

INNOVATION!



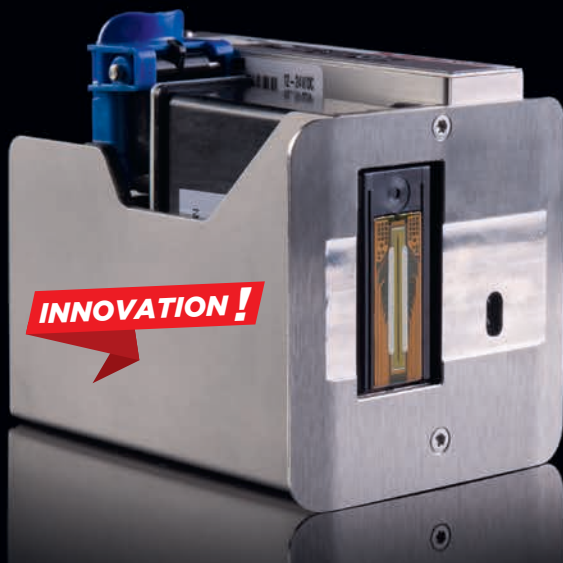
Markoprint

HIGH QUALITY MADE IN GERMANY

WE MAKE IT WORK

PRODUCT OVERVIEW

INNOVATION!



ART OF CODING

The "Markoprint" brand offers you marking solutions precisely tailored to your needs, with more than 50 years of experience.

Starting with the Jetpen, which employed thermal inkjet technology, a large character printer using a piezo electric printing module soon followed, making it possible to inkjet print both small and large characters.

Over the following years, in conjunction with our partners, the technologies were developed further with one notable milestone being the introduction of the iJET, a printer capable of handling highly complex marking requirements such as variable 2D barcodes for the pharmaceutical industry or postal applications with up to 50 variable codes being printed each second.

Due to the ever more complex networking requirements of today's industrial facilities, the focus is moving from simple surface printing to self-sufficient networked systems with shared intelligence. Today's generation of Markoprint printing systems fulfill these new requirement profiles with variable high-speed printing, serial printing of complex databases, support for True Type fonts and Unicode character sets.

At Markoprint, the printer development program is always continuing, so you can look forward to the integration of new technologies such as UPC/UA and full access via mobile devices to always provide the best solution for industrial marking.



The Jetpen of 1991 on the basis of thermal inkjet technology

MISSION STATEMENT

The core of our business is the creation of innovative marking solutions, customer-focussed service and the cooperation of a worldwide network of high performance partners.

HIGH QUALITY, MADE IN GERMANY

The best materials, the most innovative ideas, this is "Made in Germany". Aluminium is our preferred product material, preferably made of one piece. A guarantee for durability, sustainability and your success.



Andreas Bluhm,
Vice President

“ With our wide range of printing systems and technologies, Markoprint coding solutions meet every system environment and customer requirement. Whether large or small fonts, high-speed applications in pharmaceutical or automotive industries, rough industrial environments, we offer the right system for every application. ”

Our projects result in first-class, highly complex solutions that are still straightforward to use. To achieve this goal, the Markoprint team is part of a strong global community. We do not only focus on the German market: our worldwide network of distributors and trading partners is the core of all previous and future developments. They are the key to the implementation of market requirements and a central part of our product development program.



Please contact us or visit us at www.markoprint.com

After the successful launch of the RAZR platform, we are now proud to be able to offer the integra PP RAZR 67 with its flexible application options in all operating environments.



STATE OF THE ART

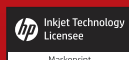
Which printing technology would you like to use? Wherever printing takes place, there is a high-quality, reliable technology available:

Printhead design "Made in Germany". Markoprint is the only manufacturer in the world that can control five print technologies. The flexible and future-proof print technologies of HP Class, LX Class, MX Class, XR Class and PP Class offer complete consumption control and ensure a perfect print image on almost all products.

