



Application Note



Dairy

Upgrading Coding Performance

The challenge

Older technologies for date and lot printing have many challenges: intermittent running time, poor print quality, higher maintenance costs, slower print speeds, and coding errors caused by human error. In addition, they are more cumbersome to startup and shutdown.

The Videojet advantage

Videojet is a leader in Continuous Ink Jet printers (CIJ), the printing technology of choice in many dairy applications. Our 1000 Line CIJ printers routinely achieve 99.9% availability*. Featuring simple ink loading, great print quality – even in changing temperatures and high speeds – and virtually error-free code selection, reliable operation is ensured. CIJ prints legible text on countless packaging materials; plastic and glass bottles, metal cans, aseptic packaging, and plastic, paperboard, and flexible film containers.

**Results of 99.9% availability obtained from a survey of customers representing over 400 printers on active production lines. Over half of the surveyed customers experienced 100% availability. Individual results may vary.*

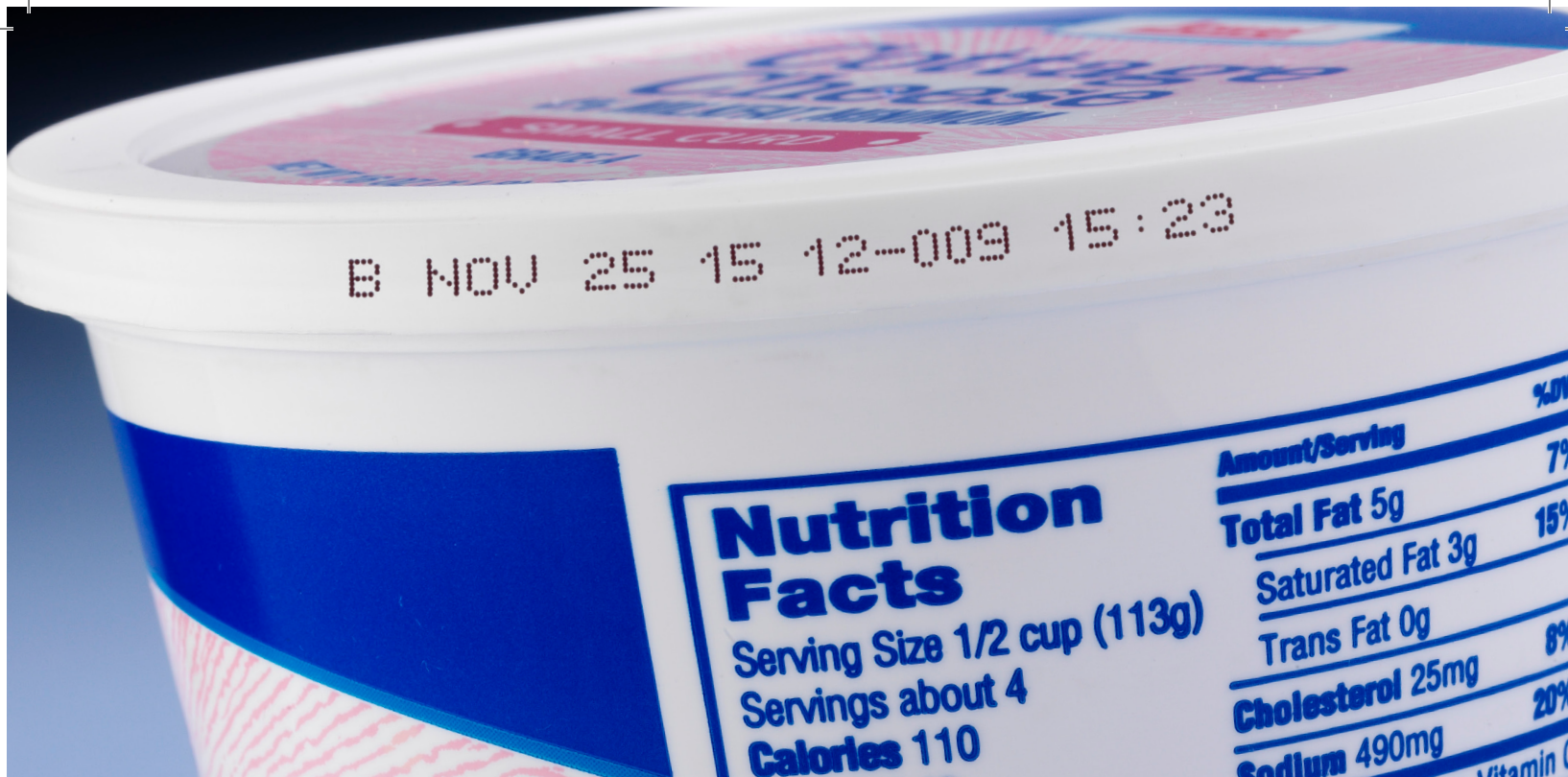
Safeguarding production efficiency and product safety is critical given the short shelf life of many dairy products. Printing clear, readable codes helps ensure that retailers and consumers can safely purchase, manage, and consume your products. The latest in Continuous Ink Jet printer technology provides operational benefits by increasing uptime, reducing errors, simplifying operations and improving flexibility to changing needs.

Improve uptime, save money, and gain agility

Uptime is critical in dairy production. Many code printers require expensive compressed air that requires filtering to remove harmful impurities like moisture and oil. Additionally, the air must be installed, which adds cost to line expansions and re-configurations. Videojet's 1000 Line printers do not require compressed air, leading to the potential savings of hundreds of dollars per year, per printer.

