



# Technology News

February, 2011

## Environmental Test Chamber for Lithium Ion Batteries & Fuel Cell

Solution from Weiss Umwelttechnik GmbH :



Weiss not only has extensive series production safety equipment as standard test units.

Special add-on components can be supplemented for testing lithium-ion batteries.

A comprehensive safety strategy guarantees that these systems are run at a low level of risk.

Additional STB safety temperature limiters to limit the maximum test chamber temperature at a very high level of reliability even if the test cabinet is malfunctioning.

Forced cooling for the system to +20 °C with a test bed guard provided by the customer with a potential-free contact

Compressed air purging at 10 x the ventilation rate

Monitoring the test chamber for CO<sub>2</sub> rise to identify leaks in overloaded cells

Monitoring the test chamber for CO<sub>2</sub> rise to identify leaks in overloaded cells

CO<sub>2</sub> flooding equipment (inert gas purging) with CO detection. Inerting/cooling

N<sub>2</sub> inerting without measuring O<sub>2</sub>

N<sub>2</sub> inerting without measuring O<sub>2</sub>

N<sub>2</sub> inerting while measuring O<sub>2</sub>

Pressure relief for the test chamber with tested rupture membrane, a reinforced test chamber and additional door interlocks

Electromechanical door lock

Applications of these types of chambers would be for testing of:




Mobile phone batteries

Laptop batteries




Batteries for Digital Cameras

Fuel Cell

Types/Varieties of Test Chambers as per application that can be offered for testing purposes:

Temperature and climate test chambers	Temperature test chambers	Stress Screening test chambers
 <ul style="list-style-type: none"> <li>+ CO<sub>2</sub> inert gas purging</li> <li>+ H<sub>2</sub> concentration measurement</li> <li>+ CO<sub>2</sub> concentration measurement</li> <li>+ CO concentration measurement</li> <li>+ Safety temperature limiter</li> </ul>	 <ul style="list-style-type: none"> <li>+ CO<sub>2</sub> inert gas purging with quick-release valve (manual/magnetic valve)</li> <li>+ CO concentration measurement</li> </ul>	 <ul style="list-style-type: none"> <li>+ Heavy-duty floor to 500 kg</li> <li>+ H<sub>2</sub> concentration measurement</li> <li>+ CO concentration measurement</li> <li>+ N<sub>2</sub> inerting instrument</li> <li>+ Overpressure rupture plate</li> </ul>

Other types of chambers:

Emission Test Chambers	Vibration Test Chambers	Thermal Shock Chambers
 <p>H<sub>2</sub> concentration measurement CO<sub>2</sub> concentration measurement</p>	 <ul style="list-style-type: none"> <li>+ CO<sub>2</sub> inert gas purging with quick-release valve (manual/magnetic valve)</li> <li>+ CO concentration measurement</li> </ul>	 <p>CO<sub>2</sub> inert gas purging H<sub>2</sub> concentration measurement CO<sub>2</sub> concentration measurement CO concentration measurement</p>

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**Structural Solutions Private Limited**

Hyderabad Office: 3-6-271, Second Floor, Sudheer Tapani Towers, Himayath Nagar, Hyderabad-500 029  
Phone: +91-40-2322 2380 / 81 / 82 / 83 Fax: +91-40-2322 2384 E-Mail:sales@stsols.com

Bangalore 080-2354 8889	Chennai 044-2626 9904	Delhi 011-4176 7790	Kolkata 033-2462 5429	Mumbai 9322057333	Pune 020-25530540	Trivandrum 9349026213
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