

A large industrial facility with a complex metal structure and blue mesh railings. In the background, a modern building with glass windows and a logo is visible. The text 'SCHAFFER NIELL' is visible on a vertical beam on the left side of the image.

CONCEPT AS GENERAL CONTRACTOR SUPPORTS THE STRATEGIC GOALS

Case Study
Gebr. Heinemann,
Hamburg (D)



Infeed Commissioner

Project Objective

- ▶ Savings on warehousing costs due to the merging of several warehouses with little or outdated technology
- ▶ Increase in delivery quality
- ▶ Faster reaction times
- ▶ Reduction of transport costs



Workplaces for inspection and quality assurance

Our Scope of Supply and Services

- ▶ Engineering
- ▶ Simulation
- ▶ Storage and Retrieval Machines (SRMs)
- ▶ Pallet conveyor system
- ▶ Conveyor system for totes and cartons
- ▶ Totes and trays
- ▶ Shrink-wrapping systems
- ▶ Commissioner
- ▶ Racking system
- ▶ PLC
- ▶ Visualisation
- ▶ Warehouse Management Software

High Bay Warehouse (HBW)

| | |
|-------------------------|---------------------------|
| L x W x H | 84 x 75 x 36 m |
| Load units | Euro + industrial pallets |
| Storage locations | some 21,400 |
| Order picking positions | some 2,700 |
| Weight | 1,200 kg maximum |
| Type of storage | single deep + double deep |
| Ambient conditions | Normal temperature |

HBW Storage and Retrieval Machine (SRM)

| | |
|----------------------|--|
| Quantity SRM/aisles | 8/8 |
| Load handling device | telescopic fork |
| Traveling speed | 200 m/min |
| Lifting speed | 60 m/min |
| Throughput | 30 DC/h + 47 SC/h per SRM |
| Peak performance | 1,400 storage operations/day 1,500 retrieval operations/day in case of future expansion, up to 3,000 retrieval operations can be carried out per day |



HBW pallet order picking

Availability to Promise: Maximum Efficiency in Any Logistics Dimension

High availability of goods, maximum reliability, perfect fulfillment: A challenge that SSI SCHAEFER as the general contractor for the logistics company Gebr. Heinemann, Hamburg has met successfully. The result is that the "just in time" concept of Gebr. Heinemann is rendered perfect and that up to 3,000 deliveries a day to more than 2,000 store customers are handled reliably and efficiently.

Task: Building a new logistics center for storage, order picking and distribution of a comprehensive range of products consisting of perfumes, liquors, tobacco, accessories, textiles and non-food products with a total of some 25,000 items. Implementation of customer-oriented, flexible and 100 % EDP controlled warehousing and order picking processes to ensure inventory and delivery quality.



Steel structure during the installation phase

Commissioner

| | |
|--------------------|--|
| Quantity | 36 |
| Load units | totes |
| Storage locations | 44,000 |
| Weight | 50 kg |
| Type of storage | double deep |
| Bin type | MF 6120 + EV 6220 |
| Ambient conditions | 34 x normal temperature, 2 x air-conditioned (approx. 16° C) |
| Throughput | 130 DC/h per module |
| Peak performance | 4,680 DC/h in the commissioner |

Pallet conveyor system

Components:
Roller conveyor, chain conveyor (some 500 drives), vertical conveyors with a lifting range of approximately 18 m, turntables, shuttle vehicles, automatic positioning in the shipping area, integration of three shrink-wrapping systems as cargo securing systems before the shipping area

Tote conveyor system

Components:
Belt, multiple strand, and roller conveyors, scales, curved belt conveyor, repacking tables, diverting unit with integrated chain conveyor, pop-up diverting unit, chain transfer unit, lifting tables with integrated roller conveyor

Warehouse management system

| | |
|-------------------|---|
| Computer hardware | 5 productive servers IBM pSeries 7028-6C4 with 4 GB RAM, external storage system Enterprise 2105-F20 with 470 GB, 1 backup server |
| Operating system | AIX 5.1 |
| Database system | Oracle |
| WMS software | ant |
| Functionalities | Goods receiving/shipping Order picking Material flow control |



