

Simple is better.

# Our world of thermal inkjet technology



by **VIDEOJET**

# Simple Quality Assurance for Codes

**It is crucial that the right code is applied to the right product or packaging in the right location.**

**Help minimize the risk of costly product recalls while lowering costs arising from production re-runs.**

**Videojet/Wolke expertise is not limited to printing codes, it also covers the integration of systems for backing up print data and optimizing administration.**

## **The importance of marking accuracy**

The first step, the implementation of a Videojet/Wolke solution for marking quality assurance purposes, offers the following decisive advantages:

- Reduction in marking-related waste and associated costs
- Lower costs for the replacement of recalled/rejected products
- Lower business losses due to the dispatch of defective products
- Protection of brand image by limiting recalls
- Meet accuracy and product traceability requirements of retail and regulatory guideline

## **Advantages of thermal inkjet (TIJ) solutions**

Videojet thermal inkjet solutions which are marketed under the brand names Videojet and Wolke, are ranked among the industrial TIJ printers with the highest resolution across the globe. This print quality is achieved using TIJ cartridges that deliver a maximum print resolution of 600 x 600 dpi.

As such, crisp, easily readable codes can be generated, that meet the code standards of GS1, securPharm, HIBCC, and ICCBBA. Regardless of whether alternative character fonts, logos, one-dimensional bar codes or 2D codes are to be used, thermal inkjet provides exactly the code required on your product.

What's more, our TIJ solutions impress customers with their level of cleanliness and minimal maintenance requirements. The cartridge houses the printhead and ink supply, so is no need for costly maintenance work often associated with replacing pumps, filters or hoses. Messy ink replacement is now a thing of the past, and there's no need to rinse the nozzles. The simple design also helps enable smooth operation, thanks to rapid cartridge replacement.

In fact, Videojet expertise does not stop at simply printing high-quality codes. We also excel at integrating systems, saving print data and optimizing management. With this in mind, when installing and starting up our coding solutions, we offer process validation based on GAMP® 5 standards.

Yet another service offered by Videojet is testing of coding durability. Working alongside the PTS (Paper Technology Institute), we test the dry time, light fastness and water-resistance of the code on your folding boxes. In doing so, you can ensure that the code is clearly legible throughout the entire service life of the product.

## **Three models for individual requirements**

- Wolke m610 advanced
- Wolke m610 oem
- Wolke m610 touch / Videojet 8520

# Print samples

## Linear bar codes

High bandwidth on bar codes for automatic coding.

UPC A&E; EAN 8 & 13;  
CODE 128 A, B&C;  
UCC/EAN/GS1-128; CODE 39;  
Interleaved 2 of 5



**EAN 8**



**EAN 13**



**EAN 128**



**Code 39**



**UPC-A**



**Codabar**

## 2D codes

Wide range of standard-2D codes, including DataMatrix GS1/PPN/HIBC.



**DataMatrix**



**MicroPDF417**



**GS1 DataBar - Stacked**



**GS1 DataBar - Limited**



**QR-Code**

## Logos and graphics



## Character fonts

User-defined character fonts can be fully adapted. In case of m610 touch, m610 oem and m600 universal devices, all TrueType® character fonts are available.

2mm Arial  
3mm Arial  
5mm Arial **12mm**

## Special character fonts

For use with Optical Character Recognition (OCR).

**V**ideojet **T**echnologies

**OCR-A**

**V**ideojet **T**echnologies

**OCR-B**



# m610 advanced

Simply high-performance:  
the printing expert for  
complex product codes



**Thanks to powerful processing hardware and interfaces, the m610 advanced can also be integrated into a fully automated process controller.**

## Reliable, clean, and fast

With advanced print technology, the m610 advanced offers crisp, high-resolution prints, which are indispensable for image-based barcode readers at high speeds.

The design of the m610 advanced has been modernized with an USB port on the front and a larger display, but dimensions have remained similar to previous m600 models for easy replacement.

