

KBA COMPACTA 318



The 24-Page Formula for Quantity with Quality



Innovative

Securing the Edge

o markets make presses or presses markets? It would be safe to say a bit of both. An ongoing dialogue with you, our customers, is fundamental to the development of a new press like the KBA Compacta 318. On the one hand you need to react fast to market developments; on the other, you want to actively influence market events by securing a competitive edge.

An edge that can only be achieved with new technology in this press class. So that you, in your turn, can win customers by offering original new ideas for creating a higher impact in advertising yet at a fair price. This is only possible with highly specialised equipment embracing frontline technology and processes.

On the following pages we present a web offset press that raises the bar in productivity, efficiency and print quality.

Key Features

- c Virtual shaft throughout
- Minigaps to cut paper consumption and enhance format flexibility
- Automatically convertible F5 gripper folder to minimise makeready times
- c Cutter for maximum productivity
- c Distributed, intelligent controls at subassembly level
- Two control consoles for more convenient operation
- c Digital networking via KBA Logotronic
- Printing pressure adjustable to different paper thicknesses without blanket packing
- c Multiring bearings for a superb print quality
- Cantilevered turner bars, former etc for easy access and precise folder settings





Technology





Boost

Microsoft Excel - QUTPUT, xls

ी DUTPUT .xl=|Graphik Diag

Economic Efficiency

The choice of a new press is always made at two levels: technical and economic. As a businessman you must think beyond the purely technical capabilities of the equipment you are choosing: the economic aspects are just as important.

According to research carried out by the trade magazine *Print & Production,* the electronic media contribute 20% of the European media market's real net output, trailing well behind the 80% generated by print. Within the print sector, advertising accounts for 49% of output, lengths ahead of information, which comes in second with 17%. These figures are representative of many industrialised countries and illustrate the continuing buoyant demand for high-quality printed products. It is our job to satisfy this demand with the greatest possible efficiency.

As a businessman you are primarily interested in your cost per 1,000 copies, how this cost is generated and how it can be reduced by a new press.

Loan servicing, labour, energy, maintenance, ink and other print consumables account for just over 22% of the total cost, as opposed to more than 77% for paper (including print waste).

The KBA Compacta 318 slashes this major cost factor by drastically reducing paper consumption. The minigap developed for this purpose narrows the print-free margin to just 6mm (.25in), while a high level of automation cuts makeready times and reduces vibration, improving printing quality. This, plus the F5 gripper folder (which eliminates the paper

