One bag minimum

THE FINNISH BAKERY GROUP FAZER BAKERIES IS AUTOMATING ITS FINISHED GOODS LOGISTICS AT ITS MOST IMPORTANT PRODUCTION LOCATIONS LAHTI AND VANTAA WITHOUT COMPROMISING THE FLEXIBILITY

++ figure 1

++ figure 2

+ Juha Starck, Logistics Director of Fazer Bakeries, is pleased about the constructional changes in the logistics area which are scheduled to be concluded by March 2010. The changes will eliminate the last obstacle which, up until now, has forced the company to limit the height of the stacked crates coming from the manual picking area to six.

The logistics system by Cimcorp, which was introduced in Vantaa in 2000 and in Lahti in 2005, allows the sorting of completely filled dispatch crates as well as manually picked crates at the production line. With this feature, Fazer is able to handle even minimum orders of one bag or piece. From the Vantaa facility, 100 daily delivery tours are needed to bring the products to about 2,600 customers in the southern part of Finland around Helsinki with the biggest customers being served twice a day.

The Vantaa facility operates seven production lines for freshly baked bread and rolls as well as five pastry lines for fresh and frozen baked goods. Both sliced products and other goods are arranged in groups; everything is packed and then immediately placed into plastic crates which are arranged in stacks of 14 and made available at the end of the line for the logistics department.

This department starts at 3 am with the combination of the orders; at 4 am the employees start the manual picking process. By noon, about 40,000 crates will have left the storage; 25,000 of them from their own production and 15,000 having arrived from other Fazer production facilities. 60% of the crates are passed on without being handled; 40% of them are re-sorted. Between 4 – 8 pm, all products that are destined for the other distribution centers of the Group in Lahti (West Finland), Oulu (North Finland) and Lappeenranta (East Finland) are loaded.

The sales department accepts the respective orders until 3 pm. The first trucks leave the facility at 4 am with exclusively automatically packed crates. The truck drivers, mostly independent entrepreneurs, dock their trucks to one of the 15 loading gates and pull the stacks of crates from the conveyor into their trucks. There is a display at the parking space informing the truck drivers about which dock and to which gate to go and at what time.

Cimcorp Oy, a global company specializing in the automation of internal logistics systems for different industries, is responsible for the development, design and implementation of the logistics system. Their headquarters is in Finnish Ulvila.

Special dimensions

The Fazer bread crates are specifically produced for the company; they are 500 mm wide, 600 mm long and 125 mm high. They fit perfectly onto the Finnish FIN pallets (1000 x 1200 x 130 mm) which had been used throughout the entire trading business of Finland although nowadays the usage of FIN-pallets is on the decrease as the EUR pallet is gaining a larger share. +++

++ figure 3

++ figure 4

The products produced at the facility are reported from the production directly to the logistics control; everything arriving from outside is registered via bar code. At this point the stacks contain only mono-product crates; one part of the crates is passed on to manual picking and the other part is moved on to the automatic picking area.

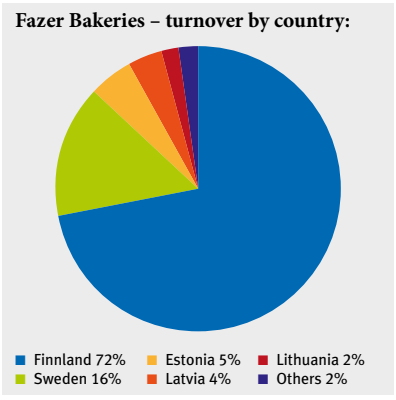
Manual picking is controlled by a system provided by PC-data b.v., Kerkrade, the Netherlands. This system is also used in other Fazer facilities. LED displays, located above the crates inclined at arm's height indicate the type and amount of product to be packed into the respective crate. The first crate of any one order is equipped with a metal plate and a label that informs the robot system about the contents and the customer. After all the crates have been packed for one customer, they are combined in stacks of six and moved on via conveyor to the dispatch area.

