

THE LINDE GROUP

*Linde*



**LOGISTICS SOLUTION FOR GAS CYLINDERS  
AT THREE CENTRAL LOCATIONS**

**Unitechnik**  
*PERFECTION AUTOMATED.*



## INITIAL SITUATION

At central locations in Germany and Sweden, the Linde Gases Division has decided to increase the degree of automation of its filling plants. The goal for intralogistics was to completely replace in-house forklift traffic.

This applies to the newly built plant in the Dorsten/Marl industrial park as well as to the plants in Unterschleißheim near Munich and in Enköping in Sweden.



### **Linde Gas**

Marl & Unterschleißheim, Germany

Enköping, Sweden

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Logistics for highly automated  
filling stations



## SOLUTION

As a manufacturer-independent system integrator, Unitechnik advised the international industrial gas specialist already in the design phase.

The three realized plants are based on the jointly developed concept.

The high degree of automation leads to information transparency in all warehouse processes, reduces storage and process costs and meets the high safety requirements. There is no longer any manual operated forklift traffic within the buildings.

The special challenge was to transport and store the 22 different heavy-duty load carriers (up to a maximum of 1.7 tons) with a maximum of 12 gas cylinders without sub-pallets.

The high storage density is achieved by a triple deep storage.





## TECHNOLOGY AND KEY FIGURES using the example of Marl

### High-bay warehouse as silo

- approx. 70 m long, 18 m wide, 13 m high
- 2 aisles
- 4 levels
- approx. 2,000 storage locations
- triple-deep storage

### UniWare

- Warehouse management system
- Plant visualization
- Host connection Manufacturing Execution System (MES)
- Connection to external Automated Guided Vehicles (AGVs)



# **Unitechnik** *PERFECTION AUTOMATED.*

For two generations **Unitechnik** has been a successful owner-managed family enterprise. For five decades we have been counted among the leading providers of industrial automation and information technology. We plan and realize customized systems for in-house logistics and production whereby we are active throughout the world as an one-stop supplier.



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