

Prismatic Lithium Battery Cell Hot Press Testing Machine Type 200

Item Number: CD-9



Introduction

Engineered for prismatic lithium battery cell shaping and quality assurance, this heated press testing system delivers uniform thickness calibration, integrated short-circuit detection, precision thermal control, and a modular split benchtop design for battery R&D laboratories and production pilot lines.

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Application	Description	Key Benefit
Prismatic Cell Thickness Shaping	Applying uniform heated pressure to freshly wound or stacked Type 200 prismatic lithium-ion cores prior to casing.	Eliminates interlayer gaps, levels core thickness, and ensures smooth insertion into metal cell cases without damaging separators.
In-Line Separator Integrity Screening	Conducting high-voltage micro-short testing under active mechanical pressure and elevated temperature.	Identifies micro-punctures, electrode burrs, and separator thin spots under realistic compressive operating states.
Battery Material & Binder Curing	Activating thermal binders (e.g., PVDF) within dry or semi-solid electrode matrices under controlled compressive loads.	Enhances interfacial bonding between electrode active layers, conductive additives, and current collector foils.
Solid-State Battery Cell Prototyping	Compacting solid electrolyte layers against composite electrodes under elevated thermal and pneumatic conditions.	Minimizes solid-solid interfacial contact resistance and maximizes ionic transport across solid-state cell stacks.
R&D Pilot Line Quality Assurance	Standardizing pre-canning physical parameters across experimental batches of pouch and prismatic cell variants.	Provides reliable, quantifiable baseline data for cell dimensional stability, thermal behavior, and electrical isolation.
Cell Failure Analysis & Teardown Verification	Replicating hot-pressing thermal and mechanical profiles to evaluate separator resilience and mechanical threshold limits.	Allows forensic assessment of internal short-circuit triggers under precise thermal and pressure profiles.

Specification Parameter	Value / Detail (CD-9)
Product Item Identifier	CD-9
Target Cell Form Factor	Type 200 Prismatic Lithium Battery Cells
Operational Mechanism	Manual loading/unloading, pneumatic automatic pressing, integrated electrical testing
Power Supply Configuration	AC 220V $\pm$ 10%, 50 Hz, Single Phase
Total Power Consumption	$\leq$ 4.0 kW
Compressed Air Supply Requirement	0.4 MPa to 0.65 MPa (Clean, dry industrial compressed air)
Pneumatic Inlet Fitting Outer Diameter	$\varnothing$ 10 mm Quick-Plug Interface
System Architecture	Desktop split-cabinet configuration (Heating/Test Unit + Electrical Control Box)
System Interconnection Method	Multi-pin industrial aviation plugs and pneumatic quick-connect couplings
Process Flow Timing	Configurable stabilization dwell, programmable short-circuit test delay, automatic decompression
External Finish / Color	International Warm Gray 1C Protective Enamel
Operating Ambient Temperature	5°C to 35°C
Operating Relative Humidity	Relative Humidity (RH) < 45% (Non-condensing)

Specification Parameter	Value / Detail (CD-9)
Total Equipment Weight	≤ 80 kg