The Videojet 1000 Line of printers incorporate an IP65 rated design within a 316 stainless steel enclosure. They are ideal for washdown applications, and since they do not require compressed air, there are fewer associated maintenance costs, and printer mobility is increased.

Changing environmental conditions within a dairy facility can be troublesome. Temperature fluctuations can alter print characteristics leading to poor print quality and missing information, both of which can require product rework or product disposal. The Videojet 1000 Line printers manage the printing process with our Dynamic Calibration™ System. The printer continuously monitors and adjusts ink consistency to produce great print quality, even as the printing environment changes.



Virtually no mess, no waste, no mistakes – easier daily operation

Don't waste time maintaining the printer – use your time running your line instead. Many older printers require operators to add fluid to internal canisters or to load fluid bottles inside disorganized printer cabinets. Fluid spills are common, messy, and incur costs for clean-up. Accidentally loading the wrong fluid can lead to poor codes, costly printer service, and having to dispose of inaccurately coded products.

Fluids for the Videojet 1000 Line printer are contained in simple-to-load, sealed Smart Cartridges™ which easily slide into the printer cabinet. The sealed cartridge helps ensure no volatile chemical spills or odors, and lowers the amount of fluid lost to evaporation. Each Smart Cartridge™ includes chip that the printer reads when the cartridge is installed, reducing errors and helping to ensure that only the correct fluids are consumed by the printer.

The damp dairy environment can alter printing operation as water is ingested into the ink system. Water in the ink system affects ink stability, causing altering of ink droplet flight and clogging of the printhead. This clogging leads to poor print quality, printer problems and increased maintenance. Videojet's ink recycling system filters unused ink and by design, reduces the risk of water entering the system.

Delivery of consistent and accurate codes is critical to preventing product waste. Many production lines require operators to set up and select the correct information at the start of each batch. Videojet's Code Assurance solution can virtually eliminate the potential of costly operator errors during code set up or selection. In fact, with our CLARISUITE™ solution, printers can be integrated into your production management system, eliminating the need for human set up.

Satisfy conflicting business needs

With many demands on your operation, your printers can become the focal point of your competing business needs. Sales needs more products to satisfy growing consumer demands, marketing needs stylish packaging to attract consumers, regulators need traceability of your products, and production needs to produce quality product. Speed, quality, and more information, in less space, are all challenging with older printing technologies.

Videojet's UHS (Ultra High Speed) printers can help you meet your diverse needs and can code 40 % faster than conventional printers at a higher dot density. The UHS printer's higher print density gives your packaging team more options for printing more information on new or existing container designs.

Additionally, the UHS printer's higher resolutions allow you to incorporate multi-line codes, which can also be printed in bold, to simplify how you present information to your consumers. And with its higher printing speed, this can be done without slowing production.

As packaging designs shrink (driven by growth in single serve products), the higher print resolution also allows you to print legible codes with the same information in a smaller space. This helps you to avoid printing versus packaging trade-offs.

Range of fluids to meet printing requirements

With the wide variety of container materials used in the dairy market, it's important that you select the correct fluids for each application. Depending on the dairy production environment, fluid selection may change to better compensate for temperature and humidity.

The 1000 Line offers a wide array of inks and fluids. General purpose fluids adhere well to a variety of substrates, including glass and plastic containers and metal cans. For high humidity environments and products with light surface condensation, we have designed fluids with adhesion properties that excel in these environments. Additionally, Videojet offers food grade rated inks that can come in contact with food and be printed directly on the product.

Videojet designs and tests its CIJ fluids in our fluid development center in North America. Ink formulations are manufactured in Videojet facilities in different regions of the world to ensure convenient supply chain availability to our customers. Ink production is managed in GMP compliant facilities to help ensure consistent production, batch after batch.



CIJ on metal can

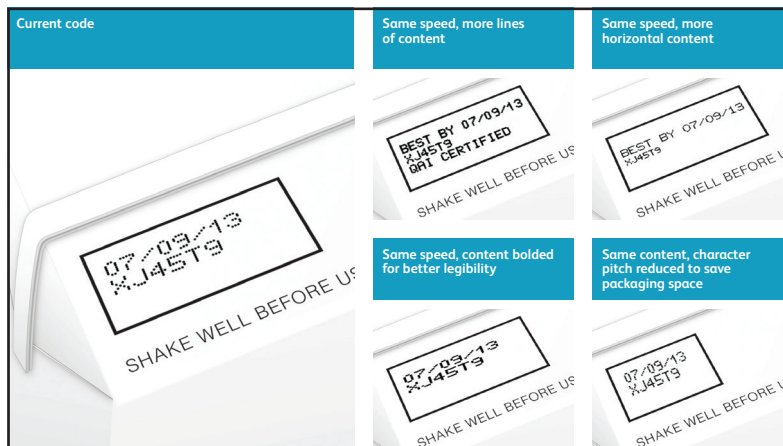


CIJ on plastic cap

The Bottom Line

Our 1000 Line CIJ printers are easier to operate, are more reliable, cause fewer mistakes, and have greater uptime – all great reasons to upgrade:

- **More consistent operation with our Dynamic Calibration™ system, lowering the occurrence of scrap and rework, saving money.**
- **Simpler operation with our Smart Cartridge™ fluid system that virtually eliminates the mistakes, rework and financial loss associated with other fillable ink systems.**
- **Greater flexibility to meet your organization's many needs with our higher print quality and higher speed UHS printers.**
- **Improved operational ease. Simple integration with your operating systems and the CLARiSUITE™ printer management solution virtually eliminates printing the wrong code.**



Printing options in varying content windows.

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