

Supercapacitor Battery Case Cylindrical Cell Assembly

Hardware With Built In Safety Vent

Item Number: FZ10



Introduction

Engineered for high-rate energy storage research, this cylindrical supercapacitor battery case features an integrated 2.5 MPa pressure relief valve, precision insulating components, and durable sealing hardware to ensure maximum experimental safety and long-term electrochemical stability across demanding laboratory prototyping workflows.

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Application	Description	Key Benefit
Electric Double-Layer Capacitor (EDLC) R&D	Prototyping high-surface-area activated carbon, graphene, and carbon nanotube electrode assemblies in a standard 26650 package.	Delivers low ESR and stable mechanical pressure to maintain optimal electrode-electrolyte interface contact.
Lithium-Ion Capacitor (LIC) Development	Evaluating asymmetric hybrid energy storage cells combining battery-type insertion anodes with capacitive adsorption cathodes.	Provides robust hermetic sealing to protect reactive lithium-intercalated materials from moisture and oxygen contamination.
Pseudocapacitive Material Evaluation	Testing transition metal oxides, conducting polymers, and MXene-based electrodes under rapid faradaic redox cycling conditions.	Calibrated 2.5 MPa safety vent protects equipment during unexpected gassing or high-voltage material decomposition.
High-Rate Pulse Power System Testing	Assembling experimental cells designed for high-power burst applications in automotive starting, grid stabilization, and industrial actuators.	Precision aluminum spacer and uniform casing walls minimize internal resistance and facilitate rapid heat dissipation.
Electrolyte Formulation & Additive Studies	Benchmarking novel non-aqueous electrolytes, ionic liquids, and solid-state gel electrolytes across wide electrochemical potential windows.	Superior alloy corrosion resistance prevents chemical side reactions and contamination of sensitive electrolyte systems.

Pilot-Scale Quality & Crimp Validation	Calibrating automated winding, grooving, and mechanical crimping equipment for small-scale pilot manufacturing lines.	Strict dimensional tolerances across all 50 pieces per pack ensure high assembly yields and reproducible crimp seal geometry.
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Component / Metric	Parameter Specification	Product Item Number
Product Identification	Supercapacitor Cell Enclosure Hardware Kit	FZ10
Standard Cell Size Form Factor	26650 Cylindrical Format	FZ10
Main Casing Outer Diameter	26 mm	FZ10
Main Casing Wall Thickness	0.25 mm	FZ10
Main Casing Total Height	67 mm	FZ10
Top Cap Outer Diameter	17.5 mm	FZ10
Top Cap Total Height	4.05 mm	FZ10
Safety Vent Actuation Pressure	2.5 MPa (Opens to relieve excess pressure and prevent explosion)	FZ10
Top Insulator Outer Diameter	16.1 mm	FZ10
Top Insulator Thickness	2.6 mm	FZ10
Included Assembly Hardware	Aluminum Spacer + Sealing O-Ring	FZ10
Standard Packaging Unit	50 pieces per bag	FZ10