


**CONSOLIDATION OF WAREHOUSING
AND PRODUCTION AREA
FOR BREWERY GROUP**

The Carlsberg logo is displayed in white on a semi-transparent grey background. It features the word 'Carlsberg' in a classic, elegant script font, with a small crown emblem above the letter 'b'.

Carlsberg

An aerial view of a large industrial facility, likely a brewery, with a grey and blue facade. In the foreground, several trucks are parked in a lot. One truck is white with 'Carlsberg' branding, and another is white with 'TUBORG' branding. There are also stacks of green pallets and other industrial equipment visible.

Case Study
Carlsberg Danmark A/S,
Fredericia, DK



The loading bays and depot are busy around-the-clock.

Project Objectives

- ▶ Centralization of warehouse
- ▶ Avoidance of external warehouses during peak times
- ▶ Guarantee of ability to deliver and delivery itself through processes that are more efficient
- ▶ Reduction of handling costs due to improved utilization of space and optimized allocation of goods
- ▶ Connection to existing bottling plant



Pallets with beverages ready to be shipped are available in the 18 aisles of the 9,000 m² large HBW. Load acceptance with two double telescopic forks.

Our Scope of Supply and Services

- ▶ Compilation of logistics concept
- ▶ Simulation
- ▶ Planning of realization
- ▶ Pallet conveyor system
- ▶ Electro Monorail
- ▶ Transfer bridges
- ▶ Storage and retrieval machines
18 HBW + 8 in-house
- ▶ Rack construction + platform steel construction
- ▶ Visualization
- ▶ Warehouse management and control system

High Bay Warehouse (HBW)

L x W x H	114 x 78 x 41 m
Loading device	Euro-pallet
Storage positions	70,000
Type of storage	single deep

Storage and Retrieval Machine (SRM)

Number of SRMs/aisles	18/18
Load accepting device	2 double telescopic forks
Handling capacity	800 pallets/h retrieval 700 pallets/h storing

High Bay Warehouse (in-house)

L x W x H	125 x 36 x 7 m
Loading device	Euro-pallet
Storage positions	6,000
Type of storage	single deep

Schäfer Compact Crane SCC

Number of SRMs/aisles	8/8
Handling capacity	250 pallets/h storage and retrieval movements

Intelligent Merging of Warehousing and Production Areas

Founded in Denmark in 1847, Carlsberg Breweries is one of the largest group of breweries in Europe. In 2007 the company dissolved their previous production facilities in Copenhagen in order to combine them in a large production and distribution center close to Fredericia.

Being the general contractor, the German logistics specialist SSI SCHÄFER took over the realization of the top-modern, multifunctional warehouse and transport concept.

76,000 pallet storage positions, pallet conveyor system with Monorail and Schäfer Compact Crane (SCC) as well as a precisely tailored warehouse management system provide transparent, efficient processes and a high throughput.



Buffer for empties with new SCC

Monorail (EHB)

Number of loops	2
Length	4,000 m
Number of vehicles	265
Transfers	~3,000 double cycles/h

Pallet Conveyor System

Components:

Roller conveyor, chain conveyor approx. 1,600 elements, feed-in/acceptance station, 3-fold feed-in/acceptance, vertical conveyor, lifting transfer unit, rotating roller conveyor 90°, shuttle vehicles (8), pallet stacker/de-stacker, pallet stack adjustment station

Warehouse Management System

Computer hardware	WMS production system (hot standby) WMS test system included PLC Emulation
Operating system	Windows 2003 Server Cluster, Middleware IBM Websphere Terminal Server/Citrix
Data base system	ORACLE 10

Functions:

Yard management, goods receiving/connection, control of supply, order picking, order management with control center function, goods issuing, warehouse management, control of material flow, fork lift control system, visualization, radio data transmission

Specialties

- ▶ 16,000 m² platform steel structure with galvanized finish
- ▶ 2 EHB transfer bridges with a length of 100 + 170 m
- ▶ Dehumidification system for HBW



265 trolleys are located on the taxiing guide line of the electric Monorail between production and warehouse. Overall length 4 km.



50 vertical conveyors are used for the transport to and from the filling machines, the in-house rack, the dispatch and goods issuing area.



Fork lifts with 3 load handling devices that can load 3 pallets simultaneously are used for loading.





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



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