



The perfecting press. **Speedmaster SX 102.**



We accompany you. On your journey into the digital future.

For over 160 years, Heidelberg has prided itself on having a vital edge. That's why print shops all over the world trust our expertise and experience. Now they are also looking to us to help with the digital transformation of their business. As a reliable partner and technology pioneer, we create added value. We do so by providing printing systems that use Push to Stop technology for autonomous, top-quality production and data-supported services. Services that are paving the way to the Smart Print Shop – the digitally connected, intelligent, highly automated print shop of the future. For better decisions, higher productivity, and enhanced efficiency.

We laid the foundations 15 years ago by creating presses that were connected online and analyzing the data to boost performance and availability. Today, we offer you an entire ecosystem for digitizing value creation at print shops. As well as smart services such as predictive maintenance. You also benefit from trendsetting business models such as pay-per-outcome. Under this model, Heidelberg provides all the necessary equipment, software, consumables, and services. You simply pay for the number of sheets printed – for “productivity on demand” that can be flexibly adapted to your requirements. We call this “Simply Smart”.



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One pass productivity. **Speedmaster SX 102.**

The Speedmaster® SX 102 is our perfecting press that combines the worldwide proven reliability with a user-friendly operating concept. A successful machine that has already proven itself thousands of times in print shops.

The Speedmaster SX 102 is the perfect investment in the future for commercial printers, publishers, and web-to-print print shops. The perfecting press in 70×100 cm (27.56×39.37 in) format offers dependably high output in straight printing and perfecting with speeds of up to 14,000 sheets per hour. The precision of our unique perfecting technology and the outstanding sheet travel ensure consistently high quality on both sides, even with very thin substrates.

Experience undreamt-of performance. With Push to Stop, the efficiency of print production (OEE) can be raised to a level that has been difficult to achieve in the past. The new Intellistart® 3 assistance system revolutionizes your job changes with comprehensive, time-optimized automation.

Push to Stop and the implementation of artificial intelligence offer you a unique user experience (UX): autonomous and navigated printing across the entire printing process.

Machine operation is now easier than ever – the new Heidelberg® User Experience on the drupa 2020 generation of the Speedmaster will inspire you.

Greater success in the market for small and large printing companies. **Optimizing OEE increases your production profitability.**

With the Speedmaster drupa 2020 generation, Heidelberg offers you the most highly automated and most intelligent Speedmaster yet. The smart machines in the series take advantage of the huge spectrum of digital possibilities for outstanding productivity and a significant increase in overall equipment effectiveness (OEE). The clear focus on operator-independent performance on the new Speedmaster raises Heidelberg's Push to Stop philosophy to a whole new level.

From the smart printing press to the smart print shop to the smart printing industry

Digitization is changing the printing industry. Heidelberg is making use across the board of the far-reaching optimization potential of digital technologies in the enhancement of its Speedmaster series with the objective of smart integration within the print shop and as part of a smart printing industry, where all stakeholders – print buyers, creatives, printing companies, service providers, and suppliers – are connected.

The future of industrial printing

Integrated communication along the entire process chain, paired with intelligent automation – this is the future of modern print production, whether for smaller businesses or large industrial printing companies. Intelligent production reduces complexity and speeds up processes autonomously. The key to this is digital connectivity with the Prinect print and media workflow. Big data provides the relevant information for optimizing results and monitoring the processes on an ongoing basis. Heidelberg is setting standards in the area of the smart factory through the direct and complete integration of printing processes

in industrial applications, and is thus driving the intelligently controlled production.

