



[www.koehl-mb.eu](http://www.koehl-mb.eu)



## **KÖHL intralogistics for dairy products.** Automated high-bay warehouse and modern conveyor technology meet the highest requirements.

DMK Deutsches Milchkontor GmbH –the result of the merger of Humana and Nordmilch– is one of the largest German dairy companies and processes approx. 6.7 billion kilograms of milk annually into high-quality products.

DMK relied on the more than 45 years of experience and professionalism of KÖHL Maschinenbau AG to ensure future-oriented and smooth production. As a general contractor for complex intralogistics solutions, KÖHL Maschinenbau AG implemented a further automated high-bay warehouse at the DMK location in Erfurt with approx. 6,400 storage spaces for the finished goods and a modern, robust conveyor system between production and the fresh food warehouses.

## HIGHLIGHTS AT A GLANCE

### STORAGE TECHNOLOGY

- High-bay warehouse in silo design (6,400 storage spaces)
- Warehouse with 2 temperature zones: cooled area with 1° - 5°C and an uncooled area
- 3 automatic RBG for storage & retrieval
- Roof and wall cladding

### CONVEYOR TECHNOLOGY

- Pallet transport system for finished goods: e.g. roller/chain/vertical conveyor, shuttle car
- Pallet inclined roller conveyors (flow storage)
- Automated empty pallet checking system

### MANUFACTURING-IT

- Automation of the conveyor system (SPS Siemens S7) incl. visualization system (WinCC)
- Connection to the newly introduced SAP-EWM warehouse management and material flow system

### ADDITIONAL SERVICES

- Complete electrical installation of the system technology
- Supply and integration of fire doors, sprinkler system, pallet wrapper



## DMK - Intralogistics solution Realised in three stages

KÖHL Maschinenbau executes the expansion of the storage capacity including the conveyor connections in three construction phases. The goal- and time-oriented realization –partly during ongoing production– had top priority.

In the first construction phase, two production plants were connected by a conveyor bridge with a new route. The high-bay warehouse for the finished goods (approx. 6,400 storage spaces) including the modern conveyor technology pre-zone took place in the second construction phase.

Afterwards, a conveyor technology platform was installed during operation through the existing fresh storage areas 1+2, which ensures the connection of the production to the new high-bay warehouse.

## Fully automated high-bay warehouse with 2 different temperature zones

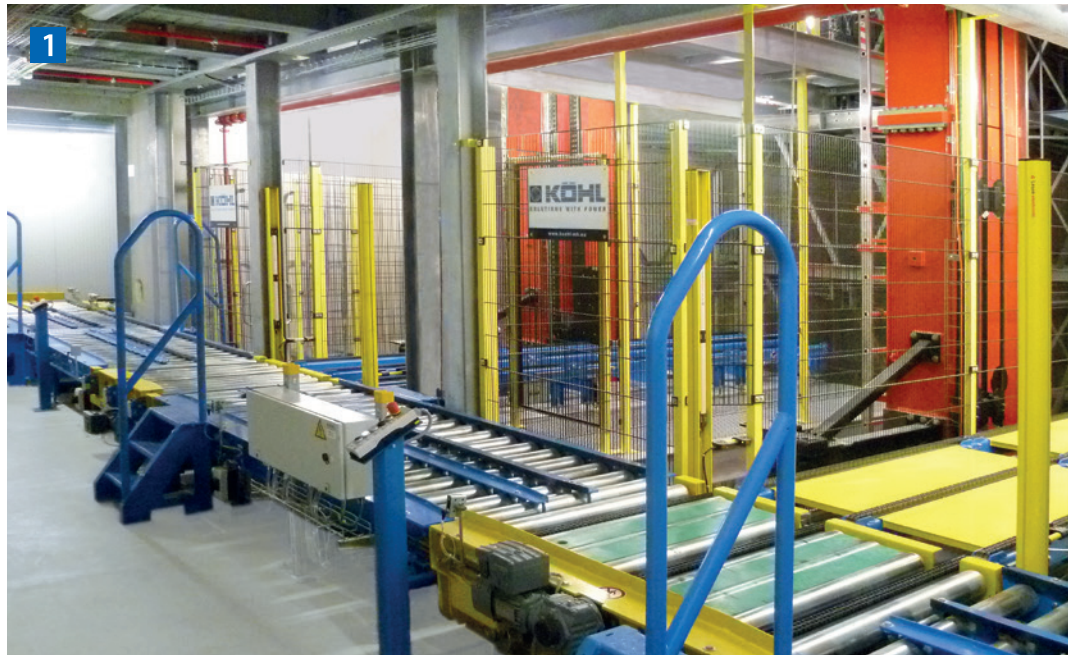
The new high-bay warehouse in silo design (height: 25 m) with approx. 6,400 storage spaces offers sufficient and future-oriented capacity for the finished goods pallets.

