



# Upgrades

Keep up with the latest technology



# Company

## KBA-MetalPrint GmbH

KBA-MetalPrint is a subsidiary of the Koenig & Bauer Group, one of the largest printing machine manufacturers in the world.

Over 100 years of competence, based on the know-how of the renowned companies Mailänder, LTG and Bauer + Kunzi makes KBA-MetalPrint the market leader of sheet metal printing and coating machines as well as of drying ovens for the metal packaging industry.

[www.kba-metalprint.com](http://www.kba-metalprint.com)

## KBA-MetalPrint Service

KBA-MetalPrint Service remains responsible for your installations over the whole production lifetime. We supply original spare parts for Mailänder printing and coating machines, for multi-colour Sprint and MetalStar printing presses and for LTG drying ovens. With our own network of qualified technicians, we are able to offer a full range of maintenance and inspection services. And our Line Optimisation team is glad to take on even the most complex projects, from general overhauls to modernisation or relocation of your equipment.

We are currently looking after active machinery from more than four decades. To this end, our staff draw on a sound technical background, paired with a wealth of practical experience.

Dear customers,

KBA-MetalPrint designs and manufactures its products for a long and productive service life. Constant further development is thus an essential motivation in all we do. To help you stay in tune with the latest advances in press and printing technology, we offer a broad spectrum of retrofit solutions, the most important of which are presented here in our new upgrade catalogue.

We hope this catalogue will inspire you to invest in expansion or modernisation of your existing presses and other machinery – so that you, too, can reap the benefits of further enhanced productivity and operating reliability.

Your KBA-MetalPrint service team



Please feel free to contact us at any time if you need further information. Thanks to our comprehensive archives, we are confident that we can supply the ideal upgrade to match your individual requirements.

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Upgrades are often derived from systems and functions which have been developed for our new presses. They are thus an ideal means to breathe new life into an older existing line, and prepare you to meet the increased demands of today's markets. A magnetic overhead sheet brake, for example, lowers the risk of damage to the sheets when stacking. That helps to minimise waste at the downstream processing stages on high-performance printing lines. The flexo scraping system, on the other hand, enables fast blade changes on coating machines and reduces makeready times.

Electrical upgrades often become necessary because the electronic systems are outdated and component manufacturers no longer supply spare parts. Even if your press is in good mechanical condition, an electrical problem could result in long downtimes for the planning and realisation of a conversion. As a preventive measure, we offer appropriate replacement control systems to extend the reliable service life of your current production line.

# Our recommendation for: coating machines 460 / 4040 / 470 / 480

## UPGRADE 5.1 / 10.3



### Flexo Scraping System

For types 460, 4040, 470 and 480 coating machines

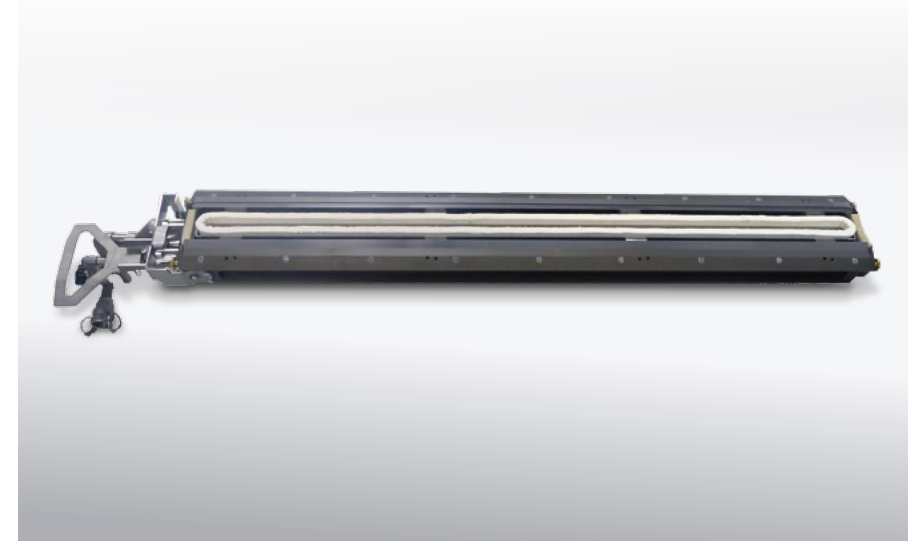
The scraper blade is fixed into a quick clamp assembly which guarantees the fast replacement of a worn-out scraper blade. While production is running, the new blade can be fitted into the quick clamp support, which can be then inserted rapidly into the Flexo Scraping System blade holder during the next line stoppage.

