Speedmaster CX 102

HEIDELBERG

Built for the Future.
Welcome to the Speedmaster CX 102.

Flexibility for Success – The Ideal Combination of Innovation and Stability.

Speedmaster CX 102 – the benchmark in its class.

The perfect combination. With more than 100,000 printing units sold, the Speedmaster® 102 creates a successful foundation for the Speedmaster CX 102. Combined with state-of-the-art Speedmaster XL components from Heidelberg®, the Speedmaster CX 102 is synonymous with outstanding straight printing technology in its class. It offers the perfect combination of reliability and innovation and gives you a crucial competitive edge.

Impressive flexibility. The Speedmaster CX 102 delivers equally impressive performance whether used for packaging, label, or high-end commercial printing, boasting significantly reduced makeready times and high production speeds of up to 16,500 sheets per hour. The press accepts a broad spectrum of substrates with grammages ranging from light-weight paper to bending-resistant cardboard, thus offering great flexibility and almost universal application. The wide range of configuration options and components makes it possible to adapt the Speedmaster CX 102 to your precise requirements.

And the high degree of automation saves you time and money. The ergonomic operation of the entire machine makes for optimum efficiency and cost-effectiveness. You benefit from a tailor-made machine that paves the way for profitable production. This makes the Speedmaster CX 102 an ideal investment in the future.

Technology for the environment. As a pioneer of ecological printing, Heidelberg develops solutions to eliminate or reduce carbon dioxide (CO_2) and process emissions and cut waste. Consequently, the technology of the Speedmaster CX 102 sets standards in more than just productivity. Its high energy and resource efficiency make it the most environmentally friendly press in its class. A measuring device can be used to measure and display the press' energy efficiency per 1,000 sheets during production. This allows the operator to run the machine with exceptional energy-efficiency values. Another way of reducing energy requirements is to employ a heat recovery system to reuse heat from the waste air from the DryStar® Combination dryer for the drying process. The Star System peripherals are perfectly coordinated with the press. They are highly efficient and designed to save energy and resources. Reducing or completely eliminating the use of alcohol by equipping the press with special packages makes another important contribution to ensuring environmentally friendly print production. This results in a print process that delivers eco-friendly operation at low costs.

The Speedmaster CX 102 at a glance:

- Production speeds of up to 16,500 sheets per hour
- Broad product spectrum from light-weight paper to bending-resistant cardboard
- Optimized sheet travel, reinforced printing unit side frames, and cylinder bearings and gripper system from the Speedmaster XL series for robustness and stability in the production run
- High-performance Prinect Press Center® and Intellistart® process-oriented operator guidance system for simple and ergonomic operation
- Highly automated Preset Plus Feeder and Preset Plus Delivery for short makeready times
- Control station with touchscreen for intuitive and ergonomic operation of feeder and press functions
- Prinect® Inpress Control inline measuring system for significantly reduced makeready times and paper waste
- Fully automated, staggered plate changing with AutoPlate Pro for rapid makeready
- Contact-free sheet travel with the AirTransfer system
- Coating unit with chambered blade system and remotely adjustable circumferential, lateral and diagonal register
- Highly efficient DryStar dryer systems that are perfectly coordinated with the sheet travel

This information and all subsequent details are dependent on the press configurations, job structures, and in-house processes.

The First Step to Successful Production.
The Preset Plus Feeder Creates the Best Possible Conditions from the Outset.

The perfect start for productivity and flexibility – the Preset Plus Feeder of the Speedmaster CX 102.

The perfect start. The Preset Plus Feeder of the Speedmaster CX 102 sets the course for successful production. Its reliable sheet separation, smooth and precise feeding of the sheet into the first printing unit, and excellent feed registration lay the foundation for optimum results at print speeds of up to 16,500 sheets per hour. The high degree of automation reduces makeready times and increases productivity considerably. A multi-stage sheet monitoring system ensures reliable production. During transfer to the first printing unit, the Preset Plus Feeder ensures excellent print quality – by ensuring precision right from the outset.

Preset Plus Feeder technology at a glance:

- Control station with touchscreen for intuitive and ergonomic operation of feeder and press functions
- Automatic air presettings based on format and substrate thickness
- Air settings controlled by characteristic curves stored for all substrate thicknesses
- Speed-compensated blast air for reliable sheet separation at any speed
- Automatic sheet arrival control for uninterrupted production
- Venturi technology at the front lays for optimum sheet positioning
- Pneumatic pull lay for precise sheet alignment
- Multi-stage sheet monitoring system consisting of a multiple sheet detector and ultrasonic and pull lay double-sheet detectors
- Shingle stream control for the detection of foreign particles, particularly when processing cardboard
- Autopile roller conveyor system for automatic material flow
- Feeder with fully-automatic non-stop device for uninterrupted pallet changes

Suitable Star System peripherals:

