KBA C16

The best of 16pp web offset technology
Competition among publication printers in high-volume markets today is fiercer than in any other sector. Fast job changes, flexibility in production, a minimum of start-up waste, a high yet stable output, trouble-free integration in the workflow and an optimum print quality on different substrates are in demand as never before – along with easy handling, energy efficiency and minimum maintenance. Our new 16pp KBA C16 web offset press was engineered to meet these specifications. Incorporating an advanced level of automation, it is available with a maximum rated output of 55,000 or 65,000cph.
The C16 combines the proven technology of our popular Compacta 215 and the sophisticated innovation of our high-end Compacta 217. The result is an exceptionally versatile, cost-effective press with an array of new modules.

Intelligent automation, ergonomic operation, low-maintenance technology from the reelstand to the folder and a raft of practical details make the C16 a highly competitive tool capable of withstanding the challenges of a pressroom environment.

Winning features in brief:
- Automatic or semi-automatic plate change
- KBA RollerTronic patented automatic roller bearings
- Flying imprint capability
- Automatically convertible folder with just one quarterfold up to 65,000cph
- Unique, patented copy control in folder
- Ergonomic operation
- Automatic press preset via KBA LogoTronic
- Optional JDF process integration via KBA LogoTronic
- Job management via KBA LogoTronic
Safeguarding a disruption-free supply of paper to the reelstand is key to maintaining a high net output. With our proven combination of Patras reel logistics and Pastoline or Pastomat C reelstand we offer a one-stop, integrated system for efficient paper logistics.

KBA Patras
Our modular Patras reel transport and logistics system is robust yet flexible, requires a minimum of maintenance and is compatible with all customary reel-loading systems. Configurations range from manually assisted to fully automated, with retrofit automation and upgrades possible at any time.

KBA Pastomat C
Our proven Pastomat C automatic reelstand with integrated infeed unit is engineered for reel weights up to 3 tonnes (3.3 US tons) and a maximum reel diameter of 1270mm (50in). Clearly laid out data screens at the reelstand and subsequent units to the folder aid the press crew by furnishing data on the current operating status. The Pastomat CL is available as an option for reel diameters up to 1524mm (60in).

KBA Pastoline
Engineered for a maximum web speed of 13mps (2,560fpm), the Pastoline accepts reels weighing up to 1.6t (1.76 US tons) and with a maximum diameter of 1270mm (50in). Controls are the same as for the Pastomat C and CL.

The infeed unit integrated in both types of reelstand is extremely compact and maintenance-friendly yet has all the components necessary for precise web alignment.

When it comes to ease of operation and cost efficiency, KBA reelstands are way ahead of the field. On top of this, their unique regenerative braking system with energy feedback reduces running costs.
Quality and stability

Performance in print

A superb print quality, fast changeover times, ergonomic operation, good stability, low maintenance and optimum flexibility: the printing units for the C16 were designed to deliver on every point. Their robust construction, practical automation level (plate change, roller bearings etc.) and ingenious details (settings for paper thickness) make the C16 the perfect tool for round-the-clock production of short, medium and long print runs alike.

The C16’s film inking unit and dampening unit can handle even the most problematic and challenging images, delivering a high quality in every type of production and at any speed. Four forme rollers, some oscillating, ensure that the ink/water balance is achieved in a minimum of time during start-up. Large-diameter rollers guarantee uniformity and rich solids throughout the production run. They also reduce ink spray and mist. This is where the C16 scores over its rivals. And it is ideal for environmentally responsible alcohol-free printing.

The ink ducts adopted from Rapida high-performance sheetfed presses have integrated electronics and operate with a total absence of bleed in the ink zones. Inking and reproductive accuracy are uniformly stable even during long print runs.

In keeping with the widespread shift towards greener production the dampening unit in the C16 is also engineered for alcohol-free operation, and allows both direct and indirect dampening with remote conversion from the console. The drive system supports optimum metering for different types of substrate.

Each printing couple has its own dedicated AC drive (i.e. two per unit) for the fast, precise setting of the circumferential register with a minimum of mechanical input. Electric motors control setting mechanisms with much greater precision than mechanical systems.

