



DERBY CYCLE / Hellmann Worldwide Logistics
A Roof for up to 150 000 Bicycles

With respect to warehousing and transport, the high end bicycle assortment of Germany's largest bicycle maker Derby Cycle demands outmost care. To be fit for the future, the formerly decentralised warehouses were combined to a single modern distribution centre. To ensure perfect warehouse management, the logistics expert Hellmann Worldwide Logistics makes use of customised equipment. Together with STILL the expert for warehouse equipment from Hamburg, navigation-guided MX-X VNA trucks were specially adapted for the high bay rack. To order pick bicycles, the trucks can hold mobile platforms on the forks.

Industry: Logistics services

Company: Over 12 500 employees worldwide in 56 countries. 244 proprietary branches.

Products: amongst others general cargo, courier and express services, contract logistics and IT solutions.

Challenge: Central distribution of over 5 000 bicycles to over 60 countries. Incl. seasonal fluctuations with a total of up to 150 000 bikes

The solution: Combination of specially designed VNA trucks, wire guidance and efficient electric counter balance trucks as well as smart software for fleet optimisation

STILL products: Eight special MX-X VNA trucks to handle mobile work platforms, ten RX 20 electric counter balance trucks, fleet management software FleetManager 4.x

Hellmann distributes bicycles across Europe for Derby Cycle

Hellmann Worldwide Logistics is a family-owned company in the fourth generation and moves goods, data and know-how around the whole world. With its successful cooperations and widespread partner networks, the logistics service provider offers a broad range of services. Since last year, Germany's highest selling bicycle manufacturer Derby Cycle also benefits from the connection to the new logistics centre to Hellmann's general cargo network. Well known brands such as Kalkhoff, Focus, Raleigh or Rixe, a strong sales team and the leading position in e-bikes in Germany stand for Derby Cycle. As a member of the Dutch Pon.Bike Group, the company from the north of Germany is also one of the leading manufacturers across Europe.

Besides warehouse services, the logistics expert Hellmann is responsible for the complete supply chain. This includes overseas imports, shuttle transports from production to the warehouse as well as outbound transports across Europe. Andreas Bothe, branch manager at Hellmann, underpins: "Shuttles move bicycles from our plant in Cloppenburg here to Emsteck. With our customised logistics concept we can handle the need of up to 5 000 bicycles delivered to over 50 countries from one central distribution point, and cope with seasonal fluctuations. Careful planning and frictionless handling along the complete supply chain is of great importance here." Besides good receipt, order picking and loading, warehouse management also includes repacking of bicycles from hood boxes to full boxes and the enclosure of user's manuals for the e-bikes.





The MX-X trucks guarantee greatest care in operating the warehouse.

Greatest care in warehousing by the MX-X VNA trucks with special design

The high bay warehouse comprises 24 aisles with 48 rack faces providing storage capacity for up to 150 000 bicycles. With respect to storage and transport, the high-value range of bikes requires greatest care. To handle the storage and retrieval process, STILL designed eight navigation-guided MX-X VNA trucks with a special construction to pick up stake racks. These customised working platforms are pushed onto the forks and are locked in place - for safety reasons the MX-X cannot enter the aisles as long as the lock is not closed. Secured with a roping system, the driver can walk on the platform and pick the needed bikes at heights of over ten metres.

Depending on the demand, up to three stake racks can be placed on top of each other, resting on mechanically suspended legs to save space. "In the old main warehouse of Derby Cycle in Quakenbrück, up to five metal racks holding the bicycles vertically could be stacked on top of each other. However, the frequent resorting wasted a lot of time. And as the business with e-bikes started to boom massively, it was urgent to find a space saving storage solution", adds Renke Wulff, responsible project manager for the MX-X trucks and the stake racks at STILL. By deploying VNA trucks in the furniture industry STILL had already gathered experience with fixed working platforms and mobile stake racks for bulky furniture on the MX-X trucks.



To pick the bicycles, the stake racks and the MX-X were specially designed by STILL.

A customised warehouse concepts creates transparency, raises flexibility and saves space, time and costs

The high bay rack occupies the complete space inside the hall right up to the ceiling. To allow using the lowest rack levels as well, the order picker trucks are operated without mechanical guidance and run on guiding wires. “During winter, we stored and retrieved several thousand bikes in hood and full boxes with four MX-X trucks every day. During the bicycle season this number will grow. The flexible application of the MX-X trucks makes performance scalable at any time”, explains Andreas Bothe.

To load the order picked bikes, ten STILL RX 20 electric counterbalance trucks are used. The fork pockets on the stake racks are set at 90 degree angles, so that the MX-X order pickers as well as the RX 20 counter balance trucks are able to move the racks.



During the bicycle season this number of delivered bikes will still grow. Due to the flexible use of the STILL order pickers, the performance is scalable at any time.

Warehouse navigation Optispeed 4.0 increases safety and productivity in the VNA warehouse

STILL Optispeed 4.0 is a driver assistance system that serves as an automatic warehouse navigator. It optimises the performance of the truck when handling goods as well as the performance of the operator with a semi-automatic approach function for the destination storage bays. With the interface to the warehouse management system LFS 400 from Ehrhardt und Partner, all the relevant coordinates are available to Optispeed 4.0.

“Therefore, we are able to distinguish between storage and retrieval of the load at the target position and automatically adjust the lift height to the respective task at hand. In addition, the spot lights light up the right storage position. This avoids mistakes and time consuming searches,” Lars Lemke, the responsible project manager for the navigation system at STILL, explains. This allows the driver to better concentrate on the storage and order picking jobs. The STILL navigation system consistently increases safety in warehousing, increases flexibility and together with this the overall productivity of the VNA warehouse.

Transparent truck biography thanks to FleetManager 4.x

The STILL FleetManager 4.x records every information about the truck from the assignment to the return of the truck, i.e. the usage history of all trucks in the fleet. Detailed maintenance reports offer demand based analyses and easy evaluation of



Optispeed 4.0 warehouse navigation from STILL leads to higher safety during order picking and increases productivity in the VNA warehouse by optimising truck speeds.

all available truck data. In addition, the transparent availability and duration of usage of the trucks improve fleet control. Furthermore, the balance utilisation of the fleet and maximisation of the worktimes eventually leads to a reduction in fleet size.

Summary

The customised concept for Derby Cycle's central warehouse creates transparency, increases flexibility and saves space, time, as well as costs. Greatest care in warehousing is guaranteed by the MX-X VNA trucks with special design. Optispeed 4.0 warehouse navigation from STILL leads to higher safety during order picking and increases productivity in the VNA warehouse by optimising truck speeds. The STILL FleetManager 4.x leads to better fleet control due to transparent availability and usage times of the trucks in the fleet. "During this pilot project, the experience, consultation and the extensive service provided by STILL were crucial for the success," Andreas Bothe wraps up the project success.

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