doppler, with TBP for 44 years.

What are the advantages of TBP's independence?

Thomas Wimmer: Our independence is a great asset that is valued by our customers and which we carefully cultivate. We are solely committed to the interests of our clients and provide objective and neutral advice to ensure the best solution in terms of price and technology. We are personally available to our customers; the boss works with us. Our hierarchies are very flat and our decision-making processes are short - this makes us an agile company and our employees agile too. We always think outside the box. "Think beyond planning" is our conscious motto.

How do you see the future as an owner-managed company?

Thomas Wimmer: Securing the future as a family business gives our customers planning security. After all, we work on everything from smaller orders that take a few months to projects with an order volume of 300 million euros that take several years to complete.

In the medium term, we will probably have to enter into strategic partnerships in order to be able to offer our high level of expertise and service quality in increasingly challenging or even disruptive markets. Employee participation models may also be a topic for the future. What worries me more is that a generational change is currently taking place. Sound medium-sized companies are being sold, and there have never been so many mergers and acquisitions as in recent years.

About TBP

The TBP Group is an internationally active engineering services company for the following areas:

- Paper/pulp (TBP is the largest planning office in this sector in German-speaking countries)
- Energy/water/waste water
- Starch/sugar
- Wood processing industry
- Environmental/environmental technology

TBP customers benefit from a comprehensive range of engineering services, synergies thanks to broad-based expertise and the flexibility of an owner-managed company with short decision- making paths: from the initial idea to commissioning and follow-up support for industrial plants.

- Consulting/Studies
- Authorisation planning

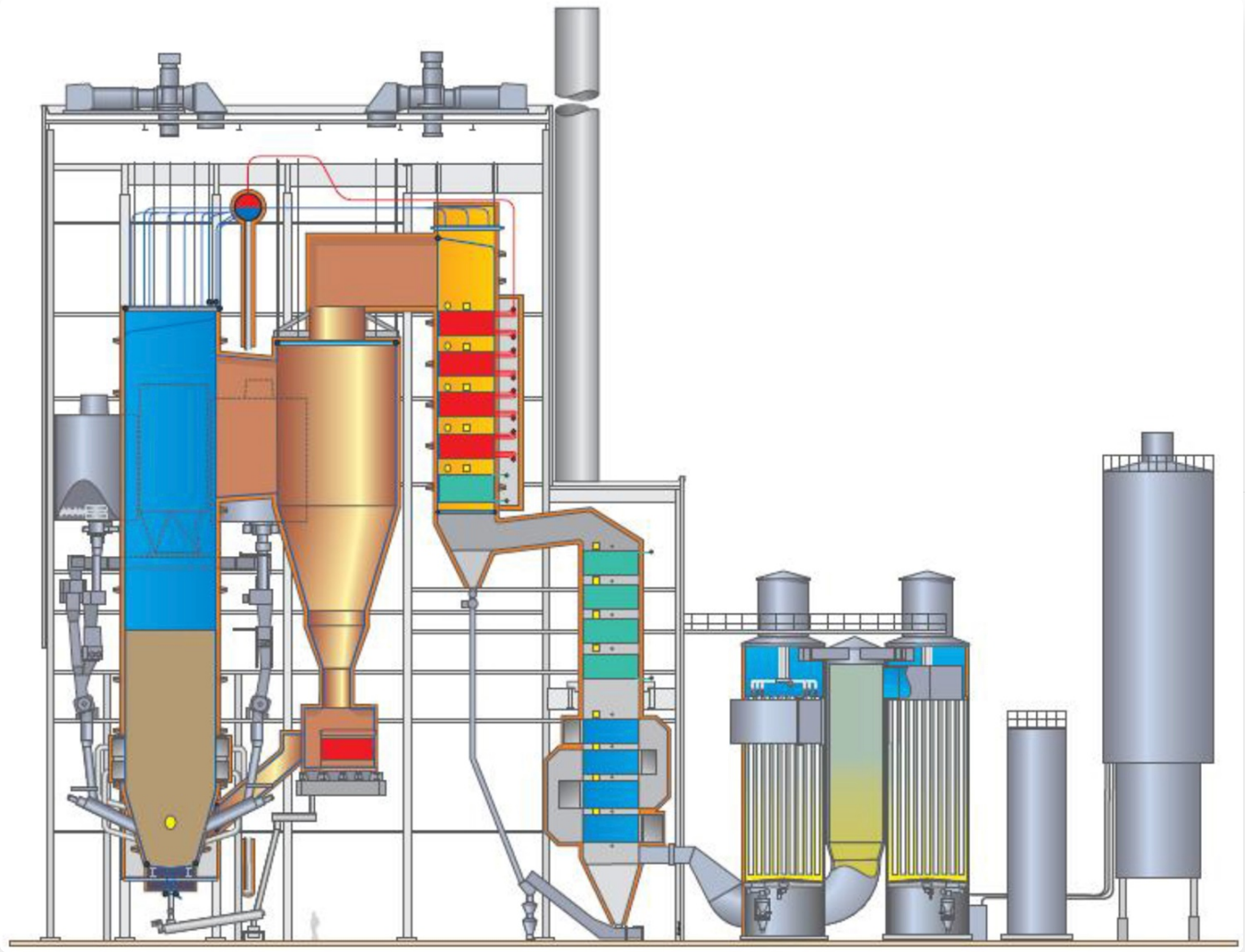
- Engineering/General Planning
- 3D as-built documentation
- Project management
- Provision of personnel
- Plant relocation

100% owned by the Wimmer and Füchsel families, the managing directors are Thomas Wimmer and Thomas Füchsel.