Existing scraper blades can be reused following modification.

#### The advantages

- Rapid scraper blade replacement
- Considerably longer blade life
- Faster bedding-in of the scraper blade
- Reduced adjustment time

## UPGRADE 5.4 / 10.7



### Solvent blade

For types 460, 4040, 470 and 480 coating machines

The solvent blade removes a possible varnish layer from the counterpressure cylinder, particularly with highly pigmented, abrasive varnishes. A diaphragm pump pumps solvent into the blade chamber, which is fitted with felt strips and the doctor blade. This is pneumatically thrown onto the counterpressure cylinder to guarantee uniform contact pressure. The partially dissolved varnish is scraped off the counterpressure cylinder by the additional doctor blade, fed into a collecting tank and reintroduced into the cleaning cycle.

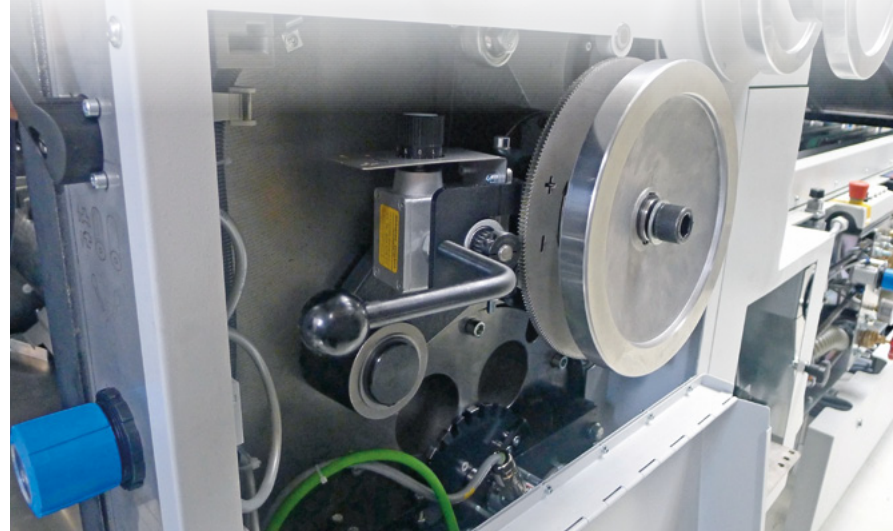
#### The advantages

- No varnish residue on the counterpressure cylinder or on the backs of the sheets
- Reduced wear on the main scraper blade
- Easy replacement of the complete doctor blade unit



## Our recommendation for: coating machines 460 / 4040 / 470 / 480

### UPGRADE 5.5



The fine adjustment of the circumferential register serves to position the transverse recess of the coating cylinder exactly. The two friction discs are replaced by two toothed adjustment wheels. This eliminates the slip, and exact positioning of the coating cylinder, down to 0.1 mm, is possible straight away. There is no further need for any repeated, time-consuming corrections.

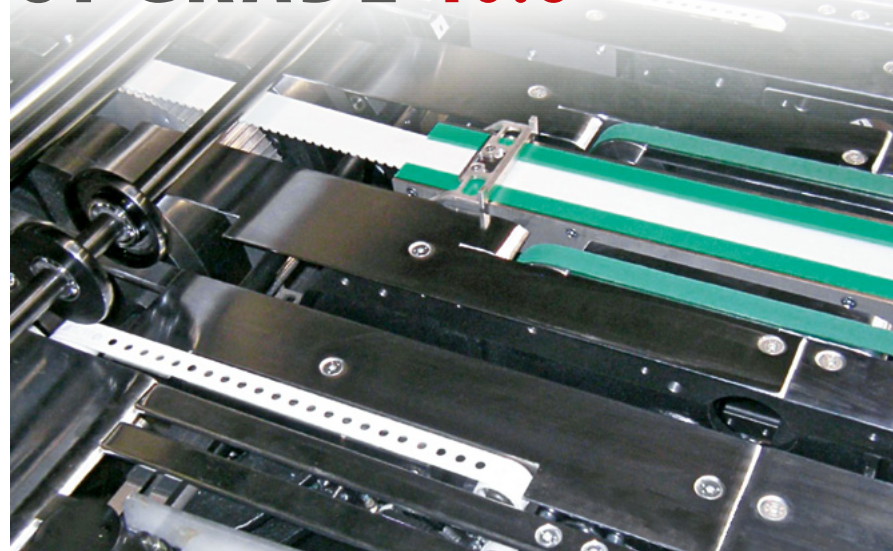
#### The advantages

- Fast, reliable adjustment of the circumferential register
- Exact setting through toothed adjustment wheels

### Fine adjustment of the coating cylinder for the transverse recess

For types 4040 and 470 coating machines

### UPGRADE 10.6



With the VacuMatic belt infeed system, the sheets are carried slippage free by belts instead of the conventional chains. This guarantees absolutely consistent, silent, scratch-free sheet transportation and eliminates the old complex length format setting process.

