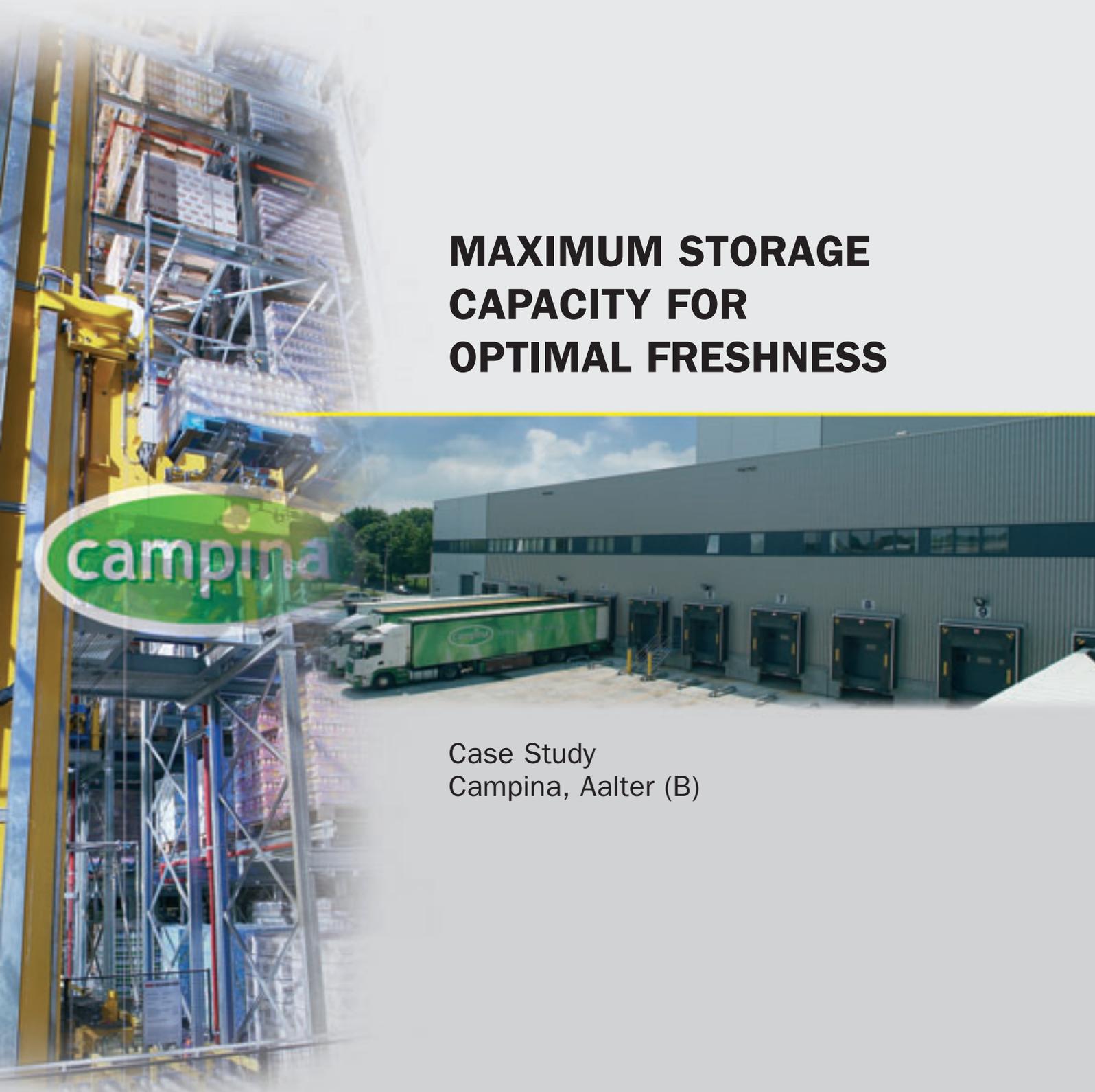


MAXIMUM STORAGE CAPACITY FOR OPTIMAL FRESHNESS



Case Study
Campina, Aalter (B)



Forklift with double pallet forks puts two pallets onto the conveyor simultaneously