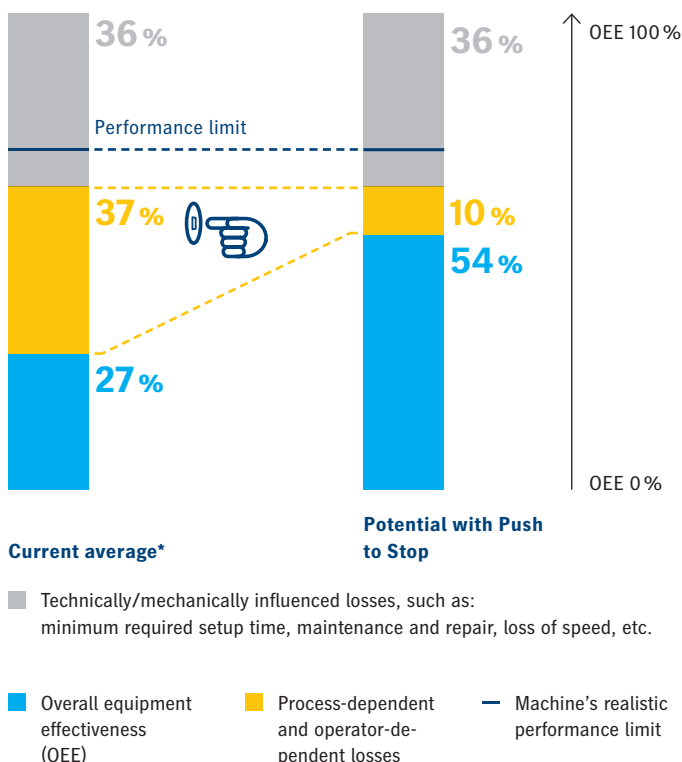
OEE – the key performance indicator for productivity

Overall equipment effectiveness is an important key performance indicator for assessing how effectively a production system is operated in practice. It is made up of the factors of availability, performance, and quality. The average OEE across all format classes is currently around 20 percent, and even the Speedmaster XL 106 from the Push to Stop generation, with an average OEE of 27 percent, still offers considerable improvement potential, since the OEE that can realistically be achieved is much higher.

This is proven by Speedmaster presses operating with an OEE of 50 percent and up. The average productivity is expected to double in the coming years. With up to 90 million printed sheets a year, the first Speedmaster users are already showing what is possible.

Increasing overall equipment effectiveness (OEE)

Significant reduction of process-dependent and operator-dependent downtimes through Push to Stop.



*OEE analysis 2020 using the example of a Speedmaster XL 106 and a run of 4,600 sheets

Exploiting potential: focusing on the yellow bar

In order to increase the OEE of the machines, existing improvement potential must be activated. Around half of this potential is tied to technical aspects (gray bar in graphic). However, technical improvements will not necessarily result in success – only if the organizational aspects are improved at the same time. The other half of the potential relates to processes and operators (yellow bar in graphic). This is precisely where Heidelberg concentrates its activities.

Process improvements and operator-independent solutions with Push to Stop have a direct effect on the OEE

Improvements that act on the yellow bar, in other words on the processes and operators, have a direct influence on the OEE. This is where the greatest potential lies. With Push to Stop, more extensive process automation, and intelligent assistance systems, the Speedmaster presses from the drupa 2020 generation enable even more comprehensive navigated and autonomous printing.

Speedmaster drupa 2020 generation: clear focus on operator-independent performance through intelligent automation.

- Close automation gaps
- Intelligent assistants for navigated printing
- Digital integration and use of digital data
- Potential of AI ensures optimal use of resources and highly effective production

The machine's intelligence minimizes the operator's influence on performance. Productivity is increased, processes are sped up, and become plannable and reproducible. The operator is navigated through the processes at a modern and attractive workstation, and in this way is better equipped to handle the greatly increased day-to-day requirements. Push to Stop on a new level – for optimized overall equipment effectiveness on all Speedmaster models.

Printing has never been so easy.

The new Heidelberg User Experience.

Immerse yourself in the new world of the Heidelberg User Experience (UX): completely rethought and clearer than ever before, it sets new standards for the user experience on the Speedmaster. The Prinect Press Center XL 3 with the new Speedmaster Operating System simplifies operation through one-of-a-kind navigation and new assistance systems, thus ensuring predictable results and increased performance.



A clear view for quality and precision

Heidelberg UX is the holistic and intuitive operation of all Heidelberg touch points. Intelligent assistants and a uniform user interface reduce complexity and simplify production processes.