## Other technical highlights

- Distributed control via PLC and host by using Ethernet-IP and TCP/IP
- All system states can be called in real-time
- Complete Track & Trace processes (serialization) through integration in higher-level 21 CFR Part 11 systems
- Secure, extremely fast processing of 20 individual data records per second

## The Perpetuo Print Mode™

- Extends production runs
- Allows for ink replenishment without stopping the line

## Dynamic Print Intensity™

- Allows different DPI resolutions to be set for bar codes and text within one printhead
- Delivers more print from each cartridge and helps optimize ink consumption



# Technical data

## m610 advanced

### HARDWARE

#### Controller dimensions

- 13.4" (341mm) long
- 10.1" (256mm) wide
- 4.6" (116mm) high

#### Weight (controller)

- Approx. 12.0lbs (5.4kgs)

#### IP rating

- IP 65

#### Display

- 800x480 pixels
- LED backlight
- TFT-LCD display

#### Memory

- 512 MB flash
- 256 MB RAM
- Additional print processor

#### Print speed

- Up to 300 m/min with 12 kHz cartridges
- Up to 450 m/min with 18 kHz cartridges

#### Resolution max.

- Max. 600 x 600 dpi

#### Environmental conditions

- 41°F to 113°F (5°C to 45°C)
- Non-condensing humidity

#### Connections

- Max. 4 printheads
- Encoder
- 24 V I/O connector
- 5 V I/O connector
- Ethernet, TCP/IP
- USB-B
- RS232

### SOFTWARE

- 16 languages
- Free design of the print layout
- Logos
- Text (variable/fixed)
- Counter
- Spitting function
- Unlimited number of lines
- Bar codes
- 2DDataMatrix, GS1/PPN/HIBC DataMatrix, QR code
- XML format
- Automatic operator logout
- Automatic ink
- Label Creator Software

#### Webserver

- With integrated event login
- Touch to edit
- Quick position to edit

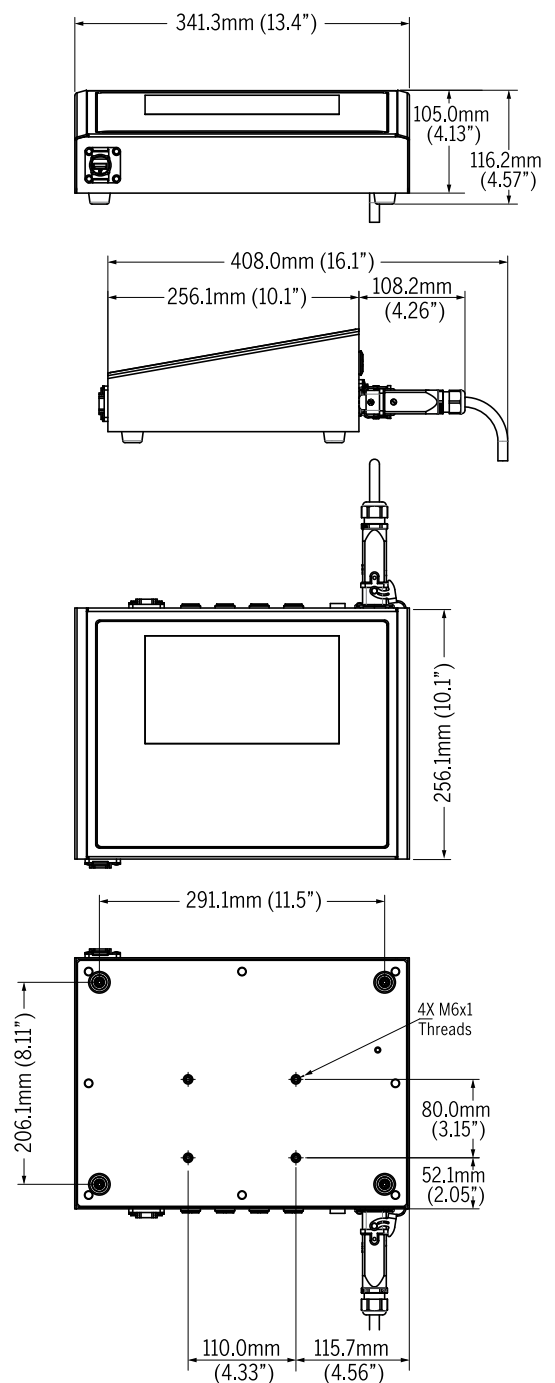
#### Unicode (UTF-8)

- Print fully variable codes with non-Latin characters. Examples: 角≡; облако; €

#### Printhead dimensions

- Four printhead options are available with different dimensions to meet line integration requirements
- The following dimensions are for the Standard Blue printhead:
  - 4.5" (115mm) long
  - 4.3" (110mm) high
  - 2.4" (60mm) wide (at rub plate)
- Dimensions exclude cartridge and cable connections. Red, Green, and Gold printhead dimensions vary in length and height from Blue printhead.