As chain systems are no longer employed, any chance of oil contamination on the sheets is avoided and maintenance costs are greatly reduced.

#### The advantages

- Consistent, absolutely scratch-free silent sheet transportation
- No length format setting necessary
- Use of belts instead of chains
- No lubrication necessary

### VacuMatic belt infeed system

For coating machines Mailänder series 460

## Our recommendation for: printing machines Mailänder 122 / 222

### UPGRADE 9.1



The new KBA ColorTronic remote inking control system eliminates the complex manual setting and readjustment of the ink zones. The printing staff saves the settings for each printing unit in the control panel and simply recalls this print job the next time. The result is a consistently high level of quality, as well as significant time savings when starting up production.

The KBA ColorTronic consists of the central control panel with colour monitor as well as ISO lighting, electromotive ink zone adjustment and the complete ink duct with a ceramic-coated ink duct roller.

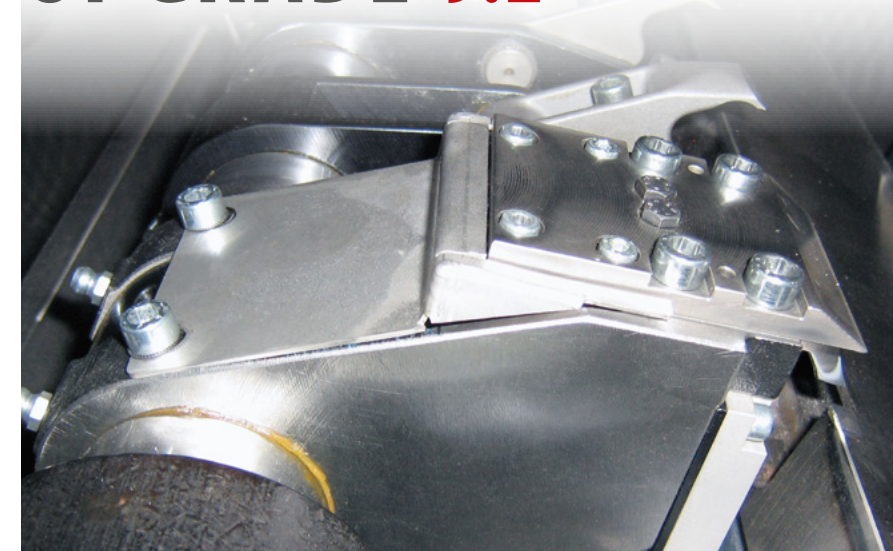
#### The advantages

- Central, clearly arranged control panel for all printing units
- Job data are saved, ensuring reproducible quality
- Simple, precise and rapid operation
- Ceramic-coated ink duct roller

### KBA ColorTronic – remote inking control system

For Mailänder printing presses types 121 and 122 / 122A

### UPGRADE 9.2



With the help of the remote-controlled diagonal register, the front lay can be motor-driven backwards and forwards by 0.25 mm to facilitate the setting up of the Mailänder printing presses types 122A and 222. This adjustment option is integrated in the existing display. In older presses, the controller may have to be retrofitted.

#### The advantages

- Adjustment of the diagonal orientation by up to +/-0.25 mm
- Fast and easy makeready from the control desk, together with the front and side lays
- Manual adjustment of the printing plate can be dispensed with

### Motor-driven diagonal register

For Mailänder printing presses types 122A and 222



## Our recommendation for: Sprint multi-colour printing presses

### UPGRADE 3.5



The incoming sheet is lifted by a timed air pulse which ensures a smooth, virtually contactfree separation from the following sheet.

The upgrade kit consists in the basic pneumatic parts and integrating software and may be retrofitted over one day.

