



The universal press. **Speedmaster CX 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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CO₂
router

Intelligence

HEIDELBERG
Speedmaster

CO₂
router

Future built-in.

Speedmaster CX 102.

With the Speedmaster® CX 102, we offer you a press concept that combines proven reliability with a new modern operating concept.

The Speedmaster CX 102 is the universal straight-printing press in 70 × 100 format. With speeds of up to 16,500 sheets per hour, there are very few challenges in commercial, label, and packaging printing that it cannot handle, and no customer requirements that it cannot meet. The perfect interaction of all components enables the Speedmaster CX 102 to easily process all materials from lightweight paper through to rigid cardboard.

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. The new Intelliline can be used to visualize the respective machine states.

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.

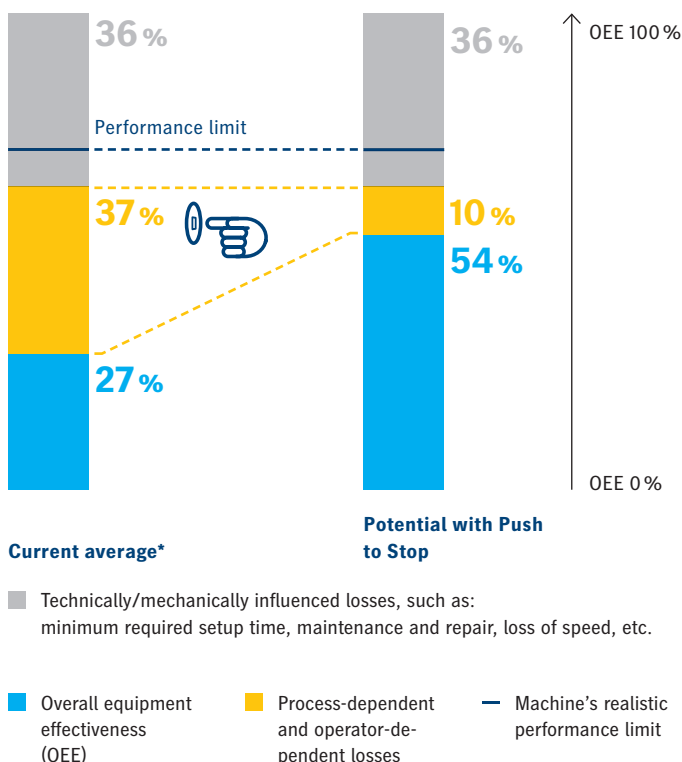
OEE – the key performance indicator for productivity

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 Intelstart 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 on the Speedmaster with the Prinect Press Center® XL 3 sets new standards for the user experience at the press. The unique navigation through Intellistart® 3 and the assistance systems of the new Speedmaster operating system ensure predictable results and improved 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 high productivity.
- AutoPlate Pro for fully automatic, staggered plate changes
- AirTransfer system with universal grippers on the transfer drum for materials in the range from 0.03 through 1.0 millimeters. Simplified operation and minimal changeover effort with different paper and cardboard qualities.
- Blade washup device for inking unit and dampening system, blanket washup device for blanket and impression cylinders – for improved washing results, shorter washing cycles, and less washing fluid.
- 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.
- Automatic non-stop delivery for fully automatic, interruption-free pile changes

Speedmaster CX 102 – the universal straight-printing press, built for the future. The tried and tested base model of our 70 × 100 presses features innovative solutions from the Peak Performance class. The result is a versatile, flexible, and economical press, perfectly tailored to the requirements of your customers and to your success.



- Maximum speeds of up to 16,500 sheets per hour per hour for all materials, from lightweight paper up to cardboard.
- 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.
- Ergonomic, operator-oriented design offers optimal access to all components.
- The components of the Star system are optimally coordinated with the press and integrated, for high energy efficiency and the short makeready times.
- Perfect solutions for a variety of requirements thanks to a wide range of models and technologies.

