SMARTER PRINTING
THE NEW SPEEDMASTER XL 106

PASSIONATE ABOUT TEA
PRINTCARE PLC IN SRI LANKA

TROUBLESHOOTERS
THE APPLICATION SPECIALISTS FROM HEIDELBERG

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ENJOYING THE MOMENT

The inhabitants of Sri Lanka's unsung capital Colombo always find an excuse to head for the Galle Face promenade. They might be taking a walk, having a picnic, flying a kite or even going kitesurfing. The narrow strip of land attracts visitors in their thousands – especially on the weekend. Some are simply having a good time, while others are taking a break from work. Many of the islanders still earn their living from the famous Ceylon tea that grows in the nearby highlands. They include the 650-strong workforce of Printcare, who produce the little labels for the string, the packets and the outer packaging that transform humble teabags into premium products for the global market. To find out more about the print shop's unusual success story and its charismatic CEO Krishnamoorthi (Ravi) Ravindran, turn to

DEAR READER,

W

e live in changing times. The speed of this change can currently be seen in the increasing intelligence of a wide range of things. Heating controls packed full with smart functions regulate our heating. Toothbrushes or even cutlery analyze our actions and make decisions for us, while cars navigate themselves more and more safely through traffic without drivers having to intervene.

The world of smart things and processes is growing, and the printing industry is no exception. One excellent example can be found at industrial commercial printer Aumüller in Germany, where a latest-generation Speedmaster XL 106 processes several similar jobs fully automatically without the printer intervening (page 12). We explain on pages 20-25 how exactly this works and the role played in this by the Push to Stop philosophy, which Heidelberg is using to usher in the age of autonomous print production.

But it isn't just the owners of Aumüller Druck who believe it's not machines but people who ultimately determine a company's success. Krishnamoorthi (Ravi) Ravindran is also convinced about this. With 650 employees, the man in charge of Printcare in Sri Lanka manufactures labels, packets and packaging for tea producers such as Lipton and Twinings (page 30). Asked about the reasons for his success, he says: "We keep our word, tell the truth and don't dupe our customers." We don't know what an autonomous machine would answer if it could. But we promise you'll find even more interesting articles in this issue – and we'll keep our word.

We hope you enjoy reading this edition!
The HN editorial team

P.S. Write to us at
heidelberg.news@heidelberg.com
to let us know how you like the HN.
We look forward to receiving your comments,
whether positive or negative.

PLASTIC INSTEAD OF PAPER

Since September, Brits have been paying for their groceries with plastic five pound notes for the first time. The note carries the image of former Prime Minister Winston Churchill, who the Bank of England says is the ideal tenacious personality to represent the characteristics of the new fiver. It is smaller than its cotton-based predecessor, but is expected to last more than twice as long because the polymer it is made from is more stable and resistant to dirt and liquids. The bank note also boasts new anti-counterfeiting features. Security print shop De La Rue is using a range of printing techniques, including offset printing, to manufacture the notes. More bank notes are set to follow the new fiver soon. The Brits are bang on trend – polymer money is already being used in a number of countries such as Canada, Australia, Vietnam and Romania. ◼

INDUSTRIAL PRINTING FROM THE EARLIEST DAYS

Antwerp in Belgium is well worth a visit, and all the more so since October. The freshly renovated Plantin-Moretus printing museum is welcoming visitors following four months of refurbishment. The main attraction is still the only remaining letterpress print shop from the Renaissance. It offers an impressive illustration of the advent of industrial letterpress printing in the 16th century. The museum was designated a UNESCO World Heritage site in 2005. As well as the world's oldest printing presses, it also houses unique copperplate engravings by Renaissance artists. ◼
www.museumplantinmoretus.be

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In 2020, companies around the world will be paying out billions of dollars for outdoor and poster advertising. Spending will grow at an annual rate of 4 percent. Posters are an attractive option for outdoor advertising because they increasingly promote interaction with the public via barcodes or app-based photography. What's more, posters displayed at railway stations and in inner cities reach consumers from all target groups.

www.technavio.com

KICK-OFF

A SERVICE UPGRADE FOR THE EYES

Combining the real and virtual worlds, augmented reality offers huge potential for services. Heidelberg is harnessing this potential – among other things with a little pair of data glasses that are a big help for far more than just maintenance work.

By Klaus Gruber

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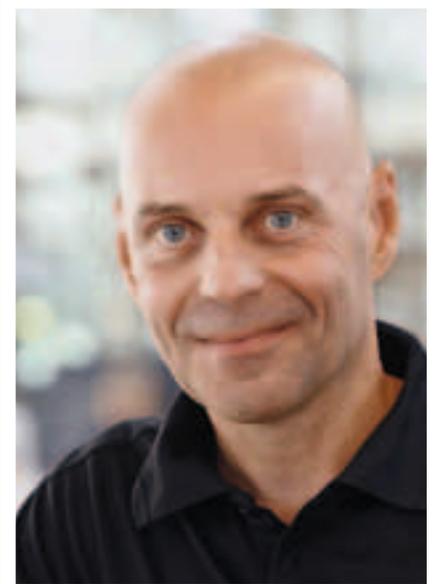
ugmented reality (AR) has long been part and parcel of the viewing experience for soccer fans. The distance to goal displayed when a free kick is given is simply additional information provided by a computer. AR applications are not merely opening up new possibilities in entertainment, though. They can also be useful and make life easier in the industrial environment. Heidelberg is working on this with a startup company from nearby Mannheim, Germany. The company founders all come from the German Research Center for Artificial Intelligence in Kaiserslautern, which is less than a two-hour drive away. The collaboration is aimed at developing various possible applications and uses for service engineers and customers worldwide.

One particularly exciting project involves data glasses that can help the wearer with repair or maintenance tasks. The glasses use colored highlighting and arrows to interactively guide users through all the necessary steps. They automatically recognize all the different machine types and components. For example, a quick glance at the small display tells users exactly where on the machine the part is located. Arrows then show which screws need to be loosened. Users can also see whether or not they have done everything correctly. If they have, a verbal command takes them to the next step. This finally makes the tedious process of leafing through operating instructions a thing of the past.

There is also a safety aspect, because a screen is simply displayed before the user's eyes. This means that tomorrow's engineers will always be able to keep their hands free and an eye on their surroundings. Another ingenious feature is that the glasses can record all the visual information as a video. This is creating a growing number of edited and digitally enhanced interactive AR videos for every conceivable type of servicing and maintenance work.

Having the required AR assembly instructions appear before your eyes in a matter of seconds at any print shop in the world is thus no longer a pipe dream. It will also be possible to connect live to a Heidelberg service expert to obtain on-the-spot assistance from many miles away in an instant. Many nightshift machine operator will no doubt be very glad to have someone looking over their shoulder to help.

Heidelberg is already using some of these applications in its training activities. Customers, too, will soon also be able to benefit from the data glasses for maintenance purposes. Many of them were very excited about this development at drupa. Heidelberg is currently using the feedback from the event at the training center in Wiesloch to fine-tune all the functions and delve even deeper into the virtual service world.

From a training development perspective, however, the data glasses look certain to provide strong support for Heidelberg Service and benefit the company's customers across the globe 24/7. Who knows? AR applications may become as routine at print shops as they already are when soccer games are being broadcast. At any rate, Heidelberg has taken the first step toward this. ∎

KLAUS GRUBER is a training developer in Technical Training Development at Heidelberger Druckmaschinen AG.

MORE MAILBOXES IN GERMANY

Despite e-mail, WhatsApp and the like, "real" mailboxes aren't disappearing nearly as quickly as many people think. Deutsche Post has even increased the number of mailboxes in Germany in recent years. There are now 110,000 of these yellow boxes spread across the country – 2,000 more than ten years ago. There are two reasons for this. Firstly, new residential areas are being built in Germany every year and regulations state that sufficient mailboxes must be provided to ensure that no one has to travel more than 1,000 meters to reach one. Secondly, the number of letters being sent is decreasing only slowly. Some 61 million letters, cards, books and advertising/media products are still in transit every day. Although over 80 percent of these are advertising or official items, printed postcards remain popular with people on vacation even in the digital age. So the yellow mailboxes will still be a familiar sight on German streets for some time to come. ∎

A UNIQUE PRODUCT

The Heidelberg Phoenix UV LED direct platesetter is a truly impressive all-rounder. Designed primarily for industrial screen printing, its imaging system can produce printing forms for virtually any process.

S pecial products such as speedometer displays, pens, toothpaste tubes and glasses call for special printing processes. These and many other consumer goods are screen printed with lettering or images – an increasingly important growth market, where Heidelberg is now also offering the full range of its CtP offset printing know-how. Heidelberg has recently launched a solution to produce the necessary printing forms – the Heidelberg Phoenix UV LED direct platesetter.

The platesetter is designed for applications in industrial flatbed and rotary screen printing that can be produced using screen printing plates under Heidelberg's own Gallus Screeny brand, for example. The special feature of the Phoenix is its dual imaging unit. "The system combines two wavelengths into one light beam, enabling total surface and deep curing of UV-reactive screen emulsions," explains Thomas Fischer, CtP product manager. This is vital, particularly for thick printing forms.

The design and imaging system of the Phoenix make it a highly versatile solution. As well as screen printing, it can also produce originals for flexographic, letterpress, pad and offset printing. "The Heidelberg Phoenix is thus an attractive option for print shops that use various printing processes side by side, but particularly for printing in the manufacturing industry," explains Fischer. "Complex packaging, wood-based applications, plastic tubes and, first and foremost, glasses require special printing forms that can all be imaged using the Phoenix."

The Phoenix can be ordered in a number of configurations depending on the area of application. Customers can choose between a model with an imaging format of max. 23.62 × 31.50 inches (600 × 800 mm) and a model with max. 31.50 × 39.37 inches (800 × 1,000 mm). Heidelberg also offers the three speed levels Eco, Standard and Fast. Several models have already been shipped since the premiere at drupa 2016. Starting with Central Europe, the Phoenix will be available throughout the world in the coming months. ∎

TWO SIZES
600 × 800 mm and
800 × 1,000 mm

THREE SPEEDS
Eco, Standard, Fast.

385 NM UND 405 NM
Two wavelengths in one beam ensure optimum surface and deep curing.

NUMEROUS APPLICATIONS
Screen, pad, flexographic, offset, letterpress printing.

HEIDELBERG
UP TO DATE

INTEGRATED COMPREHENSIVE PACKAGE – THE SPEEDMASTER SX EDITION

Speedmaster SX 52/Speedmaster SX 74. Heidelberg is streamlining its press portfolio in the small and medium formats. Following the launch of the Speedmaster SX 52 and SX 74 in 2012, the Speedmaster SX 52 Edition and Speedmaster SX 74 Edition are replacing the last SM series. The SX series is part of Heidelberg's focus on the small and medium formats on particularly productive, customizable presses that can be easily operated using Prinect Press Center 2 and integrated into the Prinect workflow. With the Speedmaster SX 52 Edition and SX 74 Edition, Heidelberg is also offering selected models with needs-based features at an attractive price. The preconfigured models include, among other equipment, an anti-static device and non-stop delivery. The special models are available with immediate effect. ◼

heidelberg.com/SX52
heidelberg.com/SX74

ADDED VALUE IN 3D

View2Connect. The new View2Connect software suite uses 3D CAD data to improve corporate processes from development right through to service. To do this, the platform solution processes complex 3D data and displays it for the entire value-added chain between purchasing, production, assembly and service. This makes PLM processes much leaner, and this is further enhanced by the ability to integrate the software with ERP systems. New opportunities are also opened up for collaboration between individual departments. This has been recognized, among others, by the judges for the Digital Leader Award 2016, who crowned View2Connect the winner in the "Spark Collaboration" category. View2Connect is aimed at Heidelberg customers and at companies from the mechanical engineering and automotive industries. ◼

OUTSTANDING TECHNOLOGY

Omnifire 250/Stahlfolder TH 82-P. The Printing Industries of America (PIA) association has honored the Omnifire 250 4D digital printing system and Stahlfolder TH 82-P folding machine with the InterTech Technology Award 2016. This year, Heidelberg has thus won not just one but two out of a total of six awards presented for outstanding innovative products. The panel of judges hailed the Omnifire 250 as a breakthrough in digital decoration of three-dimensional objects. This system makes it possible to transform mass-produced consumer goods into customized individual items in next to no time. The judges described the Stahlfolder TH 82-P folding machine as an engineering masterpiece that has taken the principle of shingled sheet feeding from the PFX feeder honored in 2012 and applied it as shingled folding to all the folding machine's stations. PIA presented the InterTech Technology Award for the first time in 1978. Since then, Heidelberg has won this prestigious accolade a total of 36 times. ◼
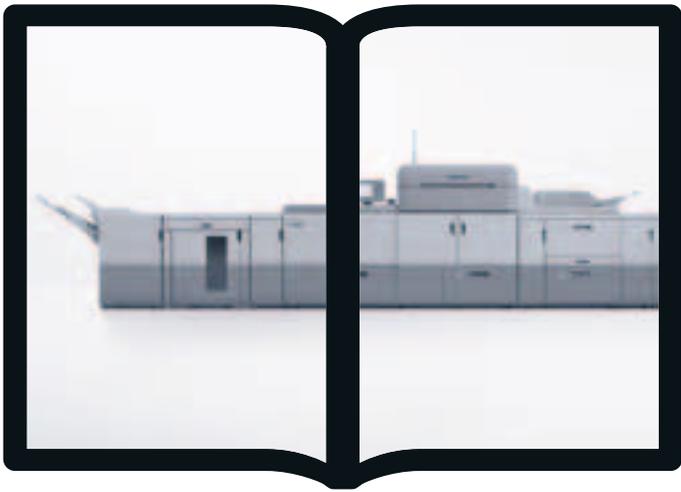
CEWE CHOOSES VERSAFIRE

Versafire CP. CEWE, Europe's largest photographic service provider, has opted to buy three Versafire CP digital printing systems to produce customized photobooks and calendars. Key to the investment were factors such as quality, reliability, flexibility and seamless workflow integration, which CEWE was able to successfully put to the test in the busy festive period of 2015. The digital printing systems will be used at the European sites Munich, Montpellier and Warwick. As part of the collaboration, Heidelberg has also developed a flexible concept for CEWE that balances out the European market leader's seasonal fluctuations. In 2015, CEWE achieved sales of around 620 million U.S. dollars (around 555 million euros). The company has a workforce of approximately 3,200 and digital and offset production operations at 13 sites throughout Europe. ◼

heidelberg.com/versafire

AT THE LIMIT

"We're committed to working with the best performing technology on the market at any given time. That's our motto."

CHRISTIAN AUMÜLLER
MANAGING DIRECTOR OF AUMÜLLER
DRUCK GMBH & CO. KG, GERMANY

PAGE 12

IT'S ALL ABOUT THE OUTPUT

State-of-the-art equipment, intelligent processes and committed employees make Aumüller Druck in Regensburg, Germany, an almost undisputed master of industrial commercial printing. And that's without taking into account the two masterminds at the top, who ensure the print shop's success.

