

KOENIG & BAUER

# Rapida 106 X



we're on it.

EN



# The performance benchmark in industrial printing

The Rapida 106 X will have you printing in a league of your own: this high-end sheetfed offset press satisfies the highest demands in terms of automation and productivity. It promises significant advantages over other presses when it comes to profitability and efficiency. It is packed with innovative solutions tailored to your individual requirements. And – it points the way to the industrial processes of the future.



The Rapida 106 X is a **sheetfed offset press of superlatives**. It combines the ultimate in production performance, future-oriented automation and the shortest-ever makeready times with maximum configuration diversity – for presses with up to 19 printing and finishing units, if required. That would add up to a total length of 35 metres.

An extensive feature list enables realisation of an end-to-end printshop workflow. The Rapida 106 X will turn your vision for **Print 4.0** into

reality: in terms of a state-of-the-art control system operated by means of touchscreens or mobile app, by means optimisation of your production scheduling with the Job Optimiser or Performance Analytics, and with myKyana, a community portal offering performance overviews, access to digital services and a direct line for communication with the Koenig & Bauer support desk.

The Rapida 106 X sets the standards for sheetfed offset in the extended 3b medium format class.

# Rapida 106 X



# High-end in medium format

Superior, dynamic and of lasting profitability – these are properties that the Rapida 106 X embodies with its award-winning design. Glass side panels, an innovative touchscreen operating concept and an expressive design language immediately identify the press as an ultra-modern automated printing system. What becomes evident at first glance is that this is the most powerful Rapida that the market has ever seen.

The Rapida 106 X will simply have you going to press faster. You avoid wasting even one single second on non-productive makeready. A sophisticated automation concept not only supports a multitude of parallel makeready processes, but also autonomous printing. The latest-generation operating concept is based on an absolutely intuitive user interface with additional features such as app and voice control.

The optional modular system for **fully automatic plate logistics**, from the platesetter right up to the loading channels on the printing units, gives you extra peace of mind for fast job changes. Your usual press crews will handle even repeated short runs without breaking a sweat. The plates are moved onto the press without any manual intervention – and later removed in the same way.

At the same time, the Rapida 106 X guarantees you a maximum net output of saleable sheets. It prints at speeds up to 20,000 sheets/hr – as the first sheetfed offset press in the world to offer a performance like this, and this in perfecting mode as well. This is, of course, paired with **excellent print quality**: thanks to market-leading measuring and control systems for register, colour and print quality. A single camera system (with two cameras on perfector presses) covers three functions: inline colour control (also based on grey balance, if you wish), sheet inspection with continuous production monitoring, and comparison of the printed sheets with the pre-press PDF.

QualiTronic PDF HighRes conducts sheet inspection with even greater precision. A **content check** of each printed sheet is performed at a resolution of 290 dpi. Even the tiniest flaws and deviations as minute as approx. 90 µm can be detected, visualised and logged.



## Rapida 106 X



# The performance benchmark in packaging printing

Koenig & Bauer has been the acknowledged market leader in industrial packaging printing for decades, and the Rapida 106 X sets yet another milestone in this segment – for even greater performance and efficiency. The Rapida 106 X allows you to elevate your production to a whole new level, and equips you to master the market demands of the future.

## Here are just a few of the highlights of the Rapida 106 X for packaging printers:

- Printing speeds up to 20,000 sheets/hr, depending on the substrate, for a wide range of materials in folding carton production
- Optimised parallel washing processes and specially coated EasyClean ink ducts for even faster makeready where frequent ink changes are necessary, e.g. spot colours
- Simultaneous roller washing with DriveTronic SRW during ongoing production
- One or more coaters before or after the printing units for a wide range of finishing options
- Cutting-edge, low-volume chamber blade coating technology and AniloxLoader for fully automatic anilox roller changes
- Automated coating forme changes in less than one minute with DriveTronic SFC
- Complex dryer solutions for a variety of fascinating finishes and special effects
- Double-pile delivery for the sorted stacking of good sheets and ejection of any flawed sheets during production
- Inline quality monitoring, including comparison with the pre-press PDF and inline grey balance control
- LiveApp family to assist press operation and inventory management

## Benefits



Exceptional performance with speeds up to 20,000 sheets/hr due to maximum automation around the printing process



Almost limitless variety of fascinating finishes and special effects thanks to complex dryer solutions



Excellent print quality thanks to market-leading control systems



Significant reduction of waste due to extensive preset functionalities and the option of ejecting flawed sheets in the double-pile delivery



Maximum flexibility in terms of configurations and equipment options – perfectly tailored to your individual requirements



Time savings at job changeovers due to parallel makeready while current production is still running



# The performance benchmark in commercial printing

The daily challenge in industrial commercial printing is to produce and deliver a broad spectrum of different print media within the shortest possible time. The Rapida 106 X is your perfect partner for this. It scores with fast makeready, maximum performance and top quality. With this innovative, top-of-the-range press from Koenig & Bauer, you will be in a position to handle more jobs and produce more saleable sheets.

