

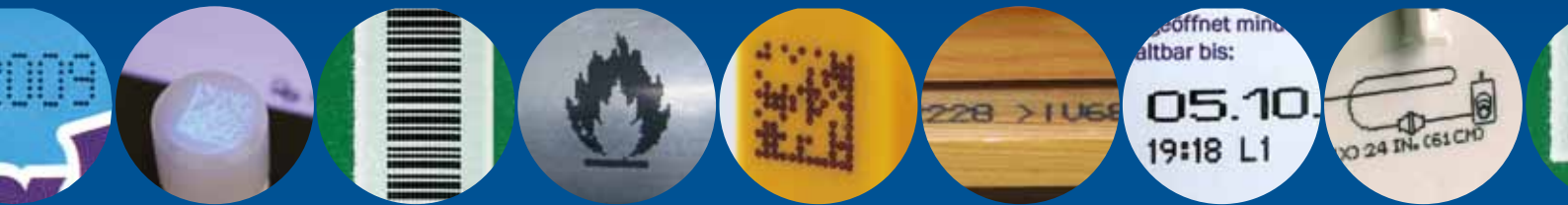


## Printing Solutions

**ALPHAJET** | CONTINUOUS INKJET PRINTERS

THE CONTINUOUS INKJET TECHNOLOGY FROM  
KBA-METRONIC – A COMPLETE OVERVIEW OF THE  
ALPHAJET PRODUCT RANGE

# THE MARK OF QUALITY: INKJET TECHNOLOGY FROM KBA-METRONIC – RELIABLE, FAST AND ECONOMICAL



**Economical, easy to use, extremely efficient and robust, the alphaJET series inkjet printers are ideal for industrial applications. The alphaJET is among the technological leaders on the international market for many years. As a high-precision marking system they are successfully used in all major industries by global market leaders throughout the world.**

The freely programmable inkJET marking technology from KBA-Metronic is extremely versatile and the alphaJET is also suitable for a wide range of substrates.

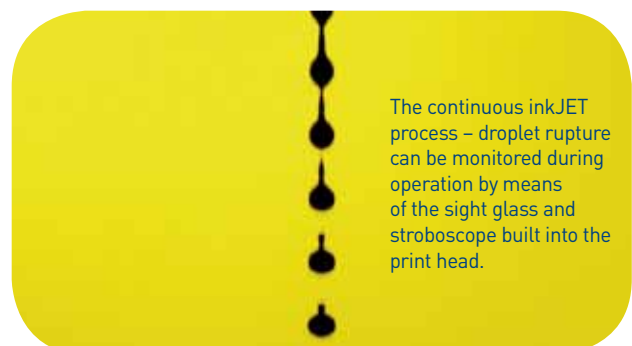
This diversity enables its use in an extremely wide range of industries, e.g. food, drink, pharmaceutical, cabling, automotive and printing.

## High precision printing using proven technology

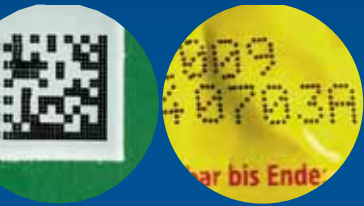
The alphaJET series works on the basis of the non-contact continuous inkJET process. In this process, a conductive ink is pressed through a nozzle by means of an integrated pump, thus generating an ink jet. A piezo element develops ultrasound vibrations which divide the ink flow into small droplets.

A defined charge is then applied to the droplets at the point of rupture. The droplets then pass through a high-voltage field which diverts the charged droplets accordingly. This diversion determines where the droplets are placed on the substrate. Non-charged droplets are not diverted and go into a gutter, from where they are pumped back into the ink system.

The whole ink system has a simple but robust design and is therefore extremely reliable. Ink bottles can also be refilled at any time during print operation so production downtimes are minimized.



The continuous inkJET process – droplet rupture can be monitored during operation by means of the sight glass and stroboscope built into the print head.



**KBA-METRONIC  
OFFERS THE RIGHT  
SOLUTION FOR  
APPLICATIONS IN ALL  
INDUSTRIES.**



#### **Unrivalled economy**

The low solvent consumption of the alphaJET C, alphaJET C-HS and in comparison with competitor products is particularly impressive.

Through the integrated recovery system the solvent not required for printing is fed back into the unit. This delivers the enormous cost-effectiveness of the alphaJET C, which uses less than 2 ml of solvent per hour at an ambient temperature of 20° C. This value has been confirmed by an independent study.

The low consumption also considerably reduces emissions and hence the exposure of employees to fumes. Companies are therefore well set to comply with future workplace directives and regulations.

#### **Versatile print head**

Thanks to the 48-dot matrix print head of the alphaJET C can print up to six lines with the option of shifting individual pixel by pixel enabling superscript and subscript characters in multiline texts.

Text can also be applied in a 90 degree rotated position. There is a free choice of font matrix with heights from 0.8 -15 mm. All marking requirements can be met, from multi-line prints to highquality logos or codes.

