

Laboratory Cylindrical Battery Decapping Machine For 18 And 26 Series Cells

Item Number: CC14



Introduction

Engineered for precise teardown, this laboratory cylindrical battery decapping machine safely opens 18 and 26 series cells without internal electrode damage. Features tungsten steel cutting blades, 0.05mm micrometer depth control, and high-efficiency dual-motor drive.

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Application	Description	Key Benefit
Battery Failure Analysis	Decapping aged or failed commercial cells to inspect electrode delamination, current collector corrosion, and separator integrity.	Extracts pristine internal electrode cores without mechanical trauma or thermal alteration.
Post-Mortem Electrochemical Research	Opening cycled test cells inside an inert argon glovebox to harvest active cathode and anode materials for XRD, SEM, and TEM analysis.	Minimizes short-circuit risks and prevents atmospheric or particulate contamination of sample surfaces.
Battery Recycling Process Development	Dismantling spent cylindrical cells to validate mechanical pre-treatment, shell-stripping efficiency, and material recovery yields.	Delivers consistent, burr-free casing separation to accelerate metallurgical and hydrometallurgical recycling workflows.
Quality Assurance & Seal Inspection	Verifying commercial crimp dimensions, gasket integrity, and internal PTC/CID safety vent mechanisms during pilot manufacturing runs.	Provides clean cross-sectional incision profiles without tearing or distorting outer metal casings.
Advanced Materials Formulation Testing	Disassembling prototype cells constructed with novel binders, high-nickel cathodes, or silicon-composite anodes after cycling benchmarks.	Preserves fragile electrode coatings in their native electrochemical states for accurate post-test evaluation.
Solid-State & Sodium-Ion Prototyping	Teardown of next-generation cylindrical sodium-ion and semi-solid cells to evaluate interface stability and electrolyte degradation.	Accommodates varied cell wall thicknesses through high-precision micrometer cutting depth calibration.

Parameter	Specification Details (CC14)
Equipment Identifier	CC14
Compatible Cell Formats	18-Series (e.g., 18650) and 26-Series (e.g., 26650) Cylindrical Cells
Standard Tooling Fixture	18650 Precision Decapping Die
Optional Tooling Fixture	26650 Precision Decapping Die
Cutter Blade Rotation Speed	1000 rpm
Cell Fixture Rotation Speed	320 rpm
Cutter Blade Material	Premium Tungsten Steel (Tungsten Carbide Alloy)
Micrometer Feed Resolution	0.05 mm per scale division
Power Supply Compatibility	AC 220V, 50/60 Hz
Rated Motor Power	150 W
Machine Dimensions (W x D x H)	550 mm x 250 mm x 220 mm
Net Equipment Weight	20 kg