### Dimensions:



# m610 oem

Ease of integration:  
the gold standard for  
track and trace integration



**Intelligent in design and practical in build, the m610 oem delivers breakthrough integration versatility in packaging machine control cabinets combined with the most powerful track and trace capabilities.**

## Ultimate flexibility when integration matters

The m610 oem controller is up to 60% smaller than comparable TIJ printers, offering system integrators and serialization OEMs a uniquely small and lightweight solution. The possibility of 18 different mounting orientations and four unique printhead designs helps address the common challenges of integrating into sophisticated packaging and serialization machinery. The option of connecting up to six printheads makes the system versatile. With a single controller, you can print up to six unique codes at once, or you can print with up to three printhead groups. This gives the user the choice of either double production run times between cartridge changes, or replacing ink cartridges without having to stop the line.

A 3.5" one-way controller display allows simple scroll to diagnostic information with no possibility of data entry or configuration. All printer operation and settings are managed exclusively via the host packaging line HMI, enabling unrivaled security. In addition, a remote web browser interface provides simple and flexible set up with four levels of user password protections and comprehensive logging, guarding printer access and supporting CFR21 part11 compliance.

## Meet present and future serialization requirements

Serialization is Wolke's legacy. And the m610 oem printer makes clear why.

The Wolke m610 oem establishes the standard for a new generation of track and trace projects, featuring:

- Powerful new processing hardware and a formidable data buffer for serialized record management
- Validated Wolke remote commands and data handling protocols
- Unicode TrueType® fonts for global projects
- Innovative asynchronous communications practice

Active User Datagram Protocol (UDP) alerts provide new options for proactive notification to a host system for defined events, such as when a configurable safety buffer threshold has been reached. In addition, one-to-one confirmation of printed records informs the host system exactly which codes have been processed, eliminating the risk of lost or wasted codes, even through power outages.

# Technical data

## m610 oem

### HARDWARE

#### Line speed/ resolution capability

- Maximum 300mpm (984fpm)
- Maximum resolution of 600x600 dpi
- Line speed dependent on selected print resolution

#### Display

- 3.5" resistive display; auto-rotates in any orientation

#### Memory

- 512 MB
- Configurable variable data buffer

#### Data connectivity

- Differential Encoder, 24V DC I/O connector, Ethernet, TCP/IP, FTP, USB-A

#### Controller dimensions

- Length: 8.7" (220mm)
- Width: 7.8" (200mm)
- Height 3.15" (80mm)

#### Printhead

- Connect up to 6 printheads, which can print simultaneously, for maximum flexibility
- Choice of 4 printhead designs for optimal integration in tight spaces

#### Environmental protection

- IP20 (controller)

#### Temperature/ humidity range

- 41°F to 113°F (5°C to 45°C)
- Non-condensing humidity

#### Electrical requirements

- External 24 V DC power supply, 150 Watt

### Approximate weight (controller)

- 4.85lbs (2.2kg)

### SOFTWARE

#### Webserver

- Integrated event logging
- Touch to edit
- Quick position edit

#### Linear bar codes

- EAN8, EAN13, UPC-A/E, CODE128, EAN128, GS1 Databar stacked/limited, 2/5i, Codabar, CODE39

#### 2D Codes

- Full suite of options, including DataMatrix, QR, GS1, PPN, HIBC, and others

#### Language options

- English, Arabic, Bulgarian, Croatian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Thai, Traditional Chinese, Turkish, Vietnamese

