Rotary Turntable Secondary Vacuum Sealing Machine For Polymer Lithium Battery Pouch Cells

Item Number: CC09

Introduction

Engineered for high-throughput pouch cell degassing and final sealing, this rotary turntable secondary vacuum sealing machine features dual-station alternating operation, precision thermal control up to 250°C, and integrated electrolyte filtration to maximize pilot-line cell manufacturing efficiency and yield.

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Application	Description	Key Benefit
Polymer Li-ion Secondary Degassing	Puncture of formation gas bags and final vacuum extraction for pouch cell packaging.	Eliminates internal gas voids and volatile residues prior to final thermal hermetic seal.
Pilot-Line Pouch Cell Assembly	High-cadence final sealing for pre-commercial electric vehicle (EV) and consumer pouch batteries.	Dual-station rotary indexing minimizes operator waiting time and elevates throughput.
Solid-State & Pouch R&D	Vacuum sealing of sensitive pouch-packaged solid-state and advanced chemistry prototype cells.	Tight ±2°C temperature accuracy and clean electrolyte filtration safeguard delicate cell chemistries.
Pouch Cell Edge Trimming & Sealing	Precision thermal bonding along the inner margin of the cell gas pocket.	Strict edge alignment within 0.5 mm of the pouch border preserves compact cell energy density.
Supercapacitor Final Sealing	High-vacuum degassing and packaging for electric double-layer capacitors (EDLC).	Deep vacuum capability (-95 kPa) guarantees moisture removal and hermetic enclosure.

Specification Parameter	CC09 System Value
Rotary Workstation Configuration	Dual-Station 180° Indexing Turntable
Turntable Positioning Accuracy	±0.05 mm
Maximum Usable Cell Dimensions	350 mm (L) × 140 mm (W) × 12 mm (T)
Sealing Head Temperature Range	Ambient to 250°C
Temperature Control Accuracy	±2°C (OMRON Digital Temperature Controller)
Sealing Dwell Time Range	1 to 99 seconds (Adjustable)
Sealing Time Accuracy	±0.1 seconds
Standard Sealing Head Width	6 mm Copper Thermal Bar (Custom Widths Available)
Pouch Edge-to-Seal Margin	≤0.5 mm (Automated Tooling Guide Alignment)
Piercing Blade to Seal Distance	≤10 mm (Dense Multi-Point Array)
Ultimate Vacuum Level	≥ -95 kPa (Vacuum pump supplied separately)
Vacuum Line Protection	Integrated In-line Electrolyte Filter Trap
Turntable Drive Mechanism	Precision Cam Indexer with VFD Motor Speed Regulation
Core Automation & Control	Panasonic PLC with Weinview Touchscreen HMI

Specification Parameter	CC09 System Value
Pneumatic Components	AirTAC Precision Actuators and Solenoid Valves
Vacuum Measurement	Panasonic Digital Vacuum Pressure Sensor
Machine Frame & Housing	High-Strength Aluminum Alloy Frame, Baked Grey-White Powder-Coated Sheet Metal