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INTERNAL LOGISTICS

Storage Systems

Automatic intralogistic projects are no isolated solutions. They are connected data technically to the business' software.

INFORMATION LOGISTICS

Identification Technology

Detection of optical codes as well as the print of ID- and 2D-labels are part of a single Auto-ID solution system.

INTEGRATED LOGISTICS

Outsourcing

"Sustainability" seems to degenerate into a buzzword. To operate truly sustainable, the supplier has to involve the carrier.

**INNOVATIVE
JUNGHEINRICH SOLUTIONS
FOR OUTDOOR-FURNITURE
MANUFACTURER DEDON**

Outdoor-furniture manufacturer Dedon uses Jungheinrich intralogistic solution

Logistics for a visionary company

All of Dedon's furniture collections reflect visions of vitality. In outdoor-furniture and accessories, for which Jungheinrich has developed an overall intralogistic solution. Customer's benefits include constant data management, a clear reduction in warehouse stocks, significantly shorter delivery times and a noticeable increase in delivery quality.

Stefan Zander, Logistics Manager at Dedon GmbH's central warehouse in Winsen (Luhe), looks back at the high rack stacker which is diagonally approaching a bay. "The integrated intralogistic concept designed by Jungheinrich comprises a narrow and a wide-aisle warehouse with 72.5 m long aisles, forklift



A Dedon worker takes a piece of furniture out of a storage rack and puts it on a furnibox, which is carried by an ECE 225 low-level order picker

trucks, a warehouse management system and a radio data system including data terminals."

Dedon previously had four warehouses in Lüneburg and one each in Belgium and

Switzerland. Since its central warehouse came on line in November 2010, the complete range has been located at the new site. Prior to this, Jungheinrich had devised solutions in a

six-monthly planning phase, based on a material flow analysis. They have been refined in consultation with the customer in order to adapt them to the specific needs precisely. Stefan Zander: "Planning a warehouse for our furniture posed a particular challenge. In particular, the range of sizes and weights are very broad and we can't avoid storing our ranges in both Furni-

Boxes and Euro pallets." Zander points to a double rack in the narrow-aisle warehouse. "Jungheinrich has supplied a few racks with an additional support bar at the base, with extensive wooden grilles and has thus designed them for exchange or mixed storage."

In order to avoid interfaces, Dedon favoured a solution from one hand, as well as a partner offering expertise in all areas and therefore being able to act as general supplier. If this had not been the case, the furniture manufacturer would have had a great deal of expenses in verifying whether the interfaces between the functions are able to operate smoothly. For example, whether the racking system is suitable for housing the 2,700 mm long, 1,150 mm wide and 2,750 mm (with goods) high FurniBoxes.

On the tour, Stefan Zander stops in the fire wall doorway, giving us an overview of all the warehouse zones which are distributed across both halves of the hall. "The benefits resulting from



Jungheinrich has implemented the Dedon logistics center. The solution includes a Warehouse Management System, a WLAN system and forklift trucks with mobile data transmission terminals