#### Wolke Label Creator™

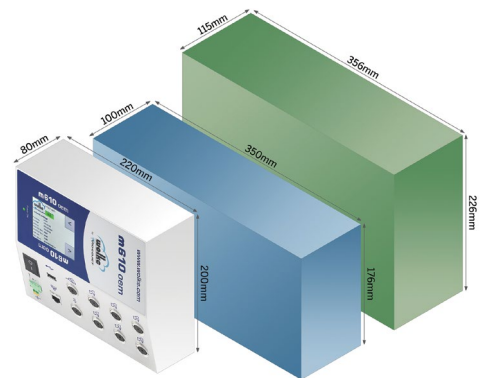
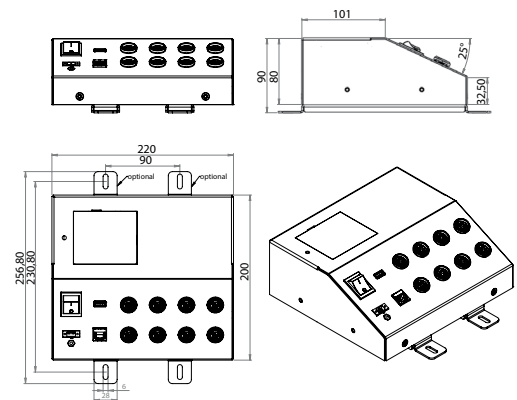
- Supports True Type® Fonts
- Enables editing or upgrade of existing m600 advanced label

#### Unicode (UTF-8)

- Print fully variable codes with non-Latin characters.
- Examples: 구름; облако; €

### Dimensions:

Compact design  
and mounting versatility



The Wolke m610 oem requires up to 60% less space in the electrical cabinet than comparable thermal inkjet solutions.



A total of 18 mounting options in various orientations, including choice of flush-mount brackets or DIN rail mounting optimized for track and trace cabinets.



# m610 touch / 8520

Simply faster:

high-speed optimization



**Perfectly integrated in nearly any production environment, the m610 touch / 8520 works at very high speed.**

## Technical advantages of the m610/8520 high-speed class

- High-resolution print (up to 600 dpi) for smooth control with downstream image processing systems
- A wide range of bar codes, including DataMatrix and Stacked symbologies
- The m610 touch/8520 can be intuitively operated via its touchscreen with CLARiTY™ interface
- The webserver functionality helps enable seamless and straightforward integration of the m610 touch/8520 into industrial processes
- No wear parts or replacement parts, except for inkjet cartridge change
- Code Assurance, the exclusive quality assurance concept from Videojet, simplifies job selection and data entry

## Print speed/print resolution

- Maximum speed: 300mpm (984 fpm)
- Maximum resolution: 600 x 600 dpi
- The maximum print resolution is dependent on the print speed

## Print speed/ print resolution

- TrueType® character fonts
- Fixed and variable text fields
- Flexible date/time and shift code formats
- Auto best before date (BBD)
- Supports multiple graphics formats (up to max. print area)

## Bar codes

- EAN 8, EAN 13, UPC-A/E, CODE 39, CODE 128, EAN/GS1-128, GS1 DataBar (including 2D Composite), DataMatrix, QR, PDF417





# Technical data

## m610 touch / 8520

### User interface

- 8.4" TFT SVGA (800 x 600), full color LCD and touchscreen
- WYSIWYG print preview
- Complete onboard diagnostics
- Three levels of password protection or advanced configurable password protection
- Extensive language support (22 in total)

### Data interfaces

- RS232, Ethernet, USB stick, text communication log, freely parameterizable I/Os (6 inputs, 4 outputs)

### Controller dimensions

- 9.6" (244 mm) long
- 3.6" (92 mm) wide
- 6.7" (170 mm) high
- Dimensions without printhead, cable accessories and network connections

### Operating temperature range

- 41°F to 113°F (5°C to 45°C)

### Power supply

- 100–240 VAC, 50/60 Hz

### Controller weight

- Approx. 3,2 kg

### Print speed

- Up to 984 fpm (300 mpm) with 12 kHz cartridges
- Up to 1476 fpm (450 mpm) with 18 kHz cartridges