**Here are just a few of the highlights of the Rapida 106 X for commercial printers:**

- First sheetfed offset press in the world that also prints up to 20,000 sheets per hour in perfecting mode
- ErgoTronic AutoRun for autonomous printing of a prepared job list with automatic sheet counter start
- Plate logistics from the platesetter right up to the plate changers on the individual printing units for ultra-fast makeready
- DriveTronic SPC: simultaneous plate changing parallel to other makeready processes for the shortest possible job changeover times
- FlyingJobChange for version and language changes 'on the fly'
- Process-optimised washing functions: Print-Clean, for example, can replace blanket washing for short runs
- Fully automatic paper stretch compensation for precise registration over the whole sheet
- Inline quality monitoring, including comparison with the pre-press PDF and inline grey balance control
- LED-UV technology for immediate finishing and maximum colour brilliance even on uncoated papers
- LiveApp family to assist press operation and inventory management





### Benefits



Maximum net output of saleable sheets thanks to printing speeds of up to 20,000 sheets/hr, also in perfecting mode



Significant reduction of waste due to extensive preset functionalities



Extraordinary productivity due to maximum automation and autonomous printing



Maximum flexibility in terms of configurations and options for perfecting applications, including inline finishing in a single pass



Excellent print quality thanks to market-leading control systems



Ultimate ease of operation based on an intelligent console concept and intuitive user interface



# The performance benchmark in label printing

Labels are something special because they lend products their unique, unmistakable character. As a label printer, you are expected to cater to particularly challenging market demands. Performance, quality and production flexibility all play a decisive role in this area. The most productive Rapida 106 X of all time will allow you to master all challenges that arise with confidence and to the highest quality standards.



**Here are just a few of the highlights of the Rapida 106 X for label printers:**

- RS 106 reel-to-sheet feeder with full flexibility in terms of sheet length – up to 780 mm
- DriveTronic SIS for fully automatic and register-true sheet alignment
- Film-handling package with high-performance antistatic systems and side blowers for stable production involving particularly sensitive substrates
- Console-controlled Venturi air-cushion sheet guiding for gentle and reliable sheet transport through the press
- FoilTronic cold foil systems with indexing facilities (significantly reduced foil consumption ensured by timed foil advance) for brilliant and highly efficient inline finishing
- DriveTronic SRW permits spot colour ink changes parallel to ongoing production
- Plate stretching – fully automatic paper stretch compensation for precise registration over the whole sheet
- Configurations and equipment packages tailored to your individual requirements, e.g. one or more coaters before or after printing for a wide range of finishing options
- Cutting-edge, low-volume chamber blade coating technology and AniloxLoader for fully automatic anilox roller changes
- Automated coating forme changes in less than one minute with DriveTronic SFC
- Extensive solutions for inline quality monitoring, including comparison against the pre-press PDF and inline grey balance control
- Hurdle delivery with optimised sheet transport for label production, including a special non-stop roller rack

**Benefits**



Maximum net output of saleable sheets thanks to printing speeds up to 20,000 sheets/hr and full flexibility in terms of format utilisation



Virtually limitless variety of fascinating finishes based on corresponding coating and drying systems, as well as inline cold foil solutions



Exceptional productivity thanks to customised automation modules and additional accessory packages specifically for label printing



Innovative solutions for resource-efficient and sustainable print production – also for the food sector



Excellent print quality thanks to market-leading control systems



Post-press systems based on the Rapida platform and its operating concept, optimised specifically for label production

Rapida 106 X



### **Control console technology: Made by Koenig & Bauer**

- Customer Community – central interface to all digital services and Koenig & Bauer
- State-of-the-art operating concept on the ErgoTronic control console (including touchscreen for intelligent, straightforward handling)
- Wall screen for visualisation of all press settings
- Job changeover program for fully automatic and coordinated make-ready sequences
- Autonomous printing with ErgoTronic AutoRun
- Job profiles saved for repeat jobs
- Rapida LiveApps (mobile control console, inventory management and batch monitoring)
- Integration into the LogoTronic Professional production data management system

### **VariDry dryer systems: For every eventuality**

- High-performance VariDry IR/TL, VariDry UV, VariDry HR-UV and VariDry LED-UV dryers all in one – dryer technology is one of Koenig & Bauer's core areas of expertise
- Flexible use of the UV dryers for intermediate and final drying
- Optional dryer control including sensors for UV lamp monitoring
- Lamp replacement without tools
- VariDry<sup>Blue</sup> technology for maximum energy efficiency

### **AirTronic delivery: Maximum preset capabilities**

- Aerodynamic gripper carriages optimise airflows, prevent turbulence, and reduce powder consumption
- Powder application on both sides in presses with perfector
- Sophisticated Venturi system ensures a stable supporting air cushion
- Dynamic sheet brake with speed-compensated suction conveyors



#### **Coating unit: Simply refined!**

- Various delivery extensions for the integration of additional dryer modules for higher performance and special coating applications
- Double-pile delivery for waste-free piles
- EES (Emission Extraction System) to eliminate potential emission hazards
- Non-stop solutions for uninterrupted production and smooth pile changes
- Large, user-friendly touchscreens for relevant functions and air settings
- State-of-the-art chamber blade technology with lightweight anilox rollers
- Fully automatic, push-button anilox roller exchange from the console using AniloxLoader
- DriveTronic SFC (Simultaneous Forme Change), automated coating forme change with changeover time of approx. 1 minute
- Remote setting of printing pressure and lateral, circumferential and diagonal register
- Coating supply system for dispersion and UV coatings in separate circuits
- Fully automated washing process from the control console, optionally with washing system for impression and coating forme cylinders

#### **CleanTronic: For outstanding washing results**

- Parallel washing processes and job-specific, pre-selectable washing programs
- CleanTronic multi-purpose washing system for ink rollers, blankets, and impression cylinders
- CleanTronic Synchro with separate washing beam for blanket and impression cylinder washing
- CleanTronic Multi: multi-media washing system permitting the use of different ink systems
- CleanTronic UV to avoid waiting times before and after cylinder washing in UV production
- CleanTronic SRW: roller washing also in UV production