Managing directors with vision – brothers Stefan and Christian Aumüller (from left).

Time and again, print media experts from Germany and abroad come to the city to see a sight of a rather different kind – the family business Aumüller Druck in the neighboring Haslbach industrial park. This is because word has spread about how brothers Christian and Stefan Aumüller and their 150 employees have perfected the art of industrial sheetfed offset printing for customers such as BMW, Adidas, Audi and online print shop Flyeralarm – and visitors are curious to find out more.

Space for productivity

So what's the recipe for success devised by the two brothers, who have shared an office since joining the family business 30 years ago?

Partly it's for that reason. "It very quickly became apparent that working together in one room has a great many positive effects, as each of us knows what the other is working on at any given moment," explains Christian Aumüller, who with his brother Stefan is now the fourth generation to head the company, founded in 1888.

A second success factor, which both mention, is rather unusual – space. When the company outgrew the original building in the old town, the brothers' father, Georg Aumüller, moved into a meticulously designed new building in 1972 that was gradually extended to some 130,000 square feet (12,000 sq. m) in a process that lasted till 2011. "The relocation and expansion were key building blocks for our industrial production and continue to be so, as space is the prerequisite for productivity," explains Stefan. "I can't simply buy a press with double the output without having space for double the amount of paper and print products."

Sophisticated press concept

Productivity is the watchword at Aumüller – "our goal," as the brothers say in unison, is not to optimize costs but output.

This is made possible not only by the fully digitized production control using Prinect, for example, but also by a smart press concept for end-to-end production in the 70×100 format. Six perfecting presses with 50 printing ›

regensburg is booming, with the historic center of this southern German city having been designated a UNESCO World Heritage site in 2006. Since then, even more tourists have been winding their way through the picturesque streets to lap up the city's medieval architecture.

Regensburg, which is often referred to as "Italy's most northern city," attracts between two and three million visitors a year. But not all of them are there just for sightseeing.
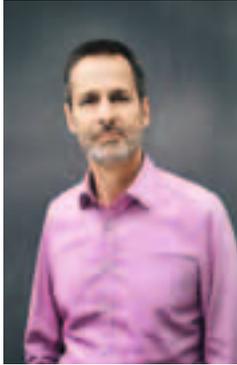
"INDUSTRIAL FOR US MEANS HAVING EVERY- THING IN DUPLICATE – IN OTHER WORDS, ALWAYS PRESSES OF THE SAME GENERATION."

STEFAN AUMÜLLER
MANAGING DIRECTOR OF AUMÜLLER
DRUCK GMBH & CO. KG
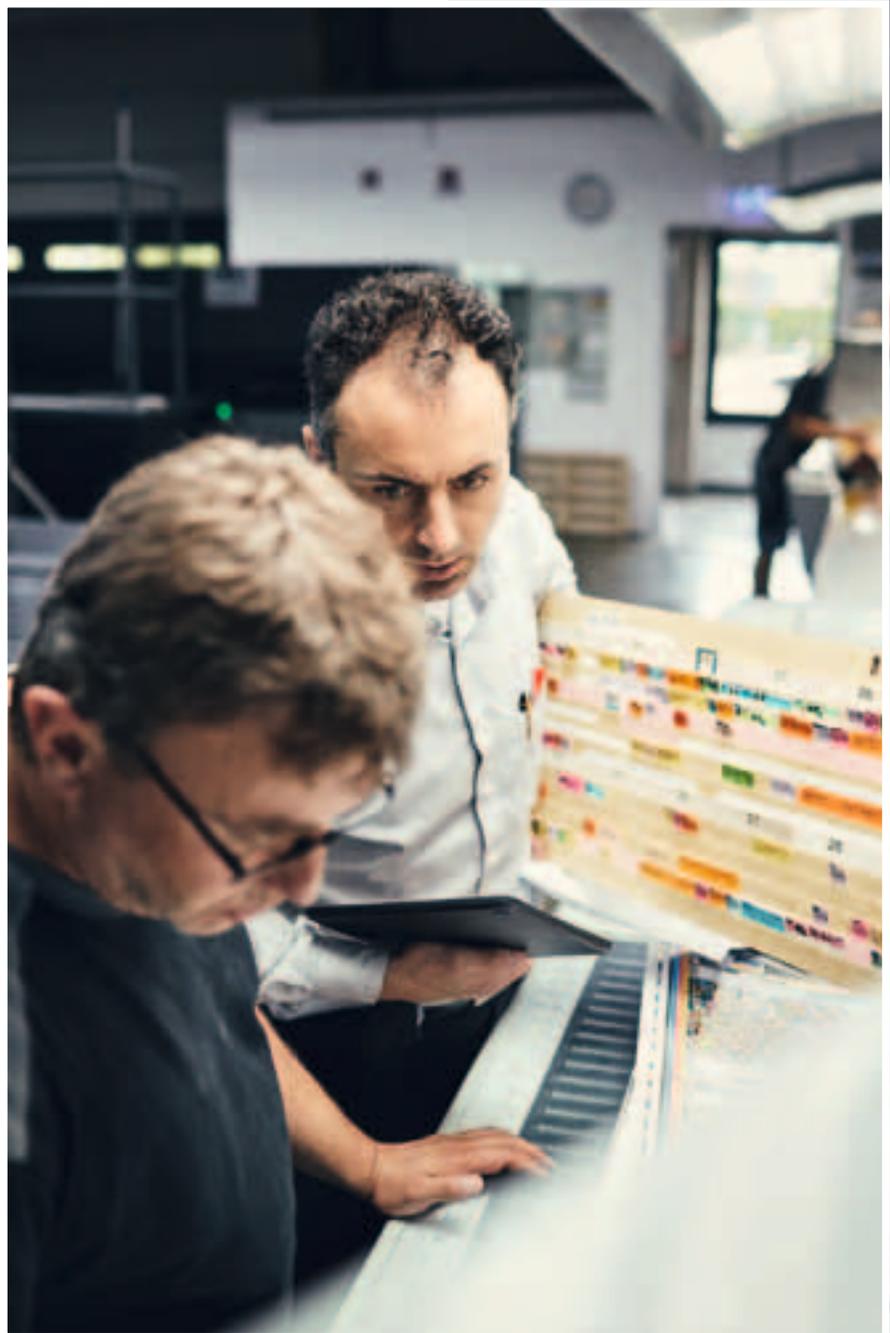
Maximum performance and delivery capability
are two key success factors for Aumüller Druck.
Others include a spare parts store created
in conjunction with Heidelberg that enables repairs
to be carried out with no loss of time.

> units are arranged together in the pressroom. They are all Speedmaster presses in the Peak Performance class with eight and 10 printing units, including a latest-generation Speedmaster XL 106. To cut down on waste and ensure maximum color stability on the fly, each press is equipped with Prinect Inpress Control. The simultaneous AutoPlate XL plate changer system ensures fast makeready.

Both features are important to Aumüller. Day-to-day operations are shaped by frequent job changes, with the company imaging around 350,000 plates a year. Added to this is the fact that virtually no proofs are used nowadays. Instead, printing is usually performed in line with the German process standard for offset printing (PSO). "This requires absolutely reliable control, and Inpress Control is essential to do this," explains Christian.

However, for the Heidelberg field tester and development partner, industrial printing means more than just using state-of-the-art equipment. "For us, it also means having everything in duplicate – in other words, always presses of the same generation," explains Stefan. This has numerous benefits – Aumüller gains enormous advantages in terms of makeready times, as large numbers of jobs can be shared out among preconfigured presses. "However, first and foremost we ensure we can supply our customers at any time."

If productivity gains are available, the company replaces the presses as quickly as possible. For example, between 2006 and 2008, all the Speedmaster SM presses were replaced by Speedmaster XL machines. "We're committed to working with the best performing technology on the market at any given time," says Christian: "That's our motto." This is also shown by the corresponding investment rate of 15 percent – three times higher than the average.

Intelligent error elimination

As important as productivity gains are for Aumüller, they don't exactly make print shop management easy. "As we increase productivity and employee numbers each year, we also need to generate more output each year," says Stefan. "We have a duty to grow."

In the past, automotive quality leaders such as BMW and Audi in particular ensured the necessary growth at Aumüller. BMW has been an Aumüller customer for over 60 years, while the print shop has supplier number 89 at Audi – today's well over 100,000 suppliers are given a number. Aumüller primarily produces catalogs and operating instructions ›

Aumüller uses six perfecting presses in the Peak Performance class for its production operations. These include a latest-generation Speedmaster XL 106.

❯ for the two premium car manufacturers. In particular when models are changed or new ones are launched, these print products call for absolute maximum performance from man, machine and organization. In February 2016 alone, Aumüller printed over 1.4 million sheets on all six presses using 1,344 imaged plates – and all on a single day!

Operating instructions in particular involve enormous logistical challenges. "Within just a few weeks, we sometimes have to produce a total of 400 versions of operating instructions for different models in 26 languages and deliver them to manufacturers' production plants in Europe," explains Stefan. "No errors are allowed in this process, even if we have a good 1,000 pallets here that are confusingly similar."

To minimize the error rate, Aumüller has implemented its own barcode system that stores the real-time storage space for each pallet in a database. To maximize reliability in production, print sheets are provided with barcodes that can be scanned. The system sounds an alarm immediately, if parts of a sheet are missing, the sequence isn't correct, or a sheet with a different language has been inserted.

A new growth customer – Flyeralarm
As well as BMW and Audi, Adidas has also been part of the company's customer base for the last 40 years, with Aumüller Druck primarily producing dealer catalogs for the sporting goods manufacturer. A more recent milestone in the company's success story is the partnership it has enjoyed with online print shop Flyeralarm since 2008. "Our very productive collaboration is a gentlemen's agreement based on mutual trust," explains Christian confidently.

The process for placing orders is clearly defined. Aumüller produces all the adhesive binding and hard covers for Flyeralarm for runs of 200 and upwards. As soon as Flyeralarm has sent the data, it is checked at Aumüller. Aumüller staff clarify any problems directly with the end customers. The ordered goods are then produced and sent to the customer directly. "Initially, the industry viewed our partnership with Flyeralarm very critically. It was felt that BMW printer Aumüller was now doing cheap junk," says Stefan. "But most people soon envied us because the work actually involves large numbers of high-quality product catalogs and we're part of an innovative market sector that has great potential and ensures good capacity utilization." ❯
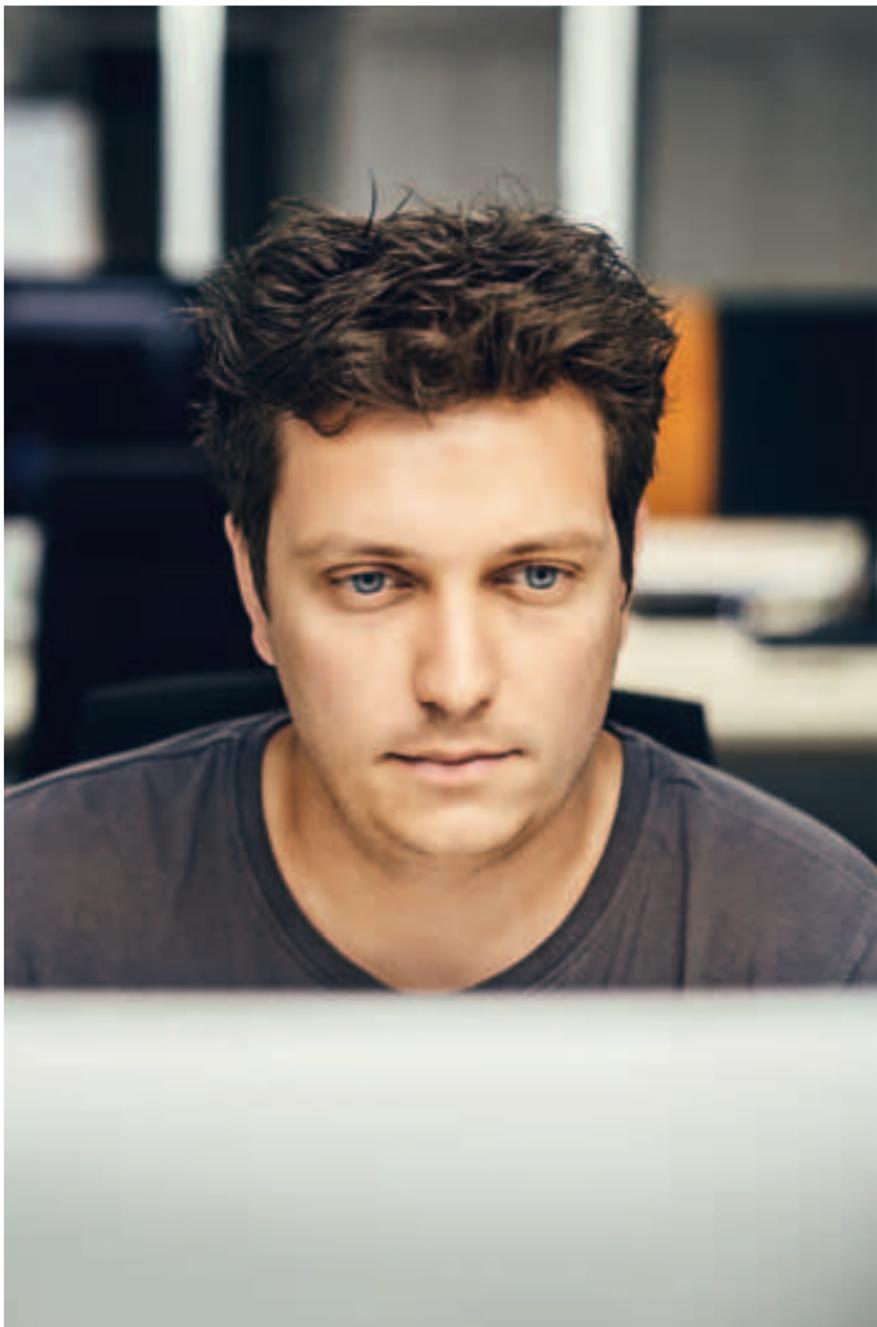
"WITHIN JUST WEEKS, WE SOMETIMES HAVE TO PRODUCE A TOTAL OF 400 VERSIONS OF OPERATING INSTRUCTIONS FOR DIFFERENT CAR MODELS IN 26 LANGUAGES AND DELIVER THEM TO MANUFACTURERS' PRODUCTION PLANTS IN EUROPE."

STEFAN AND CHRISTIAN AUMÜLLER
MANAGING DIRECTORS OF
AUMÜLLER DRUCK GMBH & CO. KG

Left: The busts of father Georg Aumüller and great-grand-father Georg Aumüller (from left), who were the first and third generation to head the company, founded in 1888.
Above: Since 2008, Aumüller Druck has been working closely with online print shop Flyeralarm.

