

PRESS RELEASE

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Automated train loading at ŠKODA with Vollert train handlers

Two automated Vollert loading cranes ensure quick unloading of vehicle batteries for e-car production from trains at ŠKODA's headquarters in Czech Mladá Boleslav. Automation reduces lading times while increasing safety in handling of sensitive batteries.

Two Vollert crane systems referred to as train handlers have been unloading freight cars with e-car batteries in parallel operation on a travelling distance of 107 m at the ŠKODA plant in Mladá Boleslav since mid-2022. They are equipped with four fork tines and a lifting force of up to ten tons each. After opening of the car doors, the train handlers will independently determine the position of the battery transport racks, taking out two racks at a time. Manoeuvring space is ensured by the crane tracks on stands with a crane bridge and a control unit that is travelling along. The limited structure gauge and narrow space has led to suspended installation of the trolley with hydraulic lifting device in order to save space. A pivoting unit permits depositing of the battery racks at an angle of 90° on the subsequent conveyor track towards the ŠKODA production.

Securely loading and unloading migrating trains

"Automation of train loading and unloading clearly accelerates processes. We are about three times as fast as we would be in manual operation of two forklifts. That is also due to the fact that we alternate the return of empty transport racks to the trains," Jochen Keinath, head of surface technology sales at Vollert, explains. The accident and damage risk are also much reduced, both for the cars and on the sensitive batteries. This is made possible by the reliable safety system used in the Vollert train handlers. It ensures safe interaction between man and technology while also reliably recognising the actual placement of the trains. Once the train has arrived, the train handlers will perform a reference run along the cars, similar to that of a parking assistant. They also keep checking the car position while loading later, since these will "migrate" as their weight changes. That means that the deflection will cause them to move in height and length alike. Vollert's train handlers adjust their own position accordingly.

Flexibility in spite of automated processes

In order to perform loading speedily, the train handlers will usually pick up two transport racks at a time. The process must remain flexible nevertheless – e.g., if there is an odd

number of transport units. Therefore, the fork tines can be automatically adjusted sideways, moved together and apart, and fully folded up hydraulically to permit individual transport as well.

Highest reliability for just-in-time production

In addition to greatest safety, reliability is vital in the automotive industry. The two train handler systems by Vollert are designed redundantly to avoid standstill of the plant in any case. They can supply the entire loading area individually as well. A secured maintenance position for each train handler permits free movement on the shared crane track in that case. Beyond this, simple maintenance was very important to ŠKODA, along with short repair times and easy accessibility and replacement of components.

Vollert designed the two train handlers using decades of know-how in track loading since the intralogistics experts have already developed similar plants for loading of beverage crates, aluminium coils, or fertilisers. Vollert can derive its knowledge of sensitive battery handling from its fully automated battery change stations for automated guided vehicles (AGV) in harbour logistics, where Vollert fully automatically replaces twelve-tons-heavy battery trays within five minutes, taking them to a high-bay warehouse for charging.

About Vollert Anlagenbau GmbH

As specialists for heavy loads and large parts, Vollert Anlagenbau GmbH develops turnkey intralogistics concepts for the aluminum and metal industry. As a general contractor and full-service provider, the service range encompasses state-of-the-art material flow, storage and packaging technology as a stand-alone solution or integrated into a larger logistics environment.

Whether fully automated mega-high bay systems for aluminum coils, intelligent material flow systems for the leading aluminum extrusion press manufacturers, the world's most efficient stacker cranes for the storage of sheet metal plates, automatic crane systems for 50 tons and more or the most modern surface coating systems – Vollert is everywhere.

Vollert's plant and machine solutions are deployed in more than 80 countries around the world and in Asia and South America the company's own subsidiaries strengthen in addition the sales activities. Vollert employs more than 300 people at its company headquarters in Weinsberg. **www.vollert.de**

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With its train handler systems, Vollert offers automated solutions for train loading even for sensitive products such as batteries for e-cars. ŠKODA is using two systems for quick and damage-free train unloading at its Czech headquarters for this.