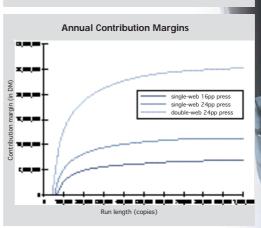
Cost per 1,000 Copies

6.20

6.00

single-web 16pp press single-web 24pp press double-web 24pp press

entium

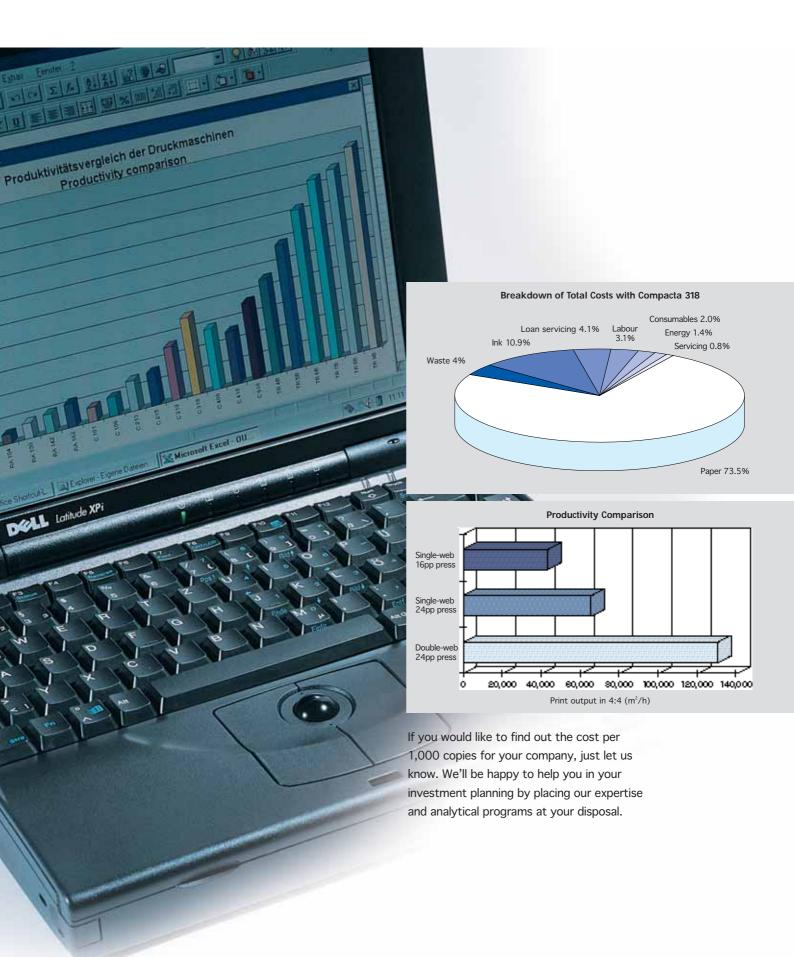


margin needed for pin-holes) enables A4 products to be printed on a cylinder with a circumference of just 620mm (24.5in) instead of the usual 630mm (24.75in).

At maximum production speed in three-shift operation this alone can reduce paper costs by as much as \$285,000 a year.



Profits





Economical

Drivetronic

A revolutionary feature of all KBA web offset presses, including the KBA Compacta 318, is that they incorporate individual drives at subassembly level, with no mechanical main shaft. The positional AC servo motors are synchronised via a 'virtual' shaft, with a CLC control card assuming the function of the main drive.

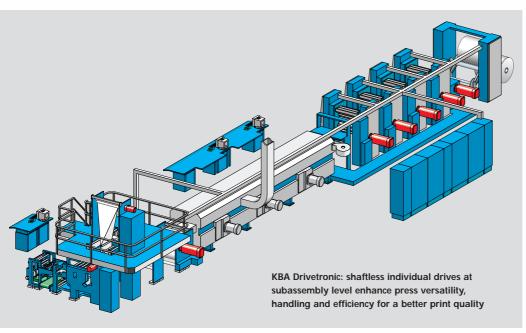
Individual drives for the infeed unit, chill roller stand, the draw units in the superstructure and the F5 gripper folder modules have already proved a big success on KBA's newspaper presses. The benefits they offer are considerable: maintenance-free, energy-saving 3-phase motors; no additional auxiliary drives needed for makeready work; a high register precision; and no vibration transfer between printing units. The result is a dramatic improvement in print quality.

With the KBA Compacta 318 mechanical unit-to-unit registration is no longer necessary:

its function is assumed by the individual drives. Extra modules, eg an imprinter, can be added and the superstructure or folder extended months or even years after the press has come on stream. The individual drives and virtual shaft eliminate the problems usually involved in adding new units to an existing press line.

An additional big advantage of shaftless drives is that they dramatically reduce on-site installation time because all the subassemblies can be pre-installed and tested prior to shipment.









Dedicated Drives





Automated

Reel Logistics

BA's integrated reel-logistics system offers the option of total automation of the paper flow, from unloading, storage and stripping to loading at the reelstands and butt-end removal. A key feature of this system is that the individual sequences are controlled and monitored from the console.

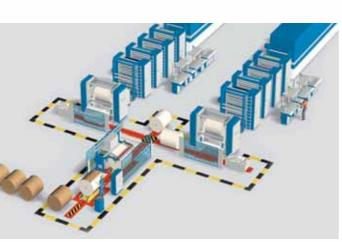
Our flexible, high-performance KBA Patras **pa**per **transport system** is module-based to support a wide range of versions, from manual to fully automatic, so that it can be custom-configured to suit your individual production specifications and the floorspace available. The individual modules are engineered for stability, low maintenance and a long service life. KBA Patras enables paper logistics to be embedded in the networked production flow to bring substantial savings in costs and wastage.

The heavy-duty KBA Pastomat RC reelstand with central drive and divided arms can be integrated easily into an automated reel-

logistics system. The web is spliced automatically at full production speed. The absence of a belt makes splice preparation much easier.

The divided arms on the Pastomat RC can be adjusted infinitely by remote control. Their ability to handle webs of different widths promotes production flexibility.

More information on reel logistics with KBA Patras and the newgeneration KBA Pastomat RC can be found in separate brochures.



KBA Patras A automatic reel-logistics system



High-performance Pastomat RC reelstand for a maximum web speed of 15.2mps (2,992fpm)



Paper Supply



The automatic webbing-up chain threads the web into the press - fast



Controlling

Web Tension / Printing Unit

Where quality, turnaround and colour are concerned your customers are justifiably fussy. The KBA Compacta 318 is not only fast but delivers a high-quality print with a precise colour match. Our engineers have really come up with something special.