Because there are two motors for each printing unit, less braking and accelerating force is generated than with the single-motor systems more common today. This reduces mechanical abrasion on components, which means less maintenance and greater reliability. The printing units are water-cooled to promote operational consistency even during long production runs.

Dispensing with bearer rings eliminates needless wear and tear and also allows the nip between the blanket cylinders to be set to the relevant stock thickness with absolute precision. The gap between the side frames is much smaller, which improves stability and vibration resistance, and there is less load on the journals. Finally, the absence of bearer rings and the forces they generate reduces energy consumption and prolongs the service life of all the drive components.
Plate change
Semi- or fully automatic
Fast and easy plate change

There is an ongoing shift away from long print runs and towards personalisation. For many printers, fast job changes have become a question of survival. Our C16 features operator-friendly semi-automatic plate changing as a standard, while both the 55,000 and 65,000cph versions can be configured with optional automatic plate changers that are the fastest on the market. They can change the plates in a single couple or the entire press line in less than sixty seconds.

With KBA automatic plate changers, jobs of fewer than 10,000 copies – which were previously the preserve of sheetfed – can now be printed cost-effectively on a web press. In tandem with an optional imprinter they support additional production capabilities such as edition changes or text imprints.

**Variable imprinter expands the options**
In commercial printing, long runs with flying imprint changes are becoming increasingly popular for direct mail. KBA has taken a new approach made possible by dedicated drives.

With conventional imprinters a flying imprint change can only be carried out on one side of the web, for example to insert different addresses or prices. With dedicated drives it is possible to change imprints simultaneously on both sides of the web and at maximum press speed by engaging and disengaging two printing couples alternately. So the different language versions of a brochure, say, can now be printed in a single run.
Innovative and effective

RollerTronic – the printer-friendly roller bearing

In today’s commercial market the focus is on process optimisation and cost efficiency. Our unique RollerTronic patented automatic roller bearings make a key contribution. This is reflected in the fact that so far over 50,000 have been fitted in newspaper and commercial web presses.

When actuated by push-button from the console panel, RollerTronic automatically sets and adjusts all the inking rollers in less than two minutes. Irksome time- and cost-intensive manual roller setting, and the hours of down time associated with it, are history.

Rollers set with optimum precision ensure that ink is transferred uniformly across the entire width. RollerTronic dramatically reduces roller abrasion and thus the frequency with which rubber coatings must be replaced, thereby delivering further cost savings. It obviates uneven wear and tear arising from the incorrect positioning of the rollers relative to each other.

Correct roller settings reduce maintenance costs and energy consumption while promoting optimum production conditions.

Benefits of RollerTronic:
- Much lower maintenance costs
- Less frequent renewal of rubber coating
- Better energy efficiency
- Greater process stability
- Optimum printing conditions

Automatically adjustable roller bearing
1 Pressure chamber for roller throw-off
2 Pressure chamber for setting roller relative to ink distributor
3 Blocking mechanism (after automatic setting)
4 Pressure chamber for setting roller relative to plate cylinder
5 Module for controlling setting direction and pressure
An eye for detail
Minigap and printing pressure

The blanket cylinders in the C16 incorporate the minigaps first developed by KBA in the 1990s and subsequently adopted by other manufacturers. With minigaps, the image-free margin is less than 6mm (0.2in). This reduces both vibration and plate abrasion. And there is no need for bearer rings.

Minigap cylinders are typically fitted with metal-backed blanket plates that can be changed much faster than either conventional rubber blankets or more costly sleeves, and without the aid of tools. Retightening is no longer necessary and the trailing edge of the blanket plate can dip into the cylinder gap during impression to compensate for heat-induced elongation. This is not the case with sleeves.

Another benefit is the tool-free adjustment of printing pressure to paper thickness via a setting screw. Adjustment is therefore much quicker and easier than on other makes of press involving lengthy changes of blankets and blanket packing (see comparison below).