### **Plate changeover: Highly automated**

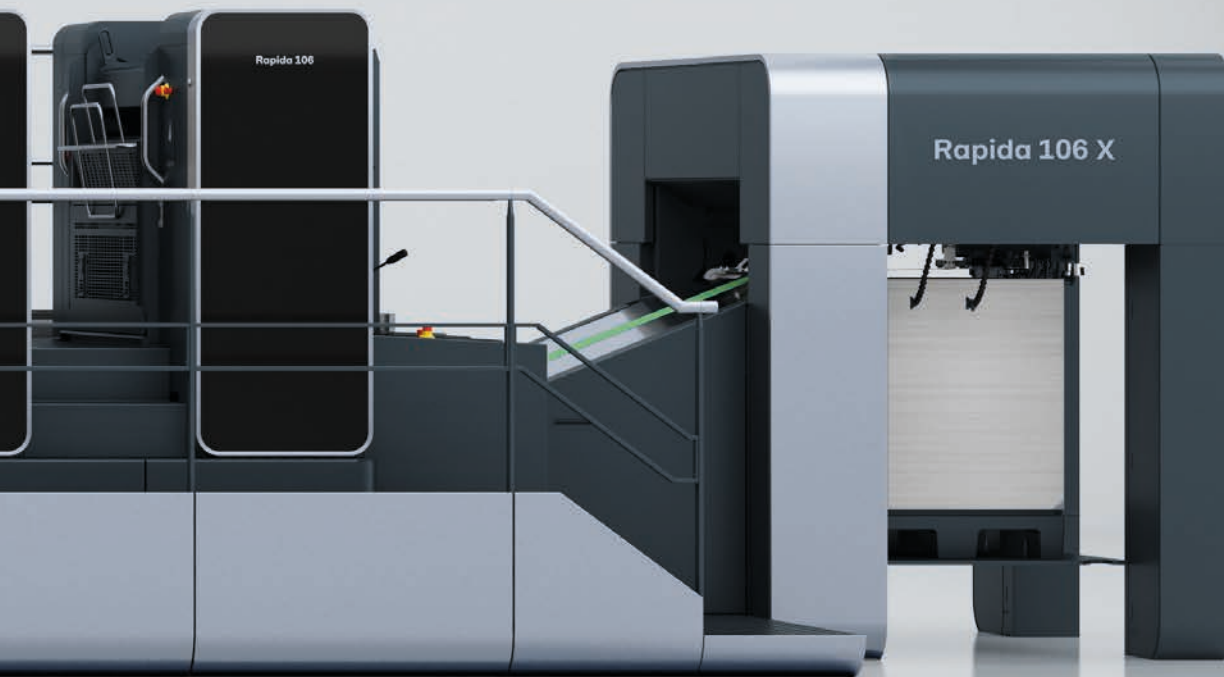
- Faster, optimised changeover process for fully automatic plate change (FAPC)
- DriveTronic SPC (Simultaneous Plate Change)
- Flying JobChange
- DriveTronic PlateIdent for plate identification directly on the press
- Optional use of unbent printing plates
- ErgoTronic PlateStretch: pneumatic plate stretching to compensate for paper stretching
- Modular, flexible and fully automatic plate logistics from the pre-press through to the plate changeover holder

### **Perfector: Fully automatic**

- Tried-and-tested three-drum configuration for exact perfecting register
- Fully automatic switching between straight printing mode and perfecting mode
- Jackets on impression cylinders with state-of-the-art ink-repellent coating
- Anti-marking coat: coated drum shells
- Gentle, air-cushioned sheet guiding with blower systems and Venturi sheet guide plates
- Rotary suckers to spread the rear edge of the sheet tight on the storage drum
- Pneumatic settings for spreading suckers
- Air settings can be entered and saved on the control console for repeat jobs
- Video system for monitoring sheet travel

### **Inking unit: Perfection in colour**

- High repeat accuracy thanks to bleed-free metering in the ColorTronic ink duct
- Maintenance-free pneumatic ink ducts for UV production for precise metering and high repeat accuracy without the use of consumables
- Stepless adjustment of oscillation timing from the control console during production
- Ink train separation with impression-off
- Individual disengagement of inking units when not needed to reduce roller wear and makeready times
- Temperature control of the duct roller and the ink distributors
- Speed-compensated VariDamp film-type dampening unit for a stable ink/water balance
- Differential drive to prevent hickeys
- Motorised blanket clamping
- Software routine for roller setting



**Printing unit:  
Clockwork precision**

- Substructure cast in a single piece for high torsional rigidity and stability
- Ultra-quiet operation and precision thanks to continuous gear train
- Double-size impression cylinders and transfer drums for low-profile sheet travel – even heavy substrates are subject to only minimal bending
- Universal gripper system adapts seamlessly to changes in substrate thicknesses
- Venturi air-cushioned sheet travel for contact-free sheet transfer
- Air settings can be set and saved on the ErgoTronic control console for repeat jobs
- Mechatronic adjustment of lateral, circumferential and diagonal registers
- Automatic setting of the substrate thickness
- Two-stage pneumatic impression on/off switching

**DriveTronic SIS:  
Simply ingenious**

- Sensoric Infeed System (sidelay-free sheet infeed)
- Patented sheet infeed system
- Electronically controlled lateral sheet alignment, eliminating maintenance and wear
- Gentle sheet positioning with the highest possible accuracy
- Integration into automatic format adjustment eliminates all need for operator intervention
- Patented Venturi system before the feed line for smooth sheet infeed

**DriveTronic sheet feeder:  
Ultimate ease of operation**

- DriveTronic sheet feeder for continuous, stepless pile lift with automatic speed adjustment for paper and cardboard
- Feed board with electronically controlled sheet deceleration to ensure optimum sheet arrival speed at the front lays
- Motorised remote adjustment of the sheet infeed with DriveTronic infeed for front lays, feed line and cover lay height
- Automatic format adjustment and sidelay control
- Large, user-friendly touchscreens for all required functions
- Ultrasonic double sheet detector; further detector types according to the printed substrates
- Uninterrupted printing production thanks to non-stop solutions



