Pouch Cell Secondary Vacuum Sealing Machine For Degassing And Final Heat Sealing

Item Number: CC15

Introduction

Streamline your pouch cell assembly workflow with our secondary vacuum sealing machine featuring built-in puncture degassing, high-conductivity copper sealing blades, precision pneumatic linear guides, and robust aluminum chamber construction for consistent, hermetic cell closure.

Learn More

Application	Description	Key Benefit
Lithium-Ion Pouch Cell Formation Degassing	Punctures gas-collection pockets on formed pouch cells under vacuum, evacuating formation-generated volatile gases before final hermetic thermal sealing.	Eliminates pouch bloating, prevents internal voids, and guarantees uniform electrode stack pressure.
Sodium-Ion Battery Pilot Manufacturing	Performs final vacuum packaging and hermetic seam closure on experimental sodium-ion pouch cells with moisture-sensitive organic electrolytes.	Provides rapid vacuum cycling down to -98 kPa to prevent moisture ingress and safeguard active materials.
Solid-State Pouch Cell Encapsulation	Provides uniform high-pressure thermal sealing for thick multi-layer polymer-electrolyte and hybrid solid-state battery pouch configurations.	Delivers parallel mechanical sealing pressure up to 7 kg/cm² across 60–300 µm thick barrier films.
High-Rate Supercapacitor Final Sealing	Evaporates residual solvent vapor and provides ultra-tight final edge sealing on pouch-type supercapacitors and hybrid ultra-capacitors.	Achieves tight seam thickness uniformity (<15 µm variance) across the entire 340 mm seal boundary.
Electrolyte Research & Formulation Testing	Facilitates clean vacuum sealing of experimental pouch cells containing volatile additives and corrosive organosilicon or fluorinated electrolytes.	Resists chemical attack via corrosion-resistant aluminum chamber and cleanable copper sealing tooling.
Academic & Industrial Battery R&D Labs	Serves as a versatile, multi-format benchtop final vacuum sealer for prototype validation, failure analysis, and small-batch production.	Compact footprint (500 × 350 × 600 mm) easily integrates into standard laboratory and dry room benches.

Specification Parameter	CC15 Value / Description
Product Model Identifier	CC15
Core Process Capability	Integrated cell pouch puncture degassing and secondary vacuum final sealing
Vacuum Chamber Material	High-strength corrosion-resistant aluminum alloy
Sealing Head Material	High thermal conductivity copper alloy
Ultimate Vacuum Level	≥ -98 kPa (external vacuum pump required)
Sealing Head Operating Temperature	Ambient (room temperature) to 260 °C (continuously adjustable)
Temperature Control Accuracy	±2 °C
Heat Sealing Pressure Range	0 to 7 kg/cm² (continuously adjustable via precision valve)
Sealing Blade Total Length	350 mm
Maximum Effective Sealing Length	340 mm
Applicable Seal Thickness Range	60 µm to 300 µm
Sealing Thickness Consistency	Thickness variation between any two arbitrary points < 15 µm

Specification Parameter	CC15 Value / Description
Tooling Motion & Guidance	Upper/lower heads and vacuum lid pneumatic cylinder-driven with twin linear guide bushings
Rated Total Power	1.0 kW
Electrical Power Supply	220V AC / 50 Hz, Single-Phase
Required Compressed Air Supply	0.4 to 0.5 MPa (regulated clean, dry air)
Overall Equipment Dimensions (L × W × H)	500 mm × 350 mm × 600 mm (working section)
Total Equipment Net Weight	120 kg