The pallets are stored and retrieved by 3 automatic stacker cranes. Before this, the pallets are checked and sorted for stability and functionality by the KÖHL pallet checking system.

Dairy products make specific demands on the storage system. Therefore KÖHL Maschinenbau realized two temperature zones in the warehouse. A partition wall created a cooling area with 1° to 5°C and an uncooled area (ambient temperature).

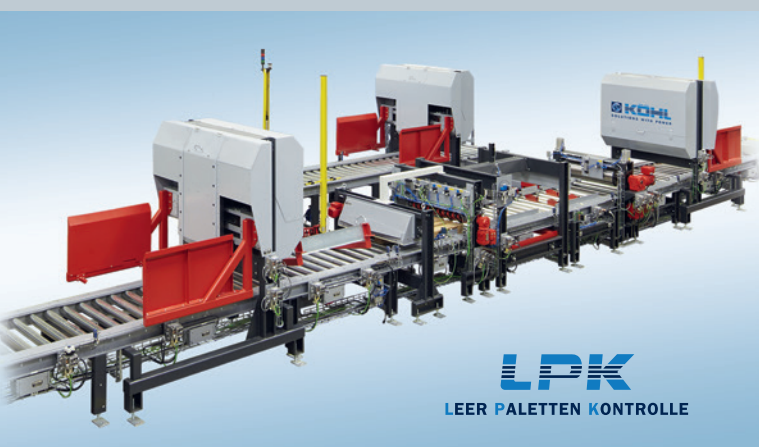


- 1 Complex conveyor technology zone in front of high-bay warehouse
- 2 Conveyor bridge connects two production areas
- 3 Conveyor technology platform in fresh food warehouse with shuttle cars
- 4 Flow storage with 5 channels for a total of 40 pallets



### KÖHL Empty pallet checking system (LPK)

Before the pallets are introduced into the DMK intralogistics system, they are checked and sorted by the KÖHL empty pallet checking system. The system developed by KÖHL with several test modules guarantees the transport and storage of the goods on damage-free pallets and prevents disturbances in the automated material flow.



### Robust conveyor technology for maximum safety and functionality

With over 45 years of experience, KÖHL Maschinenbau is the specialist for robust conveyor technology designed for a long service life. The conveyor system installed at DMK Deutsches Milchkontor GmbH ensures smooth operation in production, warehouse, order picking and dispatch.

The 320 metre pallet transport system for the storage and retrieval of finished goods uses components such as roller conveyors, chain conveyors, vertical conveyors, shuttle cars and pallet wrappers.

The flow storage system for route preparation consists of pallet inclined roller conveyors (Indu, Euro or DD pallets) with separation mechanism at the end of the conveyors. A total of 40 pallets in 5 channels can be provided in the flow storage system.

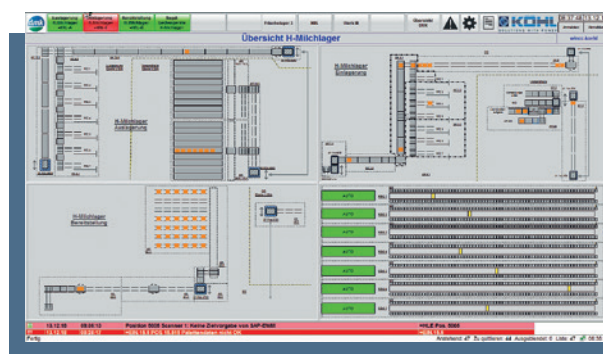




## KÖHL Warehouse Management & Material Flow System: Collect, visualize and report

At the same time as increasing warehouse capacity, the SAP material flow system SAP EWM was introduced at the DMK site in Erfurt. For this purpose KÖHL Maschinenbau created all interfaces in the area of subordinate controls such as pallet conveyor technology, stacker cranes and pallet wrappers.

A comprehensive visualization concept based on WinCC was implemented for system operation and complete pallet tracking of all pallet positions.



## INFO • CONTACT

### KÖHL Maschinenbau AG

17, Am Scheerleck • 6868 Wecker / Luxembourg  
Tel.: +352 27 68 27-0 • Fax: +352 27 68 27-99  
info@koehl-mb.eu • www.koehl-mb.eu



### Service & Support

Tel.: +352 27 68 27 - 3838  
service@koehl-mb.eu

