



Continuous Ink Jet
Grupo Siro
Case study

Improving packaging productivity at Grupo Siro. Keeping pace with the ovens.

With over 3,800 employees, production of 320 million kilos per year and revenue of over €489 million, Grupo Siro is one of the largest industrial groups in the food industry in Spain. Among seven other businesses, the Spanish-owned company manufactures its own bread products, baked goods for the brand Hacendado for Mercadona and exports additional products to a distributor in the United States, H.E.B.

At one of its facilities in Spain, in the city of Paterna (Valencia), Grupo Siro makes crust-less bread, hamburger buns and hot dog buns. The facility operates three production lines for 24 hours a day, seven days a week with 200 employees to produce approximately 340,000 units a day. Driven by regulation and customer requirements, each of these units is coded with a sell by date for the consumer and an internal code and time of manufacture for internal traceability.

A long-time customer of Videojet for over 15 years, Grupo Siro had over 10 of Videojet's older Continuous Ink Jet (CIJ) printer models in their production facility to code on the bread bags. Grupo Siro was very satisfied with the performance of the printers and was not actively looking to upgrade them. However, Grupo Siro was intrigued by the latest generation of CIJ technology. Recognizing the benefits of the newest generation of CIJ technology, Grupo Siro decided to do their due diligence on the new CIJ technology that was in the market. As a loyal customer, Grupo Siro was interested in learning more about Videojet's latest generation of CIJ technology, the 1000 Line.

“The 1000 Line offers total reliability. We have not had line stoppages since its installation. It gives us peace of mind.”

Joaquin Menent, Head of Maintenance for the Grupo Siro Facility in Paterna, Spain.



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GRUPO SIRO

In response, the Videojet sales team arranged a demonstration of all the new benefits of Videojet’s 1000 Line printers and produced samples on Grupo Siro’s products from its specialized samples laboratories. Grupo Siro was extremely pleased with the results of the tests and decided to purchase 11 new 1000 Line printers for their production lines with V410 ink. What set the 1000 Line apart from the competitors’ products was the performance of the printer and the simplicity of its engineering, including the new Smart Cartridge™ fluid delivery system and CleanFlow™ printhead.

The Videojet 1000 Line printers were installed on the packaging lines to put codes on the top of the bread bags. After baking for 20 to 30 minutes, the products are cooled to room temperature. Once this process is complete, the product is sliced and bagged in clear plastic preformed bags. Before a closure is placed on the bag to seal it, the bread bag passes underneath the CIJ printhead where the top of the bag is coded with Grupo Siro’s standard code. The printhead is installed strategically facing downwards above the line, which helps Grupo Siro prevent dust and particles in the production environment from accumulating on and then blocking the printhead.

An encoder is also used to help ensure a high quality code, as the line speed fluctuates during production, particularly during start up and shut down of the line.

After upgrading to the 1000 Line, Grupo Siro has seen an increase in its productivity, code quality and the cleanliness of its operation. Once a topic that was top of mind, the team at Grupo Siro is now able to turn their attention to other parts of their business. “Because of the Videojet 1000 Line,” explained Menent, “Coding is no longer a concern for us, which helps us focus on the more important aspects of our business.”

Most noticeably, Grupo Siro has seen a dramatic improvement in its operational productivity. Historically, the line had to be stopped almost 15 to 20 minutes each shift to perform maintenance on the printers. Every time Grupo Siro shuts down the line to perform maintenance on their printers, they are paying each of their employees that work on the line for idle time. Also, they are not able to produce products during this time which can potentially cost the company additional revenue. With the 1000 Line, downtime is almost non-existent. Grupo Siro has not stopped production during a 24 hour, seven day a week operation, reducing downtime by three hours a day across the entire facility and leading to significant savings.



Grupo Siro has been able to reduce downtime incrementally by 1 hour per day per line.

The reduction in downtime is primarily driven by Videojet's CleanFlow™ printhead. With an auto cleaning function and positive air delivery, it's the most advantaged printhead in the market today. By reducing ink and dust buildup that can cause traditional ink jet printers to shut down, causing Grupo Siro a significant amount of money, this unique printhead requires less cleaning and enables longer runs without intervention. In addition, the 1000 Line allows Grupo Siro to run longer between preventative maintenance activities and schedule maintenance time appropriately based on their production schedule.

Additionally, the older ink and makeup bottles would leave a mess not only on the operators but also throughout the entire facility. Operators were not excited about the prospect of handling ink bottles for the older printers because they would get ink on their hands and clothing. The ink would also spread to storage locations and production areas, causing a dirty situation.

The new design of the sealed Smart Cartridges™ used with the 1000 Line has all but eliminated these issues for Grupo Siro. The operators are no longer concerned about changing the ink and makeup in the printer. According to Menent, "Eliminating the system of bottles with the Smart Cartridges™ has led to a vast improvement in the cleanliness of our storage areas and more comfort and ease when replacing fluids in the printer."

The Smart Cartridge™ fluid delivery system virtually eliminated spills and ensured that all the fluid in each cartridge is used and the embedded microchip confirmed the correct fluid was being used. The self-contained cartridge with needle and septum design virtually eliminates fluid spills while the internal bladder design ensures all fluid is drained from the cartridge, saving money on supplies. Once covered in ink, the cabinets where they store consumables are now completely clean. Additionally, there are no longer half-open bottles circulating around the facility. Grupo Siro is now a cleaner, happier customer.

Finally, the crisp codes on the bread bags produced by the 1000 Line have already led to an improvement of Grupo Siro's bottom line. Grupo Siro is mindful of how poor quality codes can affect its brand and profitability, including costly product returns and potentially slow sales. It is important for them to have an attractive code on the package that is easy for consumers and retailers to find.



In addition, they want a high quality code that is indicative of their high quality products. With the new 1000 Line printers, the code quality is far superior than it was with the older generation of CIJ printers. Fewer merchandise returns by its distribution customers are a direct result of the higher quality codes that now appear on their bread bags, resulting in additional money saved for Grupo Siro.

Even before the purchase of the new 1000 Line printers, Grupo Siro and Videojet had forged a close relationship over a 15 year period. With the purchase of the 1000 Line, that relationship has gotten even closer due to the productivity, quality and usability gains seen as a result of integrating the new printers into their lines. Menent said,

“The 1000 Line has been a great change in our process that is evident not only for the company but also in the daily life of all operators that interact with them.”

As Grupo Siro continues to grow in the future, Videojet is looking forward to supporting their needs and is excited about the prospect of working with them into the future.



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