Benefits of minigaps:
• Tool-free blanket change in around 3 mins
• No retightening necessary
• Reduced storage costs for metal blankets
• Cheaper than sleeves
• No elongation during impression
• No bearer rings, i.e.
  - less strain on cylinder bearings
  - less energy consumption
  - longer service life of all drive components

| Time in minutes required to set paper thickness or change blanket packing |
|-----------------------------|---------------------|-----------------------|
| KBA | Other |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |

| Time in minutes required to change blankets in each printing couple |
|-----------------------------|---------------------|-----------------------|
| KBA | Other |
| 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 |
Bespoke configurations
For individual production scenarios

Superstructure
The superstructure on the C16 is configured for straight-on production, but can be fitted with optional turner bars. All the web guide elements are easily accessible, even the former and slitter. A modular design and dedicated drives throughout allow the superstructure to be customised for specific production scenarios.

Single-web superstructure for straight-on production
Single-web superstructure with turner bars
Double-web superstructure for duplex operation
Double-web superstructure
Double-web superstructure with all modules
The microporous patented turner bars are one of the many proven features that are unique to KBA. They no longer need to be set for different ribbon widths, and operate reliably with a minimal air cushion and superior ribbon guides.

A next-generation slitter with motorised lower knife slits and trims cleanly with very little paper dust. Cutting and perforating modules can be included in the original build or added at a later date.

The former can be angled in the direction of or counter to web travel and is laterally adjustable from the console. Oblong holes allow air to escape. The perforating knife directly in the former, with quick and easy adjustment from the console, promotes precision folding. Waste-intensive web shifts and the manual adjustment of the perforating line are a thing of the past. The web is fed in by the chain to the centre of the former in less than three minutes.

Chill roller stand
The KBA chill roller stand is located between the hot-air dryer and the superstructure. Configured with three or four rollers (depending on press output) and multiple cooling circuits, it is engineered for maximum impact and energy efficiency. A heatset dryer with built-in chill roller stand is available as an option.

Configurations
The C16's clever modular design not only allows press lines to be custom-configured, it also shortens and facilitates project planning. The heavy-duty printing units with cast-on, ready-wired subframes cut on-site installation and commissioning times.

The choice of configurations ranges from a basic straight-on version with four to six printing units and standard folder to two-web versions erected in one line or on two levels, and duplex installations with ten printing units, four turner bars, a cross lead and a folder.

The superstructure can be retrofitted with further modules as the need arises. External subassemblies such as the dryer, blanket-washing unit, length gluer, silicone unit, dampening circulation system etc. are all fully embedded in the console controls.
Intelligent folder technology

Flexibility is key

A high level of press performance and production flexibility, rapid conversion and precision folding, yet low maintenance, total reliability and ergonomic operation are the properties demanded of today’s commercial folders.

The P3 pin folder’s compact design and ease of access reflect its advanced technology.

Our new P3 folder can produce over 30 different folds in a range of formats. Not only this, it is easy to operate via a swivelling touch screen directly at the folder delivery.

We offer the benefit of a remotely adjustable first and second cross fold, and a quarterfold unit comprising a single module. This supports a wide choice of folds while dramatically shortening conversion times. The strike length and depth of circumferential and lateral perforation can be adjusted on the fly so as to adapt perforation and folding accuracy to stock type and production conditions with a minimum of waste.
Benefits of the P3 folder:
• Touch-screen operation at folder delivery
• Touch screen doubles as full console
• Just one quarterfold for output levels up to 65,000cph
• Intelligent copy control
• Pneumatic belt tension with holding brake
• Maintenance- and user-friendly

For outputs up to 65,000cph the P3 folder requires just one quarterfold. This is because the belt paths are short and broad, ensuring smooth copy transport. Intelligent, patented copy control in the quarterfold makes for a trouble-free folding sequence. It is user-friendly and requires no manual intervention. Production conditions are therefore always consistent irrespective of operator skill.

Copies are slowed effectively and with a minimum of abrasion, and aligned in the direction of fold during deceleration. Our new, automatic copy control system is self-adjusting and exceptionally reliable regardless of production speed and copy thickness. As a result folding is consistently accurate, even during changes in press speed.