"OF THE 150 EMPLOYEES, 125 ARE EMPLOYED IN PRODUCTION. THIS, TOO, SHOWS WE'RE A TRUE PRODUCTION COMPANY."

CHRISTIAN AUMÜLLER
MANAGING DIRECTOR OF
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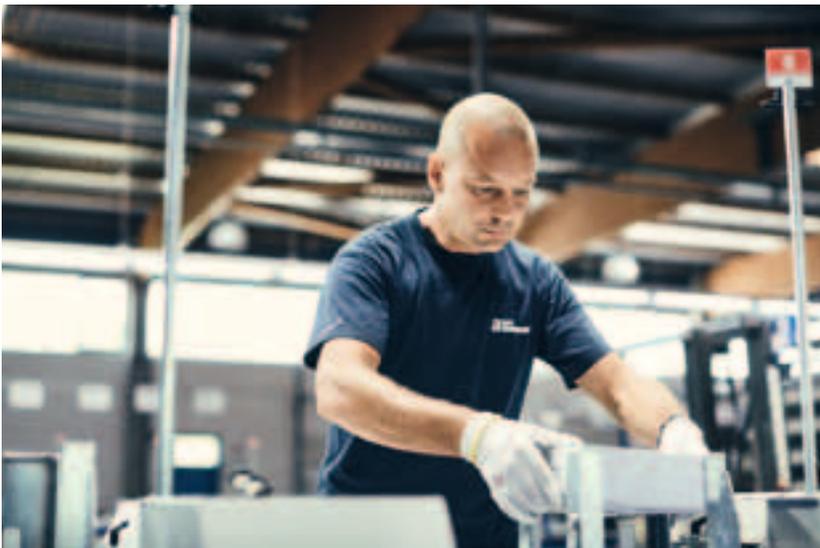
Error-free production – barcodes are scanned on the print sheets and show whether parts of a sheet are missing, the sequence isn't correct or a sheet with the wrong language has been inserted.

› **Looking ahead**

Aumüller is also innovative in management, as the lean production processes go hand in hand with lean management. "We deliberately avoid interfaces between departments and this gives us extremely short lines of communication," explains Stefan. All administrative staff are thus also buyers and material planners, while employees in prepress act as data checkers, impositioners and plate makers and complete jobs right through to the print interface, where it isn't the head of department but the printer who okays the sheet. Of the 150 employees, 125 are employed in production. "This, too, shows we're a true production company," says Christian.

Along with school and integration prizes and scholarships for studying abroad, the company also plays an active role in corporate social responsibility in Regensburg. A further special feature at Aumüller in Regensburg is that about 60 percent of employees are silent partners, who thus share directly in the company's success. This is matched by the willingness to take on a great deal of responsibility. "Employees set the pace at our company," says Stefan. "This works very well because everyone puts their heart and soul into their work and shows a real sense of sportsmanship."

The company certainly sees itself well positioned for the future, even though the brothers assume the commercial market will shrink by 2 to 3 percent a year. That's one of the main reasons why the pair have been focusing intensively on topics such as lean management and Industry 4.0 for a number of years. With a holding in the Peschke print shop since 2014, Aumüller is also represented directly on the key Munich market. And the two brothers have something else going for them with their responsible approach to business – their down-to-earth lifestyles. "Expensive cars or villas in Tuscany are simply not so important to us." ∎

ON THE WAY TO A SMART PRINT SHOP

The new Push to Stop philosophy at Heidelberg represents a paradigm shift in the company's holistic view of print shop processes in a digitally integrated environment. Its aim is to turn printing businesses into print shops that use smart, intelligently organized production environments to achieve an unprecedented level of performance.
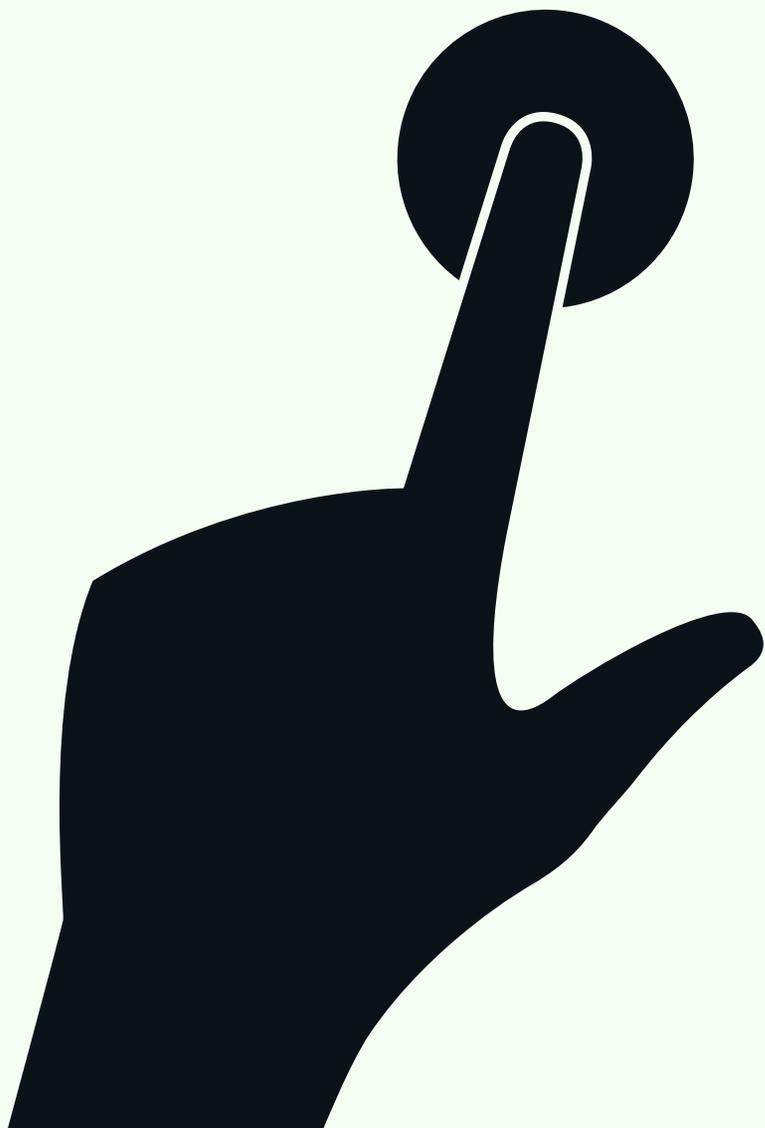
a departure from the norm – a radical change like Push to Stop – is sometimes necessary to open up new prospects for the future. Heidelberg is using this philosophy to redefine the rules of production in offset printing. To date, operators have had to initiate many parts of the production process manually. In the future, however, they will only need to intervene in the automated process chain as and when required, because intelligent networking and automation will enable presses to organize and execute the printing process autonomously. This makes Push to Stop a milestone on the road to autonomous print production. "It's a paradigm shift that throws the door wide open to higher net productivity," says Rainer Wolf, Head of Product Management Sheetfed.

From automated to smart production

Many offset businesses, even industrial-scale ones, do not even come close to maximizing overall equipment effectiveness (OEE). However, further increasing OEE is an important factor in enjoying future success with efficient production and completing ever shorter job runs profitably. A market survey conducted by Heidelberg revealed some surprising results, including an average OEE of just 25 percent. This figure highlights the dilemma that many print shops are faced with. Even if presses operate ever faster and ever more time is saved during makeready processes such as plate changes, the effectiveness of the production process does not improve as rapidly as would be expected.

Why is that? As Wolf explains, the effectiveness of print production still depends not only on perfectly coordinated processes, but also on operator efficiency. With up to ten jobs per hour on a single press, operators are already at their limits in terms of workload and speed. As a result, part of the machine's performance potential is wasted while it is waiting for operator input. "Further automation would therefore only lengthen the gaps between steps, so with Push to Stop we've turned the entire production process on its head and used digital technologies to make it smarter and easier for operators. They're now able to keep up with the productivity of the press and make full use of its potential," he continues.

Navigated and autonomous printing

The foundation for this is the Prinect workflow, which Heidelberg has turned into an even more intelligent end-to-end system with Push to Stop, because presses can now process and use even more information. Assistance systems read the information from the workflow and relieve the pressure on operators by organizing, performing or visualizing tasks independently. The centerpiece of the press is the new Prinect Press Center XL 2 press control station. It is the interface that enables highly productive cooperation between man and machine and turns operators into process managers for navigated and autonomous printing alike. In both cases, the patented Intellistart 2 software calculates the shortest route between makeready processes. In the case of navigated printing, it shows operators the best way to get from one job to the next. It also initiates makeready processes, which

"WITH A HIGH LEVEL OF AUTOMATION AND STANDARDIZED JOBS, PUSH TO STOP EVEN SUPPORTS FULLY AUTONOMOUS PRINTING."

RAINER WOLF
Head of Product Management Sheetfed
Heidelberger Druckmaschinen AG

heidelberg.com

now run independently, indicating which manual activities are required and when. In the case of autonomous printing, on the other hand, the press completes production processes entirely independently.

Thanks to the new Wallscreen XL, operators always benefit from complete control and transparency regarding the production workflow – even with frequent job changes. They see in real time what the press is doing. In addition to this, the Intelliguide feature displays time bars that show which makeready processes are currently in progress, how long they will take and when an operator needs to intervene – to change the ink, for example. Operators can also change the job order in the job list using drag & drop. In this way, up to 30 jobs can be prepared and completed in an automated process for faster, more flexible operation with shorter waiting times.

Target of doubling productivity in ten years

With a high level of automation and standardized jobs, Push to Stop even supports fully autonomous printing based on the Prinect workflow, Prinect Press Center XL 2, Wallscreen XL, Intellistart 2 and the Prinect Inpress Control 2 inline spectral measuring system. By comparing target and actual ink values, the Quality Assist software recognizes when the defined quality parameters are achieved and automatically starts production of OK sheets without human intervention.

The philosophy behind Push to Stop shows the direction in which offset printing is heading – toward industrial or even autonomous production based on digital processes. "Digitization combines intelligent networking with a smart man-machine interface to open up completely new possibilities for improving cost-efficiency and competitiveness," asserts Wolf. A small number of printing businesses are already achieving OEE values of 50 percent and proving that this is within the realms of possibility. That makes Wolf all the more confident about the objective for Heidelberg. "We're looking to help our customers double their productivity within the next ten years," he stresses. ∎

#SmartPrintShop

THE NEW PEAK PERFORMANCE CLASS

i

t's no secret that profits in offset printing are no longer generated primarily during the production run. Instead, they increasingly depend on fast changeovers and an efficient overall process. This can also be seen in the development of productivity in print businesses, which has virtually doubled in the last 10 years. Whereas the annual print output of a press 10 years ago was between 15 and 20 million sheets, it is now 30-40 million. Yet the number of individual jobs has multiplied due to ever shrinking runs per job. This makes every order a race to save time and money and thus calls for innovative solutions to generate significant gains in net productivity. This is precisely where Heidelberg comes in, with the new-generation Speedmaster XL 106.

New functions such as intelligent assistance systems and automated processes running in parallel are taking industrial print production to unprecedented performance levels. The move into automated printing is being aided by various automation modules. These include Hycolor Multidrive, a function that allows inking units to be cleaned in parallel with plate changes and washing of blankets and impression cylinders. A further example is AutoPlate Coating Pro for fully automatic coating plate changes. Other modules have also increased speed and perfor-

With the new-generation Speedmaster XL 106, Heidelberg is catapulting offset printing to unprecedented performance levels. The flagship press in the Peak Performance class symbolizes the future of industrial offset printing – this highly automated press is easy to use and, thanks to intelligently networked processes, controls itself automatically, all the way up to fully autonomous printing.

mance. For instance, AutoPlate XL 2 completes simultaneous plate changing even faster so that blankets and impression cylinders can be washed at the same time. The Prinect Inpress Control 2 spectral inline color measuring system also cuts measuring times at the start of a job and controls color and register even more intelligently, resulting in 10 to 20 percent less setup waste.

Smart press, easy to use

To ensure operators can keep up with the press's rapid multitasking and to enable print shops to really harness the enormous potential to maximize productivity, Heidelberg is undertaking a paradigm shift that involves moving from a "Push to Start" to a "Push to Stop" philosophy. Its vision is one of processes that will not need to be started in the future but will instead start autonomously, monitoring themselves and only being actively interrupted if this is necessary. Operators are actively guided through processes by intelligent assistance systems. This will ensure fully automated job changes for the first time in the history of offset printing – from the final OK sheet of one run to the first OK sheet of the next and the start of production.

The centerpiece of the new-generation Speedmaster is the new Prinect Press Center XL 2 high-performance control station in combination with the Wallscreen XL and Intellistart 2. The patented Intellistart 2 software optimizes job changes, initiates automatic makeready processes autonomously and gives operators clear indications of when they will need to intervene. It also calculates the shortest makeready process when changing jobs and navigates operators through the fastest route from one OK sheet to the next. In the case of standardized jobs, the system can even initiate OK sheet production automatically, provided the Speedmaster is equipped with the Prinect Inpress Control 2 spectral inline color measuring system for quality assurance. On the Wallscreen XL, operators have an overview of all processes and complete control over print production. The new control station also integrates the Speedmaster XL 106 directly into the Prinect print shop workflow via Prinect Pressroom Manager. This delivers the ultimate in data management, up-to-date production data and informative reports. The first field tests show that the Speedmaster XL 106 boosts net productivity by 20 percent and thus once again sets new standards in the Peak Performance class. ∎

HYCOLOR MULTIDRIVE
SIGNIFICANTLY REDUCED MAKEREADY TIMES WITH HYCOLOR MULTIDRIVE

The new Hycolor Multidrive function makes it possible to power inking and dampening units independently of the main drive at any time using a speed modulation gearbox and a separate direct drive. This enables numerous functions and operating statuses that increase press productivity considerably.

For example, the inking units can be washed while the main drive is used for changing coating plates or washing blankets and impression cylinders. Inking units that are not needed can also be shut down individually. This does not require them to be disconnected – instead they remain linked to the main powertrain at all times. This eliminates the time for coupling and uncoupling, while the drive system remains stable, regardless of the number and type of printing units shut down.

With the new Hycolor Multidrive, it isn't just the inking units that are washed at the same time as plate changing, but also blankets and impression cylinders. This cuts makeready times significantly even for complex job changes, particularly if day-to-day operations are dominated by a large number of ink changes.

PRINECT INPRESS CONTROL 2
THE INTELLIGENT "EYE" FOR INLINE COLOR AND REGISTER CONTROL

The spectrophotometric inline color measurement system is a particularly effective solution for industrial printers of short runs with frequent job changes who want to deliver quick, cost-effective results of the highest quality. Compared to its predecessor, Prinect Inpress Control 2 reduces paper waste during setup by a further 10 to 20 percent while also driving up productivity.