- 125 employees, including 45 at the TBP site in Linz, 55 at Interprojekt in Lodz/Poland, 25 at TBP Upcon in Moosburg and in Dresden, Germany.
- More than 180,000 engineering hours per year.
- Annual turnover around EUR 15 million, focus on Central and Eastern Europe, but also active worldwide.
- 60 % export quota.

www.tbp-group.com

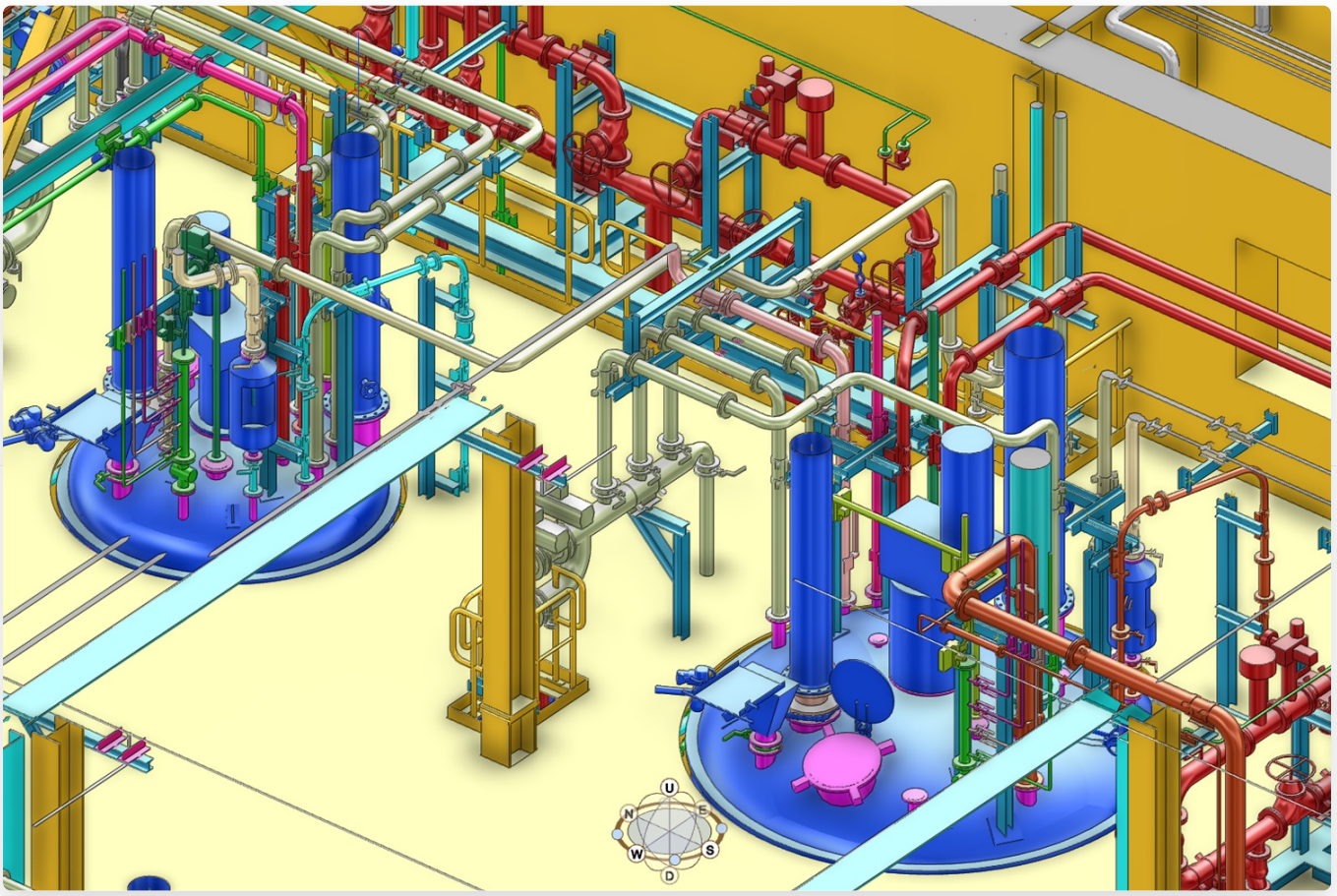
Management Shareholder DI Thomas Wimmer and Thomas Füchsel.



New biomass steam power plant for Hamburger Hungaria: Plan.

New biomass steam power plant for Hamburger Hungaria: Production site.

Thomas Wimmer and Thomas Füchsel with consultant Ferdinand Wimmer, former Managing Director and Partner.



Complex pipework routing: Detailed 3D model that illustrates the precise planning and integration of pipework systems in industrial plants.

TBP realises new PM2 paper mill for Hamburger Spremberg.

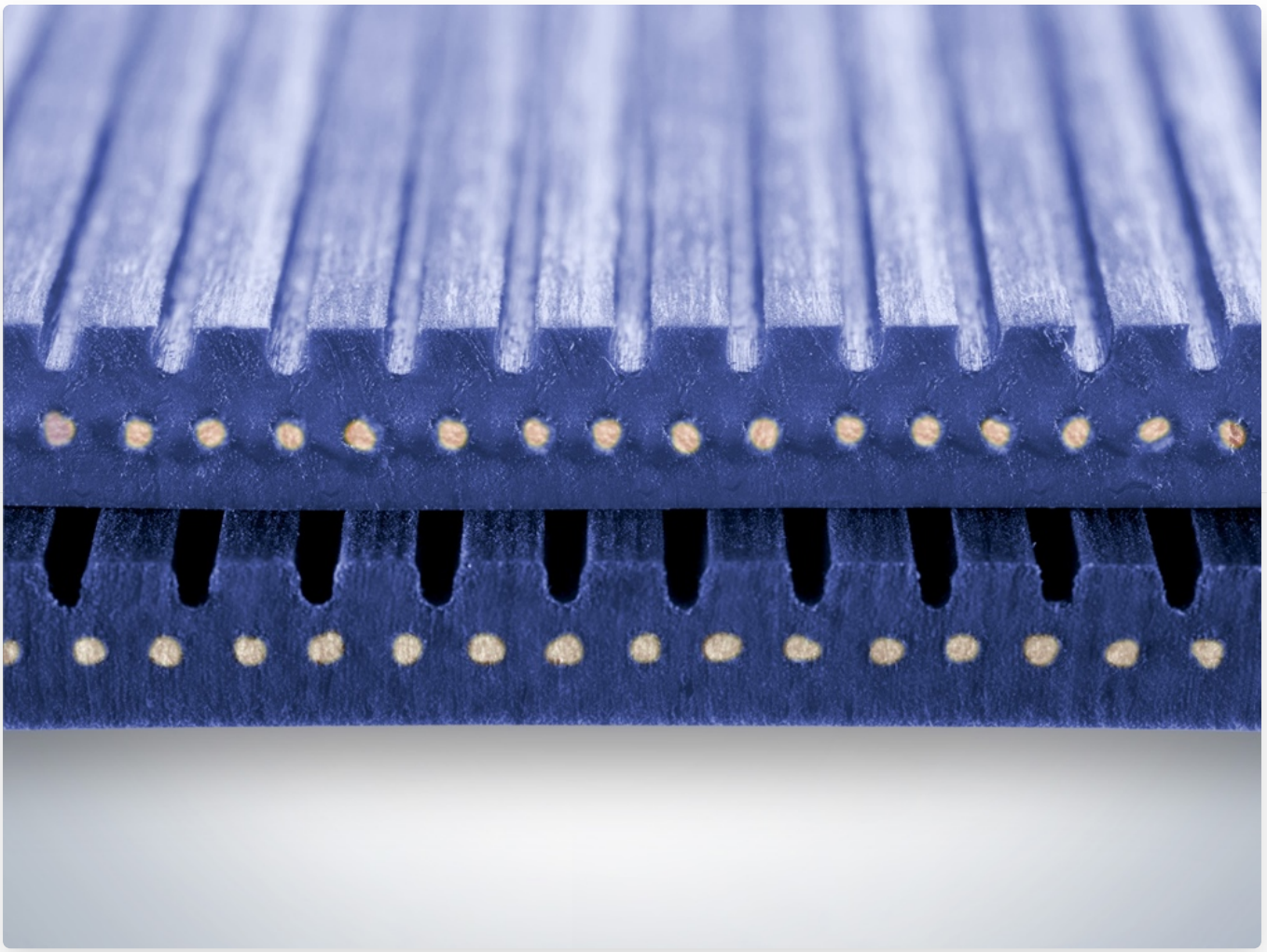
Project "MODEL Nike PM4" - Conversion of a newsprint paper machine to corrugated base paper.