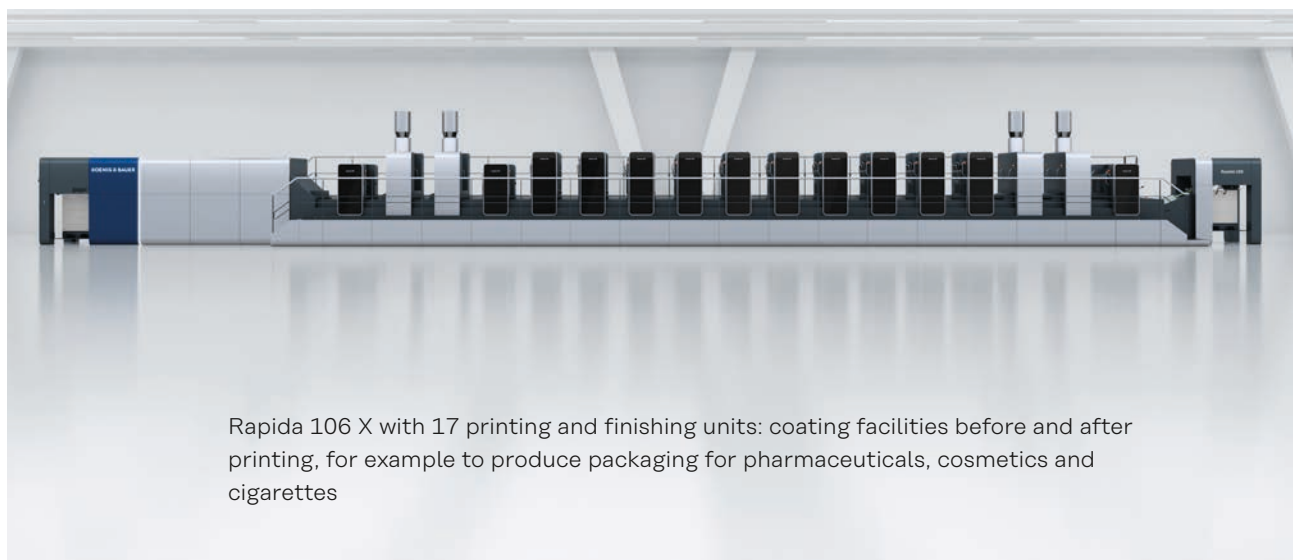
# Technology at a glance

# Individual configurations and equipment variants

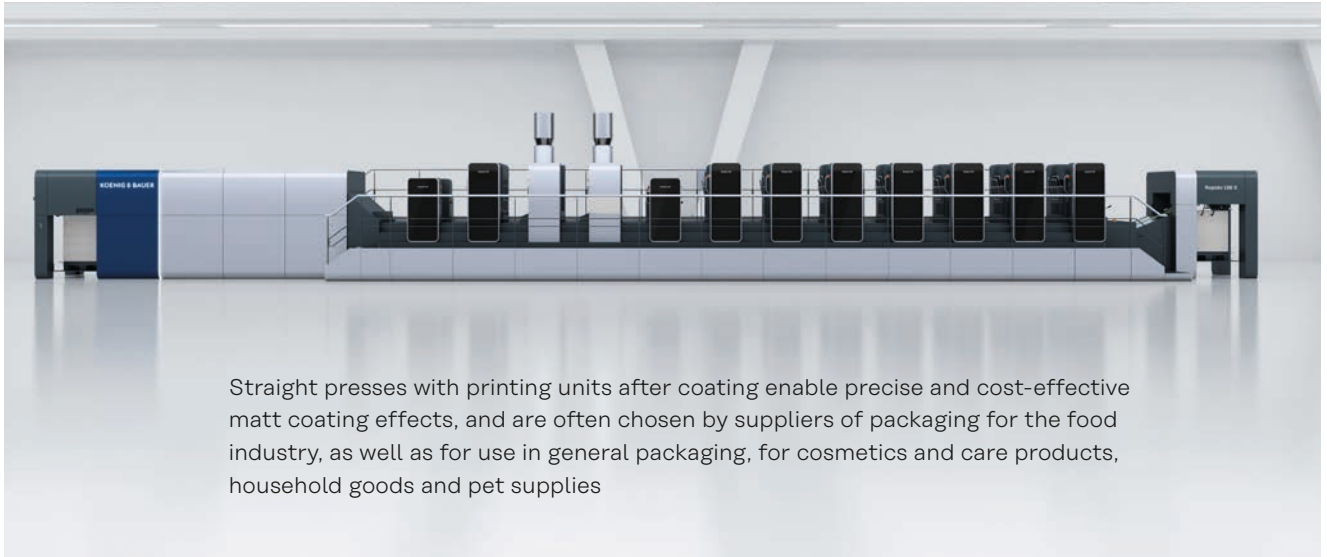
Sheetfed offset presses in the Rapida 106 X series are frequently delivered in an individually customised configuration, perfectly matched to the user's production profile. Time and again, this makes it possible to marvel at combinations of printing, coating and drying units that would have been unthinkable in this form just a few years ago.