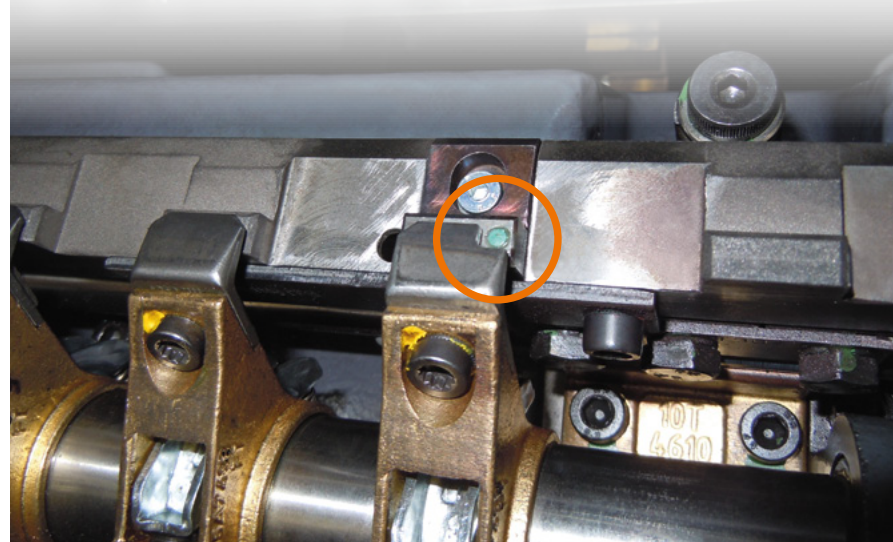
#### The advantages

- For both scroll and rectangular sheets
- Positive sheet control with no sheet damage
- Maintenance free
- Less adjustment required

### Feeder sheet separation

For all Sprint multi-colour printing machines

### UPGRADE 4.3



Sheet detection, irrespective of material and surface, is achieved by way of two inductive sensors. The stable sensor response serves to significantly enhance process reliability. The insensitivity towards dirt and simple cleaning ensure constant sheet travel and thus maximum productivity. Straightforward positioning and fast replacement permit considerable shortening of the press downtime.

#### The advantages

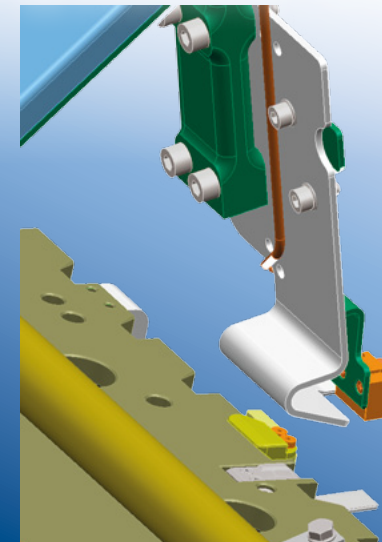
- Avoid production stoppages attributable to the sheet sensors
- Reliable detection of the gripper edge, irrespective of material, surface or coating
- No material-specific settings or calibration necessary
- Maintenance-free, simple cleaning

### Gripper edge sensors

For all Sprint multi-colour printing machines

## Our recommendation for: MetalStar multi-colour printing presses

### UPGRADE 11.2



The overshoot detector monitors the gap between the previous and the following sheet by means of a photo sensor on the feeder table. If this gap is not detected, this is recognised by the sensor as an early sheet, and the press stops with a fast stop.

After the early sheet has been removed and the error message reset, the press can be restarted and the print job continued.

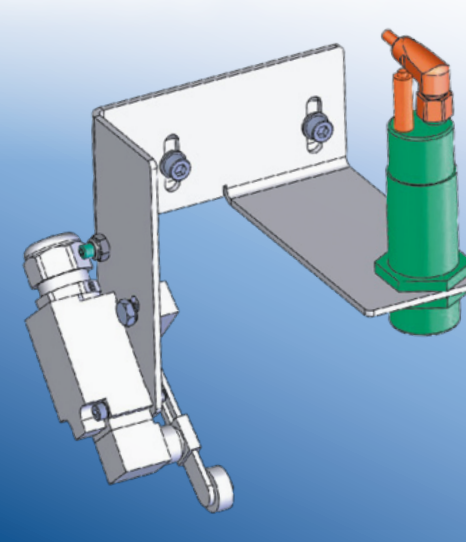
#### The advantages

- Reliable detection of early sheets
- Prevention of crashes, as the printing press is stopped in time
- Prevention of major damage in the region of the feed drum

### Overshoot detector

For MetalStar 2

### UPGRADE 11.3



The feeder of the MetalStar 2 was originally equipped with a mechanical and maintenance-intensive overpiling switch. This upgrade replaces this switch with a contact-free ultrasonic sensor.

The switching position is infinitely adjustable using a teach-in procedure. A safety limit stop switch to protect the suction head is mounted outside the sheet path.