TBP Headquarters Linz (Austria), Hopfengasse.

Editor: sbr

Customized QualiFlex Press Sleeves

Higher Dry Content, Lower Energy Use



Long-term studies using the MicroCT tool confirm that the QualiFlex reputation for reliable and superior dewatering properties is rightfully earned.

How does the fully customizable QualiFlex press sleeve portfolio achieve higher dewatering performance and dry content after press? At the Voith Paper Technology Center, a team of multidisciplinary experts are hard at work identifying innovative opportunities for continuous improvement. Discover how cutting-edge MicroCT analysis, lab tests and test rigs, as well as real-world field trials, secure the best results for every type of paper mill – even under the most challenging of conditions.

Slice by slice, the remarkable benefits of the QualiFlex press sleeve portfolio are revealed for all to see. “What we are doing is unique in the industry,” explains Dr. Christina Bauer, Global Product Manager Press Roll Covers at Voith Paper. “With our cutting-edge MicroCT analysis tool, we can see inside new and used press sleeves. This gives us a better understanding of the groove design, void volume and material properties that maximize dewatering performance and ensure a long, stable and reliable lifetime of our QualiFlex family.”

Long-term studies using the MicroCT tool confirm that the QualiFlex reputation for reliable and superior dewatering properties is rightfully earned, notes Bauer. “Time and time again, the MicroCT analysis confirms that the combination of our patented material and customized designs ensures that the void volume of our grooves remains consistent over a longer service life. Such superior and stable void volume is key to efficient water flow, which leads to effective and efficient dewatering in the press section.”

R&D for a longer service life with superior dewatering properties

This assessment is echoed by Peter Weichenberger, Business Unit Manager QualiFlex at Voith Paper. “Our MicroCT technology allows us to scientifically investigate the performance of press sleeves in real-world conditions. Our customers increasingly value our science-backed R&D methodology, which clearly visualize the benefits of our press sleeves for their production lines.”

What’s more, such in-depth analysis means that Voith can accurately and individually customize the design of each QualiFlex press sleeve to achieve a higher dry content after the press for every type of paper grade and paper mill.

“A higher dry content is the goal of any papermaker, as it ultimately leads to reduced steam and energy consumption and/or higher production capacity,” adds Weichenberger. “The MicroCT analysis helps us secure excellent dewatering properties over a longer, stable service life for every kind of paper mill.”

Unique MicroCT analysis on dewatering performance One recent field study in particularly demanding conditions compared the performance of a customized QualiFlex press sleeve to an alternative from another manufacturer. Both were used in the one and only shoe press on a paper machine to produce the same quality of paper. While the QualiFlex showed excellent dewatering performance for 145 days, the alternative had to be replaced after only 64 days due to poor dewatering results.

Back in the lab at the Voith Paper Technology Center, the R&D innovation hub in Heidenheim, Germany, the QualiFlex specialists got to work to identify the root causes for the marked differences in performance. The MicroCT analysis looked at the void volume of the grooves in the press sleeves before and after hydrolysis treatment under various pressures up to 7 MPa.

Essentially, Voith’s MicroCT analysis uses advanced X-ray technology and computer algorithms to see inside the press sleeves slice by slice and create high-resolution, three- dimensional images of the small grooves in the sleeves. This allows for detailed structural analysis and precise measurement of material properties.

The QualiFlex press sleeve stands out for stability and resilience

Among the key findings of the MicroCT analysis, two are especially interesting for papermakers. First, it showed that the initial void volume of the grooves in the new QualiFlex press sleeve was much higher than the grooves in the unused alternative. Second, at the end of the service life of 145 days, the QualiFlex press sleeve still had a remaining void volume of 348 cm^3/m^2.

Most notably, the MicroCT analysis showed that this end capacity for the QualiFlex press sleeve was close to the initial void volume of the alternative, which was 358 cm^3/m^2 at the outset. At the end of its service life of only 64 days, the alternative ended with a far lower capacity of only 288 cm^3/m^2. This explains the poorer dewatering effect. An overview of several MicroCT studies is available upon request from Christina Bauer (christina.bauer@voith.com).

“These types of comprehensive comparative studies confirm not only that QualiFlex has better initial pressure resistance, but that our patented material and groove designs are significantly superior when it comes to withstanding the harsh conditions and pressure of the paper machine over time,” notes Bauer. “This is essential to ensure stable and consistent, high dewatering performance over a longer period, whatever the conditions at the mill.”

