The Research Battery Calorimeter from THT

Battery Performance Calorimeter for Thermal Management Efficiency and Life-cycle studies suitable for cell, module and small pack testing at environment temperatures
Specification

Calorimeter Assembly:
- Oval, aluminium, 5mm wall thickness, 6mm lid and base
- 65-50cm diameter
- 50cm deep
- Heating with PID control, cooling with refrigerated circulating bath.
- Built in thermally guarded cycler connectors to minimise heat loss during cycling
- Pressure measurement capability
- Operation modes: Isothermal or Adiabatic

Temperature range: -30°C* to +120°C
Temperature measurement: Type N thermocouple
Temperature sensitivity: 0.01°C
Temperature accuracy: 0.1°C
Detection sensitivity: from 0.01°C/min
Pressure measurement: 0 - 10 bar
Pressure accuracy: 0.5%

*dependent upon external chiller

Calorimeter Assembly: Functionality

Standard Features
(1) Two stage insulated calorimeter construction
(2) Internal cooling coil (connection to chiller)
(3) Internal dry gas purge (preventing ice formation)
(4) Ancillary Ports Unit
  - Offers ability to implement options & functionality such as pressure measuring, inertion, video, heat capacity or surface temperature distribution measurement.

Safety Features
Electronic Cut Out
- Software & Hardware cut out features will automate cooling.

Optional Features

Options are available from THT to increase the functionality of the BPC

(1) Surface Temperature Distribution (Multipoint Option)
  - Ancillary port available to allow THT Multipoint Option (8-24 thermocouple) to be implemented during test to monitor surface temperature variation.

(2) Heat Capacity Measurement Cp Option
  - Ancillary port available to allow the THT Heat Capacity Option (CPO) to be used.

Specification above subject to change.