#### The advantages

- Wear-free
- Contact-free
- Easy installation

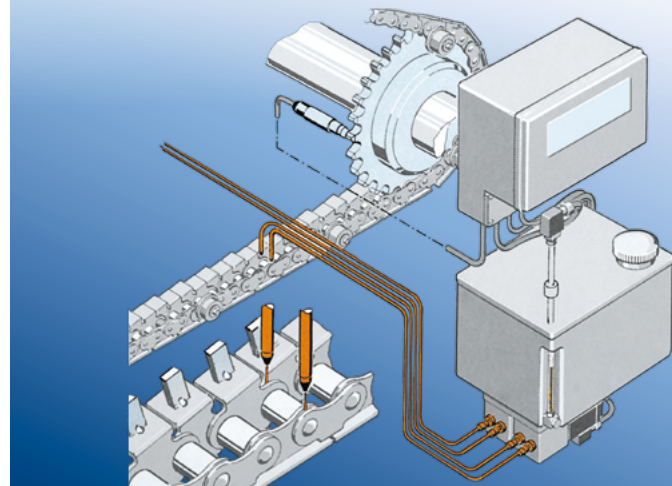
### Contact-free overpiling switch on the feeder

For MetalStar 2



## Our recommendation for: LTG drying ovens

### UPGRADE 7.3



#### Spray lubrication system with PLC control

For drying oven transport chains

The automatic spray lubrication system guarantees pinpoint lubrication of the transport chain. A sensor monitors the exact positions of the chain links, and a PLC ensures precise metering of the oil drops to prevent waste attributable to over-lubrication.

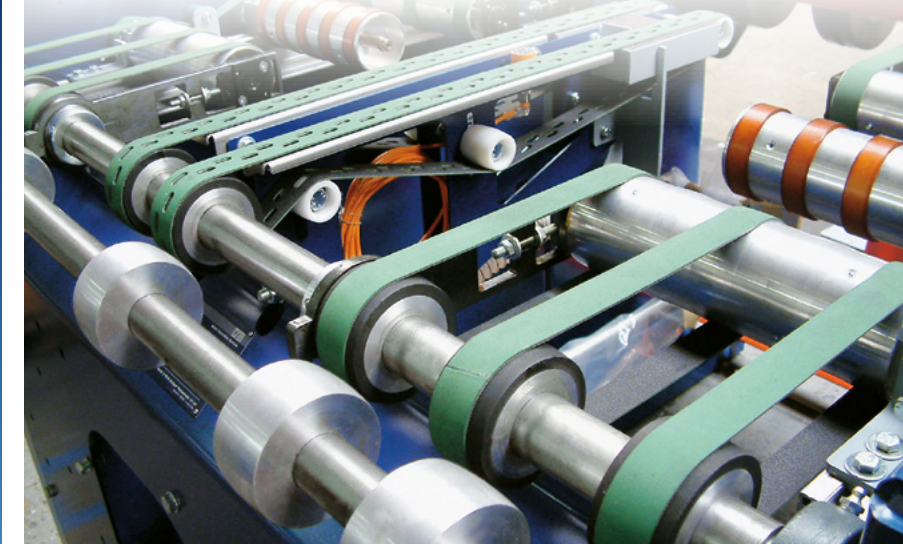
The lubrication system is supplied complete with all mechanical parts, a cabinet and a preset PLC controller, and can be installed very simply by the customer.

##### The advantages

- PLC instead of mechanical control
- Sensor monitoring
- Pinpoint lubrication
- Installation by the customer

## Our recommendation for: LTG loading and unloading machines

### UPGRADE 6.1



#### Dynamic sheet control

For LTG loading machines

The dynamic sheet control system ensures completely slippage free and precise positioning of the sheets as they are transferred to the wickets. Even at the highest speeds the plate is held in the correct place using the latest vacuum technology and the rate of deceleration is finely controlled by means of a sensor and frequency controller system. The employment of a specially developed conveyor system and the latest belt materials results in the unit is virtually maintenance free.

##### The advantages

- No sheet surface or edge damage
- No belt slippage giving precise positioning
- High production speed
- Infinitely variable braking adjustment
- Suitable for tinplate and aluminium sheets

### UPGRADE 7.4



#### Burner KXB 2.0

For EcoTNV

Higher preheating temperatures represent new challenges to material and design. In order to meet the changed requirements, we have developed a completely new KXB 2.0 burner with a new type of cone. Thanks to its special design, the KXB 2.0 burner compensates for the greater heat, thus protecting the cone from damage. This means that the burner works at a consistent performance level. This in turn extends the service life and reduces the maintenance required.