For one European paper mill with an annual production capacity of around 200,000 tons of fluting and testliner between 110g/m^2 and 215g/m^2, the higher dewatering performance of QualiFlex press sleeves was evident after a temporary switch to a press sleeve from another manufacturer. The QualiFlex press sleeve had recorded a stable and efficient dewatering performance over 451 days. In contrast, within 140 days with a third-party alternative, the press section already showed increased misting around the press sleeve. Initial investigation of the issue suggested that the misting was likely caused by the heavy wear and swelling of the surface of the third-party press sleeve, which was unable to withstand the harsh conditions of this particular paper mill.

A focus on continuous improvements in R&D for press sleeves

The MicroCT analysis tool is not just about measurement, however. It's also a powerful R&D tool for customer-centric innovation. Crucially, this one-of-a-kind research in the industry ensures that the Voith QualiFlex specialists can identify key opportunities for continuous improvement.

Continuous improvement is a key topic of interest at the Voith Paper Technology Center, the R&D innovation hub in Heidenheim, Germany, where the in-depth MicroCT analysis takes place. It's also where the custom-made QualiFlex press sleeves are designed and manufactured using innovative, patented materials.

This clear focus on continuous improvement at the production site has led to further developments in the design, material use and manufacturing methods for the portfolio of QualiFlex press sleeves. Each improvement is aimed at ensuring a higher dry content after press with stable and reliable production.

Improving performance, reducing risk for customers

"We invest considerable sums in R&D and quality control for our press sleeves, which sets us apart from other suppliers," explains Bauer. "It's a luxury that gives us time to focus on continuous improvement and customer-centric innovations at our state-of-the-art research hub. We can them try our ideas out on test rigs that replicate conditions in paper mills before moving to real-world trials in close collaboration with our customers."

This approach takes time, but there's a good reason for this. "Our way is specifically aimed at protecting our customers and giving them a competitive edge," explains Bauer. "We never increase the risk for our customers."

This tried-and-tested process has led to proven popular innovations with patented materials in the QualiFlex portfolio. These include the unique blind-drilled surface in the QualiFlex press sleeves that optimize the dewatering process. It's also why QualiFlex press sleeves are breaking world records in service life, measured both in terms of nip cycles and operating days.

In addition, the QualiFlex specialists have another key advantage on top of the cutting-edge research facilities, highlights Weichenberger. "We are members of a multidisciplinary team at a full-line supplier, which means we have access to every kind of insight, expertise and knowledge of process engineering that is necessary to ensure our innovations have a positive impact on the paper production process.

Greater impact resistance and mechanical strength Another type of impact can be a considerable cause of concern for papermakers who produce board and packaging with higher grammage. When a paper wad of testliner makes its way through to the press nip in such production lines, for instance, it can suddenly increase the pressure on the press sleeve. The impact of such a paper wad can lead to damage on a press sleeve if it is not tough enough to withstand the shock.

Such wad impacts are relatively rare even in the harshest conditions at board and packaging production lines. However, when they occur, they can lead to costly unscheduled maintenance shutdowns. This is why the QualiFlex team has also been making use of the high-tech R&D facilities to research ways to ensure superior impact resistance of the press sleeves.

At the research hub, the QualiFlex specialists have replicated testliner wad impacts on a NipcoFlex test rig running at 800 m/min with a line load of 1,100 kN/m. Lab tests followed using various weights to simulate impacts under mill conditions. One key finding of the series of tests was that impact failure always starts with damage to the yarn structure.

“Our research shows that when the reinforced structure has higher impact resistance, the press sleeve itself is more durable in the long run,” explains Bauer. “This insight subsequently led to the development of a new type of reinforced structure with higher mechanical strength and flexibility in direction of the cross section for the QualiFlex portfolio.”

Tougher reinforced structure for increased flexibility and service life

Following the initial results of the research into the impact failures, the Voith specialists identified a way to improve the reinforced structure of the QualiFlex press sleeves to secure higher impact strength.

The first QualiFlex press sleeves with the new reinforced structure underwent extensive lab testing. Once the team was satisfied with the results, numerous field trials followed in close collaboration with customers around the world.

Currently, hundreds of QualiFlex press sleeves with the new reinforced structure are running successfully. The switch to the new reinforced structure has been smooth and viewed positively by customers involved in the trials.

The improved toughness and impact resistance of the new reinforced structure ensures that the QualiFlex press sleeves retain mechanical strength throughout the service life and have high wad and shoe crack resistance.

Solving the shoe edge cracking challenge

Increased shoe crack resistance is not a benefit that many papermakers will immediately notice, simply because shoe edge cracking of the QualiFlex press sleeve is not an issue for most papermakers. It generally occurs only under the most challenging conditions, and even then, only in the most demanding applications.

Nevertheless, shoe edge cracking was an occurrence that caught the attention of the QualiFlex specialists who saw it as another opportunity for continuous improvement.

Long-term rigorous trials and analysis at the research hub in Heidenheim led to an innovative optimization of the production process to further reduce the rare occurrences of shoe edge cracking. Repeated trials on test rigs confirmed that the press sleeves produced using the new process showed no signs of cracking.

“Although this particular improvement is not something that every papermaker will notice, it is something that benefits everyone,” highlights Weichenberger. “Our manufacturing process ensures that our QualiFlex portfolio is designed to withstand the most challenging conditions — which leads to a longer stable service life for all applications.”

Superior performance through tailored service and support

As the QualiFlex press sleeves have such a long life, Voith ensures that customers are provided with long-term service over the entire life cycle. QualiFlex specialists and Voith engineers team up to offer a wide range of comprehensive support that is designed to improve not only the performance of the QualiFlex press sleeves but also the press section as a whole.

As a full-line supplier, Voith provides tailored service packages that include audits, maintenance, and troubleshooting across the entire paper machine, not just the press section. Teams of experienced application engineers work closely with customers to optimize press sleeve designs for specific paper grades, machine

layouts and production processes.

As an international organization, the teams can leverage a global network of experts to solve issues. It's possible to draw on the collective knowledge of Voith engineers and resources across regions to quickly address any type of challenge that a customer might be experiencing in the press section – or elsewhere in the mill.

"By offering this level of comprehensive support and expertise, we are a true long-term partner to our customers," explains Weichenberger. "We help them maximize the efficiency and reliability of their paper production operations and make them fit for the future."