➔ **You can find more about technical data and facts here: heidelberg.com/cx102/technical-data**

Prinect Workflow.

One for all!

Prinect Business and Prinect Production merge all print production stages into a single, end-to-end process – from costing to prepress, press and postpress right through to invoicing. Reduce complexity, boost your profits: With Prinect, you can access all workflow functions while only paying for the volume you actually produce, rather than for individual licenses.

➔ **Find out more:**
heidelberg.com/en/prinect



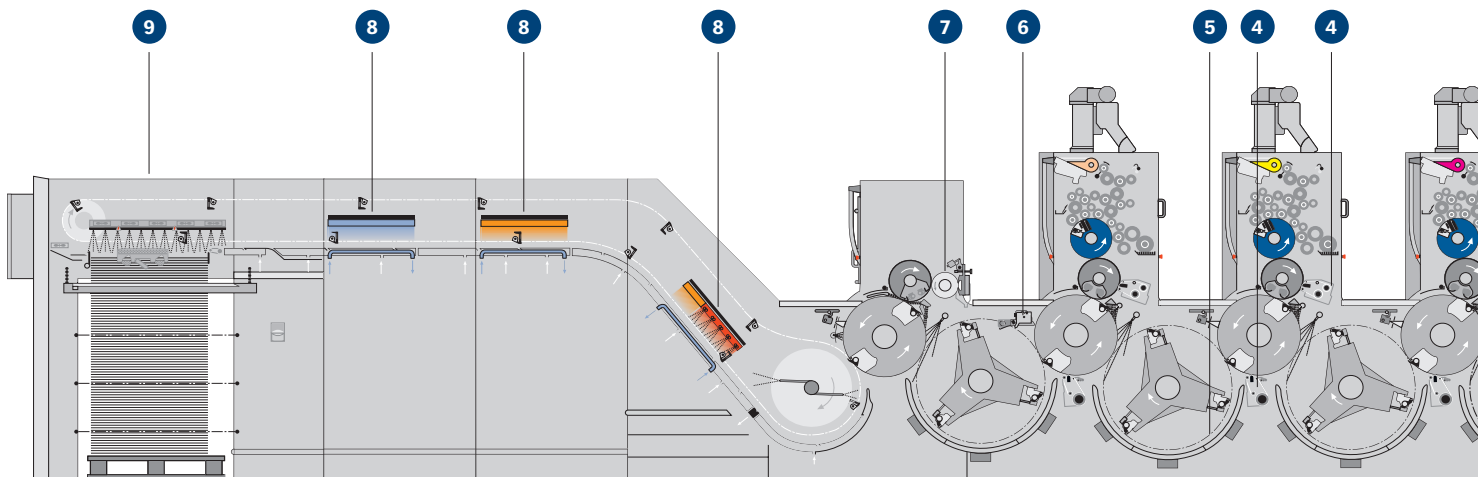
Uninterrupted production with the automatic non-stop system at the delivery.



The Speedmaster CX 102 offers brilliant finishing options for the highest demands for that something special.



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



Speedmaster CX 102-5+L. The press shown is a sample configuration. Some of the equipment features mentioned are optional.

1 Feeder

- Preset Plus feeder automatically makes 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.

2 Inking unit and dampening unit

- 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 adaption of the characteristic profiles for perfect ink metering.

3 Printing unit

- AutoPlate Pro permits fully automatic, staggered plate changes within the shortest time. InkStar® ink supply system for automatic filling of the ink fountains.

4 Washup devices

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

5 Sheet travel

- AirTransfer system, the patented, contact-free sheet guide with Venturi nozzle technology for outstanding sheet travel quality and substrate flexibility.

6 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.

7 Coating unit

- High-quality chamber blade system consisting of a blade chamber, exchangeable screen roller, and ink collecting pan with level sensors as well as a quick-change system for the blades for a homogeneous coating application with a high degree of gloss.