THERMAL INKJET TECHNOLOGY

- Clean - new printhead with every cartridge
- No maintenance
- Intelligent ink cartridges
- Small and compact printheads
- Flexible and variable in application

HP
CLASS



- Print heights from 1.5 - 108 mm with up to 1200 dpi
- 180 m/min at 300 dpi
- Click'n Print cartridge holder
- Large variety of inks
- Bulk / Large Volume Ink Support



HP 108.0 mm



HP 12.5 mm

LX 12.5 mm



LX 25.4 mm

LX
CLASS

- Print heights up to 25.4 mm with up to 600 dpi
- High print speeds up to 240 m/min at 300 dpi
- Up to 10 mm print distance to the product
- Excellent print quality

PIEZO TECHNOLOGY

- Non-Stop Printing integrated
- Efficient due large ink tank
- IQ Supplies
- Optimized maintenance intervals
- High speed
- Printing on different materials



markoprint.com/technologies

PP
CLASS

- Top quality printing of barcodes, small fonts (from 1.5 mm) and detailed logos
- Print heights from 1.5 - 108 mm with up to 360 dpi
- Recirculating ink system on the integra PP 108 for uncomplicated use



XR
CLASS

- Optimized for many applications
- Print heights up to 71 mm with up to 180 dpi
- Optimized for large barcode and big letter text prints
- Perfectly suited for detailed logo prints

MX
CLASS

- Print heights up to 50/100 mm with up to 192 dpi
- The standard for industrial PIEZO marking
- Optimized for large barcode and big letter text prints



INK 4.0

Markprint HP Class and LX Class printing systems use an intelligent chip, integrated into the consumables cartridges, enabling communication between those and the printing system.

Auto-Setup allows automatic settings of the various ink parameters. Further advantages of consumables – IQ Supplies:

- Automatic detection of the ink type
- Real-time ink level control
- Guarantee of continued print quality

Integrated RFID chips enable the latest generation of piezo printing systems, the integra PP 108 and RAZR Platform, to recognize the ink type automatically.



markprint.com/inks



NONSTOPPRINTING

Possible due to intelligent printheads. NonStopPrinting offers a zero downtime solution for maximum system availability.

Thermal Inkjet

Continuous, uninterrupted printing in harsh 24/7 industrial facilities. An intelligent algorithm ensures cartridges are always ready for use.

Piezo Inkjet

All Piezo Inkjets are featured with an integrated "Nonstop" feature. RFID and large ink tanks make it possible to refill consumables while the system is running.

Two-color prints up to 25 mm print height are also possible with the NonStopPrinting printhead. With the water- and solvent-based inks of the HP and LX Class, company logos or warning symbols can be applied quickly and contact-free to absorbent and non-absorbent outer packaging.

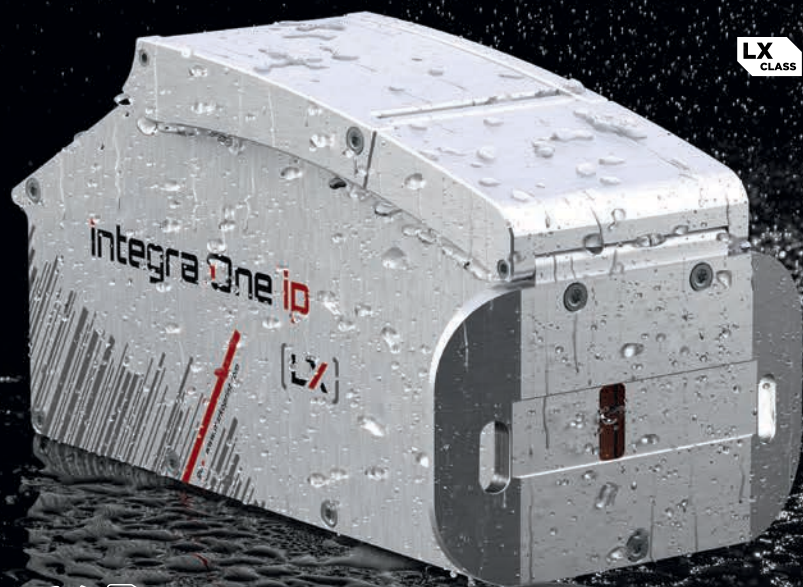


premium systems

WE MAKE IT WORK

Systems for industry applications - ready for any challenge. The primary focus in the development of the "Premium" systems was based on:

- Intelligent print systems, compact and highly integrated
- Protection class IP 65 - splash and dust protection available as option
- High speed and modularity
- High performance data management up to 80 variable codes per second



LX
CLASS



INTEGRA ONE IP LX

The proven washdown technology (IP65 protection class) with the LX cartridge generation is ideally suited for use in the harshest environmental conditions. Complex and demanding applications with high printing speeds of up to

240 m/min and up to 10 mm print distance to the product are realized without any problems. Many innovations, such as the patented mechanism for holding the ink/printhead unit and the optional WiFi version will convince you!

