



The specialist for industrial buildings.

**MPREIS GMBH**

# INSIGHT



## Automation implemented with ice-cold precision.

**MPREIS, an austrian food retailer, has a production facility for meat and baked goods in Völs that has been in operation since 2012. Separated by a road is the frozen storage facility, where the delivery and dispatch of frozen finished goods is handled. A newly constructed logistics bridge between the bakery and the frozen food warehouse, which has been expanded to accommodate 1,789 pallet spaces, ensures automated and optimized exchange between the two facilities, leading to increased efficiency.**

### PLANNING AND CONSTRUCTION PERIOD

- › 1¾ years, 2016–2018

### CONSTRUCTION SCOPE

- › Total built-up area: 2.735 m<sup>2</sup>
- › Gross volume: 33.570 m<sup>3</sup>

### SERVICES PROVIDED BY IE

- › Feasibility study
- › Logistics planning
- › General building planning

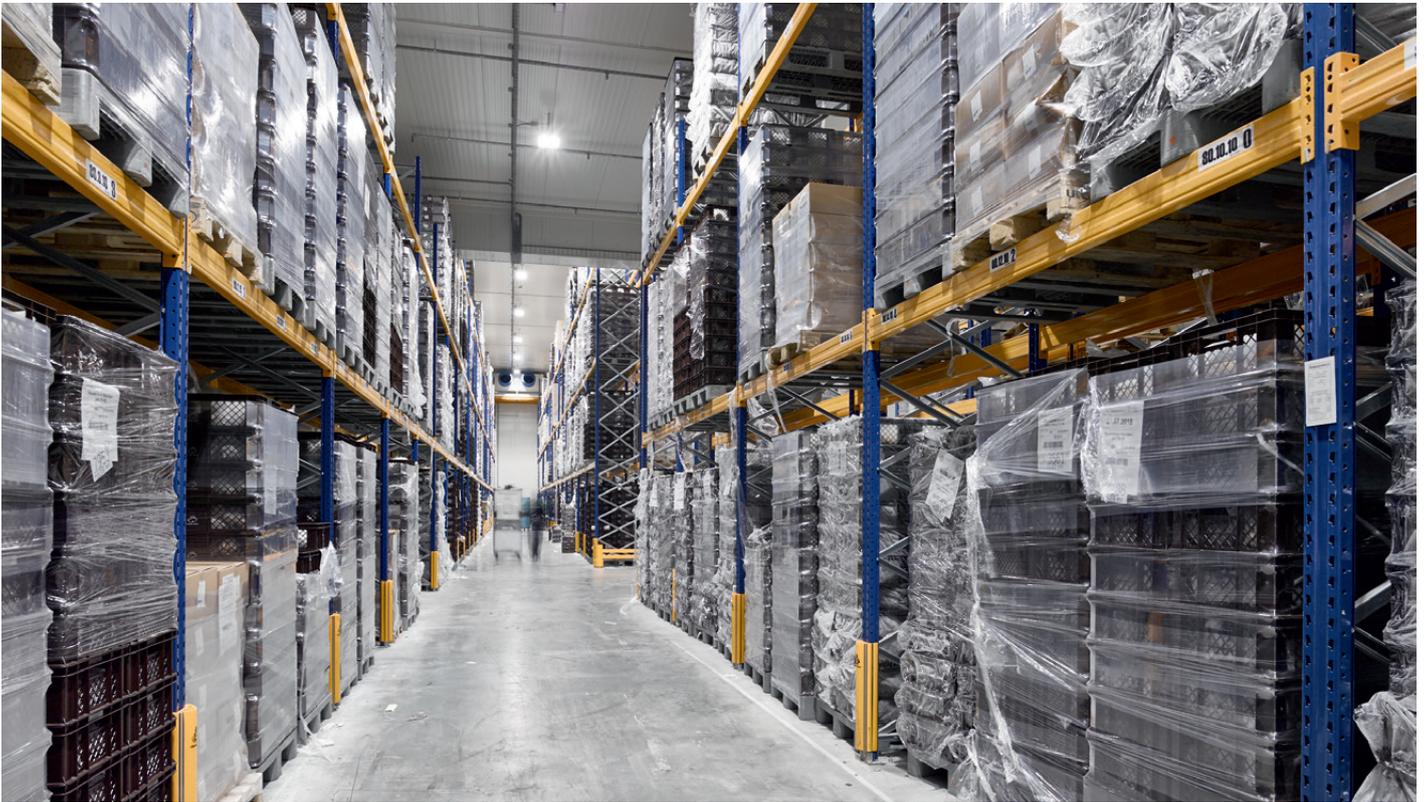
### RECIPE FOR SUCCESS

- › Designed from the inside out
- › Comprehensive industry knowledge from IE Food
- › Logistics expertise in the food sector

*// By implementing this project, we have succeeded in raising our product quality to a new level. //*

*Mathias Mölk, Head of the bakery*





The challenge of the project lay in MPreis's diverse objectives: How can the bakery be optimally connected to the frozen food warehouse? How could cartons and crates from different baking lines be automatically palletized and transported to the frozen storage facility as quickly as possible to prevent thawing? How could the frozen storage facility be expanded by approximately 1,700 to 1,800 pallet spaces? And how could these requirements be met while operations continued?

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## Success factors

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### 1 From the inside out.

At IE Food, planning is consistently carried out from the inside out. This means that planners first focus on the core of the business: the processing process. From this starting point, the ideal operational layout is assembled layer by layer, from the processing process to logistics, hygiene, media supply, and storage technology to the building structure. The goal is perfect process flow: short and fast transport routes between production lines and finished goods warehouses..

