

## **Unitemp to showcase ESPEC's new dedicated chamber for safe battery charge-discharge testing at Battery Tech Expo**



The Battery Tech Expo 2021 runs 12th October at Silverstone and will bring together the latest technologies and services involved in the battery technology covering battery storage, battery management systems, fuel cell technology, lithium-ion batteries to name a few. The event will welcome senior decision makers and users from across the power industry who share a professional interest in the technology and science of battery technology.

Unitemp, exhibiting on stand 19/20, will be demonstrating the new Espec BTC series, dedicated temperature chambers for battery charge / discharge testing.

As batteries become increasingly high capacity for the full-scale use of EVs, more and more safety features and chamber strength are required for the associated charge/discharge tests. During the tests, there is a possibility of gas leakage from the battery, ignition, smoking, or destruction. The Espec BTC series temperature chamber is specially designed for the safe and reliable testing of rechargeable battery charge and discharge applications. It features a number of new characteristics designed with ease of use and safety in mind.

The chamber includes an extra-large pressure relief vent (300 x 700 mm), which can quickly release the pressure inside the chamber in the event of an explosion and reduce damage.

The built-in gas detector and air supply / exhaust damper further improves operator safety.

It is the first Espec chamber to use a toggle clamp latch to securely lock the door with total ease and again, no compromise in safety.

Temperature difference between batteries under test is minimised with a function to select the air flow direction from "horizontal" or "vertical". The optimum direction can be selected

according to the type of the secondary battery (cylinder / pouch / square) and how they are positioned in the chamber and a better temperature uniformity in the test area achieved.

Efficient wiring to the battery cells increases the safety of the experimental area and saves space. The BTC chamber is equipped with square cable ports on both sides and a round cable port on the back, allowing the customer to create the optimal layout.

The floor load capacity in the chamber is 300 kg, which is strong enough to install a jig for battery installation and a large number of batteries.

Designed with safety as a top priority, the BTC safety features can be adapted individually, according to customer specifications.

Ron Brown, Chairman and Managing Director of Unitemp said “The introduction of this latest BTC Series cabinet cements Espec’s position at the forefront of battery testing technology providers. The chamber brings together years of experience in providing EUCAR Level chambers.”

The Unitemp team will be on hand at the Expo next to demonstrate the BTC test chambers, amongst others, and discuss any queries visitors may have.

Jack Brown, Sales Director of Unitemp, commented “The Battery Tech Expo is the UK’s largest exhibition dedicated to the advancement of battery technology, and a great opportunity to showcase our solutions to a dynamic audience at an exciting event. We are thrilled to be showcasing our solutions for environmental battery testing.”

Battery testing is at the forefront of Unitemp’s current success. They are playing a critical role in supporting research at the University of Warwick which aims to establish new battery chemistries and manufacturing techniques. The mission of researchers at the university’s state-of-the-art facilities is to fabricate a new generation of batteries which will outperform the existing ones to deliver higher energy density, cheaper, safer and longer-lasting. Arrival, the London based commercial electric vehicle company has also recently invested in the BTC chambers, to help in the development of new and improved battery technologies. The Arrival Bus will commence trial productions in the U.K. at the end of this year, and the first Arrival Vans will be built in the U.K. by the third quarter of next year.

**Editor's Note:**

Unitemp Ltd is a specialist environmental engineering company that offers testing equipment for tough environmental conditions, whether they be temperature, humidity, vibration, highly accelerated stress screening, or highly accelerated life test. It is the UK distributor for the world-renowned range of ESPEC environmental test chambers and has a proven track record of integrating modern electronics and control technology with mechanical refurbishment to improve performance and investment. Unitemp also specialises in the design, installation and commissioning of modular custom environmental rooms. For more information on Unitemp Ltd and its products, please contact Jack Brown on +44 (0)1628 860611.

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