

Pouch Cell Top And Side Heat Sealing Machine For Lithium Battery Assembly

Item Number: CC06



Introduction

This precision pouch cell top and side heat sealing machine delivers uniform thermal bonding for aluminum laminated films. Featuring dual linear guide alignment, customizable sealing dies, and digital temperature regulation, it guarantees hermetic seal integrity for lithium battery R&D lines.

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Application	Description	Key Benefit
Lithium-Ion Pouch Cell R&D	Sealing side edges and tab-protruding top seams on prototype pouch cells during lab-scale assembly.	Delivers hermetic, blister-free pouch encapsulation with uniform polymer flow around nickel and copper tabs.
Solid-State Battery Fabrication	Thermal encapsulation of pouch-type all-solid-state electrolyte cells requiring precise pressure and temperature control.	Prevents mechanical damage to brittle solid electrolyte separators through balanced, parallel die clamping.
Pilot-Line Gas Bag Sealing	Edge sealing of pre-formation pouch cells including extended temporary gas collection chambers.	Accommodates gas bag widths from 15 mm to 90 mm without requiring hardware reconfiguration.
Supercapacitor Enclosure	Hermetic sealing of aluminum-plastic film casings for high-rate electric double-layer capacitors (EDLC).	Provides rapid cycle times (≥ 400 cycles/hour) with consistent moisture and electrolyte barrier retention.
Battery Packaging Material Testing	Evaluating bonding strength, melt behavior, and thermal degradation limits of novel multi-layer laminate films.	Digital dwell and temperature controls allow systematic optimization of seal parameters.
Academic Materials Research	Preparing custom electrochemical test cells for universities studying novel cathode, anode, and gel-polymer formulations.	Compact, benchtop-friendly footprint with plug-and-play single-phase power integration.

Specification Parameter	CC06-200	CC06-300
Sealing Blade Length	200 mm	300 mm
Applicable Cell Dimensions	Side seal ≤ 190 mm, Top seal 190 mm (including gas bag)	Accommodates wider format cells up to 290 mm
Gas Bag Edge Width Range	15 to 90 mm	15 to 90 mm
Standard Seal Width	5 mm $\pm$ 0.4 mm (2 to 10 mm optional/customizable)	5 mm $\pm$ 0.4 mm (2 to 10 mm optional/customizable)
Side Sealing Thickness Range	60 to 300 μ m (film dependent)	60 to 300 μ m (film dependent)
Top Tab Sealing Thickness Range	200 to 700 μ m (film dependent)	200 to 700 μ m (film dependent)
Heating Temperature Range	Ambient to 250°C (freely settable)	Ambient to 250°C (freely settable)
Temperature Control Accuracy	$\pm 2^\circ\text{C}$	$\pm 2^\circ\text{C}$
Cell Body to Seal Edge Distance	1 to 5 mm $\pm$ 0.4 mm (adjustable)	1 to 5 mm $\pm$ 0.4 mm (adjustable)
Sealing Dwell Time Range	Standard 2 to 3 s (0 to 99 s adjustable)	Standard 2 to 3 s (0 to 99 s adjustable)
Seal Thickness Uniformity	Difference between any two points < 15 μ m	Difference between any two points < 15 μ m
Compressed Air Requirement	5 to 7 kg/cm ² (0.5 to 0.7 MPa)	5 to 8 kg/cm ² (0.5 to 0.8 MPa)

Specification Parameter	CC06-200	CC06-300
Operating Throughput Speed	≥ 400 cycles/hour	≥ 400 cycles/hour
Operating Modes	Manual and Automatic (Foot Switch)	Manual and Automatic (Foot Switch)
Power Supply	AC 220 V / 50 Hz	AC 220 V / 50 Hz
Power Consumption	1.0 kW	0.5 kW
External Dimensions (L × W × H)	430 × 330 × 480 mm	500 × 430 × 480 mm
Net Weight	35 kg	50 kg
Safety & Handling	Anti-scald safety cover, feeding platform, easy-clean removable copper dies	Anti-scald safety cover, feeding platform, easy-clean removable copper dies