This is thanks to improved measuring and control algorithms that ensure more intelligent color control and halve the time for print control strip measurement at the start of a job. The system also covers a wider range of applications. For example, it is now also possible to measure metallized and transparent substrates with opaque white under the control strip on the fly – this is particularly important in label and packaging printing.

Another new feature is automated measurement of register during setup and dot gain. This eliminates the need for manual intervention, thus reducing operator workload, and enhances process reliability, as quality measurement can no longer be overlooked. All the important measurement data is logged and saved and is thus available for evaluations in the Analyze Point reporting tool of Prinect Pressroom Manager.

INTELLISTART 2
STAYING ONE STEP AHEAD
WITH INTELLISTART 2

The unique Intellistart 2 software with its many patented functions optimizes job changes, initiates automatic makeready processes autonomously and gives operators clear indications of when they will need to intervene. To ensure operators have a complete picture, Intellistart 2 has been integrated into the new Wallscreen XL.

Up to 30 jobs can now be prepared and processed automatically, which means greater flexibility and less downtime. To ensure an optimum overview of all processes during job changes, Intellistart 2 is divided into four areas.

Jobs approved for a press are listed in the user-friendly job queue and can be moved using drag & drop. They are processed by Intellistart 2 automatically in the defined sequence.

By clicking a job in the job queue, the process view shows which processes Intellistart 2 suggests for switching from the previously planned job to the next.

The Intelliguide timebar display shows in real time which makeready processes are currently in progress, how much longer they will take and when an operator needs to intervene manually – to change the ink, for example. To ensure completely autonomous production, automated decision-making at the start of production is also required. This is performed by the Quality Assist software function. Once all the necessary makeready processes have been carried out, Intellistart 2 launches production. Quality Assist uses the measurement values from the Prinect Inpress Control 2 inline color measuring system to detect when sheets have achieved the defined quality parameters and automatically starts production of OK sheets.

THE A-TEAM FOR
WHEN THE GOING GETS TOUGH

The Heidelberg application specialists step in when everyone else has run
out of ideas. The five-strong team is available around the globe to
solve particularly challenging problems. In this interview, Winfried Wagner,
the head of Application Specialist Service, talks about particular
requests, challenges and successes.

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r. Wagner, you've been in charge of the Application Specialist Service at Heidelberg since 2009. Is there any particular assignment that sticks in your memory?

One springs to mind immediately. We were asked to reduce the alcohol content to zero in a Speedmaster CD 102 built in 1998. It initially looked like a hopeless case. The press was in poor condition and the print shop owner was reluctant to spend much on it. Despite that, we found a solution.

What did you do?

We modified the dampening solution concentrate. That enabled us to reduce the alcohol content from 15 to 4.5 percent in a single day and gave the customer over three months of stable, problem-free printing. He then wanted a further reduction, so we recommended installing new application rollers. He's now been printing with no alcohol at all for nearly a year.

What was especially important during this assignment?

We needed to get the press operator on board from the outset. After all, modifying the dampening solution also changes the water's viscosity, which means the operator has to run the press at far higher speeds. Many people then think they're using much more water. That's not the case, though, and we needed to convince above all the press operator of this. Open communication is a key part of our work, because it's the only thing that can bring about truly sustainable solutions.

In addition to solving problems, your team also shows the way forward and makes applications that initially appear impossible at first sight.

That's right, we put our customers' ideas into practice. Print shops repeatedly receive requests for applications they don't specialize in. We help them to create the technical conditions required to get the job done – and also to select appropriate consumables. We draw on all our know-how for this. ›

JOCHEN GUTENSOHN

Training:
Application engineer / print instructor

Areas covered:
Europe, Eastern Europe, South America

Special skills:
UV, LE UV, LED UV, packaging and commercial applications

GIUSEPPE LANZA

Training:
Application engineer / print instructor

Areas covered:
Central and Southern Europe, Asia, China

Special skills:
UV, LE UV, LED UV, packaging and commercial applications, Print Color Management, press-room chemicals

PROFILE OF THE APPLICATION SPECIALISTS

ALL-ROUND ADVISORS

Heidelberg application specialists cover the entire range of consumables. They are coating professionals, engineers and press specialists. The team's wide-ranging knowledge means they are able to provide print shops with comprehensive advice.

PORTFOLIO PROFESSIONALS

The application specialists work with customers to develop new portfolios for print shops. They organize customer demonstrations to present new coatings and products.

INTERFACE

The team also acts as an interface between the customer and the companies supplying its consumables, including the Heidelberg research and development department in the case of Saphira. In this role, for example, it forwards questions from customers to the manufacturer, which helps solve problems.

KNOWLEDGE PROVIDER

The team works around the globe and passes on its knowledge to engineers and sales staff in the various regions. The aim is to improve the know-how in the various countries and deliver globally standardized application engineering quality.

❭ *Can you elaborate?*

For example, we help introduce new applications with the Saphira Performance Kit Primer/UV, which makes it possible to apply a UV coating combined with a primer and conventional inks in a single pass. If the parameters aren't quite right during this process, the results are unsatisfactory. We also help if print shops don't get new applications working properly. We scrutinize all possible influencing factors – such as machine settings, the consumables used, the way these are combined and boundary conditions such as the room climate or operating errors. A great deal of experience and very specific know-how are needed to identify the error or errors from all these interacting factors.

Do you specifically advise your customers to switch to Saphira products?

Poor-quality print products can definitely be caused by consumables that are unsuitable or used in the wrong combination. Where it makes sense, we use Saphira products on site as a reference because we know these best and can quickly identify whether the errors are related to the consumables used. If the result is fine with Saphira and the problem is solved, we certainly advise print shops to switch. Normally, though, something else is causing the problems.

Such as?

Application errors in most cases. For example, simply using the wrong coatings or not adjusting the chambered blades correctly. The paper used is often too thin. In other cases, the layer of coating applied is too thin or there are problems due to ink buildup on the coating blanket. This is caused by using too much ink and applying insufficient coating. The ink then penetrates through the coating and is deposited on the blanket.

What do you do if you're unable to solve a problem straight away?

We use the application expert network to share our know-how with colleagues worldwide. We're also in regular contact with engineers. And if we can't solve a problem immediately, we can test complex applications at the Heidelberg Print Media Centers (PMC) and devise solutions. That's a big advantage.

Do you have a structured method for when you're with customers?

Each customer and each case is different. We constantly need to adapt to new circumstances. You gradually get used to this. My job is to deploy my team so as to make the best possible use of their strengths and knowledge.

Your team has five members. How do you work together?

We're constantly on the move and working all over the world, but we're still in regular contact by phone and e-mail. That's very important to me because it means everyone is always up to date. We also get together for regular meetings in Heidelberg. All the team members have a technical background and each of us has different specializations, so we complement each other very well.

Where will you be heading next and what do you expect to find there.

I'm flying to a customer in Thailand the day after tomorrow where we're testing a new coating that achieves fantastic gloss results if used correctly. We're going to be helping with this and I'm already looking forward to it. ∎

WINFRIED WAGNER
Head of Heidelberg Application Specialists

KAI-MICHAEL BOEHM

Training:
Application engineer / print instructor

Areas covered:
Central and Southern Europe, Russia, South Africa

Special skills:
UV, packaging and commercial applications,
support for key accounts

UDO SCHNEIDER

Training:
Application engineer / print instructor

Areas covered:
Europe, United States, Canada

Special skills:
Pressroom chemicals, packaging and commer-
cial applications, Print Color Management

TO PERFECTION

"We don't tolerate any
behavior that harms
our company. We keep
our word, tell the truth
and don't dupe our
customers."

KRISHNAMOORTHI (RAVI) RAVINDRAN
OWNER AND CEO OF PRINTCARE PLC,
SRI LANKA

PAGE 26

TEA TIME

Honesty and trust are the cornerstones of success at Printcare PLC in Sri Lanka – something that is valued by employees, shareholders and customers alike.

LEAVES THAT MEAN THE WORLD

Tea was discovered by the Chinese Emperor Shennong 5,000 years ago, when the wind blew tea leaves into boiling water. Tea came to the United States through the Dutch. And the Portuguese claim that Jasper de Cruz, a Jesuit, introduced it to Europe in 1560.

More tea is drunk worldwide than any other beverage except water. Sri Lanka is one of the world's five largest producers of tea. Producing over 340,000 metric tons in 2014, virtually all of which was exported. Sri Lanka's plantations were devoted almost exclusively to coffee up till the 1860s. Only when these were almost entirely destroyed by pests did a Scotsman start buying up some fallow land to plant tea and because the plants flourished in the relatively cool but moist highlands, "green gold" quickly became a big seller and the country's main source of income.

All the tea is harvested manually. The women and men working in the fields pick over 12 kilos of leaves each day on average – enough to produce around two kilos of the finished product.
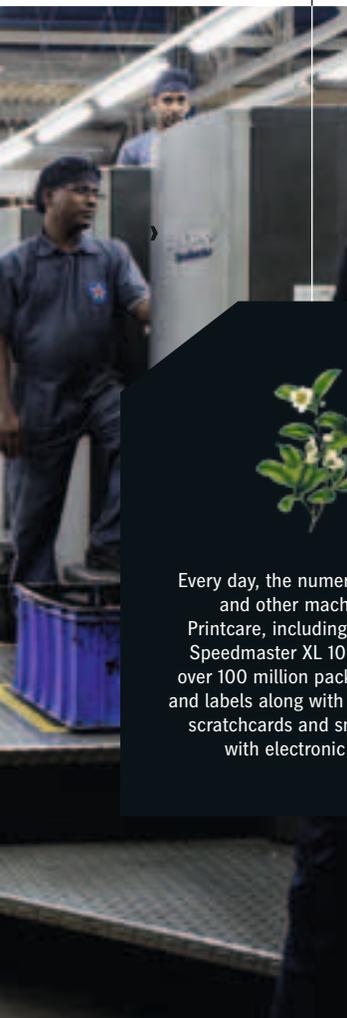
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f you could simply print them, Krishnamoorthi (Ravi) Ravindran would probably be a global leader in fortune cookie production, because some of the things he says sound like the pearls of wisdom you find in fortune cookies – with a bit of luck that is. "Live each day as if it were your last but plan ahead assuming you're going to live to be 100" and "If things are to be good for us, they should also be good for the people around us" are just two examples.

Ravi doesn't simply pay lip service to such phrases, however. He lives and acts by them. They have been his mantra. For over 35 years, his company's success has been based on his abiding faith in a principled and ethical management style. His more than 650 employees and the community in which the company operates will stand testimony to this.

Loyalty is a given

Whilst its true that personnel costs are lower in Sri Lanka than in the western industrialized nations, Printcare does pay its staff top wages, organizes regular training and genuinely also looks after the welfare of its employees. "Our staff turnover is extremely low. Only a handful of people have ever left us for other companies in our 35-year history," reveals Ravi. Printcare arranges scholarship schemes for the children of its workers, runs its own non-profit supermarket, and helps out on personal issues, whether it's a death in the family, a serious illness or a school admission for a child.

Printcare's social commitment extends beyond the company gates. "Our aim must not only be to make money, but also to ensure that the people around us benefit by our presence." Sustainability also plays a key role in production notwithstanding the increased costs.

Sustainability – a blessing and a curse

"Few printing companies in Sri Lanka bother about sustainability," says Ravi. Measures to protect the environment, recover raw materials and use particularly green printing processes are seemingly unimportant to the company's competitors, but extremely important to Printcare – not just for ethical reasons, but also because it is expected of a company of their reputation and standing.

The additional costs do mean sometimes that Printcare is not competitive in the local market, but overseas is another story. And that's why multinational customers find them so attractive – a relatively lower cost base, world-class quality and adherence to high standards.

Printcare built itself as a supplier to virtually all the world's major tea bag manufacturers. But bearing in mind the risk of too much dependence in one industry, they are now diversified into other forms of packaging, digital media services and security print solutions. Their clientele includes renowned telecom companies and multinationals like Harrods, Hallmark, Target, Unilever, BAT etc.

Rising like a phoenix from the ashes

Back in the mid 1970s, Ravi started to work in the family-owned tea plantation. His family was suddenly left with nothing when almost all the country's tea plantations passed into state ownership virtually overnight. The compensation payments were not based on market prices and the tea plantation owners were left with little of the large tracts of land they had owned.

Ravi's family already had a small print shop at that time. Ravi joined that business and then promptly helped modernize it with two single color Heidelberg offset presses with which he started producing what was needed by the ❯

Every day, the numerous presses and other machines at Printcare, including a six-color Speedmaster XL 106, produce over 100 million packaging items and labels along with phone cards, scratchcards and smart labels with electronic chips.

❯ new five-star hotels that were being built. He also realized very quickly that most of the tea harvested in Sri Lanka was being shipped from his country in wooden chests and repackaged elsewhere and therein he surmised lay an opportunity. He knew that if quality packaging became available, the chance of big tea companies moving their pre-packaging to Sri Lanka was real.

Expansion from the garage

He found a willing partner in the (now) tea giant Merrill J. Fernando, the founder of Dilmah Tea. That was the beginning of Printcare in a space no larger than a garage – printing tea bag tags and tea envelopes.

Ravi recalls the horror start to his business: Just moments after the fitter connected the first machine to the power source, the unstable supply blew the electrical circuits. It was a few months before the machine could resume operation.

As Ravi foresaw, the tea industry moved packaging to Sri Lanka once quality packaging was available, and Printcare was well-positioned to take advantage of that.

Guile and passion

The pre-packaged tea bag market in Sri Lanka grew. But the real big brands including Lipton, Twinings, Tetley and many others – were based in the United Kingdom. Ravi knew he had to win their trust and their business if Printcare was to progress.

When approached, there was a natural reluctance on the part of these companies to believe that a supplier from a developing country could meet the exacting standards that a tea bag machine required. After all, if the quality of the tag or envelope was found wanting, several other components which

form the tea bag would also be faulty. Ravi sought and obtained a meeting with one of the world's largest tea companies. He submitted to them two samples and asked the officer to compare them and identify his own. "He couldn't tell the difference, and that's how we got our first production order," says Ravi. He smiles before admitting: "What he didn't know was that both samples were his!" After that we built a strong relationship.

100 million labels a day

Printcare produces more than 100 million tea bag tags and tea envelopes a day. "For quality control we modeled ourselves on Lego who also produce large numbers. A reject rate of 1 percent is acceptable in the printing industry. But 1 percent for us means one million deficient tea bags each day – and that was unacceptable," points out Ravi. Quality and quality control have always been vital. "We once even lost an order because the customer was using several print shops around the world and wanted uniform results. Our supplies were of a visibly higher quality – we were simply too good," laughs Ravi.

