A 3D architectural rendering of the DEKRA Battery Test Center. The building is a large, modern industrial structure with a flat roof and large windows. The DEKRA logo is visible on the side of the building. In front of the building is a paved road with a crosswalk and some greenery, including trees and grass. The sky is clear and blue.

Environmental Testing for Batteries DEKRA Battery Test Center

Safety and reliability of batteries under extreme environmental conditions

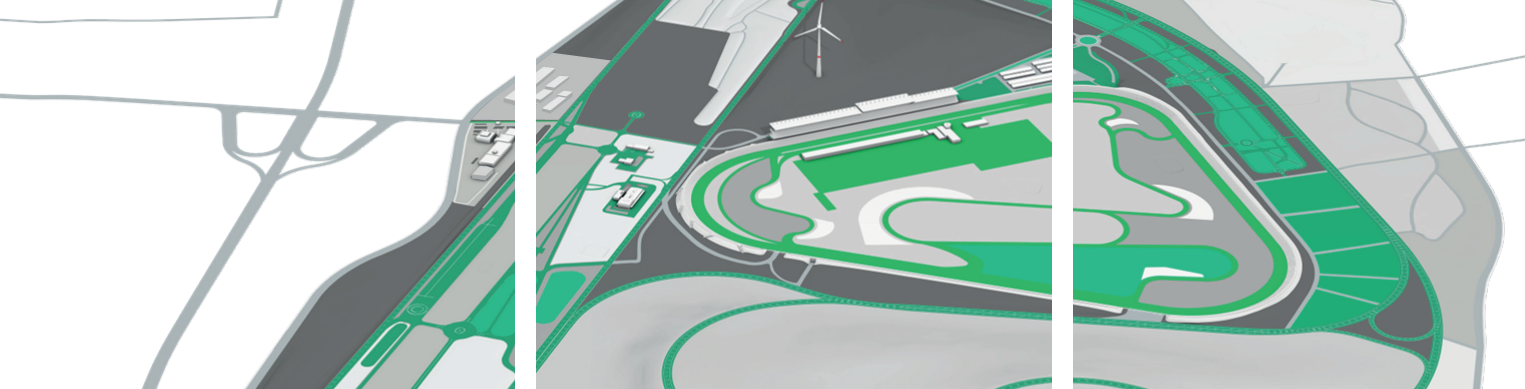
The reliability and durability of batteries are essential to their success on the market. Environmental factors such as temperature, humidity, and mechanical stress can impact the performance and safety of batteries. Environmental testing is essential to ensure batteries function reliably under the toughest conditions and meet strict quality and safety requirements. Our tests guarantee that your batteries can withstand extreme conditions and maintain their functionality.

Why is DEKRA the right choice?

- ▶ **Comprehensive experience:** Our experts have many years of experience in conducting environmental tests for batteries.
- ▶ **State-of-the-art testing environment:** Our Battery Test Center is equipped with cutting-edge technology to ensure precise and reproducible test results.
- ▶ **Regulatory expertise:** We guarantee that your products meet international standards and support you in meeting all relevant regulations.
- ▶ **Holistic approach:** From single module testing to complete battery systems, we are your one-stop shop.
- ▶ **Global network:** Our international presence and state-of-the-art testing facilities give you a competitive edge.

Service overview

Our environmental tests are based on international standards and offer comprehensive testing for battery cells, modules, and packs. With advanced technology and solid expertise, we ensure that your products meet the highest quality and safety standards.



Our tests at a glance

► **Temperature and climate chambers:** Our chambers (up to 20 m²) simulate temperatures from -45°C to 130°C and allow heating or cooling of test objects weighing one ton at 5 K per minute. With a capacity of up to 1 MW, we ensure conditions are as realistic as possible.

► **Dust tests with cycling:** We intensify testing by introducing dust specifically tailored to your requirements.

► **Splash water tests:** Test the tightness of your batteries and modules under controlled water exposure at high loads.

► **IP protection rating tests:** We test the resistance of your products to water according to IPx6k, IPx7/8, and IPx9k – including splash water tests – and to dust in accordance with protection classes like IP5x or IP6x.

► **Altitude simulation and vacuum tests:** Ensure the reliability of your products under extreme altitude and pressure conditions.

► **Corrosion/salt spray test:** Simulate the long-term effects of salt and test the corrosion resistance of your products, including climate tests with dew point formation and variable salt concentration.

► **Ice water shock test:** We check the resilience of your batteries to extreme temperature changes and supplement stress scenarios with salt concentration.

With automated processes and the option of documentation and video monitoring during testing, we deliver fast and reliable results, while customized solutions cover specific test requirements. Our precise environmental testing minimizes failure risks and ensures battery safety.

Whether individual cells, modules or complete battery systems - at the DEKRA Battery Test Center we test your products under realistic conditions with the highest precision. Contact us today to learn more about our testing services.

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Environmental testing for batteries:
Ensure your batteries withstand extreme conditions.

Learn more now!