8 Dryer system

- DryStar Combination with infrared as well as hot-air and recirculated-air modules is optimally coordinated with the sheet travel – for excellent drying results.



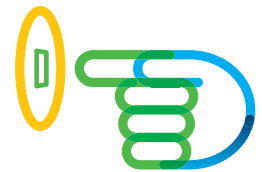
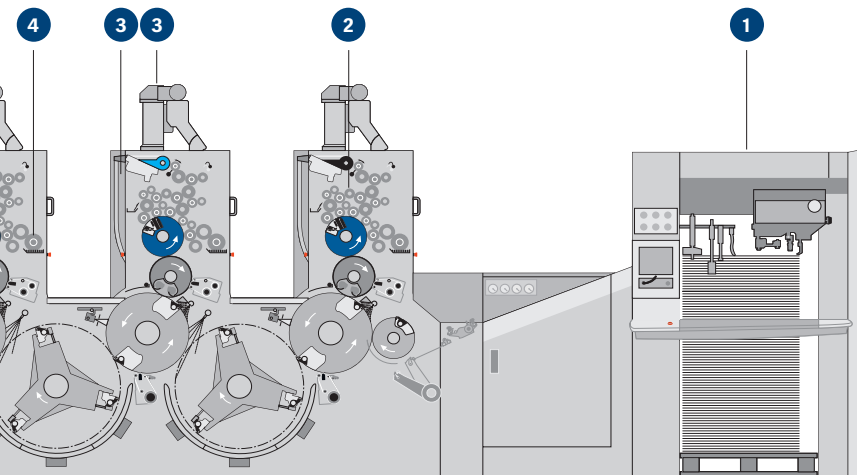
AirTransfer system with universal grippers – contact-free sheet transport of all materials using Venturi nozzles for consistently high print quality.



Lined ink fountain for lightning fast ink changes.



The first step to successful production – optimal operation using the touchscreen



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

9 Delivery

- Preset Plus delivery permits high-precision pile formation with the shortest makeready times by adopting presetting data.
- Automatic non-stop device for fully automatic, interruption-free pile changes at the delivery.
- 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/cx102

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/printsitecontracts



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



Intelliline offers one-of-a-kind assistance and transparency at the machine and navigates you through any manual steps required.

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.

The new **Intelliline LED-based navigation support** extends this logic to the machine. The resulting expansion of the Intelliguide, Intellistart 3, and Intellirun process displays provides a color visualization of the unit status on all printing, coating, and drying units on the operator and drive sides. You can keep an eye on everything at all times and are prompted when intervention is required.

What this means is a new era of navigated and autonomous printing with Push to Stop. Uninterrupted productivity with the fully automated job change – from the last sheet to the first good sheet and the start of production.

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 presets, 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 CX 102

Experience the Heidelberg UX on the Speedmaster CX 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 CX 102 delivers an unparalleled user experience.

Machine and market. Equipped for all requirements.

The Speedmaster CX 102 is the universal press for almost all requirements. The wide range of substrates and high level of automation allow you to offer your customers a comprehensive product range and maximum flexibility and, in this way, contribute to your overall success, especially in growing markets.



The universal press

The Speedmaster CX 102 is the ideal press for customers that process a wide range of substrates. Whether traditional advertising materials or products from the area of packaging printing, you can rely on the Speedmaster CX 102.

Packaging printing

Packaging sells. A product must be eye-catching if it is to stand out from a rival product. More than ever, this is accomplished today with surface textures and Iriodin effects that not only increase the signal effect of the packagings, but also their protective effect. Effects and multi-sensory experiences fulfill the consumer's need for packaging that appeals to all the senses.

The Speedmaster CX 102 provides all the prerequisites for success in high-quality packaging printing. The cardboard kit offers reliable sheet travel when processing cardboard packagings. The FoilStar® cold foil module opens up a variety of unusual finishes – brilliant metallic effects that add value to print products. UV technology adds high-gloss effects and eliminates waiting times during processing.