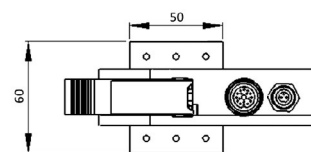
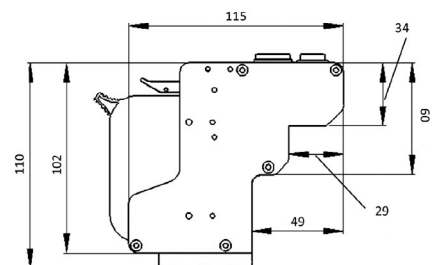
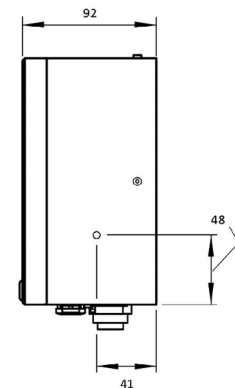
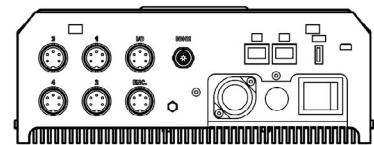
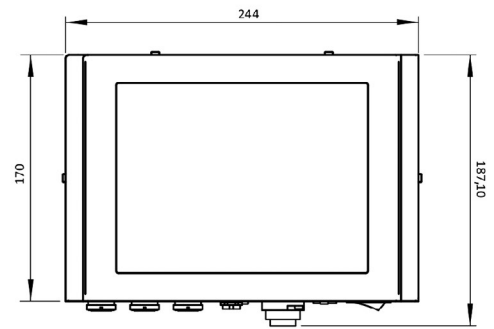
### Printheads

- Up to 4 printheads can be connected to the controller each with a print height of 12.7mm (individually or together in a group)
- The printheads can be distinguished from the advanced and oem models by the deviating electrical connecting data

### Printhead dimensions

- Four printhead options are available with different dimensions to meet line integration requirements.
- The following dimensions are for the 4.5" (115 mm) long 4.3" (110 mm) high 2.4" (60 mm) wide (at rub plate)
- Dimensions exclude cartridge and cable connections Red, Green, and Gold printhead dimensions vary in length and height from Blue printhead

## Dimensions:



# Cartridges for thermal inkjet

For m610 advanced, oem and touch



The interaction between original cartridges and standardized inkjet inks from Videojet/Wolke helps ensure maximum quality. The broad range of inks delivers excellent contrast, a high level of light-fastness and long de-cap times.

## Wolke Premium Black

Premium Black is a fast-drying and highly reliable ink offering unrivaled high contrast prints. It was developed by Videojet and designed with optimum performance for Wolke thermal inkjet systems in mind. The long de-cap time helps ensure excellent codes following longer production line stoppages. The high degree of blackening also allows for exceptional code legibility. High-contrast codes printed with Premium Black ink exhibit excellent light-fastness to stage WS 6\*.

## Wolke Global Black

With its combination of long open times and short dry times, this exclusive and proprietary TIJ ink is ideal for printing on unpainted and coated surfaces and other paper substrates. Wolke Global Black impresses with high-quality printing even after long interruptions.

## Water Resistant Black

The specialized formulation minimizes bleeding or smearing of ink when the packaging is exposed to moisture or condensation after printing. This solution is particularly useful for pharmaceutical cold chain applications.

## Global Solvent

Global Solvent ink unlocks extraordinary new applications for TIJ marking on many non-porous materials such as glossy cartons, blister foils, coated labels, or soft plastics. Global Solvent offers all-new applications for Videojet/Wolke TIJ printing on pharmaceutical materials beyond paperboard cartons.

\*WS 6 = very good according to blue wool scale  
Standard paper APCO II / II in accordance with DIN ISO 12040th.

## Many other inks are available

Don't hesitate to contact our team if you need any further information.

## TIJ cartridge authentication\*\*

The Wolke m610 series/Videojet 8520 automatically detects the cartridge type and provides information about the expiration date and ink level of the cartridge. The configuration feature restricts the print operation to a predefined ink type, which helps eliminate user errors.

\*\*Feature available when using compatible TIJ ink cartridges



# Printheads, accessories and services

Simply brilliant



## Tested marking quality for your carton

In order to help ensure optimum marking quality on your packaging, Videojet has worked together with the Paper Technology Foundation (PTS) to offer a test for Videojet codes on the folding cartons that you use.

### The following tests are offered:

- Dry time
- Water resistance
- Light-fastness (resistance of colors under light)

High-quality print results are critical when it comes to traceable coding of folding boxes, labels, and other packaging.

**m610/8520 printheads were developed with robust, industrial use in mind.**

Various designs guarantee straightforward integration into nearly any system. Depending on individual requirements and the print system, up to six printheads can be connected. These then work individually or as a group-

These printheads can be used for the m610 advanced, m610 oem and the m610 touch/8520. The touch/8520 models have the same dimensions, but the electrical connection data differs.



## IQ/OQ Documentation

For the installation and start-up of the Wolke systems, Videojet offers IQ/OQ documentation to facilitate GAMP® 5 compliance.

