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Electrode Slitter Catalog

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KINTEK SOLUTION

COMPANY PROFILE

>>> About Us

KINTEK Solution is a technology-driven innovator specializing in comprehensive laboratory equipment for battery R&D and advanced materials research. Our portfolio spans the entire cell fabrication workflow—from mixing, coating, and precision pressing (automatic, heated, isostatic) to cell assembly and testing. Also essential in ceramics and powder metallurgy, our systems prioritize precision, safety, and repeatability, empowering researchers and industrial labs to achieve groundbreaking results.

Aluminum Plastic Film Slitting And Segment Cutting Machine For Pouch Lithium Batteries

Item Number: FQ01

Introduction

Precision aluminum plastic film slitting and segment cutting equipment for pouch lithium battery packaging, delivering controlled tension, flexible widths, accurate lengths, and high-throughput preparation for dependable cell manufacturing workflows in research pilot and production environments with stable operation.

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Application	Description	Key Benefit
Pouch lithium battery packaging preparation	Slits 500 mm-wide aluminum-plastic laminate roll stock and cuts it into programmed sections for flexible pouch-cell packaging workflows.	Produces material sections matched to required pouch-film dimensions.
Battery R&D sample preparation	Prepares short or varied film sections for development programs using segment lengths from 10 mm to 500 mm.	Supports format changes without requiring a separate cutting process.
Pilot-line pouch-cell manufacturing	Converts roll material into repeatable packaging-film pieces for pilot-scale cell builds and process verification.	Combines controlled unwinding, feed, slitting, and cutting in one workflow.
Production pouch-film conversion	Processes aluminum-plastic film at approximately 3,000 to 12,000 pieces per hour, subject to cutting length.	Provides throughput suitable for recurring packaging-material preparation.
Multi-width packaging material preparation	Longitudinally slits film to widths between 55 mm and 500 mm before segment cutting.	Enables multiple finished-width requirements from a full-width roll.
Cell assembly material staging	Creates cut aluminum-plastic film pieces before downstream pouch forming and battery assembly steps.	Delivers consistently sized material for organized production staging.
Flexible laminate film processing	Handles aluminum-plastic film with a maximum loaded-roll width of 500 mm and maximum loaded-roll diameter of 350 mm.	Accommodates substantial roll stock within the specified machine envelope.

Parameter	Specification
Site-facing identifier	FQ01
Applicable material	Aluminum-plastic film for pouch lithium batteries
Processing function	Longitudinal slitting and segment cutting
Input power supply	220V/50Hz
Power	1.5KW
Compressed air requirement	≥0.5MPa
Equipment weight	Approximately 300KG
Installation floor load requirement	□ 0.5 T/m2
Equipment dimensions (L x W x H)	≈1142x800x1100mm
Slitting width	Minimum 55mm-500mm
Segment cutting length	10mm-500mm

Parameter	Specification
Segment cutting accuracy	±0.1mm
Maximum loaded-roll width	500mm
Maximum loaded-roll diameter	350mm
Equipment capacity	Approximately 3000-12000 PSC/H, depending on segment cutting length
Material feed method	Two rollers driven by a high-power stepper motor
Unwinding method	Speed-regulated motorized active unwinding
Tension-control purpose	Maintains constant material-belt tension
Primary control system	Imported PLC and touchscreen
PLC	Xinjie
Human-machine interface	Xinjie
Base plate	45# steel plate with chrome-plated surface
Cover plate and reinforcing plate finish	Painted
Main frame	Painted square-tube frame
Segment-cutting blade material	SKD11
Rubber roller material	Nitrile rubber
Rubber roller properties	Corrosion resistant and non-deforming
Pneumatic components	AirATC / Xingchen

Continuous Lithium Battery Electrode Slitting Machine For 4680 Tabless Cells

Item Number: FQ07

Introduction

Continuous lithium battery electrode slitting machine delivers controlled multi-strip processing, closed-loop tension, precision web guiding, dust extraction, and stable rewinding for demanding 4680 tabless cell electrode manufacturing lines handling coated rolled foil within width thickness speed burr and straightness requirements.