A precise, uniform web tension is crucial if you want to produce register-true full-colour prints while keeping waste at a minimum. That is why even the four-unit version of the Compacta 318 comes with a freestanding electric infeed unit. Web tension is generated between the infeed unit and the chill rollers, which are all integrated in the

Measuring rollers monitor web tension

shaftless drive system and the intelligent distributed control system for the entire press line.

The current web tension throughout the press is measured by rollers located in the infeed unit and chill roller stand, before the slitter in the superstructure and the former draw rollers, and is displayed clearly in the console monitor. Photoelectric cells monitor the web run and, in the event of a web break, activate the web catcher after the last printing unit, or severers at the reelstand and folder, in order to prevent damage to the systems.

The primary objectives in developing the printing units for the Compacta 318 were easy operation, reduced maintenance, the best possible print quality and the ability to handle a wide range of stock thicknesses. Pretensioned, multiring bearings with zero play, plus minigaps in the cylinders of this high-performance press, eliminate the need for bearer rings. Extensive practical tests have shown that the print quality obtained is superb. The absence of bearer rings brings the added bonus of perceptibly reducing maintenance time and costs.

Another advantage of the off-bearer system, as far as user-friendliness and efficiency are concerned, is that there is no need for blanket packing when printing stock of different thicknesses. The upper blanket cylinder can be adjusted relative to the lower one in a range of 0.15mm (6thou) without changing the printing pressure on the upper plate cylinder.



Waste





Lower Costs,

Minigaps

The KBA Compacta 318 features proven minigaps on the plate and blanket cylinders, which narrow the print-free margin to just 6mm (.25in), effectively eliminating cylinder bounce. The press runs more smoothly, an excellent print quality is the logical result.

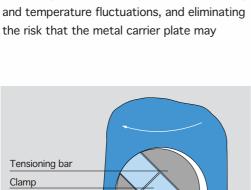
Instead of a conventional rubber blanket a cylinder with a minigap takes a blanket plate, which is basically a blanket glued onto a metal carrier plate. The plate is bent at either end and once the ends are clamped in the cylinder gap they are secured for the entire printing process.

A major advantage of plates over sleeves – apart from the fact that they are cheaper – is that the special clamping system allows the trailing edge of the plate to plunge deeper into the cylinder gap, thus accommodating the change in blanket length caused by fulling and temperature fluctuations, and eliminating the risk that the metal carrier plate may

break. The gap which remains once the blanket plate has been clamped allows the blanket to relax. A further advantage is that blanket plates take up a mere fraction of the storage space required by sleeves, and are also easier to handle.

The blanket plates can be changed in just two minutes, as opposed to the 10–15 minutes needed for conventional blankets. Standard blanket-washing systems can also be used.

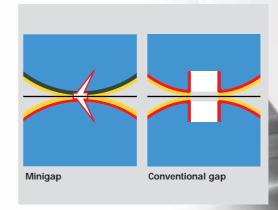
An added bonus is that the minigap system supports a wider range of formats because the print-free margin is narrower, allowing plenty of scope for new ideas.



