

Butter with detailed packaging code

Comprehensive marking takes only a second | To satisfy the ever increasing demand for dairy products as well as legal requirements, the company, Vereinigte Molkereizentralen GmbH & Co. KG has introduced a thermal ink jet printer made by APS. Due to the reliability of the device, the Berlin-based dairy company was able to reduce breakdown time to zero. Nowadays, packaging coding takes only a second.

The milk does it, has been an advertising slogan as seen on television. However, this credo is well suited to the leading position of the German milk and dairy industry within the food manufacturing sector. The dairy industry is the strongest sector within this segment, showing an annual turnover of almost 21 billion € in 2006 and employing approx. 32,700 employees. The share in exports amount to 21 percent of total sales and this means the top position as well. "We see a positive development here", so

Hans-Joachim Finke, works manager, Vereinigte Molkereizentralen GmbH & Co. KG (VMZ) [see Box 1]. "Since processing 27,000 tons in 2005, we have gone to 34,000 tons of butter in 2007. That is a share of approx. eight percent of the entire butter production in Germany."

Product tracing prescribed by law

However, the increasing demand for dairy products presents some challenges for the Berlin-based dairy company, which has been certified according to

the International Food Standard (IFS) [see box 2]. This is due to the fact, that every single product must be completely traceable. Hans-Joachim Finke: "Since the dairy industry must comply with legal requirements for cleanliness, severe security measures and controls as to quality, hygiene and ingredients apply. For that purpose, more information is required on packaging than ever before. "Nowadays, printing the expiration date is not sufficient to comply with the legal regulations. Unique and clear tracing of all packaged butter, yoghurt and cream requires information about batch numbers, machine number and processing time.

Conventional printers not suitable for extensive marking

To give an example: A customer in the supermarket takes butter which has past its expiration date out of the refrigerated shelves and later complains at the cash register. In this case, the sales assistant can identify the supplier of the butter due to the printed indication of source. Using the expiration date, the VMZ is also able to identify the producer of the product as well as product status and delivery date. Batch number, machine number and processing time are used to trace back the employee at the packing machine. The cause of failure is then quickly identified in most cases, if this additional information has been printed onto the product. Nevertheless, the dot matrix printers used so far are not equipped for such comprehensive packaging marking. "Our dot matrix printers were only able to code the expiration date. Any tracing of the products to comply with the law was therefore quite time-consuming", so Hans-Joachim Finke.

In order to comply with the legal requirements, VMZ introduced the



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Key facts

About Vereinigte Molkereizentralen GmbH & Co. KG

Vereinigte Molkereizentralen GmbH & Co. KG was founded in 1983. The company is certified to IFS Version 5. VMZ produces butter in different packing sizes (10g / 20g portion butter; piece-goods of 125g / 250g and 10kg / 25kg blocks), buttermilk, concentrated butter milk, yoghurt with different fat content and Ayran. Buttermilk and concentrated butter milk are sold as semi-finished products. The company is supplied with the raw ingredient pasteurized cream. In addition, Irish butter is purchased in blocks and packed up in piece-goods since 2006. The company-own lab carries out chemical-physical and microbiological tests for production analysis.

International Food Standard – IFS

In 2002, the German retail association (Deutscher Einzelhandelsverband, HDE) has developed the International Food Standard (IFS) to ensure uniform food safety standards. A year later, the French retailers of the Fédération des entreprises du Commerce et de la Distribution (FCD) joined the IFS team. In order to control the food safety of the own brand producers, the companies are subject to regular checks by independent auditors. The basis for such checks is the IFS. Aside from applicable high-quality management standards, the IFS includes also basic principles for manufacturing best practices such as cleaning, disinfection, pest control, maintenance and repair, and training. Companies complying with the stipulated requirements are awarded with an IFS certificate.

About aps

The enterprise with headquarters in Herrenberg, Germany, specialises in industrial marking and coding using thermo-inkjet technology. aps was founded in 2000 and was integrated in the Domino group as a competence center for thermo-inkjet technology in 2008. With its resellers and branches abroad it is present in nearly 40 countries worldwide. The enterprise's absolute is the first all-purpose, maintenance-free inkjet printer. Various products as well as their primary and secondary packaging can be marked and coded due to the large variety of inks. Furthermore, aps provides a wide range of goods and services, for example equipment, spare parts and services for all established industrial inkjet printers.



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thermal ink jet printer made by APS GmbH in December 2007. The requirements for the new printer specified by VMZ were quite high. Hans-Joachim Finke: "Our factory environment is relatively wet. That means, we clean our machines and halls regularly with water. Therefore, the printer must be moisture-proof." Another important factor for the decision of what device to purchase, is reliability.

The thermal ink printer is not subject to malfunction due to its use of cartridges and absence of any movable parts. As a result, neither down time occurred nor maintenance was required since the printer has been used. Accordingly, there are no costs for maintenance and repairs. Actually, only the ink represent a cost factor, since additional supplies such as cleaners, make-ups as well as replacement and wear and tear parts are not required. The ink

is purchased by the dairy company from the marking specialist in Herrenberg. "We see it as a great advantage to get all services from one supplier. We have a dedicated contact person providing us with support in every respect", says the VMZ works manager.

Simultaneous coding at two production lines

A team of APS was already on site during the testing and implementation phase, thus ensuring smooth project implementation. Vereinigte Molkereizentralen GmbH & Co. KG was able to convert its marking process to the thermal ink jet printer. In the butter sector, a device with four print heads was installed. VMZ is therefore able to mark products simultaneously at two production lines with two print positions, which are independent from each other. The butter may be packaged on one

line for a discount chain, for example, and coded at the other line for a super-market chain. Print text and font sizes can be set individually.

High-quality print layout

One of the surfaces requiring coding is aluminum foil. So far, non-porous materials could only be marked by VMZ with a somewhat reduced quality of appearance. The dot matrix printing has resulted in a print layout which appeared dotted and looked like a raster. With the new thermal Inkjet printer, all information is printed in high-quality resolution. "That is another reason, why we have decided to use this type of equipment", so Hans-Joachim Finke.

Product marking takes only a second

From the start, acceptance and satisfaction level among the employees have been high. The printer is controlled easily using a graphic interface, which reduces labor. The unit is controlled by software, which can be operated intuitively and is immediately operable after switch-on. Product marking takes only a second. Hans-Joachim Finke: "Thanks to the reduced time requirements and lower costs we now have more capacities to fulfill the increasing demand for dairy products in the market. In this way, everything is fine for us." ■