Project objective

- ▶ Reduction of warehousing costs
- ▶ Improvement of personnel efficiency
- ▶ Increase in delivery quality
- ▶ Increase in storage capacity
- ▶ Reduction of transport costs by bundling deliveries
- ▶ High availability of items
- ▶ Automation of the flow of goods



Electric overhead conveyors take the pallets to the shipping area on an oval circuit

Our scope of supply and services:

- ▶ Rack steel structure (Silo)
- ▶ Storage and retrieval machines
- ▶ Pallet conveyor system for infeed and outfeed including order picking
- ▶ Electric overhead conveyor, storage and sequencing
- ▶ Route positioning system
- ▶ Pallet check station
- ▶ System visualization
- ▶ Warehouse control system with material flow computer, SAP connection
- ▶ All-inclusive maintenance and service contract

High bay warehouse (HBW)

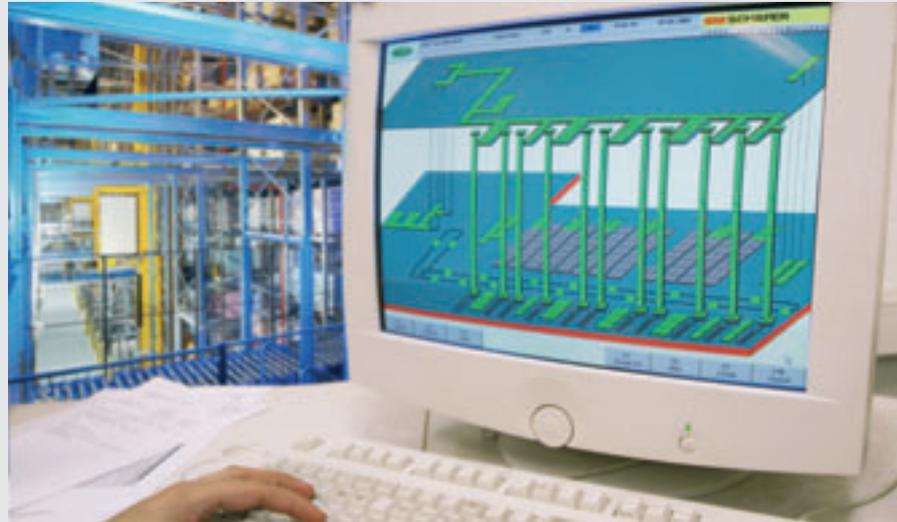
L x W x H	79 x 68 x 35 m
Loading aids	Euro and Chep pallets
Storage locations	24,640
Weight	1,000/ 1,100 kg
Type of storage	double-deep
Ambience	9 aisles: normal/ 2 aisles: +4° C

Storage and retrieval machine (SRM)

Quantity SRM / aisles	11/11
Load-carrying device	Telescopic fork
Traveling speed	210 m/min.
Lifting speed	70 m/min.
Throughput	30.9 DC/h or 54 SC/h

Optimal system performance due to a precisely harmonized mix of components

SSI Schäfer, in cooperation with a Belgian planning agency, prepared a logistics overall concept for the construction of a new eleven-aisle high bay warehouse for the international dairy company Campina. The system enables the continuous transport away from the production lines in combination with efficient storage and simultaneous positioning for sequenced shipping. The result is a successful combination of different logistics systems and is based on the well-founded expertise and excellent competence of the planning team. The partly temperature-controlled high bay warehouse has some 25,000 storage locations for two different pallet standards and three different height classes. A high-performance conveyor system solution in the goods receiving area and a highly dynamic electric overhead conveyor for outgoing goods and positioning in the shipping area enable peak performances of up to 230 storage and 300 retrieval operations per hour.



At the control station, the warehouse personnel can get an overview of the system status

Pallet conveyor system

Components:

Roller conveyor, chain conveyor, infeed/outfeed station, lifting transfer unit, vertical conveyor, scales

Pallet check station

Pallet destacker

Checking unit, visual and mechanical
Good/poor sorting

Electric overhead conveyor

Circuit with maintenance area

15 suspended trolleys with driven roller conveyor

Outgoing goods sorting

Sorter; 44 gravity roller conveyors

Warehouse management system

Computer hardware Redundant standby database configuration

2 x HP ProLiant ML570,
each with 4 GB RAM and
300 GB Raid system

Operating system Microsoft Windows Server 2003

Database system Oracle 9i

WMS software



Functionalities

Host connection to SAP LES
Incoming goods from
production and order picking
Material flow control
Control station for outgoing
goods control
Positioning in the shipping
area with sequencing
System visualization



