



The new KBA Rapida 105

Innovative Rapida 106 technology inside



RAPID 105

The new KBA Rapida 105

Better and more flexible than ever before

KBA Rapida 105 has for years stood as a synonym for reliability and an attractive price-performance ratio in medium-format sheetfed offset printing. The lasting market success has been founded above all on its superior substrate flexibility, ease of operation, a robust construction, diverse possibilities for inline finishing and, last but not least, the excellent print quality.



But the competition is becoming ever fiercer, turnaround times ever shorter, and the demands of the market ever more complex – the pressures placed on operators and presses continue to grow constantly. It is not least for this reason that the new Rapida 105 now stands on the same technology platform as the innovative makeready world champion press Rapida 106. The completely new Rapida 105 generation is available with immediate effect – packed with design solutions previously unique to the KBA Rapida 106.

This leap forward in technology will set your heart alight. After all, the new Rapida 105 integrates many proven Rapida 106 features, for example

- new gripper systems
- optimised inking units
- improved sheet guiding
- KBA VariDry dryer technology
- further extended automation
- new delivery

A sheer endless range of configuration variants, furthermore, permits tailoring to a broad spectrum of applications, from commercial production to labels or high-quality packaging. Inline finishing? Of course: Both conventional and UV technologies are available for all-over and spot coatings – and as your key to an exciting world of visual and haptic effects.



DriveTronic feeder – drive technology par excellence

User-oriented automation

Strong performance begins at the feeder. On the Rapida 105, state-of-the-art dedicated drives have been standard for years. The DriveTronic technology is unique in the world. Whatever the thickness, whether heavy or light, the DriveTronic feeder handles every substrate with kid gloves. And the continuous, jerk-free pile lift guarantees smooth transport into the press. Following exact alignment of the sheet by the vacuum side lay, the proven swing infeed provides for gentle acceleration to production speed.

DriveTronic feeder

- Feeder motions controlled via 4 servo motors
- Continuous, stepless pile lifting with automatic speed compensation (paper/board)
- Antistatic rear-edge separating air
- Automatic format setting
- Automatic pile side edge alignment
- Front-edge pile height sensing with automatic compensation of the feeder head height
- Skew-sheet correction at the feeder head during production

Suction-belt feed table

- Suction-belt feed table with stainless, antistatic structured surface and multi-chamber vacuum system

- Electronically controlled sheet deceleration to ensure optimum sheet arrival speed at the front lays

Vacuum side lay

- Marking-free alignment process
- Multi-chamber vacuum system to permit matching to different substrates
- Included in automatic format setting

Infeed

- Swing infeed accelerates the sheet smoothly for transfer to the feed drum
- Central parallel and skew adjustment of the feed line
- Central adjustment of the front lay cover height
- Touchscreen display with direct function keys for reliable and intuitive press operation

Sheet monitoring

- Ultrasonic double-sheet detector, also for inhomogeneous materials
- Multiple-sheet detector
- Optical skew-sheet and side lay sensors
- Optical front lay sensors with electropneumatic overshoot blocking
- Magnetic crash bar

Non-stop operation at the feeder

- Non-stop system with individual rods for uninterrupted production during pile changes
- Pile insertion and removal possible from all three sides





Stability in print

Register-true and with perfect precision

The new printing unit substructures have further smoothed the curvature of sheet travel on the Rapida 105. For even the heaviest materials, bending is reduced to an absolute minimum. The sophisticated Venturi sheet guiding system ensures a contact- and scratch-free passage through the press for every conceivable substrate – whether thick or thin, solid or multiple-ply. And a drive based on a single, continuous gear train has already been typical and proven Rapida technology for decades. This design provides for the desired quiet running and the ultimate precision of the print on the sheet.

Design principles

- Unit design
- Double-size impression cylinders and transfer systems for reliable sheet travel over the full substrate range
- 7 o'clock cylinder arrangement
- Substructure cast in a single piece for high torsional rigidity and stability
- Continuous gear train for smooth running and precision
- Corrosion-free cylinder surface finish
- Bearer contact and play-free bearings for precise rolling between plate and blanket cylinders
- Central lubrication

Sheet travel

- Gentle, air-cushioned sheet travel with blower systems and Venturi guide plates
- Automatic setting of the substrate thickness
- Pneumatic impression on/off switching

Universal gripper system

- No adjustments required to accommodate changes in substrate thickness
- Coated gripper tips and structured gripper pads for maximum holding force
- Gripper pads and tips can be replaced individually
- Increased gripper shaft diameter

Register setting

- Remote setting of lateral, circumferential and diagonal register
- Diagonal register achieved by tilting the transfer drums
- ErgoTronic ACR for automatic and exact register checking and correction

ColorTronic – performance in colour

Even faster reaction

The optimised inking units of the new Rapida 105 shy no comparison. After all, they stand firmly on a par with those of the high-tech sister press in respect of ink flow and distribution. The latest rheology know-how and many years of practical experience have combined to produce an even faster reacting inking unit for the Rapida 105. The high level of repeat accuracy thanks to bleed-free ink metering and the disengaging of inking units not required for a particular job are just two of the many highlights by which the new inking unit excels.

