



Application note



Laser Marking Systems

Egg carton coding with lasers

The challenge:

Most countries across the world require traceability and expiration information on egg cartons. This ensures a minimum level of traceability and provides consumers information on the eggs' freshness. Given the variety of egg carton materials and retailer requirements, how can you best achieve a reliable, legible, flexible and easy to maintain solution?

The Videojet advantage

As the largest manufacturer of laser marking systems, Videojet has the capability to exceed your laser coding requirements.

Our laser marking solutions are capable of coding on all carton materials and are easily integrated onto the packing lane for either top or side coding.



Egg carton coding with lasers

Lasers create a code on an egg carton by etching the carton's surface without the need for additional materials like ink. Lasers also deliver outstanding print quality and permanence on any surface. Let's review some important considerations regarding laser egg carton coding.



Coding on a variety of materials

Egg cartons are typically made from three types of materials: paper, polystyrene and polyethylene (PET, PETE). Paper cartons are made from recycled paper products and are found in a variety of colors. Polystyrene cartons are available in many colors. Plastic cartons are typically clear, however there are some newer opaque versions.

Lasers can code directly on all these materials, quickly and easily. Unlike labels which can fall off or get misaligned, laser marking is accurate and permanent. Lasers are also a great way to print on any paper covers that are applied to the egg carton. These covers are often quite colorful and high quality because they represent the retail brand. Lasers can be used to etch the paper to produce a highly visible code, which is eye-catching on clear plastic cartons.



Poor stamp code on egg carton



Videojet Laser Marking



Easy to integrate

Laser integration with the packing lanes is straight forward.

The lasers are installed in the packing lanes and print after the eggs are loaded and the cover is closed. The laser can be mounted above the cartons to print on top of the carton; one laser can print on both tops of split cartons. Alternatively, the laser can be installed on the side of the packing lane to print on the end of the carton. Two lasers are required to print on both ends of a split carton.



Simple carton change-over

If the grading operation has a limited number of customers and limited number of cartons, controlling the laser via the user interface is quite simple.

When a carton or customer change occurs, a trained operator selects the correct information to print from the laser control panel.

For larger or more complex operations, the lasers can be controlled via a secondary computer print manager solution. During a changeover, the grader is reconfigured. The grader then sends information to the print manager. The print manager updates what the lasers need to print, without anyone having to manually change the laser. **This solution is faster and more accurate than any other standalone solution.**



Code placement accuracy and legibility

It's important to educate your customers to take full advantage of laser's high quality coding potential.

The visibility of the code on the carton depends on the carton material. Paper and darker plastics (like blue or green) provide the best viewing contrast at a wide range of viewing angles. Lighter colored plastics and clear plastic require specific viewing angles to get the best consumer legibility.

If the customer prefers printing on covers, it's best to use darker colors in the print area. Avoid the use of light color covers because the etched contrast will be low and difficult to read.

It's also important to leave enough room for the code. Extra space is required to account for variation in carton production and carton movement in the packing lane. For existing designs, select the area for the code that balances the best legibility while not interfering with the label styling.

Moving forward, engage your customers early in their design process so that they can take advantage of laser's capabilities as they contemplate new carton designs.

The bottom line

Laser egg carton coding has many benefits for the egg producer. Lasers require fewer consumables and eliminate the costly manpower and upkeep associated with other technologies.

Lasers also produce very clean and legible codes that make it easy for consumers to pick the best eggs for their needs. Laser solutions offer a great way to increase your value to customers since you can offer innovative ways to code information on the cartons.

Videojet is a leader in product laser coding solutions. Ask your local Videojet representative for assistance on how to specify and design a laser egg carton coding system that will perform reliably for years to come.

Call **+971 4 550 8713**
Email **MEA.Sales@videojet.com**
or visit **http://www.videojet.eu/me/en**

Videojet Technologies Inc.
3rd Floor, Al Zahrawi Building #34
Dubai Healthcare City
Oud Metha
P.O.Box 71569
Dubai
United Arab Emirates

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