

Effective labelling for effective catering solutions

Weber marking applicators label for Apetito at -24° Celsius

Us Germans will get the shivers even at slightly below zero. Yet, this is nothing. For some real freezing, try the Apetito logistics centre at its Rheine headquarters, where the provider of deep frozen products and catering keeps its products at minus 24 degrees Celsius. Not only the staff must operate under the extreme conditions here, but also the equipment, such as the labelling systems. This is where the producer of deep frozen products relies on Weber Marking label dispensers because they will continue labelling packages reliably despite the cold.

Karl Düsterberg who, together with a friend, founded the Apetito company in 1958, was a pioneer. Apetito originally produced and sold only ready-to-serve food. In the next two decades, however, Düsterberg also entered the catering business and introduced meals on wheels. Both of these were relatively unknown in Germany at that stage, or non-existent. Apetito is active today in three lines of business: communal and individual nutrition and the retail and catering business.

The company meanwhile has a global staff complement of over 8 000 and recorded a turnover of 800 million Euro in 2015. Positive developments and increasing growth over the last three decades and a half pushed the existing deep freeze storage and packaging in Rheine to its limits. This gave rise to the decision to build a new, state-of-the-art logistics and dispatch centre at the Rheine headquarters. Apetito commissioned Swisslog GmbH in Dortmund as the prime contractor for the project.

An automated carton warehouse with its connected packaging area lies at the core of the logistics and dispatch centre which opened in 2013. In excess of 2 000 different products, sorted into 60 different carton formats, are packaged here just for the system market sector. To assist the packers and delivery drivers and to avoid confusion or errors, all the products for a particular customer will be

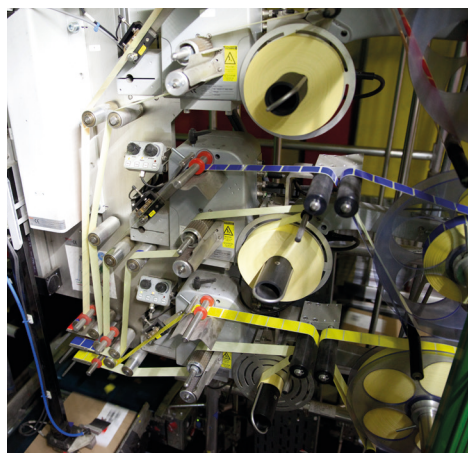
marked exclusively red, blue or yellow. Two stations, each with an installed labelling system comprising 3 Alpha Compact dispensers, are to this end provided for proper labelling of the cartons. Of the order of 8 million of the approximately 12 million cartons are now leaving the Rheine logistics centre properly labelled using this colour code.

Degrees below zero present technology with the acid test

“We are used to suppliers first of all needing to overcome our extremely low temperatures. Although many will assure us that their systems will function in our deep-freeze temperatures, they unfortunately often fail to provide the proof”, says Klaus Schmalbrock, Head of department for dispatch, loading, à la carte and deep freeze systems at Apetito.

“Minor differences in the material used will sometimes determine whether it can survive the cold or not.” Schmalbrock has been working for the company for 31 years and has many a tale to tell in this regard.

Even Weber, provider of marking systems, had to learn that temperatures of minus 24°C pose serious technological challenges. Weber accepted the challenge after a number of providers of marking technology had already





replied with a thank you, but no thanks, to the Apetito enquiry. The project was no child's play, however.

Labelling was planned to take place in the deep freeze area and little space was made available for the applicators, on a raised platform. No provision was made for re-location of the applicators to an area with temperatures above zero or for an enclosure. Volker Bluhm, authorised representative and member of the Weber Marking board, recalls: "Initial label materials turned stiff and brittle in the cold and could not be processed automatically. And the linear axis of the label dispensers presented a problem at first, even though we tested this in the cold for many weeks."

But the Weber engineers refused to give up and found a solution. Various label materials and adhesives were tried before finding a suitable material for the labels, amenable to automatic processing and gluing even at the extreme temperatures. The linear label dispenser shafts by various suppliers were tested and the bearings made compatible with deep freeze temperatures. The burning ambition and perseverance of the marking systems provider finally paid off. Type Alpha Compact labelling systems on two feeder lines are today providing the passing cartons with coloured labels.

Applicators reducing error rate and returns

Apetito has had a colour marking system ever since Klaus Schmalbrock can remember. The cartons were initially marked with chalk, but this smudged. "This was later replaced by permanent markers. Yet, as with chalk marking, the risk of a worker forgetting to mark a carton remained. It was also possible that two cartons were occasionally marked with one line. "The system was therefore prone to errors and complaints due to wrong deliveries were correspondingly frequent", reports Schmalbrock. "Ink jet printers were quickly ruled out. Because coloured ink will soon clot in the cold. It can also not be thinned, however, since the jet will then lose directionality and spray in all directions."

Applicators now assure more reliable and quicker labelling. All the cartons for a customer order will automatically receive the same colour label. The next customer order will then be assigned a new colour. The colours and quantities will tell the staff whether the full complement

of an order is ready. The need for tedious and time-consuming marking down of every item falls away. But, apart from own staff, major customers will also benefit, since the colour system may, for instance, assist them in more simply and reliably supplying their own customers.



„The investment in the labelling system has paid off in all respects. Not only are we saving time and have we considerably reduced the claims rate, we also succeeded in reducing costs.“

Klaus Schmalbrock, Head of department for dispatch

Smart technology

The cartons for labelling will arrive on the conveyor belts in seemingly random order. This is deceiving, though, since it is based on a clever system: The Swisslog plant controller precisely specifies the order and sorting of the cartons. The barcode labels of the products will be scanned at the goods receipt and goods dispatch points. Everything else is controlled by the Swisslog "logical" tracking system. The Swisslog logistics controller will also tell the labelling systems which colour label to dispense onto which carton. Light barriers will measure the different heights of the cartons. The dispensing stroke is capable of distances up to 800 mm. The dispensing head will stop just short of the carton surface and the label will be blown onto the carton without touching – called the tamp-blow process. The tamp also has a soft brush to brush the label against the surface for better adhesion. The plant is capable of flawlessly labelling 50 – 60 cartons per minute in this way.

The Alpha Compact label dispensers are a robust breed suitable for continuous operation. An end of roll pre-warning system will alert operators in time that the end of the roll is approaching.

"The investment in the labelling system has paid off in all respects", sums up Klaus Schmalbrock. "Not only are we saving time and have we considerably reduced the claims rate since the introduction of the labelling system, we also succeeded in reducing costs through the introduction of the new labelling technology."

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