INTEGRA ONE HP INTEGRA ONE IP HP

- Highly integrated, HP Class printing system
- Developed for system integration
- Support of intelligent consumables
- Operation via iLogik with OLED display
- integra One: Integrated photo sensor for automatic print activation
- IP65 protection class optional



HP
CLASS

HP
CLASS



www.bluhmsysteme.com/mop-premium



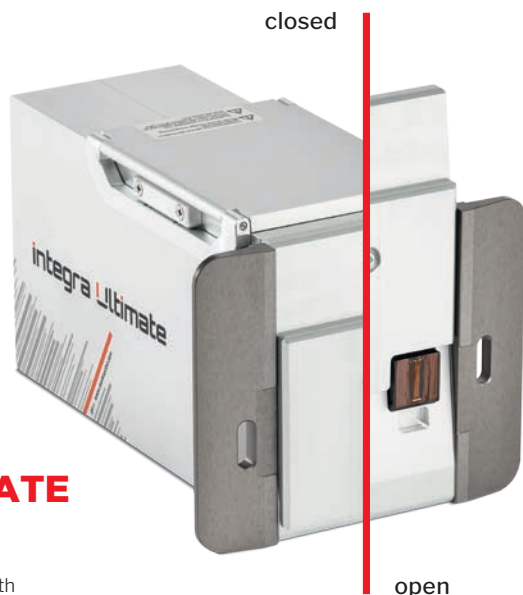
HP
CLASS

IPJET MK3

- Designed for use in wet and dusty environments (IP65)
- Compact, robust system for easy integration into production lines
- Optimized for vertical forming, filling and closing machines



HP
CLASS



closed

open

INTEGRA ULTIMATE

- Evolution in production:
Patented nozzle shutter print head with integrated cleaning function
- Certified according to protection class IP65
- Print heights up to 1" (25,4 mm)

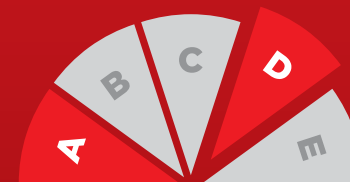
DIGITAL TUNING FOR YOUR APPLICATION

Buy only what you need, confident of having a future-proofed solution!

Due to years of experience and customer dialogue, we have developed performance levels for the Markoprint printing systems. These are characterized by a simple, flexible and dynamic scalability to the respective application.

Make it your way, we introduce the "Coding Score".

Performance levels of the printing systems:



CODING SCORE

A = PRINT | B = BASIC | C = ADVANCED | D = PRO | E = ULTIMATE

Every Markoprint printing system has been developed for the optimal adaptation into customer requirements.

That means that now and in the future you're safe with Markoprint. The configuration of the system and your production will be perfectly matched.

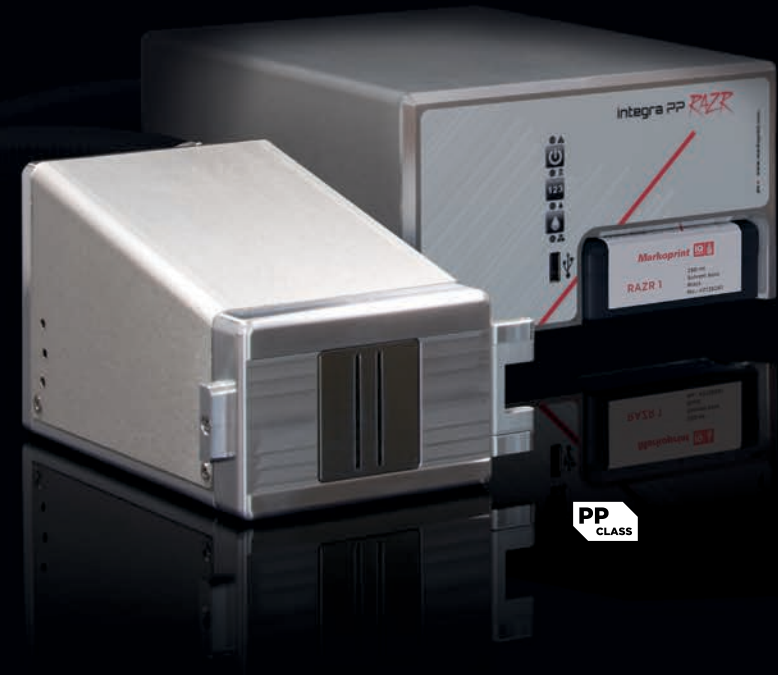
You can easily add performance levels and thus meet new requirements for production and sustainability.