Focus on you, the user

The Speedmaster Operating System with intuitive touch control turns the convenient control of the new Speedmaster into an experience. Settings can be called up with a click, and the scalable operation can be flexibly adjusted in accordance with the requirement profile. Intuitive operator guidance, innovative gesture control, and integrated help functions eliminate lengthy searches.

The Speedmaster Operating System delivers fast, simple and navigated use of all your machine's functionalities.

The most intelligent Speedmaster yet

Integrated assistance systems make your work easier. They look after routine tasks and ensure reproducible results.

Push to Stop – reliable performance through one-of-a-kind navigation and automation

For the first time, navigated printing with Push to Stop is possible on all Speedmaster machines. The patented Intellistart 3 defines all the steps required for the job change without any operator intervention and provides maximum transparency across all active and queued processes. Intelliguide® simulates the time-optimized sequence live and, if necessary, also includes the steps to be executed manually.

Everything at a glance

The Wallscreen XL completes the one-of-a-kind operator navigation for the highest performance demands. Intellirun, the new dynamic production view, shows the operator the right view at the right time, fully automatically, and provides intelligent information on the current production status. Intellirun thus not only supports you

Outstanding characteristics.

The facts at a glance.



Highlights:

- The Heidelberg User Experience at the Speedmaster with the Prinect Press Center® XL 3 sets new standards for the user experience on the press.
- The unique navigation tool Intellistart 3 and the assistance systems of the new Speedmaster Operating System ensure predictable results and increased performance.
- Prinect Inpress Control 3 automatically measures and controls color and register on the fly and at all speeds. As the press does not need to be stopped for either makeready or monitoring of the production run, Prinect Inpress Control 3 achieves maximum productivity.
- In combination with Prinect Inpress Control 3, the unique Quality Assist function automatically switches to production mode from job change mode once the pre-defined quality requirements are met.
- Database with substrate-dependent air characteristic profiles for all common substrates for making the perfect presettings using the Preset function.
- AutoPlate Pro for fully automatic, staggered plate changes.
- Our perfecting device with best-in-class perfecting technology delivers an outstanding, accurate, and reliable perfecting process at all production speeds.
- PerfectJacket® Blue: nano-coated, exchangeable impression cylinder jacket for all impression cylinders downstream of the perfecting device. Outstanding print quality in straight printing and perfecting.
- TransferJacket Blue: easy to change cylinder jackets with unique, ink-repelling special coating for minimal cleaning on all single-speed transfer cylinders.
- Blade washup device for inking unit and dampening system, blanket washup device for rubber blanket – for improved washing results, shorter washing cycles, and reduced washing fluid consumption.

Speedmaster SX 102 – the perfecting press, built for the future. The tried and tested base model of our 70×100 cm (27.56×39.37 in) perfecting press features innovative solutions from the XL series. The result is a versatile and economical press, perfectly tailored to the requirements of your customers and to your success.

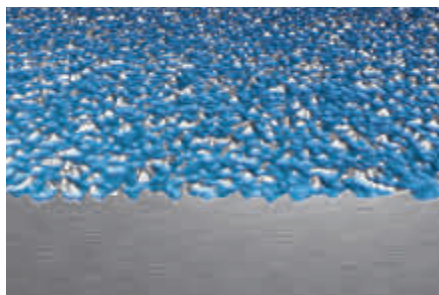


- The ink fountain is lined, making it quick and easy to clean. The ink zones require no calibration, and therefore also require no maintenance.
- The Color Assistant Pro software automatically compensates ink fountain liner wear before each job change for uniform and standardized ink presetting in each printing unit. Ink presettings for different papers, inks, and printing conditions are automatically corrected using a good sheet for less paper waste and faster job changes.
- The presettable, dynamic sheet brake gently decelerates the sheet under controlled conditions. The position of the brake modules is determined by the format and controlled using presets. The oblique position of the two outer suction slow-down brackets allows even thin materials to be straightened in order to place them in the pile.
- High level of automation for shorter makeready times, less paper waste, and dependably high print quality.
- Fast finishing with DryStar® LE UV and DryStar LED dryer technology.
- The CutStar® roll sheeter permits considerable cost savings by processing roll-fed stock.