Very soon Printcare became one of the biggest suppliers in the world in their segment of the business.

Every tea bag needs to go into a carton. So getting into the sheet fed folding carton segment was a natural progression for Printcare. In 1990, Printcare purchased its first five-color Speedmaster from Heidelberg. A clock that the fitter from Heidelberg brought him as a little gift still stands in his office and is keeping accurate time! Printcare quickly added other equipment to the pressroom, including several Speedmaster CD 102 presses with two, three and four inking units. A few years later, Printcare took Sri Lanka's first Speedmaster CD 102 six-color press ❯

Tea is a natural product and production errors can have a big impact on quality, so Printcare places great importance on meticulous quality control. Long-standing Danish company Lego serves as a role model here.
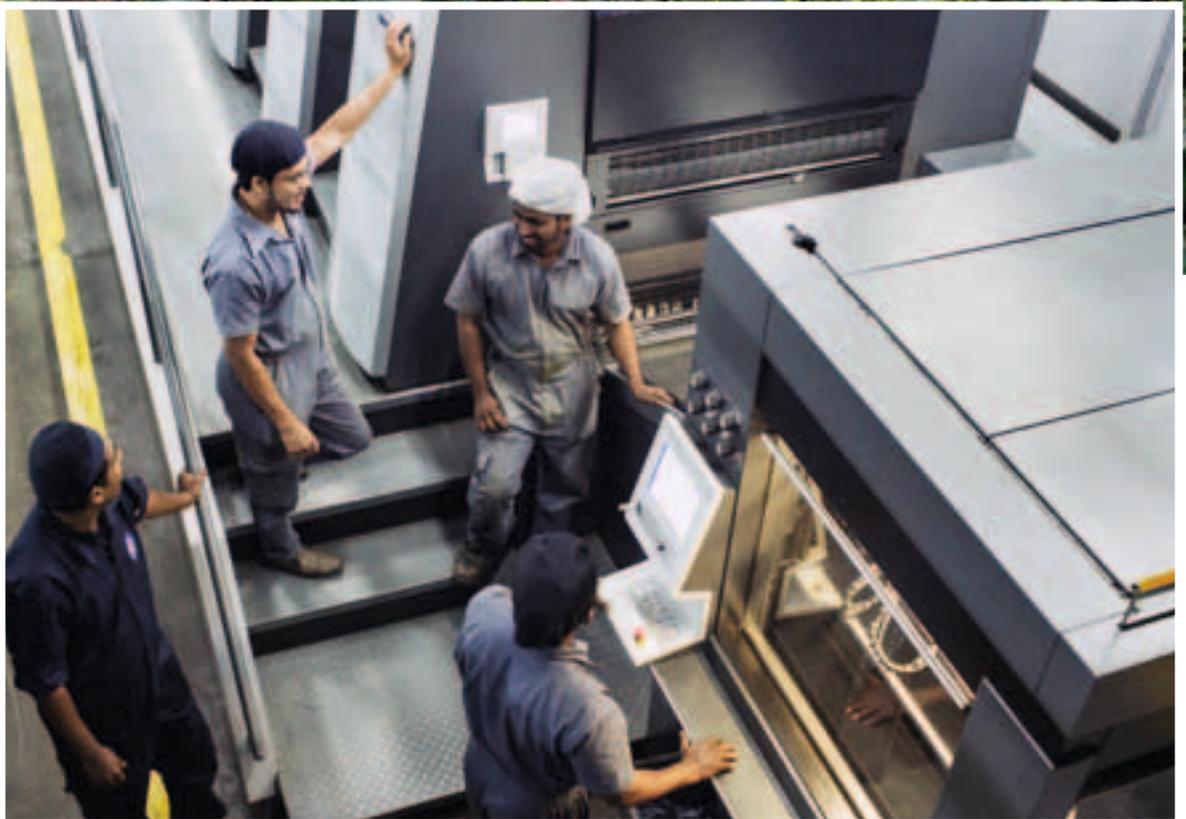
KRISHNAMOORTHI (RAVI) RAVINDRAN

The 64 year old has spent more than 35 years driving the fortunes of Printcare PLC, which specializes in label and packaging printing and is now a listed company.
In 2015, Ravi also served as global President of Rotary International, the world's largest service organization, and had to relocate his office to the organization's headquarters in Chicago for two years. He has been a Rotarian for 40 years. In fact, he relates how he obtained the loan for his first press on the basis of the trust a Rotary Club member placed on him after many banks rejected his business idea. He is married, has two children and lives with his wife in Colombo, Sri Lanka.

Staff enjoy a wide range of benefits, including school fees for their children and a cut-price supermarket.

The company has strict rules. Drinks bottles are banned from the workplace, so staff hand them in at a collection point till it's time for their break.

into operation. Printcare uses these presses and a few smaller machines, including a Speedmaster CD 74, a Speedmaster 74 and a Gallus EM 410. Recently, it bought a Speedmaster XL 106-6 LYYLX six-color machine.

Diversification is the key
To avoid being dependent on a single sector, Printcare was very quick to diversify its customers and products. "We try to avoid any one customer having a disproportionately large percentage of our sales," reveals Ravi, adding that this also provides far greater room for maneuver in price negotiations. "Customers should know we have other options if the price is not right," he explains.

Therefore, Printcare diversified both its offerings and customer base substantially to include items such as self-adhesive labels, prepaid phone cards, lottery scratch cards, and even labels with RFID chips. This is apart from their folding carton range. The range now encompasses countless print products in all kinds of versions and finishes.

Printcare also offers design and graphics services, especially to customers in the United States. "Our personnel and overhead costs are far lower than in America and there's also the time difference. This means we can offer services at lower prices and complete orders while it's nighttime on the other side of the world. My colleagues tell these customers that we earn the money while they still sleep," says Ravi with a smile.

Expansion, but not at any price
Ravi does not make investments in new equipment only to increase capacity or to get bigger. "Simply increasing capacity is not our goal. It's better to focus on a small number of machines running at full capacity and land long-term repeat orders than be constantly

forced to take on small jobs to keep a large number of machines occupied," he says. But he is constantly looking for opportunities into new lines of business or to find greater efficiencies.

For instance, the possibilities for tracking and evaluating jobs are high on the agenda. The company has been using SAP software to monitor its processes for some time now. "We have complete control over all our production processes including job estimating and post costing," stresses Ravi.

This insight into business processes is a key factor in many customers' decisions to place orders with Printcare. They know they can rely on the company's quality and technology and they value its honesty. "We don't tolerate any behavior that harms the image of our company. We keep our word, tell the truth and don't dupe our customers," underlines Ravi. And then comes another saying that could have come straight from a fortune cookie: "You can lose the reputation it took you a lifetime to build in a single day." That is unlikely to happen at Printcare in the foreseeable future.

DIGITAL PEAK PERFORMANCE

For the first time, Heidelberg brings all the benefits of digital printing to the 70 x 100 sheet format in the form of the Primefire 106. This gives industrial packaging and commercial printers a highly flexible solution for cost-effective production of very short runs and personalized print jobs.

Visitors to the Heidelberg drupa booth jostled for position, in their keenness to check out the paper printed on the new Primefire 106. All were curious to see with their own eyes just how good the new flagship press from Heidelberg really is for industrial digital printing. The level of interest was so high that the 12 planned daily VIP tours were not enough. At the close of the final day of the show, this number had reached 30. And each one was a success. "I think we've exceeded the very high expectations placed on the Primefire 106," says Montserrat Peidro-Insa, Vice President Worldwide Sales, Digital Products. "Visitors were particularly impressed with the printing quality of our new digital printing system."

The explanation for the enormous interest is simple. Before the appearance of the Primefire 106, there had been no digital press available to industrial packaging and commercial printers in the maximum print for-

mat of 29.527 inches (75 cm) × 41.732 inches (106 cm). The Primefire 106 now offers these printers a digital printing system that they can integrate seamlessly into their standardized workflows with presses such as the Speedmaster XL 106 and related postpress equipment. This machine opens up a variety of new business opportunities for runs from 1 to 2,500 sheets for precisely these companies. "Businesses that only use offset make losses with these types of jobs and so usually don't even take them on. An additional Primefire 106, which makes production of these jobs profitable, is set to change this situation," explains Peidro-Insa.

Personalized, brilliant and sharp
The Primefire 106 is thus also a strategically important investment. For several years, the number of individual orders with short and very short runs has been growing on these markets. Bernhard Schaaf, Senior Man- ›
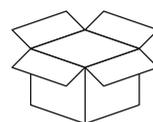
INDIVIDUALITY IN PRINT

Flexible applications are increasingly in demand in packaging printing, whether it's a specially designed gift box for corporate events, personalized packaging for loyal customers or putting a viral Internet trend onto a carton overnight. The Primefire 106 is the first industrial digital press that can meet these special needs in the 70 × 100 format. Larger folding cartons starting with batches of one are thus no problem either.

ULTRA-SHARP MICRO LETTERING

In printing pharmaceutical packaging, colors in the corporate design are every bit as important as the use of micro lettering. The Primefire 106 handles both aspects with superb results. CMYK, orange, green, violet and the multicolor technology from Heidelberg eliminate the need for spot colors, while extremely small fonts down to 2 pt are reproduced with ultra-sharp clarity even in negative printing or color. This enables precise compliance with strict information regulations covering packaging and colors.
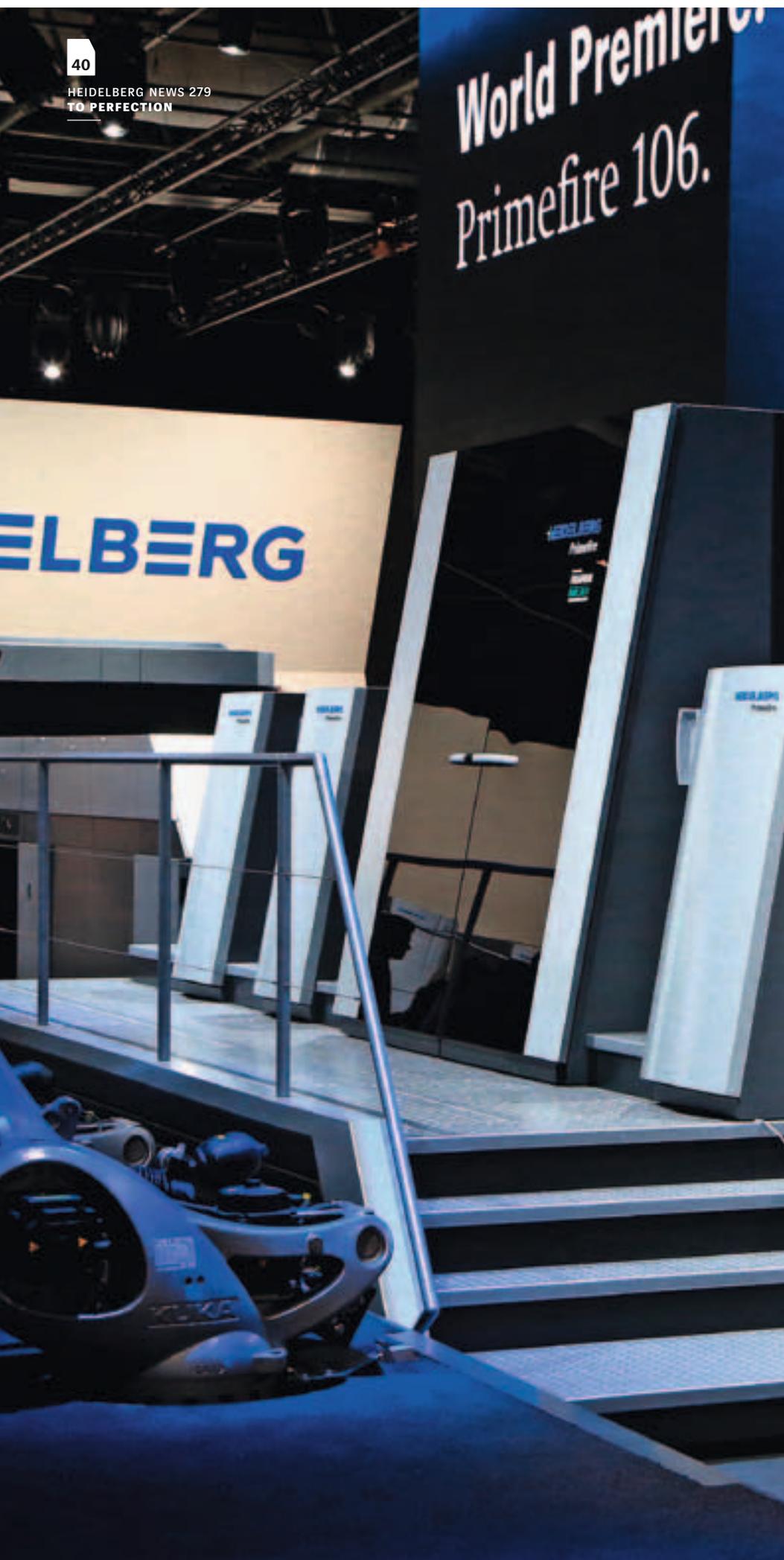
OPTIMUM IMAGE QUALITY

Customers nowadays are used to ordering a poster in the morning that is delivered in the evening. However, what didn't previously exist was a digital press in the 70 × 100 format that printed up to 2,500 sheets in a native resolution of 1,200 dpi. And thanks to the separation of the seven-color system of the Primefire 106, print shops can offer their customers packaging, posters and bookbindings in a quality that is every match for offset printing. The Primefire 106 saves on makeready times, plate sets and paper waste, while all jobs are processed one after the other automatically.
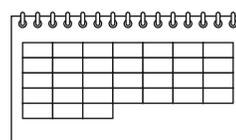
CALENDARS ON DEMAND

While printing a short run of 50 calendars in top quality would not be profitable on an offset press, this is where the Primefire 106 really comes into its own – and all the more so where various versions are required. One calendar after the other can be produced digitally on the press in the 27.559 inch (70 cm) × 39.37 inch (100 cm) format, without machine conversions and – thanks to perfect stack technology – without subsequent sorting either. Shorter runs can thus be produced on demand while also cutting storage costs.

❯ ager Market Development Primefire 106, has seen increasing segmentation of packaging production over a number of years, while a shorter time to market is placing the very highest demands on companies' agility. "If industrialized packaging printers can supply 100 personalized cartons or a number of versions of a packaging item within 24 hours, for example, they don't just ensure enhanced customer loyalty but also improve their chances when competing for new customers." The Primefire 106 is the perfect solution for these needs. It applies print data directly to paper, handles individual orders or bundled jobs with sorting at delivery, and eliminates makeready times, CTP and paper waste.

