KOENIG & BAUER

Rapida 145
Rapida 164

we’re on it.

EN

A new generation and a new dimension in performance: The large format Rapida

There are any number of reasons why Koenig & Bauer is acclaimed as the market and technology leader in the large-format sheetfed offset sector. Many ground-breaking innovations originated from Koenig & Bauer that remain unique today. The presses in the Rapida 145 and Rapida 164 series set the industry benchmark in their respective format classes. Production speeds up to 18,000 sheets per hour, fast makeready, the ultimate in automation and precise inline quality control systems form the basis for efficient and profitable production processes.

The latest generation of large-format Rapida presses takes the floor in a modern and fascinating design. This not only makes them an **unparalleled means of production** for your printshop, but also an eye-catching technology that is guaranteed to inspire your staff, customers and business partners alike.

State-of-the-art operating concepts based on touchscreens and apps make routine processes such as job changeovers, production and quality control a pleasure. A whole range of additional functions also enable you to control your production processes in real time. Production data and additional details such as CO_2 emissions are available at a glance. Your Rapida large-format press forms the nexus of all activities serving the digitalisation of your print company.

The mix of proven features and innovative automation functions heralds a whole new era in large-format sheetfed offset. Look forward to a **new dimension in performance**.

Perfect for every application
At home in all market segments

Large-format Rapida presses are used in many different market segments. One important field is industrial packaging printing. The presses are nevertheless equally at home when operating in modern online print businesses, book printers, poster printers and many other highly specialised companies.

The wide range of applications is more than matched by the number of configuration options for large-format Rapida presses. Presses with **up to 16 printing and finishing units** are already in daily use. They can be equipped with a reel-to-sheet feeder, coaters ahead of the printing units, perfecting facilities, intermediate drying units, additional printing units after coating or a double-pile delivery – whatever the individual application requires. For packaging printing, they can also be placed on raised foundations and integrated into a fully automatic pile logistics system. There are practically no limits to the potential they offer.

Even where printshop space is at a premium, the large-format Rapidas are still the ideal choice. They boast a significantly **smaller footprint** than their competitors for the same or even a slightly larger format, and this, in turn, reduces the space required, as well as production costs. Even in buildings with low ceilings, a Rapida 145 or Rapida 164 makes for the ideal production equipment. What' s more, Koenig & Bauer large-format presses are much lighter in weight than you might expect, and can be placed on cast blocks to raise pile heights. That saves money that must otherwise be spent on construction work to prepare for installation.

With their large range of automation and equipment variants, the large-format Rapidas offer an ideal solution for all market segments. And they help you to **maximise your business success** – something the following technical features contribute to:

Commercial printing/Web-to-print

- ErgoTronic AutoRun – autonomous printing of a prepared job list
- Reel-to-sheet feeder RS 145
- Unbent printing plates
- DriveTronic PlateIdent: camera-based plate identification; this feature determines whether the correct plate is in the plate changer before the change process begins
- DriveTronic SPC (simultaneous plate changing at the same time as other makeready processes) to ensure the shortest possible job changeover times
- “Print clean” function can replace blanket washing when working on short runs
- Simultaneous roller washing at the same time as other makeready processes with DriveTronic SRW
- Plate stretching (paper stretch compensation)
- Automatic perfecting unit conversion
- Automatic start to the sheet counter once a good sheet is detected
- Inline measuring and control systems, including QualiTronic PrintCheck, PDFCheck and PDF HighRes

Packaging printing

- Automatic and register-true sheet alignment for safe onward processing (SIS)
- Handling of a broad spectrum of substrates
- EasyClean: specially coated ink ducts for fast ink changes
- Disengagement of unused inking units as standard
- DriveTronic SRW permits simultaneous preparation of a printing unit for spot colours during ongoing production – also suitable for UV inks
- Incorporation of one or more coater towers before or after offset printing for a wide range of high-quality finishing options
- Automated coating forme changes in less than one minute with DriveTronic SFC
- State-of-the-art chamber blade technology with lightweight anilox rollers
- AniSleeve for fast, tool-free anilox roller changes
- Double-pile delivery to separate good sheets and waste sheets

High output, fast job changeovers For more turnover

Rapida sheetfed offset presses are renowned for their previously unimagined performance capabilities, not least in large formats. With sheets measuring almost 2 square metres (Rapida 164) and speeds up to 18,000 sheets per hour (Rapida 145), an area equivalent to four football pitches can be printed in just one hour.