Blanket cylinder

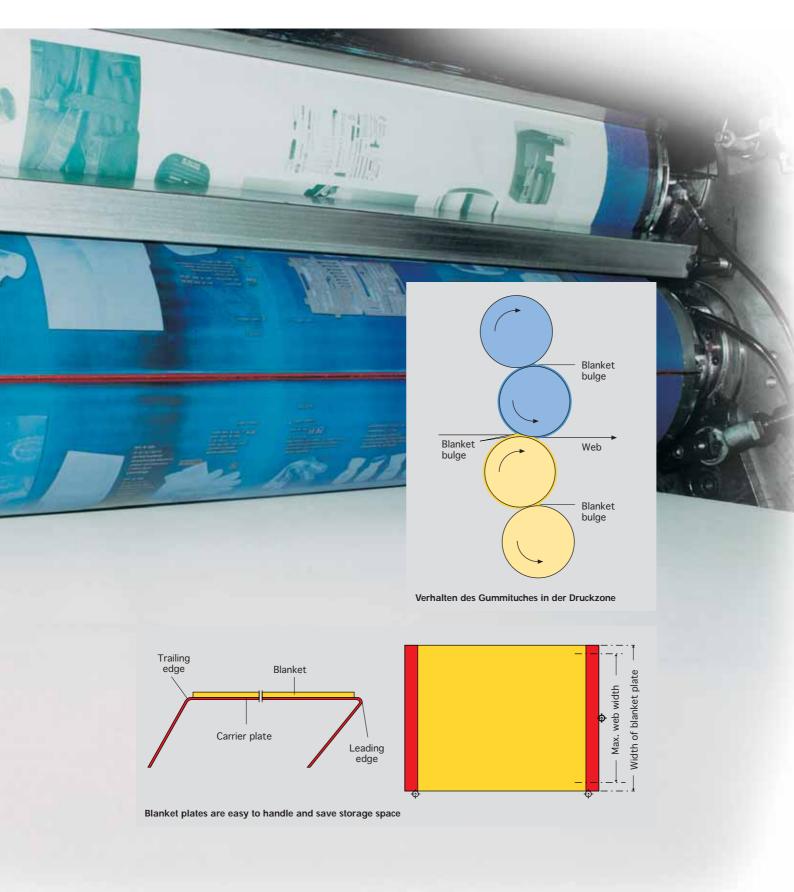
Metal blanket

Minigap





Higher Quality





On-the-Dot

Inking and Dampening Units

n the KBA Compacta 318 we have combined innovative technology and proven features to furnish the basis for your success and therefore that of this press: a register-true, colour-consistent high-quality print, even of problematical subjects.

The proven features we have retained include the rigid, cast-iron side frames for the printing units, and solidly built cylinders – some of refined steel – with zero-play bearings.

The inking unit applies an even film of ink. In practice this means that an optimum print is achieved even with unfavourable image layouts.

A spiral vibrator roller picks up the ink from the duct roller and transfers it uniformly to the

The acknowledged superior technology of the Colortronic ink ducts, which have integrated electronics and a 32mm (1.25in) key spacing, is reflected in a uniform, bleedfree ink feed – even during long print runs – and high repetitive accuracy. The metering elements have carbide tips for a long service life. The duct rollers have a ceramic coating. The large-diameter ink rollers prevent ink misting even at high speeds.

The 4-roller dampening unit can run either with the inking unit (indirectly) or independently (directly). It can be switched automatically from direct to indirect dampening by simply keying in the relevant command at the control console. To facilitate handling the dampening unit can be accessed freely and key commands implemented from either side of the press.

The KBA Compacta 318 incorporates a host of small, intelligent features to create the perfect entity.





The spiral vibrator roller ensures uniform, precisely

printing couple, regardless of whether the print run entails an extremely low or extremely high take-up of ink.

Colour





Nonstop

Imprinter

ewspaper supplements and flyers for different regional target groups involve long print runs with personalised address or price imprints. The imprinter on the KBA Compacta 318 performs this task with simple, economical perfection.

The imprinter incorporates two independent printing couples which are thrown on the common impression cylinder alternately. This means that the plates on one printing couple can be changed while the other is in full-speed production.

The presettable decremental counter in the operating panel emits an optical and acoustic signal to warn of an impending imprinter change.

The command for impression ON or OFF is actuated by push-button. The printing couple with the new imprint is accelerated to press speed by the imprinter's AC drive and engaged in register on the impression cylinder. The printing couple no longer required is brought to a halt for the next plate change.

Motorised settings guarantee perfect circumferential, side-lay and diagonal register.

The web lead in the imprinting unit can be varied to allow the imprinter to double as an additional printing unit.