**INNOVATIVE SOLUTIONS  
FOR ALL TASKS: TEXT CAN  
BE APPLIED IN TWO AXIAL  
DIRECTIONS IN ONE PASS.**

# RUNS LIKE CLOCKWORK: PRACTICAL AND USER-FRIENDLY OPERATION



**INTELLIGENT  
SOLUTIONS: FAST-  
RUNNING OBJECTS  
SUCH AS CABLES  
ARE CLEARLY  
MARKED.**

## Efficient easy to operate technology

The test of any technology is its continued use in everyday applications. The winning features of the inkjet printers from KBA-Metronic are simple operation and the ease with which they can be integrated into all production lines.



An alphaJET C dual-head unit is incorporated into a Universys from KBA-Metronic, a personalization system for individual cards.

Right from the word go, the KBA-Metronic technology stands out for its high reliability and minimal start-up times, even after a period of inactivity of several days.

Users like the ergonomic membrane keyboard terminal and the clearly designed graphic user interface. Here the user can enter data texts, code numbers and select logos in WYSIWYG mode. If required, the terminal can be positioned separately from the printer – allowing the user to find the ideal position even where installation conditions are difficult.

To simplify the workload a handscanner can be installed with the capability:

- to call up various memory texts from the alphaJET that can then be printed,
- to insert variable elements in a text with new data,
- to activate various existing configurations saved on the alphaJET.

## Integration made easy

The open interface protocol makes integration of the printer into existing production lines easier. The programming language developed by KBAMetronic can be customised for each installation, with standard routines easily adapted to local requirements.

The adaptive system software makes it easier to handle errors in the production process and allows the fastest response times possible.

## Efficiency in all applications

The inkjet printers from KBA-Metronic can be used just as efficiently for simple applications – such as printing dates – as for complicated applications in which the alphaJET is networked with a PC, control unit, barcode reader, traversing systems or other peripheral units.



Precise marking on objects with non plane surfaces.



Two networked alphaJET C allow marking with two different colors in one pass.



A wide range of materials and surfaces such as films, glass, metal, plastic, paper etc. can be marked with an alphaJET.

## The users of continuous inkJET printers from KBA-Metronic enjoy the following benefits:

- Easy integration into any production line
- Practically emissions-free operation thanks to the solvent recovery system integrated as standard (alphaJET C)
- Most economical consumption of solvent in its class
- Maintenance-friendly thanks to modular design
- Extremely easy operation via terminal or PC software
- 1 to 6 line print image, font size up to 15 mm, resolution up to 48 dots.
- Freely programmable
- Two production line operation possible with independent data
- Easy connection of peripherals
- Possibility of networking additional print devices via just one terminal
- Simple selection from a number of standard print programs
- Easy topping up of consumables
- Non-contact printing process providing top printing quality even with maximum print head clearance
- High quality print even on irregular surfaces
- Diverse range of inks also suitable for applications in sensitive areas [e.g. food and pharmaceutical production]
- Optimised price/performance ratio

## AlphaJET

### AlphaJET C – The classic choice for a number of applications

The outstanding price/performance ratio is demonstrated by the fact that the alphaJET C is also available as a dual-head printer and is thus able to serve two production lines concurrently, with completely different data, logos or addresses.

In whichever position it is installed, the print head of the alphaJET C produces a high quality print of 1 to 6 lines on smooth and irregular surfaces.

Applications include best before dates, batch numbers, logos, barcodes, Data Matrix Codes, serial numbers and production data.

The alphaJET C can be operated with many different inks. This includes pigmented inks for high-contrast and nonfade marking on dark surfaces, or special inks such as UV-detectable inks.

### AlphaJET E – Ideal for the drinks industry

This system was designed to meet IP 55 protection class requirements and is therefore suitable for use in damp and wet areas. The alphaJET E also has an extended operating temperature range of 5° C to 45° C.

### Alphajet EVO - IP 65 protection class

Alphajet evo and alphajet tempo are the next generation of ink jet printers based on KBA-metronic's expertise gained from decades of inkjet design. The new alphajets are easy to operate, they print in high quality, at fast production speeds [speed of up to 10m/second].