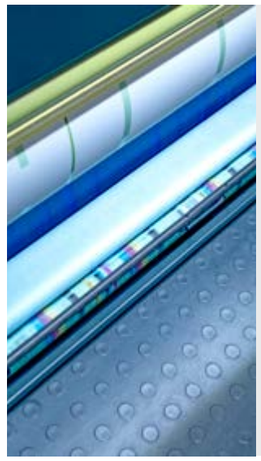
But that's not all: Rapida sheetfed offset presses are particularly robust, and are manufactured to provide many years and decades of **reliable** service. Several of them have already sailed past the impressive milestone of 1 billion printed sheets.

Three criteria are key to a performance this remarkable: **extremely short makeready times** for fast, highly automated job changeovers, **maximum availability** and **top production outputs**. Whether you primarily print short and medium-length jobs or specialise in very long runs, you'll always be able to depend on a Rapida large-format press. Moreover, inline control systems with functionalities extending to sheet inspection and continuous production monitoring guarantee consistent, first-class print quality.

An overview of automation features with added value for the Rapida large-format series:

DriveTronic at a glance

- DriveTronic Feeder: ultimate preset capabilities
- DriveTronic Infeed: remote motorised adjustment of the feed line
- DriveTronic SIS: sidelay-free infeed
- DriveTronic SRW: simultaneous roller washing parallel to other makeready processes (except plate changing)
- DriveTronic SPC: simultaneous plate change in all printing units
- DriveTronic SFC: automated coating forme change, at the same time as other makeready processes in the printing units



CleanTronic at a glance

- CleanTronic blanket and impression cylinder washing system: multi-purpose system for roller, blanket and impression cylinder washing, with simultaneous washing of rollers and blankets or rollers and impression cylinders
- CleanTronic Synchro: simultaneous washing of blankets and impression cylinders parallel to plate change with DriveTronic SPC
- CleanTronic Multi: multi-media washing circuits for alternating conventional/UV production – available for CleanTronic and CleanTronic Synchro systems
- CleanTronic UV: safety function to eliminate waiting times before and after cylinder washing when printing using UV inks
- "PrintClean" function: precise stripping of the remaining ink from printing plates and blankets as an alternative to blanket washing (shorter washing times and reduced solvent consumption)

Inline sophistication Coating and drying at the highest level

In the large-format sheetfed offset sector in particular, inline finishing systems have now become commonplace. The coating and drying systems on the Rapida 145 and Rapida 164, however, allow you to offer your customers finishing in a quality that far exceeds the standards typically available on the market.

Single and multiple coating applications, all-over and spot coatings, gloss and matt finishes, matt-gloss combinations, pearlescent and metallic effects, conventional and/or UV coating systems in every variation – the **coater towers** for the large-format Rapidas can turn practically every idea on the wish-lists of creatives and product designers into reality. Thereby ensuring that the final product catches the eye, and piquing the customer's interest at the point of sale.

State-of-the-art automation details provide for both brilliant finishing results and outstanding process efficiency. This all begins with the **coating forme changes**: thanks to dedicated drive technology (DriveTronic SFC), changes run **parallel to other makeready processes** with a high degree of automation. There is no need to set aside additional time for this task, as everything is completed without the need for tools in just 1.5 minutes. On double-coating presses, makeready can be done on one coater while production continues on the second. Things could hardly be better than that.

The **AniSleeve** technology also helps make **anilox roller changes**, and therefore varying the amount of coating to be applied, especially straightforward and convenient. The sleeves can be changed by a single operator, who won't need any tools – and this can be done at the same time as other makeready processes or ongoing production in the other units. Two minutes is all it takes.

With its reduced volume, the integrated **blade chamber** helps to maintain a high coating flow velocity. This prevents coating starvation and also reduces the risk of foaming. The evenly distributed pressure, and linear motion to the

roller, play a similarly decisive role in homogeneous and consistently high-quality coating results.

All this leaves is the drying: the VariDry family of high-performance dryers will give you the best drying results in both conventional and UV applications. Thanks to their modular design, they are perfectly matched to the geometry of the press and are suitable for flexible use for either intermediate or final drying. The **energy-saving VariDry^{Blue} system** recirculates the still-unsaturated dryer air, thereby reducing the necessary heat energy input. Depending on the particular job, this makes savings of up to 30 per cent possible compared to conventional technologies! Energy is used more efficiently and the impact on the environment is reduced is reduced.

