



CASE STUDY | FOOD INDUSTRY | REFRIGERATION SYSTEMS

11ER NAHRUNGSMITTEL

AUSTRIA

A BOND OF TRUST

SYSTEM MODERNIZATION ACCORDING TO PLAN

We have been collaborating with 11er Nahrungsmittel GmbH, a specialist in frozen potato products, for many years. Our partnership began in 2001 when we were entrusted with modernizing their frozen food warehouse, which was then operated by a Dutch third-party company. Over 20 years later, the company once again chose to partner with us. This time, however, our role expanded beyond another retrofit to include constructing an entirely new frozen food warehouse.

Each year, the Vorarlberg-based company 11er Nahrungsmittel GmbH processes approximately 80,000 tons of potatoes into 50,000 tons of products, including French fries, croquettes, and a wide variety of roasted potato specialties. To support its steady growth, the company decided as early as 1991 to construct its third deep-freeze warehouse – this time as a fully

automated facility. However, after years of operating the system provided by a Dutch manufacturer, issues and malfunctions began to increase, compounded by significant challenges in sourcing spare parts. The solution was a system modernization. LTW Intralogistics GmbH was ultimately chosen as their new partner, thanks not only to their geographic proximity but also to their compelling expertise and competitive retrofit proposal.

Modernization with increased handling capacity

Following a detailed on-site analysis, it quickly became evident that, beyond mechanical components, the control system and software also needed replacement to bring the facility up to the standards of a modern system. After just three weeks of retrofitting, plant availability returned to peak levels, with handling capacity increasing by an impressive 15%.

The greatest challenge?

The -28°C working conditions posed significant difficulties for the team, particularly in tasks requiring fine motor skills. Upgrading to new software was another critical aspect, especially in modernization projects—where any failure could lead to a complete system shutdown. Nevertheless, operations resumed on schedule after the planned three-week conversion period.

"The implementation went smoothly—LTW truly maximized the potential of our aging system. Another key advantage was the immediate support from experienced LTW technicians whenever a malfunction occurred. That gave us great peace of mind," shared Senad Murecahajic, Deputy Head of Logistics at 11er Nahrungsmittel.

Once LTW – always LTW

More than 20 years later, the frozen food specialist remains highly satisfied with our service and performance, leading them to entrust us with a new project. This includes not only modernizing the original warehouse but also expanding their facilities with a completely new warehouse, both seamlessly connected to the production area. But why did 11er Nahrungsmittel opt for another fully automated deep-freeze warehouse?



11er Nahrungsmittel GmbH

Galinastrasse 34
6820 Frastanz, Austria
11er.at

Founded: 1941

Employees: Family business with over 370 employees

Portfolio:

Austrian manufacturer of frozen food products made from potatoes.





Thanks to modernization, material handling capacity increased by 15%

"The frozen food market has grown dramatically over the years. To meet demand, we had to rent storage space in nearby cold stores, which was a cumbersome situation for everyone," explains Clemens Grabher, Managing Director of 11er Nahrungsmittel.

The new storage space allows them to operate more flexibly and efficiently, while also enabling the company to stay competitive and keep pace with other frozen food producers.

The planning

Before implementing the project, several key factors needed careful consideration:

1. How can the old and new high-bay warehouses be effectively connected, ensuring seamless distribution so that every product remains readily available?
2. How can the available space be maximized to create sufficient new storage capacity?
3. How can the conversion process be planned to allow regular operations to continue uninterrupted?

"As project manager, I worked closely with the LTW team and am very pleased with the results. Not only did we successfully complete the retrofit while maintaining ongoing operations, but we also optimized the use of available space. By implementing up to fifth-deep storage, we've created significantly more storage locations within a compact area," says David Klien, who oversees energy, environment, and sustainability at 11er Nahrungsmittel GmbH.

The conversion phase

Despite challenges stemming from supply chain disruptions caused by the COVID-19 pandemic and the war in Ukraine, the conversion during ongoing operations was completed to the customer's full satisfaction, even though it proved more demanding than anticipated. The process was carried out step by step, ensuring that at least one of the fully automated deep-freeze warehouses remained operational at all times. This approach not only complicated the construction and mechanical system upgrades but also the phased implementation of our new LTW software, which guaranteed uninterrupted operations throughout. Another significant challenge was managing the varying temperatures between the production area, pre-zone, and deep-freeze warehouse, which tested both the technology

and our team. Space constraints also added complexity, requiring creative improvisation to bring in the stacker cranes within the limited area. Ultimately, the most important outcome was the customer's satisfaction with our work.

