

PRESS RELEASE

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World's First Fully Automated Indoor Tire Testing Facility

Up and away – Continental exchanges 75 meters of test track in a matter of minutes

Anything but small, the exchangeable pavement cassettes used in the world's first fully climatized indoor tire testing facility from Continental weigh more than 100 tons and measure 75 meters in length. The facility allows the tire manufacturer to conduct 100,000 dry and wet brake tests per year using up to five different sections of test pavement. Vollert developed the system that quickly changes the cassettes.

Continental recently commissioned the world's first fully automated indoor tire testing facility on the Contidrom proving grounds north of Hannover. The climate-controlled building, which measures 300 meters in length, features a linear drive that accelerates an unoccupied vehicle up to 120 km/h down a 100-meter track much like a roller coaster. The vehicle then rolls across the test pavement, as it is braked. Tests can also be performed on wet or dry pavement as required which, unlike conventional outdoor testing, allows initial results to be verified with much higher levels of accuracy. This flexibility makes Continental the first tire manufacturer to be able to test tires in a sheltered environment all year round in the same location.

Moving 75-Meter Test Pavement with Millimeter Precision

Vollert Anlagenbau developed the interchangeable sections of test pavement for this unique project, which was particularly challenging because a one-off transport solution had to be devised to transversely move the 100-ton, 3.7-meter wide, 75-meter long sections absolutely parallel and with exacting precision across the floor. "This was not a trivial task by any means, since the bulky cassettes cannot deviate in alignment by more than +/-1 mm", reports project manager Jürgen Hesselbarth from Vollert. The system installed uses seven frequency-controlled cross-lifting cars that move underneath the pavement cassette in synchrony, lift it via hydraulics, travel to the new position at 0.3 m/s, and set it down on roller blocks. Lasers are employed at this time to continually measure the exact distance to the wall and correct travel paths accordingly. Friction wheels then take the cassette down the test track to the buffer area. A total of 14 crosslifting cars, 420 roller blocks, and 56 friction wheel drives configure the track as required and delay testing for no more than 10

to 15 minutes. To ensure that the contact surfaces wear evenly, the cassettes can be offset to the right or left by 200 mm. Vollert intralogistics technology not only coordinates activities indoors, but are also used for an outdoor test track. The selection of pavement currently being tested on will likewise be expanded to include additional variants.

24-Hour Testing, 365 Days a Year

Continental's new testing facility enables round-the-clock testing in a controlled indoor environment. This is particularly beneficial in the winter, when the elements make testing very difficult on the Contidrom. Now, the company can carry out its test program on schedule and always under the right conditions.

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

14 transversely mounted lifters, 420 roller blocks, and 56 friction wheel drives transport the 100-ton pavement cassettes in the world's first indoor tire testing facility. Five different types of asphalt are used in carrying out the brake tests.



Image 2

SOURCE: Continental



Image 3

Tire maker Continental has put the world's first indoor tire testing facility into service on the Contidrom proving grounds in Hannover. The building, which measures 300 meters in length, can accommodate 100,000 brake tests annually while maintaining consistent testing conditions regardless of the outside weather.



Image 4