

Media Release



The approximately 48-meter-long and 16-meter-wide high-bay warehouse provides a total of 2,922 pallet storage spaces. Source: Kardex Mlog

Kardex Mlog / Dairies

Kärntnermilch: Playing it safe with a buffer

Neuenstadt, Germany 7/15/2021 – With the installation of an automated high-bay warehouse and extensive conveying technology, supplied by Kardex Mlog, the dairy cooperative Kärntnermilch added almost 3,000 pallet storage spaces in a minimal surface area. The new storage spaces fit seamlessly into the material flow between goods receipt, production and shipping.

This was a first for Kärntnermilch. The traditional dairy and farming cooperative had not previously introduced automation to its logistics. Up until then, the Austrian company had long relied on manual processes. This changed in 2015 when increasing space requirements at the Spittal/Drau, Austria location made it necessary to expand storage and shipping capacities. Adding approximately 3,000 additionally required pallet storage spaces within the existing surface area would only be possible with a fully automated, refrigerated high-bay warehouse, especially since the adjacent site was already earmarked for a new picking and shipping building.

Proofing against failure

In the tendering procedure for the two-aisle high-bay warehouse with extensive conveyor technology, a pallet wrapper, and a warehouse management system, Kardex Mlog was awarded the commission as general contractor ahead of two rival bidders. In addition to price/performance and product quality considerations, Kärntnermilch's trust in the reliability, experience and competence of the logistics provider played a key role in the selection. Initially, there were some concerns that a fully automated high-bay warehouse might mean over-dependence on a single provider. The fear was that a technical defect in the warehouse could bring the entire production to a standstill. Kärntnermilch production operates Monday to Friday from 6:00 am until 10:00 pm and Sundays from 3:00 am to 10:00 pm. The shipping, packaging and picking areas operate from Sunday to Friday from 6:00 am to 5:00 pm.

Therefore, when the plant was being designed, it was extremely important to safeguard against technical disruptions. The result is evident, for example, in the extra-long accumulation conveyor, which can buffer up to 70 pallets. "This corresponds to a production buffer of one hour, if the high-bay warehouse were to fail",

explains Andreas Koch, who works in the sales department at Kardex Mlog and was involved in the entire project at Kärntnermilch. However, there has been no such disruption since commissioning in May 2016. As a result, confidence in the made-in-Germany technology has grown from year to year.

Movable element allows forklift trucks to pass through

The accumulation conveyor connects the high-bay warehouse with goods receipt and production. Here, in order to buffer as many Euro pallets simultaneously as possible, the company opted for 2-track chain conveyors. In contrast to roller conveyors, this means that the pallets can be transported sideways instead of lengthways. The approximately 100 frequency-controlled drives allow a conveying speed of 0.3 m/s. One of the features of the conveyor line is an element in the production hall that can pivot upwards, enabling a forklift truck to pass through if required. This functional detail is put to use once or twice a day to enable the transport of packaging materials.

The approximately 48-meter-long and 16-meter-wide high-bay warehouse provides a total of 2,922 pallet storage spaces. A partner supplier, Kocher Regalbau, designed the racking structure as a roof- and wall-supporting, silo-type steel construction. The wall panels were mounted horizontally on the racking supports by the Brucha company, another partner in the project. The temperature-controlled aisles (+2 to +6 degrees Celsius) are served by two storage and retrieval machines (SRMs), type MSingle-A. The 21-meter-high SRMs can carry loads of 1,000 kilograms and are equipped with telescopic forks for double-deep pick-up of the pallets. With a travel speed of 100 m/min and an acceleration of around 0.4 m/s², approximately 37 double cycles or 62 single cycles are possible per SRM per hour.

One floor up for packaging

Retrieved pallets move automatically from the high-bay warehouse to the adjacent picking and shipping building. C-articles are transported here to a goods-to-person picking station, while full pallets are moved either via the pallet-wrap machines or directly to the shipping zone. Other pallets must first be brought to the upper floor for packaging, and the height difference of approximately six meters is overcome by two vertical conveyors, also supplied by Kardex Mlog.

The commands to store and retrieve pallets are sent to the machines from a warehouse management computer, supplied by a partner company, N-Gin. Plant visualization is provided by Kardex Mlog via their in-house developed MLOG Control Center (MCC). The modular warehouse management system maps the entire company's supply chain. The plant visualization software MVisu, an integral module of the MCC system, graphically portrays the automatic conveying technology including vertical conveyors, turntables, transfer carriages, and a pallet inspection station. The two SRMs and their operating status are also shown graphically. Visualization enables interactive communication with the material flow system - from context-related processing of location data to information required in the event of a plant malfunction. The visualization system is connected with the automation devices of the controls via a standardized interface, which ensures a permanent exchange of data between the systems.

Minimal floor space

Summary: With the construction of a fully automated high-bay warehouse, Kärntnermilch gained an extra 3,000 pallet storage spaces in a minimum surface area. Kardex Mlog seamlessly integrated the new storage spaces into the material flow between goods receipt, production, picking and shipping. Now, after five years of use, the plant extension at Kärntnermilch has long since proven its value, and any initial reservations concerning full automation in the warehouse have disappeared. Kärntnermilch was delighted with how Kardex Mlog managed the project. Only 12 months passed between signing the contract in April 2015 and an on-time commissioning of the complete plant.

Background: Kärntnermilch reg.Gen.m.b.H.

Kärntnermilch is a farming cooperative based in Spittal/Drau in southern Austria. It has a long history dating back to 1928. Today, the company employs 200 people and produces approximately 400 high-quality articles. Fresh raw milk is delivered daily from 1,000 farmers who work approximately 65 percent of the agricultural land in the state of Kärnten (Carinthia). Kärntnermilch is a cooperative of farmers, which strives to ensure the economic viability of farming operations and promotes appreciation of the quality of the region's products. For more information, see www.kaerntnermilch.at

For more information, see:

www.kardex.com

About Kardex Mlog

Kardex Mlog (www.kardex.com), located in Neuenstadt am Kocher, Germany, is one of the leading suppliers of integrated material handling systems and high-bay warehouses.

The company has more than 50 years of experience in the planning, implementation and maintenance of fully automated logistics solutions. The three divisions: Greenfield Installation, Modernization and Life Cycle Service are based at the company's own production center in Neuenstadt. Kardex Mlog is part of the Kardex Group and employs 300 people - revenues for 2019 were 79 million euros. For additional information about the Kardex Group, visit www.kardex.com.

Further information:

MLOG Logistics GmbH
Wilhelm-Maybach-Straße 2
74196 Neuenstadt am Kocher, Germany
Tel.: +49 7139 / 4893-536
Fax: +49 7139 / 4893-99 536
E-Mail: presse.mlog@kardex.com
Website: www.kardex.com

Press Relations Officer:

Bettina Wittenberg
Tel.: +49 7139 / 4893-536
E-Mail: bettina.wittenberg@kardex.com