

Press release

Automated high-bay warehouse with tailor-made conveyor technology for Mayr-Melnhof Holz completed in Leoben

Munich, July 2024 – HÖRMANN Intralogistics is pleased to announce the successful completion of the state-of-the-art high-bay warehouse for the Mayr-Melnhof Holz Group in Leoben. The large-scale project sets a new standard for timber logistics with a high degree of automation, including truck loading.

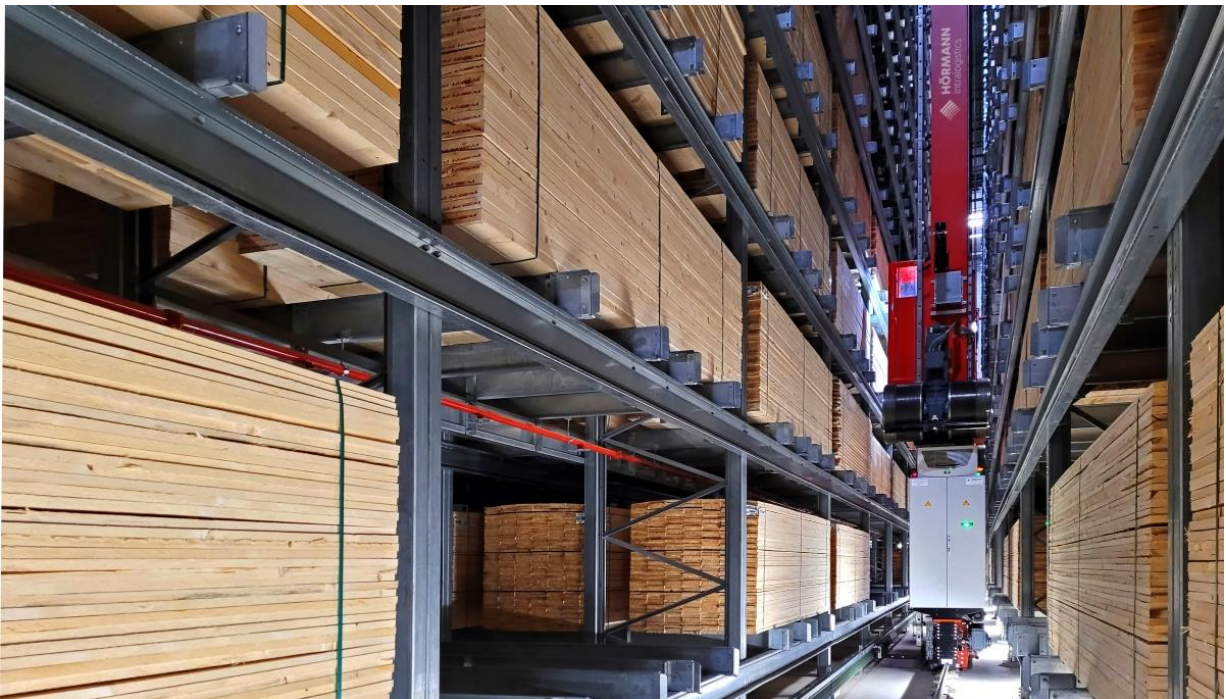


Illustration 1 3-aisle heavy-duty high-bay warehouse at MMH Leoben from the inside

Mayr-Melnhof Holz Holding AG, headquartered in Leoben, was founded in 1850 and is one of the leading European companies in the fields of sawn timber and wood processing. Around 1,630 employees are employed at nine locations. As the engine of the wood industry, market leader in the glulam segment and a driving force in the production of cross-laminated timber, the building material and material of the future, the long-established company relies on advanced, efficient plant solutions for the expansion and modernization of its plants.

At the sawmill site in Leoben, where the headquarters of the group of companies is also located, a modern, future-oriented intralogistics solution has been created, with an automatic,

HÖRMANN Intralogistics
Gneisenaustraße 15
80992 Munich
Phone +49 (0)89/14 98 98-0
info@hoermann-logistik.de

in    

Press:
External Marketing Annett Sachs
Khünburg 49 9620 Hermagor, AT
Phone: +43(0)4282 20570
a.sachs@marketing-extern.com

Marketing contact:
Nina Maresch
M: +49 160 595 1775
nina.maresch@hoermann-logistik.de

3-aisle high-bay warehouse as well as the connected conveyor technology for order-related sequencing, packaging, stacking and tour-oriented provision with subsequent truck loading in the loading hall, which is also semi-automated for the first time in a pioneering way. Based on the functional specifications of the logistics planner Xvise from Lauterbach (Austria), HÖRMANN Intralogistics had developed a convincing concept for Mayr-Melnhof Holz and received the general contractor contract for the implementation of this special intralogistics solution.

Stephan Dorn, Project Manager Implementation at HÖRMANN Intralogistics, comments: "This project was an exciting challenge, which we accepted with enthusiasm but also with due respect. The close cooperation with Mayr-Melnhof Holz enabled us to develop a tailor-made solution that is both efficient and forward-looking. We are proud of the result and the sustainable improvements it brings to our customer."