HIGH PERFORMANCE - RAZR PLATFORM

Modular and flexibly - scalable to your requirements, these are the "Professional" systems from Markoprint.

Professional printing systems consist of a print controller which can handle up to 8 printheads in any combination of printing technologies: Depending on the used printing technology, whether small and large characters, high-speed or via a data interface (ERP) - coordinated marking requirements can be realized.

INNOVATION !



INTEGRA PP RAZR INTEGRA PP RAZR 67

- Optimized for integration into production lines
- Impressive print resolution up to 600 dpi vertical
- Print speeds up to 90 m/min at 300 dpi
- Integrated redundancy
- Solvent ink for printing on absorbent and non-absorbent surfaces
- Print heights up to 34 mm without offset with the integra PP RAZR
- Print heights up to 67 mm without offset with the integra PP RAZR 67

INNOVATION !



INTEGRA SINGULAR 108

Integra Singular 108, our latest generation TIJ 4.0 thermal printing system is unique in the world of product coding. A reliable ink supply system and the latest HP print head technology with integrated print control allow free positioning of the

printing system and therefore easy integration. 108 mm closed print images, up to 10 mm print distance to the product and impressive print speeds of up to 150 m/min guarantee flexible application options.



INTEGRA PP 108 INTEGRA PP 108 BICOLOR INTEGRA PP 108 UV

- Large and high-resolution marking on production lines
- Speed and flexibility in large character marking with superior system performance in the piezo range
- Print heights up to 108 mm
- Print speed up to 150 m/min at 360 dpi
- Recirculating ink system
- Height-independent ink system
- Integra PP 108 bicolor: One system, one print head for two-color printing
- Integra PP 108 UV: UV-curing ink for printing on absorbent and non-absorbent materials



CONTROLLER

- X2JET / X4JET for operations at the production line
integra Quadro / integra Quadro² for integration into the production line
- 5 supported printing technologies
- Flexibly configurable for the application
- Multi channel - technology for different printing technologies with one controller
- Speed and start signal can be individually adjusted to the connected printing technology
- Hybrid operation with keyboard / iLogic or touch (resistive)



X2JET X4JET

- Optimized for operations at the production line with up to 2/4 printheads
- The printheads can be individually adjusted to the respective requirement:
1 channel: up to 2/4 printheads of one printing technology
2 channel: up to 1/2 printheads of different printing technologies
- 5.7" touch screen and keyboard for easy operation



markoprint.com/professional



INTEGRA QUADRO INTEGRA QUADRO²

- Optimized for integration into the production line with up to 4/8 printheads
- Compact design for integration into control cabinets or machines
- Developed in cooperation with our machines and installation manufacturers
- iLogic controller and OLED display are available for the integra Quadro, the integra Quadro² is completely designed for integration
- The printheads can be individually adjusted to the respective requirement:
1 channel: up to 4/8 printheads of one print technology
2 channel: up to 4/8 printheads of different printing technologies
4 channel: up to 8 printheads of different printing technologies



standard systems

X1 – THE ALL-ROUND PLATFORM

Compact and economical, these are the „Standard“ systems of Markoprint. Printhead and print controller are combined in one housing and can be easily integrated into existing production lines.

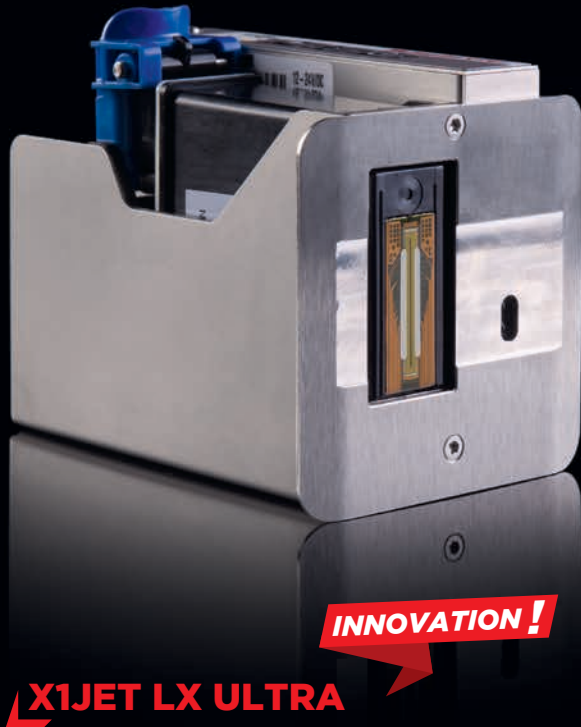
LX
CLASS



X1JET LX MK3

can print up to 12.5 mm.