ColorTronic ink duct

- Ink keys with carbide blades and ceramic-coated ink duct roller
- Remote control of the ink keys
- Wear-free ink metering ensures accurately reproducible settings
- Ink duct roller speed compensated to the press speed

Special ink duct foil

- Makeready savings through
- Fast emptying of the ink duct
 - Fast cleaning of the ink duct
 - Fast foil replacement

Inking unit

- New, fast-reacting inking unit
- Remote setting of vibrator frequency and blocking from the control console
- Ink train separation with impression-off
- Automatic adjustment of the oscillation timing from the control console
- Ink forme roller oscillation
- Inking unit temperature control for duct roller and oscillating distributors
- Individual engaging/disengaging of inking units from the console for reduced roller wear and minimised makeready times

Dampening unit

- New, speed-compensated Varidamp film-type dampening unit for a stable ink-water balance
- Skewing of the dampening duct roller to adapt dampening solution distribution across the press width
- Differential drive to eliminate hickeys, activated from the control console during production







Suiting all preferences

Diversity of plate changing choice

By catering for individual job structures and press manning practices, the new Rapida 105 also leaves no wish unanswered when it comes to makeready savings at job changeover. Between a convenient manual variant and fully automatic plate change – the choice is yours. And even with the simplest solution, the new Rapida 105 provides for fast and precise positioning of the plate on the cylinder. That not only saves time and nerves, it also puts money back in your pocket.

QAPC (Quick Action Plate Change): **Simple plate change**

- Plate change with quick-release clamps
- Automatic plate cylinder positioning
- Pneumatic plate clamping
- Divided rear plate clamps

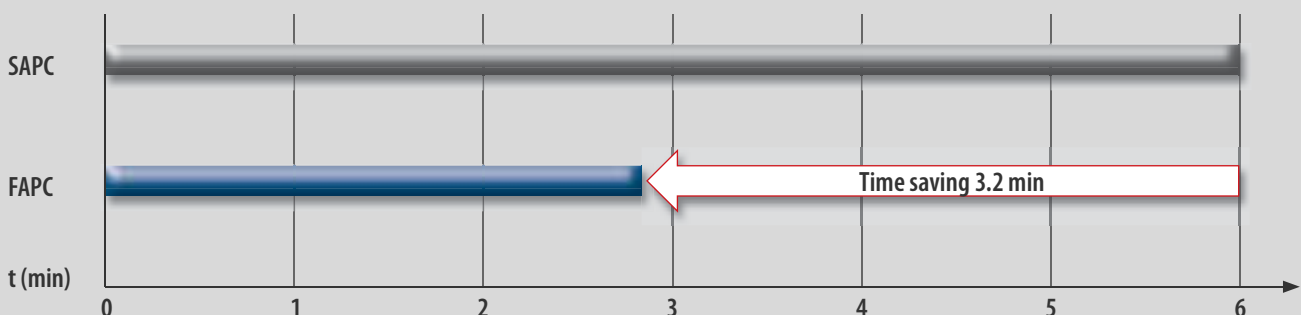
SAPC (Semi Automatic Plate Change): **Automated plate change**

- Pneumatic opening and closing of the plate cylinder guard
- Automatic rotation to the change positions
- Automatic clamping and tensioning of the plate
- Divided rear plate clamps

FAPC (Fully Automatic Plate Change): **Fully automatic plate change**

- Automatic plate change on the whole press after program start at the control console
- Parallel changing in several printing units, completed in 3 cycles
- Faster, optimised change process with change time of 2.8 min, including register zeroing
- Divided rear plate clamps