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Continuous Lithium Battery Electrode Sheet Slitter 7 To 500 Mm Slitting Width

Item Number: FQ04

Introduction

Continuous lithium battery electrode sheet slitter with 7 to 500 mm slitting width, stable web handling, edge trim collection, dust extraction, and precise roll-to-roll processing for coated electrodes across lithium iron phosphate, ternary, graphite, and oxide electrode systems

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Application	Description	Key Benefit
Lithium Iron Phosphate Electrode Slitting	Processes roll-pressed lithium iron phosphate positive or negative electrode sheets into specified strip widths for subsequent cell fabrication.	Supports repeatable preparation across a 7 to 500 mm slitting-width range.
Lithium Cobalt Oxide and Lithium Manganese Oxide Materials	Slits coated aluminum or copper foil electrodes used in lithium cobalt oxide and lithium manganese oxide systems.	Accommodates multiple established cathode material systems on one processing platform.
Ternary and Nickel Cobalt Manganese Electrodes	Handles rolled ternary and lithium nickel cobalt manganese oxide electrode sheets before cell assembly or further laboratory processing.	Provides controlled continuous feeding, configured cutting, and separated roll collection.
Lithium Titanate Electrode Preparation	Processes lithium titanate electrode rolls for research, development, and pilot-scale battery workflows.	Combines adjustable slitting speed with tension and alignment support.
Carbon Graphite Anode Processing	Slits carbon graphite-coated copper foil used for anode preparation and downstream cell fabrication.	Supports copper foil thicknesses from 6 to 30 micrometers and widths from 50 to 500 mm.
Battery R&D and Pilot Production	Produces electrode strips for laboratory-scale process development, material comparison, and pilot manufacturing studies.	Offers flexible width adjustment and compatibility with multiple electrode chemistries.
Advanced Materials Research	Applies controlled roll-to-roll slitting to coated foil materials used in academic and industrial materials research.	Provides a defined processing route for evaluating strip width, burr, straightness, and winding performance.

Parameter	Specification	Notes
Product Item Number	FQ05	Continuous lithium battery electrode sheet slitting equipment
Suitable Systems	Lithium iron phosphate, lithium cobalt oxide, lithium manganese oxide, ternary, lithium nickel cobalt manganese oxide, lithium titanate, carbon graphite, and other electrode systems after coating and roll pressing	Applies to coated and roll-pressed electrode sheets
Slitting Method	Combination knife slitting	Knife group is arranged according to the required process specification
Winding Method	Two-shaft differential-shaft offset winding	Finished strips are separately collected into rolls
Mechanical Running Speed	50 m/min	Maximum equipment mechanical running speed
Slitting Speed	0 to 40 m/min	Determined according to slitting effect
Guaranteed Slitting Width	7 to 500 mm	Process slitting-width range
Roll Face Design Width	650 mm	Designed roll-face width

Substrate	Thickness	Width	Maximum Roll Diameter
Aluminum Foil Al	8 to 30 micrometers	50 to 500 mm	400 mm
Copper Foil Cu	6 to 30 micrometers	50 to 500 mm	400 mm

Parameter	Specification
Electrode Thickness Range	70 to 250 micrometers
Main Equipment Dimensions Length x Width x Height	Approximately 1850 x 1900 x 1865 mm
Dust Extractor Dimensions Length x Width x Height	Approximately 800 x 800 x 1400 mm
Knife-Holder Cart Dimensions Length x Width x Height	Approximately 1200 x 400 x 1000 mm
Alignment System	Edge alignment system
Tension Control Support	Tension transmission system
Dust Management	Dust extraction system
Edge Material Handling	Both side-edge materials collected by the edge-material mechanism

Lithium Battery Electrode Sheet Continuous Slitting Machine 200 To 560 Mm Slitting Width

Item Number: FQ03

Introduction

Continuous lithium battery electrode sheet slitting machine processes rolled coated electrodes across 200 to 560 mm widths with closed loop tension control precision web guiding dust removal and dual differential shaft rewinding.