Order picking at the commissioner using mobile scales for 100% control



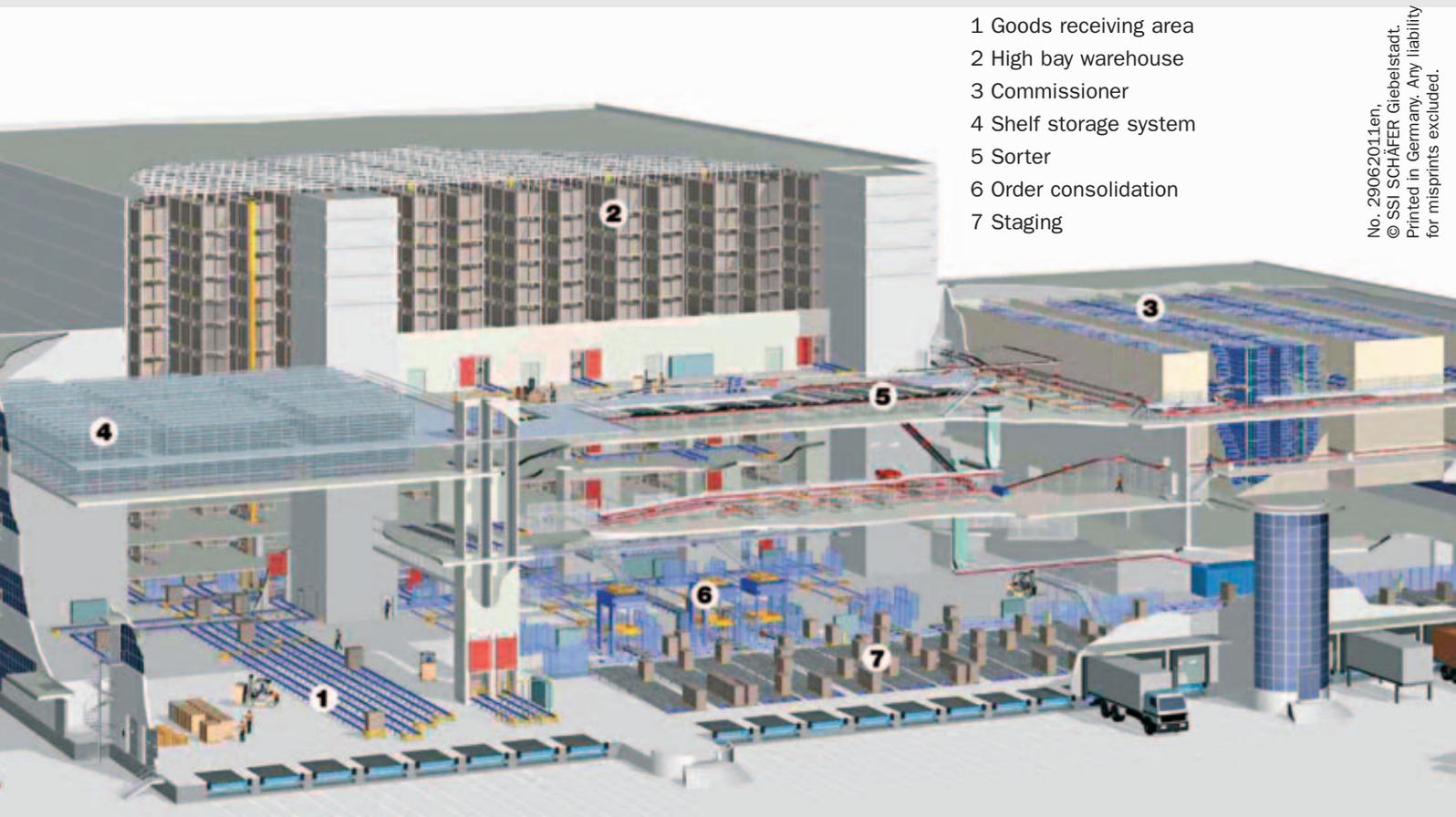
Order consolidation



Tote conveyor system

Operating Figures

- ▶ some 25,000 order lines per day in the overall system
- ▶ 12.5 mil. shipping cartons or 150,000 tons of cargo per year
- ▶ every day, 1,500 pallets are staged in the shipping area for up to 100 trucks
- ▶ a range of some 25,000 items in the shipping area
the tunnel picking storage system and the shelf storage system
- ▶ order picking performance in the commissioner area: 12,000 picks/day (8hrs)



- 1 Goods receiving area
- 2 High bay warehouse
- 3 Commissioner
- 4 Shelf storage system
- 5 Sorter
- 6 Order consolidation
- 7 Staging

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- ▶ General contractor
- ▶ Planning and consulting
- ▶ Warehouse Management System
- ▶ Control systems
- ▶ Steel structure/racking systems
- ▶ Storage and Retrieval Machines
- ▶ Conveyor system
- ▶ Service and maintenance



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