1:0 colour imprints

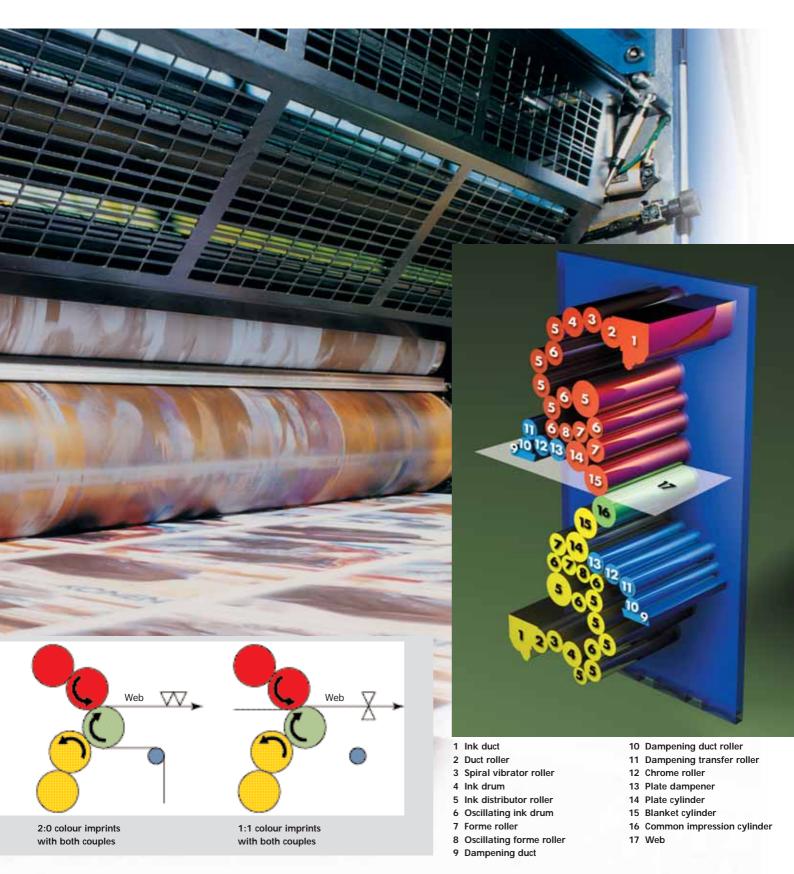
with the lower printing couple

1:0 colour imprints

with the upper printing couple



Imprint Changes





Exploiting

Superstructure

BA has the broadest portfolio in the industry, ranging from small-format sheetfed offset presses to webfed rotogravure presses for a web width of 3.6m (11ft 10in). Where so much printing expertise has been amassed you can expect some exceptional solutions to your production needs.

A lot of gravure know-how has gone into the superstructure of the new KBA Compacta 318. The turner bars, former and infeed rollers are cantilevered for easy access. Ribbon paths are very short, dramatically reducing web-up times.

Gearless 3-phase AC motors have been adopted for the superstructure too: the main draw rollers, former roller etc are all controlled via the 'virtual' shaft. A modular design and individual drives enable you to adapt the superstructure easily to different production specifications, eg draw unit and slitter with downstream turner bars, a second web, a cross lead to a parallel press, auxiliary formers, a perforating unit, length gluing unit and plough fold. The slitters operate like scissors and can be changed in under 5 minutes.

A new system is available for trimming both sides of the web. A knife rotating at three

times web speed trims off the surplus paper which is then extracted via the hollow knife axle.

Linear register rollers support an optimum cut-off register control. The cantilevered turner bars can be adjusted easily in the direction of pivot. They are available in various lengths for different web widths, and can be interchanged as required.

The turner-bar blower is integrated into the turning unit, minimising air-supply paths.

The entire former section can be shifted by remote control sideways and with web run. The angle of the former nose can also be adjusted. Even the rollers beneath the former are suspended on gimbals so that they can be adjusted in all directions to ensure a perfect former fold.



The slitters operate like scissors



Cantilevered turner bars make for easy handling



The position of the former section and the angle of the former nose are both adjustable

the Synergy





Flexibility Enhances

Folder

he more versatile your folder, and thus the range of products you can offer your customers, the greater your chances of raising your profile and enhancing your market position.

The KBA Compacta 318 is configured with a heavy-duty F5 gripper folder. All essential production presettings and adjustments are carried out automatically upon input of the relevant command at the control console. The result is faster makereadies and job changes.

The five-part folder is module-based and can be custom-configured to suit your specific production requirements.

Production flexibility, ultra-fast job changes, precise folding, minimum maintenance and 100% reliable, problem-free operation: these were our targets in engineering the F5 folder for the Compacta 318.

To exploit the minigap's full potential for saving paper throughout the print run, right down to the finished product, a pinless gripper folder was a must, and this is where our formidable

Gripper folders help save paper

competitive edge in folder technology and expertise came into its own. Our Frankenthal facility has specialised in folding engineering for more than 25 years, with the focus on gripper folders for gravure presses that run at production speeds of up to 17.5mps (3,445fpm) day in, day out.

Folder conversion from any one type of product to another is initiated from the control console and takes a maximum of 2 minutes. Gripper folders have several advantages over pin folders above and beyond the potential paper savings: they produce a high-quality product which is often saleable without trimming; the fold tolerances in the first cross fold are much smaller; and the slight advance of the gripper cylinder generates tension on the web before the cross cut, producing an extremely accurate cut.

In addition, grippers are much less prone to abrasion and require less maintenance than pins. A jam in the folder, for example, would destroy pins but does not damage grippers.

The F5 folder is also equipped with individual drives, which eliminate the need for complex gear trains, overload clutches and other potential sources of abrasion.

One feature which has proven very useful in practice is on-the-run circumferential adjustment of the electrically driven spider wheel to suit







Cutting

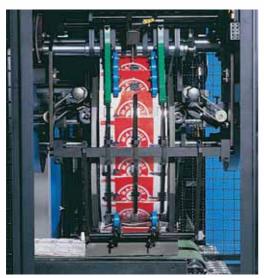
Cutter

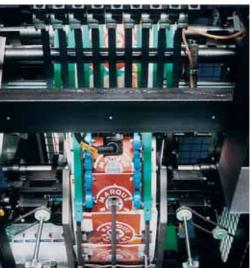
he KBA cutter is the ideal complement to KBA's range of commercial folders. Since the moving elements all rotate there is no braking effect caused by reversing.