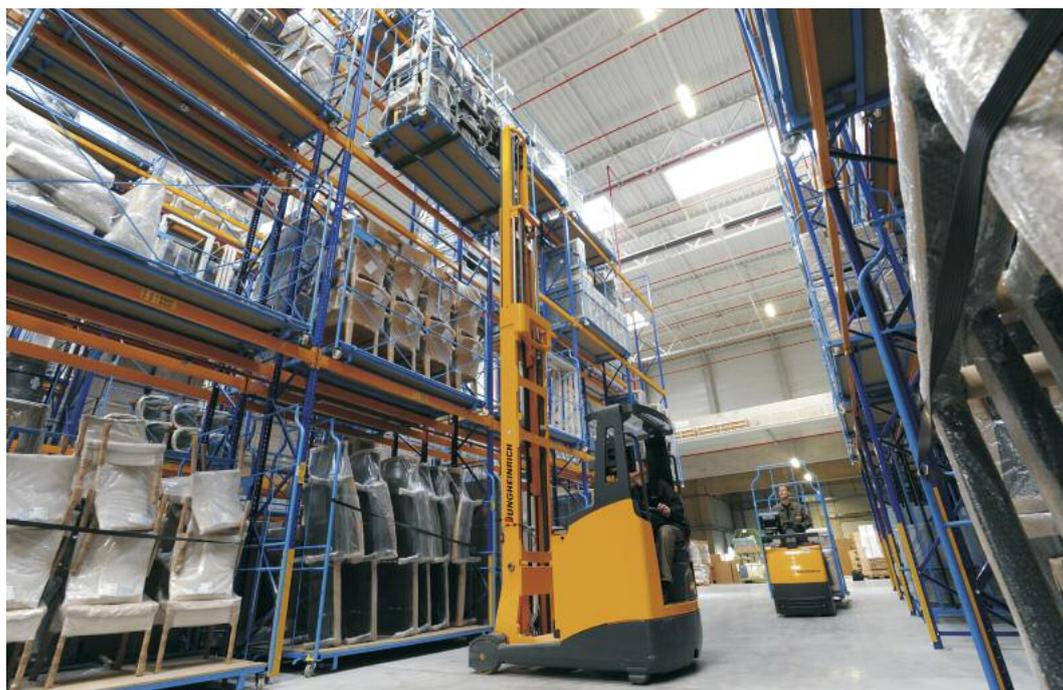
INDUSTRIAL TRUCKS

the concept are considerable. We have reduced our stock levels by 30 percent and the corresponding floor space from 24,000 m² to 11,300 m², while simultaneously reducing our delivery time from six to two weeks. Moreover, we were able to increase our delivery quality by around 50 percent as a result of optimised shipping inspections. And all this has been done without additional staff.” This operating efficiency is also reflected in the predicted amortisation period of three to four years. Referring to these positive figures, there could be considered a win-win situation which is profitable for both the operating company and its customers.

Jungheinrich WMS supports all intralogistic processes

Dedon's, all intralogistic processes, from arrival until departure of goods, are supported by the Jungheinrich Warehouse Management System (WMS). As the foundation for this, the Jungheinrich WMS links the material and information flows, thereby creating a broad database and complete process transparency. In conjunction with Dedon's Enterprise Resource Planning (ERP) system, this facilitates individually configurable evaluations and precise analyses, identifying unutilised potential in the management and control of the warehouse. Respectively, can processes be made considerably more efficient. In addition, the operating company is able to initiate its own dynamic improvements, such as stock transfers and permanent ABC analysis. The Jungheinrich WMS also ensures a high degree of shipping reliability, as it identifies the contents of the individual cartons.

Stefan Zander: “Jungheinrich has partially parametrised the standard modules of the Jungheinrich WMS for specific applications. This means that



The Jungheinrich reach truck ETV 216 demonstrates its strength in the wide-aisle warehouse storing A and B articles at heights of up to 9.0m

Dedon: Furniture for outside living

Dedon GmbH is one of the world's leading manufacturers of exclusive outdoor furniture. With its visionary designs the company, founded in 1990 by former professional footballer Bobby Dekeyser, revolutionised its market within a few years. Proof of this are the numerous design awards received by the Dedon collections. Represented in more than 80 countries, the manufacturer employs more than 3,000 people and has its own showrooms in Barcelona, Paris, Hong Kong, Hamburg, Milan, Antwerp, Monaco, Athens, Limassol and New York.