##### The advantages

- Controlled heat distribution
- Constant burner performance
- Tapered form is preserved
- One standard size

### UPGRADE 6.3



#### Dynamic sheet accelerator

For LTG unloading machines

As the cured sheet comes out of the drying oven it is essential that it is carried off the wickets quickly and consistently without damage. The dynamic sheet accelerator system achieves this by firmly gripping the sheet using the latest vacuum technology and then accelerating it under precise control out of the wicket area placing it in a consistent position on the outgoing conveyor. This has the advantage of reducing scratching and corner damage on the sheets as well as allowing the line to run reliably at higher speeds.

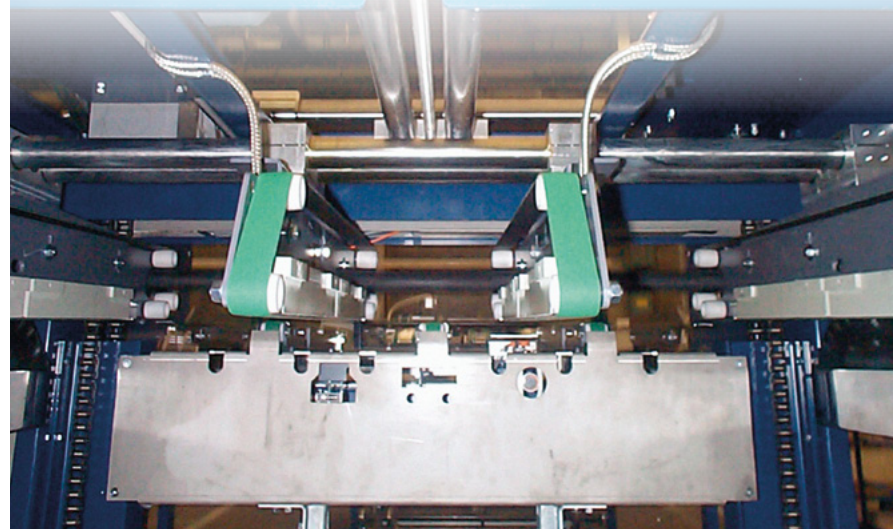
##### The advantages

- No sheet surface or edge damage
- No belt slippage on the plate
- Controlled sheet acceleration
- Suitable for tinplate and aluminium sheets, all formats
- Increased speed of production, also with heavy plates



## Our recommendation for: Sheet Handling

### UPGRADE 6.6



#### MagStack magnetic overhead brake

For LTG single and double stackers

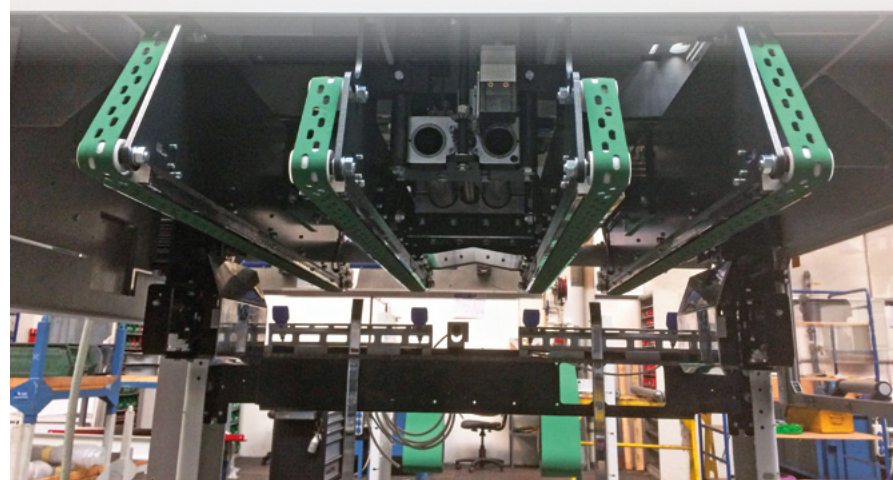
With the magnetic overhead brake, the metal sheet is brought to a controlled stop from full production speed, and falls vertically and precisely onto the pallet.

The deceleration process is controlled by a frequency converter with suitable software in a separate cabinet, as well as light barriers and sensors. As the new system does not use the spring-loaded sheet buffers and the stacker fan, the system is practically maintenance-free.

