

HANS KUPFER & SOHN HEILSBRONN/GERMANY





THE CUSTOMER

Hans Kupfer & Sohn GmbH & Co. KG is an old-established Franconian producer of sausages and other meat products with a long tradition and is among the top ten German companies in its industry.

With a total of 700 employees in Heilsbronn and at two other sites, the company produces cooked and pre-cooked sausages and cooked ham in a wide variety, from regional classics to home-made creations that cater to the latest tastes.

Hans Kupfer & Sohn supply food retailers with an annual amount of 30,000 metric tons of sausages. Since 2008 they deliver from one of the leading-edge production facilities in Germany with an automated distribution centre.



One million pieces a day: Original Nuremberger Rostbratwurst by Kupfer

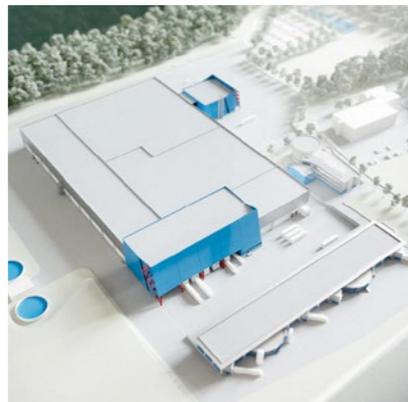
BACK TO SQUARE ONE TO MAKE A STEP FORWARD

FIRST GERMAN SAUSAGE PRODUCER WITH AUTOMATED HIGH-BAY WAREHOUSE

The Kupfer headquarters in Heilsbronn, June 23, 2006: Five weeks before the planned centennial celebration, a major fire caused by a defective deep fryer destroyed two of the three factory buildings. The oldest parts of the production facilities were only ten years old.

The last flames were not extinguished yet when Otto Kupfer, owner in third generation, assured his employees: „We carry on!“

The road map for rebuilding was very ambitious: 18 months for planning and construction, outsourcing of production to a leasehold and two own plants, and for the enlargement of the premises by 70,000 m².



Model of the new 25,000 m² production building in Heilsbronn. The high-bay warehouse is located in the blue part of the building at the front.

THE CONCEPTION

A project team of nine used the forced new beginning to re-engineer all operational processes.

The standard was given by SAP being the central control system. Especially packing and goods issue had to be integrated seamlessly in order to achieve lowest possible error rates and costs.

Soon a new idea electrified the project team: an automated pallet store as logistics hub and buffer for the production plants in Heilsbronn and Nuremberg.

Logistics planner Luy & Partner, brought on board in October 2006, confirmed this approach. They planned the project



A transfer carriage connects production and packing (on the right) with the high-bay warehouse (on the left) and assists with empty pallet handling.



Holger Dörr, Managing Director at Hans Kupfer & Sohn: „In retrospect I ask myself how we managed all this in only 18 months. All participants took pains to achieve the common objective.“

consistently and put it out to tender as a whole. Already at tender stage LTW demonstrated an impressive work pace and scored with a convincing concept and substantial SAP experience.

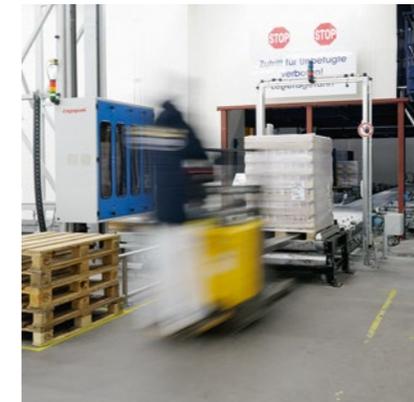
THE IMPLEMENTATION

The extremely tight schedule forced all parties to start constructing the production building when logistics was still under planning. Hence the 20-meter-high pallet rack had to be erected within the completed production building.

In its capacity as general contractor for intralogistics, LTW provided four aisle-bound S/R machines and the pallet conveying system including two transfer carriages. In addition, LTW integrated RFID reading stations, labelling systems and two automatic pallet wrapping machines, and programmed an adapted warehouse control unit as an interface to SAP.

Commissioning took place in January 2008, right on schedule.

„All participants could celebrate driving a hard race and successfully crossing the finish line“, Holger Dörr remembers. „We had practically zero defect delivery straightaway.“



Pallet loading station with automatic RFID detection and conveyor system loop at the interface with the high-bay warehouse.

Apart from their main task, four storage and retrieval machines also serve as a connection between the storeys.

„ESPECIALLY SATISFIED“

After two years of operation, Holger Dörr is upbeat about the results: „Thanks to the automated buffer store, production is regular and flowing smoothly. With marginal error rates we set the benchmark for goods issuing.“

In answer to the question as to what he would do differently in hindsight, Holger Dörr says: „I would build the warehouse even higher and automate the internal logistics process more extensively. We have acquired a taste for it!“

PROJECT OUTLINE



HIGH-BAY WAREHOUSE

- ▶ Painted steel rack
- ▶ Inhouse structure
- ▶ L x W x H: 65 x 18 x 22 m
- ▶ 4 rack lanes, single deep storage
- ▶ Approx. 4.500 pallet spaces
- ▶ Payload: 700 kg
- ▶ Air conditioning: + 2 °C



MATERIALS HANDLING TECHNOLOGY

On 2 levels with storage/retrieval, dispatch area, connection to order picking and packing

- ▶ 2 transfer carriages
- ▶ Empty pallet handling
- ▶ Integration of RFID stations, labelling systems, automatic pallet wrapping machines

YEAR OF CONSTRUCTION 2008



STORAGE AND RETRIEVAL MACHINES (SRM)

- ▶ 4 aisle-bound SRMs
- ▶ Driving speed: 200 m/min
- ▶ Hoisting speed: 70 m/min
- ▶ Load handling device: telescopic fork
- ▶ Performance: 68 single cycles resp. 41 double cycles/h/SRM
- ▶ SRM as connection between storeys



SOFTWARE

- ▶ LTW adapted warehouse control unit as interface with the customer's SAP system
- ▶ Visualisation of system status and logging of status messages

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