➔ You can find more about technical data and facts here: heidelberg.com/sx102/technical-data



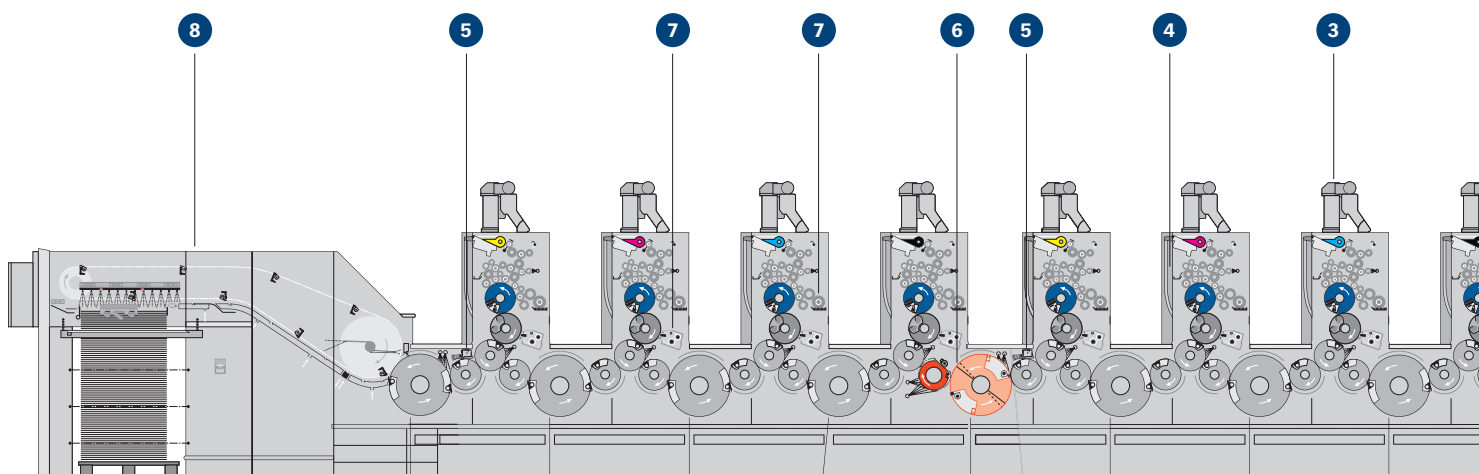
A perfect pile thanks to the Preset Plus delivery for smooth postpress operations.



PerfectJacket Blue with a special surface seal for high print quality in straight printing and perfecting mode.



The tried and tested cylinder configuration of the automated three-drum perfecting ensures reliable and precise sheet transfer.



Speedmaster SX 102-8-P with CutStar. The machine shown is a sample configuration. Some of the equipment features mentioned are optional.

1 Roll sheeter

- The CutStar roll sheeter with CAN connection combines the cost benefits of roll-fed stock with the flexibility of sheetfed offset printing.

2 Feeder

- Preset Plus feeder automatically adapts to format and air settings, for reduced makeready times and steady sheet travel.
- Control panel with touchscreen for intuitive and ergonomic operation of feeder and machine functions.

3 Inking unit and dampening system

- Tried and tested inking unit with lined ink fountain, perfectly combined with the unique, speed-compensated Alcolor® dampening system, for outstanding production stability, high contrast, and homogeneous printing of solid areas.
- Color Assistant Pro software for self-calibration of the ink zones and automatic adaptation of the characteristic profiles for perfect ink metering.
- Inking unit temperature control for constant production conditions and therefore stable print quality over the entire production run.
- InkStar® ink supply system for automatic filling of the ink fountains.

4 Printing unit

- AutoPlate Pro permits fully automatic, staggered plate changes within the shortest time.