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Application	Description	Key Benefit
Lithium iron phosphate electrode production	Slits calendered positive and negative electrode rolls used in lithium iron phosphate cell manufacturing.	Controlled web handling supports stable preparation of multiple electrode strips from wide parent rolls.
Nickel cobalt manganese electrode processing	Converts calendered electrode sheets for nickel cobalt manganese oxide material systems into specified strip formats.	Precision rotary shearing helps maintain defined slit widths and controlled metal-burr performance.
Lithium cobalt oxide and lithium manganate cell lines	Processes coated and rolled electrode materials for lithium cobalt oxide and lithium manganate battery manufacturing.	Dual upper and lower rewinding separates slit strips into orderly finished rolls.
Lithium titanate electrode conversion	Handles calendered lithium titanate electrode material within the supported foil, electrode-thickness, and roll-diameter limits.	Closed-loop tension and automatic web guiding promote stable movement of sensitive coated webs.
Graphite and carbon anode preparation	Slits graphite or carbon-based negative electrode sheets after coating and calendering.	Integrated brushing and extraction remove loose powder generated around the slitting stage.
Pilot-line electrode format development	Produces repeated multi-strip widths, including the stated 56/58 mm one-out-nine configuration, for process development and evaluation.	Adjustable continuous operation allows teams to establish slitting conditions based on actual cut results.
Battery manufacturing edge-trim recovery	Collects side trim generated during electrode strip conversion using dedicated waste handling.	Independently adjustable scrap tension helps maintain stable edge-material collection.

Parameter	Specification	Notes
Site-facing item number	FQ03	
Suitable electrode systems	Lithium iron phosphate, lithium cobalt oxide, lithium manganate, ternary materials, nickel cobalt manganese oxide, lithium titanate, carbon, graphite, and related systems	For coated and calendered electrode sheets
Unwind type	Single-shaft center unwind	
Splicing method	Manual web splicing	
Tension control	Automatic closed-loop, continuous tension control system	
Slitting method	Circular disc knives for simultaneous multi-strip continuous rotary shearing	Knife-type roll slitting
Guaranteed slitting width	200-560 mm	
Slitting specification	56/58 mm, one-out-nine, two groups	Each knife holder includes knives, spacers, and knife sleeves
Effective slitting width	Maximum 530 mm	
Slit-width accuracy	+/-0.05 mm	

Parameter	Specification	Notes
Roller-face design width	650 mm	
Mechanical running speed	50 m/min	
Mechanical speed setting	Maximum 50 m/min, continuously adjustable	
Slitting speed	20-50 m/min	Determined by slitting result
Slitting acceptance speed	50 m/min	
Electrode thickness range	80-250 um	
Slittable electrode thickness	90-300 um	
Incoming aluminum foil thickness	10-30 um	Width 100-560 mm; maximum roll diameter 450 mm
Incoming copper foil thickness	6-30 um	Width 100-560 mm; maximum roll diameter 450 mm
Adaptable copper foil thickness	5-20 um	
Adaptable aluminum foil thickness	10-25 um	
Maximum foil width	560 mm	
Maximum unwind roll diameter	Phi 450 mm	
Maximum unwind weight	250 kg	
Unwind core inside diameter	Phi 3 inch (Phi 76.2 mm)	
Web-guiding controller travel and accuracy	+/-50 mm; +/-0.2 mm	Unwind correction control
Rewinding method	Upper and lower sets of differential-shaft winding devices	
Differential-shaft configuration	Nishimura method	
Maximum rewind width	650 mm	Equipped with 40# differential shaft
Maximum rewind diameter	Phi 450 mm	
Rewind shaft diameter	Phi 3 inch inside diameter	Rewind core supplied by the user
Rewind accuracy	+/-0.4 mm	
Rewind pressure roller	Two-wheel rolling roller	Helps prevent wound-roll edge curl
Longitudinal metal burr	Less than 8 um	Beyond electrode coating surface; in the direction beyond the electrode
Transverse metal burr	Less than 10 um	In the electrode direction
Electrode meandering	+/-0.5 mm/1000 mm	Curvature in the slitting direction; measured by fixing both ends of a flat strip against a one-meter ruler and checking the maximum gap
Slitting knives	Domestic tungsten carbide alloy knives	
Standard supplied knife sizes	Phi 100 x Phi 65 x 0.7 (30 degrees); Phi 100 x Phi 55 x 2.0 (90 degrees)	Factory standard
Minimum usable upper-knife outside diameter	Phi 96 mm	
Cleaning system	Dust-removal device brushes and extracts floating powder after slitting; upper-knife dust extraction included	
Edge-scrap handling	Independent nip-roll collection device	Edge-scrap tension manually adjustable; edge scrap greater than 3 mm, with 5 mm recommended for stable collection
Electrical supply	Three-phase 380 V / 30 A / 50 Hz	
Air consumption	450 L/h	