Despite all this flexibility, Heidelberg naturally also attaches great importance to print quality in digital printing. Increasingly strict regulations mean that absolute precision is called for when very little space is available on the packaging. For example, pharmaceutical printers today need to print more information on small cartons than just a few years ago. And here, too, the Primefire 106 really shows what it can do. As it prints with perfect register accuracy, font sizes down to 2 pt and line thicknesses of 0.1 pt are extremely easy to read. This applies to negative lettering and colored text alike. The seven-color inkjet system combined with multicolor technology from Heidelberg covers around 95 percent of the Pantone color space. In other words, packaging can be printed in the corporate design without using spot colors. A further advantage benefits poster and calendar printers, too. "The test prints to date exhibit high stability, reproducibility and quality with the seven-color multicolor process that other manufacturers can't offer," says Kurt Fuchsenthaler, Product Management Applications, adding: "The image quality, register and reproduction of details with the Primefire 106 are so far unique in one-pass inkjet printing."

High-tech for the smart print shop

Fast, large-format digital printing offers yet another advantage. For example, calendars are regularly produced in long runs where, after a few months in storage, around one in every four is destined for the scrap heap. Digital on-demand printing cuts this kind of unnecessary over-production. This saves money on storage and materials, e.g. money that can be channeled instead into investments in lean printing processes. The medium-term target here is to deliver production that is as autonomous as possible – the smart print shop.

The Primefire 106 is already paving the way toward this goal. For instance, it can provide additional information for each sheet via a mini barcode. Laser die cutters or other postpress machinery equipped with scanners can thus see what needs to be done with each sheet or repeat.

As a high-performance, comprehensive package combining quality and innovative inkjet technology, the Primefire 106 is already attracting a great deal of interest among international packaging printers in the United States, Germany, Brazil, Switzerland, China, Japan and other countries. The first models will be shipped before the end of 2017. The Heidelberg experts are currently making the final adjustments in field tests to check how the press harmonizes with various substrates, for example. However, the range of applications for the Primefire 106 also depends on the creativity of users and their ability to harness the many and varied new possibilities. One thing is certain – industrial digital printing will once again be a key topic at the next drupa, and one that is certain to draw the crowds. ◗

heidelberg.com/primefire106

THE ENTIRE PRINT SHOP AT A GLANCE

Everybody's talking about it, but what does digitization of the printing industry mean? And what will it offer? An initial look at the Heidelberg Assistant concept study shows where things are heading. The new information and service portal offers easy access to all of a print shop's key service, contract and performance data – including direct support for service queries. And that's just the tip of the iceberg.

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e all want to be healthy and, ideally, slim and effective too, as everyday life makes numerous demands on us. Apps are increasingly telling us exactly what we need to do to achieve these aims. Using a fitness wristband, they measure all the key parameters, process them in a smart format and recommend what food we should be eating or whether we should run another lap. And all this is completely personalized and in real time. Anyone wanting to can also share their performance data with others in social networks and see how they compare. These apps already have millions of followers and this in itself shows that digital data is extremely useful once it makes complex information easy to understand and offers clear added value. It's also true that the more data is available, the more informative it is.

PERFORMANCE ANALYSIS AND CONSULTING

Customers have access to the wealth of data from the Heidelberg cloud. They can thus see their own performance parameters such as auxiliary times, makeready times and paper waste at a glance, make anonymous comparisons of productivity rates with comparable machines from other print shops and measure the success of optimization measures.

Digital cockpit with all-round view

This technology for the body can also be adapted to companies. After all, they, too, are faced with fundamental everyday questions such as how productive is my print shop, when is the next service, what services do I use and how effective are my new configurations?

Answers to these questions are provided by the Heidelberg Assistant, a portal that is much more than just a type of fitness app for print shops. This application for PCs, smartphones and tablets gives users personalized access to their company's key parameters, service contracts and services. The Heidelberg Assistant also provides a gateway to a wide variety of Heidelberg products and services. "The portal enables us to offer our customers maximum transparency and end-to-end support for their entire print shop operations – this is unique in the industry," says Ulrich Köhler, who is in charge of SystemService at Heidelberg, USA.

The portal delivers a whole host of useful information that is available in tile format via the start screen. For example, in the four areas of print shop overview, administration, shopping and support, customers can find a view of all the installed machines and the associated service contracts. Users are notified immediately when a Prinect software update is available, which can then be downloaded and installed directly. And if inks or other consumables are running low, the intelligent system lists the relevant materials for reordering in the eShop.

SHARED DATABASE

Customers need a standardized inventory list where all machines can be found at any time. The Heidelberg Assistant offers this, and thus shortens the coordination process with Heidelberg, as both sides are using the same database. Customers can add machines, rename them to fit in with their internal management system and also integrate them into this.

More benefits thanks to big data

When it comes to performance and maintenance, what applies to fitness apps is also true of the Heidelberg Assistant – the benefits for the individual user increase in line with the volume of data. Every machine that feeds into the Heidelberg data network improves the accuracy of forecasts. A good example of this is Remote Services – print shops that monitor their machines using Predictive Monitoring benefit from the fact that the status of connected equipment is displayed via the Heidelberg Assistant and unscheduled machine downtimes are eliminated before they occur. The portal doesn't just display the emerging faults – the service team also suggests appropriate measures to customers. "Working with the Heidelberg Assistant, we can now respond even faster because all maintenance inquiries received by the service team are allocated to a contact. For the first time, machine service reports can now also be seen by customers. This delivers greater transparency," explains Köhler.

This greater proximity to customers is naturally no accident. The Heidelberg Assistant project team is committed to creating a complete, scalable portal that is also as user-friendly as possible when used on the move.

NO MORE LOST INVOICES

In the administrative area, Heidelberg provides all contract data agreed with customers and saves invoices and ordering processes electronically.

Heidelberg customers were first quizzed about their everyday business needs. Only after these details had been recorded did the search move on to finding a suitable means of processing all the information from the Heidelberg cloud, containing data records from over 10,000 installed machines and   ›

"THIS IS UNIQUE IN THE INDUSTRY."

ULRICH KÖHLER
Senior Vice President SystemService
Heidelberg USA

KNOWLEDGE ON DEMAND

The Knowledge Base contains accumulated expertise relating to Heidelberg machines. It offers information on specific print applications and instructions for changing a filter, for example. The Knowledge Base also has countless useful tips and advice.

PREDICTIVE MONITORING

Predictive monitoring centers on predictive detection of machine malfunctions and timely planning of countermeasures. The reports get sent to the service area, while the Heidelberg Assistant provides information on the status and responsible contact at Heidelberg. The customer and Heidelberg Service decide collectively what measures are to be performed and with what priority, to prevent unscheduled downtimes.

SMARTER SERVICE

What servicing is due? Who is carrying it out? What's the right spare part? The Heidelberg Assistant provides answers to all these questions. The status and contact for a service query can be called up at any time. To simplify spare part identification, smartphone images of the required part can also be attached to the order in the portal.

true added value if data is used correctly. This calls for time and know-how, and Heidelberg brings both to print shops as part of the Performance Plus service, for instance.

The Heidelberg Assistant's role as a personalized information and service portal in reflecting the spirit of the digital age is shown by its success at the Digital Leader Awards 2016. The portal impressed the panel of judges in Berlin with its cross-functional digitization strategy. The Heidelberg Assistant also proved popular among interested testers and customers at the recent drupa trade show in Düsseldorf: "People were fascinated by the idea of walking through the print shop with a tablet in their hand and tracking all processes," recalls Köhler. If the pilot tests are successful, the first customers will be able to share this enjoyment in summer 2017. ◗

SMARTER SHOPPING

The new eShop from Heidelberg, which is available in 27 countries for sourcing consumables, offers even more in conjunction with the Heidelberg Assistant. Customers aren't just given product suggestions optimized for their portfolios – they can also be sent timely reminders when reordering is required based on known delivery times and current consumption levels.

❯ 15,000 software products. The Heidelberg Assistant provides users with this data for comprehensive analyses.

However, intensive discussions with customers prior to development showed they wanted more. "In terms of big data, we thought detailed analyses and benchmarks would be right at the top of the wish list," explains Köhler. The reality looks somewhat more complex, even though data comparisons undoubtedly play a key role in boosting machine availability and productivity. "As well as transparency, discussions with our customers revealed a particular need for personal service and collaboration," says Köhler. In other words, figures pure and simple, as generated in abundance by big data, are no longer enough. Print shops only benefit from

FINELY CRAFTED

Anyone opening one of the 300 greetings cards produced by French print shop Studio Pression in 2016 will no doubt have been captivated for a few moments. After all, it is all too rare to receive something so attractive through the mail. Opening the card reveals the finely crafted outline of a KSBA Cylinder press from Heidelberg – the print shop's homage to the time-honored Heidelberg Cylinder, Tiegel and Tiegel GT press models that are still reliably die cutting, printing book pages and embossing hot foils at Studio Pression. The printing experts appreciate the machines' versatility and the feeling that they are built to last forever. To capture this feeling, the small three-strong team designed and produced the multilayer greetings card entirely in-house. The paper selected was Fedrigoni Sirio Ultra Black 280g. Together with silver and gold foil embossings, this sumptuous printing material creates sophisticated shimmer effects. Several different techniques were used for the elaborate details – laser cutting and engraving, die cutting and both blind and hot-foil embossing. The various layers of the machine outline were then folded by hand and all the foils were glued together. The message that the print shop wants to convey to its customers in this way comes across loud and clear – have fun trying out new things. ▮
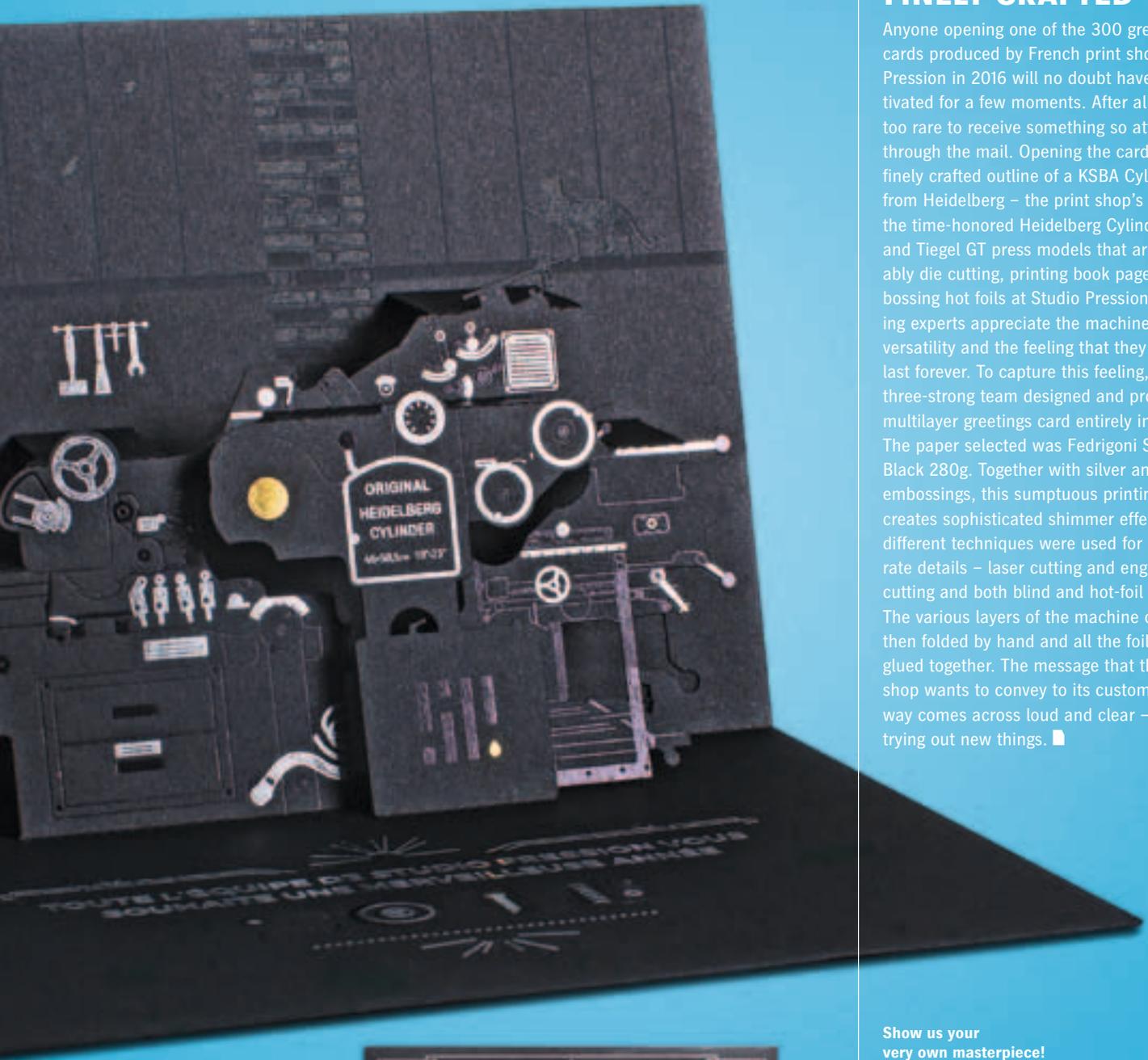
**Show us your
very own masterpiece!**

Do you have a packaging solution, brochure, calendar or some other print sample that you're particularly proud of? A masterpiece, large or small, that you would like to see featured in an upcoming issue of HN? If so, join in and send a copy to us at:

Heidelberger Druckmaschinen AG
Sabine Langthaler
Gutenbergring
69168 Wiesloch
Germany

TIPS &
TRICKS

CORRECT PERFORATION AND SCORING — FOR A PERFECT FOLD

Torn paper, wrinkles, uneven edges and fold lines or even cracks in the coating – a great deal can go wrong when folding. In most cases, this is caused by inadequate or incorrect fold preparation when perforating or scoring.

UP TO 90 gsm

THICK AND STIFF MATERIALS

Tie length

Slot length

PERFORATION

This process reduces the material tension within the sheet and makes it easier to achieve a clean fold. Wrinkles are prevented, as the air trapped in the sheet during folding can escape. The best solution for perforation is to use the upstream slitter shaft at the first folding station. This reduces the distance the sheet has to travel and ensures it is positioned cleanly – for smooth perforation edges and a precise perforation line, even at high speeds.

SLOT AND TIE LENGTH

The thicker or stiffer the product, the longer the slits and the shorter the ties. As a guideline, select a blade with short slots for up to 90 gsm paper, one with larger slots for art paper and large slots or a punching knife for thick, stiff materials. Following perforation, the tie must be sufficiently stable not to tear during subsequent processing (e.g. saddlestitching or adhesive binding).

SLOT OR PUNCH PERFORATION?