### 2 Plan and implement.

MPreis commissioned IE Food to conduct a feasibility study in advance. The production process presented IE Food with two major challenges: The two buildings are separated by a factory road, meaning that two stations have to be accessed for transport. In addition, the deep-freeze storage is to be expanded by 1,700 to 1,800 pallet spaces. All this while operations continue as usual. The solution: a fully automated logistics bridge connecting the bakery to the deep-freeze warehouse without interrupting the cold chain.

After IE Food's feasibility study proved convincing, the company was commissioned with the concept and logistics planning, construction management, and complete execution.



### **3 Connects more than just two points: the logistics bridge.**

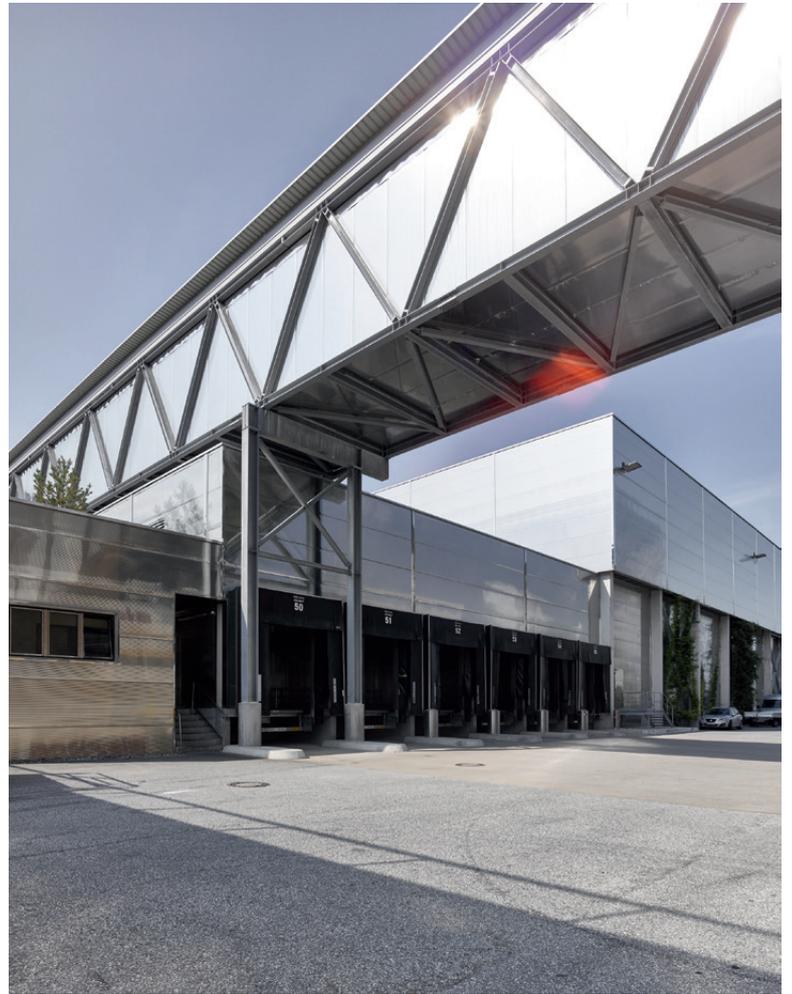
The fully automated logistics bridge connecting the bakery and the deep-freeze warehouse not only eliminated the need for multiple docking maneuvers by numerous shuttle vehicles during the day and up to 60 delivery vehicles at night, but also ensured faster transport of food between the two locations without any temperature fluctuations. It was equipped with room air conditioning technology for cooling, so that fluctuating outside temperatures have no effect on the temperature of the goods being transported in the logistics bridge, which can be transported at a constant room temperature of +5°C. This means that condensation and subsequent ice formation are prevented. Glycol sprinklers were installed in the frozen food warehouse itself to prevent freezing even at -24°C.

### **4 Efficient. Completely automated. Through digitization and automation.**

In order to achieve greater efficiency, IE Food set itself the task of digitalizing and automating the entire logistics process. Cartons marked with barcodes using direct printing and crates equipped with RFID tags are transported to the frozen food warehouse via a crate conveyor system in the logistics bridge. There, they are sorted by product and automatically palletized, wrapped, and labeled with an individual pallet slip using articulated arm robots. The pallets are then transported to the frozen food area, where they are temporarily stored and picked for store tours in frozen food containers. Finally, the goods are transported across the logistics bridge to the staging area..

### **5 Cool concept, perfectly executed. IE demonstrates construction expertise in the deep-freeze sector.**

With the structurally challenging expansion of the deep-freeze warehouse, IE Food succeeded in designing the connection between the existing and new warehouse sections in such a way that there is no loss of cold at any time. To prevent settlement of the cold storage extension and thus cracks in the surrounding moisture barrier and floor insulation, the old and new foundations were connected to each other in a force-fit manner. This ensures that no ambient air can penetrate at a later date and therefore no ice formation can occur.



### We are the IE Group:

#### Your specialist for industrial buildings

We plan, design, and construct industrial buildings. Our goal is to maximize the efficiency of your production - with the help of industrial buildings that are perfectly tailored to your manufacturing processes. We work in manageable and therefore effective teams of industry experts whose motivation and initiative you can rely on. Because at our company, all employees are involved in the business. Of course, we also give you guarantees on costs, deadlines, and quality. IE Food, IE Plast, IE Life Science, and IE Technology are part of the IE Group, which has been in the market since 1966 and offers the necessary financial backing - even for large construction projects.



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INDUSTRY**



**EMPLOYEES AS  
ENTREPRENEURS**



**ALL EXPERTS  
UNDER ONE ROOF**



**SECURITY THROUGH  
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