Plate changing time on a KBA Rapida 105-6+L

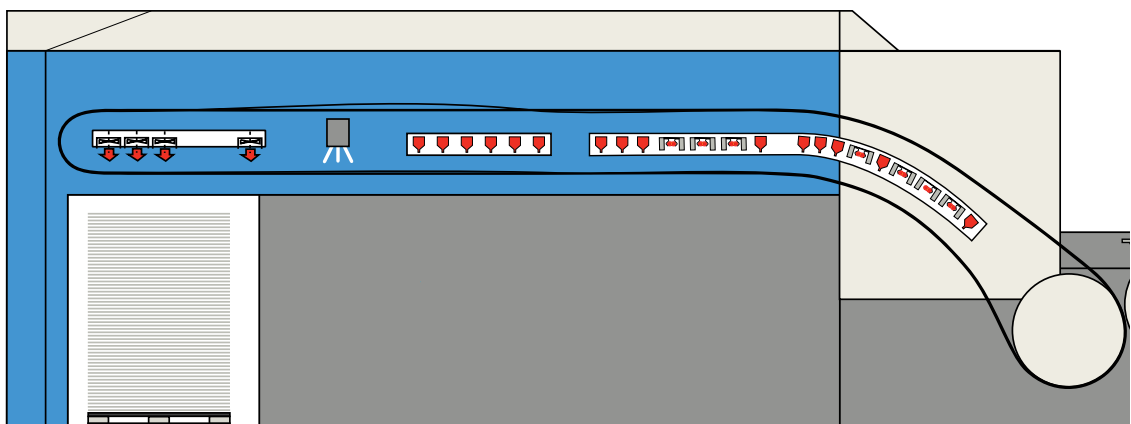


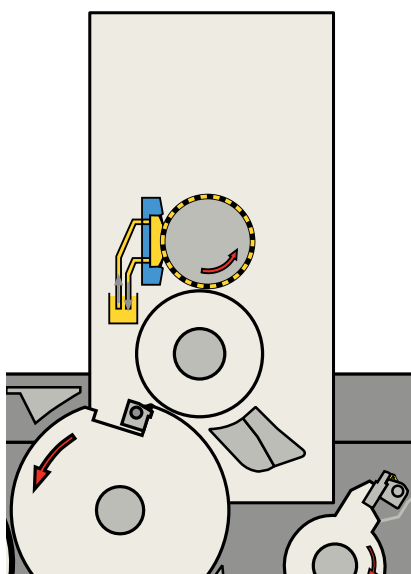
The new KBA Rapida



AirTronic delivery with VariDry^{Blue} drying system

Even difficult substrates are transported smoothly and dropped precisely onto the pile in the aerodynamically optimised delivery. Energy efficiency paired with a perfect drying result – already reality with the VariDry^{Blue} system of the latest generation.





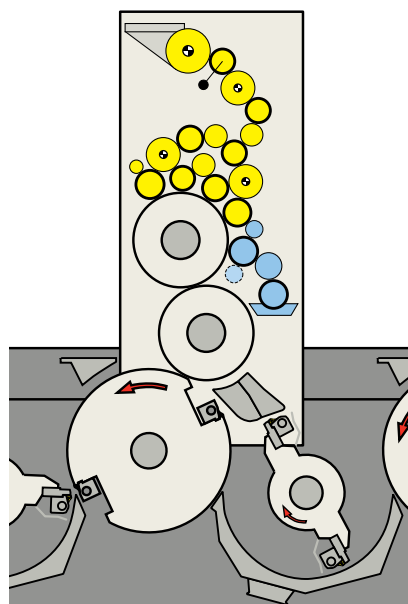
Coater

Gloss and matt effects, all-over and spot finishes, dispersion and UV coatings – everything is included in the coating concept of the Rapida 105. And the handling? A pleasure to work with thanks to the modern chamber blade technology and press console integration.



Printing unit

The optimised geometry of the new inking unit satisfies even the highest quality demands. The unit substructure is also something special: Thanks to the sophisticated Venturi sheet guide plates, every substrate is carried perfectly through the press. All air settings can be preset.

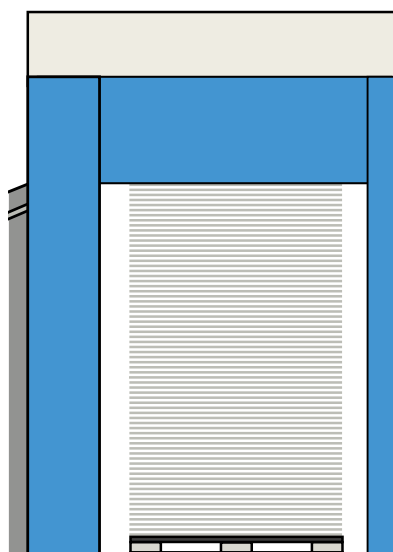




Feeder

Characterised by its four electronically controlled dedicated drives – the proven DriveTronic feeder.

Stoppages? Not here, because every substrate is handled with kid gloves, whether challenging lightweight paper or heavy board.



105 —

Rapida 106 inside



CleanTronic – washing system with class

Fast and efficient

Washing during long runs and at job changeover is usually a time-consuming procedure, but at the same time simply necessary to guarantee constantly high print quality.

Here, too, the new Rapida 105 is ideally prepared. Individually customised washing system configurations contribute to process automation. Parallel functions and the preselection of washing programs matched to job-specific needs ensure a perfect washing result – and that all faster than you ever thought possible.

Roller washing

- Individual programming and central control of washing programs
- Multiple-media washing system permitting the use of different ink systems