In the meantime, the robot has already sorted the mono-product crates according to the incoming orders. The ▶

Fazer Bakeries

Fazer Bakeries is part of the Finnish Fazer Group which also includes Fazer Amica, the largest contract catering enterprise in Scandinavia, Fazer Confectionery, a leading confectionery company in Finland as well as Fazer Russia which is responsible for the bakery operations of the Group in Russia. In 2008, the Fazer Group realized a turnover of 1,159.7m Euros with Fazer Bakeries accounting for 365.1m Euros and Fazer Russia for 222.5m Euros which is a 32.3% increase compared to the previous year.

The turnover of Fazer Bakeries went up by 13.4% in 2008. In that year, the Group also took over the fresh baked goods division from the Swedish Lantmännen Group; this division is a market leader in Sweden with its Skogaholm brand. In total, the Group operates bakeries in Finland, Sweden, Russia, Estonia, Latvia and Lithuania. The ingredients supplier, Fazer Mill & Mixes in Lahti is also part of the Group.



Following the closure of the production facilities in Tampere and Ilsami in 2009, the remaining Finnish bakeries are now located in Vantaa, Lahti, Hyvinkää, Lappeenranta, Oulu, Seinäjoki, Turku and Ulvila as well as in Jyväskylä. The later will be closed down in February 2010. Vantaa and Lahti are technologically the leading bakery operations of the Group and they presumably will receive the largest share of the 35m Euro investment, decided on in 2008, for increased operational efficiency and sustainability.

Fazer supplies Finnish supermarkets with bread sold under the brands of Fazer and Oululainen. Oulu, once the location of the most important bakery school in Finland, is considered to be a synonym for good bread quality. The baked goods range is broad, encompassing Finnish sourdough bread, toast bread, rolls and buns as well as frozen baked goods and coffee bread which in Finland includes the category of pastry products. +++

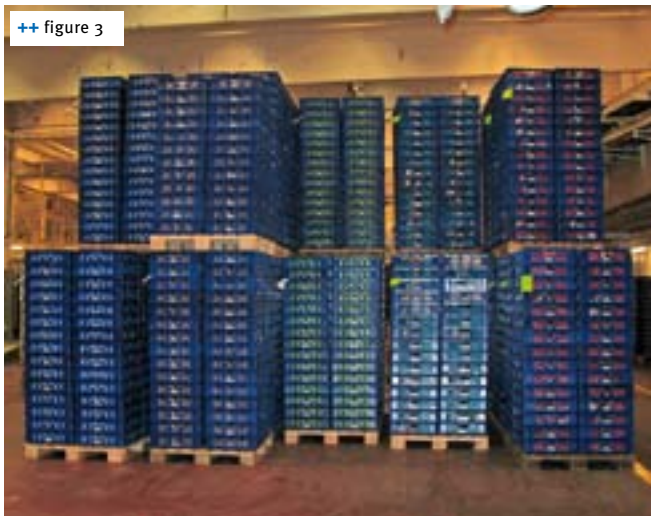
++ figure 1
The stacks of crates are made ready for the robot which sorts them into customer-related stacks

++ figure 2
The ordered quantities, as combined by robot and humans, are merged on conveying belts

++ figure 3
Fazer packs its products into open paper bags as well as into plastic bags with the paper bags being mainly used for premium products

++ figure 4
These labels are used to mark the manually picked crates for each customer