The reason for its success is an extremely tough, durable and flexible synthetic fibre based on polyethylene, which Dedon produces at its headquarters in Lüneburg, northern Germany. Developed more than 20 years ago, this unique Dedon fibre is still regarded as ‘the original’ in the industry. ‘Made by Dedon’ is also a hallmark of the highest standards of quality and design. A reputation which is reinforced every day by this washable, easy-care and environmentally degradable fibre, which is resistant to salt water and sunlight as well as high and low temperatures. And it feels great. Given these many advantages, it is no wonder that international designers are interested in the fibre. They design the furniture which Dedon then has manufactured, using the traditional skills of weavers on the Philippine island of Cebu in accordance with German quality standards. Each piece of furniture therefore embodies a blend of modern technology and centuries-old craftsmanship.

packing processes can be diverted to hand-held terminals as well as orders and customer deliveries can be gathered at dispatch or loading areas.” Zander removes documents bearing the Dedon logo from a folder. “Gone are the days when we had to create delivery notes manually, shipping papers and other documents. The Jungheinrich WMS now takes over this task in cooperation with the ERP system. And it is our design.”

The comprehensive basic software of the Jungheinrich WMS includes a host interface and a truck guidance system. The Jungheinrich WMS also supports multi-client and multi-lingual functionality. For example, Dedon can process complaints and transfer established processes to its overseas warehouses without any further tests. Prior to commissioning, Jungheinrich also carried out a WLAN simulation as well as a WLAN system and performance analysis whose results have been practically confirmed. One example is the number and configuration of necessary access

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points required to guarantee reliable communication via radio data at any time.

The operator of an ECE 225 low-level order picker makes it look easy when he takes a futuristic-looking, 165 cm wide and 193 cm high Orbit sofa island from the picking location in the wide-aisle warehouse. He places it on the FurniBox which the truck transports on its 2.4 m long forks. Stefan Zander: "We use four of these fast trucks, both for our internal job orders and for order picking, because they are ideally suited from an ergonomic point of view."

The truck terminal of the ECE 225 must be highlighted – its glare-free terminal is located within the operator's field of vision but does not interfere.

More than 12m height, 9 narrow-aisles storage

In the nine aisles of the narrow-aisle warehouse, which has an upper storage height of 12.25 m and is primarily used for C and sometimes for B articles, Dedon uses an inductively guided EKX 515 electric order picker/tri-lateral stacker. Its 80-volt 3-phase AC technology, combined with a load capacity of 1.5 t and the Jungheinrich Personnel Protection System, makes this stacker ideal for very high throughput rates. Using the integrated RFID warehouse navigation, the EKX 515 communicates both via transponders embedded in the floor measuring continually its route, and the Jungheinrich WMS, which issues jobs to the truck via radio data transmission. The operator scans the barcode on the Furni-Box, receives the coordinates of the destination bay from the Jungheinrich WMS and starts to travel to this location. Stefan Zander: "As the stacker automatically takes the shortest route to its destination, at the highest possible speed and with the lowest consumption of ener-



The Jungheinrich EKX 515 electric order picker/tri-lateral stacker operates in the Dedon narrow-aisle warehouse



Using the integrated RFID warehouse navigation, the EKX 515 communicates via transponders embedded in the floor

gy, error-free stacking and retrieval is guaranteed." The stacker transmits appropriate confirmations back to the Jungheinrich WMS. The automatic control and monitoring of all processes eliminates other manual and time-consuming scans.

Warehouse navigation steers automatic functions

Jungheinrich estimates that the warehouse navigation, which is based on the horizontal position control system, rack height select and automated stacking modules, provides an increase in throughput of approximately 25 percent. Contributing to this, the warehouse navigation activates the lift and auxiliary lift in parallel. In order to be more productive, the operator can also use the optional 'Lift' module, which increases the lift speed from 0.47 m to 0.52 m per second and optimises the traverse/pivot movement via load sensing.

When asked what were the decisive reasons for Dedon's choice of supplier, Stefan Zander mentions several points. "Jungheinrich was more committed than its competitors and, in contrast to them, was able to communicate that it truly wanted to support the project. Apart from this, its considerable experience in providing complete solutions was an argument in favor for Jungheinrich. Of course, the price-performance ratio also played an important role in the decision-making process. I would furthermore like to draw particular attention to the preliminary work done by Jungheinrich, before it was even awarded the contract."

Jürgen Warmbold

Further Information

www.dedon.de

www.jungheinrich.de