5 Color and register measurement and control system

- Prinect Inpress Control 3 spectrophotometrically measures and controls the color inline during production. The register is checked at the same time and readjusted if necessary.

6 Perfecting device

- Unique perfecting technology with patented components from the peak performance class.



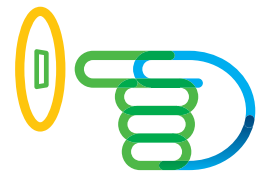
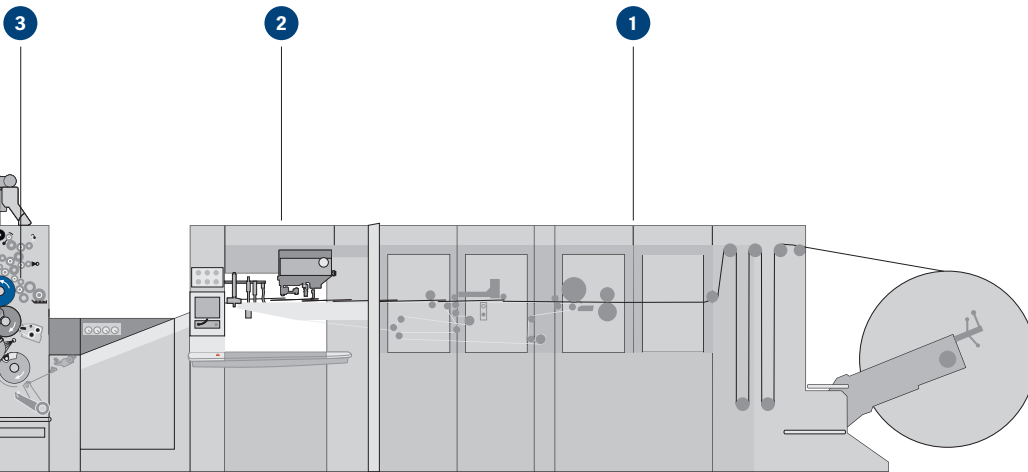
TransferJacket Blue with a special surface seal for markless sheet travel and much less cleaning.



Staggered plate changes with AutoPlate Pro – quick, easy, and fully automatic.



Optimal operation right from the beginning with the touchscreen – the first step to successful production.



Push to Stop.
The key to the Smart Print Shop.

7 Washup devices

- Fully automatic, program-controlled washup devices for inking unit and rubber blanket with sensor-based monitoring and extremely short washing times.

8 Delivery

- Preset Plus delivery permits high-precision pile formation with the shortest makeready times by adopting presetting data.
- Presettable, dynamic sheet brake accepts the sheet at production speed, straightens it, and decelerates it to the delivery speed under controlled conditions.

→ You can find more about the details of your Speedmaster here: heidelberg.com/en/sx102

Print Site Contracts.

Lifecycle Smart & Plus:
Partnering for flexibility.

With Lifecycle Smart & Plus, we supply you with everything you need for your print shop: services, spare parts, consumables and software. Working closely with you, we put together the products that most precisely match your requirements – choosing the scope, quantities, service level and billing mode that best fit your business. So you always have exactly what you need to stay commercially flexible and responsive.

→ Find out more: heidelberg.com/en/printsitcontracts



Modern working environment on the Princt Press Center XL 3 with 24-inch multi touchscreen and LED standard daylight lamp for optimal sheet coordination.



Consistently ergonomic design for easy operation.

during the automated job change, but also throughout production. For the first time, all production steps are supported by an up-to-date overall view. The feeder display also shows important job information for optimal integration of the helper.

Perfect data and color management with Princt

The Princt Press Center XL 3 links the printing press to the print shop's Princt workflow. Job data can be transferred and also made available in an automatically defined sequence. The production data is returned fully automatically. This enables you to benefit from excellent data management, one-of-a-kind presettings, up-to-date production data, and informative reports.

