

# Connected and Safe Supply Chain

From industrial coding and packaging operations to the consumer's hands

# Intelligence, beyond the mark.

Markem-Imaje provides producers and machine manufacturers worldwide with a one-stop-shop of innovative smart product identification, packaging intelligence and connected product solutions to unlock the power of intelligence in codes. Combined with our services and expertise, we enable leading brands to efficiently optimize production, achieve sustainability goals and regulatory compliance objectives across today's digitalized supply chain.

By seamlessly integrating the most comprehensive range of proprietary coding technologies with software, services and certified consumables, we empower our customers with the right information across the supply chain—keeping products and consumers safe and connected - this is intelligence, beyond the mark.



**Message Management** Improve data accuracy and line efficiency with automation





SECURE CLOUD

**IT-OT Integration**Two-way communication of production and enterprise data



**Data Intelligence**Optimize business operations with actionable information



**Data Management**Production order and
master article data



Marking & Coding
All printing needs
and smart services
from one supplier



Verification
Ensure high-quality
packaging and
accurate codes



Line Control & KPIs
Optimize printer
performance and overall
equipment effectiveness



Pallet Track
On-premises,
inventory
traceability and
end-of-line



Traceability
Get complete,
off-promises,
item transfer visibility



Real-time
Authentication
Enable retailers to confirm
authenticity and receive/
share product data



Connected Consumer
Empower consumers
to authenticate
and engage











# Efficiency and digitalization throughout the supply chain

#### Product Identification



Markem-Imaje is a leading manufacturer of marking and coding systems including a wide range of consumables. Our highly experienced team of engineers, programmers and scientists is continuously setting the standards for sustainable product innovation—maximizing uptime and through-put while cutting Total Cost of Ownership.

## Packaging Intelligence



Our industrial coding solutions help you reduce errors and optimize operations whether you want to improve a single line or factories worldwide. Continually improve your line efficiency and profitability with our automated solutions for message design, data management, packaging, coding verification, line control, serialization, track & trace and IT/OT integration.

### **Connected Products**



We connect products and help manufacturers to unlock the power of information in codes e.g with serialized GS1 Digital Link 2D codes. Our traceability solutions, we protect brands and consumers through enabling authentication, recall handling and product insight –from farm to fork. Connected products bring both manufacturer and consumer together building transparency and consumer engagement.

## Smart Services



Markem-Imaje ensures peace of mind with our comprehensive services portfolio. Our technical and helpdesk teams, together with advanced Al and IoT tools, help you boost uptime, increase production output, and optimize printer performance—from startup and training through to upkeep and repairs.

## Sustainability in Action

We strive to deliver innovative product identification, packaging intelligence and connected product solutions that meet the needs of our customers protecting people and striving to limit our environmental impact, while operating with high ethical and compliance standards. We live up to the standards of EcoVadis, Sedex, and BRCGS recognitions while driving Sustainability by Design to assess the entire lifecycle of our product and services, from conception to marketplace entry, to reduce our carbon footprint. Here are some examples of how Markem-Imaje is helping clients achieve their ESG KPIs today.



## Innovative solutions

Markem-Imaje has in recent years expanded its portfolio according to recent manufacturing trends. Laser technology offers a virtually consumable-free and virtually maintenance-free option. Traditional inkjet coding and marking, on the other hand, implies the use of inks and additives. Over the years, Markem-Imaje has rigorously investigated introducing more sustainable inkjet solutions starting with a new array of MEK-free inks that reduce VOC emissions and consumption by up to 60%. Solid hot melt inks have the advantage of being solvent-free, safe to handle and less harmful for the environment than other inks during customers' printing operations.

## Minimizing waste

Our customers can also eliminate coding errors to reduce product waste on their packaging lines thanks to our Packaging Intelligence Suite powered by **CoLOS**®. With the right code on the right package, they minimize waste in their logistics and retail channels owing to selective product recalls and advanced inventory management.

Markem-Imaje's connected printer services offer remote monitoring and diagnostic solutions enabling rapid detection, troubleshooting and resolution of potential issues affecting the marking and coding equipment on a packaging line. Minimizing unforeseen downtime clearly impacts on wasted production. If help is needed, the line operator can also find online support through the Al-powered connected services.





# Design for repair and refurbishing

A circular economy is one where the useful life of all non-renewable materials is extended as much as possible.

Marking and coding equipment is made of a complex blend of metallic, plastic and electronic parts.

Markem-Imaje extends the useful life of its equipment for as long as is feasible through our unique repair and refurbishing services—Advanced Services Exchange.

#### Front of Line Coding



#### **Continuous Inkjet**

High contrast and high-performance marking.

**Substrates:** Plastics, glass, metal, cardboard and directly onto food.



#### **Thermal Transfer Overprinter**

High-resolution coding on flexible film packaging.

**Substrates:** Flow-wrappers, bags, tray seals, pouches, sachets, vacuum packs or labels.



#### Laser

Permanent, high-quality, high contrast codes for medium to high-speed production lines.