The Concept

The high-bay warehouse (HRL) as well as the logistics and loading hall were built on an existing plot of land next to the sawmill's existing production halls and directly adjacent to the newly built high-performance post-sorting and planing mill and the new high-tech cross-laminated timber plant. The conveyor system transports the timber packages from the sorting and planing mill to the high-bay warehouse. The timber packages are temporarily stored in the 3-aisle high-bay warehouse, which are stored on an order-by-order basis either for truck loading to internal and external customers or to the cross-laminated timber plant for further processing. For truck loading, the sawn timber packages are put together according to sequence and route, packed and stacked on request. A distribution wagon then transports the heavy-duty packages to the respective staging lane next to trailers in the loading hall.

Stefan Hierzenberger, Head of Group Logistics at Mayr-Melnhof Holz, adds: "The all-in-one concept of HÖRMANN Intralogistics has enabled us to revolutionize our logistics processes. The designed software control, sensor technology, innovative conveyor technology and seamless integration into our existing processes increase our efficiency and competitiveness. We are excited about the possibilities offered by this new facility."

Flexible and gentle material flow with innovative modular belt conveyor technology

The load units are bundled sawn timber packages with dimensions of up to 5.2 m long, 1.27 m wide and 1.30 m high, weighing up to 3,200 kg. In order to transport the parcels safely and gently on the conveyor system, HÖRMANN Intralogistics uses an innovative modular belt conveyor technology made of high-quality, lubricating oil-free plastic with integrated

HÖRMANN Intralogistics
Solutions GmbH
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80992 Munich
Phone +49 (0)89/14 98 98-0
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transport rollers. The parcels can be transported on it with and without squared timber. When it is taken over by the sorting and planing mill, all packages undergo a weight and contour check.



Illustration 2 Semi-automatic trailer loading zone with modular belt conveyors and lifting rams for up to 12 tons

Coming from the sorting and planing mill, the wooden packages are automatically accepted, checked and transported to the pre-zone of the high-bay warehouse. At the storage section, parcels up to 4.2 m / 2.7 t are positioned in the middle of the storage and retrieval machine (SRM) according to their lengths, and transferred from the stacker crane to 3-fold deep rack storage locations.

Order-related sequencing and gantry robot station for 3- and 4-pack stacks

The timber packages are then retrieved in sequence and tour. In this process step, there are additional sorting options directly on the conveyor system. For the most part, the packages are foiled fully automatically at the customer's request, underlaid with squared timber by a robot and strapped. After automatic labeling, the packages are stacked.

This takes place in the hall front zone, where up to four packages can be assembled from a straddle truck to a hub for truck loading. Two packets side by side and two packets on top of each other make up this hub.

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In the night zone of the high-bay warehouse, retrieval stitches have also been taken into account in each rack aisle. Here, sawn timber packages are retrieved and fed to the cross-laminated timber plant via a distribution car.

Intelligent intralogistics strategies with the HiLIS warehouse management system

Warehouse management, system control and system visualization are carried out with the proven HÖRMANN Intralogistics Warehouse Management System HiLIS, which communicates with the customer system via an interface. With 24/7 operating hours, HiLIS continuously receives removal and storage orders for the items to be loaded via an interface from the on-site HOST.

Facts

In this forward-looking showcase project for Mayr-Melnhof Holz, HÖRMANN Intralogistics' scope of supply included the rack steel construction, roof and wall cladding, storage and retrieval machines, special conveyor technology from HÖRMANN Klatt Conveyors, fire protection doors, high-speed doors, gantry robots for squared timber underneath or intermediate laying, parcel stackers, strapping machines, automatic sawing machine including chippers, labellers, inkjet labelling, loading crane and the HiLIS WMS, as well as the PLC system control incl. Plant visualization.

Project data:

- High-bay warehouse, 3-aisle in sewer technology
- 3 two-mast storage and retrieval machines, each with 2 synchronous canal vehicles
- Dimensions HRL 125 x 33 x 35 m (L x W x H)
- Storage capacity 7,914 parking spaces
- Storage and retrieval capacity of at least 63/72 parcels/h each
- Operating hours 24/7
- Modular belt conveyor technology with integrated transport rollers for transporting parcels with and without shims
- Order-related sequencing over 3 high-bay aisles with parcel stacker for the formation of 1-4 strokes with HiLIS WMS
- Packaging line with automatic package wrapping, strapping lines with automatic shim feeders
- Marking Systems, Labeling and Ink-Jet Marking

Eberhard Keppler, Sales Project Manager at HÖRMANN Intralogistics adds:

"Our task was to bring the material flows planned by Xvise to life with precise detail work and innovative technology. The realization of this project shows the incredible automation

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possibilities even for heavy-duty packages with high throughput. We would like to thank Mayr-Melnhof Holz for their trust and excellent cooperation. Together, we have set a new standard and are looking forward to future projects."

Assembly began in October 2021, commissioning in 2023 and handover in 2024.

www.hoermann-intralogistics.com, July 2024

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