All these presses are catering to the trend towards ever **greater product refinement** e.g. in the packaging industry. At the same time, there is particular pressure to provide complex press solutions capable of printing exactly this type

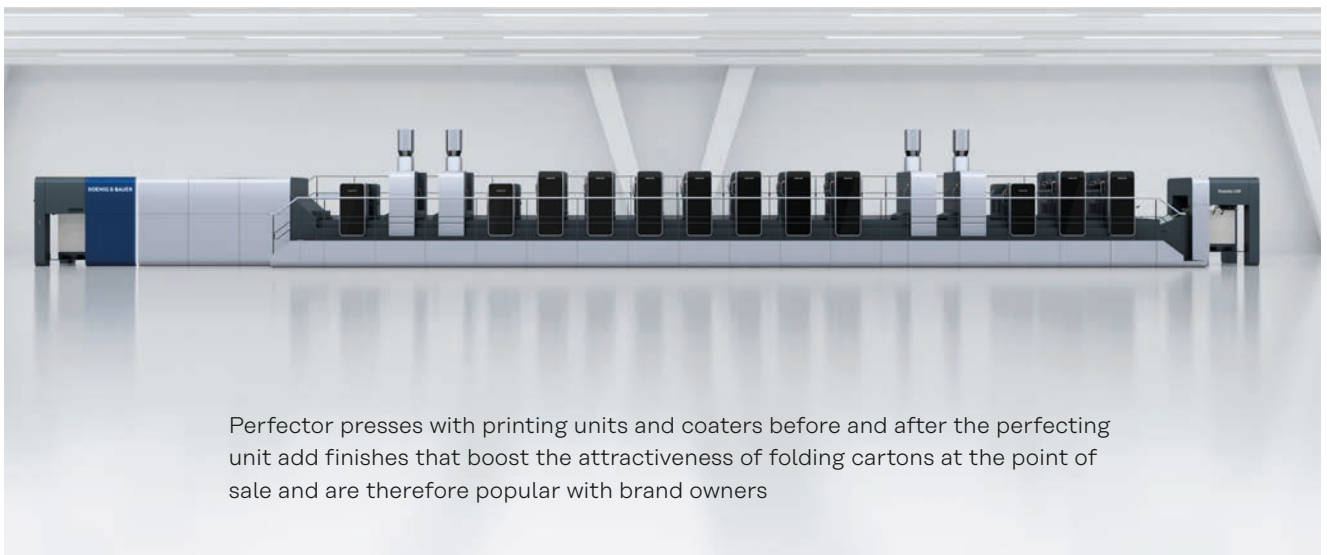
of highly finished products in a **cost-effective process**. A further objective in many cases is to use the printed and finished cartons as ecological primary packaging and to eliminate the need for additional plastic film materials.



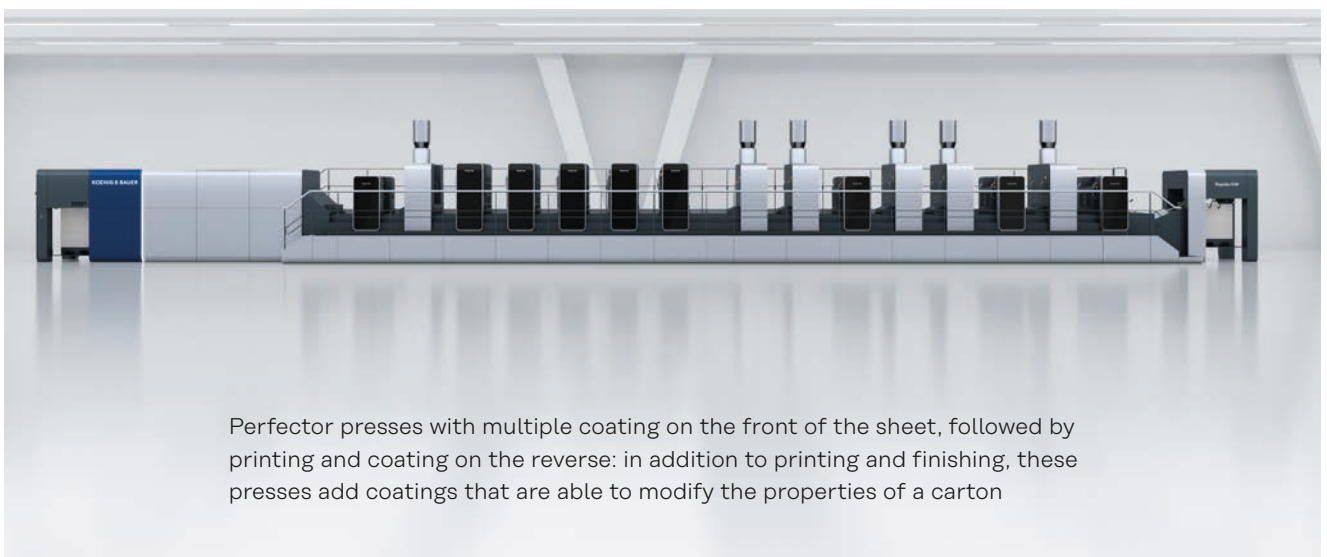
Rapida 106 X with 17 printing and finishing units: coating facilities before and after printing, for example to produce packaging for pharmaceuticals, cosmetics and cigarettes