Slot perforation is suitable for signatures with less than 30 pages that undergo further processing after folding to create products such as brochures with saddle stitching or adhesive binding. Punch perforation is good for cross-folds with signatures of 32 pages or more and/or high grammages. Punching out tiny pieces of paper around 0.43 inches long and up to 0.047 inches wide (11 mm long and up to 1.2 mm wide) makes it easier for the air to escape than with slot perforation. Signatures prepared in this way hold together well at the sheet edges. The end product also lasts longer, for example book blocks with adhesive binding.
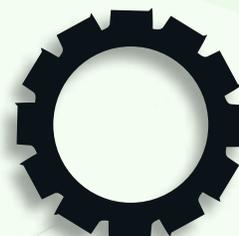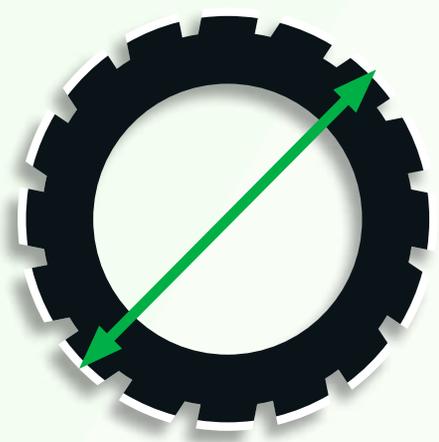
DIAMETER OF PERFORATING BLADE

The blade should extend at least 0.039 inches (1 mm) but no more than 0.078 inches (2 mm) into the counter blade. This enables it to cut through all layers of the fold without going too deep or tearing the paper on its way out. The undercut can be set precisely using the (upstream) movable upper slitter shaft.
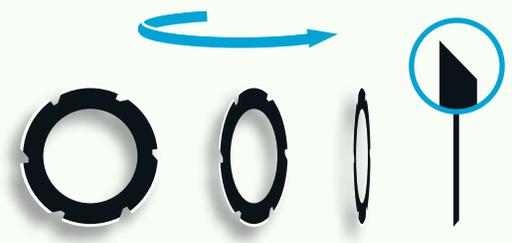
FITTING THE PERFORATING BLADE

The ground, inclined side should form an imaginary arrow pointing forward, e.g. toward the next folding station. This means the ties run backward when the sheet is inserted into the buckle plate. If the blade is fitted the other way around, the resultant forward projections can get caught when the sheet enters the buckle plate, which prevents a clean fold.
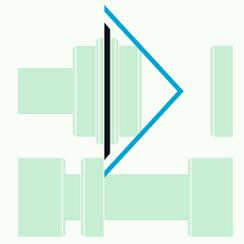
>> Direction of paper feed >>
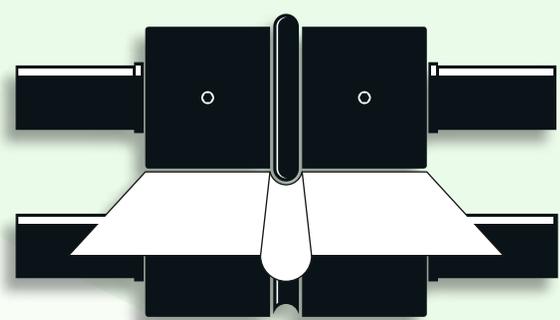
SCORING

This process is suitable for products with surfaces that cannot be cut open such as brochures, maps and thread-stitched or thread-sealed signatures. Compressing and displacing the material at the fold line prevents it from cracking or splitting open when folding the material or opening the end product.
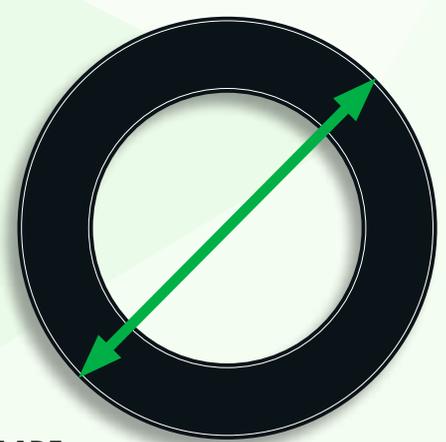
DIAMETER OF THE SCORING BLADE

A scoring depth of 0.078 inches (2 mm) is sufficient in most cases. If the blade diameter is too large, it cuts into the sheet at the start and end and the sheet can tear at the front and rear edges. If the scores are too narrow, though, this may cause cracks in the fold or wrinkles at the scoring ridge.
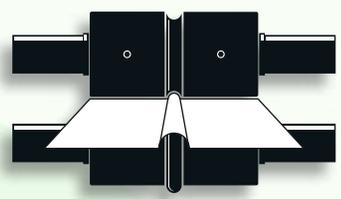
NEGATIVE SCORING

This method is ideal for thick grammages of 170 gsm or more. Fitting the scoring blade underneath rather than on top as is normally the case improves paper displacement during folding to create an inward-pointing scoring ridge. This prevents the paper's fibers and coating from cracking. It also creates clean fold edges. Alternatively, the Tri-Creaser Fast Fit can be used for grammages of up to 350 gsm. This tool has a rubber ring instead of a scoring blade. The ring runs against a steel female die (scoring groove) with recesses. The different groove widths and corresponding rubber rings are marked red, blue and yellow according to the thickness of the grammage to be processed.
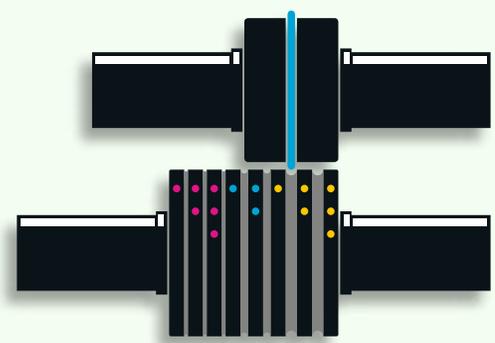
DIGITALLY PRINTED PAPER

This cracks more easily than offset sheets because the toner lies on the paper. To prevent this from happening, it is advisable to use the Tri-Creaser Fast Fit for scoring. The trick with this tool is not to select the same colored groove width for the rubber ring, but the next one up – the blue ring with the yellow groove, for example.

YOU SIMPLY CAN'T GET MORE UNIQUE

Customizing your life is a new megatrend allowing more and more consumers to look for products that are as unique as they themselves. This offers a whole raft of business opportunities for personalization that can be harnessed effortlessly using the new Omnifire 1000 4D printing system from Heidelberg.

a

ccording to trend researchers, very soon we'll be seeing a consumer world where people surround themselves with products that they can give their own personal touch. Changes and adaptations will make every product unique, highlighting our individual personalities and making us stand out from the crowd.

   This new dimension in personalization also calls for a new approach to print production. Heidelberg was quick to respond to market needs with its Omnifire 250 4D digital printing system and is now following this up with the new Omnifire 1000, which is even more versatile than its smaller brother. The Omnifire 1000 can print complex objects in virtually any geometries up to a width of 19.68 inches (500 mm) and lengths in excess of 39.37 inches (1,000 mm) with up to four colors, opaque white and a protective coating. The six robot axes rotate the starting product with the utmost precision and, in doing so, ensure consistently high print quality, even for curved, complex surfaces.

   Heidelberg supplies turnkey presses – in other words, machines that are preset and customized as part of a proof of concept. "In this process, we identify the printing process, produce object-specific support, define the movements of the robotics and create a reference sample for the customer," explains Ivar Emde from the Business Development 4D Printing team at Heidelberg. "All necessary parameters and settings are developed to suit the individual requirements of each application. Customers can access this information easily through a button on the touch screen and are able to use the press immediately." ◼

SEAMLESS PRODUCTION INTEGRATION

The Omnifire 1000 can be integrated seamlessly into industrial production chains. Whether it's series production of coffee machines, washing machine fronts or housings for medical equipment, the 4D press's digital workflow ensures automated flexibility, fully in keeping with Industry 4.0.

OLIVER

CUSTOMIZED
MASS PRODUCTION

The Omnifire 1000 also prints automotive interiors such as dashboards, center consoles, door interiors and sun visors. This area in particular is seeing a trend toward greater personalization, as cars continue to be highly emotive products. The Omnifire 1000 provides a virtually unlimited range of decorative options without making production and logistics more complex. Even personalized custom-made products are possible without any additional outlay.

Jack

AVA

PERSONALIZING
LIFESTYLE PRODUCTS

Whether it's surfboards, motorcycle helmets or ice hockey sticks, the Omnifire 1000 prints 3D objects for sport and leisure with ease, thereby turning a mass-produced product into a customized item. In doing so, it creates greater design freedom in implementing new, creative ideas, and does so on demand, flexibly and digitally.

heidelberg.com/omnifire1000

FOCUS
INNOVATION

SOLUTIONS
FOR PAPER STRETCH

With automatic paper stretch compensation and remote fan-out control, Heidelberg offers not just one but two solutions to reliably correct register errors caused by paper stretch. Choosing the right solution depends first and foremost on the job structure and sheet format used.

p aper stretches under roller pressure due to absorption of the ink/dampening solution emulsion. In large formats, this may exceed 0.039 inches (1 mm). This leads to illegible text and color shifts as a result of register inaccuracies, but also costs a great deal of time and money if it involves stopping the press either to adjust the printing plates mechanically or replace them with newly imaged plates. The automatic paper stretch compensation and remote fan-out control solutions from Heidelberg show that economical alternatives are also possible.

Software with "stretch prediction"
Automatic paper stretch compensation is a new software solution that precalculates paper stretching and adjusts imaging data before printing. Stopping the press or imaging a second plate set is not required. Predicting paper stretch is based on calibrating the paper using defined and documented job parameters. To do this, at least two test forms need to be proof-printed – one with high ink coverage and one with low. The software calculates how much the register deviates at a particular measuring point and saves the results in a characteristic curve along with data on the coloring, dampening settings, printing sequence and consumables used.

The next time printing is performed under comparable production conditions, the program can use the calibration to precalculate stretching. "The software compensates for the stretch effect in the background, which means the printer doesn't need to intervene," says Andreas Gembe, head of Pre-

press Services. If conditions change, such as humidity or blankets, the accuracy of the prediction can be optimized on the fly. The workflow-independent software works most efficiently for repeat jobs using the same materials.

Ever greater precision
Prediction alone is often not enough, particularly in large formats. In this case, the best option to compensate for paper stretch for frequent job changes in large formats is remote fan-out control. With this solution, which is available as an option for the Speedmaster XL 145 and XL 162, users can easily compress and stretch the rear edge of the printing plate on the fly from the control station. The corrections are then made by eight individually operating digital direct drives in the printing plate cylinder. They adjust the four clamping segments at the rear edge of the plate laterally or circumferentially. The printing plate can therefore be moved by up to +/- 0.011 inches (0.3 mm) laterally and 0.023 inches (0.6 mm) in circumferential direction.

"Remote fan-out control enables full compensation for every stretch effect, both when using thin substrates and for unstable grades of card. The solution operates on the fly, thus cutting setup time and waste," says Stefan Stillger, Product Management XL 145/162, summing up the key benefits. ∎

AUTOMATIC PAPER STRETCH COMPENSATION
Based on a single paper calibration, the software solution can reliably predict the expected stretch for all subsequent comparable jobs and adjust the imaging data automatically before printing. The solution is ideal for series-produced print jobs and repeat orders. Manual adjustments can be made on the fly.
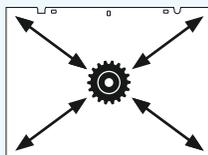
REMOTE FAN-OUT CONTROL
With this remote-controlled mechanical solution, register deviations can be corrected effortlessly from the control station during the production run. The corrections are made by eight direct drives in each plate cylinder that move the printing plate by up to +/- 0.011 inches (0.3 mm) laterally and 0.023 inches (0.6 mm) in circumferential direction. Remote fan-out control is available as an option for the Speedmaster XL 145 and XL 162.

Andreas Gembe
Head of Prepress Services,
Stefan Stillger
Product Management XL 145/162 (from left)
Heidelberger Druckmaschinen AG

heidelberg.com/RFOC

WHAT ARE
THE IMPORTANT
CONSIDERATIONS …

… when printing electrostatic foils?

Demand for electrostatically charged foils is growing rapidly because of all their benefits. These adhesive-free foils are easy to apply to virtually all smooth, dry surfaces, can be removed without any adhesive residue and enable flexible repositioning. This makes them an ideal advertising material for trade shows, other events and showrooms.

At the Print Media Center (PMC) Commercial in Wiesloch-Walldorf, we provide regular customer demonstrations showing how easy it is to print on the polypropylene foils. One vital requirement prior to printing is to set the feeder correctly. The ultrasonic double sheet detector must be switched off so that the foil and backing are not mistaken for a double sheet. And the pull lay double sheet detector needs to be activated to prevent two foils from being pulled in together. It is also important to restrict the flow of suction air at the suction tape to lessen the glass-plate effect, e.g. the sticking together of foils.

One particular challenge during printing is the conventional foil ink, which takes a very long time to dry. Thanks to the LE UV configuration of our Speedmaster SX 52, however, this is not a problem. One UV lamp is sufficient for the printed foil to reach the delivery fully cured.

Klaus Löhr
Team Leader Small- and Medium-Format Printing,
Print Media Center Heidelberger Druckmaschinen AG

Do you, too, have a question you'd like to ask?
Is there anything relating to complicated applications, optimum use of equipment and consumables or other matters that is on your mind? If so, write to us at **heidelberg.news@heidelberg.com** and put your questions directly to the Heidelberg Global Expert Network.

PANORAMA

"Graphic novels differ from conventional comics through their complex, sophisticated storytelling, book form and elaborate graphics. This is music to the ears of publishers and booksellers, who are using the novels to target a more discerning audience with greater spending power."

COMICS WITH A CINEMATIC ALLURE

COMICS WITH A CINEMATIC ALLURE

Sneered at by intellectuals, loved by readers – comics were long seen as easy reading for children and people who remain children at heart. This has changed fundamentally with the rise of sophisticated graphic novels.

d
ealing with themes such as war, the darkest depths of the human soul and how people handle change or are broken by it, graphic novels are a relatively new comic genre. They tell stories in drawings and in many respects have more to do with a novel than a conventional comic. And they're successful because in book form they also reach people who don't enjoy reading long texts but are nonetheless interested in great stories on a wide canvas.

Cinema on the page
Graphic novels differ from conventional comics through their complex, sophisticated storytelling, book form and elaborate graphics. This is music to the ears of publishers and booksellers, who are using the novels to target a more discerning audience with greater spending power – in 2015 alone, booksellers in the United States saw sales of graphic novels grow by a healthy 23 percent.

The works that have conquered the market in the last few years are noticeably varied. Whether in color or black and white and whether drawn in ink or pencil, the variation in graphics styles and the passion for the stylistic devices of movies is striking. Added to

this is the fact that many graphic novels feature surprisingly vast narrative depths and complex storylines. The range of subjects is equally huge, extending from biographies and pure fiction to serious social issues such as dementia and war trauma.