Parameter	Specification	Notes
Total power	Approximately 5 kW	
Equipment availability	At least 95%	
Overall equipment dimensions	Approximately 1800 x 2200 x 1900 mm	Length x width x height
Dust collector dimensions	Approximately 800 x 600 x 1400 mm	Length x width x height
Knife-holder cart dimensions	Approximately 1200 x 400 x 1000 mm	Length x width x height
Weight	Approximately 3.5 t	
Standard equipment color	Dark gray	
Included documentation	Chinese operation manual, equipment maintenance manual, and documentation for purchased components	
Operating sequence	Transfer-cart loading to unwind shaft, splicing platform, traction roller, knife group, roller group, upper and lower differential-shaft rewinding, and edge-scrap winding	Set required electrode tension, switch web guiding to automatic mode, and start automatic slitting, winding, and collection

50Mm To 600Mm Aluminum Plastic Film Slitting And Cutting Machine

Item Number: FQ05

Introduction

Precision aluminum plastic film slitting and cutting machine processes 50mm to 600mm pouch cell packaging film with adjustable tension accurate longitudinal cutting and synchronized rewind control for reliable production preparation in lithium battery manufacturing operations and research lines.

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Application	Description	Key Benefit
Pouch Cell Packaging Film Preparation	Slits full-width aluminum plastic film into widths used in soft-pack lithium battery packaging processes.	Converts rolls up to 600 mm wide into process-ready packaging-film strips.
Lithium Battery R&D Lines	Prepares aluminum plastic film for research-scale soft-pack cell work where different film widths are required.	Adjustable 50 mm to 600 mm slitting width accommodates changing development requirements.
Battery Pilot Production	Supports controlled conversion of packaging film before downstream pouch-cell production steps.	+/-0.5 mm slitting accuracy provides a defined width-control specification.
Multi-Strip Film Processing	Uses eight blade sets to longitudinally divide a loaded material roll into separate film strips.	Enables multiple slit strips to be produced from a single roll-cutting operation.
Wide-Roll Aluminum Plastic Film Conversion	Processes rolls with a maximum loading width of 600 mm and maximum loading diameter of 350 mm.	Provides a defined capacity envelope for full-roll material preparation.
Tension-Sensitive Film Rewinding	Rewinds slit aluminum plastic film using two synchronously driven winding rollers and adjustable tension.	Adjustable 0 to 25 N tension supports controlled handling during collection.
Variable-Speed Packaging Film Cutting	Operates the knife roller at an adjustable speed of 0 to 30 m/min according to actual conditions.	Allows the processing speed to be set for the active material-handling requirement.

Parameter	Specification
Site-facing item identifier	FQ05
Equipment function	Longitudinal slitting and roll cutting of aluminum plastic film for soft-pack lithium batteries; after blade slitting of a full roll up to 600 mm wide, two motor-synchronized winding rollers rewind the film according to the set width
Applicable material	Aluminum plastic film for soft-pack lithium battery packaging
Slitting method	Blade-based longitudinal slitting / roll cutting
Slitting width	Minimum 50 mm--600 mm
Slitting accuracy	+/-0.5 mm
Blade quantity	8 sets
Blade material	SKD11
Maximum loading width	600 mm
Maximum loading diameter	350 mm