The Princt Inpress Control 3 inline color measurement system stands for high productivity. The powerful Princt Axis Control and the Princt Image Control 3, which measures the entire print image, also offer you optimal, reproducible color stability and minimum paper waste. All color measurement systems are perfectly integrated into the workflow via the central color database and provide automated color reports.

Simply – fast – reliable: the new Heidelberg UX on the Speedmaster SX 102

Experience the Heidelberg UX on the Speedmaster SX 102 also. Every time you operate a component you are experiencing the Peak Performance concept. From the seamlessly ergonomic design, to the pioneering touchscreen control panels, the simple handling of the washup devices to the unique preset functionality, the Speedmaster SX 102 delivers an unparalleled user experience.

Fast finishing.

DryStar LE UV and DryStar LED technology.

Equipping your Speedmaster SX 102 with DryStar LE UV or DryStar LED increases your options in terms of your range of services and the performance of your press.

The various DryStar UV systems increase your range of services and the performance of your Speedmaster SX 102. You have greater flexibility in the choice of substrate available to you, since plastics and natural papers can also be used.

Modern UV technology reduces the throughput times in your print shop. In times of short production runs and fast turnarounds, having the sheet arrive dry in the delivery for immediate forwarding to postpress is a huge advantage, particularly for commercial printers and web-to-print providers.

Saving energy with complete flexibility

The UV system is fully integrated into the operating concept of the press and precisely coordinated with its performance features. Regardless of whether based on lamp or diode technology, UV systems deliver the most efficient energy use and complete flexibility thanks to the ability to select the position of the interdeck dryers. The slide-in dryer modules can be changed without the need for tools, which shortens the makeready times when changing jobs. Mixed-operation applications are also possible with both

technologies, and are another way to fully expand your range of applications.

DryStar LE UV

Sheets produced using an LE UV system are instantly dry. This technology therefore enables very short throughput times and fast finishing. It helps commercial printers in particular to process short production runs with fast turnarounds quickly and efficiently. A wider range of substrates can also be processed compared with conventional production and further special effects can be offered. The investment volume is lower compared with DryStar UV systems and you gain the option of ozone-free production.

The Instant Start software reduces waiting times when changing jobs. The bulb, reflector, and shutter technology of both systems has been designed to get the most out of the energy used. The benefits of this for you are a longer bulb lifespan and reduced energy consumption when the system is in standby mode.



DryStar LED

Commercial printers and web-to-print providers also benefit from instant drying and ozone-free production with LED diode technology, and the mercury-free and future-oriented technology also provides a way to set themselves apart from the competition. Maximum energy efficiency without any radiant heat in the press provides the best possible production conditions. With DryStar LED, you get a perfectly dry sheet through the precise focusing of the light and the optimal distance from the sheet travel.

No power is consumed in standby mode (makeready times, washing times) thanks to the Instant On/Off system. The power consumption is further minimized by the timing of the diodes based on the format length. The Auto Format setting only activates those diodes actually required for the format width.

Our technology

The sophisticated temperature and power management guarantees a durable technology, even after up to 20,000 hours of operation.

➔ **You can find more about the DryStar LE UV and DryStar LED technology here:**
heidelberg.com/en/starsystem

Machine and market.

Successful straight printing and perfecting.

The Speedmaster SX 102 is the ideal press for high productivity in commercial printing, publishing, and web-to-print. It guarantees you short throughput times and the highest quality printing on both sides thanks to our perfecting technology. The numerous configuration options of the Speedmaster SX 102 enable it to be precisely tailored to your requirements.

Publishing

The current trend in publishing is towards niche magazines. As a result, run lengths are getting shorter. However, efficient production is also a basic requirement for commercial success with other publishing products such as books and calendars. The Speedmaster SX 102 offers top quality and high productivity here. With its tried and tested platform and the transfer of technological innovations from the peak performance class, the press is designed to provide the highest performance day after day.

You can choose from various press models and configurations depending on your requirements. AutoPlate Pro and Prinect Inpress Control 3 also provide benefits such as fast makeready and throughput times as well as dependable print quality.