LX
CLASS



X1JET LX ULTRA

The new X1JET LX Ultra printing system from Markoprint is versatile and a real all-rounder. Twice as large product markings up to 25.4 mm

height are possible thanks to the use of a 1 inch cartridge. Simple operation, almost maintenance-free and cost-effectiveness are a matter of course.

X1JET HP STANDARD MK3 X1JET HP PREMIUM MK3 X1JET HP STITCH MK3 HANDHOLD

- Standard: Unique in its performance and designed for a wide range of applications
- Premium: Highspeed function and optional WiFi connectivity
- Stitch: Whenever space is limited or a print image has to be generated from individual heads
- HandHold: For mobile, location-independent product coding with WiFi option

X1JET HP Premium MK3

HP
CLASS



HandHold



HP
CLASS

HP
CLASS



X1JET HP Stitch MK3

X1JET MX X1JET XR

The "All in One" Piezo Inkjet Systems X1JET MX and X1JET XR provide an

- easy installation and maintenance of the system
- easy commissioning and venting of the ink system by combining printhead, ink system, cleaning station, control electronics and power supply in one housing.

The easiest way to join the world of inkjets with large characters!

MX
CLASS



XR
CLASS



markoprint.com/standard

INTEGRA VIVID

Inspired by customer requirements, the integra Vivid stands for modern touch operating technology with an innovative swipe user interface. Print jobs to be processed and the operation of X1JET and PP Class printing systems are now easier and more innovative than ever. The positioning of the 7" high-resolution HMI color display can be freely selected.



X1JET MX



X1JET XR



X1JET LX



X1JET LX Ultra



X1JET HP Standard



X1JET HP Stitch



X1JET HP Premium



integra PP RAZR



integra PP RAZR 67



integra PP 108



integra Singular 108

IQ SYSTEM-ADD-ONS

You need a perfect reprinting behaviour, even after a longer downtime?

Print systems such as the X2 / X4JET and integra Quadro / integra Quadro², which have proven themselves over several years in the industry, have been extended by additional components.

Hereby we react to the special requirements of the food, wood, pharmaceutical, automotive and beverage industries with innovative products to increase and secure product quality.



INTEGRA ULTIMATE SHUTTER

is certified according to protection class IP65. With this patented print head it is possible to leave the print head in place during wash-down, thus increasing line efficiency. The "integra Ultimate" can print up to 1" (25,4 mm) images.

The "Shutter Print Head" is also an extension according to IP40 standard, but without "cleaning function". Due to its special design, the print head is optimized for systems in the pharmaceutical industry.

ZTV HP MK2 - BULK SYSTEM

The central HP ink supply MK2 guarantees a high availability and cost savings in equal parts. Innovative technology, such as the inclusion of intelligent Markoprint "IQ" consumables, combined with our print systems allows this system to be offered with the following printers

- integra Quadro / integra Quadro²
- integra One
- X2 / X4JET

The ZTV provides the optimal solution for large-scale consumers with cost savings of up to 75% being possible.

Specially developed for use with the 400 ml bulk system, the print cartridges, which actively communicate with the ZTV HP MK 2 to ensure correct fill level at all times.

Markoprint has been a certified partner for this technology since 2017.



markoprint.com/iq





LET'S MAKE IT WORK, EASY

Simple, consistent, intuitive and intelligent, that's integra Command, the software solution from Markoprint.

By porting the functional core of the proven idesign8+ software to a new platform and continuously improving and expanding it, the integra Command software has served as a standardized operating concept for all Markoprint printing systems and printing technologies since 2022. It offers the contemporary user experience that users are familiar with from current operating systems.

Requirements from the market are realized flexibly through universally free data interfaces. Additional operational security is provided by Active Directory user management. For the transfer of production data, all common database formats can be accessed via an ODBC interface.