Blanket and impression cylinder washing

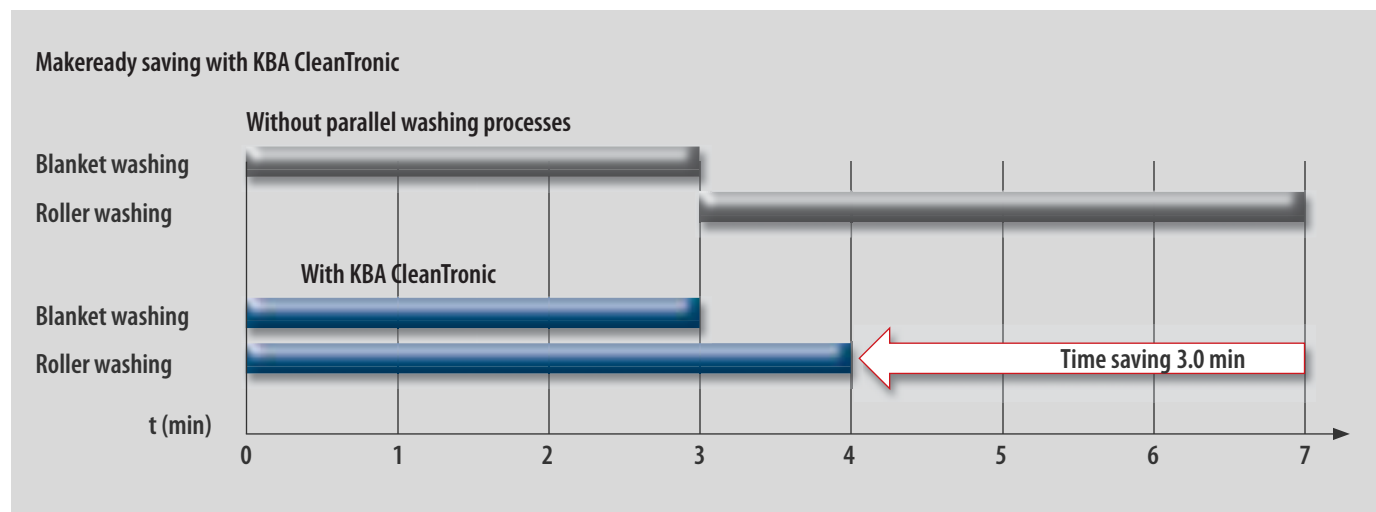
- Simple washing beam for blanket washing (with Easy Set)
- Swing-action washing beam for combined blanket and impression cylinder washing
- Individual programming and central control of washing programs
- Multiple-media washing system permitting the use of different ink systems
- Parallel washing of rollers and blanket
- Use of dry cloth or ready-impregnated cloth rolls
- Indication of washing cloth consumption at the control console

"Print clean" function

- Targeted stripping of the remaining ink from plate and blanket
- Reduced blanket washing times and material consumption
- Enhanced production stability with thin materials
- Pre-selection of the number of sheets to be used
- Can replace blanket washing for short runs

CleanTronic UV

- WashTronic safety function to eliminate waiting times before and after cylinder washing when printing with UV inks
- More efficient makeready and longer service life for UV lamps



Shining finishes

Endless diversity for maximum creativity

Inline finishing is nowadays the icing on the cake for every print process. Whether for straightforward protection or as a design element on commercial products, whether for special effects or spot coating in high-quality packaging printing and a broad range of special applications – the coater of the Rapida 105 is ready to master all challenges. State-of-the-art chamber blade technology with lightweight anilox rollers, separate coating supply circuits and console integration make handling a real pleasure.

Chamber blade system

- Hydropneumatic control for constant and even coating application
- Lightweight anilox rollers ensuring fast and user-friendly replacement

Coating supply system

- Coating supply system for dispersion and UV coatings in separate circuits
- Central control via the press console
- Fully automatic cleaning for dispersion and UV coatings
- Excellent cleaning result enabling immediate use of the coating system for the next job

Coating forme change

- Universal clamps for blankets and coating plates
- Quick-release clamps for coating plates with register system for automated forme change (change time: approx. 1 min)
- Remote pressure setting
- Remote adjustment of lateral and circumferential register from the press console







