

REFERENCE

Scenery Warehouse for Opera Oslo



EXTERNAL STORE
LINKED WITH INTELLIGENT TRUCKS

DEN
NORSKE
OPERA
&
BALLETT



Unitechnik
PERFECTION AUTOMATED.



DEN NORSKE OPERA & BALLETT

OSLO, NORWAY

Key data of the facility

Loading devices:

Special paletts: 9,20 x 2,30 x 2,80 m
3-side closed

High bay warehouse:

25 m high
115 m long
6 levels
244 Positions
1 Automatic stacker crane

Conveyor System:

Handover deck for trucks with
levelling function
ID-deck with shape control
Turning deck

Transport with trucks:

2 Trailer with integrated conveyor system
16 km driving distance

Distant storage of sceneries

The new opera house in Oslo, built like the Sydney Opera House directly on the harbour, rates as Norway's largest cultural project of the post-war years.

A special feature of the opera house in logistical terms is the fact that the props and stage sets are not stored in the opera house itself but 16 km away. To this end a 25 m high and 115 m long high bay warehouse was constructed in an existing building. Special 9.20 m x 2.30 m large pallets are used to carry the items. An automatic stacker crane stores the pallets on 6 levels. In total 244 storage places are available.

Transportation between the warehouse and the opera house is carried out with special trucks. The truck trailers are fitted with a conveying and safety system which enables each pallet to be moved automatically from the rack compartment up to and into the trailer. In other words the truck trailers represent a conveying device in two senses. Having arrived at the opera house, the pallets are unloaded and placed on flat carriages. With the aid of these the pallets are then drawn to the stage.

Scope of Unitechnik contribution

Control technology:

PLC Simatic S7-400
Profibus-DP / Ethernet

Warehouse management System:

UniWare for the materials flow and
warehouse management
System visualization

Control cabinet construction,
installation, commissioning
and training

General Contractor:

ICM Airport Technics GmbH
(Unitechnik Group)

Completion: 2008

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