The pneumatic belt system maintains a constant tension yet effectively prevents stretching. This reduces abrasion and thus maintenance input. Belt tension can also be adjusted on the fly.
## Folding options

**Perfect copies in every format**

<table>
<thead>
<tr>
<th>Web leads</th>
<th>Standard folds</th>
<th>Auxiliary equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><strong>1</strong> Former fold First cross fold</td>
<td><img src="image2" alt="Diagram" /></td>
</tr>
<tr>
<td></td>
<td><strong>2</strong> Former fold First cross fold Quarter fold</td>
<td><img src="image3" alt="Diagram" /></td>
</tr>
<tr>
<td></td>
<td><strong>3</strong> Former fold Double parallel fold</td>
<td><img src="image4" alt="Diagram" /></td>
</tr>
</tbody>
</table>

### Web leads

<table>
<thead>
<tr>
<th>Web width W</th>
<th>Circumference C</th>
<th>Pages</th>
<th>C = 620 mm</th>
<th>W = 1,000 mm (max.)</th>
<th>W = 420 mm (min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1/3</td>
<td></td>
<td>32</td>
<td>1/4 C = 155</td>
<td>1/4 W = 250 max./165 min.</td>
<td></td>
</tr>
<tr>
<td>W1/2</td>
<td></td>
<td>24</td>
<td>1/4 C = 155</td>
<td>1/4 W = 310 max./165 min.</td>
<td></td>
</tr>
<tr>
<td>W1/1</td>
<td></td>
<td>16</td>
<td>1/4 C = 155</td>
<td>1/4 W = 500 max./210 min.</td>
<td></td>
</tr>
</tbody>
</table>

### Possible folds

- Former fold
- First cross fold
- Quarter fold
- Double parallel fold
- Two-up

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### Auxiliary equipment

- 8 pages A3
  - 1/2 C = 310
  - 1/2 W = 500 max./210 min.

- 16 pages A4
  - 1/2 C = 310
  - 1/4 W = 250 max./105 min.

- 32 (2 x 16) pages A5
  - 1/4 C = 155
  - 1/4 W = 250 max./165 min.

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### Standard folds

- 8 pages A3
  - 1/2 C = 310
  - 1/2 W = 500 max./210 min.

- 16 pages A4
  - 1/2 C = 310
  - 1/4 W = 250 max./105 min.

- 32 (2 x 16) pages A5
  - 1/4 C = 155
  - 1/4 W = 250 max./165 min.
Open Ergonomic Automation System

Efficient dialogue with the press

The KBA ErgoTronic console, KBA EasyTronic automatic press presetting system and KBA LogoTronic production management system are the primary components in the C16’s integrated automation concept. Intelligent control technology at subassembly level and concise data screens ensure that the operator at the console has total control of the press at every stage of production. Our module-based OPERA (OP en ERgonomic Automation) system incorporates all the requisite modules for a rapid dialogue between man and machine.

KBA ErgoTronic
The console for the new C16 is a perfect interplay of functionality and aesthetics. All essential production commands, including automatic folder conversion, are initiated at the console. Easy-read data screens with plain-language displays on the touch screen facilitate operation.
KBA SupportOnline
A 24/7 service hotline ensures prompt and effective customer support. The computer in the service department can communicate with the C16 via a network or the internet. Any malfunctions that may arise are generally detected within a very short space of time, so remedial action can be initiated without delay.

KBA ColorTronic
The ColorTronic desk is the operator’s primary workstation. It supports optimum colour setting and incorporates a colour presetting system as a standard feature. The colour profile is depicted as a broad LED band, allowing prompt correction.

KBA CIPLink
A CIPLink interface for transferring pre-press data is included in LogoTronic. CIP3 files are accessed via a local network. A CIP4 capability is available as an option.

KBA EasyTronic
Our EasyTronic automatic press presetting system, which includes slitter, turner-bar, register-roller and former preset during job changes, boosts productivity and at the same time helps to minimise waste, e.g. through rapid web tensioning, run-out washing (depending on product) and defined pre-inking. The ability to preset all the components in the superstructure and the folder according to pre-press data is available as an option. Optimised press start-up, makeready and run-down are actuated at the touch of a single button.
KBA LogoTronic

Digital workflow

Among printers today the concept of an integrated workflow from order reception to print production and distribution is steadily gaining currency. The diversity of equipment and software installed means that shrink-wrapped packages are rarely appropriate, so workflows must be customised using existing kit with the addition of bought-in components where necessary. We offer suitable tools in the form of LogoTronic and LogoTronic Professional, and also work closely with prominent providers of proprietary software. This enables us to offer integrated networks based on JDF (Job Definition Format).