Service portfolio improves planning of maintenance

One such innovative service is performed with the Voith Surface Scanner. "With this tool, Voith Service Engineers can perform essential inspections of the QualiFlex press sleeve during a planned maintenance shutdown anywhere in the world", explains Mario Neumann, Senior Global Application Manager at Voith Paper.

Unlike conventional inspections that generally use manual imprints and are known to overlook critical wear points, the self- driven Voith Surface Scanner automatically carries out a seamless full-width profile and delivers high-resolution images over the length of the press sleeve surface. Following detailed analysis of the void volume, the remaining lifetime of the press sleeve can be reliably calculated, and maintenance procedures can be efficiently planned.

Higher dry content leads to energy savings

All the research, innovative improvements and service options are geared at ensuring papermakers have fewer unplanned shutdowns and can better plan maintenance, which results in higher overall equipment efficiency (OEE) and lower operational costs.

In addition, as the superior dewatering performance of the QualiFlex sleeve press leads to a higher dry content, papermakers ultimately save steam and energy consumption in the dryer section. Generally, a 1 percent increase in dry content saves 4 percent in energy consumption. Papermakers can also choose to use that 1 percent increase in dry content to increase production by 4 percent.

One example of what a difference this all-round expertise and service can make is exemplified by another recent innovation: the HighPerformance Press solution. This consists of Voith's NipcoPress Shoe Press technology, a new press concept, a tailored combination of press felts and QualiFlex press sleeves. Together, they contribute to an even higher dry content.

Simulations show that, depending on the initial conditions, up to a 3 percent increase in dry content can be achieved, which reduces the steam consumption by up to 12 percent.

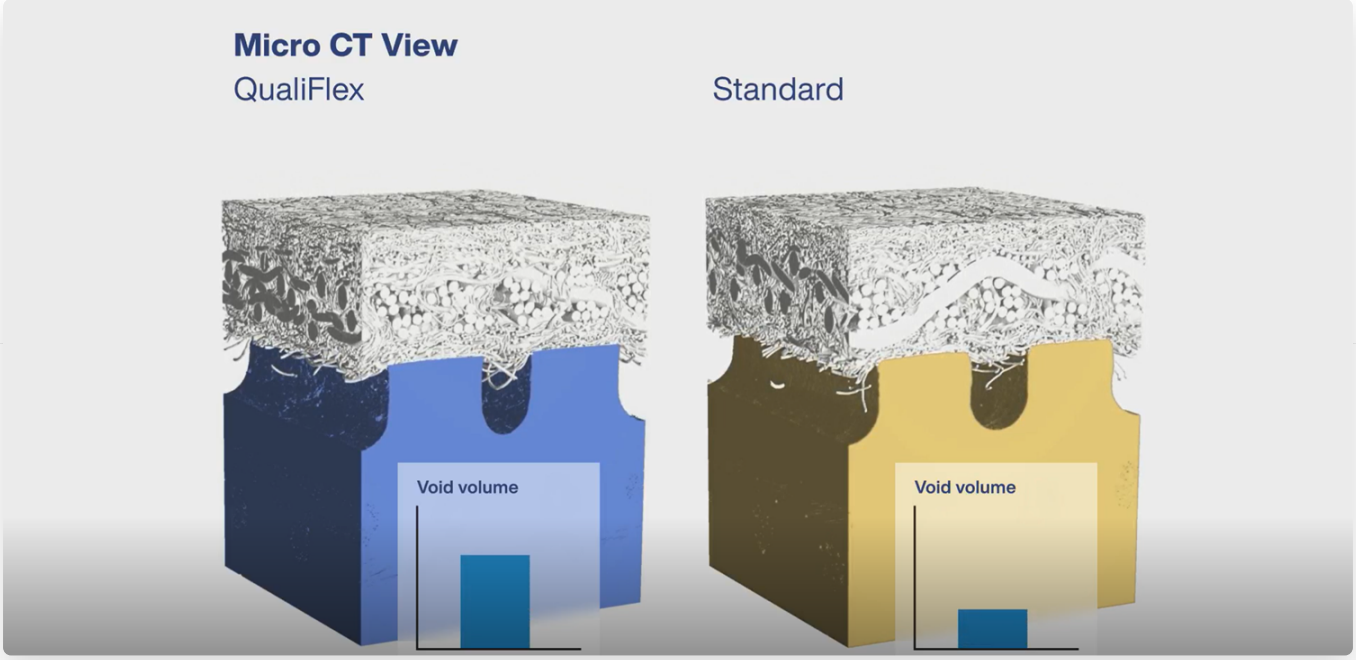
"After installing HighPerformance Press, we have seen a higher dry content after the press section and lower steam consumption, which helps us reduce our carbon emissions," explains Wouter Lap, Managing Director at Smurfit Kappa Roermond Papier. But the advantages don't end there for the PM 1, which has an operating speed of 1,250 m/min, a sheet width of 5,000 mm and an annual production capacity of 275,000 tons of high-performance lightweight packaging paper with basis weights between 80 and 135 g/m^2. "This solution also has a cost-price benefit," Lap adds. "And it has increased our machine capacity."

Customized press sleeves and services for greater efficiency

The specific requirements and conditions differ greatly from one paper grade and mill to another. As a result, the ability to design, manufacture and service customized QualiFlex press sleeves is crucial for achieving the highest possible dry content after press on every type of machine and a higher runability.

Each QualiFlex press sleeve is therefore custom-made in the Voith Paper production site in Heidenheim, Germany. The portfolio covers all paper grades, and each press sleeve is tailored to the requirements of individual machines and mill conditions. During the production process, the surface of the QualiFlex press sleeves are treated to create the grooves, blind- drilled surface and distinct profiles that give the sleeve press some of its unique qualities.

“Finding the perfect QualiFlex press sleeve for every type of paper machine is a fascinating process,” adds Bauer. “Figuring out the best possible solution and seeing how our innovations maximize the optimization potential of a paper mill is incredibly rewarding.”



Currently, hundreds of QualiFlex press sleeves with the new reinforced structure are running successfully.

A higher dry content is the goal of any papermaker.

"We invest considerable sums in R&D and quality control for our press sleeves, which sets us apart from other suppliers."

Editor: SBR

EUROSAC Congress 2025

Envisioning the Paper Sacks of Tomorrow

The participants received an update on market trends, recent EU legislation, strategies for initiating behavioural change and a glance at the latest developments for paper sacks.

