

Viking Packaging Technologies

Stickpack Date Coding Customization

An Innovative Solution for a Popular New Packaging Technology ■ ■ ■

Following the popularity of bottled water, the use of single-serve stickpacks has exploded. Also called single-use sachets, stickpacks offer consumers the convenience of instantly turning plain bottled water into their favorite, flavored beverage. It's as simple as pouring a powdered mix from the stickpack into the water and shaking. Beyond beverages, stickpacks have also been popular for other single-use applications such as condiments, sweeteners, pharmaceuticals and even house-plant fertilizer.

The packaging equipment utilized to produce the variety of available stickpack types is highly specialized. Stickpack machines are designed to fill multiple packs of product at the same time using "lanes" - a typical machine might be 8 to 10 lanes wide. Viking Packaging Technologies, located in Kohler, Wisconsin, is a prominent manufacturer and provider of the vertical packaging machines required for producing stickpacks. Their "Total Packaging Solutions" approach delivers the right fit packaging machine for each customer.

To help its customers meet date coding requirements, Viking began exploring the possibility of incorporating date coding technology directly on their stickpack machinery. However, using up to 10 separate inkjet printers was a costly proposition. Was there a way that just one moving printhead could eliminate the need for multiple printers? While the technology did not yet exist, it was a customization challenge that the engineers at Markem-Imaje were eager to tackle.

The root of the problem ■ ■ ■

Including a digital code dating component on a stickpack machine is challenging because the window of time to print on all lanes is literally less than a second; printing must be done when the machine slows momentarily for the filling of the product into the stickpacks.

In the past, choices for coding multiple lanes have included non-digital analog embossed coding or a hot stamp to date mark the packaging. This solution required operators to manually update the time/date often resulting in errors and inconsistencies. Another unrealistic coding choice was to fit the machine with up to 10 individual printheads; this was not only costly but impractical because of the amount of machine "real estate" required for 10 printheads.

The Markem-Imaje thermal transfer digital coding products are the solution to the cumbersome, manual processes of the past. Their lines of printers automatically update the code (based on date and time) every time the machine goes through a complete cycle. Since stickpack machines run between 35 and 60+ cycles per minute, Markem-Imaje found that its continuous inkjet 9000 series printers could provide the best solution for these applications. Now the challenge became positioning a single 9030 printer on a traversing mechanism in order to move the printhead back and forth across the printing lanes.

Putting the printhead on the move ■ ■ ■

Markem-Imaje Applications Engineer Dan Stock felt that there was a way to add a moving component to the date coding technology. He describes the solution that was eventually found as "one continuous inkjet head that we were able to successfully put on a traverse. It's a lower cost solution because it is one printer that can print numerous code dates (up to 10, generally) in less than a second." In order to accomplish this, Markem-Imaje engineers needed to apply the code where the film is captured—so they moved the laser head on to that specific location during the brief second when the machine is filling the product. The timing is extremely important, because once the machine advances the film and the product falls, there is not an opportunity to capture the code in the same location every time.

The traversing printheads are a "servo-driven" (or servomechanism) technology which means they use an automatic device for error-sensing feedback to correct the performance of a mechanism. The machines utilize the servo to provide position and velocity control.



markem·imaje

the team to trust ■ ■ ■

This means that the acceleration and deceleration of the printhead can be accurately controlled. As opposed to air-driven technology, this technology is reliable and the action is highly repeatable.

Not only is the solution highly economical because it is only one printhead, but it is highly reliable, requiring little maintenance - something that will add to the customers' savings over time. The printhead is designed to survive in a wash-down environment, and is made with components that can handle 24/7 production environments.

According to Viking Packaging President Rick Leonhard, "the Markem-Imaje coding solution is something we plan to include on most of our stickpack applications. It provides our customers with reliable horizontal printing in a cost effective manner, and is a good avenue for us in terms of new business—these are the types of efficiencies that our customers are seeking."

Once the system is set up, no adjustments are necessary between cycles. The operator generally only needs to enter the package and code width, the pitch of packages between codes, the overall web width and the number of packages being processed. The traversing controller detects the machine speed and automatically adjusts the parameters to complete the print cycle within the allowable "film stopped period." The system automatically adjusts the date and time and the necessary cycle rate of the machine.

This type of customization and innovative problem solving is not unusual for the engineers at Markem-Imaje. What is considered unusual is that a third-party integrator did not need to be involved. Working directly with Markem-Imaje engineers, the Viking Packaging team was able to receive a turnkey solution for its stickpack date coding applications.

About Markem-Imaje ■ ■ ■

Markem-Imaje, a wholly owned subsidiary of the New York-based Dover Group, is a trusted world manufacturer of product identification and traceability solutions, offering a full line of reliable and innovative inkjet, thermal transfer, laser, print and apply label systems and RFID-based systems.

With more than 95 years of experience, Markem-Imaje delivers fully integrated solutions that enable product quality and safety, regulatory and retailer compliance, better product recalls and improved manufacturing processes. Headquartered in Bourg-les-Valence, France, Markem-Imaje employs more than 2,800 people in 33 subsidiaries worldwide and provides more than 30,000 customers with optimal product marking and coding solutions.

Additionally, Markem-Imaje customers are supported by 6 R&D centers, several equipment repair centers and manufacturing plants strategically located around the globe.

About Viking Packaging Technologies ■ ■ ■

Located in Kohler, Wisconsin, Viking Packaging Technologies, Inc. is an experienced manufacturer and provider of the industry-hardened, state-of-the-art VIKING line of packaging machinery that includes stickpack machinery and v/ff/s machines, both intermittent and continuous motion. We offer a depth and breadth of products and services second to none, making Viking your single-source turnkey packaging partner. Visit our website at www.VikingPT.com or contact us via email at Sales@VikingPT.com or call 920-467-1400.

For more case studies, visit www.markem-imaje.com

150 Congress Street
Keene, NH 03431
United States of America
Tel: 800-258-5356
Fax: 603-357-1835

1650 Airport Road
Kennesaw, GA 30144
United States of America
Tel: 770-421-7700
Fax: 770-421-7702



markem·imaje

A  Company