##### The advantages

- Damage-free stacking in both boxes now
- High production speed
- Quiet and precise stacking
- Especially suitable for scroll sheets and for thin sheets
- Less adjustment required

### UPGRADE 6.7



#### VacStack vacuum-operated overhead brake

For LTG single stacker

With the vacuum-operated overhead brake, the metal sheet is brought to a controlled stop from full production speed, and falls vertically and precisely onto the pallet. The vacuum-operated overhead system is suitable for aluminium and tinplate sheets.

The deceleration process is controlled by a frequency converter with suitable software in a separate cabinet, as well as light barriers and sensors. As the new system does not use the spring-loaded sheet buffers and the stacker fan, the system is practically maintenance-free.

##### The advantages

- Suitable for aluminium and tinplate
- Damage-free stacking
- High production speed
- Specially suitable for scroll sheets
- Less adjustment required

## Our recommendation for: E-Upgrades

### UPGRADE 2.E1



#### E-Modification

For multi-colour printing presses type MetalStar 1 and MetalWing

In order to adapt your MetalStar 1 metal decorating press to current market requirements and to ensure a high level of availability in terms of productivity and the supply of spare parts, KBA-MetalPrint has developed a new press control system: E-Modification.

This modern control console combines all of the functions of the press, the ink zones and the format adjustment in one Siemens S7 controller. The operating concept has been simplified and adapted to meet the needs of metal decorating. An easy-to-read touch display shows print-relevant setup data, for example of the damping unit, the ink zones and the duct roller speed.

##### The advantages

- Modern control system
- Comprehensive fault messages
- New job management
- Remote maintenance

### UPGRADE 9.E1



#### Modern control and drive system

For LTG Mailänder printing and coating lines

The availability of spare parts for PS3/PS4 PLC controllers by Klöckner-Möller can no longer be guaranteed. The relevant software is not consistently supported either. With this upgrade, the PLC controller as well as the Synchro line synchronisation system will be converted to the latest Siemens S7 controller with Lenze drive technology, currently available worldwide. The display and operating system on each printing unit will also be modernised. In printing lines, a special PLC program developed by KBA automates the startup of the individual press functions. New technologies like remote maintenance will assist you during troubleshooting.

##### The advantages

- Modern Siemens S7 controller with worldwide availability
- Frequency converter with asynchronous three-phase AC motor
- Modern drive concept
- Remote maintenance



# UPGRADES for KBA-MetalPrint multicolour printing lines

Optimize the productivity and flexibility of your line

## Upgrade 1 Feeder MetalStar 1

- 1.1** Rear edge magnetic sheet separation
- 1.2** Optimized feeder suction head
- 1.3** Electromagnetic rear edge sheet separation system

## Upgrade 2 MetalWing / MetalStar 1

- 2.1** Printing cylinder sheet monitoring
- 2.2** Pneumatic printing cylinder pressure on-/off switching
- 2.3** Pneumatic rear edge sheet guide
- 2.4** Side lay light barrier sensor
- 2.E1** E-Modification

## Upgrade 3 Feeder 790

- 3.1** Automatic suction head height setting
- 3.2** Fine alignment vacuum valve
- 3.3** Second vacuum valve impulse for fine sheet alignment
- 3.4** Forwarding sucker control – feeder
- 3.5** Feeder sheet separation

## Upgrade 4 Sprint

- 4.1** Teflon®-coated ink duct
- 4.2** Front lay sensors
- 4.3** Gripper edge sensors

## Upgrade 11 MetalStar 2

- 11.1** Remote maintenance service
- 11.2** Overshoot detector
- 11.3** Contact-free overpiling switch on the feeder
- 11.4** Pneumatic sheet separator

## Upgrade 6 Sheet Handling

- 6.6** MagStack magnetic overhead brake
- 6.7** VacStack vacuum-operated overhead brake

## Upgrade 5 Coating type 4040 / 470 / 480

- 5.1** Flexo scraping system
- 5.2** VacuMatic belt infeed system
- 5.3** Delivery with round belt
- 5.4** Solvent blade
- 5.5** Fine adjustment of the coating cylinder for the transverse recess



# UPGRADES for KBA-MetalPrint printing and coating lines

Optimize the productivity and flexibility of your line

## Upgrade 8 Feeder

- 8.1 Feeder stack height sensor
- 8.2 Cams made of high-performance plastic
- 8.3 Electronic cam controller for controlling the suction unit and separating air
- 8.4 Conversion kit for noise reduction
- 8.5 Continuous pile lift
- 8.6 Scroll side guides
- 8.7 Stop & Turn pile lifting
- 8.8 Side blast air

