



CASE STUDY | RETROFIT

# **IKEA** **LOGISTICS CENTER** AUSTRIA

**IKEA LOGISTICS CENTER WELS**

# MINIMUM INTERVENTION, MAXIMUM EFFECT

**IKEA, the world-famous furniture manufacturer, urgently needed a retrofit. After almost 20 years of reliable operation, the 10 manual stacker cranes at its distribution center in Wels were reaching the end of the line. It's not just that the technology employed is no longer up to date, but the supply of spare parts is becoming increasingly fraught too. But following a complete modernization the system is now running like new again.**

**Starting point**

The IKEA distribution center for central and eastern Europe in Wels started operations way back in 1989. At that time, manual high-bay warehouses were the be-all and end-all for large-scale logistics systems. IKEA opted for us again, as even then our

innovative switching technology was a real winner. We initially supplied three stacker cranes and – owing to the dynamic development – a further seven over a period of two years, which service a total of 20 rack aisles.

**Concept phase**

After almost 20 years of reliable operation, the first bottlenecks were starting to appear in the supply of spare parts. At the same time the supply regions in the group were being redistributed. The distribution center now focuses on the Austrian and Swiss markets, which has led to a steep rise in capacity requirements. The internal logistics planners, who manage all IKEA's worldwide logistics processes, got together round the table. It transpired that there were only two options: tear down the entire building and replace it with one twice the height, or modernize the entire plant.

**Modernization or new build**

After an intensive concept phase, the choice fell on modernizing the existing plant, as during the planning the following advantages of a retrofit become apparent:

- Favorable cost/benefit ratio
- Flexibility in terms of budget and scope of services
- No approval procedures
- No time-consuming training
- Retrofit during ongoing operation

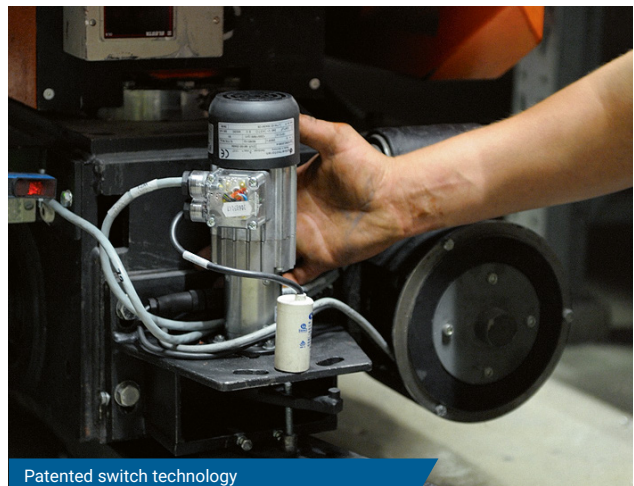


**IKEA Logistics center Wels**

Terminalstraße 2  
4600 Wels, Österreich  
[ikea.com/at/de/stores/abholstation-wels](http://ikea.com/at/de/stores/abholstation-wels)

**Founded:** 1956  
**Employees (2016):** 123.000

**Furniture stores (2016):** 267 in 39 Ländern  
**Stock (2016):** 43 und 4 Millionen m<sup>2</sup> Lagerraum  
**Articles (2016):** 9500  
**Suppliers (2016):** 1220



Patented switch technology

Thanks to the well-established collaboration between IKEA and our service team, the details of the retrofit program were quickly and pragmatically agreed.



**The implementation was just as perfect as the planning. After twenty years of working with LTW, I would not have expected anything else.**  
Werner Kraft, Maintenance Manager IKEA Wels

**The implementation**

The first step involved jointly determining which components had the strongest effect on performance. Two further important factors are spare parts reliability and availability – the entire modernization approach focuses on these ends. The retrofit was successfully completed in eight weeks without disrupting operations. Eight of the ten stacker cranes operate in a two-shift system, while the rail system and switches were upgraded in stages. Achieving these ambitious timing objectives not only demands careful planning, but also flexibility and commitment from both parties. Another bonus point: 20 years ago, the LTW team manager had himself assembled all ten stacker cranes that were now being made fit for the future again.

**More infos at:**  
[LTW.AT/en/references/retrofit](http://LTW.AT/en/references/retrofit)



Precise, semi-automatic handling of half pallets

S7-switch cabinet with new driving and lift drive

# OUTLINE OF THE PROJECT



## HIGH-BAY WAREHOUSE

- Year of construction: 1989
- Galvanized steel rack
- L x W x H: 84 x 90 x 14 m
- 20 rack lanes, 1 switching aisle
- Single-depth storage
- Approx. 28,000 pallet spaces
- Maximum payload: 1,000 kg



## STACKER CRANES

- 10 aisle-switching, manually-controlled SRMs
- Driving speed: 130 m/min
- Driving acceleration: 0.5 m/s<sup>2</sup>
- Hoisting speed: 25 m/min
- Hoisting acceleration: 0.5 m/s<sup>2</sup>
- Load handling device: telescopic fork



## CONVEYOR SYSTEM

- Front side rack with handover bays for manual forklift operations



## SOFTWARE

- Radio terminals in the SRM cabins coupled with the IKEA forklift guidance system