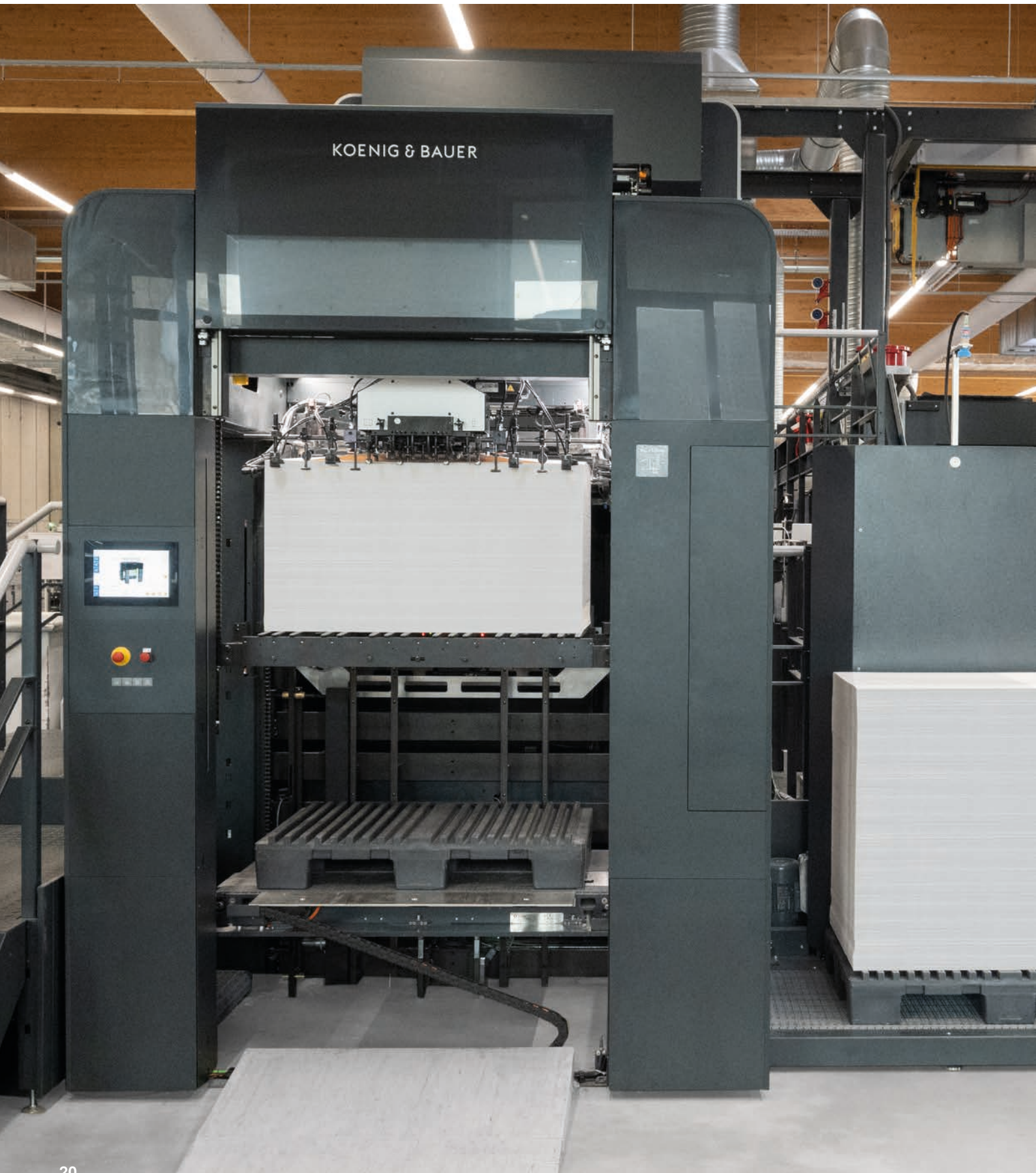
Straight presses with printing units after coating enable precise and cost-effective matt coating effects, and are often chosen by suppliers of packaging for the food industry, as well as for use in general packaging, for cosmetics and care products, household goods and pet supplies



Perfector presses with printing units and coaters before and after the perfecting unit add finishes that boost the attractiveness of folding cartons at the point of sale and are therefore popular with brand owners



Perfector presses with multiple coating on the front of the sheet, followed by printing and coating on the reverse: in addition to printing and finishing, these presses add coatings that are able to modify the properties of a carton





## Ingenious automation and logistics solutions

Operators working on the Rapida 106 X will find it straightforward to monitor the complex production process, allowing them to concentrate on the essential aspects of the job at hand. Even challenges such as continuous production at maximum speed or extended series of extremely short runs can be handled with ease. And that in consistently high quality. This makes printing a real pleasure.

This is all made possible by a long list of pioneering automation modules and logistics systems. Among them is **DriveTronic SPC** with its dedicated drives for simultaneous plate changing. The plates in all printing units can be changed in just 50 seconds – irrespective of the length of the press.

But even that can be topped: if the Rapida 106 X is equipped with more printing units than are required for the current production, it is possible to use the **FlyingJobChange** function. The upcoming job change is prepared on the unused printing units while production is still running. A brief pause then suffices to deactivate the printing units that have been producing the completed job and to activate the units for the new job. Job changeovers are almost instant. Especially where multiple language versions are required, this production mode achieves considerable time savings.

**AutoRun** starts processing of a given list of print jobs, implementing production parameters, makeready steps and process sequences predefined by the operator or based on values from the MIS/MES. The principle fields of application can be found in the commercial segment – for example multiple short runs or multiple sections for products with high page counts, as well as online printing scenarios with their highly standardised and automated processes.

As an option, the Rapida 106 X can be equipped with a **double-pile delivery**. This allows waste sheets to be ejected onto a separate pile. In other words, only good sheets make it to the downstream processing stages.

A perfectly organised **pile logistics** system is likewise an ideal complement to the highly automated Rapida 106 X. Modular system components for substrate transport from the stores to the presses, and then either to an intermediate holding area or directly to the post-press department, are standard features today.





## Digital workflows – Everything in real time

Continuous workflows are just as important as engineering and technology. They streamline and optimise the processes within the business while contributing towards increased economy.