The Prinect packaging workflow integrates all of your print shop processes into a single workflow. Fast, flexible, and cost-transparent production delivers precisely reproducible processes and top quality.

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 and premium printed products delivers critical added value. Success in this market demands a lean and efficient production process that optimizes the costs and therefore the cost efficiency.

The print shops that benefit most from the strengths of the Speedmaster CX 102 are those with frequent job changes, short production runs, and standardized jobs: the highly automated high-performance feeder and delivery offer outstanding operating stability 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.

The innovative DryStar LE UV and DryStar LED dryer technology now brings all the advantages of UV printing to commercial printing.

➔ You can find user reports on the individual topics here: heidelberg.com/cx102/user-reports

Energy-efficient and climate-neutral. Trailblazer in green printing.

As a trailblazer in green printing, we develop solutions for conserving resources and sustainability. That is why the Speedmaster CX 102 not only sets technological standards in terms of its productivity, but also its environmental friendliness.

The Speedmaster CX 102 is geared towards environmentally responsible production in every aspect. The peripherals are optimally tailored to the press and thus help to ensure resource-efficient printing.

Dampening solution conditioning with the CombiStar

Reducing or completely eliminating the use of alcohol by equipping the press with special packages makes another important contribution to green print production. This results in a print process that delivers environmentally friendly operation at lower costs.

Energy-efficient central air supply

AirStar Pro combines virtually all individual blowers providing vacuum and blast air in a single, central air supply cabinet. Unique energy- and space-saving turbo radial blowers double the efficiency. This means that your energy consumption is reduced by up to 50%. The significant reduction in maintenance saves you time, energy and money.

Compressed air supply free of oil and condensation

Thanks to its low-wear design and the high power reserves, the energy-efficient ScrollStar offers you low energy consumption as well as excellent reliability and availability – for safe, resource-efficient production.

Main drive with the highest efficiency

The electronically controlled sine synchronous drive of the Speedmaster CX 102 offers impressive energy efficiency. The main drive of the press is especially reliable. The outstanding efficiency of up to 95 percent ensures high availability and low operating costs.

Energy-saving standby function

The standby function switches the press to energy-saving mode at the press of a button on the Prinect Press Center XL 3 if production is interrupted. This is an advantage that quickly pays dividends.

The CO₂-neutral press

CO₂-neutral production of the Speedmaster CX 102 is possible if the customer so wishes. During the production of the presses, the unavoidable CO₂ emissions are offset by investments in high-value gold standard certificates.

➔ **You can find more about our commitment to the environment here:**

www.heidelberg.com/environment

Leader in the printing process.

15 clear benefits.

Makeready



50 %

less makeready time with AutoPlate Pro compared to AutoPlate.

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**.

Color Assistant Pro

Fast makeready times thanks to intelligent assistance systems.

Productivity



Autonomous printing

Fully automated job changes – from the last to the first good sheet – the ultimate solution for **navigated printing**.

Perfect **solutions** for a wide range of requirements.

Maximum speeds up to

16,500 sheets/h

for all materials, from lightweight paper through to cardboard.

User friendliness

100 %

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

Easy, navigated production. Just

2 clicks

to select and release jobs for printing.

Intelligent assistance systems

support the operator and minimize the operating steps.

Availability



Remote connection makes error analysis on average

50 %

faster.

Worldwide **service network** in

170 countries

enables fast and competent assistance to ensure high availability of the machinery.

Ecology



Wash Assistant –

always the optimum washup program for efficient and resource-friendly washing.

Only

2 cl

of washing fluid for each rubber blanket wash cycle.



Save without switching off – the standby function cuts electricity consumption

by up to 50 %.

Prinect Press Center XL 3 with LED daylight lamp combines performance with **high energy efficiency**.

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

➔ heidelberg.com/info



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

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