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Unfold your Potential: Twice the productivity in commercial printing with Push to Stop – end-to-end

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- World premiere: Heidelberg showcases automated workflow from PDF to stacked folded sheets for the first time
- Operator navigation and intelligent assistance systems on all Speedmaster models
- Flexible selection of digital and offset from Prinect workflow
- Versafire with new Digital Cluster production mode even more efficient

Which solutions do commercial printers need to be competitive and profitable in the market? Which processes and interfaces offer potential to be leveraged, and how can print shop staff be even better supported? These are the questions the experts at Heidelberger Druckmaschinen AG (Heidelberg) asked themselves when developing the latest innovations. The answers are set to raise the productivity in the sector to a new level: for highly industrialized commercial printing companies with standardized workflows, Heidelberg is showcasing autonomous production from data input right through to the folded signature – Push to Stop end-to-end – for the first time.

The Prinect Production Manager production workflow organizes the digitized processes in the smart print shop with its broad-based, scalable range of functions. It delivers streamlined, costefficient workflows and growth potential, even in smaller and medium-sized companies. And it integrates not only offset printing presses but also digital presses via the Prinect Digital Front End (DFE).

The Digital Cluster production mode is a new functionality in the Prinect DFE. It enables several new-generation Versafire presses to share a job queue so the jobs can be organized with the optimal distribution.



# Everything happens autonomously – completely autonomous production including postpress becomes reality

In mid-October, Heidelberg held a world premiere of completely autonomous production at an inperson event at the Wiesloch-Walldorf site. The powerful, digital planning system **Prinect Scheduler** schedules the incoming data in the optimum order based on criteria such as paper, color assignment, and folding layout. Imaging of the printing plates takes place fully automatically via the **Suprasetter production line** in the correct order. "Prinect knows at all times which plates are stored where. The order of the jobs in the plate storage system is optimized so that changes from job to job are kept as small as possible – we call this incremental makeready. Based on substrate parameters and job data, the anticipated paper stretch can be calculated and already compensated for during the imaging. This saves time and reduces paper waste," explains Rainer Wolf, Head of Segment Management Commercial at Heidelberg.

The jobs are automatically loaded directly into the job memory of the printing press by the Prinect Scheduler. This includes the information about where the plate is stored. With **Plate to Unit**, the new and fully automatic printing plate logistics at the printing press, the printing plates are provided and removed using a fully automated process. "With industrial production of short runs, we get to ten to twenty job changes per hour in no time at all. Plate to Unit reduces the operator's workload and ensures a reliable and stable process. Each plate has its own ID. This is how we ensure that the right plate is provided at the right time in the right printing unit. The risk of creases or scratches on the plate is eliminated. The process is more stable, downtimes are minimized, and the quality is better," says Rainer Wolfhappily.

The 2020 generation of the Speedmaster XL 106-8+P+L has everything needed to systematically harness the performance of the press. Operator navigation reaches a new level with further intelligent assistance systems and the use of artificial intelligence. The new Heidelberg UX thus delivers a new user experience and a modern workstation that provides ergonomic assistance for top performance. For example, the patented Intellistart 3 software organizes and optimizes the makeready processes. The new Intellirun software extends the navigation functionality beyond the makeready process. It provides the operator with continuous information appropriate to the situation on which activities are required to avoid unnecessary auxiliary times. For example, the Wallscreen XL switches to the job preparation menu in good time before the run is reached. The operator can review the data in good time, become familiar with the upcoming change sequence, and provide any materials not yet available. Navigation functions like these are becoming more and more important. On the Wallscreen XL, the



**Intelliguide** timeline display ensures transparency across all processes. The operator can see exactly where manual interventions are needed. However, operator navigation is not limited to the machine control station: it is now also available at the printing units thanks to the new **Intelliline**. LED strips show whether the press is in production or makeready mode, and whether and if so where the operator needs to take action. With the **Press Center Mobile app**, control station information is also available on the go. The operator always has the job data and press status available in real time and can use it, for example, when providing materials for the next job.

To be able to head into postpress with a zero-waste pile, the **waste sorting gate** has been integrated in a perfecting press for the first time. The press detects waste sheets and automatically ejects them. The ejected sheets are immediately shredded and disposed of via a vacuum unit. This means there is no more collection bin to empty.

Ever shorter delivery times require that the sheets get to postpress as quickly as possible. The **new generation of the DryStar LED Pro dryer systems** is not only 20% lighter, it is also more powerful and ensures a dry pile in the delivery, which can go straight into postpress.

This is then sent by an **unattended transport system** to the **Stahlfolder KH 82-P folding machine**, which folds around 15,000 sheets per hour using the shingled folding principle. The KH 82-P is also integrated via the Push to Stop concept and detects the next signature automatically by the printed barcode. Each new signature is autonomously recognized and automatically started. Compared with the previous workflows, this eliminates a total of six steps as well as the factor of operator influence. "The operator moves around seven tonnes of paper in one shift on this high-performance machine – a bundle every 12 seconds. The only way we can continuously realize the full potential of the press is by significantly reducing the operator's workload. This is why we developed an industrial robotic solution with the **Stahlfolder P-Stacker**, which also permits the use of Euro pallets. Most of the know-how here is in the sophisticated gripper system, which was modeled on the human hand," explains Rainer Wolf. The folding machine operator enjoys a significant reduction in workload and gets a modern, automated, and highly productive workstation.

Another world premiere in the area of folding machines is the **Stahlfolder TH 56 Pharma**, which sets a new performance standard in the growth field of pharmaceuticals with extensive automation and a robust machine platform. It features many new extras that enable much more



economical production of a wide range of package inserts than on most of the folding machines around nowadays that require manual adjustment.