Parameter	Specification
Tension control	Adjustable according to actual conditions, 0-25 N
Cutting-roll speed	Adjustable according to actual conditions, 0-30 m/min
Collection speed	Adjustable according to actual conditions
Winding configuration	Two winding rollers synchronously driven by motors
Primary control components	Variable-frequency motor and winding motor
Knife-roller drive	High-power motor
Winding drive	Active winding with speed-regulation motor
Control characteristics	Stable control performance; adjustable fast and slow operation; convenient and intuitive operation
Power supply	220V/50Hz
Power	2.5KW
Compressed air	>=0.6MPa
Equipment dimensions L x W x H	Approx. 1150 x 1040 x 1040 mm
Frame platform base	45# steel plate with chrome-plated surface
Frame structure	Painted cover plates, painted reinforcing plates, and painted square-tube main frame
Safety provision	Equipment safety protection plate
Inverter	Taichuang
Speed-regulation motor	Taili
Pneumatic components	AirATC / Xingchen

Automatic Lithium Battery Electrode Sheet Cross Cutting Slitting Machine

Item Number: FQ08

Introduction

Automatic lithium battery electrode sheet cross cutting slitting machine provides programmable fixed length or optical tracking cuts, constant tension unwinding, adjustable speed, and low burr processing for positive and negative electrode production.

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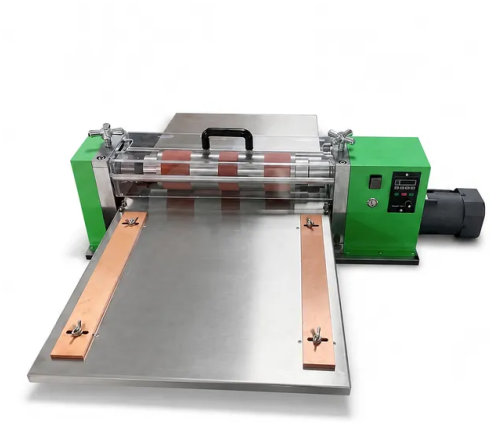
Application	Description	Key Benefit
Lithium-ion cathode sheet preparation	Cuts positive electrode sheets from roll material to programmed lengths for individual-piece preparation.	Configurable length, quantity, and speed support repeatable cathode-sheet cutting routines.
Lithium-ion anode sheet preparation	Processes negative electrode sheets using fixed-length or optical-fiber tracking cutting.	Provides a choice of cutting mode for electrode material handling requirements.
Multi-section electrode cutting	Performs continuous cutting where multiple sections are required from a roll.	Front and rear cut compensation can be set to support controlled cut positioning.
Optical-mark tracked cutting	Uses optical-fiber tracking when cutting must follow a tracked reference rather than only a programmed length.	Specified tracking fixed-length cutting accuracy of +/-0.3 mm supports precise cut control.
Battery R&D sample preparation	Produces electrode-sheet pieces across the stated 1-9999 mm cutting-length range for laboratory cell-development workflows.	Wide programmable length range accommodates varied sample and cell-format work.
Pilot-scale electrode processing	Supports repeated roll-fed cutting of positive and negative electrode sheets during process development.	Automatic constant-tension unwinding, adjustable release speed, and automatic stop support orderly material feeding.
Electrode roll conversion	Cuts material supplied on rolls using a fixed pneumatic expanding shaft for loading and unloading.	Pneumatic shaft handling simplifies roll changes during scheduled cutting work.

Parameter	FQ08-320	FQ08-400
Unwinding	Fixed pneumatic expanding shaft; automatic unwinding tension; constant tension	Fixed pneumatic expanding shaft; automatic unwinding tension; constant tension
Fixed-length cutting speed	5~250mm/s	5~250mm/s
Color-tracking cutting speed	5~150mm/s	5~150mm/s
Maximum unwinding diameter	250mm	250mm
Burr condition	<=25um	<=25um
Stated width setting range	10~300mm	10~400mm
Applicable cutting width	Width Max320mm	Width Max400mm
Cutting length	1~9999 mm	1~9999 mm