Sought-after print product
Younger readers in particular are finding graphic novels a gateway to print media once again. Although providers such as Amazon subsidiary Comixology are also offering comics and graphic novels on the web, the sales success of electronic versions has so far been limited. A comic book with its touch and feel and painstakingly designed cover doesn't just look good on the shelf. It also makes apps seem pretty old in other ways. Turning the pages, the fresh smell of ink, the feel of paper between your fingers – no software can offer that. Will the digital competition also threaten this new bastion of book printing some day? It's hard to tell. At any rate, the following pages contain a selection of stories from around the world with exciting plots and impressively drawn pictures – pages that are well worth turning. ◗
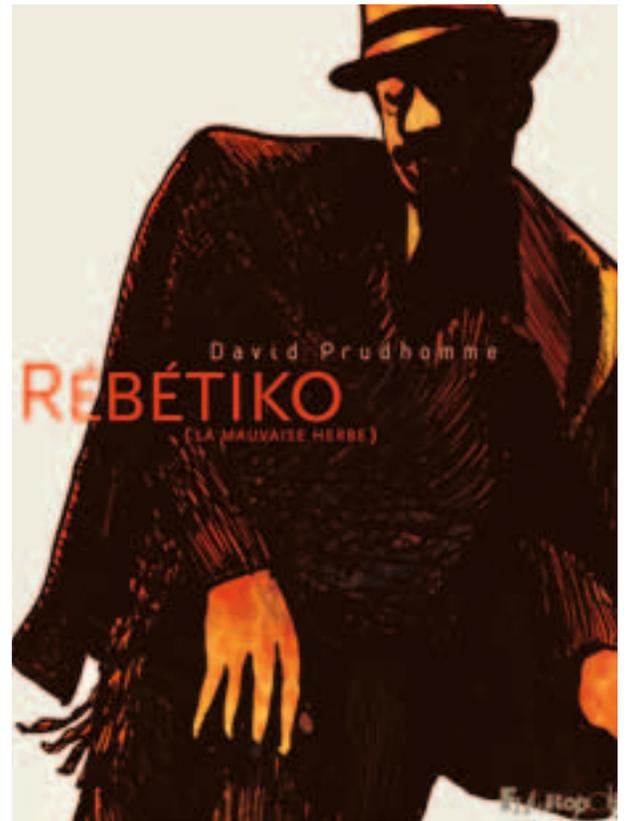
RÉBÉTIKO
BY DAVID PRUDHOMME
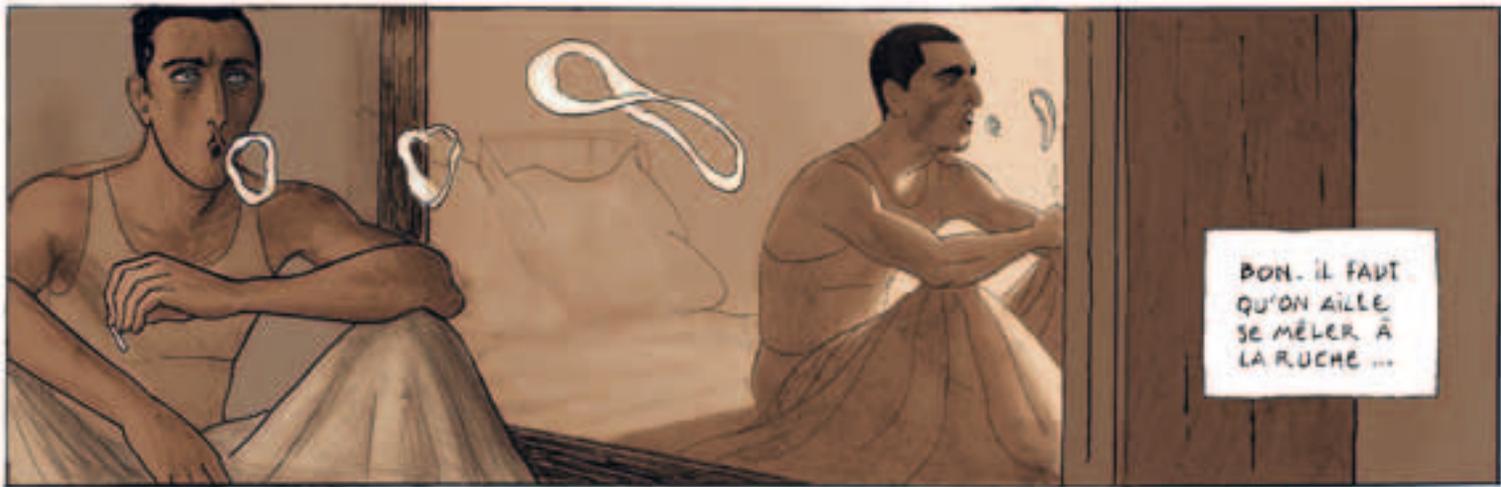
David Prudhomme, born in Tours, France, in 1969, made a name for himself as a comic artist and illustrator while still studying at the École de l'Image in Angoulême. His work "Rébétiko" was published in France in 2009. Just one year later, he was honored with the "Regards sur le monde" award at the leading European comic festival in Angoulême. In "Rébétiko," Prudhomme tells the story of a single night in Greece in 1936 over 104 pages. Five musicians defy the dictatorship by playing rebetiko, the outlawed style of music, in the taverns of Piraeus. "Rébétiko" impresses in particular thanks to its varied use of color, alternating between bright Mediterranean hues and the dark shadows of the dimly lit taverns.
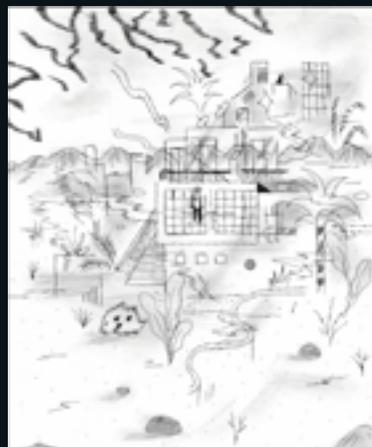
SHIT IS REAL
BY AISHA FRANZ

Aisha Franz is a shooting star on the German comic and graphic novel scene. She studied visual communication, specializing in comics and illustration. "Shit is real" was published by Berlin-based publisher Reprodukt at the start of 2016. With simple pencil strokes, she charts the story of Selma, who is left by her boyfriend and has to mold her life in a new direction. Aimlessly, she lives for the moment and increasingly loses sight of reality. Franz repeatedly breaks up a number of structured scenes on a page with full-page crosshatched pictures. "Shit is real" is an existential comic novel with a happy ending for love and friendship.
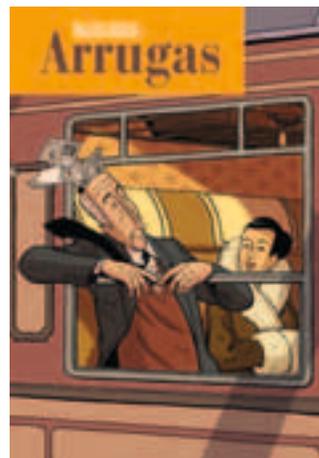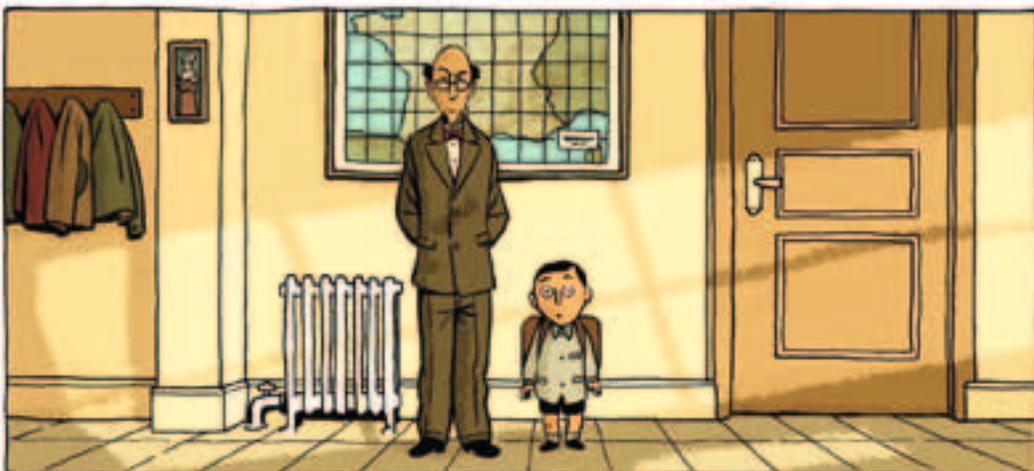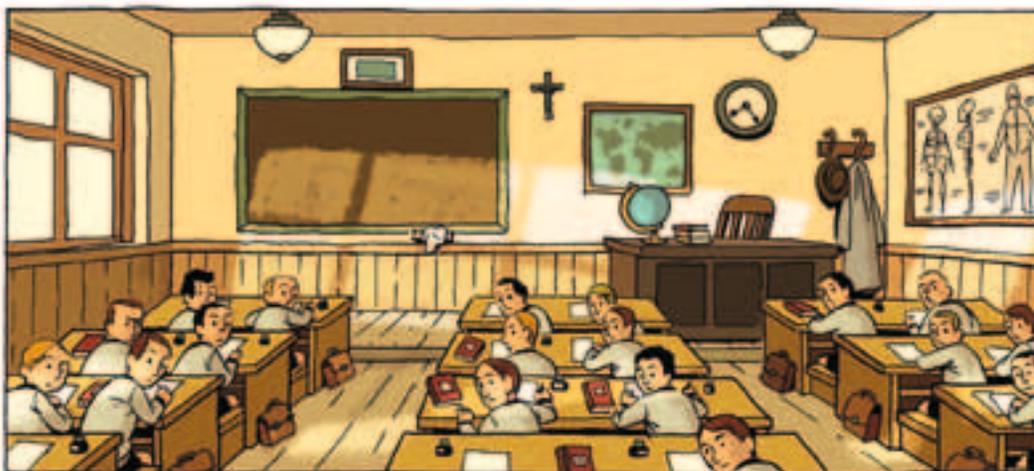
ARRUGAS
BY PACO ROCA

In "Arrugas," comic artist Paco Roca, born in Valencia in 1969, focuses on a difficult subject – age-related dementia. This involved the Spaniard conducting research in care and retirement homes and asking friends and relations about their experiences with sufferers. In "Arrugas," the former bank manager Emilio has to face his progressive dementia in a retirement home. With much humor but first and foremost a great deal of empathy, one of Spain's most successful comic artists tells the story of a fading memory. "Arrugas" was not only honored with the national comic award by the Spanish Ministry of Culture in 2008. The film version also garnered several prizes.

COMPETITION
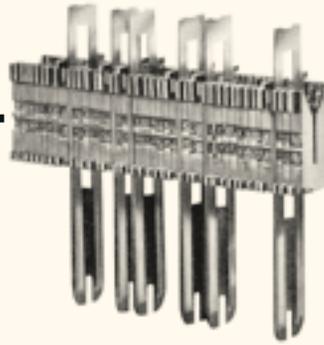
CAN YOU TELL US?

Once Johannes Gutenberg had invented letterpress printing with moveable type and reusable dies in the 15th century, not only the work of book printers but also that of typesetters remained virtually unchanged for centuries. For a long time, letters still had to be cast by hand, distributed in the letter case and lined up in the composing stick, and the lines of text obtained in this way had to be arranged one below the other in the composing galley.

In 1822, the American William Church took a big step toward automating the typesetting process when he patented a composing machine that enabled letters to be lined up mechanically. His invention was not really usable, though, because it was still necessary to perform many steps such as impositioning and distributing letters by hand.

All that changed 18 years later when an Englishman and a Belgian joined forces to further mechanize the process. Their invention had a composing machine at the front that was operated like a keyboard instrument, an impositioning device at the side and a distributing device at the back. Five to seven people were needed to operate it. They were called "type weavers" because working on the machine was similar to working on a loom.

What is the two inventors' mechanical composing machine called?

1st PRIZE
iPad Air

Do you know the answer?
If so, write to us at
heidelberg.news@heidelberg.com
and, with a little bit of luck,
you could win one of 10 great prizes
from our merchandising shop.
The closing date for entries is April 30, 2017.

THE ANSWER TO THE COMPETITION IN HN 278 WAS:

Anicolor

1st PRIZE:

SEPPO SALMINEN
Jaakkoo-Taara Oy
Turku, Finland

The other winners will be notified in writing.

The judges' decision is final. Employees of Heidelberger Druckmaschinen AG and their families
may not take part. Prizes cannot be substituted for their cash equivalent. Full conditions of entry are available
at heidelberg.com/hncompetition.

PLAYLIST

INTERESTING VIDEOS FROM HEIDELBERG ON YOUTUBE

AUMÜLLER DRUCK, REGENSBURG, GERMANY

In just under five minutes, owner and Managing Director Stefan Aumüller explains the key features of Aumüller Druck in Regensburg and the industrial commercial printer's close partnership with Heidelberg.
https://youtu.be/sVEZRUhm8bY

JOB CHANGES IN LESS THAN 3 MINUTES

Impressive performance – how automated processes running in parallel are delivering super-fast job changes on the Speedmaster XL 106.
https://youtu.be/AFKaJ2c5_1E

INDUSTRIAL DIGITAL PRINTING – THE PRIMEFIRE 106

How it works and what it can offer – the new digital printing system from Heidelberg for industrial production in the 70 × 100 format.
**heidelberg.com/en/
primefire106-video**

Send us your comments!
We're happy to hear your suggestions,
praise and criticism.

heidelberg.news@heidelberg.com

AT WORK

GREGOR WOLF FROM BVD DRUCK + VERLAG IN SCHAAN, LIECHTENSTEIN

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regor Wolf always has his favorite movies with him. The 27 year old from Liechtenstein has tattoos inspired by The Shining and other horror classics extending all the way up his arms to the sleeves of his black company t-shirt. And he loves his work, even if life at BVD Druck + Verlag in Liechtenstein isn't always quite as exciting as in the movies. The postpress specialist has been working at the Schaan-based company for eight years – mostly on the cutter, the saddlestitcher and a Stahlfolder KH 82, which he describes as a great machine that you can use to full advantage if you have the right know-how. "Fortunately, I did my training on an old folding machine with manual settings. That helps me time and again, even when working with such a state-of-the-art machine," he reveals.

Wolf also passes on his experience to the apprentices and is always available to give advice or a helping hand. "It's important that the next generation of machine operators know why precision is so important to us – for example, accurate insertion of sheets into the saddlestitcher to prevent production stoppages," he explains.

After work, the dedicated member of the production team likes nothing better than to jump on his motorcycle – a Honda CBR 600 with over 120 hp – and join his father for a ride in the area around his home town of Vaduz, where he lives with his girlfriend. ∎

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