The cutter optimises the production of 4, 8 and 12 pages by drastically reducing production costs. This is made possible by applying the latest technology and manufacturing processes throughout.

The key features:

- c Cut to 1/3 or 1/4 circumference
- c Two infeed formers, movable sideways and with web run
- c Variable infeed width
- c Variable length trimming opposite the former nose
- c Splitting to two spider wheels
- c Individual drives with distributed controls





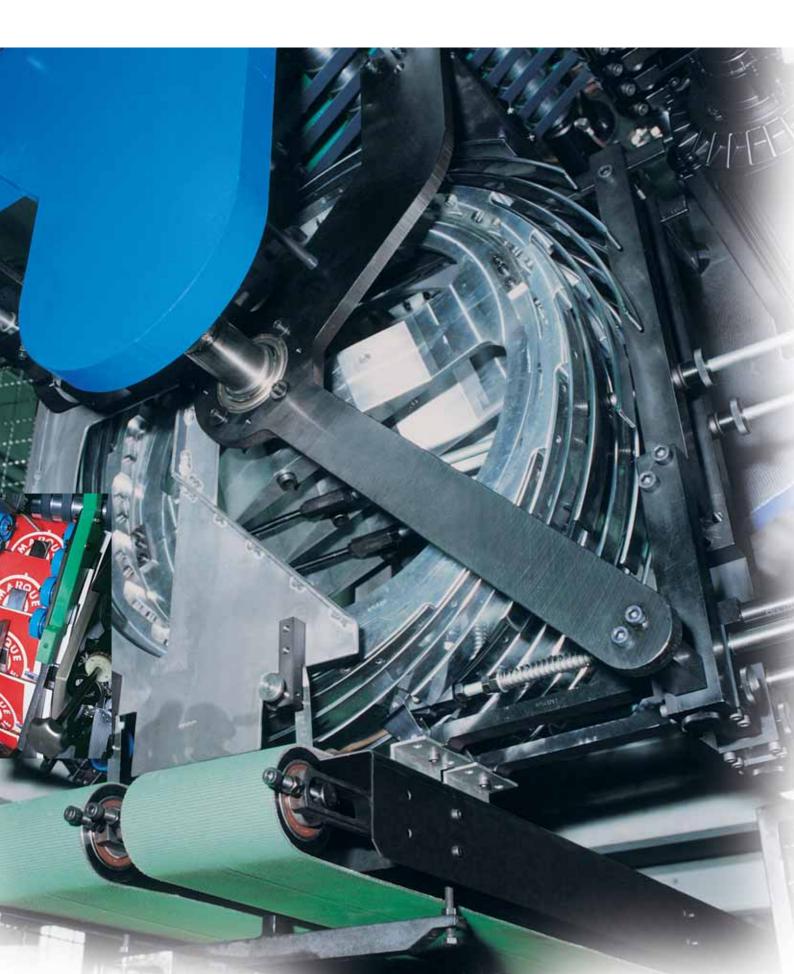








Production Costs



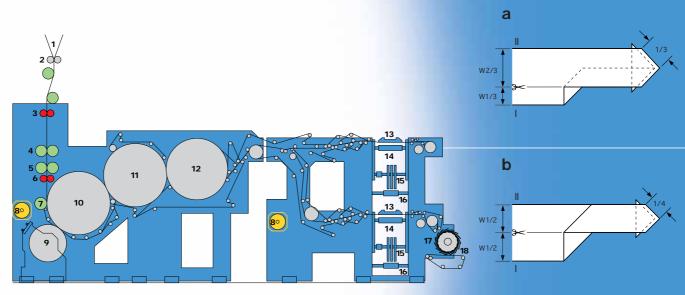


Perfect

Production Options

W ith the F5 gripper folder and different web leads in the superstructure the Compacta 318 can output virtually all the products currently on the market, as the following overview shows.

