# Press release

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## Safely testing energy storage devices

**What you should be paying attention to when testing batteries**

**Munich, 13 November 2018 - With the e-mobility megatrend, very high-performance electric storage systems are becoming ever more important – accompanied by a likewise increase in demands on their safety and reliability. To ensure that these storage systems work properly, they are put through their paces under a wide variety of conditions. The usual tests include, for example, the standard state-of-charge (SoC) temperature and climate tests as well as other tests under extreme thermal, climatic and mechanical conditions. With a rising energy density, however, the risk also rises. For this reason, a number of factors must be considered when selecting a suitable test system.**

**Risky testing**

If a storage system is subjected to a test, for example a temperature test, overload conditions or malfunctions can occur. The consequences of such events can range from minor damage and leakage, through fires, to the complete destruction of the storage device by way of explosion. With the ever increasing size of energy storage devices, the impact of a possible malfunction becomes larger and the potential danger when testing electrochemical batteries looms larger. If a deflagration or even an explosion occurs inside the test space, the test and laboratory equipment may be damaged as a result. Laboratory employees might also be affected in such a case. It is therefore hardly surprising that operator protection is at the top of the list when designing test systems for electrochemical storage systems.

**Safety first**

Test chambers and systems are equipped with extensive safety devices to ensure that people, the laboratory and the objects inside are optimally protected. These devices are designed to prevent explosions and limit the effects of a malfunction as far as possible from the very outset. They include, for example, measuring devices to monitor gas concentration and composition, fire detectors, warning devices and various pressure relief devices. For the case of an explosion, attention is paid to a pressure-resistant construction and reinforced seals when designing the test space.

**From standard to customised**

As the world's leading specialist for safe, reliable and versatile environmental simulation systems, Weiss Technik offers solutions for all relevant testing tasks in the field of energy storage. The company offers equipment for almost the entire array of battery tests. This includes temperature and climate tests, dust, corrosion and temperature shock tests, splash water tests as well as immersion tests. In addition, we offer test systems for damp heat tests, vibration tests and multi-axial shaker tables (MAST). Weiss' solution portfolio ranges from time-proven standard solutions to tailor-made large-scale systems.

“In order to realise the optimal testing system, it is important to understand the test specimen and the testing task down to the last detail and to assess all possible hazards accurately,” says Jürgen Plumm, Head of Pre-project Planning at Weiss Technik. “In addition, we have to understand the customer's safety philosophy and the local conditions on site. Based on this hazard analysis, we then derive the safety concept and plan all the trades required for the testing system.”

**Find out more about our test chambers for lithium-ion batteries!**

Hall A3, Booth No. 432

Further information is available at **www.weiss-technik.com**

(3,516 characters incl. spaces)

**Photomaterial:**

ClimeEventKompakt.png: Climate test chamber ClimeEvent can be modified according to the hazard assessment.

ClimeEventXXL.tif or ClimeEventXXL-mitWagen.jpg: When size matters, Weiss Technik offers walk-in, drive-in and customised test chambers.

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**The Weiss Technik Companies**

The Weiss Technik Companies offer under the slogan - Test it. Heat it. Cool it. - solutions that are used around the world in research and development as well as in the production and quality assurance of numerous products. A strong distribution and service organisation with 22 companies in 15 countries at 40 locations ensures optimum customer support and guarantees a high degree of operational safety. The brand **weiss**technik® includes individual solutions for environmental simulation, clean rooms, climatic engineering, air dehumidification as well as containment solutions. With the test systems from the field of environmental simulation, different environmental influences around the globe can be simulated in time-lapse. The product is tested under real load for its functionality, quality, reliability, material resistance and service life. The dimensions of the test equipment range from laboratory test cabinets to test chambers for aircraft components with a volume of several hundred cubic meters. The Weiss Technik Companies are part of the Schunk Group based in Heuchelheim near Gießen, Germany.

**Schunk Group**  
The Schunk Group is a globally active technology group with over 8,200 employees in 29 countries. The Group offers a wide range of products and services in the carbon technology and ceramics, environmental simulation and air-conditioning technology, sinter metals and ultrasonic welding sectors. In 2017, the Schunk Group generated a turnover of around 1.2 billion euros.