CutStar®: Sheeter for processing cost-effective reel stock

StaticStar®: Anti-static system minimizes static charges and optimizes sheet travel when processing critical substrates, e.g. plastic films
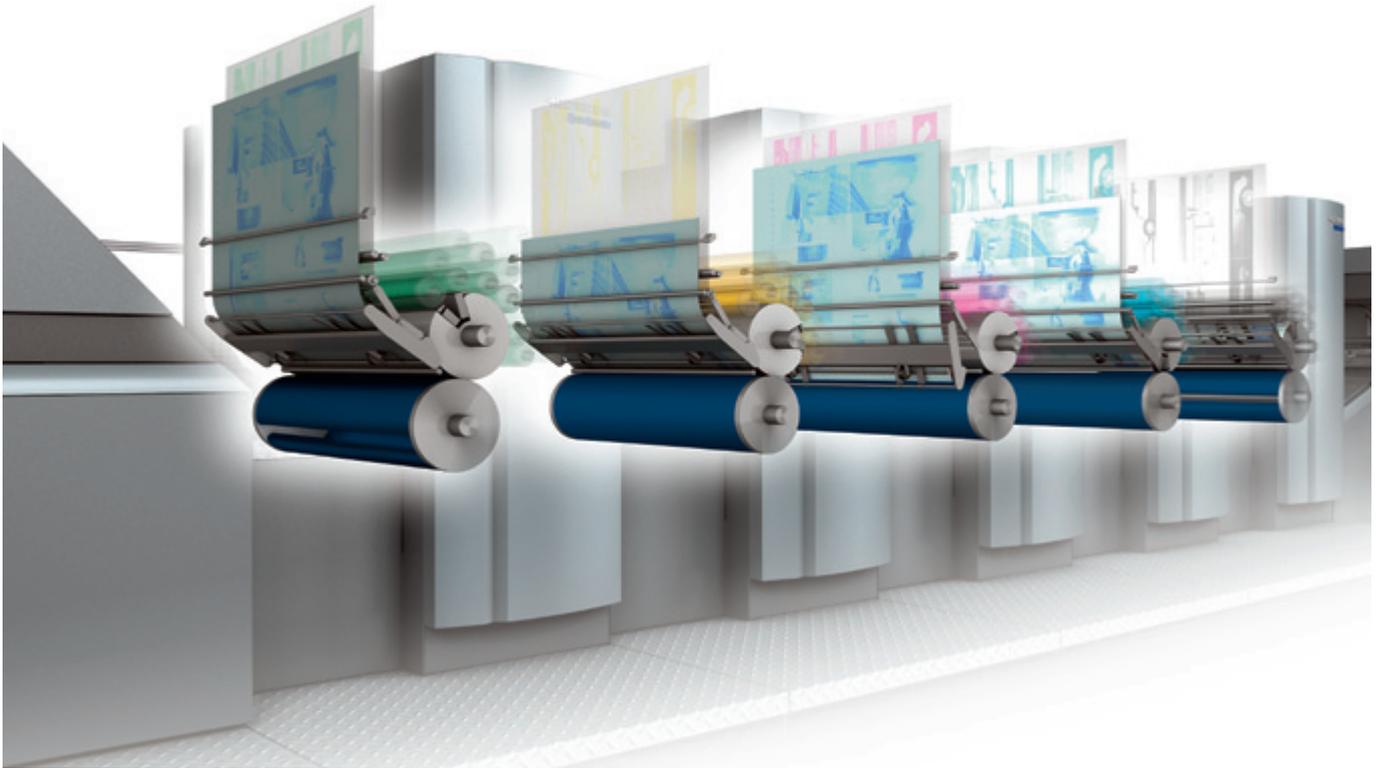

Control station with touchscreen – intuitive and ergonomic.

The advantages for your printing process:

Makeready times: Your makeready times will be cut by up to five minutes compared with presses with lower levels of automation thanks to format- and substrate-dependent presetting data. Stored, job-related settings help reduce makeready times further still. • **Productivity**: The multi-stage sheet monitoring system ensures reliable production. Autopile and the non-stop device boost your productivity considerably thanks to uninterrupted production. • **Quality:** Excellent feed registration creates the basis for outstanding print results. • **Ergonomics:** The control station with touchscreen ensures ease of operation. • **Environment:** Reducing paper waste helps conserve valuable resources and cut CO_2 emissions.

Quality as Standard.
Printing Units and Sheet Travel – Precision Down to the Last Detail.

Staggered plate changing with AutoPlate Pro – fast and fully automated.

Quality comes from precision. Precision is the basis for optimum print quality from the first sheet to the last. Smooth running is ensured through the stronger and more robust printing unit design and tried-and-tested components from the Speedmaster XL series. This results in absolutely reliable sheet travel at production speeds of up to 16,500 sheets an hour over the entire print run.

Contact-free sheet transport with Venturi nozzles.
Air-supported sheet guidance is another factor in ensuring reliable sheet travel and consistently high print quality on the press. Sheets are transported on a cushion of air from one printing unit to the next all the way through to the delivery without marking or scratching.

However, quality is just one factor in ensuring economic success. The makeready times also play an important part. These are cut considerably by the rapid washup processes of the Speedmaster CX 102 and the register-accurate and fully-automatic plate changes. Inline measurement and control of ink and register during production saves more time and cuts paper waste further still.

Printing unit technology at a glance:

- AutoPlate Pro for fully automated, staggered plate changes
- Reinforced side frames for a more robust printing unit and stable and low-vibration sheet travel
- Stronger printing unit design and high-performance cylinder bearings for reliable sheet travel
- Prinect Inpress Control measures and controls ink and register inline during production
- AirTransfer system with Venturi nozzle technology enables contact-free sheet travel
- Automatic washup devices for blanket and impression cylinders working simultaneously

Suitable Star System peripherals:

- WashStar®: Washup device for automatic rinsing of the collecting pans and removal of the used cleaning agent
- FoilStar®: Cold foil module with inline application for a wide range of unusual surface finishes
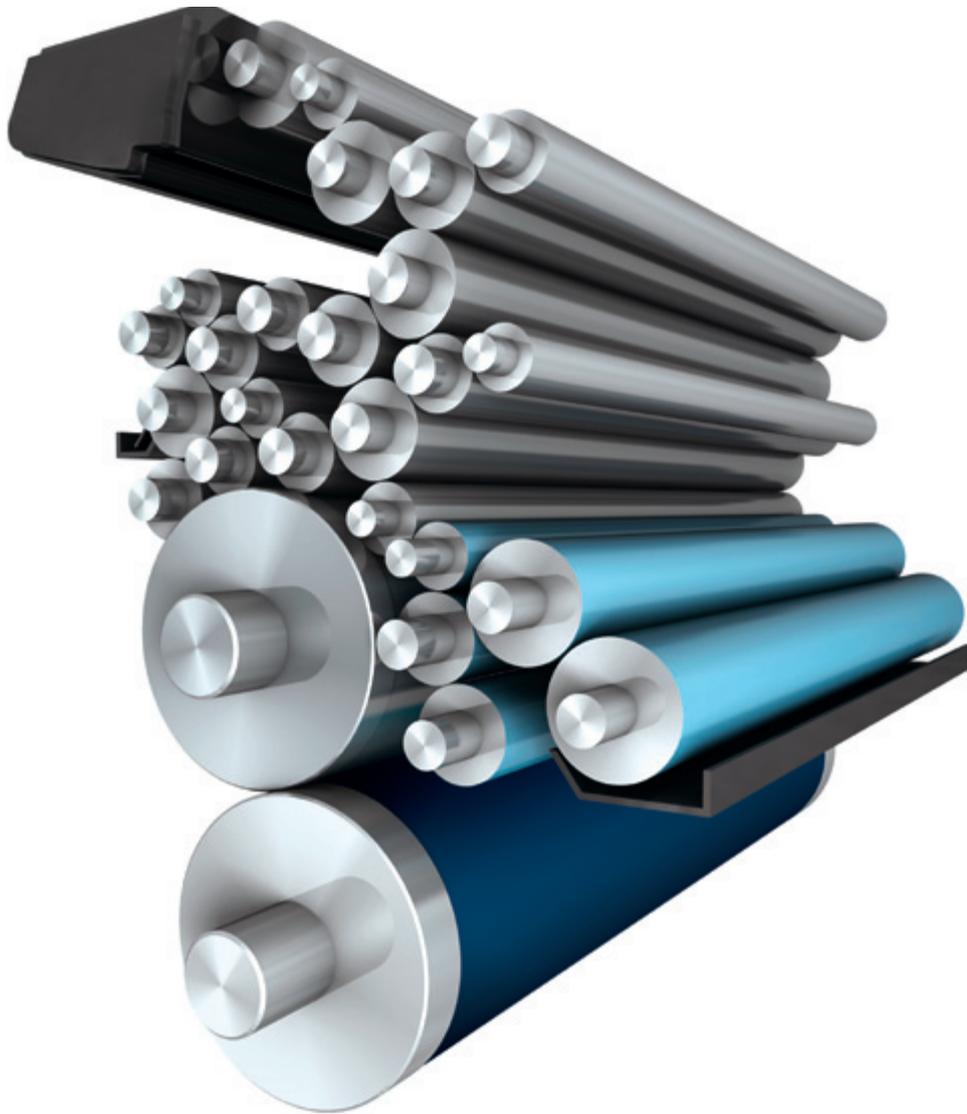

Innovation through technology transfer – the printing units of the Speedmaster CX 102.

The advantages for your printing process:

Makeready times: Fast and automatic plate changing with AutoPlate Pro and simultaneous washup devices cut your makeready times considerably. Prinect Inpress Control speeds up the setup process and saves you valuable time. The AirTransfer system provides effective support for the quick and easy exchange of substrate thicknesses. **Productivity:** Inline measurement and control of ink and register on the fly provides a significant boost to your productivity. • **Quality:** The side frames and stronger printing unit design ensure low-vibration and smooth sheet travel while producing up to 16,500 sheets an hour. Monitoring ink and register with Prinect Inpress Control ensures high stability over the entire print run. • **Environment:** Prinect Inpress Control reduces paper waste, thereby saving valuable resources. The index function of the FoilStar lowers consumption of the polyester foil substrate, which in turn results in annual carbon savings of between 70 and 130 metric tons.

Focus on Precision.
Fast and Consistent – Inking and Dampening Systems.

Stable coloring throughout the run with the inking and dampening system.

Perfect color – faster. Maintaining the desired color throughout the print run is crucial for ensuring high print quality. The inking units react extremely quickly to color adjustments. Comprehensive preset functions make it possible to adopt ink presettings. This results in shorter makeready times and less paper waste.

The dampening systems of the Speedmaster CX 102 generate a particularly thin film of dampening solution, which ensures a consistent ink/water balance. This results in excellent dot definition, high contrast, and smooth full-area printing.

**Inking and dampening system technology
at a glance:**

- Color Assistant Pro:
  - Fully automated monitoring of the ink fountain liner, self-calibration of the ink zones, and automatic adjustment of characteristic curves for high-precision ink metering
  - Customized optimization of ink presettings for different papers, inks, and printing conditions
- Ink fountain liner for fast and clean ink changeover
- Preset function for adopting ink presettings
- Fast reaction to color changes during the setup process
- Color Fast Solution speeds up the inking unit response by 50 to 70 percent
- Automatic distributor switchoff to ensure the color profile is not lost when printing is interrupted
- Spring-loaded end position damping of the ink distributors for smoother running
- The point at which the distributor comes into play can be adjusted directly on the Prinect Press Center
- Speed-compensated Alcolor® dampening system with Vario function to prevent hickeys
- Matt chrome-plated dampening distributor below the dampening form roller for an even film of dampening solution
- Automatic, program-controlled inking unit washup device
- Equipment packages available for alcohol-reduced or alcohol-free printing