For you to perform on-site installations quickly and cost-effectively, we recommend using exclusively developed original accessories which are specially tailored to your system.

### Bracket kits for printheads

Proven, robust bracket kits help enable fast and easy printhead mounting.



Multi-head bracket

### Encoder

The encoder is used to measure the product speed and therefore adjust the print to this. Various measurement wheels as well as connection cables, extension cables, and other accessories are also available.



Measurement wheels for the encoder

### Parallelogram

A parallelogram can be used to compensate for the unevenness on the printed item or vibrations in the product flow. This helps ensure consistently optimum print results.



### Signal lamps

Production also runs smoothly, thanks to the LED signal lamps which can be seen from afar. They are designed based on the traffic light system and indicate faults, warnings, and alarm messages of the printer.



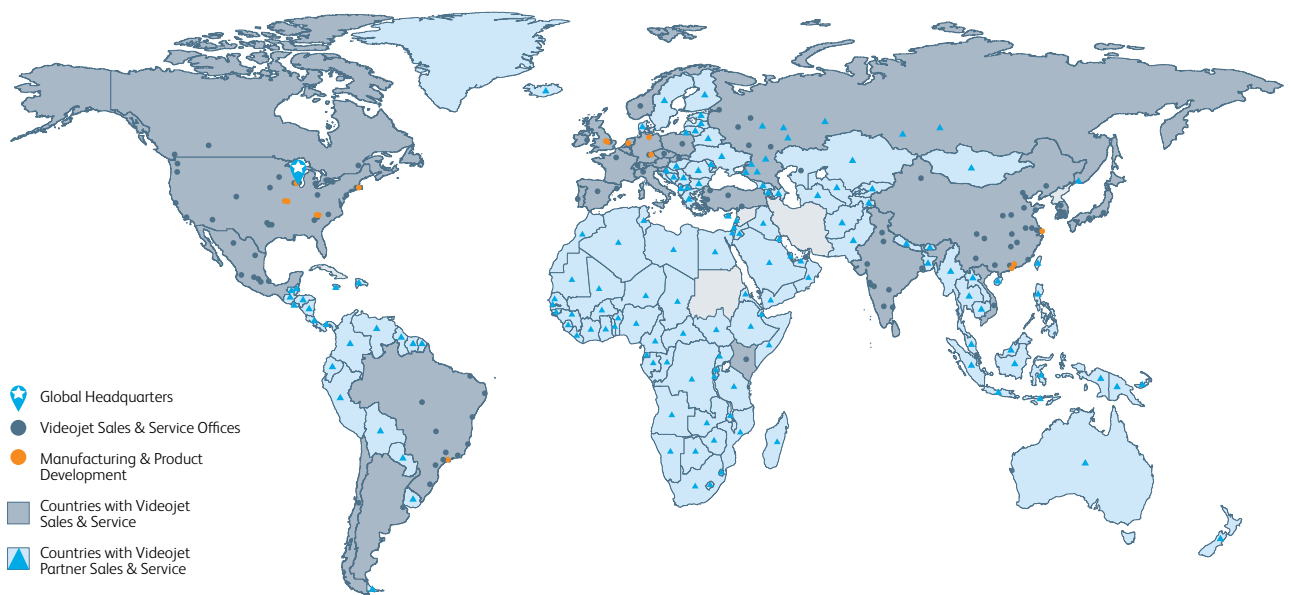


# Peace of mind comes as standard

Videojet Technologies is a world-leader in the product identification market, providing in-line printing, coding, and marking products, application specific fluids, and product life cycle services.

Our goal is to partner with our customers in the consumer packaged goods, pharmaceutical, and industrial goods industries to improve their productivity, to protect and grow their brands, and to stay ahead of industry trends and regulations. With our customer application experts and technology leadership in Continuous Inkjet (CIJ), Thermal Inkjet (TIJ), Laser Marking, Thermal Transfer Overprinting (TTO), case coding and labeling, and wide array printing, Videojet has more than 400,000 printers installed worldwide.

Our customers rely on Videojet products to print on over ten billion products daily. Customer sales, application, service, and training support is provided by direct operations with over 4,000 team members in 26 countries worldwide. In addition, Videojet's distribution network includes more than 400 distributors and OEMs, serving 135 countries.



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