## Upgrade 9 Printing

- 9.1 KBA ColorTronic inking remote control system
- 9.2 Motor-driven diagonal register
- 9.E1 Modern control and drive system

- 6.1 Dynamic sheet control
- 6.2 Smooth transition loading ramp

## Upgrade 7 Drying

- 7.1 Burner control
- 7.2 Steering plates for air circulation adjustment
- 7.3 Spray lubrication system with PLC control
- 7.4 Burner KXB 2.0

## Upgrade 10 Coating type 460

- 10.1 Pressure roller – simultaneous adjustment
- 10.2 Ball bearings for varnishing rollers
- 10.3 Flexo scraping system
- 10.4 Pneumatic scraper blade
- 10.5 Pneumatic varnishing cylinder friction clutch
- 10.6 VacuMatic belt infeed system
- 10.7 Solvent blade

## Upgrade 6 Sheet Handling

- 6.6 MagStack magnetic overhead brake
- 6.7 VacStack vacuum-operated overhead brake

- 6.3 Dynamic sheet accelerator
- 6.4 Vacuum sheet accelerator
- 6.5 Smooth transition unloading ramp
- 6.8 Pneumatic sheet alignment
- 6.9 Pneumatic transport chain tensioning
- 6.10 Safety device with pneumatic lowering



# Overview of all available Upgrades

## Mailänder 460

- 10.1** Pressure roller – simultaneous adjustment
- 10.2** Ball bearings for varnishing rollers
- 10.3** Flexo scraping system
- 10.4** Pneumatic scraper blade
- 10.5** Pneumatic varnishing cylinder friction clutch
- 10.6** VacuMatic belt infeed system
- 10.7** Solvent blade

## Coating machine 4040 / 470

- 5.1** Flexo scraping system
- 5.2** VacuMatic belt infeed system
- 5.3** Delivery with round belt
- 5.4** Solvent blade
- 5.5** Fine adjustment of the coating cylinder for the transverse recess

## Mailänder 122 / 222

- 9.1** KBA ColorTronic inking remote control system
- 9.2** Motor-driven diagonal register
- 9E.1** Modern control and drive system

## Feeder 770 / 4050 / 780

- 8.1** Feeder stack height sensor
- 8.2** Cams made of high-performance plastic
- 8.3** Electronic cam controller for controlling the suction unit and separating air
- 8.4** Conversion kit for noise reduction
- 8.5** Continuous pile lift
- 8.6** Scroll side guides
- 8.7** Stop & Turn pile lifting
- 8.8** Side blast air

## MetalStar 1 / MetalWing

- 2.1** Printing cylinder sheet monitoring
- 2.2** Pneumatic printing cylinder pressure on-/off switching
- 2.3** Pneumatic rear edge sheet guide
- 2.4** Side lay light barrier sensor
- 2E.1** E-Modification

## Feeder MetalStar 1 / MetalWing

- 1.1** Rear edge magnetic sheet separation
- 1.2** Optimized feeder suction head
- 1.3** Electromagnetic rear edge sheet separation system

## MetalStar 2

- 11.1** Remote maintenance service
- 11.2** Overshoot detector
- 11.3** Contact-free overpiling switch on the feeder
- 11.4** Pneumatic sheet separator

## Sprint

- 4.1** Teflon®-coated ink duct
- 4.2** Front lay sensors
- 4.3** Gripper edge sensors

## Feeder 790

- 3.1** Automatic suction head height setting
- 3.2** Fine alignment vacuum valve
- 3.3** Second vacuum valve impulse for fine sheet alignment
- 3.4** Forwarding sucker control – feeder
- 3.5** Feeder sheet separation

## LTG Ovens

- 7.1** Burner control
- 7.2** Steering plates for air circulation adjustment
- 7.3** Spray lubrication system with PLC control
- 7.4** Burner KXB 2.0

## LTG loading and unloading machines

- 6.1** Dynamic sheet control
- 6.2** Smooth transition loading ramp
- 6.3** Dynamic sheet accelerator
- 6.4** Vacuum sheet accelerator
- 6.5** Smooth transition unloading ramp
- 6.8** Pneumatic sheet alignment
- 6.9** Pneumatic transport chain tensioning
- 6.10** Safety device with pneumatic lowering

## Sheet Handling

- 6.6** MagStack magnetic overhead brake
- 6.7** VacStack vacuum-operated overhead brake

Depending on the technical configuration of your equipment we can offer a comprehensive consultation service. We will be pleased to supply you with a quotation tailored to your specific needs.

**Please feel free to contact us!**

## Contact

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