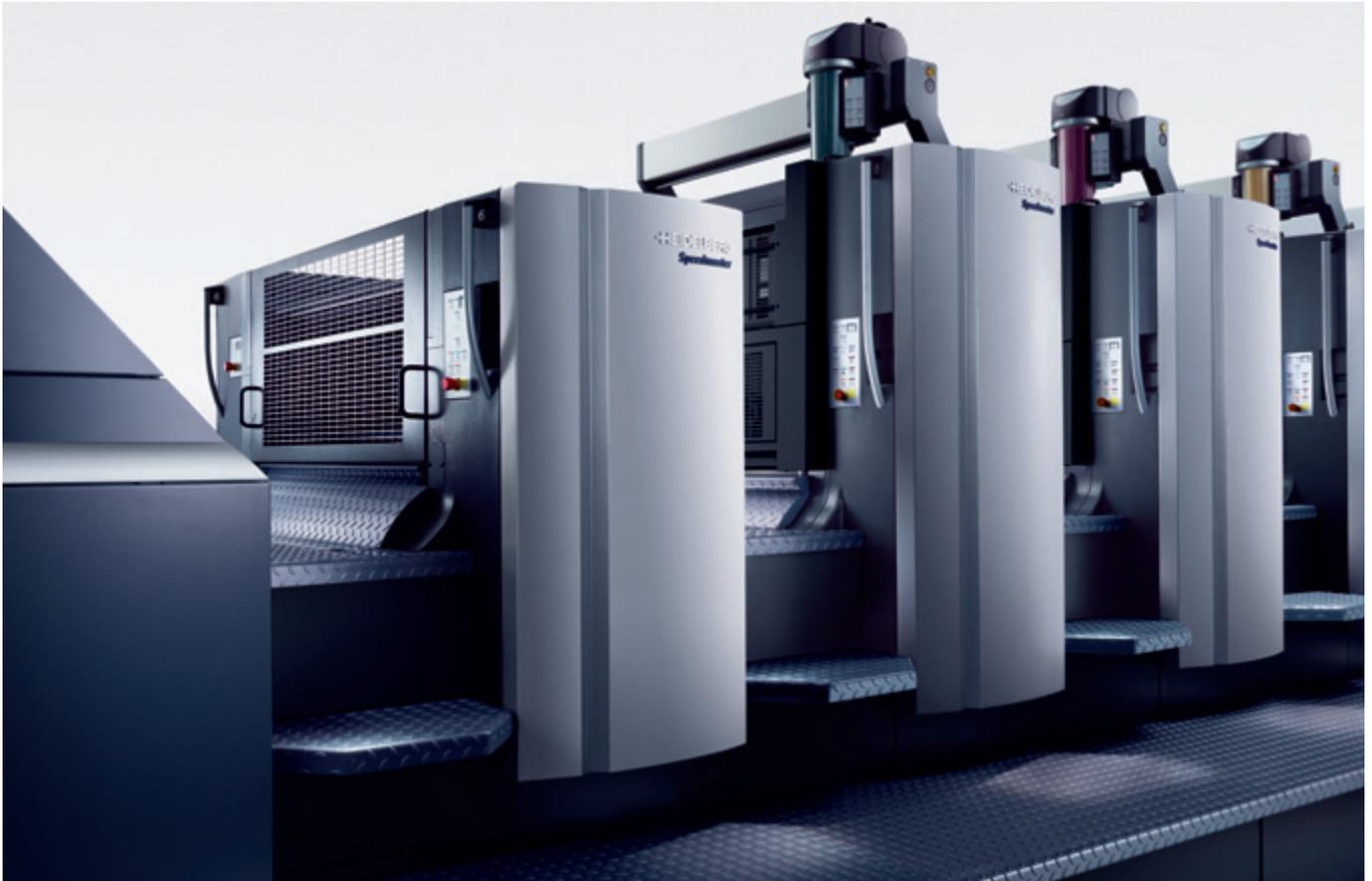Fast and clean ink changeover thanks to ink fountain liner.

Suitable Star System peripherals:

- HydroStar®: Dampening solution supply for consistently high dampening solution quality
- CombiStar®: Combination unit with dampening solution supply and inking unit temperature control for consistent printing conditions
- FilterStar®: Dampening solution filtration, to complement HydroStar and CombiStar
- InkStar®/InkStar Direct: Ink supply for fully-automatic ink feed from cartridges or drums

The advantages for your printing process:

Makeready times: You can cut your makeready times by adopting ink presettings and using ink fountain liners for fast and clean ink changeover. Color Assistant Pro calibrates the ink zones based on the condition of the ink fountain liner to ensure even faster inking-up during job changes. • **Productivity:** Color Fast Solution enables you to speed up the inking unit response by 50 to 70 percent. • **Quality:** You can achieve optimum, stable print quality regardless of production speed and job sequence. You benefit from a stable ink/water balance throughout the run thanks to inking unit temperature control and the Alcolor dampening system. • **Integration:** On the Prinect Press Center you can remotely adjust the points at which the distributors come into play on the fly. • **Environment:** A pre-temperature-controlled inking unit cuts paper waste and minimizes energy consumption. Using FilterStar extends the service life of the dampening solution and thus minimizes fresh water consumption. Special equipment packages reduce or completely eliminate the use of alcohol. Color Assistant Pro saves up to 150 waste sheets and thus conserves valuable resources.

When Something Very Special is Needed. The Speedmaster CX 102 Offers a Dazzling Array of Surface Finishing Options.

You can choose from several different systems when selecting the coating unit for your Speedmaster CX 102.

Brilliant prospects. When you are looking for a protective coating or a striking high-quality finish – the Speedmaster CX 102 has the answer to even the most complex of requirements. A wide range of configurations covers every conceivable surface finishing option – from presses with one or two coating units to the Speedmaster CX 102 Duo with coating units both before and after the offset units. There are also numerous configurations for applications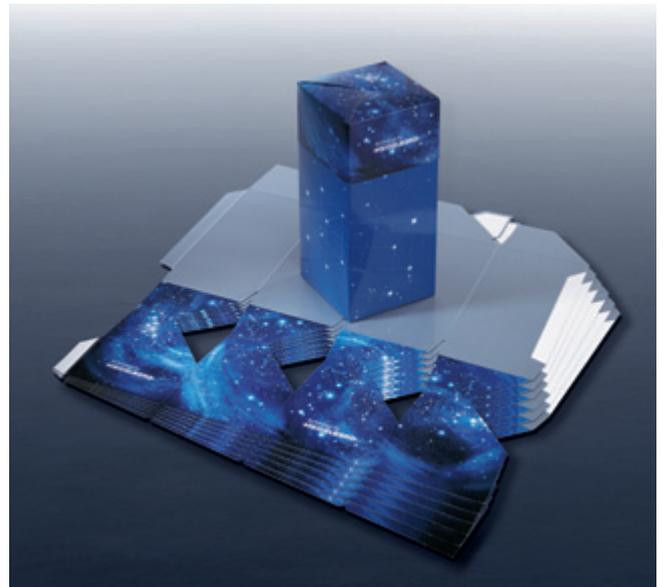. The Speedmaster CX 102 presents the perfect opportunity to expand existing lines of business or tap into new ones. It offers the right solution for every application – from simple coating application to the production of high-finish packaging for the luxury goods segment – to ensure your requirements are realized reliably and profitably.

