



Application note



Thermal Inkjet

Customer achieves 78%* ink savings, improves code quality, reduces rework and waste

The challenge

Traditional Thermal Inkjet (TIJ) coding technology offers simplicity in use and a range of other benefits. However, the traditional water-based inks associated with these systems can require extended dry times and result in smearing and excessive ink bleed when printed on non-porous surfaces. This is an issue for manufacturers desiring fast-dry, high resolution codes on glossy packaging. Traditional TIJ ink cartridges can also dry out when faced with lags in printing, and therefore, create an opportunity for clogging, ink waste, rework and downtime.

The Videojet advantage

The Videojet 8610 TIJ printer combines MEK-based industrial inks with patented Videojet TIJ technology to deliver crisp print quality with excellent edge acuity. This addresses a long-standing need of manufacturers to code high-resolution text, logos, bar codes and graphics on hard-to-mark glossy surfaces.

This exceptional printing technology unlocks the popular benefits of TIJ industrial coding, such as clean and easy operation, avoidance of printhead maintenance, and impressive code appearance on non-porous materials. And, the patent-pending Cartridge Readiness System™ helps ensure consistent code quality and maximized ink and cartridge usage even after interruptions in production.

The customer need

One of the food industry's largest contract manufacturers of baked foods and snacks that also offers packaging services recently reached out to Videojet for assistance. They wanted to improve code quality, as well as reduce code-related downtime and product rework in one of their high-volume facilities.

On a key contract packaging line, this manufacturer had grown frustrated with poor quality codes, waste from clogged printheads, and rudimentary coder interfaces. These interfaces left operators perplexed and with codes that often did not match the product's contents. One of the biggest problems the company had was that its existing drop-on-demand coding equipment was not engineered for printing on glossy, non-porous paperboard cartons. This resulted in very long ink dry times, and often caused smeared, illegible codes. Moreover, the customer ended up losing valuable time to recode many boxes which lead to unnecessary downtime and it greatly impacted their ability to deliver faster service to their customers.

In addition to inconsistent code quality, this customer also identified issues associated with their existing coder that contributed to inefficiencies on their packaging line. Of particular concern was the short life of their printer cartridges. Trying to address this issue, the customer unsuccessfully experimented with a "fast-dry" ink cartridge. The new ink cartridge, however, did not address their need as it was not designed to print on non-porous materials. As a result, the ink still smeared on the glossy package and produced poor quality codes. Also, during lags in production, their ink cartridges often clogged and then stopped printing completely before the entire volume of ink was dispensed. This resulted in excessive cost due to wasted and unusable ink that was trapped in the cartridge. It also resulted in downtime due to numerous cartridge changeovers.

*Individual results may vary depending on application and coding environment.

A customer success story using TIJ with high performance MEK inks

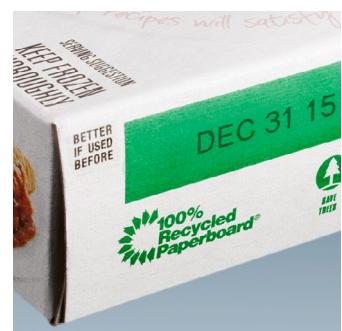


Another issue for the customer's operations team was the laborious process for programming codes into the printer. Their lines have frequent changeovers and operators often need to update coding information based on batch or production changes. The interface of the existing coder required operators to manually input the code for each changeover, which was not only time-consuming, but also opened the possibility of human error during code input.

While dealing with these on-going challenges, this customer realized that they had been settling too long with a coding solution that yielded poor code appearance and waste, and that confused operators dealing with wrong codes. They believed there must be a better solution.

To the customer, it had become clear they needed to make some changes, especially when it came to coding on substrates that were not simply porous cardboard. They were looking for a coding solution that provided better adhesion and code appearance than their existing method did. The solution also needed to address some of the other issues negatively impacting their production uptime.

This customer was using Videojet coding equipment on other packaging lines, including the 1510 small-character continuous ink jet printer to code on a high-speed pouch line, as well as a Videojet 3320 laser marking system to apply codes on cartons. They were therefore, very enthusiastic to try out a new Videojet coding technology in their facility.



Offering true simplicity and substrate versatility, the Videojet 8610 TIJ printer can print fast-dry, high resolution text, bar codes and graphics on challenging substrates like films, foils, plastics and coated stocks. And with no wear parts, scheduled maintenance, printer calibration and the patented Cartridge Readiness System™, the Videojet 8610 is ready to print when you are.



The Videojet solution

"The timing could not have been more perfect. We had just completed development of the Videojet 8610, which uses fast-drying, MEK-based inks to deliver high resolution print on non-porous packaging materials including films, foils, plastics and coated paperboard cartons. It was previously impossible to consistently mark these with TIJ technology, which was a frustration for our customers who want the impressive benefits of TIJ throughout all of their applications," said Casey Robertson, North America Product Manager at Videojet.

Continued Robertson, "We felt the 8610 was the ideal solution for this customer because it would not only print high quality codes on the company's glossy packaging, but the print cartridges are specifically designed to handle this ink and deliver the full ink volume, making the solution extremely cost-effective and virtually hassle-free."

Working with Videojet, the customer installed the Videojet 8610 TIJ printer on a production line devoted to putting individual paper packets into small coated boxes that are coded and then sent on to be placed in a shipping case.



The result

Immediately, the customer began seeing the benefits of switching to the Videojet 8610, including fast MEK dry times that eliminated the problem of codes smearing. Also adding value was the unique printer Cartridge Readiness System™ that helps prevent ink from drying in the printer nozzles during production stops. As required, the Videojet 8610 provided crisp, consistent codes and operators were no longer burdened by the on-going need to stop production due to smudging, poor ink quality or ink cartridge issues.

Operators also found that code changes were much easier with the Videojet 8610. After some setup training from Videojet, they were easily able to input all the different product coding information into the 8610 controller at once. Now, when operators have a line change, they can simply touch the appropriate code from an intuitive menu of options, greatly speeding up production changeovers.

One unexpected benefit to the customer was the significant cost savings it realized from the 8610 print cartridges designed specifically for MEK ink.

The customer has reported a 78% reduction in cartridges expenditure with the Videojet 8610 because of the new cartridges' reliability and ability to deliver the full ink volume.

The customer is now achieving longer run times between cartridge changes and only needs to change them every two to three days, instead of every shift-and-a-half.* This helps to keep their production running...and their customers happy.

**Individual results may vary depending on application and coding environment.*



The Bottom Line

Videojet was able to partner with this large food manufacturer to identify and integrate an innovative TIJ coding solution with an impressive impact to their bottom line. Not only was the manufacturer able to achieve high quality codes and significant cost savings from the elimination of ink cartridge waste, but they were also able to drive down the costs associated with printer downtime and product rework. The Videojet commitment to customer satisfaction and innovation helped to directly address this customer's needs, while also simplifying and streamlining the coding process for their operators.

For more information on how Videojet can help you achieve high quality codes on your challenging, non-porous substrates, contact your sales representative or visit www.videojet.com.

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