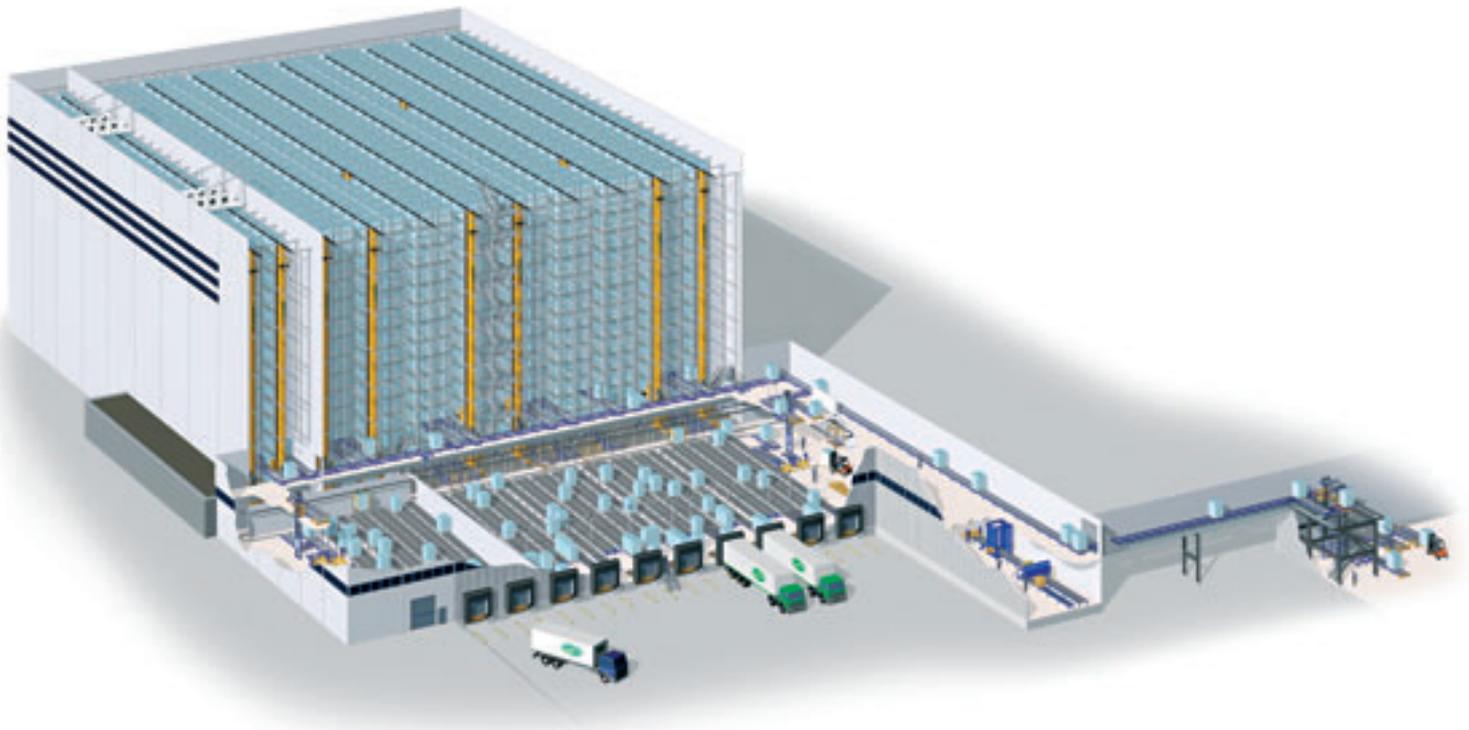
At three i-points, the pallet contour, weight, and data of the transport units are synchronized with the system data.



The pallets are transported between two levels by a total of four vertical conveyors



Eleven storage and retrieval machines with telescopic forks for double-deep storage "work" in the high bay warehouse



- ▶ General contracting
- ▶ Planning and consulting
- ▶ Warehouse management system
- ▶ Control systems
- ▶ Steel structure / racking systems
- ▶ Storage and retrieval machines
- ▶ Conveyor systems
- ▶ Service and maintenance