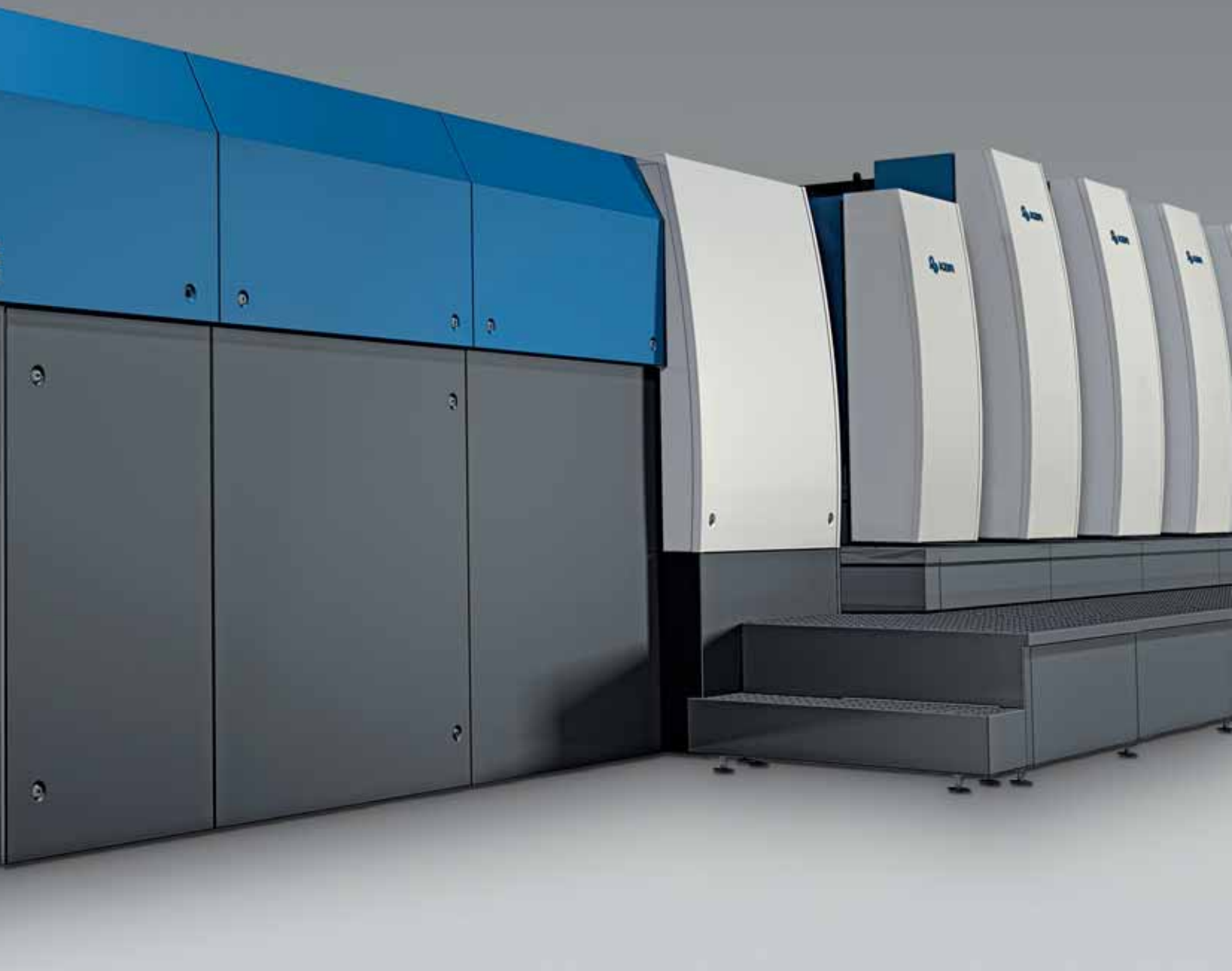
The new AirTronic delivery

Rapida 106 inside

Redesigned from the ground up for perfect aerodynamics, the new delivery of the Rapida 105 adopts the underlying concept of the Rapida 106. The swan neck now follows directly after the last printing unit, providing for significantly smoother sheet travel and precise pile formation irrespective of the substrate. Another new feature is the air-cushioned sheet transport through to precise delivery onto the pile. Even sensitive substrates can thus be handled with ease at full production speed.

Sheet travel

- High-level delivery for smooth sheet transport
- Touchscreen display with direct function keys for reliable and intuitive press operation
- Air-cushioned sheet guiding with multiple Venturi systems
- Speed-compensated gripper opening cam for a broad range of substrates
- Fan modules and blower bars promote optimum pile formation
- Standard-compliant light barriers to guard the hazardous area



Powder sprayer

- Speed-compensated and format-dependent powder metering

Sheet brake

- Sheet brake with pre-suction plate and variable speed to facilitate precise sheet delivery
- Automatic format setting
- Individual air settings for suction rings
- Suction rings can be deactivated in pairs

Extraction system

- Elimination of health hazards from ozone and VOC emissions

Extended delivery

- Extension length 2,400 mm
- Enhanced productivity when coating thanks to shorter drying times

Non-stop operation at the delivery

- Non-stop pile change possible at full production speed
- Lowerable non-stop roller rack extended automatically above the main pile
- Sensor monitoring for lifting/lowering of main and auxiliary piles
- Alternative: Non-stop system without lowering capability for smaller pile heights or several product piles on a single pallet



VariDry drying systems

Ecological and efficient

As production speeds increase, ever greater demands are placed on dryer efficiency. The new Rapida 105 is equipped with high-performance dryers from the KBA VariDry family. Perfect drying results are thus practically guaranteed – for both conventional and UV applications. With the latest VariDry^{Blue} technology, the additional aspect of energy efficiency is shifted into the spotlight. The print process gains significantly in terms of ecology and places even less impact on the environment.

VariDry UV

- Compact dryer module with UV power rating of 160 W/cm (stepless control)
- Can be installed as final or interdeck dryers
- Lamp replacement without tools
- Automatic pile temperature measurement
- Lamp-specific acquisition of operating hours, irrespective of installation position
- CleanTronic UV to shorten the waiting times when washing

VariDry IR/hot air

- IR/hot-air drying with stepless control
- Can be installed as final dryers, as intermediate dryers or in a dryer tower
- Carbon twin lamps with IR power rating of 60 W/cm
- Lamp replacement without tools
- Dryer control on the basis of pile temperature

VariDry^{Blue}

- System variant for enhanced energy efficiency
- Energy saving potential up to 50% compared to conventional IR/hot-air dryers
- Unsaturated dryer air recirculated within the extended delivery
- Controlled via the press console