Rapida 145
Rapida 164

ErgoTronic console
Made by Koenig & Bauer

- Customer Community – central interface to all digital services and to 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 makeready sequences
- Autonomous printing with ErgoTronic AutoRun
- Job profiles can be saved for repeat jobs
- Integrated measuring and control systems
- Rapida LiveApps (mobile control console, inventory management and batch tracking)
- Integration into the LogoTronic production data management system

VariDry dryer systems
Efficient and effective

- High-performance VariDry IR/hot air, VariDry UV, VariDry HR-UV and VariDry LED-UV dryers from a single source – dryer technologies are one of Koenig & Bauer's core areas of expertise
- Flexible use of the UV dryers for interdeck and final drying
- Optional dryer control including sensors for UV lamp monitoring
- Lamp replacement without tools
- VariDry^{Blue} technology for enhanced energy efficiency

AirTronic delivery
Maximum preset capabilities

- Aerodynamic gripper carriages for optimised air flows
- Intelligent sheet guiding solutions for commercial and packaging printing
- Sheet brakes for commercial and packaging production
- Speed-compensated, format-dependent powder metering
- Delivery extensions for the integration of dryer modules
- Double-pile delivery (Rapida 145)
- EES (Emission Extraction System) to eliminate potential emission hazards
- Specific non-stop solutions

Inline finishing
Coating in endless variants

- Automated coating forme change
- DriveTronic SFC for simultaneous coating forme change parallel to other makeready processes or ongoing production
- AniSleeve: Anilox rollers in sleeve design for changing parallel to other makeready processes or ongoing production
- Remote setting of the pressure between anilox roller and forme
- Remote register adjustment
- IVL: viscosity-controlled coating pumps
- Fully automatic coating supply
- Fully automated coating circuit cleaning process, controlled from the press console
- Cold foil unit

CleanTronic
Best washing results

- CleanTronic: multi-purpose washing system for blankets and impression cylinders with swing-action washing beam
- CleanTronic Synchro: multi-purpose washing system for blankets, impression cylinders and rollers with two washing beams
- CleanTronic Multi: multi-media washing system for mixed conventional/UV production
- CleanTronic UV: blanket washing with the UV lamps in standby mode
- CleanTronic SRW: roller washing parallel to blanket and impression cylinder washing, coating forme changes and production
- "Print Clean" function to strip remaining ink from the plate and blanket

Plate changing
Application-oriented automation

- SAPC: automated plate change
- FAPC: fully automatic plate change
- DriveTronic SPC: simultaneous plate change with other makeready processes
- ErgoTronic PlateStretch: pneumatic plate stretching as paper stretch compensation
- Optional use of unbent printing plates

Perfecting unit
Flexibility in production

- Three-drum system for exact perfecting register
- Fully automatic operating mode changeover in approx. 3 minutes
- Jackets on impression cylinders with state-of-the-art ink-repellent coating
- Anti-Marking Coat: coated drum shells
- Gentle, air-cushioned sheet guiding by means of blower systems and Venturi sheet guide plates
- Twist-action suckers to spread the rear edge of the sheet tight on the storage drum
- Air settings can be entered and saved on the control console for repeat jobs
- Video system for monitoring sheet travel

Inking unit
Ingenious solutions

- High repeat accuracy thanks to bleed-free metering in the ColorTronic ink duct
- Stepless adjustment of the oscillation timing from the control console during production
- Maintenance-free pneumatic ink ducts for UV production
- EasyClean ink duct plates for fast ink changes
- Ink train separation with impression-off
- Individual disengaging of inking units when not needed to reduce roller wear and makeready times
- Temperature control for the duct roller and oscillating distributors
- Speed-compensated VariDamp film-type dampening units for a stable ink/water balance
- Differential drive to eliminate hickeys

Printing unit
Manufactured with high precision

- Substructure cast in a single piece for high torsional rigidity and stability
- Double-size impression cylinders and transfer drums for low-curvature sheet travel – even heavy substrates are subject to only minimal bending
- Smooth running and excellent precision thanks to continuous gear train
- Venturi air-cushioned sheet travel for contact-free sheet transfer
- Air settings can be entered and saved on the ErgoTronic control console for repeat jobs
- Universal gripper system accommodates all changes in substrate thickness
- Remote setting of lateral, circumferential and diagonal register from the ErgoTronic console
- Automatic setting of the substrate thickness
- Two-stage process to switch pneumatic impression on/off

DriveTronic SIS
Patented sheet infeed

- Sensoric Infeed System (sidelay-free infeed)
- Patented, maintenance-free sheet infeed system
- Electronically controlled lateral alignment
- 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 feeder
Convenient sheet travel start

- DriveTronic sheet feeder for continuous, stepless pile lift with automatic speed adjustment for paper and board
- Feed table with electronically controlled sheet deceleration to ensure optimum sheet arrival speeds at the front lays
- DriveTronic Infeed for motorised remote adjustment of the front lays, feed line and front lay cover height
- Automatic format adjustment and pile-edge control

- Large, user-friendly touchscreens for all required functions
- Ultrasonic double sheet detector; other detector types according to the printed substrates
- Uninterrupted print production provided by non-stop solutions with motorised rake adjustment

Technology at a glance


Rapida 145/164

More precision than any magnifier
Sheet after sheet

In order to meet increasing expectations of higher quality, large-format Rapida presses can be fitted with a wide variety of quality measurement and control systems. They help to shorten makeready times, minimise paper waste, and safeguard the consistently high quality of printing production.