Systematic coating. Depending on the application spectrum, both the press and coating unit can be individually configured – for the ideal combination of coating system, coating supply unit, and screen roller.

The coating unit boasts ease of operation and excellent accessibility. The system is operated centrally at the Prinect Press Center.

The coating unit technology at a glance:

- Chambered blade system for even, reproducible coating
- Chambered blade system located in the direction of the feeder ensures excellent access at the delivery for quick and easy exchange of coating plates and format sheets by one operator only
- Flexokit pressurized chamber doctor blade for processing special coatings such as gold, silver or Iriodin or coatings with a strong tendency to foaming
- Convenient remote-controlled adjustment of lateral, circumferential and diagonal registers via the Prinect Press Center
- Additional second coating circuit and second blade chamber enable rapid coating changes, e.g. from water-based to UV coating
- Combination clamping system, which enables blankets or coating plates to be used as required
- Parking position for second screen roller simplifies screen roller changes
- Central operation from the Prinect Press Center

The Speedmaster CX 102 can also handle unusual packaging requirements for reliable and profitable production.

Suitable Star System peripherals:

- CoatingStar®: Coating supply unit with wear-free eccentric disc pump for pulse-free coating feed and an integrated coating conditioning system

The advantages for your printing process:

Makeready times: Makeready times are minimized by ease of operation and outstanding accessibility. • **Productivity:** Shorter throughput times through inline finishing in a single pass boost your productivity. • **Quality:** The coating systems deliver top-quality results even with the most demanding finishing requirements. • **Ergonomics:** Ease of operation, e.g. during coating plate changeovers, washing, or adjustment of the coating form. • **Integration:** All key functions of the coating unit and the CoatingStar are initiated from the Prinect Press Center. • **Specialization:** Be it dual coating, Duo, or UV, the range of configurations covered by the Speedmaster CX 102 enables a wealth of applications.

Perfection All the Way to the Pile.
The Preset Plus Delivery Creates Ideal Conditions for Finishing.

The perfect pile thanks to the Preset Plus Delivery – for smooth finishing.

Gentle, plane, and neatly aligned. The Preset Plus Delivery rounds off the printing process and creates the ideal conditions for fast and smooth finishing. It impresses with optimum sheet travel and precisely aligned piles. The delivery's high degree of automation cuts makeready times and improves productivity significantly.

Simple and ergonomic operation at the Prinect Press Center, the delivery control panel with jogwheel, ensures fast and direct access throughout production, which saves even more time.

Components in the Star System from Heidelberg ensure efficient powder application and thus reduce consumption, dust levels, and the cleaning outlay. Process air extraction helps to ensure a pleasant pressroom and working environment.

The perfectly integrated dryer systems that are coordinated with the sheet travel combine excellent drying results with maximum energy efficiency thanks to the minimal distance between dryer and substrate.

Preset Plus Delivery technology at a glance:

- Automatic air presettings based on format and substrate thickness
- Automatic positioning of all sheet guidance elements
- The presettable, dynamic sheet brake takes sheets at production speed, tightens them, and decelerates them to delivery speed in a controlled manner
- Combination of the sheet guide plate's Venturi nozzle technology and aerodynamic gripper bars ensures reliable sheet travel

Suitable Star System peripherals:

- PowderStar® AP 500: Powder spray device for even, turbulence-free powder application
- CleanStar®: Process air extraction for odors, hot air, powder particles, and paper dust
- DryStar Coating: Infrared/hot-air dryer for effective coating drying on presses with short deliveries
- DryStar Combination: Infrared/hot-air dryer and circulating-air dryer, with additional hot-air dryers in the extended delivery for excellent drying results with demanding coating applications
- Heat recovery: From the waste air from the DryStar Combination dryer – for reuse during the drying process

The DryStar Combination is perfectly geared to sheet travel in the Speedmaster CX 102.

The advantages for your printing process:

Makeready times: Your makeready times will be cut by up to five minutes compared with presses with lower levels of automation thanks to format- and substrate-dependent presetting data. • **Productivity:** Perfect sheet travel enables stable production for a wide range of substrates at speeds of up to 16,500 sheets an hour. Precisely aligned piles enable fast finishing and thus cut your job throughput times. • **Quality:** Aerodynamic gripper bars suppress air turbulence, giving rise to perfect scratch- and smear-free sheet travel. • **Integration:** The delivery is controlled quickly and easily using presets on the Prinect Press Center. • **Environment:** By reducing powder consumption by up to 50 percent, dust levels by more than 80 percent, and possible odor emissions, you can help protect the environment and improve working conditions. Through highly efficient drying with DryStar and heat recovery from its waste air, you can save valuable energy and help protect the environment. The dynamic sheet brake requires minimum print-free areas and thus saves on paper.

Prinect Press Center.
The High-Performance Control Station.

Straightforward operation combined with precision control. In addition to serving as an intelligent control station for your Speedmaster press, the Prinect Press Center also integrates the machine into the comprehensive Prinect workflow from Heidelberg. The standardized operating concept paves the way for fast and reliable processes. All settings can be stored for repeat jobs, which maximizes performance and productivity – even with frequent job changes. Cutting-edge technology, time-saving automation, and perfect data management ensure the ideal conditions for efficient production on a lasting basis.

Data is entered and settings are made via a convenient touchscreen interface. During job changes, the innovative, process-oriented Intellistart operator guidance system uses all the relevant information on both the current and the next job for optimum makeready processes planned down to the last detail.

