

Media Release



Image caption: Adjacent to three existing high-bay warehouses, Kardex Mlog constructed and connected a fourth high-bay warehouse with four storage aisles and integrated conveyor technology.
Source: Kardex Mlog

Kardex Mlog / Dairy

Gropper dairy adds a high-bay warehouse in less than 12 months

Neuenstadt, May 4, 2021 - Gropper dairy expanded their fully-automated central warehouse at their headquarters in Bissingen, Germany. They added a fourth high-bay warehouse and created space for an additional 5,177 pallets. The system's construction and connection to the existing conveyor technology took place during ongoing operations by Kardex Mlog; establishing Kardex Mlog as a new and reliable Gropper dairy supplier.

A maximum of 48 hours between order and delivery: This is the promise fulfilled by the Swabian company, Gropper dairy, thanks to efficient production and smooth logistics. More than 60 employees pick and load refrigerated products around the clock, while a large part of the process is automated.

In 2014, the company expanded its headquarters to include a third high-bay warehouse (HRL3), connected to the other warehouse areas via a bridge, approximately 25 meters long. Also in 2014, Gropper dairy erected another connection directly adjacent to the production and shipping building. In 2017, the storage and shipping capacities for Gropper dairy's three-shift operations had, once again, reached its limit. A new task was necessary: to build a fourth high-bay warehouse with four storage aisles directly next to the HRL3 and integrate it with the associated conveyor technology and existing structures.

Experience is compelling

Although other suppliers built the existing plant, Gropper awarded the request for tender to Kardex Mlog, a project of approximately 6 million euros. In addition to an excellent price-performance ratio, the intralogistics specialist impressed Gropper dairy with their German-developed and constructed components, as well as their extensive experience converting industrial plants during ongoing operations. "The new HRL4 high-bay warehouse had to connect to the goods receiving area, the HRL3, and the shipping area without impacting production," reports Andreas Koch, who works in sales at Kardex Mlog and oversaw the entire project.

The HRL4, designed and built by Kardex Mlog, is 28.4 meters high and provides storage on 11 levels. Within a floor space of 64.5 x 23.6 meters, four rack aisles were realized, in which storage and retrieval is partly double-deep. MSingle B storage and retrieval machines (SRM) are used, which, depending on the case, allow up to 37 double cycles per hour. This results in a total output of up to 140 pallets per hour. A traveling camera system monitors their inward and outward movements and transmits the images to an Ethernet network. The last images before any malfunction are stored.

25 percent more economical

Each SRM is 26 meters high and picks pallets weighing up to 1,000 kilograms via a telescopic fork. Transport takes place at a travel speed of 140 meters /minute. The controlled ambient temperature of the cold storage ranges from +2 to +7 degrees Celsius: one of the aisles can operate at +10 to +15 degrees. The SRMs have a DC link coupling and can use the regenerative energy of one axis to help other axes. In addition, the movement axes are started and decelerated in a targeted manner by optimizing the control of the travel and lifting units. "This enables the stacker cranes to operate up to 25 percent more economically," emphasizes Mr. Koch.

Critical project steps included connecting the new high-bay warehouse to the HRL3 and production. This required various modifications, which could only take place on weekends to avoid disrupting production. The plan included a new conveyor line between the HRL3 and HRL4, as well as the modernization and expansion of existing elements and components. The new line alone required 137 conveyor drives. In addition, Kardex Mlog installed 34 drives as part of the rebuild.

Reconstruction during weekends

A lock with a high-speed door enabled the transition between the existing and new high-bay warehouses. To install it, Kardex Mlog had to open the outer facade of the HRL3 and convert the drive of a roller conveyor. This took two weekends. The conversion work in the bridge area between the HRL2 and HRL3 took a further four weekends. During this time, two chain conveyors were replaced, among other things. In addition, the team integrated four new roller conveyor elements, four high-speed doors, and an enclosure into the material flow.

The conveyor sections in the pallet wrapping area, also controlled by the HRL4, had to be extended. Over five weekends, the team installed additional lift tables, a roller, chain conveyors, and replaced the existing conveyor elements with turntables. In addition, another conveyor line was laid from the HRL4 to the shipping zone in the neighboring production building and connected to the existing material flow with a new turntable. There are up to seven trucks at the loading gates there, which have to be processed in the shortest possible time.

Extensive training

In April 2018, less than 12 months after the contract was awarded, Kardex Mlog completed the challenging expansion project on time. The project wrapped up with extensive training for employees to ensure error-free and independent operation right from the start. Conclusion: Kardex Mlog has proven itself as a new intralogistics supplier for Gropper dairy. "The trust placed in Kardex Mlog in terms of competence and reliability has been confirmed. We are very satisfied with the entire project management," confirms Karl Klein, Managing Director at Gropper dairy.

Background: Gropper dairy:

As a private label specialist, Gropper dairy produces dairy products, direct juices, and smoothies for retail companies throughout Europe. Founded in 1929, the medium-sized family business employs 880 people, who generated sales of around 680 million euros in 2019. To achieve this, 355 million liters of milk were processed, which came from 874 milk producers and their dairy cattle. The company, now in its third generation of owner-management, is based in Bissingen, Germany in the Swabian district of Dillingen a.d. Donau. Further information at <https://www.gropper.de/en/>

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, Germany. 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.

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