From 22–24 May, more than 130 industry professionals convened in Thessaloniki, Greece, for the EUROSAC Congress 2025. Under the theme "Envisioning the paper sacks of tomorrow," the event featured expert presentations, dynamic discussions and valuable networking opportunities. Key topics included regulatory developments, paper sack recycling and the necessary behavioural changes. The EUROSAC Grand Prix Award took centre stage, showcasing the industry's most forward-thinking projects. The Gold Award went to eXpandyble from dy-pack, with Silver awarded to W. Gröning and Billerud for their joint development Future-Proof Paper Sack for Low-Carbon Cement. Mondi received Bronze for its re/cycle PaperPlus Bag Advanced, while the Public Choice Award went to ConFlex® HeatSeal by Billerud.

"We are living in complex times shaped by geo- economic challenges," said EUROSAC President Alessandro Selmin at the opening. "That makes platforms like the congress all the more vital to address key industry issues and shape the future through our members' commitment and our organisation's strength."

Positive market trend

After a sharp decline in 2023, the European paper sack market showed signs of recovery in 2024. Deliveries rose by 2.2% to 5.32 billion units. Growth was strongest in food products (excluding milk powder) at +6.8%, followed by animal feed and chemical products (both +6.2%). While cement, milk powder and minerals continued to decline, the drop slowed, pointing to stabilisation. The building materials segment (excluding cement) also contributed with a 3.1% increase. A glimpse into the first quarter of 2025 suggests an even more solid upward trend with increases across all sectors.

Preparing for the latest EU legislation

Regulatory developments remain a driving force in the industry. Laura Mazzei from CITPA provided an overview of current legislative policies trends shaping the industry, such as the 2050 decarbonisation goal and retaining resources longer in the economy. Her message: packaging must be functional, designed for recycling and adapted to increasing legal complexity. Ulrika Wedberg and Robert Torstensson from Billerud outlined challenges and practical steps to prepare for the European Deforestation Regulation (EUDR). A subsequent round table gave insights into paper sack recycling initiatives across various European countries. The industry has set up an alliance involving over 70 companies from across the entire construction value chain and 180 construction sites, aiming to advance circularity through multi-material recycling and scalable pilot projects. The key takeaway: circularity doesn't happen by itself – but with cross-industry collaboration, it can be transformed into a viable business model.

Driving sustainability with behavioural strategies

Especially when it comes to driving circularity, the industry faces the challenge of motivating various stakeholders to actively support paper sack recycling. Sam Gray from RARE Europe introduced behaviour-centred design as a powerful approach to tackling sustainability challenges. Instead of relying on regulations, financial incentives or information campaigns, Gray highlighted the need to understand the psychological and social context behind human behaviour. People tend to respond more positively to emotional appeals like pride, rather than guilt or shame. They are more likely to adopt behaviours that seem easy and are already practiced by others. Gray's clear message: "Make the right choice the easy choice."

Paper sacks vs. WPP sacks – a comparative view

The role of 50 kg woven polypropylene (WPP) cement sacks in countries outside Europe was compared to paper-based alternatives. Thomas Hilling from Haver & Boecker and Dominik Wörsdörfer from Windmöller & Hölscher shared insights into market developments, production, applications, handling and technical performance.

According to their observations, paper sack production requires three times less space, generates three times less waste, uses only 20% of the energy and just one-tenth of the manpower compared to WPP sack production. Complementing this, Elin Gordon from CEPI Eurokraft presented findings from a recent lab study comparing filling speed, product loss, dust generation and carbon footprint across both packaging types. The results clearly highlight the advantages of paper sacks: they can be filled 21% faster, reduce product loss by a factor of four, generate only a third of the dust and only half the carbon footprint in comparison with WPP sacks. More info here.

EUROSAC Grand Prix Award 2025

The EUROSAC Grand Prix honoured outstanding innovation in performance, sustainability and customer value. "It's a showcase of what modern paper sack technology can achieve – and how our industry envisions the paper sacks of tomorrow," said EUROSAC President Alessandro Selmin. "What looks like a simple paper sack often hides cutting-edge technology." Praising the high quality of the submissions provided by the participants, jury president Herbert Rode noted that "the winning solutions clearly stood out."

Grand Prix Award winners 2025

The Gold Award went to eXpandyble from dy-pack. The sack offers a smart and flexible solution: it expands precisely to the required volume during filling – by up to 30%. Whether the adjustment needed is 5% or 25%, the sack adapts automatically and ensures optimal filling accuracy. One sack size can be used for various products reducing stock and simplifying logistics. An additional benefit: lower internal pressure during filling enables a noticeably faster filling process. The sack is considerably stronger than conventional sacks, reducing breakage. The sack's surface supports water uptake during the recycling process, aligning with established recycling practices. "It solves a common customer problem and can help replace non-paper solutions where variable sizes are needed," the jury noted.

The companies W. Gröning and Billerud were presented with the Silver Award for their joint project Future-Proof Paper Sack for Low-Carbon Cement. The solution combines ultra- breathable and semi-extensible sack kraft paper with an 8 µm HDPE film containing 35% PCR to meet future PPWR regulations. It ensures dust-free, high-efficiency filling of finer, low- carbon cement blends which are expected to become increasingly common. At the same time, the sack offers strong moisture protection, high strength and a reduced carbon footprint, using materials already available on the market. The jury highlighted the dual innovation: an improved paper porosity for finer cement blends and a recycled PE film performing in line with conventional options.

The Bronze Award was given to re/cycle PaperPlus Bag Advanced by Mondi. This high- performance paper sack features an advanced 20 µm barrier film that replaces standard 30– 50 µm HDPE layers. It reduces plastic consumption by up to 60% while maintaining the same moisture protection. Customers benefit from reduced emissions, improved recyclability and compatibility with existing filling equipment, all while enhancing compliance with evolving EU regulations and preserving product performance. The jury praised the impressive film reduction and the product's focus on recyclability and performance.

ConFlex® HeatSeal developed by Billerud impressed the audience and was honoured with the Public Choice Award. It is a recyclable, PE-free heat-sealable paper that replaces plastic wraps in pre-made bag and form-fill-seal applications. The clay-based coating ensures recyclability, making it a future-proof alternative. Used by a Swedish furniture brand, it cut plastic waste while reducing CO_2 emissions by estimated 50%, increasing line speed by 30% and boosting packing efficiency by 20%. With a CEPI recyclability score of 18/20 and food contact approval, the solution offers environmental and operational advantages.