Parameter	FQ08-320	FQ08-400
Cutting method	Fixed-length cutting or optical-fiber tracking cutting; continuous cutting; multi-section cutting; front and rear cut compensation can be set	Fixed-length cutting or optical-fiber tracking cutting; continuous cutting; multi-section cutting; front and rear cut compensation can be set
Cutting accuracy	Optical-fiber-sensor tracking fixed length; cutting accuracy +/-0.3mm	Optical-fiber-sensor tracking fixed length; cutting accuracy +/-0.3mm
Control system	PLC, HMI control	PLC, HMI control
Compressed air	0.5Mpa~0.8 Mpa	0.5Mpa~0.8 Mpa
Power supply	220V/50Hz	220V/50Hz
Power	1.2KW	1.2KW
Overall equipment dimensions	L1500mm*W700mm*H1000mm	L700mm*W800mm*H1000mm (guide plate length 800; total machine length 1500mm)
Weight	Approx. 240kg	Approx. 280kg

Polymer Battery Lithium Battery Positive Negative Electrode Sheet Electric Slitting Machine

Item Number: FQ02



Introduction

Electric roll slitting machine for polymer battery and lithium battery positive and negative electrode sheets, delivering adjustable positioning, synchronized circular cutters, high precision cutting, and guarded operation for 50-400 µm electrode materials.

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Application	Description	Key Benefit
Polymer battery electrode-sheet preparation	Slits polymer battery electrode sheets into specified strip widths before downstream cell-production operations.	Adjustable guidance and cutter engagement support controlled processing of 50-400 µm electrode sheets.
Lithium battery positive-electrode processing	Processes lithium battery positive electrode sheets using the upper and lower circular knife pair.	Synchronized same-speed cutter transmission supports stable, repeatable cutting action.
Lithium battery negative-electrode processing	Processes lithium battery negative electrode sheets within the stated thickness and width capability.	Adjustable cutting width from 10-300 mm accommodates varied electrode-strip requirements.
Electrode strip layout preparation	Produces multiple slit strips according to the installed knife-spacing arrangement.	Standard 56 mm and 58 mm spacing positions, with optional alternatives, support defined strip layouts.
Battery electrode sample preparation	Prepares controlled-width electrode strips for lithium battery and polymer battery development work.	Knob-adjustable speed below 2 m/min gives operators a deliberate, controllable slitting pace.
Electrode-sheet process setup	Supports adjustment of feed location and cutter engagement when establishing a battery electrode slitting operation.	Adjustable guides and 0.2-0.4 mm handwheel-controlled knife engagement provide direct setup control.

Parameter	Specification
Site-facing identifier	FQ02
Cutter type	Upper and lower circular knife opposing cut
Cutting width	10-300 mm
Knife spacing	Standard: 56 mm, 56 mm, 56 mm, 58 mm, 58 mm, 58 mm; other spacing optional
Cuttable material thickness	50-400 µm battery electrode sheet
Cutter engagement	Handwheel adjustable, 0.2-0.4 mm
Cutter diameter	85 mm
Cutter material	Ultrafine-grain alloy steel
Slitting speed	<2 m/min, knob adjustable
Power supply	AC220V/50Hz
Power	0.5KW
Overall dimensions	Length 850 × Width 620 × Height 300 (mm)
Weight	Approximately 100KG

Parameter	Specification
Equipment composition	Upper and lower rolling cutters, cutter support, infeed and outfeed positioning plates, gears, reducer, motor, and frame
Main cutter construction	Upper and lower rolling cutters composed of alternating steel knives and rubber knives
Material positioning	Adjustable guide device for infeed positioning
Cutter drive	Upper and lower blades at the same speed with synchronized transmission
Cutter protection	Acrylic protective device at the rolling-cutter area
Cutter fixing method	Open-type rolling-cutter fixing arrangement

Lithium Battery Electrode Roll To Roll Slitting Machine

Item Number: FQ09

Introduction

Precision roll to roll slitting machine for lithium battery electrode sheets delivers burr controlled foil cutting adjustable widths automatic winding tension and PLC operated production consistency across thin coated materials and functional film converting lines with tungsten carbide blades.

