

Aluminum Case Small Capacitor Grooving And Sealing Machine

Item Number: GC02



Introduction

Engineered for precision battery and capacitor manufacturing, this aluminum case small capacitor grooving and sealing machine delivers synchronized grooving and roll-crimping with high concentricity, 98 percent operational availability, and tooling life exceeding 500,000 cycles for reliable hermetic sealing performance.

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Application	Description	Key Benefit
Aluminum Electrolytic Capacitors	Simultaneous circumferential grooving and hermetic roll-crimping on standard Φ16 mm and custom aluminum can housings.	Guarantees consistent seal compression against rubber end seals, preventing electrolyte evaporation and extending component operational life.
Miniature Supercapacitors (EDLCs)	Precision groove indentation and curl-sealing for small cylindrical electric double-layer capacitors used in power backup and pulse applications.	Ensures high concentricity and uniform mechanical pressure without risking separator pinch or internal terminal short-circuits.
Small Cylindrical Battery Assembly	Sealing of miniature cylindrical primary and secondary battery cells (such as specialized lithium-ion and nickel-based micro-cells).	Achieves moisture-tight hermetic mechanical closures with zero shell wall thinning and tight axial height tolerances.
Electronic Component Pilot Lines	Batch pilot manufacturing, process optimization, and sample prototyping for custom-dimensioned passive energy components.	Compact tabletop footprint with rapid tooling interchangeability enables agile transitions between different can diameters.
University and Corporate R&D	Materials evaluation, electrolyte containment testing, and mechanical casing integrity studies in advanced electronics laboratories.	Highly reproducible mechanical parameters allow researchers to isolate formulation variables from packaging variations.

Automotive Sensor Electronics	Encapsulation and end-sealing of cylindrical aluminum sensor housings containing delicate passive filtering capacitors.	Robust mechanical lock resists thermal cycling and intense mechanical vibration encountered in automotive under-hood environments.
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Parameter	Specification (GC02)
Product Item Number	GC02
Applicable Component Type	Aluminum shell small capacitors and miniature cylindrical energy cells
Standard Process Diameter	Φ16 mm aluminum casing
Diameter Customization Range	Fully customizable tooling available for alternative shell diameters
Primary Operational Processes	Synchronized circumferential grooving and rotary roll-crimping / edge-folding
Sealing / Flanging Mechanism	Rotary die mold roll-sealing (spin-crimping)
Operational Availability Rate	≥ 98%
Tooling and Die Service Life	≥ 500,000 cycles (under standard operating conditions)
Grooving Tool Material	High-hardness wear-resistant imported alloy steel
Tool Infeed Guidance	High-precision linear motion guide rails
Operating Power Supply	220V AC / 50 Hz
Rated Power Consumption	0.2 kW (200 W)

Parameter	Specification (GC02)
External Dimensions (L × W × H)	300 mm × 240 mm × 570 mm
Net Equipment Weight	Approximately 40 kg
Structural Housing	Ergonomic geometric enclosure with protective powder-coated finish