Other Grand Prix entries

EUKA FLOUR BAG by Klabin is a plastic-free multiwall valve sack made 100% from short-fibre Eucalyptus paper. It features an innovative easy-open ribbon made solely from paper and a sealable valve using special resins instead of film. Designed for 25 kg wheat flour, the sack combines strong product protection, high print quality, excellent runnability, perfect logistics performance and improved resource efficiency.

Mondi presented as a second entry re/cycle ProtectorBAG PocketForm, a fully paper-based flexible packaging solution that replaces plastic in transport and storage. With up to seven customisable compartments and individual printing, it offers organised, branded and damage- minimising protection for diverse items – a versatility that opens opportunities across various industries. Its compact form and easy handling support logistics efficiency. Made from renewable, responsibly sourced paper, the packaging is recyclable and helps reduce plastic waste.

The Grand Prix entries embody this year's congress motto, "Envisioning the paper sacks of tomorrow", and reflect the shared ambition of the paper sack and sack kraft paper industry to shape the future through innovation.

About EUROSAC

EUROSAC is the European Federation of Multiwall Paper Sack Manufacturers. The federation represents over 80% of European paper sack manufacturers. Its members operate in 20 different countries. They produce some 5 billion paper sacks per year, representing 630,000 tonnes of paper converted in 55 plants. Sack manufacturers from all continents and bag manufacturers also contribute to the federation as corresponding members, and more than 30 suppliers (paper, film, machine or glue manufacturers) are registered as associate members.

www.eurosac.org

About CEPI Eurokraft

CEPI Eurokraft is the European Association for Producers of Sack Kraft Paper for the Paper Sack Industry and Kraft Paper for the Packaging Industry. It has ten member companies representing a volume of 3 million tonnes of paper produced in eleven countries.

www.cepi-eurokraft.org

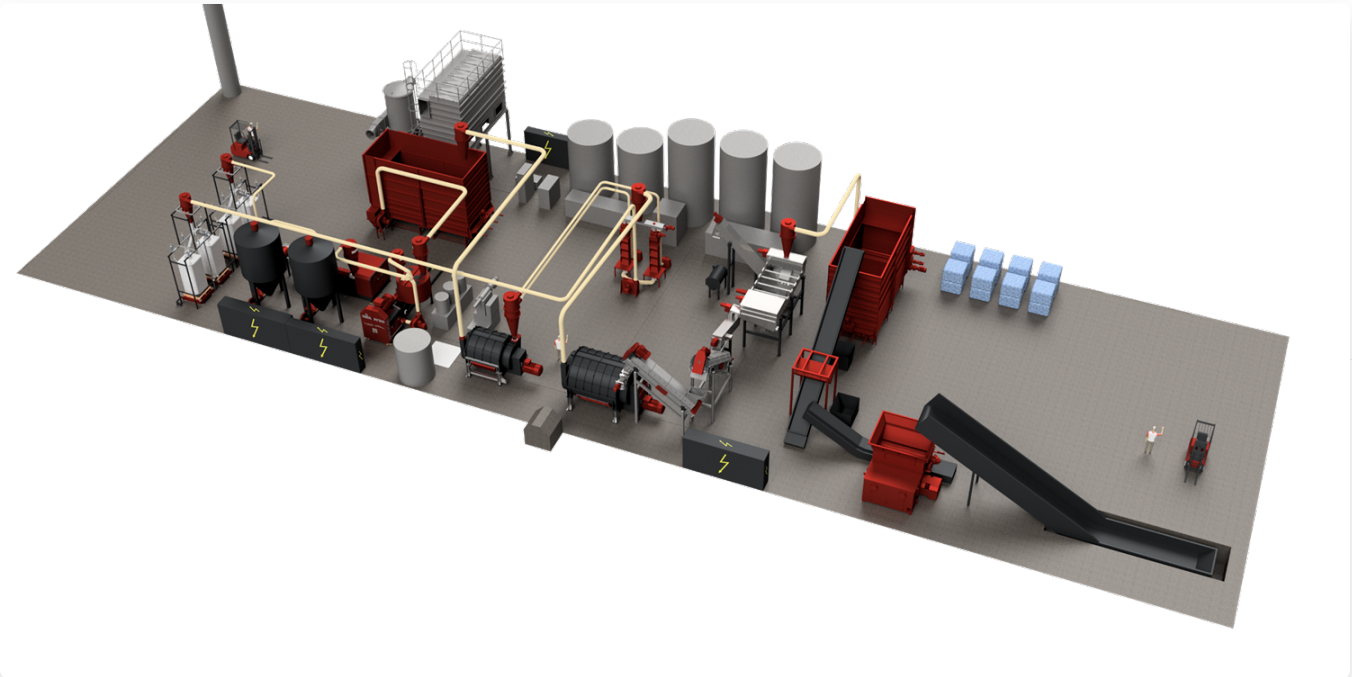
Elin Gordon, CEPI Eurokraft, discusses insights from comparative study on paper and WPP sacks.

The Grand Prix Award jury, winners and participants from right to left: jury members Larry Challis (Challis Clarke Enterprises), Herbert Rode (Windmöller & Hölscher) and Carla Croso (Saccarta), Antonio Carlos de Liz (Klabin), Fabio Barbieri (Mondi), Wilhelm Dyckerhoff (dy-pack), EUROSAC president Alessandro Selmin (Corazza), Matthias Becker-Gröning (W. Gröning), Mark van der Merwe (Billerud) and moderator Ingo Theissen.

Editor: sbr

CAVITATION TECHNOLOGY

Comprehensive Recycling Concept for Cellulose-Based Composite Packaging



STRUCTURE OF A POLYAL RECYCLING PLANT ...

bio-fibre MAGAZINE

With an innovative separation technology from Repulping Technology “Cavitation Pulper”, winner of the Bavarian Environmental Award and the European Paper Recycling Award, among others, cellulose fibers are separated very efficiently and qualitatively, even from composite materials. The first plant using RT technology to process used recycling paper and composite packaging that is difficult to recycle has been operating successfully in Austria since 2024.

