Tobacco

Implementing Codentify®: Pack-level coding with lasers

The challenge

Serialization implementations require sophisticated marking technology capable of meeting your performance specifications while producing machine readable codes and multiple lines of text. Variations in pack attributes require expertise to help ensure successful implementation. The solution must also effectively interface with a code generation system, such as Codentify®, and integrate into tobacco OEM equipment.

The Videojet advantage

Codentify®-compatible, the Videojet 3320 creates crisp, clean codes while excelling in:

Performance: Videojet lasers can produce up to 4 lines of code at industry-standard line speeds and mark with only one laser instead of two in certain applications.

Integration: Videojet's variety of beam turning units help integrate lasers into tight spaces. Approved safety guarding balances safe access around the laser and dust removal.

Total Cost of Ownership: Videojet lasers run at 80% of nominal power, extending tube life and requiring less user intervention. Videojet fume extraction systems can help extend filter life.

Codentify® helps protect your brands and customers

Over 600 billion illegal cigarettes are sold each year, costing governments and tobacco companies billions[1] and exposing customers to poorly made and potentially harmful products. To address this problem, the Digital Coding & Tracking Association (DCTA), an innovative partnership of leading tobacco manufacturers, has leveraged its considerable technical expertise in securing legitimate supply chains for excisable consumer goods to develop a coding solution for the tobacco industry. This solution is referred to as Codentify®.

Codentify is a serialization system that generates a 12-digit alphanumeric code that is marked on tobacco product packaging to assist with the authentication, authorization, verification and monitoring of tobacco products throughout the entire supply chain. Successful laser implementations for Codentify must not only deliver the requisite code, but also meet the integration and speed needs of tobacco companies. To accomplish this objective, there are several key considerations:

1. Code generator support.
Laser marking equipment must be interfaced with a Codentify Code Generator component through a driver that translates the Codentify Code Generator instructions into equipment specific commands. In addition, the laser must provide a reliable counting mechanism for the number of items being coded.

2. Message content.
Message content has a significant impact on laser marking performance. Where tobacco companies formerly had one line of text, Codentify implementations often require a machine-readable code, such as a dotcode, in addition to 2-3 lines of text. In addition to the Codentify code, internal standards and local government regulations often require an additional 1-2 lines of text.

[1] www.codentify.com

CODENTIFY®

3. Pack material.

A laser-friendly pack can decrease marking times, helping to enable faster line speeds. Laser performance can be improved through changes to the virgin pack material as well as through using ink pigments that absorb laser energy well. By using laser-friendly materials, a smaller lens can be used which is capable of marking at faster speeds. Standardizing on a single material across all brands allows for consistent laser settings, facilitating more rapid changeovers.

4. Available marking time.

Available marking time can vary greatly depending on the location of your coding station and your pack size. Selecting the correct coding location for your laser is primarily a function of your packing equipment provider. For some equipment, the only practical choice is to code on the dwell in drying drums. Other equipment allows for coding on the packs as they enter or depart the packer via conveyors.

Another key consideration is pack size. For coding on the dwell, a drying drum can contain 1-7 packs per pocket, depending on the packing machine and if the packs are standard (23 mm) or slim width (as narrow as 12.5 mm). For coding on-the-fly, variance in pack size impacts the pitch of the products and the maximum line speeds achievable.

5. Marking windows.

Larger marking windows allow you to address more packs with the same laser or engage the same pack for longer. Not all lasers are created equal – a top five tobacco company recently selected Videojet because we offer a larger marking window, allowing for coding with one laser instead of two.

6. Vision system compatibility.

For vision systems, coding area characteristics make a significant difference in performance. Optimal contrast maximizes the difference between Rmax (a measure of lightness) and Rmin (a measure of darkness) where the code is marked. To achieve consistent, predictable results, several companies standardize on one color marking area for all of their product lines.

7. Overall integration.

The task of effectively integrating the OEM equipment, laser, vision system and Codentify must be completed for a successful implementation. To that end, Videojet has developed the Videojet Codentify Box for seamless integration.

Traditional pack-level coding

Pack with dotcode, Codentify® code and two lines of text

The Bottom Line

Codentify® provides protection of your brand's legitimacy, and if properly integrated, does not have to impact line performance. Ask your local representative for guidance on laser marking and Codentify, a production line audit or sample testing in Videojet's specialized sample laboratories. As one of the world's largest laser marking companies, Videojet will help you through the process, leveraging our experience to configure a solution which:

- Integrates easily with a Codentify code generator component and into your packing equipment
- Meets the speed demanded by your packing lines
- Can help reduce the total cost of ownership

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