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Application	Description	Key Benefit
Lithium battery electrode-sheet preparation	Slits continuous electrode-sheet rolls into defined strip widths for downstream cell-fabrication workflows.	±0.09 mm slitting accuracy and ≤25 µm burr condition support controlled electrode-strip preparation.
Metal foil conversion	Processes metal foil rolls into multiple continuous narrow strips using upper and lower circular knife cutting.	Adjustable knife engagement and speed ratio provide setup control for foil cutting operations.
Optical film processing	Converts optical film rolls where edge appearance and dimensional uniformity are important process considerations.	Clean finished strips without burrs, waves, or pressure marks are specified as the target slitting outcome.
Functional-film manufacturing	Handles other functional films through a continuously fed and rewound multi-strip process.	Adjustable feed and discharge angles accommodate different material types and thickness values.
Thin coated material slitting	Processes roll materials within the specified 100-300 µm cutting-thickness range.	Defined thickness capability helps buyers match the unit to their material envelope.
Multi-width converting operations	Produces strip formats across a 20-280 mm range by changing spacer sleeves between circular knives.	Multiple knife-sleeve sets enable more convenient recurring width changes.
Precision material rewinding	Rewinds slit material using automatic tension control on separate upper and lower winding shafts.	Independent adjustment within 50 N supports controlled winding conditions.

Parameter	Specification
Product Item Number	FQ09
Slitting Method	Single-blade rolling cut
Cutter Type	Upper and lower circular knife pair cutting
Width Adjustment	Adjusted by changing spacer sleeves; for multiple models, multiple knife-sleeve sets are recommended for more convenient blade changes
Cuttable Thickness	100~300μm
Slitting Blade	Ultra-fine-grain alloy tungsten steel, diameter Φ100mm
Slitting Width	Adjustment range 20~280mm, customizable
Burr Condition	≤25μm
Slitting Accuracy	±0.09mm
Knife Engagement	0.2~0.4mm adjustable, dial indicator display
Slitting Speed	Max. 4m/min
Winding Tension Control	Automatic control; upper and lower shafts independently adjustable within 50N

Parameter	Specification
Control System	PLC control, HMI operation
Structure	Single upright-plate structure, independent knife holder, equipped with dust-removal device
Knife and Material Speed Setting	Knife speed and material line-speed ratio adjustable
Material Path Adjustment	Feed and discharge angles adjustable for materials of different types and thickness values
Power Supply Voltage	Single-phase 220VAC±10%
Power Supply Frequency	50Hz/60Hz
Power	1kW
Recommended Operating Temperature	25±3℃
Recommended Operating Humidity	30~90RH
Operating-Environment Requirement	No vibration and electromagnetic interference
Dimensions	L850mm*W800mm*H700mm
Net Weight	Approx. 580Kg

Lithium Battery Electrode Sheet Manual Slitting Machine

Item Number: FQ06

Introduction

Manual lithium battery electrode sheet slitting machine delivers controlled 5-480 mm cuts for polymer cell fabrication with roll-knife tooling, stable feeding, compact installation, and dependable operation in laboratory electrode processing workflows.

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Application	Description	Key Benefit
Polymer lithium battery electrode preparation	Slits large positive or negative polymer lithium battery electrode sheets into narrower pieces for subsequent cell-making operations.	Produces electrode strip widths selected through the installed knife die arrangement.
Pouch-cell R&D workflows	Prepares electrode strips from coated sheets used in laboratory pouch-cell development and process trials.	Supports repeatable preparation from sheets up to 400 mm maximum slitting size.
Battery pilot-line sample processing	Handles manually fed electrode material when evaluating strip dimensions and preparing development batches.	Provides a 5-480 mm slitting-width range for varied trial requirements.
University battery research	Enables academic laboratories to process electrode sheets for experimental lithium battery cell fabrication.	Compact dimensions help integrate the unit into research equipment areas.
Electrode format development	Cuts electrode sheets into target widths while teams assess material layouts and cell-format requirements.	Knife-die-based width selection provides a direct mechanical approach to format preparation.
Battery materials laboratory operations	Supports the electrode slitting step between electrode-sheet preparation and downstream assembly work.	Inlet positioning and manual feeding give operators a defined material entry reference.
Controlled strip sample preparation	Produces smaller electrode pieces from a larger sheet for laboratory evaluation and fabrication tasks.	Upper and lower rotary knives separate material after alignment and clearance adjustment.

