

Aluminum Steel Shell Lithium Battery Vacuum Steel Ball Sealing Machine

Item Number: FX06



Introduction

Vacuum steel ball sealing machine for aluminum and steel shell lithium batteries with dual chambers precise ± 0.1 mm positioning adjustable vacuum timing and 40-100 units per hour output for reliable cell closure in demanding laboratory production environments

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Application	Description	Key Benefit
Lithium battery pilot-line sealing	Performs vacuum and steel-ball closure for steel-shell and aluminum-shell lithium batteries during pilot-scale fabrication.	Alternating dual-chamber loading supports a practical manual production rhythm.
Battery R&D cell preparation	Supports researchers preparing shell-type cells where evacuation must occur before the closure ball is pressed.	Adjustable vacuum duration from 1 to 999 seconds enables process-specific setup.
60 Ah cell-format acceptance work	Provides the stated acceptance reference for 60 Ah battery products while accommodating the specified compatible dimensional range.	Gives procurement and process teams a defined basis for evaluating fit.
Aluminum-shell lithium cell assembly	Seals aluminum-shell cells using fixtures and steel-ball compatibility established from order-supplied samples.	Helps match the equipment interface to the intended shell and ball configuration.
Steel-shell lithium cell assembly	Handles steel-shell lithium batteries through fixture loading, feeding, evacuation, ball delivery, pressing, and venting.	Integrates the required closure sequence into one controlled station.
Glove-box-connected cell processing	Places the independent control cabinet outside the glove box while the equipment supports the associated cell-handling process.	Reduces corrosion exposure for the electrical control cabinet.
Laboratory process verification	Enables teams to assess ball-placement consistency, vacuum settings, cycle time, and finished-product results before wider implementation.	± 0.1 mm stated sealing deviation accuracy supports focused process evaluation.
Manual battery closure operations	Uses manual loading and unloading at the left and right work positions with automatic cylinder-driven internal actions.	Combines operator control at loading with a repeatable mechanical cycle.

Parameter	Specification
Site-facing item number	FX06
Applicable battery type	Steel-shell (aluminum-shell) lithium battery
Primary function	Vacuuming and steel-ball sealing
Workstation configuration	Left-right dual-chamber structure
Loading and unloading mode	Manual loading; dual left-right workstations for loading and unloading
Operating sequence	Place battery in fixed fixture → feed cylinder sends battery into ball-sealing area while the other fixture returns to loading position → sealing cylinder presses down → vacuum begins → steel-ball feed cylinder advances one ball → ball-sealing cylinder presses ball in → mechanisms reset → compressed air releases vacuum → the other battery enters the sealing area while the completed battery exits
Sealing process order	Vacuum first, then steel-ball sealing
Fixture arrangement	Upper and lower chambers have positioning devices

Parameter	Specification
Initial fixture size	Provided according to the battery model supplied with the order
Steel ball	User provides sample; steel-ball suitability is based on the ordered model/sample
Steel-ball storage	Storage trough with a certain holding capacity
Ball-sealing deviation accuracy	±0.1 mm
Vacuum setting method	Vacuum time and vacuum pressure value can be set simply on the panel
Vacuum value control	-85~90Kpa
Vacuum level stated in operating description	-85~95Kpa
Vacuum time	1~999 seconds, freely settable
Pressure-release control	0.1~0.6 Kpa
Electrical supply	220V/50HZ
Power	0.1kw
Compressed air	≥0.6mpa, 10L/min (user supplied)
Vacuum source	-0.09mpa, 40L/min (user supplied)
Production capacity	40-100ea/H (depending on worker operating proficiency)
Finished-product rate	≥98%
Acceptance product specification	Based on 60AH
Compatible battery thickness	20~60mm
Compatible battery width	50~150mm
Compatible battery height	100~220mm
Equipment noise	≤60 db
Equipment weight	Approximately 0.15T
Equipment dimensions	Length x width x height ≈900×430×1000mm
Main component surface treatment	Chrome treatment for rust and corrosion resistance
Electrical control arrangement	Independent control cabinet located outside the glove box
Operating characteristics	Safe and stable operation, reliable control, convenient operation