

18650 Cylindrical Battery Cases With Anti Explosion Caps And Insulating Spacers

Item Number: FZ13



Introduction

Engineered for high power cell manufacturing, these 18650 cylindrical battery cases feature 304 stainless steel bodies, integrated anti explosion caps, and PP insulating spacers to deliver superior hermetic sealing and structural reliability in electrochemical laboratory research applications.

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Application	Description	Key Benefit
High-Power Battery R&D	Prototyping cells for power tools, electric mobility, and pulsed-power systems requiring high discharge C-rates.	Robust nickel-plated cap and thick-walled shell handle high current loads with minimal resistive thermal losses.
Novel Electrolyte Formulation Testing	Evaluating performance and stability of novel liquid, gel, and ionic liquid electrolyte compositions under cycling.	304 stainless steel prevents parasitic corrosion reactions and provides inert chemical containment during long-term cycling.
Cathode and Anode Material Validation	Standardized coin-to-cylindrical scale-up testing for high-nickel NMC, LFP, LNMO, and silicon-carbon composite electrodes.	Standard 18650 internal volume provides realistic commercial-format electrochemical and volumetric energy density data.
Battery Safety & Abuse Testing	Thermal runaway characterization, overcharge, over-discharge, and nail penetration testing under controlled laboratory conditions.	Built-in anti-explosion cap enables predictable, safe pressure relief during extreme thermal and electrical stress scenarios.
Pilot-Scale Cylindrical Cell Assembly	Small-to-medium batch manufacturing for customized battery pack integration, aerospace prototypes, and robotics.	High dimensional uniformity ensures 100% crimp yield and zero electrolyte leakage across automated assembly batches.
Academic & Institutional Training	Hands-on laboratory training for university students and engineers mastering the complete cylindrical cell manufacturing chain.	Ready-to-use, all-inclusive 100-set hardware kits simplify material preparation and prevent assembly errors.

Parameter	Specification (Model FZ13)
Product Item Number	FZ13
Compatible Cell Format	18650 Cylindrical
Packaging Quantity	100 complete sets per pack
Set Composition	Cell Case, Anti-Explosion Cap with O-Ring, Top Spacer, Bottom Spacer
Shell Outer Diameter (OD)	18.15 mm
Shell Inner Diameter (ID)	17.60 mm
Shell Total Height	68.25 mm
Cap Outer Diameter	17.60 mm
Cap Height (Bare)	3.85 mm
Cap Height (with O-Ring)	4.00 mm
Top Insulating Spacer Dimensions	17.00 mm (D) x 0.12 mm (H), 6.50 mm center hole
Bottom Insulating Spacer Dimensions	17.00 mm (D) x 0.12 mm (H), 6.50 mm center hole
Shell Material	304 Stainless Steel

Parameter	Specification (Model FZ13)
Top Cap Material	Nickel-Plated Steel
Sealing Ring Material	High-Elasticity Nylon (Polyamide)
Spacer Material	Polypropylene (PP)
Safety Feature	Built-in Mechanical Pressure Relief Vent (Anti-Explosion)
Intended Application Focus	Standard & High-Power 18650 Battery R&D and Manufacturing