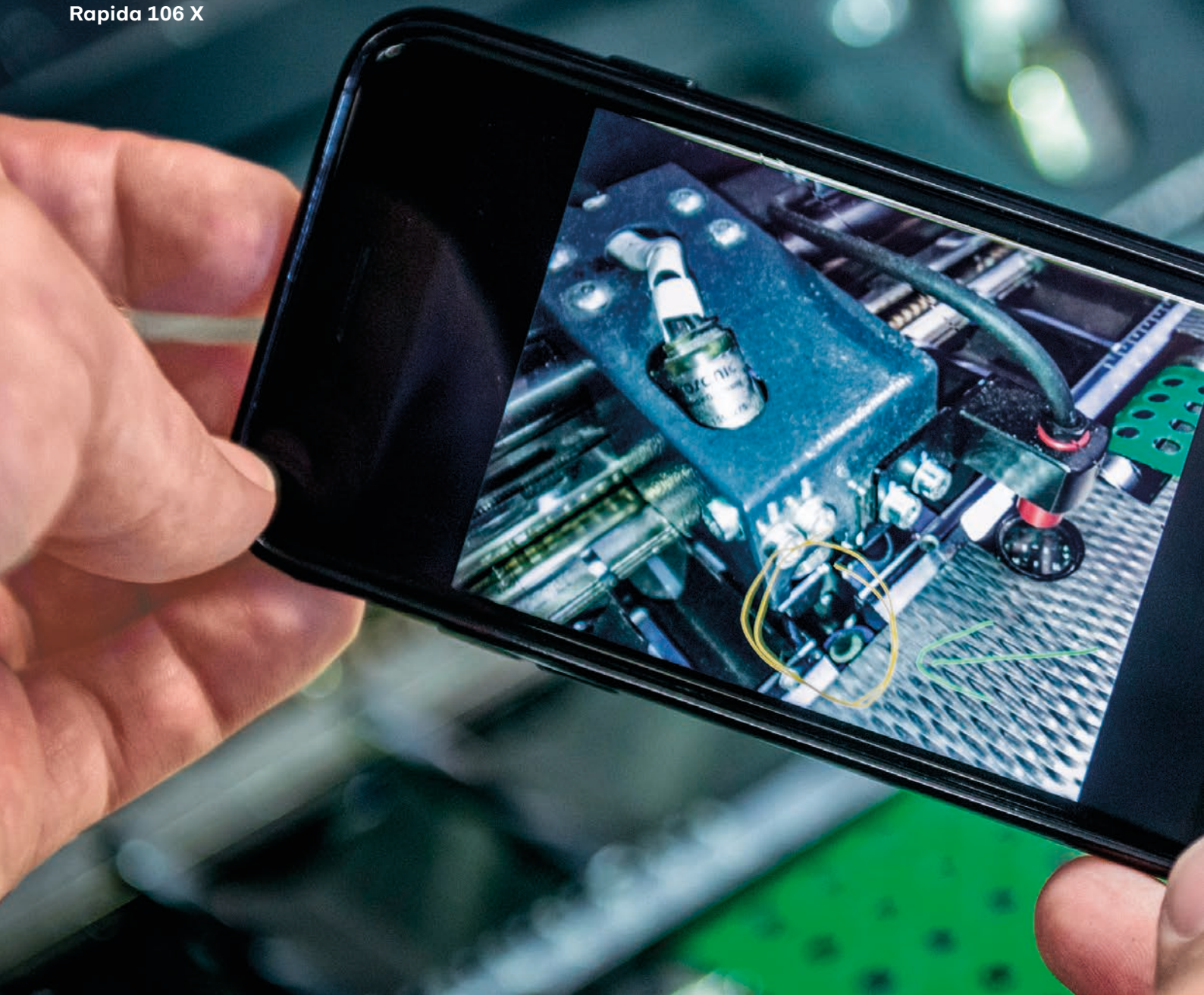
MIS systems such as **Optimus Dash** cover the entire value chain in commercial, label or packaging production, and control business processes in real time. The benefits offered by the range of features in Optimus Dash include flawless communication between all departments, lean management, demonstrating optimisation potential and cost focus.

Performance Analytics and the Job Optimiser help to turn your vision for Print 4.0 into reality. The basis for this is the collection, processing, analysis and interpretation of extensive digital data – all in real time. The **Performance Analytics** tool allows even large and complex data sets to be transformed into informative reports and dashboards. You establish the prerequisites for agile, data-driven business decisions. The **Job Optimiser** optimises costs, makeready and throughput times, delivery scheduling and capacity utilisation on the basis of intelligent job sequence planning. Production planning is raised to a whole new level and helps you to continue optimising your production.

**Rapida LiveApps** provide printers with state-of-the-art tools for press operation and inventory management.

The **ErgoTronicApp** gives you full control of your Rapida 106 X wherever you may be. Printers can access all job data, production times, status messages and maintenance instructions, together with explanatory notes, using their mobile devices. The ErgoTronicApp releases the control console from all location constraints.

The **ProductionApp** not only allows you to manage storeroom inventories, but also track the times remaining before a consumable must be replaced or restocked. Later, the app provides an accurate overview of which print jobs were produced with which batches of substrates, inks and consumables.



## Digital services at the touch of a button

The customer portal myKyana represents the central interface between Rapida users and the customer service desk. All digital services are pooled in one place. Users and the manufacturer can access an identical information database, meaning that they are all on the same page when working together.