Clemens Grabher, Managing Director of 11er Nahrungsmittel GmbH, remarked: "LTW demonstrated great flexibility and delivered everything to our satisfaction. We were confident that we could tackle this project together despite the various challenges, and once again, we were not disappointed."

An investment in the future

The new, fully automated deep-freeze warehouse offers significant advantages compared to renting storage space in external facilities. The need for frequent trips to off-site warehouses has been eliminated, reducing workload by streamlining the planning and provision of goods that previously had to be stored elsewhere. Route management has also become much simpler. This improvement not only makes daily operations more efficient but also reduces costs, as renting external storage space is not only inconvenient but also expensive in the long term.

Today, the potato processing company has 21,000 frozen storage spaces at its disposal and can typically handle peak demands with ease. The warehouse is fully stocked in advance, ensuring readiness even for the 3½-week summer break.



Maximum system availability thanks to redundant design



Modernization and expansion during operation

Safety first

Thanks to the advanced software logic, storage strategies such as FIFO (First In, First Out) or FEFO (First Expired, First Out) can be easily implemented, while the system operates with full redundancy. Although the two warehouses are interconnected, they are designed to function entirely independently. Furthermore, all product lines are stored in both warehouses, ensuring continuous product availability even in the event of a malfunction in one warehouse. The optimal allocation of storage locations is determined during the initial storage process. Additionally, pallets are reorganized within the high-bay warehouse during the evening, ensuring the warehouse operates at maximum efficiency the following day. Because the two warehouses are not only logically but also physically connected, an oxygen reduction system has been installed. This feature enhances safety, providing even greater protection for the entire warehouse against potential risks such as fires.

Troubleshooting made easy

11er Nahrungsmittel can continue to rely on us even after the plant is completed. As part of our standard procedure, LTW offers customer training during the handover of a turnkey plant, ensuring that the customer's employees are familiar with and fully understand the system. Additionally, we provide access to our digital service platform, LTWcare, which allows 11er Nahrungsmittel to troubleshoot quickly and easily from a distance. Should an on-site visit be required, our experienced LTW technicians are always available to assist the customer as needed.

More Infos at:

[LTW.AT/en/references/detail/11er-nahrungsmittel](https://www.ltw.at/en/references/detail/11er-nahrungsmittel)

PROJECT OUTLINE



HIGH-BAY WAREHOUSE (TK4)

- Steel rack high-bay warehouse
- L x B x H: 67 x 30 x 27 m
- 3 rack aisles
- Multi-deep storage
- Approximately 8,040 pallet spaces
- Payload: 1,000 kg
- Temperature range: +5 bis +30 °C



STACKER CRANES (STC) TK4

- 3 aisle-bound stacker cranes: TypLTWI-1025QSHU-2/R/A
- Rail systems: 65 m, Typ S41
- Driving speed: 180 m/min
- Driving acceleration: 70 m/min
- Lifting speed: 0,5 m/s²
- Lifting acceleration: 0,5 m/s²
- Performance: 30 KS/h/RBG



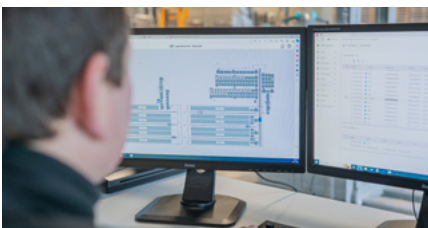
STACKER CRANES (STC) TK3

- 3 aisle switching STC: TypLTWIL-1017TG/R/A
- Rail systems: 63 m, Typ U172
- Driving speed: 150 m/min
- Driving acceleration: 50 m/min
- Lifting speed: 0,5 m/s²
- Lifting acceleration: 0,5 m/s²
- Performance: 27 KS/h/RBG



CONVEYOR SYSTEM

- Pallet conveyor system TK4
- Pallet conveyor system pre-zone
- 2 Vertical lifts
- 1 transfer car
- 11 Fast shutter doors
- 4 Fire protection doors
- Conversion of existing transfer car in TK3



SOFTWARE

- Material flow control system (MFS)
- Warehouse management (WMS)
- Simplified Visualisation

LTW.AT

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