

PRESS RELEASE

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Large-part painting systems designed around the corner

For LEWA as a special pump manufacturer and HAMM as a manufacturer of rollers for road construction and earthworks, Vollert developed and installed new floor-guided and overhead material flow systems for surface coating of parts weighing up to 12 tons. While high cycle times are crucial at HAMM, at LEWA for the first-time workpieces weighing tons travel 90° around the corner and thus enable an extremely compact system layout.

On the one hand, at LEWA in Leonberg, special pumps weighing up to 12 metric tons were supposed to be cycled in the drying process one after another as with a circular chain conveyor; on the other hand, however, the coating system needed to be constructed in an especially compact and space-saving way. Because such tight radii are not possible with a circular conveyor, the engineers at Vollert developed a new type of solution with turning elements on the ceiling-guided rails and on the chassis of the friction-gear product carriers.

Guide rails run straight around the corner

The system from Vollert does not follow a larger radius or a curved path; rather, the product carriers with the workpieces are brought directly “around the corner” by 90° and in a maximal space-saving way. For this purpose, the guide rails within the dryer are split at two places – the layout of the chassis of the product carriers makes it possible to bridge the gap without problems. After the arrival in the 15m-long dryer, the two parts of the guide rails turn 90°, while the product carrier, thanks to the rotatable suspension bracket, maintains its position. After that, the product carrier travels transversely to the side, cycled together through the dryer. At the end, conversely, pivoting guide rails enable the piece to exit longitudinally to the post-processing and to the loading and unloading manipulator. “All workstations have a place in an area of only 15 x 25 m: loading and unloading manipulator, wash cabin, coating cabin, dryer and post-processing,” explains Jochen Keinath, project manager from Vollert. It is thus possible to cycle up to seven product carriers with a total load of 84 tons simultaneously in the tightest space.

Road rollers in a 10-minute cycle

At HAMM in Tirschenreuth, the bar was equally high. Thanks to a sophisticated logistics concept, the roller manufacturer has the most modern roller factory in Europe. The requirements for the new coating are correspondingly ambitious: Every 10 minutes, a roller drum leaves the system – with a weight of up to 10 metric tons.

The roller drums are painted complete with the mounted drive and oscillation technology. Because only the sides are painted, the developers from Vollert were able to rely on floor conveyor technology this time. Two distribution trolleys, arranged centrally to the work cabins, automatically transport the roller drums, which are stored on skids, to the free workstations, slide them off and pick up the finished ones. The trick thereby lies in the optimal interaction, which was calculated by Vollert in advance through a simulation: While one of the distributor trolleys exclusively serves the preparation and wash cabin area on a short stretch, the second is designed as a long-distance runner in a double version. Thus, on each trip, it can bring in one roller drum and carry out one roller drum, with a short drive in between.

About Vollert Anlagenbau GmbH

As specialists for heavy loads and large parts, Vollert Anlagenbau GmbH develops turnkey intralogistic 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 storage and retrieval machines 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 used in more than 80 countries worldwide. Its subsidiaries in Asia and South America also strengthen the sales activities. Vollert employs 250 people at its company headquarters in Weinsberg. www.vollert.de

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Image 1

For LEWA, Vollert developed an extremely compact coating system for loads up to 12 metric tons. In an area of only 15 x 25 m, there is space for the loading and unloading manipulator, wash and coating cabinets, dryer and post-processing.

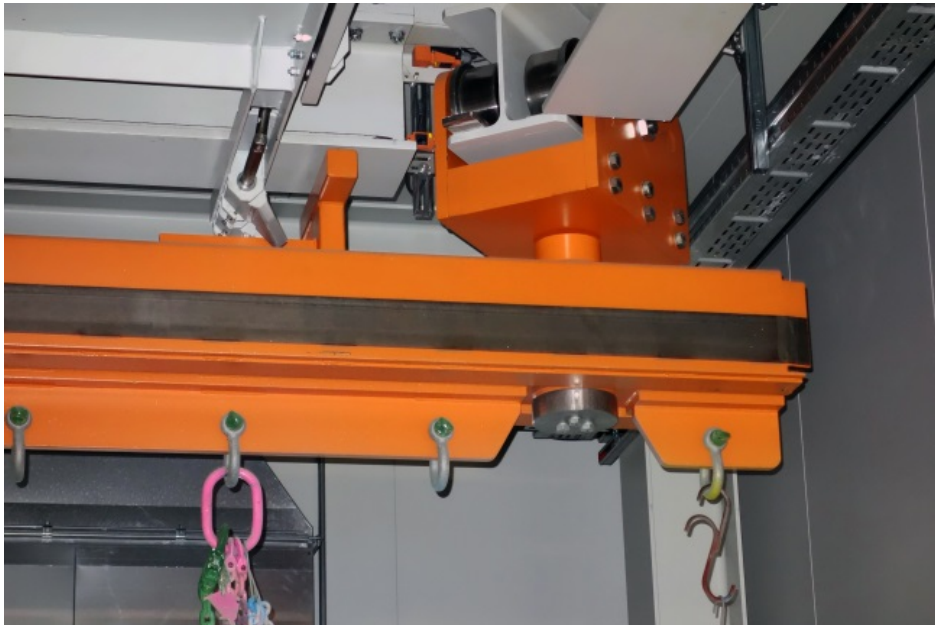


Image 2

A new type of guide rail turning solution at LEWA enables travel around corners by 90° inside the dryer.



Image 3

For the asphalt-roller manufacturer HAMM, Vollert develops and constructs as general contractor a floor-guided coating system with distributor trolleys for loads up to 10 metric tons. A simulation showed in advance that the solution as single and double distributor trolleys at HAMM achieves the optimal cycle time.