

## Multi-Zone Temperature Chamber

### Product Description

Arbin's Cell-Isolation Thermal Safety Chamber (**MZTC**) contains **8 independently-controlled** temperature mini-chambers. Insulation and protection between each chamber provides greater temperature control and a **safe** testing environment by **isolating** each cell or pair of cells.



The small, independent chambers ensure a **stable** and **uniform temperature** for all cells without temperature fluctuation that oversized chambers suffer. Isolating cells this way provides **greater independence** to access and monitor the devices under test, and prevents a weak or failed cell from affecting others during testing.

Over 10 different battery trays are available to accommodate a variety of cell types and **make connections easy**, along with racks to hold up to 6 MZTC's (upto 192 cells).

### Product Highlights

- Each of the **8 independent chambers** are isolated and allow a **unique** temperature setpoint.
- The MZTC's patented design ensures a stable and **uniform temperature** for all cells without hot/cold zones like oversized chambers suffer.
- Provides a simple solution for cabling and connections between tester and cells with interface trays for all cell-types.
- MZTC uses **corrosion-resistant** and **thermally insulated** materials for all seals creating a safe and robust product.
- Large **LCD touchscreen** will display temperature setpoint and measured temperature for each chamber.
- Start & stop tests on an individual cell without affecting others in the chamber.
- Control the chamber using Arbin's **MITS Pro** software or use the digital display and push button control for manual operation when used stand-alone.
- **Racks** are available to hold up to 2, 3, 4, or 6 MZTC's (up to 192 cells).



#### # Independent Chambers

8 isolated chambers

#### Interior Dimensions

4.5W x 7D x 3H inches

#### Exterior Dimensions

12.5W x 16D x 22H inches

#### Total # of Cells Allowed

8-32\*

#### Temperature Range

10~60°C

#### Control Accuracy

±0.5 °C

#### Maximum Current Allowed

Up to 60A\*

\*Determined by tray type used to interface with cells.

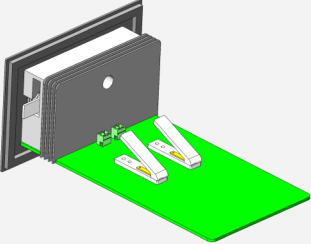
**“Isolating high capacity cells like Arbin’s Multi-Chamber design is the best way to maintain uniform temperature and ensures a safe testing environment.”**

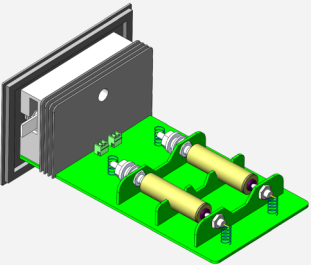
### Safety Features

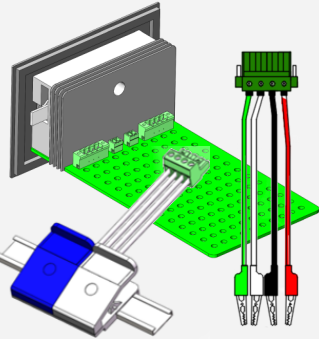
- Each chamber is equipped with a **pressure relief valve** to provide protection in the case of gassing or thermal events.
- Built-in **over-temperature protection** integrates with Arbin cycler to automatically stop tests on any cell that is out of tolerance.

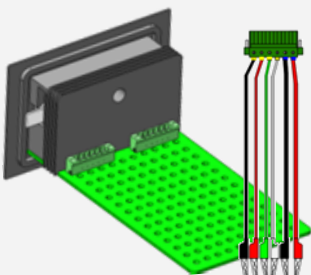
## Battery Tray Types

Each mini-chamber of the MZTC **must use** an interface tray. Trays include a **thermistor port** for external temperature sensor for each cell. **\*\*Note:** The 4-cell Coincell tray and 10A Universal clips with reference electrode do not contain thermistor ports.

<b>Coincell</b>		<b>Coincell Tray for MZTC</b>	<b>5A Tray (2 cells) (PN 413820)</b>	<b>5A Tray (4 cells) (PN 413822)</b>
		<b>Max Current</b>	5A	5A
		<b># of Cells</b>	2	4
		<b>Cell Dimensions</b>	ØD < 30mm H = <7mm	
		<b>Internal Resistance</b>	<5mΩ	<5mΩ

<b>Cylindrical Cell</b>		<b>Cylindrical Cell Tray for MZTC</b>	<b>10A Tray (2 cells) (PN 413824)</b>	<b>30A Tray (1 cell) (PN 413832)</b>	<b>60A Tray (1 cell) (PN 413836)</b>
		<b>Max Current</b>	10A	30A	60A
		<b># of Cells</b>	2	1	1
		<b>Cell Dimensions</b>	18 < ØD < 21mm 55 < L < 75mm		
		<b>Internal Resistance</b>	<10mΩ	<10mΩ	<10mΩ

<b>Pouch Cell &amp; Universal Clips</b>		<b>Pouch &amp; Universal Tray for MZTC</b>	<b>10A Tray (1 cell) (PN 413828)</b>	<b>60A Tray (1 cell) (PN 413840)</b>
		<b>Max Current</b>	10A	60A
		<b># of Cells</b>	2	1
		<b>Cell Dimensions</b>	W < 4 inch L < 6 inch Connection must be specified for pouch clips or alligator clips.	
		<b>Internal Resistance</b>	<10mΩ	<10mΩ

<b>Universal Clips with Ref Electrode</b>		<b>Clips with Ref Electrode Tray for MZTC</b>	<b>10A Tray (2 cells) (PN 413830)</b>
		<b>Max Current</b>	10A
		<b># of Cells</b>	2
		<b>Cell Dimensions</b>	W < 4 inch L < 6 inch
		<b>Internal Resistance</b>	<10mΩ

**For Arbin MSTAT with built-in reference electrode**