The Cavitation Pulper

Many valuable raw materials can only be recycled inadequately with conventional technology (standard pulpers, pulping drums, etc.) or with very high energy consumption, especially cellulose-based composites and hard-to-recover grades.

Multi-material multilayer plastic packaging (“MMPP”)

- Composites and composite packaging (e.g. beverage carton packaging)

- Papers from waste (paper and cardboard from lightweight food packaging)
- Metallized packaging (e.g. aluminium-vaporized paper packaging)

Hard-to-recover grades („h2r")

- Coated paper and cardboard (e.g. paper cups and tableware)
- Kraft paper and cardboard (e.g. sack paper)
- Cores and core wrapping paper products
- Wet-strength papers (e.g. labels)
- Release liner / Siliconized papers
- Barrier papers, consisting of various barrier layers

With the cavitation process, almost the entire fiber content can be recovered from these materials. The technology can also be used to treat and clean plastics in order to improve their quality (e.g. removing stuck-on paper labels, cleaning foils, etc.).

The Cavitation Pulper ("CP" for short) is an innovative and patented system for the efficient separation of fibrous and composite materials (or non-fiber materials) using the purely physical principle of targeted cavitation to separate the molecular compounds in the raw material. The CP system consists of an airtight tank with an agitator (HC spiral rotor), which is driven by an energy-efficient direct drive, and a vacuum pump. The cavitation effect is generated by the vacuum pump, which creates a vacuum inside the tank. In combination with rotor recirculation, the raw material is separated very efficiently.

The main advantages compared to conventional technology:

- Significantly lower specific energy consumption (up to 50% energy savings)
- No use of chemicals or hot water necessary
- Processing of "MMPP" and "hard to recycle" raw materials
- Higher cost and resource efficiency due to improved fiber yield

As a result, the use of cavitation technology allows the packaging industry, for example, to make greater use of composite materials that were previously inadequately recyclable (avoiding plastic waste and conserving resources). Furthermore, a reduction in the formation of bacteria and yeasts can be observed in contaminated raw materials.

To operate the recycling plant, the raw material is delivered in bales (optionally in bulk), de-wired and fed into the cavitation pulper with the addition of water. The cavitation process separates the raw material into a fiber and non-fiber fraction. The entire content is then fed into the downstream peripheral equipment.

- Fibers as a final product: After separation from the reject stream, the pulp enters further cleaning and dewatering stages. After final drying, the pulp is either produced as a fiber bale (Option 1) or after initial dewatering as crumbled stock or bulk material (Option 2).
- Reject as a final product: After the cavitation pulper, the reject fraction passes through various sorting and washing stages and is available either as compressed and wired bales or as loose bulk material. The reject quality meets the requirements for further material processing. Subsequent PolyAl processing can be taken into account by RT in an overall plant concept.

The following illustrations are examples of the processing of used beverage cartons (UBC) and are taken from a fiber processing plant that has already been implemented with the innovative cavitation pulper concept.

The processing of MMPP materials (e.g. UBC) produces reject quantities that are mainly sent for thermal recycling today. Repulping Technology and Partner and its partner company offer a highly efficient closed-loop solution for the complete recycling of composite materials. The rejects produced after the RT process are virtually fiber-free and are fed directly into the PolyAl recycling plant. The process in detail:

- Step 1: Shredding and intermediate storage - to ensure a continuous process
- Step 2: Washing and separating - fibers, impurities and aluminum are sorted out
- Step 3: Drying - via a centrifugal dryer
- Step 4: Sifting - separation of light and heavy plastic parts
- Step 5: Agglomeration and extrusion - production of end products

A complete closed-loop solution for composite and MMPP materials is now possible. Recycling rates > 90% can be achieved.

Project approaches

Total costs of around EUR 15 million are estimated for an autonomous recycling plant (“greenfield”) with an annual capacity of around 40,000 tons of input material. The dried fiber bales can be sold to customers with the best prices. Alternatively, the plant can be located close to a fiber-receiving paper mill or integrated into it (“brownfield”). This eliminates the need for costly pulp drying and thus minimizes energy and transport costs to increase profitability. The revenues from the operation of such a recycling plant result from the additional payment of the dual systems (for example for fractions 512 and 550), as well as from the sale of pulp to the paper industry.

Increasingly, the recovered composite materials (films) can also be sold at a profit, or additionally processed by other systems (e.g. PolyAl processing) and used as a raw material for new plastic production. This provides a complete, closed-loop solution. This highly efficient overall solution from Repulping Technology and its partners is unique and enables end customers to meet the (PPWR) quota compliance of the recycling quotas required in the future.

Due to the increasing requirements for the recycling of packaging and the associated recycling quotas, e.g. from the PPWR legislation (applicable from 26.01.2025), such recycling capacities are increasingly necessary on the market. There are already bottlenecks in Germany, such as paper and cardboard from lightweight food packaging (Papers from waste), which is putting disposal companies under increasing pressure.

The range of services offered by Repulping Technology GmbH & Co. KG:

1. Preparation of a technical and commercial feasibility study (technical system concept with investment/ operating costs and profitability analysis)
2. Engineering phase: preparation of planning documents and final offer
3. Holistic realization partner for the construction of the recycling plant

... AND INPUT MATERIAL AFTER THE RT PROCESS.

CP SYSTEM ...

... and autonomous recycling plant for the dissolution of composite packaging in Austria.

Input material	End product: fiber bales	End product: reject bales
		
Raw material • Bale goods or loose goods • Raw material types e.g. from the yellow collection system	Fiber quality • Impurities < 0,5% • Opt. 1: Fiber bales (dry content > 70%) • Opt. 2: Crumble stock (dry content > 40%)	Reject quality • Residual fibers < 5% • Dry content > 60%

Input and semi-finished materials as separate output fractions: Cellulose fibers and almost fiber-free plastic foils.

Residual fibers	Aluminium	HDPE	LDPE
			
Recovery of residual fibers from the input material	Processing into marketable aluminum granulate or agglomerate	Use for non-food products, e.g. boxes, canisters, etc.	Can be used after processing for plastic products (similar to HDPE) in pure form or as an admixture

HOLISTIC RECYCLING SOLUTION FOR COMPOSITE BEVERAGE CARTONS.

EDITOR: SBR

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