Comparison of dryer efficiency

Basic capacity data	KBA VariDry ^{Blue}	Standard
Working days per year	251	251
Shifts per day	3	3
Working hours per shift	7.4	7.4
Production hours per year	5,015	5,015
Production hours without makeready	4,000	4,000
Measurement results	KBA VariDry ^{Blue}	Standard
Average measured power consumption (kWh)	33	70
Power consumption in kWh/year	132,000	280,000
Electricity costs in € per kWh	0.10	0.10
Electricity costs per year in €	13,200	28,000
CO ₂ emissions (t/year)	81.5	172.8
Savings potential	KBA VariDry ^{Blue}	
Energy saving (kWh/year)	148,000	–
Energy saving (%)	53	–
Cost saving (€/year)	14,800	–
CO ₂ reduction (t/year)	91.3	–

Cutting-edge console technology

Elegant workflow solutions

Thanks to comprehensive console and preset capabilities, alongside an ergonomically arranged and intuitive user interface, work on the new Rapida 105 is child's play.

All operating functions are clearly structured for process-oriented access via the modern touchscreen monitor. Additional touchpanels with direct function keys help to maximise operator convenience at the feeder and delivery – directly on the press itself. The concept of the new Rapida 105 also provides for tailored workflow components for integration into company-wide production control and management systems.

ErgoTronic control console

- 19" TFT touchscreen for ergonomic access to all press functions
- USB port for fast communication of job data
- ColorTronic ink metering with ink profile displays on console
- Uninterruptible power supply to enable controlled press shutdown in case of power supply failure
- Integrated remote maintenance module

Control console functions

- Job changeover program for automatic job presetting
- Job-specific saving of all relevant press parameters for repeat jobs
- Remote register setting
- Control for all peripheral equipment
- Maintenance indicator

Job changeover program

- Preparation of the next job while production is still running
- Presetting of format and substrate thickness
- Presetting of all substrate-specific air settings
- Job-specific presetting of ColorTronic ink metering
- Preselection and activation of washing functions
- Automatic execution of all preselected makeready processes in time-optimised order

LogoTronic

- Ink profile presetting via CIP3 data

LogoTronic Professional

Comprehensive management system for KBA presses:

- CIP4/JDF interface to an MIS
- Order management
- Press presetting
- Master data, including central ink database
- PressWatch for graphic representation of the overall production process
- SpeedWatch for graphic representation of job progress
- Report functions





Remote diagnosis and maintenance

Boundless and convincing

The remote maintenance module which is incorporated into every press console as standard is your direct line to KBA. We are at your call with advice and practical support 24 hours a day, seven days a week. Just in case you ever need our assistance. With operating and setting tips, or online error diagnosis and rectification to get your press back on track without delay. Service visits and spare parts supplies, too, are coordinated immediately and without ado – worldwide. Data security? As remote maintenance can only be activated explicitly on the user side, the privacy of your data is guaranteed at all times.

Remote maintenance

- Integrated remote maintenance module in every press
- Most comprehensive remote maintenance functionality and longest experience on the market
- Access to individual printing unit controllers possible
- Fast assistance and problem remedies in up to 80% of all cases – without need for service visit or spare parts
- Telephone hotline free of charge during the warranty period
- Immense time and cost savings
- Increased availability of the press

Spare parts service

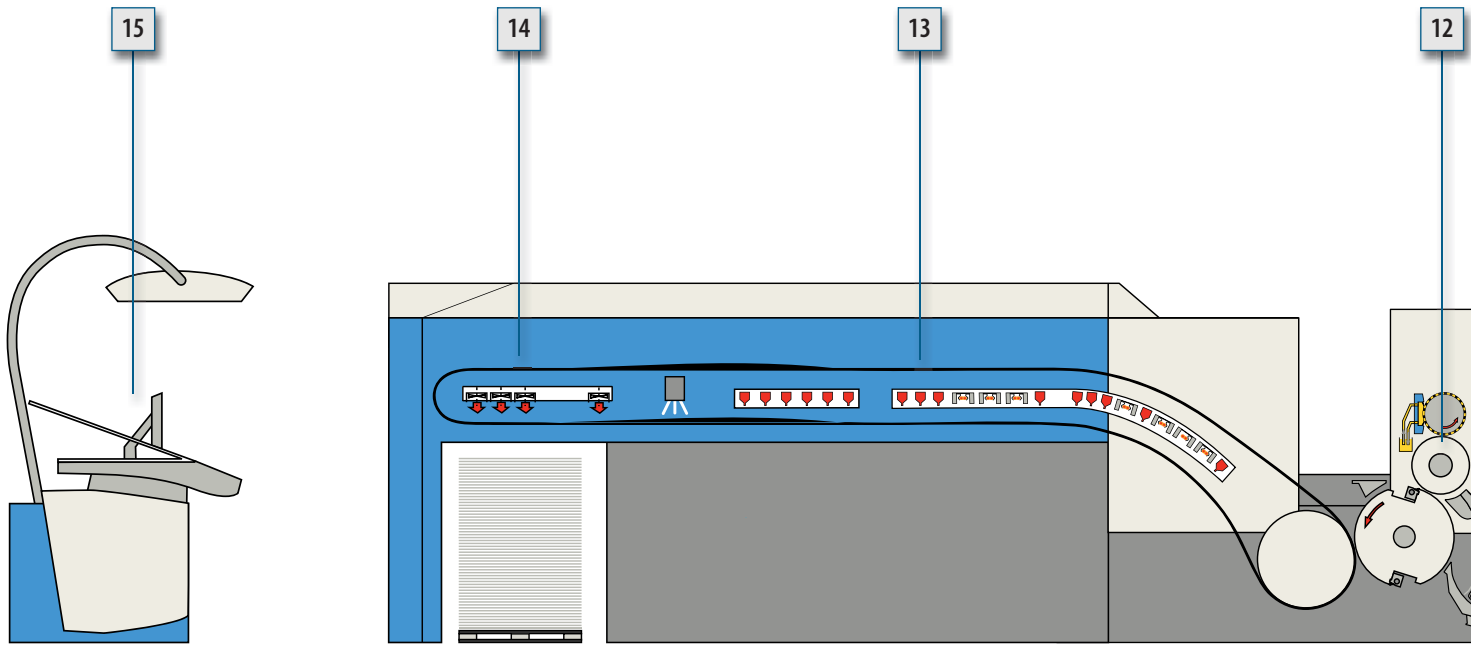
- Comprehensive product and quality tests for original KBA parts
- Competent and efficient advice from our service specialists
- Guarantee of outstanding precision and quality, high reliability and maximum service life
- Spare parts incorporating the latest state of the art
- High availability of over 2.5 million parts
- Fastest possible delivery of spare and accessory parts