Basic presetting data in the printing units, superstructure and folder can be stored for future use, substantially reducing make-ready time and waste when printing repeat jobs. Continuously improved since its launch, LogoTronic has a standardised, easy-to-use graphical user interface and can be embedded in the central console, furnishing the operator with an overview of all the systems required for fast job changes.

**LogoTronic**

A standard feature of all KBA commercial presses, the basic version of LogoTronic enables essential presetting data to be transferred directly to the press. It includes a CIPLink module for the CIP3-/CIP4-compliant transfer of data for press preset, with reel- and ink-data capture available as an option. The workflow is networked using the in-house hardware (server). Ink-key, colour and dampening data can be transferred to the press for presetting.

**LogoTronic Professional**

As an option the console can be configured with LogoTronic Professional, an open-architecture production management system that supports production monitoring, the digital flow of job and presetting data, and the systematic evaluation of production data. It connects the press to upstream production planning and scheduling systems and commercial IT. This well-proven system translates production and administrative data into meaningful statistics and makes for greater transparency by capturing press and operational data.

LogoTronic Professional is a key link in the communication chain between the KBA press and the printshop’s management information system. New KBA presses can be embedded at any time in an existing LogoTronic Professional scenario with KBA sheetfed, newspaper and commercial web presses, delivering synergy gains and creating a uniform platform for all the presses in the printing plant. The database can be accessed either direct or, as an option, via JDF.
**KBA C16**

**At a glance**

<table>
<thead>
<tr>
<th>Specifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum production speed</td>
<td>65,000 revs/h</td>
</tr>
<tr>
<td>Maximum web speed</td>
<td>11.4 m/s</td>
</tr>
<tr>
<td>Cylinder circumference</td>
<td>546 – 630 mm / (700 mm)</td>
</tr>
<tr>
<td>Web width</td>
<td>1,000 mm</td>
</tr>
<tr>
<td>Printable stock weights</td>
<td>36 – 200* g/m²</td>
</tr>
<tr>
<td>Plate-changing time**</td>
<td>approx. 1 min.</td>
</tr>
<tr>
<td>Webbing-up speed, with chain</td>
<td>40 m/min</td>
</tr>
</tbody>
</table>

**Standard equipment**

- KBA reelstand with integrated infeed unit
- Spreading roller
- Printing units
  - Semi-automatic plate changers
  - Mobile operating panel
  - Blanket-washing system
  - Ink-pumping system
  - Dampening system
  - Web catcher (Baldwin)
- Dryer with/without post-incineration
  - with/without integrated chill roller stand
- Superstructure
- Silicone unit
- Web-centre control
- Colour-register control
- Cut-off-register control
- Length gluing unit
- P3 pin folder
- Plate punch
- Bending machine for plates and metal blankets

**Opera**

- KBA ErgoTronic console
- Remote adjustment of inking unit, dampening unit and register
- KBA DriveTronic shaftless drives
- KBA LogoTronic production management system
- CIP3 integration

**Optional equipment**

- KBA Patras reel-handling system
- Webbing-up unit with chain to former
- Flying imprint capability
- Automatic plate changers
- Desk lighting
- Height-adjustable desk
- Remoistening unit
- Colour-density control
- Cross lead for duplex press lines
- Steel substructure for stacked configurations
- Auxiliary former
- Expansion module for 2x8 pages
- Cut-off cassette for 4x4 pages
- Die-cutter and perforator
- Coater, UV coater and remoist gluer
- Plough fold
- Sheeter
- Compressed-air unit
- Chilling station
- P3 folder with no delta or double parallel fold

**Opera (optional extras)**

- KBA LogoTronic Professional production management system
- KBA EasyTronic automatic press presetting
- CIP4 integration

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* with sheeter  ** with automatic plate change


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The KBA C16 from Koenig & Bauer Group

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