Laser Marking Systems

Videojet® Laser Reactive Marking
Videojet Technologies, a global leader in coding, marking and variable data printing solutions, offers industry-proven laser marking systems to produce high-resolution text, graphics and bar codes with high grade readability on cartons and cases.
Let’s talk about Laser Reactive Marking
The results are clear...

Laser Reactive Marking (LRM) is an innovative category of laser marking that will potentially disrupt long-established package coding applications. The process requires that carton manufacturers apply laser reactive ink patches onto packaging. During production or packaging, a laser marking system creates a code on the pre-printed transparent or tinted reactive patch. In this way, brand owners can add information after the filling and closure of the packaging.

The pre-applied patch of laser reactive coating responds to specifically fine-tuned Videojet CO₂ or fiber laser marking systems. The laser technology reacts with the coating to create a black code.

The results are clear, crisp bar codes, logos, or text on cases and packages, time after time. The code is also light fast and highly tolerant to almost all environmental conditions.

Videojet partners with printing inks and pigments industry leaders to offer specific LRM solutions to customers. Target applications for LRM include those that value clean coding, no VOCs (volatile organic compounds), ease of use, and the need for uninterrupted uptime.
Laser reactive coatings

Mark onto reactive, pre-coated stock

Laser reactive marking technology allows a variety of different substrates to be marked inline with CO₂ laser technology.

Laser reactive coatings are formulated to change from their existing color to black when hit by a low energy laser. No burning, ablation or etching is involved – only a photothermal reaction to the laser’s application.

These coatings offer packers and end-users the platform to introduce greater efficiencies and productivity to their variable printing process, as well as higher quality of product and packaging identification.

The benefits

- The patch applied to packaging means that variable data can be laser marked and coded as required
- SKU and waste reduction through production of standard packaging that can be marked and coded at the point of packing and filling, rather than multiple runs of individual SKU packs
- No resetting of equipment for different jobs
- No consumables – LRM patch is pre-applied to packaging and then laser marked – no inks or ribbons at the point of print
- Excellent marking quality at high speeds
- Coatings available for nearly all substrates
- Ideal for producers who may incur fines or other serious repercussions for poor bar code quality
- Supports packaging innovation
- Cleaner technology without inks or VOCs
- Videojet laser marking systems are built to last in extreme working environments
No mess, no waste, no consumable replacement – it’s an uptime chain reaction

Utilizing LRM offers significant commercial and productivity benefits to more traditional production solutions.

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SKU reduction

Multiple approaches exist to apply code information on a case, each with its own unique considerations. Preprinting cases typically ensures a consistently readable code, but it also means managing large and cost-carrying inventories of unique SKUs. A print-on-demand case coding solution can offer the operational benefits of:

- Incorporation of dynamic production data such as lot code and date of manufacture
- Streamlining of purchasing requirements and reduction of unique case inventory
- Reduced carryover costs, required storage space, and opportunity for waste
- Increased flexibility to quickly react to changes in content as well as product demand

Who can benefit from LRM?

Applications that produce high-value product (where downtime reduction is most critical), average code content volume, or high throughput 24/7 operations.
Videojet lasers

Producing enhanced mark quality for excellent readability throughout the distribution chain.

Videojet 10-, 30-, and 60-Watt laser marking solutions are ideal for LRM applications.

A high performance 60-Watt laser marker, the 3640 delivers a powerful combination of performance and flexibility for high resolution marking on cases and cartons, even at high speeds. The Videojet 3140 and 3340 10-Watt and 30-Watt laser marking systems are engineered to mark high-quality codes and help increase throughput and productivity. Videojet also offers a wide range of additional CO2 and fiber laser marking systems to choose from depending on the application requirements.

Long and short-run operations both enjoy the flexibility to add information like ingredients, logos, bar codes and other tracking information onto packaging late in the production cycle. Laser marking is a solvent and ink-free solution, and offers additional advantages including low odor and low consumables.

Videojet has a wide variety of CO2 and fiber laser marking systems ideal for Laser Reactive Marking. Available in different power outputs to address a range of substrates and applications.
Multiple laser control

Multiple laser marking systems can be controlled from TCS+ software running on a web browser. Each laser is represented in its own tab within the web browser. All laser systems need to be in the same network as the PC/browser-enabled device that is running TCS+ in a web browser. To control the laser systems through WiFi, each laser has to be equipped with a WiFi kit and logged onto the customer’s network.

1:1 connection

One Videojet TU440 laser controller can control one compatible Videojet laser marking system.

“Whether marking cases and cartons for supply chain management, track and trace requirements or late-stage pack differentiation, brand owners are demanding the flexibility and variable data that lasers can provide”

Sascha Ammesdorfer, Laser Business Unit Manager for Videojet
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.

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 LifeCycle Advantage™.

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