Retrofits

- Adaptation of already installed presses to changing market conditions
- Possibilities to shorten makeready times, reduce waste or further improve quality
- Considerable experience gained in the course of many successful modernisation projects
- Comprehensive measures to raise press productivity possible

The new Rapida 105 at a glance

KBA Rapida 106 technology inside



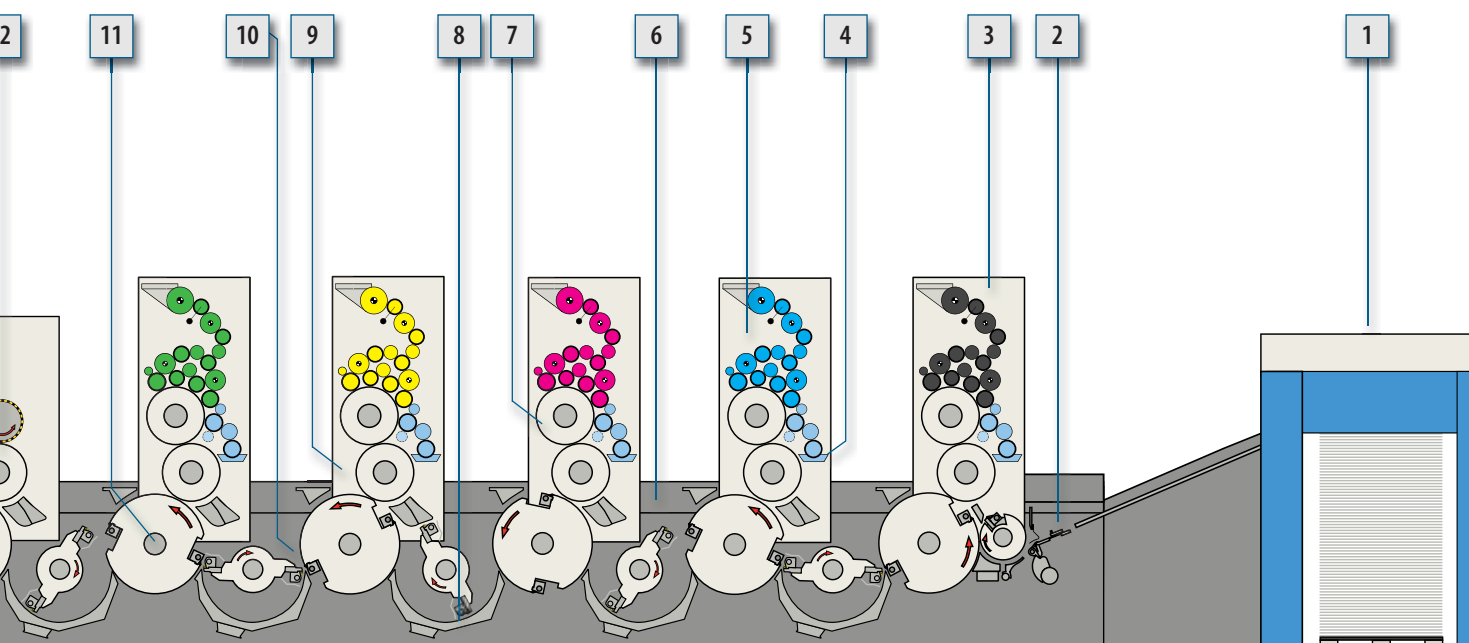
Sheet format:		
Maximum (standard/special version)	720 x 1050 / 740 x 1050	mm
Minimum (standard/special version)	360 x 520 / 350 x 500	mm
Print format:		
Standard/special version	710 x 1040 / 730 x 1040	mm
Substrates¹⁾:		
Standard	0.06 - 0.7	mm
With lightweight package	0.04	mm
With board-handling package	1.2	mm
With corrugated package	1.6	mm
Production speed²⁾:		
Maximum, dependent on configuration	16,000	sheets/h
With High Speed Package (optional)	16,500	sheets/h
Pile height³⁾:		
Feeder	1,300	mm
Delivery	1,200	mm
Plate and blanket dimensions:		
Plate size	795 x 1050	mm
Copy line (standard/special version)	50 / 36	mm
Blanket size	860 x 1060	mm