++ figure 3



++ figure 4

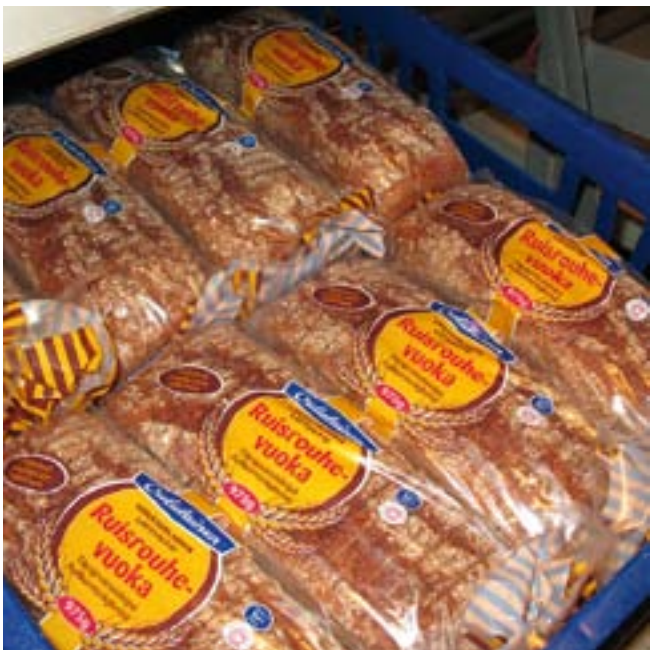
++ figure 5
These labels are used to mark the manually picked crates for each customer

++ figure 6
At the end of the production line, the products are waiting – packed in crates and stacked on FIN pallets – for their dispatch

gripping arms of the robot are able to lift and place single crates as well as multiple crates all at once. The second step is the combination of the automatically sorted and the manually picked stacks. A delivery note is printed and applied to the first stack of crates; the route information label is additionally applied to the last crate. In order to provide as much stability as is possible for the crates intended to be delivered to one customer during the transportation, the height of the last four stacks of crates is leveled and the entire order is pushed on conveyors to the truck docking stations. The efficiency of the crate sorting process by robot is based on the control of the Cimcorp system which registers the type and quantity of the incoming products and guides the stacks of crates in such a way so that they are placed at the picking area as efficiently as possible. This means that crates containing products which are needed more frequently are positioned for faster access by the robot than crates containing products which are not ordered that often. +++

Cimcorp and ToolBox forge an alliance in bakery logistics

Cimcorp, the Finnish supplier of robotic picking systems, and ToolBox Bakery Solutions, the bakery distribution software specialist based in Germany, have entered an agreement that will see them work together on project management, sales and marketing.



Markku Vesa, Managing Director of Cimcorp Oy reports, "Both companies have a proven track record in the bakery sector – with Cimcorp having supplied its MultiPick robotic picking solutions for industrial bakeries and ToolBox being the market leader in computer-controlled pick-by-light distribution solutions for bakeries – so our combined experience and expertise is extremely powerful."

Dirk Franke, Chief Executive Director of ToolBox Software GmbH, added, "The simple fact is that dispatch is the area of greatest potential for efficiency improvements and cost savings in the baking industry today. If the goods arrive one hour later on the store shelf, that's an hour off the selling time and that may affect total sales. With many bakeries offering guaranteed sales – that is, sale or return – this has a direct impact at the bottom line of the business."

About Cimcorp

Cimcorp Oy is headquartered in Ulvila, Finland, and has representatives in the USA, China, India, Japan, Russia and South Korea. The company supplies innovative robotic solutions to automate logistics and production, improving clients' profitability and competitiveness. Cimcorp has supplied more than 1,500 robotic systems in over 30 countries around the globe for applications in the bakery, dairy, fresh produce, beverage, meat processing, tire manufacturing, paper, photovoltaic and postal sectors. The company also provides 24/7 customer support services.
www.cimcorp.com

About ToolBox

ToolBox Bakery Solutions is headquartered in Eschweiler, Germany, and has representatives worldwide. ToolBox Software North America Inc., a 100% owned subsidiary, was founded in 2008. ToolBox Bakery Solutions has been providing innovative software systems for the efficient flow of materials and information in bakeries since 1996. In 2009, dispoTool was extended to provide the functionality of a complete Warehouse Management System (WMS) by the addition of modules for goods received, storage, inventory control, retrieval, picking and dispatch, as well as tools for analysis and statistics. Other ToolBox solutions include cabTool – the production management tool that takes care of ingredient weighing, recipe administration and quality management – and tomTool, the GPS-based fleet management solution that optimizes transport routes, minimizes costs and ensures tracking and tracing in real time. The firm also provides a 24/7 customer support service. ToolBox has installed more than 500 systems in over 25 countries.
www.toolbox.eu +++