Most systems work with a **shared camera system**, which helps simplify maintenance work and improves handling and accessibility.

Register measurement and control can be carried out using three different systems. The most straightforward solution is automatic measurement and control for an individual sheet using the separate ErgoTronic ACR video magnifier. ErgoTronic ICR controls the register for an individual sheet on the control console.

QualiTronic ICR, in turn, offers fully automated register control directly on the press.

Two other systems measure and control the ink. ErgoTronic ColorControl can be used to control ink densities and, optionally, the spectral values – both in colour bars and in the image – online at the press console. **QualiTronic ColorControl** makes colour control especially convenient. The camera system installed after the last printing or coating unit, or after the last unit before perfecting, automatically determines the optical densities and controls the ink keys without further intervention.

ErgoTronic and QualiTronic form an unbeatable combination: from a simple online system through to high-quality inline colour control according to grey balance, there is a range of upgrade options to choose from. Whatever printing standard you require, Koenig & Bauer has the right solution for you.

QualiTronic PrintCheck and PDF HighRes also give you two different **sheet inspection** variants to choose from. PrintCheck combines colour measurement with a fully automated comparison of the printed sheet against a reference. QualiTronic PDF HighRes is aimed at users who require a resolution of approx. 260 dpi for sheet inspection, making it ideal for fulfilling the stringent requirements that apply in the pharmaceutical industry.

Digital workflows
Everything in real time

The Rapida 145/164 is destined to become the nexus of your digital print factory of the future. End-to-end workflows and smart operating concepts streamline and optimise processes within the company and contribute to increases in profitability.

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 that the range of features available in Optimus dash has to offer include flawless communication between all departments, lean management, the identification of optimisation potential, and a cost focus.

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 145 / Rapida 164 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 to 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 New application experience

The Customer Community forms the central interface between Rapida users and customer service representatives. This portal pools all digital services in one and the same 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 able to view 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 InspectionReport** 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

Sheet format	**Rapida 145**	**Rapiad 164**	
Maximum	1,060 × 1,450	1,205 × 1,640	mm
Minimum (straight printing/perfecting)	600 × 600 / 670 × 600	600 × 800	mm
Print format			
Maximum	1,050 × 1,450	1,190 × 1,640	mm
Substrates[1]			
Standard (straight printing/perfecting)	0.1 - 0.7 / 0.1 - 0.6	0.1 - 0.7	mm
With lightweight package	from 0.06	from 0.06	mm
With board-handling package (from approx. 450 g/m²)	up to 1.2	up to 1.2	mm
With corrugated package	up to 1.6	up to 1.6	mm
More extensive substrate range upon request			
Gripper margin	10	10	mm
Max. production speed Standard[2]	**Paper / board**	**Paper / board**	
Up to 8 printing units + coater	15,000 / 16,000	15,000 / 16,000	sheets/h
8 printing units + double coater	14,000	12,000	sheets/h
9 printing units + coater	13,000	12,000	sheets/h
10 printing units	13,000	12,000	sheets/h
With perfecting unit (straight printing/perfecting) Up to 10 printing units	13,000	–	sheets/h
With High Speed package			
Up to 8 printing units + coater	18,000	17,000	sheets/h
With perfecting unit (straight printing/perfecting) Up to 10 printing units	15,000	–	sheets/h
Pile height from floor			
Feeder	1,500	1,500	mm
Feeder in non-stop operation	1,200	1,200	mm
Delivery (commercial/board equipment)	1,500	1,500	mm
Delivery in non-stop operation (commercial/board equipment)	1,400	1,400	mm
Raised press foundations			
Strip foundations	185/370/555/ 740/925	185/370/555/ 740/925	mm
Cast blocks	185/370/555	185/370/555	mm
Plate and blanket dimensions			
Printing plate	1,180 × 1,460	1,265 × 1,650	mm
Coating plate	1,180 × 1,460	1,260 × 1,650	mm
Standard copy line	72	49	mm
Blanket size	1,305 × 1,480	1,355 × 1,670	mm

[1] The flexural rigidity of the substrate is a decisive factor in suitability for printing.

[2] Depends on individual operating conditions and the inks and substrates used.

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