ADVANTAGES

- Easy installation and intuitive operation
- No training required when changing printing technology or Markoprint printing systems
- Simple and understandable print image design (select print system, design print image, print)
- All Markoprint printing systems and technologies in one software
- Intelligent print images through simple macros in text design
- Superior client server architecture:
 - Central storage location for all print images and resources
 - Increased data security through central print image storage
 - 24/7 monitoring
 - Reporting of production statistics for analysis and optimization of the production process
 - HTTP web server with REST-compliant application programming interface (API) according to OpenAPI Initiative specification

OPERATION

- Free choice of operation: One software for desktop and tablet
- Consistent operation of all Markoprint printing systems
- By using a simple user interface, the program can be operated across all users
- Users:
 - Print image designer (backoffice)
 - System administrator / ERP specialists (automation)
 - Machine operator (Change parameters and control of the printing system)

FEATURES

- Clear layout and monitoring of all connected printing systems:
 - Status display (ink consumption, currently printed data, print counter)
 - Printer setup (print and system parameters)
 - Print management (start, stop, pause, data input)
- Print image design with Unicode support and TrueType fonts: implementation and use of international character sets for global marking
- Additional operational security through Active Directory user management in conjunction with Audit Trail



For the user interface there are 4 adjustable color schemes available

DATA CONNECTION WITH DBPRINT IN INTEGRA COMMAND

With integra Command, data sources can be easily integrated for further use in print images. integra Command supports various data connections:

- Importing text and CSV files (.txt, .csv) with configurable separators, with or without headers
- Connection to configured ODBC drivers, which are available for Microsoft Excel and all common database systems
- Directly configurable use of ODBC drivers with customizable connection string and complex SQL queries for pre-processing the data.

Integrated into the print start menu of integra Command is a comprehensive function for filtering the integrated data.

We not only support cross-column filtering, but also the manual selection of individual entries via buttons or mouse clicks, including a direct preview of the selected print image.

integra Command saves all the information required to directly integrate the last data source used and select the last entry used the next time the program is started.

MARKOPRINT API

Whether Industry 4.0 or Internet of Things - there are many buzzwords to describe a development that is gaining ground in the industry.

Markoprint not only aims to keep pace with such developments, we prefer to go one step further and set our own standards.

With the Markoprint API, a Windows service that is permanently available for requests, print starts can be executed, Markoprint printing systems can be supplied with parameters and monitored 24/7.

If required, it can manage your print images, fonts and logos. All resources required for product coding are located at a central location in your local network.

Only open protocol standards are used for this. System integrators or your own developers can view the documentation of the Markoprint API, which is always up to date, online at any time. It can be tested live and tools in your favorite programming language can even automatically generate code for the Markoprint API. The technology behind it is called Open API / SWAGGER. You receive push notifications about any status changes to your Markoprint devices in real time via Microsoft's proven Signal R protocol.

All devices in the Weber Markoprint product line receive an unprecedented level of interoperability with the Markoprint API. In the past, system integrators had the choice of programming the connection to Markoprint printers themselves or using idesign Remote. With the Markoprint API, we combine very simple and modern control with maximum flexibility.

The Markoprint API can be used by several clients on different computers at the same time. All accesses are synchronized and the network load on the printing systems is even reduced as a result.

With a growing number of tutorials and webinars, the knowledge shared about the possibilities of the Markoprint API is constantly increasing. Stay informed.



integra Vivid



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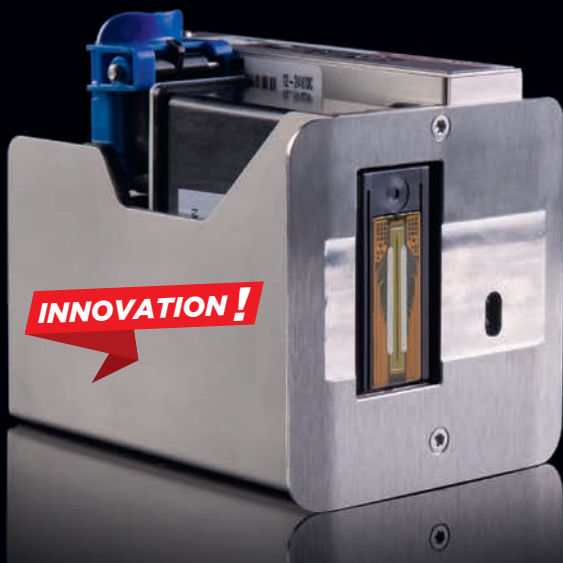
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PRODUCT OVERVIEW

FACHPACK
SPECIAL
EDITION

INNOVATION!



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