**Substrates:** Plastics, glass, flexible foil/film, metal and coated cartons.



#### Thermal Inkjet

Low-volume, low maintenance, high-quality coding on medium to high-speed lines.

**Substrates:** Coated cartons, flexible films and foils.

## End of Line Coding



#### **Print and Apply Labeling**

High-quality product and production data including including 2D barcodes.

**Substrates:** Corrugate cases, trays, shrink-wrapped cases and pallets.



#### Touch Dry® High-Resolution Inkjet

High contrast text, logos and compliant barcodes. **Substrates:** Corrugate cases, trays, shrink-wrapped cases, polystyrene and non-woven fabrics.



#### Valvejet or Large Character Piezo

Easy to integrate solutions for low resolution, low maintenance applications.

**Substrates:** Corrugate cases, trays, plastic, glass, metal, PVC and wood.



#### Thermal Inkjet

Low maintenance, barcodes, logos and text. **Substrates:** Corrugate cases, trays and kraft bags.

# State-of-art coding and marking equipment



#### **Laser Technology**

A full range of advanced CO<sub>2</sub>, Fiber and UV lasers printers to match your coding requirements.

#### Key benefits:

- High-quality, compliant and permanent codes even at high line speeds and with complex codes.
- Vrtually maintenance-free and lower consumables costs.
- Safe and reliable operation even in harsh manufacturing environments.



#### Thermal Inkjet (TIJ)

Clean and controlled ink flow with bulk inks from patented air regulation system eliminates leakage.

#### Key benefits:

- High-quality, contact-free marking suitable for a wide range of substrates including 3D or uneven surfaces.
- Fast and easy printing on primary and secondary packages even at higher line speeds.
- Low maintenance, easy to operate and suitable for dusty, humid environments.



#### Continuous Inkjet (CIJ)

Employs multiple printheads for precise, fast, continuous and contactless marking on all substrates.

#### Key benefits:

- High-quality, internationally-compliant coding from contactless, precise Intelli'Jet® technology.
- Hybrid dye and pigment models for dual use, reducing the need for multiple printers and consumables.
- Extensive connectivity with capacity for seamless production line integration, including the market's only customizable 24-pin interface.



#### Touch Dry<sup>®</sup> High-Resolution Inkjet

With our exclusive **Touch Dry**® hot melt inks that freeze on contact to provide high-quality, high-resolution printing on cases, trays and films. **Key benefits:** 

- Compliant, high-quality codes with patented Intelli'Flow® technology.
- Touch Dry<sup>®</sup> hot melt inks are free of odors and Volatile Organic Compounds (VOC) and comply with global food packaging guidelines.
- Maximized uptime with easy to maintain, robust design.



#### Thermal Transfer Overprinting (TTO)

This technology offers high-quality marking via the transfer of rapidly-heated ink.

#### Key benefits:

- High-resolution and high-performance printing for compliant codes on foils and flexible films.
- Durable hardware with low-maintenance for lower TCO.
- Optimized tracking of OEE data, elimination of faulty codes and brand protection.



#### **Print and Apply Labeling**

Designed for end-of-line operations with codes on labels of all sizes. **Key benefits:** 

- Unmatched quality of 300 dpi and reliability for compliant codes.
- Unparalleled application rates including with the most complex codes with low maintenance and TCO.
- Pack variability via Al-powered eTouch-S® applicator enables customers to have full movement control and application monitoring without operator intervention.



#### Valvejet, or Large Character Piezo

Drop-on-Demand contactless, large character low-resolution robust technology principally used for secondary stage cartons and corrugate cases.

#### Key benefits:

- Print low-resolution, highly visible codes on a wide variety of materials such as cardboard, coated cardboard, plastic, glass, metals, PVC and wood.
- Compact, easy to install and operate.
- Robust printing even in challenging environments.



#### Consumables

Leading range of more than 500 colors of dyes and pigments, plus ribbons and labels for use across applications, substrates and technologies.

#### Key benefits:

- Promote maximum uptime requiring minimal changeovers and maintenance.
- Variety of MEK-free and significantly reduced VOC emissions inks and the first producer to be BRCGS-certified.
- Thermal transfer ribbons for paper-based substrates.

# About Markem-Imaje

Markem-Imaje, a wholly owned subsidiary of US-based Dover Corporation, is a trusted provider of end-to-end supply chain solutions—from production through to the consumer's hands. We offer the industry's most comprehensive range of industrial marking and coding systems seamlessly integrated with proven product identification and traceability software, services and consumables. Over 50,000 customers worldwide partner with us to help them reduce waste, optimize coding processes, achieve compliance, connect their packaging and protect their brands and consumers.

With decades of proven hardware and software expertise provided through the most extensive global network, we deliver sustainable solutions that add value at every stage of the product journey. Our commitment to continuous customer-driven innovation empowers our customers with cutting-edge technology, actionable data and real-time business intelligence to build connected and safe supply chains.