Integration with Prinect. The high-performance Prinect Press Center control station and the Prinect Axis Control®, Prinect Image Control, and Prinect Inpress Control color measurement systems form a perfectly coordinated unit.

Overview of all press operations. The Prinect Press Center gives you the perfect overview. Its wallscreen – a large monitor integrated into the extraneous light shield – ensures ideal interaction between the operator and press and provides a comprehensive overview of all press operations.

Innovative technology. The innovative, web-based Prinect Performance Benchmarking tool tells you exactly how productively you are working and how your print shop is doing in direct comparison with the competition.

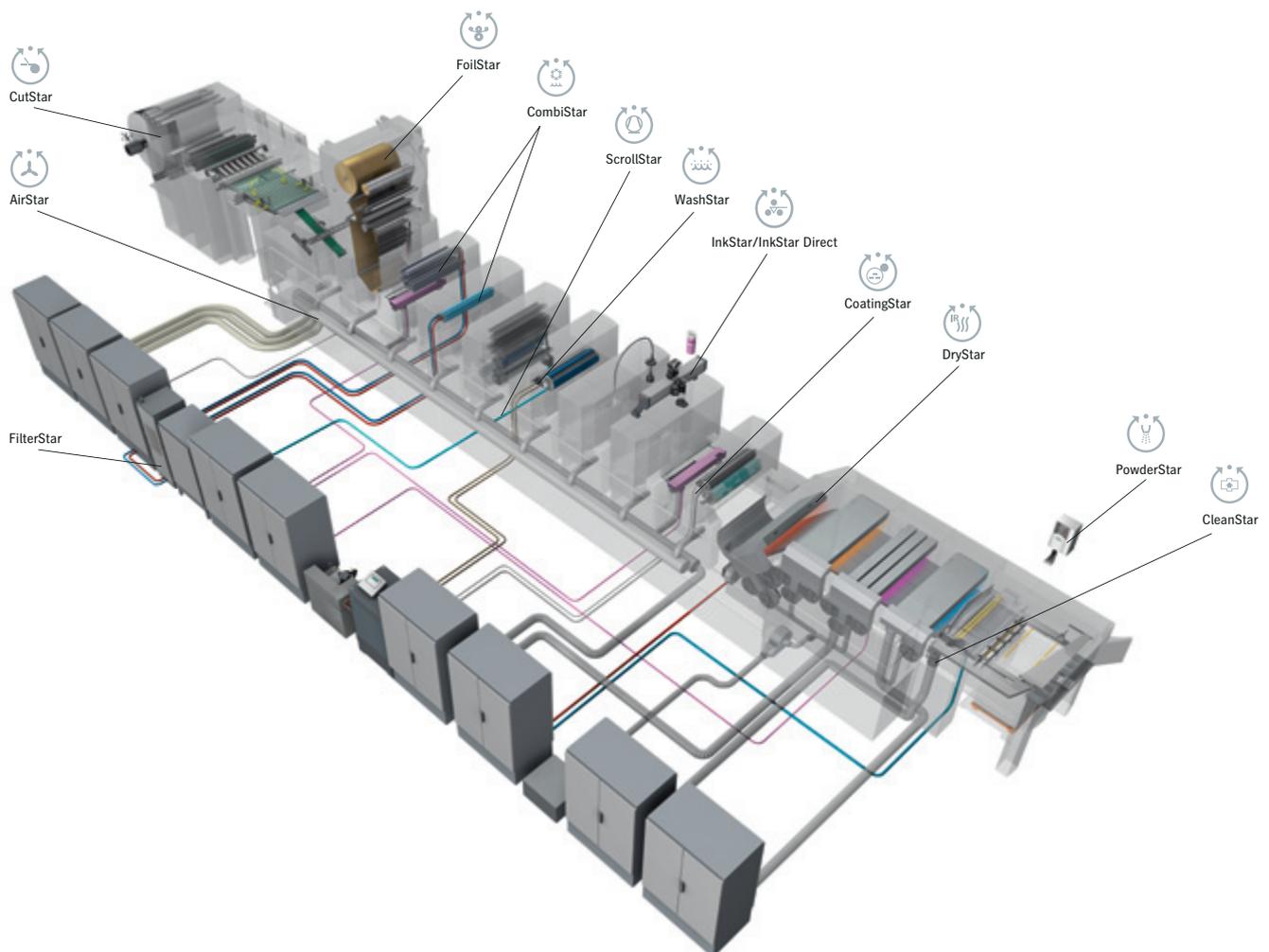Prinect Press Center – the high-performance control station of the Speedmaster CX 102.

The advantages for your printing process:
Makeready times: The Prinect Press Center cuts the number of operations per job change by up to 70 percent. **Productivity:** The Prinect Press Center raises annual production capacities by up to 8 percent. • **Quality:** The control station and color measuring/image inspection system are perfectly coordinated to ensure exceptional quality assurance. • **Integration:** Fully integrated into the Prinect workflow, you can achieve the ultimate in data management at the control station. • **Ergonomics:** The ergonomic Prinect Press Center ensures a high level of usability and a more pleasant and efficient working environment. • **Environment:** Substantial paper savings thanks to controlled processes.

Working in Perfect Harmony.
Star System Peripherals and the Speedmaster CX 102 – a Strong Team.

Everything from a single source. The Star System from Heidelberg offers peripherals tailor-made for the press. Perfectly coordinated and integrated components pave the way for short makeready times, maximum productivity, high print quality, and optimum energy efficiency. Star products are also easy to operate, because all components are controlled via the Prinect Press Center. Installation and servicing are carried out by experts from Heidelberg. This creates an integrated solution consisting of the press itself and individually coordinated high-performance peripherals.

The Star System also makes an important contribution to environmentally friendly print production with the Speedmaster CX 102. Less dampening solution, washup solution, powder, and paper waste make the system more ecological and economical.

CutStar
FoilStar
CombiStar
AirStar
ScrollStar
WashStar
InkStar/InkStar Direct
CoatingStar
DryStar
FilterStar
PowderStar
CleanStar

The perfect combination – Speedmaster CX 102 and the Star System.