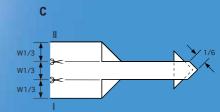
Web lead



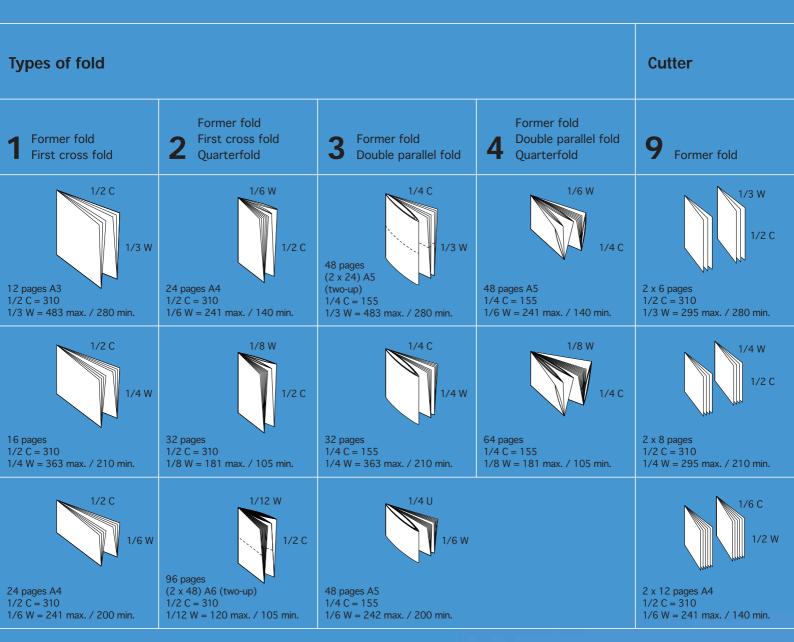


- 1 Former
- 2 Forming rollers
- 3 Driven draw roller
- 4 Length perforation
- 5 Cross perforation
- 6 Driven draw roller
- 7 Cutting cylinder
- 8 Distributed drive
- 9 Stitcher

- 10 Folding-blade cylinder
- 11 Folding-jaw/folding-blade cylinder
- 12 Folding-jaw cylinder
- 13 Folding blade
- **14** Folding rollers
- 15 Spider wheel
- 16 Sheet delivery
- **17** Spider wheel
- 18 Cross-fold delivery



Products A-Plenty



Circumference C = 620 mmWeb width W = 1,450 mm (max.) 840 mm (min.)



Easy

KBA OPERA

BA OPERA, an <u>open ergonomic automation</u> system, furnishes the modules to support the high level of automation needed to master increasingly complex press installations, and the rapid dialogue between man and machine which these demand.

The KBA OPERA system comprises the following modules:

KBA ERGOTRONIC

KBA's double-circumference commercial presses are configured with two consoles as a standard feature. One console, with a Colortronic desk, is located in front of the press line, the second beside the folder delivery. This makes handling much easier and saves the crew a lot of legwork.

All essential production commands, including the ones for automated conversion sequences for the folder, are initiated from the console. Easy-to-read data screens with clear-text displays promote accurate and rapid handling.

Remote Diagnostics and Maintenance

The KBA Compacta 318 can communicate with a computer at KBA's service centre via modem and telephone link. Any malfunctions which may arise can be located and assistance given with a minimum of delay.

KBA COLORTRONIC

Two desks, one for straight printing and one for perfecting, enable the optimum setting values for the upper and lower printing couples to be keyed in fast and so reduce waste. A presetting system for the ink keys is also part of the standard package. Broad LED bands provide data on the ink profile set, so it can be corrected quickly and easily.





Handling





Customised

Configurations

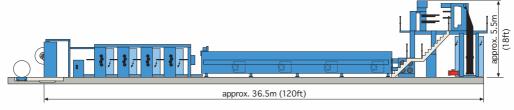
he KBA Compacta 318's individual drives and modular design, which includes the superstructure and KBA F5 gripper folder, offer you enormous flexibility in customising your press configuration to suit your individual production requirements.

The module-based system also shortens and simplifies project planning for new installations, and enables the individual subassemblies to be tested prior to shipment. Retrofits and extensions to the press line can be added easily at any time.

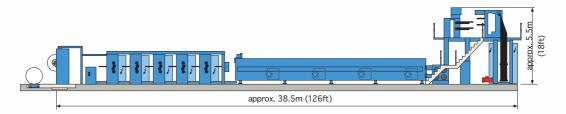
Subassemblies from other manufacturers, such as the reelstand, dryer, silicone unit, dampening circulation system etc, are fully embedded in the control system.



