



Increased consumer demand for frozen food products and a highly competitive market prompt supply chain owners to turn to high-bay deep-freeze warehouses with streamlined logistics processes.

With global demand for frozen food products expected to continue its considerable growth, the deep-freeze supply chain is pressured to improve throughput, accuracy and product quality.

### The Case for Deep-Freeze High-Bays

This pressure can be alleviated by high-bay deep-freeze facilities that display a number of unique features, including:

- > A seamless link on the supply chain for the storage of products at sub-zero temperatures
- > Faster receiving and retrieval of deep-freeze products
- > Immediate tracking and identification of products in the facility
- > Improved inventory and order fulfillment accuracy
- > Less staff recruitment and retention problems in deep-freeze
- > Reduced environmental impact

High-bays maximize volume utilization and optimize energy efficiency. Coupled with streamlined automation, high-bay deep-freeze warehouses are the most energy and cost efficient.

For companies to stay competitive in this challenging environment, they must ensure their facilities meet the demands of retailers. These may include integrated IT systems, capability to deliver smaller and more frequent orders as well as tracking and traceability. The case for automated high-bay deep-freeze facilities is compelling.

### Swisslog's Unrivalled Experience

Swisslog has considerable know-how and expertise within the temperature-controlled logistics sector, having pioneered the design and development of automated systems for deep-freeze. In fact, no other logistics solutions provider has installed as many automated deep-freeze warehouses - they number more than 50.

The comprehensive services portfolio of Swisslog covers the planning and building of complex warehouses and distribution centers for food manufacturers, wholesale distributors and retailers, including the implementation of Swisslog's own software and technology.



## REWE, DORTMUND, GERMANY

**Customer** - REWE Dortmund is a regional retailer with more than MEUR 2 000 revenue and 436 outlets.

**Solution** - Distribution center for frozen food with fully automated ASRS for pallet

handling, integrated picking and warehouse management system. More than 500 delivery points penetrated five days per week.

**Benefits** - Considerable energy savings due to compact design and better volume utilization, less labor costs.

SKU range	700
Items picked per day	31 000
Number of stacker cranes	3
Pallet locations in high-bay warehouse	3 700
Bin locations in small parts storage	2 400
Pallet locations in fast mover area	420
Temperature in (°C/°F)	-24/-11



## EUROFRIGO, PARMA, ITALY

**Customer** - 3PL focused on deep-freeze supply chain in Italy and eastern Europe with a revenue of MEUR 150.

**Solution** - Distribution center consists of monorail system and two ASRS high-bay

warehouses which can seasonally operate in ambient temperature.

**Benefits** - Reduced operating cost due to labor and energy savings, increased accuracy and speed in order fulfillment, significantly smaller land footprint.

SKU range	2 000
Number of stacker cranes	9
Pallet locations in automated high-bay warehouse	20 500
Pallet locations in manual warehouse	16 000
Monorail system (pallets/h)	320
Temperature in (°C/°F)	-28/-18



## DERKENNE-COULINE SA, BARCHON, BELGIUM

**Customer** - Belgian leader in production and distribution of frozen bakery products with a revenue of MEUR 65.

**Solution** - Fully automated high-bay warehouse for frozen bakery products. Automated pallet handling and storage between production and shipping.

**Benefits** - More accurate and faster deliveries, cost savings due to less land requirement, significant reduction of labor and energy spending.

SKU range	200
Infeed/Outfeed (pallets/24h)	600
Number of stacker cranes	3
Pallet locations in automated high-bay warehouse	8 016
Pallet locations in manual warehouse	800
Temperature in (°C/°F)	-20/-4