Heidelberg Services.
Boosting Your Performance.

Heidelberg Services offers a comprehensive portfolio extending from technical and machine-based services to coordinated consumables and a wide range of training and consulting services. All the services are designed to help print media companies strengthen and expand their performance and competitiveness in the long term.

Technical services and consumables. Stable production and maximum machine availability lay the foundation for efficiency and top performance. This is why Heidelberg Systemservice® offers service packages for all aspects of the press, service parts service, and technical support. With Saphira® consumables, you benefit from perfectly coordinated products from Heidelberg.

Productivity optimization. To ensure maximum productivity coupled with top quality, Heidelberg experts identify potential for improvement in your print shop. Print Color Management helps you shorten make-ready times and cut waste while maintaining the same high print quality.

Process optimization. This service is used to analyze your processes, develop measures for improvement, and train your staff. Prinect®, the print shop workflow from Heidelberg, helps cut your workload and boost your profit.

People development. The training and advisory services of the Print Media Academy (PMA) ensure your specialists and managers acquire comprehensive expertise and strategic know-how.

Business development. Heidelberg consultants work with you to analyze the strengths and weaknesses of your company, identify potential for improvement, and then derive the optimum market positioning strategy.
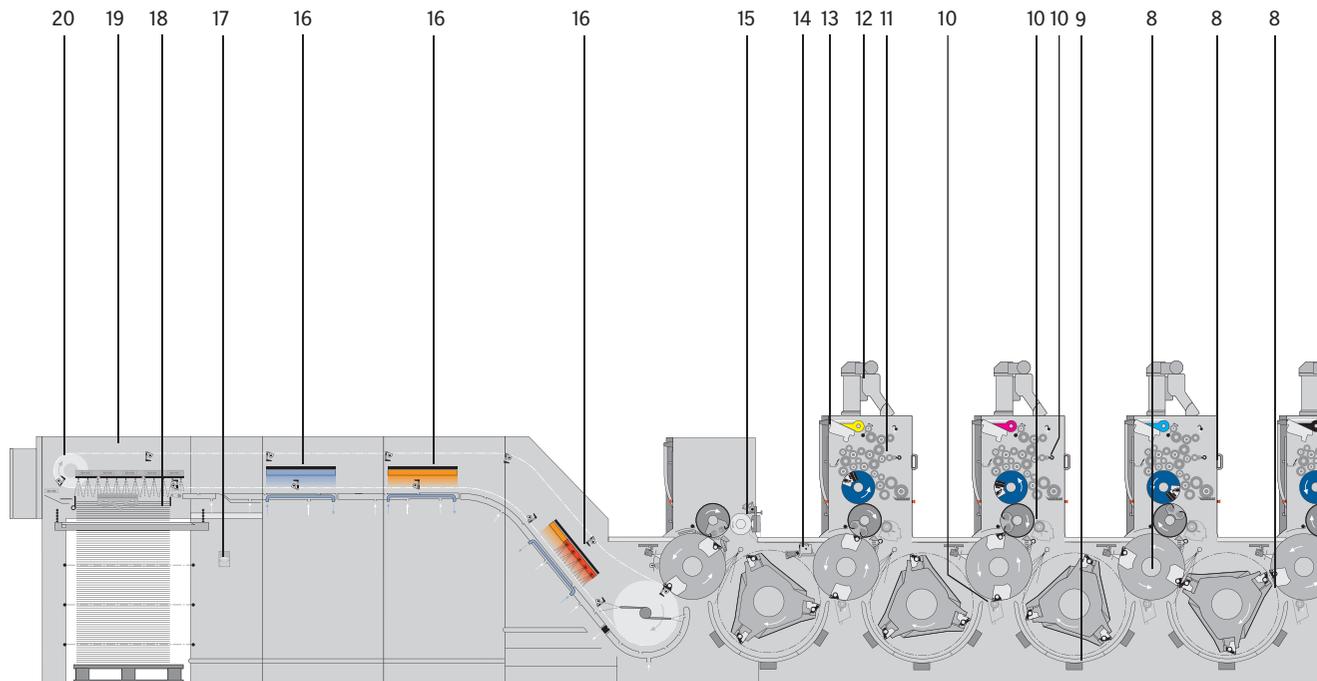
Equipped for the future with Heidelberg. The portfolio of Heidelberg Services provides print shops with far-reaching support to set the course for future success. The experts of Heidelberg Services offer a broad range of specialist know-how in the search for solutions.