2 parallel Compacta 318 press lines with cross lead for 48 pages



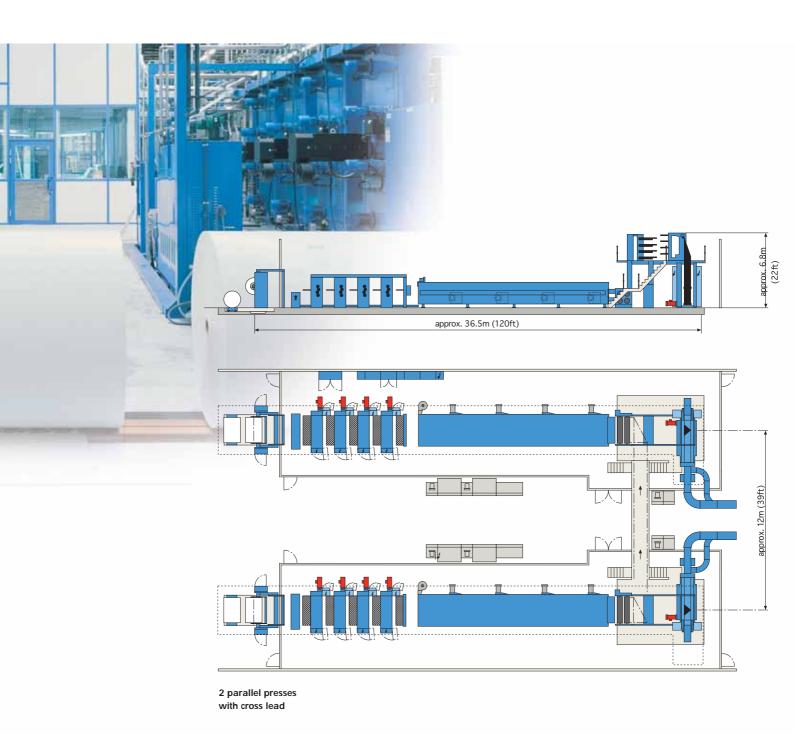
1 web with turner bars

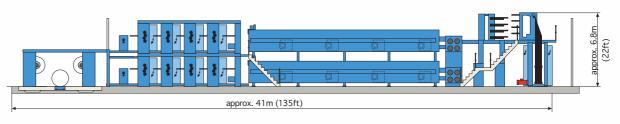


1 web with turner bars and 5 printing units



Installations





4 + 4 printing units 2 webs



Ecology

Environmental Aspects

or you as a responsible entrepreneur, concern about the environmental compatibility of new production equipment, a sparing use of natural resources and a conscious avoidance of waste are an integral aspect of your business and are subject to increasing regulation by legislation.

Minigaps and gripper folders save valuable paper. Maintenance-free, fully enclosed 3-phase drives with minimal wattless power consumption reduce energy consumption, as do the individual drives which allow aggregates to be switched off when not needed.

Automatic blanket washing units reduce the consumption of cleaning agents and enhance press ecology.

The dampening unit is engineered for both low-alcohol and alcohol-free printing to cut solvent emissions. The materials used in the construction of the press can be recycled at the end of its service life.

In the KBA Compacta 318, economy and ecology go hand in hand.





and Technology

Technical Data

Max. production speed

Max. web speed

Circumference

Min. web width

Max. web width

Stock weights

*additional circumferences upon request

840 mm 33 in 1,450 mm 57 in

> 36-130 gsm 23-83.5 lbs

70,000 rev/h 12.1 m/sec

2,380 f/min 620 mm *

24.5 in *

Standard features

Reelstand

Infeed unit

Stretching roller

Printing units

Blanket washing unit

Water preparation unit

Web catcher

Dryer without after-burner

Chill roller stand

Superstructure with insertion deck

Silicone unit

Web guidance

Ink-register control

Cut-off register control

Automatically convertible F5 folder

Plate-punching machine

Plate-bending machine

Opera:

Console (KBA Ergotronic) with electrical angle adjustment

Remote adjustment of inking unit, dampening unit and register (KBA Colortronic)

Shaftless drives (KBA Drivetronic)

Production management system (KBA Logotronic): basic

CIP3 integration possible

Optional extras

KBA Patras reel-logistics system

Web-threading device

Imprinter

Ink-supply system

Dryer with integrated after-burner

Desk lighting

Height adjustment for desk Web-remoistening unit

Cross lead for duplex presses

Cooling station

Steel substructure for two-floor version

Insertion decks

Auxiliary former

Length gluing unit

Cutter

Die-cutter perforator

Coater and remoist gluer

Plough fold

Compressed-air unit

Opera:

Film and plate scanner (KBA Scantronic)

Production management system (KBA Logotronic): online data transfer (CIPLink)



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For further information please contact our sales department at:

Koenig & Bauer AG, Frankenthal Facility (Albert) Postfach 1122, 67225 Frankenthal, Germany

Tel: (+49) 6233 873-3278 Fax: (+49) 6233 873-3595 http://www.kba-print.de

E-mail: kba-frankenthal@kba-print.de 04/00-e-H Printed in Germany

Our agency:



KBA COMPACTA 318