The reliable perfecting device transfers sheets with excellent register accuracy during the perfecting process and ensures scratch-free and markless sheet travel. The jacket technology with PerfectJacket Blue and TransferJacket Blue guarantees you consistently high print quality on both sides. The special surface seal also increases the lifespan of the jackets and reduces the amount of cleaning required.

Web-to-print

Web-based order placement and processing of masters delivered online in an automated and standardized process offers the web-to-print customer huge advantages: easy ordering, cost-effective creation of high-quality print products (including in short runs), and fast delivery. For their part, the web-to-print print shops benefit from gaining new customers and retaining existing customers with innovative offerings.

The Speedmaster SX 102 offers you big advantages in this market. The high level of automation with Prinect Inpress Control 3 and AutoPlate Pro as well as the numerous preset options shorten your makeready processes. Double-sided printing in one pass and the use of the UV dryers DryStar LE UV or DryStar LED mean instant sheet drying, short throughput times, and therefore fast delivery performance.

Traditional commercial printing

Commercial products are facing tough competition from digital platforms as an advertising medium. However, print media still have clear benefits. The feel and high-end appearance of the printing medium lend the product to be advertised an overall sense of quality. The combination of digital elements like QR codes or augmented reality elements and premium printed products deliver critical added value. Success in this market demands a lean and



efficient production process that optimizes the costs and cost efficiency. Speedmaster perfecting presses offer a wide range of options here for responding flexibly to individual requirements and at the same time achieving the highest quality.

The highly automated feeder and delivery offer outstanding operating stability and pile formation with fully automatic presettings for all relevant format and air values on the basis of substrate-dependent characteristic profiles stored as factory settings. This minimizes your makeready times and allows you to achieve high production speeds.

DryStar LE UV and DryStar LED bring all the advantages of UV printing to commercial printing.

Special applications

The Speedmaster SX 102 can be specifically configured for special applications. For example, drug package inserts on lightweight paper can be produced extremely cost-effectively in one pass using a 1/1-color press. The CutStar roll sheeter additionally reduces your costs. The StaticStar® Compact antistatic device achieves clean sheet separation, optimum sheet travel, and exceptionally high production speeds, all of which are especially important for light grammages. The equipment package perfectly matched to

the requirements of light grammages increases your net production speed by 500 to 1,000 sheets per hour.

➔ **You can find user reports on the individual topics here:**
heidelberg.com/sx102/user-reports

Leader in the printing process.

10 clear benefits.

Makeready

No more flying blind – with Prinect Inpress Control 3, the first measuring results are delivered after **less than**

30 sheets

and the run is ready to start in **under 1 minute.**



50 %

less makeready time with AutoPlate Pro compared to AutoPlate.

Intelligent **assistance systems** for a continuous **process optimization.**

Productivity

Less than

3 minutes

to select 30 jobs on the fly and then process them in a fully automated workflow.

Protective liner instead of metal – cleaning the ink fountain takes just **1 minute** instead of **4 minutes.**

World champion in turning technology. Proven a thousand times over.



Up to **100,000 €** saved per year by using roll-fed stock (7% cheaper) in combination with CutStar.

User friendliness



Autonomous printing

fully automated changeover from the last to the first good sheet – the ultimate solution of navigated printing.

100 % transparency, even with complex job changes, thanks to the innovative, process-oriented operator guidance system Intellistart 3.

Navigated and easy production. Just **2 clicks** to select and release jobs for printing.

Simply get in touch. Your dialog with Heidelberg.



We hope this brochure has inspired you. Our aim is to make you even more successful in the future, so feel free to contact us with your questions and suggestions. We're only ever an e-mail or phone call away.

We look forward to hearing from you!

Whether you're just curious or have specific things you'd like to ask, simply send an e-mail with your questions, requests, or comments to

➔ info@heidelberg.com

or use our contact form at

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For details on the emissions of the Speedmaster SX 102, please visit us at heidelberg.com/emissiondetails

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