

Introduction: The manufacturing of Lithium-Ion cells involves highly sensitive chemical processes. SJ Industrial Ovens provides the precision thermal equipment required for electrode coating, drying, and cell aging, ensuring the safety and performance of the final battery pack.

CRITICAL THERMAL PROCESSES

1. Electrode Slurry Drying (Anode & Cathode)

The Challenge: After coating the current collector foil, the slurry contains solvents (like NMP) that must be removed rapidly yet evenly to prevent cracking or delamination.

Our Solution: High-efficiency *Conveyor Drying Ovens* with floating nozzle technology for double-sided drying.

Tech Specs:

- Temp Accuracy: +/- 1°C
- Airflow: Laminar flow to prevent coating disturbance
- Feature: Solvent Recovery System compatibility

2. Vacuum Baking (Moisture Removal)

The Challenge: Even trace amounts of moisture can react with the electrolyte to create hydrofluoric acid, degrading the battery. Deep drying is mandatory.

Our Solution: *High-Vacuum Batch Ovens* designed for deep moisture extraction.

Tech Specs:

- Vacuum Level: Up to 10^{-2} Torr
- Heating: Radiant or Conductive Shelf heating
- Atmosphere: Nitrogen back-fill capability

3. Cell Formation & Aging

The Challenge: The Solid Electrolyte Interface (SEI) layer forms during the first charge. This requires strictly controlled temperatures.

Our Solution: *Walk-in Aging Chambers* with multi-point data logging.

WHY CHOOSE SJ OVENS?


Clean Room Ready


Class 100/1000 compatible designs with HEPA filtration to prevent contamination.

Explosion Proof

Safety panels and NFPA-compliant venting for handling volatile solvents (NMP).

 Sales: 9768072730 | 9820315252

 sjindustrialovenssales@gmail.com

 Shop No. C-11, A.K. Industrial Estate, Vasai (E), Palghar - 401208