Corrosion Resistant Ptfe Coin Cell Battery Testing Clamps And Acid Proof Custom Fluoropolymer Battery Fixtures

Item Number: PL-CP400

Introduction

Engineering-grade PTFE coin cell battery testing clamps offer unparalleled acid resistance and electrical insulation for high-precision electrochemical research. These customizable fixtures prevent stray currents and electrolyte corrosion, ensuring reliable data acquisition in demanding laboratory environments across global industrial battery sectors.

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Application	Description	Key Benefit
Lithium-Ion Research	Characterizing half-cell and full-cell performance of new cathode and anode materials.	Prevents electrolyte-induced corrosion of testing hardware.
Supercapacitor Testing	Measuring the charge-discharge cycles and capacitance of high-surface-area materials.	Low parasitic capacitance for accurate high-frequency data.
Acidic Electrolyte Studies	Testing lead-acid or redox flow battery chemistries involving highly concentrated sulfuric or phosphoric acids.	Absolute chemical resistance to corrosive mist and liquids.
Solid-State Battery Development	Evaluating interface impedance and ionic conductivity in experimental solid electrolytes.	High electrical insulation ensures measurement of the sample only.
Aerospace Power Systems	Stress-testing battery components under varying thermal and chemical environments.	Dimensional stability ensures consistent contact pressure.
Academic Materials Science	Standardized testing of novel thin-film electrodes and separator materials in university labs.	High-purity construction prevents sample contamination.
Industrial QC Testing	Batch testing of coin cells for quality assurance in commercial battery production lines.	Durable construction withstands high-volume usage cycles.

Attribute	Specification Details for PL-CP400
Model Identifier	PL-CP400 Series
Primary Body Material	High-Purity PTFE (Polytetrafluoroethylene)
Chemical Resistance	Resistant to all acids, alkalis, and organic solvents (Universal)
Volume Resistivity	> 10^18 Ω·cm
Dielectric Strength	≈ 60 MV/m
Dielectric Constant	2.1 (at 1 MHz)
Fabrication Method	End-to-end custom CNC machining
Dimensions	Fully customizable based on user-provided drawings or specifications
Contact Type	Customizable (e.g., gold-plated, platinum, or stainless steel inserts)
Operating Temperature	-200°C to +260°C (Material limit)
Product Classification	Custom-engineered laboratory testing hardware