

## *Peter Kölln KgaA, Elmshorn*



The Kölln brand is synonymous with healthy delicacies made from oats for quality-conscious and nutrition-conscious people of all ages. And it has enjoyed this reputation for 180 years. The company has always had close ties with the Kölln family right from the very beginning and is now being run by the sixth generation. The history of their breakfast cereals goes back as far as 1820. Kölln wholemeal oat products are sold across Europe and even overseas. Though nowadays the product range is no longer just confined to oats but also includes baby foods, pet foods, mueslis and snacks for between meals.

Kölln operates three production plants including a warehouse at its Elmshorn site to dispatch its finished products. The company decided to invest in a fourth plant and saw this as an ideal opportunity to replace its existing warehouse control system with a modern software solution.

Peter Kölln plants operate in two shifts with a break at the weekend. The break could be used to connect the new warehouse management system (after extensive pre-configuration work) and the conveyor system to the warehouse systems. Testing was also subsequently

carried out during this time so as to avoid warehouse downtime.

## **Requirements and implementation**

Kölln's high-bay warehouse comprises 5,512 storage positions divided into eight rows of twelve levels each. Access is provided by four track-guided shelf operating devices. The warehouse is used to store finished products as well as raw materials and packaging materials on pallets. The barcoding used is EAN 128 compliant. There are between 250 and 300 different articles in the warehouse of which 116 are various finished products made by Peter Kölln. The stock turnover takes place within approximately 14 days. Fast movers are only stored here for one day at the most.

The storage bin labels are read by a laser scanner that is integrated in the conveyor system. The system assigns a randomly selected storing position and issues a transport order to the control system of the conveyor that tells it where to store the article.

All articles coming out of production and going into storage are placed under 24-hour quarantine. After this quarantine period elapses, the system automatically gives the articles clearance thus making them available to fulfil customer orders.

Around 500 pallets of finished products, raw materials and packaging materials are placed in storage every day. A similar number are conveyed via the intermediate temporary storage area to the outgoing goods department. The order processing system differentiates between

full pallets and picking pallets – the latter allow different articles to be picked and placed on the same transport unit.

A special feature of the warehouse management system is that orders can be picked in advance. Ready-processed transport units are kept in intermediate storage in the high-bay warehouse until they are dispatched. This calls for the orders not to be transferred to the outgoing goods department automatically after picking but to be dealt with differently. Advance picking has the advantage that peak times can be avoided.

## **Configuration**

The warehouse management system is run on a UNIX server and the data are stored in an ANSI-SQL database from Oracle. PCs are connected to the Windows NT operating system via Ethernet. The server is protected against power failure by an uninterruptible power supply.

An interface to the overlying host system is implemented via Ethernet / TCP/IP.

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