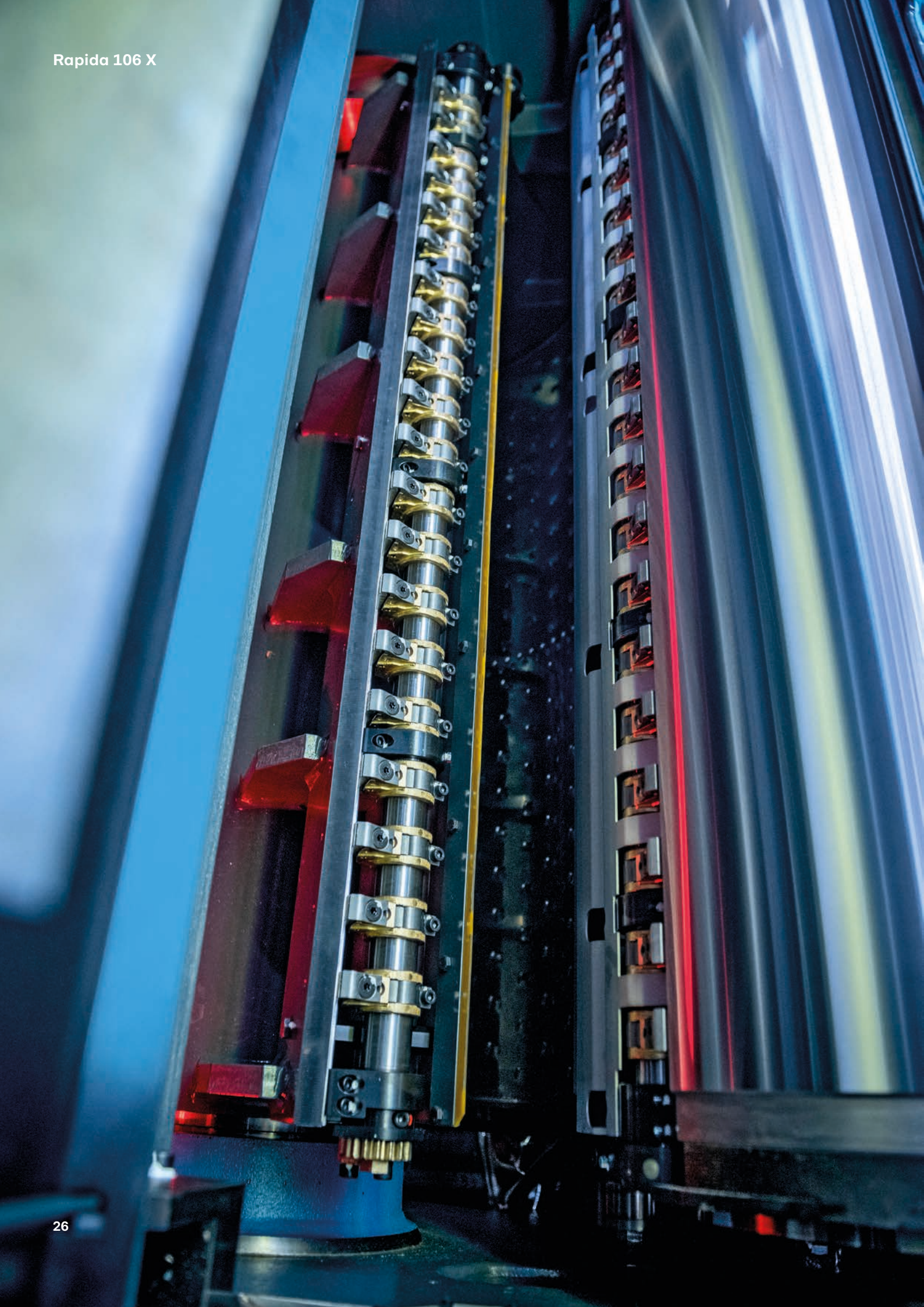


**PressCall** improves communication during remote maintenance. The hotline technicians are presented with all the information they require at the touch of a button on the control console. Communication is optimised while language barriers are removed. A customer ticket is automatically created in CRM. This enables solutions to be found more quickly and efficiently, which in turn reduces downtime and increases availability.

**Visual ServiceSupport** is an additional means of optimising communication during remote maintenance. By using the functions that today's mobile devices provide, remote maintenance issues can be communicated easily and directly using photos and videos, audio transmission and comment functions. This has allowed Visual ServiceSupport to extend the functionality of remote maintenance to include process technology and mechanical support.

Users with a remote maintenance contract receive a regular **Performance Report**. Performance data and key performance indicators for presses are shown in an easy-to-understand graphic form. This allows performance data to be compared and maintenance work to be planned in advance, as well as revealing optimisation potential and reducing unscheduled downtime. Performance and availability increase accordingly.

The **Press Inspection Report** provides a summary of the results of press inspections in an equally easy-to-understand format. You can instantly identify potential technical improvements and the reasons for maintenance work, as well as its duration. It also lists the required interventions in order of priority according to impact on the productivity of the press as well as the urgency of replacing individual parts.



# Technical data

<b>Sheet format</b>		
Maximum (straight/perfector presses)	740 × 1,060 / 750 × 1,060	mm
Special formats (straight)	750 × 1,060 / 780 × 1,060	mm
Minimum (straight/perfecting)	340 × 480 / 400 × 480	mm
<b>Print format</b>		
Maximum	730 × 1,050	mm
Special formats (straight presses)	740 × 1,050 / 770 × 1,050	mm
<b>Substrates<sup>1</sup></b>		
Standard	0.04 – 0.7	mm
With cardboard handling package (from approx. 450 g/m <sup>2</sup> )	up to 1.2	mm
With corrugated package	up to 1.6	mm
With film and plastics package	0.1–0.7	mm
Perfector press	up to 0.6	mm
Perfector press with cardboard handling package	up to 0.8	mm
Gripper margin	10	mm
<b>Production speed<sup>2</sup></b>		
Depending on the configuration	18,000 - 20,000	sheets/h
<b>Pile heights from floor</b>		
Sheet feeder	1,250	mm
Sheet feeder in non-stop operation	1,000	mm
Delivery	1,200	mm
Delivery in non-stop operation	900	mm
<b>Plate and blanket dimensions</b>		
Standard printing plate	795 × 1,060	mm
Standard copy line	36	mm
Blanket	860 × 1,070	mm

<sup>1</sup> Suitability for printing is partly determined by the flexural rigidity of the substrate.

<sup>2</sup> Depends on individual operating conditions, and inks and substrates used.

**Koenig & Bauer Sheetfed AG & Co. KG**

Friedrich-List-Str. 47  
01445 Radebeul, Germany

T +49 351 833-0  
F +49 351 833-1001  
radebeul@koenig-bauer.com

koenig-bauer.com

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