Illustrations and descriptions include special features. For further information please contact your KBA agent.

¹⁾ Printability is also influenced decisively by the flexural rigidity of the substrate

²⁾ Dependent on individual processing parameters, e.g. the inks and substrates used

³⁾ From floor / without non-stop operation



- 1 DriveTronic feeder
- 2 RA 106 side lay
- 3 RA 106 tower
- 4 RA 106 VariDamp dampening unit
- 5 RA 106 inking unit
- 6 RA 106 substructure
- 7 New plate change system
- 8 New multi-Venturi sheet guiding
- 9 CleanTronic washing systems
- 10 RA 106 gripper shafts
- 11 RA 106 cylinder bearings
- 12 RA 106 coating forme change system
- 13 VariDry^{Blue} IR/hot-air final dryers
- 14 AirTronic delivery
- 15 ErgoTronic console

Configuration variants for the new Rapida 105*

General	RA 105	RA 105 EasySet
Substrate range: 0.06 to 0.70 mm (maximum production speed dependent on substrate rigidity)	■	■
Accessory package for thin materials	■	■
Accessory package CX for board up to 1.2 mm	■	■
Accessory package for corrugated board	■	■
Accessory package for films and plastics	■	■
Accessory package for UV applications	■	■
Coater and double-length extended delivery	■	■
Feeder		
High-performance antistatic system, including side blowers with ionised air	■	■
Manual non-stop facility	■	■
Inset frame for flush pile board (not available separately, only together with inset frame in the delivery)	■	■
Free-standing pre-piling fixture	■	■
Infeed		
Vacuum side lay	■	■
Dust extraction	■	■
Intercom between infeed and delivery	■	■
Printing unit		
Sheet travel sensors	■	■
Sheet guide plates with preset capability	■	■
Plate change QAPC	□	■
Automated plate change SAPC	■	□
Fully automatic plate change FAPC	■	□
Inking unit		
Rollers for conventional inks	■	■
Rollers for UV inks	■	■
Inking unit temperature control	■	■
Ink duct roller cooling	■	□
Ink agitators	■	□
Hickey pickers	■	■
Dampening unit		
Differential drive	■	■
Washing systems		
CleanTronic blanket and roller washing	□	■
CleanTronic Impact with pre-impregnated cloth for blanket and roller washing	□	■
CleanTronic blanket/impression cylinder washing and roller washing	■	□
CleanTronic Impact with pre-impregnated cloth for blanket/impression cylinder washing and roller washing	■	□
CleanTronic UV	■	□
"Print clean" function	■	■

Coater	RA 105	RA 105 EasySet
Coater with chamber blade	■	■
Automated plate change for coating plates	■	□
Manual coating forme change with universal clamping bars	□	■
Second coating circuit for alternating use of different coating types	■	■
Coating supply and cleaning system for dispersion coating, with console integration	■	□
Coating supply and cleaning system for dispersion and UV coating, with console integration	■	□
Delivery		
Powder sprayer with console integration	■	□
Powder extraction	■	□
EES - Emission Extraction System	■	□
Inset frame for flush pile board (not available separately, only together with inset frame in the feeder)	■	■
Non-stop board, fixed height	□	■
Non-stop roller rack, lowerable (only available in CX package)	■	□
Dryer systems		
VariDry IR final dryers	■	■
VariDry IR/hot-air final dryers	■	■
VariDry IR/hot-air/UV final dryers	■	■
VariDry UV final dryers	■	■
VariDry UV interdeck dryers	■	■
Measurement and control		
ErgoTronic ACR	■	■
DensiTronic	■	■
DensiTronic Professional	■	□
Process automation/networking		
LogoTronic	■	■
LogoTronic Professional	■	■

Standard ■
Option ■
not available □

* Subject to modification without prior notice

KBA Rapida 105
from Koenig & Bauer AG

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For further information please
contact the sales department at:
Koenig & Bauer AG
Radebeul Facility near Dresden
Postfach 020164,
01439 Radebeul, Germany
Friedrich-List-Str. 47
01445 Radebeul, Germany
Tel: +49 351 833-0
Fax: +49 351 833-1001
kba-radebeul@kba.com
www.kba.com
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Our agency:

