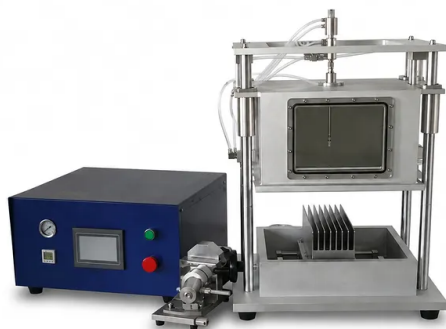


Pouch Cell Vacuum Electrolyte Injection And Diffusion Standing Machine

Item Number: JZ06



Introduction

Optimize battery cell fabrication with this integrated vacuum electrolyte injection and standing machine. Engineered for pouch and cylindrical cells, it features automated vacuum cycles, precise dispensing accuracy within $\pm 1\%$, robust PLC touchscreen control, and superior glovebox compatibility for advanced research.

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Application	Description	Key Benefit
Pouch Cell Pilot Fabrication	Automated vacuum filling and diffusion for standard and customized pouch cells up to 200 × 200 mm.	Ensures uniform wetting across multi-layer electrode stacks without delamination or dry spots.
Cylindrical Cell Prototyping	Precision electrolyte dosing for experimental cylindrical battery formats under controlled vacuum conditions.	High volumetric repeatability ($\pm 1\%$) guarantees consistent cell balancing in small-batch testing.
Solid-State & Semi-Solid Infiltration	Infusion of liquid or gel-polymer electrolytes into dense, low-porosity composite separator structures.	Deep vacuum pre-evacuation drives fluid deep into tortuous micro-pores for low internal resistance.
Sodium-Ion Battery Research	Electrolyte injection using highly corrosive or novel ester- and ether-based solvent formulations.	SUS316 and welded aluminum components prevent chemical corrosion and fluid contamination.
Supercapacitor Electrolyte Impregnation	Vacuum de-aeration and high-speed filling of high-surface-area activated carbon or graphene electrodes.	Multi-stage soaking cycles up to 9999 minutes ensure exhaustive saturation of nanoscale pore networks.
Silicon-Anode Battery Development	Precise micro-volume dispensing (from 0.2 ml) for high-capacity silicon-dominant experimental cells.	Prevents excess electrolyte degradation while providing exact stoichiometry required for SEI formation.

Specification Parameter	Value / Technical Metric
Model Item Number	JZ06
Primary Functional Modes	Integrated Vacuum Electrolyte Injection & Vacuum Soaking / Standing
Supported Cell Dimensions	Length: 20–200 mm (incl. tabs) × Width: 20–200 mm (incl. gas bag) × Thickness: 0–15 mm
Injection Volume Range	0.2 ml to unlimited (0.2 g to unlimited, adjustable via metering pump)
Dispensing Volumetric Accuracy	$\pm 1\%$
Dispensing / Delivery Speed	6 ml/s (Continuously adjustable)
Fluid Connection Ports	Φ6 mm chemical-resistant tubing
Chamber Construction	Structural welded aluminum with chemical-passivated interior
Fluid Contact Materials	High-grade AISI 304 and AISI 316 stainless steel
Soaking & Vacuum Timer Range	0 to 9999 minutes (Fully programmable per cycle stage)
Vacuum & Pressure Settings	High and low vacuum levels independently adjustable
Chamber Cover Actuation	Pneumatic cylinder drive guided by rotary precision sleeve
User Interface & Control	Industrial PLC with multi-parameter interactive touchscreen

Specification Parameter	Value / Technical Metric
Operating Environment	Compatible with inert gas gloveboxes (Argon/Nitrogen) or dry rooms
Overall Equipment Dimensions	L 510 mm × W 400 mm × H 650 mm
Electrical Requirements	AC 220 V / 50 Hz, Single Phase, 1.0 kW Total Power
Total Equipment Weight	90 kg