

Case Study

Dairy

Hitting the Jackpot for Lot Numbers

The Emmi production plant in Ostermundigen, Switzerland counts on Hitachi inkjet printing systems for marking their lots.

Summary

The winning numbers are 20, 1500 and 50: Around 50 Hitachi inkjet printers mark all the products with their lot information at the Emmi's Ostermundigen plant near Bern, Switzerland. 1500 different articles are filled and packaged there, monthly, on 20 production lines. A bonus number is the 10, because the oldest inkjet printer of the Japanese printing experts has already been working reliably for 10 years.

Emmi

Emmi processes around one million tonnes of milk at its 25 production facilities throughout Switzerland. The company is number 1 in the Swiss milk market with a production volume of around 3.4 million tonnes of milk. In 2017, the Emmi Group generated sales of around CHF 3.4 billion.

The Emmi plant in Ostermundigen started operations in 2003: Around 600 employees work there, now, processing 330 tons of milk every day – about a tenth of all the milk processed by Emmi in Switzerland. Today, the plant is the largest production site in Switzerland within the group. The best sellers from Ostermundigen are the ten caffè latte variations. „That is probably the most important Emmi brand“, says plant manager Isidor Lauber. In 2012, this product group hit the magic number of 100 million cups sold. The Ostermundigen product portfolio also comprises numerous yoghurt, ice cream and dessert varieties along with products catering to the great demand for lactose-free milk.

„Around **50 Hitachi printers** mark all products with their lot information at Emmi.“



CUSTOMER
Emmi Switzerland

INDUSTRY
Dairy

DISTRIBUTOR
Peyer Graphic AG



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PRODUCT

Inkjet Printer



„Only with inkjet technology are we able to safely print all the different lid varieties.“

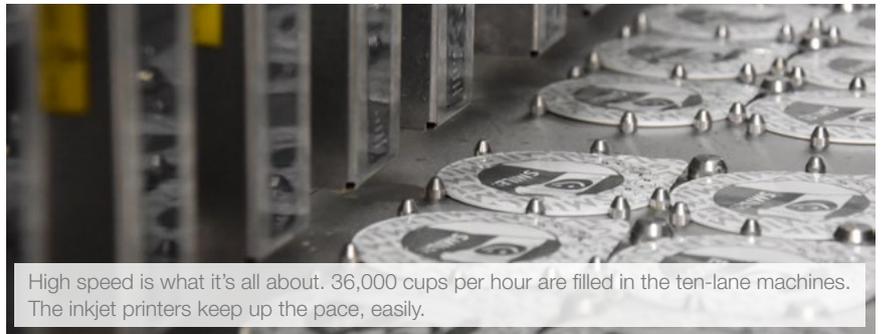


Isidor Lauber, Plant Manager

CHALLENGE

When it comes to lot numbers, which are absolutely essential for all of these products, the management at Emmi's Ostermundigen plant leave nothing to chance. Lauber makes it perfectly clear: „No cup leaves the plant without this info: on which production line was the product filled, what was the relevant fill date or best-before date?“ It also includes the information on which lane the individual cups were filled and sealed.

Inkjet coding technology is ideal for this task. „We use different kinds of lids, from plastic films and aluminium to paper. Only inkjet can cover this broad spectrum.“



High speed is what it's all about. 36,000 cups per hour are filled in the ten-lane machines. The inkjet printers keep up the pace, easily.

Ostermundigen has been relying on Hitachi inkjet printers for several years now. Lauber explains the decision-making process and the set of criteria that goes into the selection of their partners for printing systems. „We define a specification which we distribute to potential suppliers.“ Emmi always takes three possible suppliers into the initial screening phase, when investing in new equipment.

„Hitachi printers help us better integrate servicing into our production plan.“

Christoph Wyss, Production Manager

Christoph Wyss is the production manager of the caffè latte lines. He is very close to operations and knows what's important: „Our caffè latte lines produce 36,000 cups per hour, they have to keep running.“ High performance is essential in both ten-lane lines. Product changeover, including changing the lid print, is done by the machine operator directly at the line by means of a programmable logic controller (PLC).

Wyss adds: „In addition to great performance, convenient servicing is also important. Servicing a machine should never mean an interruption to operations due to a block from a coding unit.“

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Hitachi allows for service requests to be handled within a particular time window so that production continues until the next suitable break.

SOLUTION

Since the implementation of Hitachi solutions for marking technology, there are no longer problems with “smudging” or “spilling” ink. „Everything is clean in production, you can ask any of our employees. That was an important criteria in the selection of Hitachi”, Lauber insists.

Refilling ink and solvent is just a matter of a few easy steps. The line operator is responsible for the solvent and a technician exchanges the ink. Wyss elaborates: „A single supply of ink is good for about 2,400 operating hours, that is very convenient. Only then the ink has to be changed.“

All in all, Wyss is also very satisfied with the robustness of the systems. „The high temperatures of around 45 °C - 50 °C in the lines, overpressure along with the high air humidity and the use of peroxide are no problem at all for the printing systems.“

„We check the imprints ourselves – the **high print quality** is easy to recognise.“

Etemi Bljerim, System Operator

Cleaning the printheads is easy. The system operator, Etemi Bljerim, shows how the printheads are lifted out of the line during cleaning. „When cleaning the line, we check the print heads as well as the fill level of the ink and solvent containers.” After this process, the high print quality is clear to see: Only twenty cups - two cycles - are necessary to check the reliable function of the printheads and the quality of the imprint when products are changed. Emmi doesn't need an additional control device, here, because the high quality of the print is visible at a glance.

Standardised processes provide the necessary security. Bljerim explains: „We check every 30 minutes to see whether the printing systems are working properly and whether the imprint is correct. This is documented in our inspection reports.“



Space is scarce in the production area at Emmi, but there's enough room for a photo of Christoph Wyss, Production Manager for Yoghurt/Quark, and Guido Wertli, Head of Coding at Peyer Graphic.

„**Refilling** solvent and ink must be easy and clean.“

Isidor Lauber, Plant Manager



Hitachi printers are not only present in the caffè latte lines, they are also in the large yoghurt lines.



System operator Etemi Bljerim: „We don't have a lot of extra work with these printing systems.“



RESULTS

„The **total package** was a great fit.“

Hitachi was able to establish themselves and their printing systems bit by bit at Ostermundigen. Their distribution partner in Switzerland is Peyer Graphic. Guido Wertli, Head of Coding at Peyer Graphic, recalls: „Emmi gave us the opportunity in 2006 to install a first device in one of the lines. That was quite successful because the Hitachi printer worked well even at a production temperature of 50°C on the yoghurt line.“ Over the years, other printers were placed, one by one, on the smaller lines: „The technicians noticed that they were spending much less time on the printers than before.“

„The technicians noticed that they were **spending much less time** on the printers **than before**.“

When the large caffè latte lines needed new equipment in 2012, it was clear that Hitachi would be deployed there with ten inkjets and a reserve unit per line. Plant manager Lauber confirms: „The total package was simply a great fit.“ The total package also includes servicing: Hitachi considers it essential to offer prompt service with well-trained service partners for their printing solutions on site. Emmi is able to rely fully on the quick response times of Peyer Graphic’s service staff who are personally available whenever needed.

As part of the integration of the new printing solution, all the line printers were placed on printer chassis with printhead tubes over six meters in length connecting to all the printheads along the line.

Integrating the printers was quickly completed. Wyss points out that there is little time available for commissioning new machines or systems: „When the machine goes into operation we have to go straight back into production and start filling again.“

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