- IP 65 rated for challenging environmental conditions
- Space-saving, compact construction
- Maximum up-time, with modular construction and minimal components
- Prints consistently high quality text and images (up to 6 lines), even onto structured and uneven surfaces.
- Quick start-up and shut down procedures due to automatic nozzle lock

# AT A GLANCE:

## THE RIGHT ALPHAJET FOR EACH APPLICATION



**POINT BY POINT:  
PRECISE AND  
ECONOMICAL**

### Alphajet EVO

- Dimensions:** Control unit 320 x 320 x 700 mm (incl. operator terminal), print head : 40 x 40 x 145 mm (LxWxH)
- Ink system:** 1-litre bottles for ink, easy to change. No requirement for compressed air
- Working conditions:** Operating temperature: +5° to +45°C, max. 90% relative air humidity, non-condensing
- Connected loads:** 86-264 V 10%, 50 - 60 Hz, maximum power consumption 1.0/0.5A
- Safety Standard:** Ink return controll; automatic viscosity and ink level control; remote monitoring of printing errors; separation of the electronics and ink systems; practically zero emissions thanks to solvent recovery



Technical Data	Alphajet evo			Alphajet tempo
	Light	Standard	Pro	Pro
License :				
Print resolution	32 dots in vertical direction	32 dots in vertical direction	48 dots in vertical direction	24 dots in vertical direction
Print speed	Up to 2800 characters/second	Up to 2800 characters/second	Up to 2800 characters/second	Up to 3500 characters/second
Type height	0.8 - 15 mm (max. 6 lines)	0.8 - 15 mm (max. 6 lines)	0.8 - 15 mm (max. 6 lines)	0.8 - 8 mm (max. 2 lines)
print head distance	1 - 25 mm	1 - 25 mm	1 - 25 mm	1 - 25 mm
Barcode	Barcode restricted	Barcode standard	Barcode advanced	Barcode advanced
Logo possible	Yes	Yes	Yes	Yes
Password protection	No	Yes	Yes	Yes
Ink types	Pigmented / non pigmented	Pigmented / non pigmented	Pigmented / non pigmented	Pigmented / non pigmented protection
Protection class	IP 65	IP 65	IP 65	IP 65
Recommended for sectors	Packaging, food, beverages, dairy products, agricultural	Pharmaceutical, automotive, electronics, cosmetics, furniture, chemical, plastics, CD/DVD, toys	Automotive, electronics, OEM, precision mechanics, optical, pharmaceutical, glass, plastics	Wire & tube, tobacco, beverages, packaging, plastic cards, automotive

**COMPLETE OVERVIEW OF THE PRODUCT RANGE**



**Alpha JET C**

**Alpha JET C-HS**

**Alpha JET E**

Dimensions and connected loads			
Housing material	Stainless steel	Stainless steel	Stainless steel
Protection class	IP 54	IP 54	IP 55
Dimensions of unit (H x W x D)	655 x 295 x 320 mm incl. terminal	655 x 295 x 320 mm incl. terminal	403 x 562 x 251 mm
Weight	27 kg	27 kg	26 kg
Dimensions of terminal 1	installed	installed	installed
Dimensions of print head 1	169 x 40 x 40 mm	155 x 40 x 40 mm	169 x 40 x 40 mm
Length of print head supply line	4 m (option of 2 m or 6 m)	4 m (option of 2 m or 6 m)	4 m
Electrical connection	115 / 230 V +/- 10 % 50 / 60 Hz; 1,0 / 0,5 A	115 / 230 V +/- 10 % 50 / 60 Hz; 1,0 / 0,5 A	115 / 230 V +/- 10 % 50 / 60 Hz; 1,0 / 0,5 A
Operating temperature	+10°C to +35°C (dep. on ink)	+10°C to +35°C (dep. on ink)	+5°C to +45°C (dep. on ink)
Relative air humidity (max.)	90%, non-condensing	90%, non-condensing	90%, non-condensing
Compressed air required	no	no	no

Hardware			
External	yes, available as option	yes, available as option	no
Number of print heads	1-2	1-2	1
Number of production lines	1 or 2	1 or 2	1
Interfaces	2 x RS 232	2 x RS 232	1 x RS 232
Alarm output	yes	yes	yes
Rotary encoder	1 (option of 2); 24 V	1 (option of 2); 24 V	1; 24V
Product sensor	1 (option of 2); NPN/PNP	1 (option of 2); NPN/PNP	1; NPN/PNP
Switchover of text via user port	yes	yes	no
Nozzle sizes	42 µ, 55 µ, 70 µ	55 µ	55 µ, 70 µ
Ink supply	500 ml	500 ml	1000 ml
Recovery of solvent	yes	yes	no
Pigmented inks	available as unit variants	available as unit variants	no
Ink circulation/stirrer	yes, for pigmented inks	yes, for pigmented inks	no
Automatic disconnection of power	yes	yes	yes
Print head excess pressure term.	optional	optional	optional
Angle print head (hose)	yes, available as option	yes, available as option	yes, available as option

Power			
Print head clearance	1 - 25 mm	1 - 8 mm	1 - 25 mm
Font size	0.8 - 15 mm	0.8 - 3 mm, single-line	1 - 15 mm
Number of print lines/head	6 8 (5 x 5)	1 1 (5 x 5)	3 4 (5 x 5)
Print resolution/head	48 dots	7 dots	24 dots

Software			
Tower print	5 x 5 (other sizes available)	5 x 5 (other sizes available)	5 x 5 (other sizes available)
90° printing	yes	yes	yes
Distance measurement	optional	optional	no
Customer-specific programs	yes	yes	no

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