

## BISCHOF FOOD LOGISTICS FELDKIRCH/AUSTRIA





**THE CUSTOMER**

The development of the Austrian logistics service provider is closely linked to the regional expansion of the food industry.

Bischof provides its customers (Kraft Foods, 11er, Hilcona, Bofrost, Ölz etc.) with a comprehensive range of services such as the collection of frozen and cooled foods, duty payments, storage, order picking, manufacturing, co-packing, alternative storage, scheduled delivery to the wholesale and retail trade industry in Europe.

Currently 260 employees, 190 refrigerated trucks and 25,000 pallet spaces, 16,000 of them in the cold storage area, serve as the backbone of the cold chain.



The head office in Feldkirch is the central point of a region-wide refrigerated network.

**TOTAL SATISFACTION**

**KEEPING TEMPERATURES LOW**

Spring 2007: Bischof Food Logistics decides to double its storage capacity and build a fully automated frozen food high-bay warehouse. Important customers, such as 11er and Kraft Foods are signaling a rapid increase in demand for space. They are also providing recommendations for the project: LTW Intralogistics who have proven themselves to be a reliable partner, particularly in the area of frozen food.

Thanks to this recommendation as well as fast and goal-oriented project development, LTW wins the contract to provide the stacker cranes, conveyor system and warehouse management software.



The pre-zone of the high-bay warehouse forms the interface between the manual truck loading docks and the automated storage and retrieval routes.

The work with the project partner runs smoothly right from the beginning. Official regulations restrict the height of the plant to 28 m, which means 5 m of it have to be underground. The warehouse is completed in less than the scheduled 10 months. Following successful test runs at normal temperatures, operation begins immediately at cold temperatures.

Michael Zimmermann, CEO of Bischof Food Logistics, is highly pleased: "The interface of the LTW warehouse management system to our ERP system worked perfectly right from the start. Within one week we had the first 2,500 pallets stored in the warehouse."



CEO Michael Zimmermann: "We were pleasantly surprised at how smoothly the plant was put into operation."



**THE MATERIAL FLOW**

The fully automated operation of a logistics warehouse at -28 °C in high-bay storage area and -5 °C in the pre-zone places high demands on the planning and employment of the equipment.

Experience is essential for knowing, for example, about material shrinkage at low temperatures, how to choose gear oil suitable for cold temperature operation or which heatable electrical components to use.

Goods are transported through the four aisles of the double deep high-bay warehouse using aisle-switching stacker cranes. Collisions are avoided using the LTW warehouse management system. Branch terminal lines connect each aisle at eye-level to the conveyors and two transfer carriages bridge the storage and retrieval lines. A vertical lift connects the order

picking area on the upper floor with the material flow below.

Features such as size check and buffer areas ensure smooth operation. Additionally the stacker cranes are equipped for remote maintenance via VPN (Virtual Private Network).



Thanks to the ease of maintenance of the LTW components, it is no problem working with cold protection gloves.

**THE FOLLOW-UP PROJECT**

In November 2010 the successful performance of the high-bay warehouse is met with approval: Bischof commissions LTW to build the same installation again – this time in Sennwald in the neighboring Swiss Rhine Valley.



The stacker crane works the switch during driving – without hesitation, monitoring or complex construction.



## PROJECT OUTLINE

YEAR OF CONSTRUCTION 2008



### HIGH-BAY WAREHOUSE (HBW)

- ▶ Galvanized steel shelves
- ▶ Silo structure
- ▶ Height approx. 31 m (5 m underground)
- ▶ Frozen storage (-28 °C)
- ▶ 4 rack aisles, 1 switching aisle
- ▶ Double-deep storage
- ▶ Approx. 6,200 pallet spaces

### STACKER CRANES

- ▶ 2 aisle-switching stacker cranes
- ▶ Driving speed: 130 m/min
- ▶ Lifting speed 60 m/min
- ▶ Performance for storage and retrieval: 58 single or 35 double cycles / h
- ▶ Maximum payload: 1,000 kg
- ▶ Overall height: 30.7 m



### CONVEYOR SYSTEM

- ▶ 2 transfer carriages  
HBW (-28 °C) and pre-zone (-5 °C)  
Performance: max. 100 pallets/hour
- ▶ 1 vertical lift  
Performance: 74 pallets/hour
- ▶ 2 cold doors
- ▶ 2 scanners for size check
- ▶ Maximum payload: 1,000 kg

### SOFTWARE

- ▶ LTW warehouse management system
- ▶ Interface to the customer's ERP system
- ▶ Anti-collision control (2 stacker cranes on a single track)