There are also new Push to Stop solutions for cutting on the Polar cutting systems. Whereas jogging used to be a laborious manual process, the new **AirGo Jog** system now fully automates it.

"We speak provocatively about doubling productivity with Push to Stop – end-to-end. That is quite possible for the majority of print shops – a small number are already demonstrating this in real life, and not just the web-to-print printers, either. It's our mission to enable our customers to unlock this potential. Because our customers' success is ultimately our success, too," explains Rainer Wolf.

## Smart Print Shop delivering high flexibility and more profit in medium-sized print shops

At the event Heidelberg also demonstrated how the Smart Print Shop is the solution for economical production and surviving increasingly tough competition for smaller and medium-sized print shops, too. "Less overtime and special shifts as well as more time to build customer loyalty, on top of this having transparency about which jobs are profitable and which are not. All of these are benefits that the Smart Print Shop provides, and that are also important for smaller businesses. Their production volumes are smaller and more varied. Accordingly they need different products that fit their budget. We have a lot to offer here, with our broad portfolio. From scalable software solutions and Push to Stop functionalities on all printing presses to corresponding solutions in postpress," says Rainer Wolf.

The completely redesigned **Prinect Press Center 2020 generation** with the new **Speedmaster Operating System** brings **Push to Stop functionality** and the **Prinect Cloud interface** to every Speedmaster – from the SX 52 to the XL 106. On the two **Speedmaster CX 75 and XL 75 presses**, the visitors saw how the many new assistance systems are making the Prinect Press Center a modern, attractive workstation. With the **Heidelberg UX**, the operator is able to continuously tap into the performance potential of the press. These digitized and automated processes permit navigated printing – all the way up to postpress on the **Stahlfolder KH 82 folding machine**, which is also integrated into the Push to Stop concept.



Medium-sized print shops are characterized by a broad portfolio of services, for which they use both offset and digital printing. With the **Versafire**, Heidelberg offers a digital sheetfed printing system that is integrated in all the different printing processes via the Prinect DFE.

This close **integration of offset and digital printing** means that the customer can still decide which printing method is the most economical for the specific job and the current workload up until shortly before printing starts. Even short runs previously produced using offset printing can be post-produced using digital printing without any trouble. The operators are familiar with the workflow sequence, and neither need to specialize nor switch with another operator. Sources of errors go down, flexibility and profitability go up.

Thanks to the tried-and-tested **Heidelberg Color Management** system, the color space of the Versafire is used in such a way that the result is best matched to the offset printed sheet. The screen technology is identical. This opens up the door for hybrid productions, where for example a customized and personalized title is printed digitally and the content pages are printed using offset, or even for incorporating offset pre-printed sheets into the end product with the Versafire.

For print shops with a high volume of digital print jobs, Heidelberg has developed a further functionality for the Prinect DFE with the new **Digital Cluster production mode**. It enables smart job management in a productive cluster of two or more Versafire presses, connected via the Prinect DFE.

The Digital Cluster production mode is a scalable solution requiring little up-front investment for growing the digital production volume with an eye on value for money.

The Versafire stands for reliability and quality. The integrated **Media Management Tool** provides automatic setting of over 200 press parameters to achieve the perfect printed image on a variety of substrates. Fine adjustment of these parameters is also possible for special substrates, for example if the end customer wants a special paper. The Versafire processes a wide variety of substrates, from synthetic, textured, and metalized materials and offset pre-printed materials, to special formats in widths of up to 1,260 mm or short runs of customized packagings. "The Versafire offers print shops a wide product portfolio, flexible tailoring and expansion of their range of print jobs, and thus new business models, and all with an attractive price/performance ratio, especially compared with liquid toner or inkjet systems," sums up Rainer Wolf. "Over 1,600 installations are proof of the Versafire's success in the professional printing environment. It is an integral part of our portfolio and a growing area we want to expand further."



<u>Press release dated March 26, 2020: Heidelberg sets off fireworks of innovation in sheetfed offset for the digital Smart Print Shop</u>

<u>Press release dated Tuesday, March 24, 2020:Next level Push to Stop:Systematically unlocking</u> OEE potential with intelligent digitization

**Figure 1:** Heidelberg showcases as a world premiere the automated workflow from PDF to stacked folded sheets for the first time.

**Figure 2:** The Speedmaster XL 106-8+P+L2020 generation has everything needed to systematically harness the performance of the press. Operator navigation reaches a new level with further intelligent assistance systems and the use of artificial intelligence.

**Figure 3:** With Plate to Unit, the new, fully automated printing plate logistics system at the press, the printing plates are provided and removed using a fully automated process.

**Figure 4:** An unattended transport system moves the finished sheet pile to the Stahlfolder KH 82-P folding machine. This is also integrated via the Push to Stop concept and detects the next signature automatically by the printed barcode.

**Figure 5:** Another world premiere in the area of folding machines is the Stahlfolder TH 56 Pharma, which sets a new performance standard in the growth field of pharmaceuticals with extensive automation and a robust machine platform.

**Figure 6:** The Versafire processes a wide variety of substrates and scores points for its flexibility.

**Figure 7:** Thanks to the tried-and-tested Heidelberg Color Management system, the color space of the Versafire is used in such a way that the result is best matched to the offset printed sheet.

Image material as well as further information about the company can be found in the Heidelberger Druckmaschinen AG press portal at <a href="https://www.heidelberg.com">www.heidelberg.com</a> or in the <a href="https://www.heidelberg.com">Media Library</a>.



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