



Application Note



Large Character Marking

Achieving operational savings with micropurge printhead technology

The challenge

Ink jet and hot melt case coding printers are good in that they don't require the use of labels. However, their printheads must be purged at regular intervals to maintain print quality. If not purged, printhead nozzles can become quickly clogged. This results in, at best, poor quality codes that require rework, and at worst, on-going repair and/or replacement of damaged printheads. Some manufacturers address this challenge by requiring multiple manual purge processes per shift. Though planned for throughout the day, this activity places a periodic maintenance burden onto line operators that can get overlooked in fast-paced production environments.

The Videojet advantage

Videojet Large Character Marking (LCM) systems offer reliable, high quality and cost-effective codes. Featuring a patented, self-cleaning micropurge printhead system, operators are freed from performing excessive manual intervention. This automated printhead purge system can simplify coding operations, reduce maintenance demands, and lessen the need for rework...all of which can save time and money.

The customer need

One customer faced this challenge of required manual printhead purge requirements for six plus years of operation of their legacy case coding systems. While the manufacturer had good standard operating procedures in place for purging of their printheads, the issue was on-going and proved that the printer's required maintenance procedures (and frequency) were incompatible with the manufacturer's needs and production processes. Regrettably, over time, the customer came to accept and expect compromises in print quality, the inevitability of rework, and the routine requirement of downtime for expensive printhead replacement.

What the customer hadn't come to realize was just how quickly their case coding costs were skyrocketing and that advancements in automated printhead purge operations could offer them meaningful savings. It was this realization that brought one of the top-15 multi-national food manufacturers to Videojet to investigate an LCM system that would lower operating costs, reduce maintenance expenses, lessen the maintenance burden on operational staff and limit downtime.

Calculating the cost...before and after

A huge consideration for a move to a new LCM printing solution was the on-going and manual maintenance required on the manufacturer's legacy printers and the difficulty they had in keeping their lines up and running consistently. On average, their printheads had to be manually cleaned nine times daily (three times per shift at three shifts per day). Despite established operating procedures, with other competing line priorities, operators often missed cleaning of the printheads as directed. This not only caused poor print quality and rework, but it also damaged the printheads, which required costly changeout and even more downtime.

To highlight the severity of the issue, the customer reported spending almost \$5,000 a month replacing printheads, and had tens of thousands of dollars tied-up in spare printheads in an effort to limit printer downtime. After an evaluation of the number and

frequency of their printhead exchanges, the customer estimated they were losing 2 – 4 hours of production time monthly due to the inefficiencies of their legacy coding system. At 50 products per minute, this adds up to approximately 6,000 – 12,000 cases of lost production every month. On an annual basis, that number could approach 50,000 cases.

To help address the customer's concerns with poor code quality, long start-up times, extended downtimes, and high costs per code, Videojet presented the 2360 ink jet printer. The 2360 features a patented micropurge printhead technology which unlike the manufacturer's legacy printers, only requires a once-daily cleaning of the printhead. With an automated micropurge feature, there is little operator intervention necessary to keep the printhead clean and functioning properly. And since the printhead doesn't require regular manual intervention, there is little risk of missed cleanings that lead to poor quality codes, associated rework, printhead damage or costly downtime to replace a damaged printhead.

With the installation of Videojet 2360 printers, the manufacturer quickly began realizing significant savings. In a trial of 30 plus days, the Videojet 2360 was found to perform at a much higher level than the existing solution. The results were impressive, including less downtime, better print quality, and a cost per code savings of approximately 1/3 that of their legacy coding solution.

Aside from maintenance-related cost savings, the manufacturer achieved other efficiencies as well. The total networked Videojet solution includes two 2360 printers per line, the Videojet CLARISUITE™ software package, and Videojet Continuous Ink Jet printers on all 14 production lines. The simplicity of a networked solution helps to reduce the amount of time the manufacturer spends on maintenance, message set-up/management and quality reviews. This solution also positioned them to meet their growing traceability needs – both now and into the future – without sacrificing production. Moreover, the CLARISUITE Code Assurance solution helps to simplify production and take the guesswork out of code selection for their operators. Systems can be set-up to limit input (helping to reduce operator error) or to give users the flexibility to input changes directly on the line. Either way, with Code Assurance, manufacturers are empowered to achieve the right code on the right product, case, and pallet, time after time.



The Bottom Line

Videojet was able to partner with this top-15 multi-national food manufacturer to identify and integrate innovative printer solutions with immediate impact to their bottom line. Not only did they achieve cost-savings from reduced maintenance and printhead inventory, but they also drove down the costs associated with printer downtime and product rework. Videojet's commitment to customer satisfaction and its dedicated global technical support team helped to meet this manufacturer's needs while simplifying their overall coding processes across their facility.

Offering outstanding print quality, ease-of-use, Code Assurance solutions, and reduced maintenance over competitive LCM systems, the Videojet 2360 can help simplify your operations, too. For more information on how Videojet can help you improve your uptime and bring new efficiencies to your production, contact your sales representative or visit www.videojet.com/sg.

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