Heidelberg Services

Technical services and consumables: For stable production and maximum availability. • **Productivity optimization:** For maximum productivity and top quality. • **Process optimization:** For efficient production processes from a single source. • **People development:** For comprehensive expertise throughout the company. • **Business development:** For successful business and higher profit.
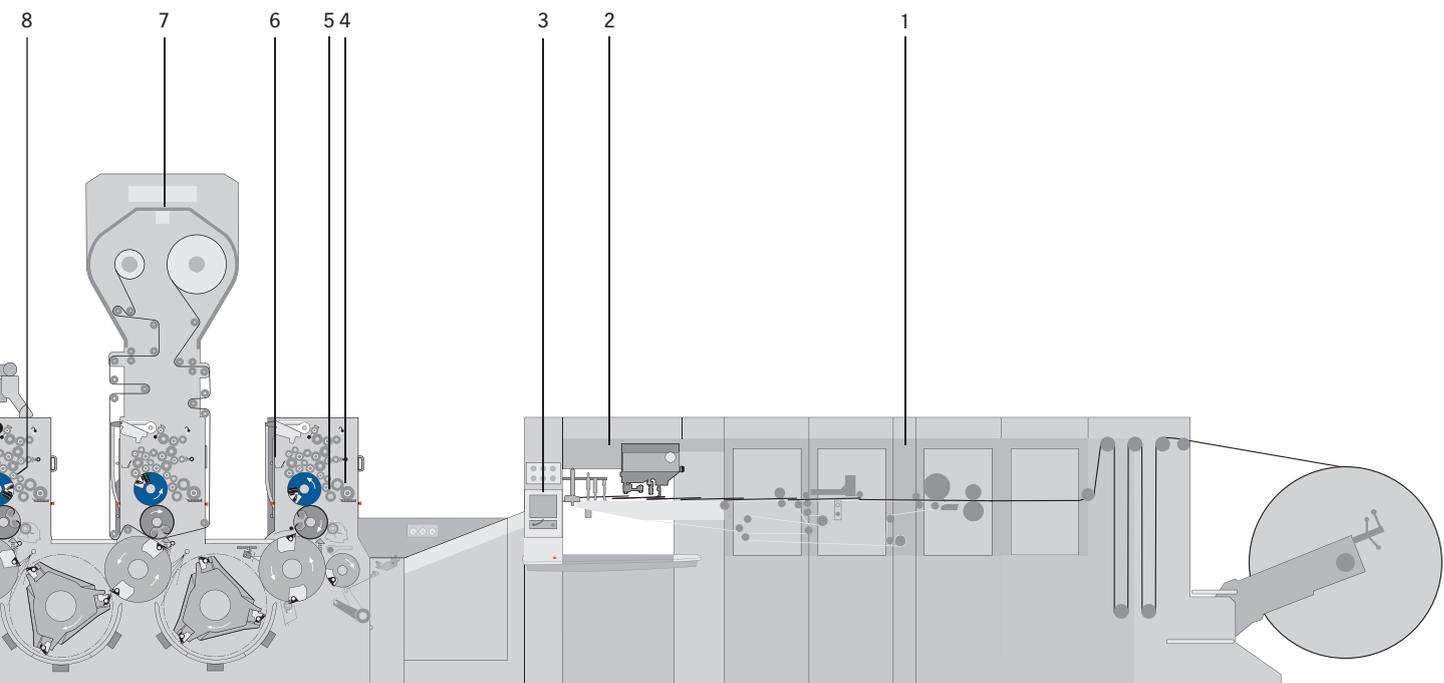
Inside View of the Speedmaster CX 102

The press shown here is a sample configuration. Some of the features shown are optional.

1 CutStar sheeter with CAN connection combines the cost benefits of reel stock with the flexibility of the sheet format.

2 The Preset Plus Feeder automatically makes format and air settings, resulting in reduced makeready times and stable paper travel.

3 Control station with touchscreen for intuitive and ergonomic operation of feeder and press functions.

4 Speed-compensated Alcolor dampening system with Vario function to prevent hickeys.

5 Matt chrome-plated dampening distributor below the dampening form roller for an even film of dampening solution.

6 AutoPlate Pro for fully automated, staggered plate changing in minimal time.

7 FoilStar, the cold foil module with index function, enables cost-effective and environmentally friendly metallic finishing effects for labels, packaging, and demanding commercial work.

8 Spring-loaded end position damping of the ink distributors, the innovative gripper system, a stronger printing unit design, state-of-the-art high-performance cylinder bearings, and the tried-and-tested cylinder arrangement ensure reliable sheet travel for all grammages.

9 The AirTransfer system and its Venturi nozzle technology ensure smooth sheet travel.

10 Automatic inking unit, blanket, and impression cylinder washup devices work simultaneously to deliver short washup times.

8 7 6 5 4 3 2 1

11 The inking units, equipped with the Color Fast Solution, respond quickly to adjustments, thereby cutting makeready times.

12 The InkStar ink supply system automatically fills the ink fountains.

13 Color Assistant Pro – self-calibration of the ink zones and automatic profile adjustment for perfect ink metering.

14 Prinect Inpress Control automatically measures and controls ink and register during production – and does so directly in the press and at all speeds.

15 Chambered blade system for uniform coating application and high-gloss results.

16 The DryStar Combination with its infrared, hot air, and circulating air modules has been specifically designed to complement sheet travel – for outstanding drying performance.

17 The PowderStar AP 500 powder spray device ensures efficient powder application.

18 The presettable, dynamic sheet brake takes sheets at production speed, tightens them, and decelerates them to delivery speed in a controlled manner.

19 The CleanStar process air extraction system minimizes hot air, odor, dust, and heat in the production environment.

20 The Preset Plus Delivery utilizes presetting data for high-precision pile formation and extremely short makeready times.

Heidelberger Druckmaschinen AG

As a technology pioneer in our industry, we're constantly pushing boundaries. We have become a leading international solution and service provider to the print media industry thanks to our innovative strength, cutting-edge technology, and closeness to customers. We supply not only extremely high-performance equipment covering the entire value-added chain in sheetfed offset printing but also digital printing systems for hybrid applications or extremely short runs. Our complementary services and training and advisory portfolios significantly enhance print shops' economic performance and green credentials.

We give you the solutions that meet your customers' needs. Find out about the customized products and services from Heidelberg that will strengthen your company in the long term on every market.

Discover HEI – for print media business with a future.

HEI Productivity: Boost your productivity with seamless processes and efficient and reliable production equipment from Heidelberg.

HEI Eco: Production equipment from Heidelberg ensures that eco-friendly printing also makes economic sense – true to our motto "Think economically, print ecologically".

HEI Emotions: Use our surface finishing techniques to transform feelings and original ideas into visual and haptic experiences.

HEI Integration: We can provide you with the software you need for your online operations with our Prinect print shop workflow.
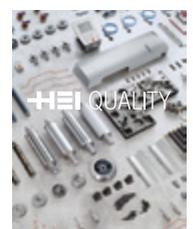
HEI Flexibility: Our digital and offset printing range gives you the flexibility you need to handle any kind of job.

HEI End: Our postpress technologies transform your print products into bestsellers that fly off the shelves.

HEI School: Hone your skills and expertise with training courses, seminars, and know-how from our Print Media Academy.

HEI Quality: Ensuring top quality is your aim – and ours, too.

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