Parameter	Specification
Site-facing item number	FQ06
Equipment configuration	Frame section; machine body section; feeding section; receiving section; transmission section; slitting knife die section
Intended use	Slitting of polymer lithium battery electrode sheets during lithium battery electrode fabrication
Maximum electrode sheet slitting size	400 mm
Slitting width	5-480 mm
Equipment running speed	10 m/min
Slitting speed	8 m/min
Power supply	220 V grounding protection
Electrical supply frequency and voltage	50 Hz, AC220V
Rated power	0.5 kW
Drive motor	0.37 kW AC asynchronous motor
Reduction gearbox ratio	1:40
Electrical protector	DZ47-15 protector

Parameter	Specification
Push-button switch	T3SN-310 type
Indicator light	20 V, 22 mm diameter
Ambient temperature	0-45℃
Ambient humidity	40-80%
Overall dimensions	740 mm (L) x 620 mm (W) x 740 mm (H)
Weight	Approximately 250 kg
Feeding method	Manual feeding with inlet-board positioning plate
Cutting method	Upper and lower rotary knife dies
Strip-width determination	Determined by the upper and lower knife die set
Knife setup requirement	Align upper and lower knife dies and adjust knife clearance before operation
Knife engagement setting	Adjust until the electrode sheet is just cut through
Operating sequence	Press Start; allow motor-driven rotary knives to reach stable equal speed; feed aligned electrode sheet; remove edge trim promptly
Stop operation	Press Stop to stop the machine during shutdown or material waiting
Installation requirement	Place the equipment in the correct position and keep it level
Pre-start cleaning requirement	Clean the equipment; ensure no foreign material is present between upper and lower knife dies
Gearbox oil service interval	Replace once every three months
Gearbox oil specification	No. 46 gear oil
General lubrication requirement	Keep grease available on the machine at all times
Transmission gear lubrication	Replenish lubricating grease regularly
Fastener inspection	Regularly inspect screws at frequently moving locations
Cleaning restriction	Do not clean the machine body or knives with toxic chemical reagents
Idle storage requirement	Turn off the main power switch when the equipment will not be used for a long period
Knife-die storage	Store unused knife dies vertically on a dedicated knife-die rack in a dry environment; wrap surfaces with oil paper

Roll To Roll Continuous Slitting Machine

Item Number: FQ10

Introduction

Precision roll to roll continuous slitting machine for battery foil metal foil optical film and functional film converting delivers adjustable tension accurate widths low burr quality and PLC controlled operation with durable tungsten carbide circular blades and servo-driven unwinding rewinding.

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Application	Description	Key Benefit
Lithium battery foil preparation	Slits battery-related foil roll stock into defined strip widths for battery research and cell-fabrication workflows.	Specified ±0.09mm slitting accuracy and ≤15µm burr condition support controlled foil preparation.
Metal foil converting	Processes continuous metal foil coils into two or more narrower rolls using upper and lower circular knife cutting.	Adjustable knife engagement and servo-controlled tension support defined processing setup.
Optical film slitting	Converts optical film roll materials into required widths for further film handling or production steps.	Adjustable entry and exit angles accommodate different material properties and thickness values.
Functional film processing	Produces narrow strips from functional-film coils used in advanced-materials workflows.	Width adjustment from 20 to 480mm enables different strip-format requirements.
Laboratory materials research	Prepares foil or film samples and roll formats for materials-science research processes.	PLC/HMI operation and dial-indicator blade-engagement display provide a structured setup approach.
Multi-strip roll preparation	Continuously divides roll stock into two or more slit strips for subsequent winding or processing.	Two differential winding shafts and automatic winding-tension control support continuous rewinding.
Thin material conversion	Processes material in the specified 100 to 300 µm thickness range.	The opposed circular knife arrangement is configured for precision slitting of thin coil materials.

Parameter	Specification
Product Item Number	FQ10
Slitting Method	Single-blade rolling cut
Cutter Type	Upper and lower circular knife opposed cutting
Width Adjustment	Adjusted by replacing spacer sleeves
Rewinding	2 differential winding shafts
Unwinding	Web-guiding control
Unwinding and Rewinding Tension	Servo motor control
Slittable Thickness	100~300µm
Slitting Blade	Ultrafine-grain alloy tungsten carbide, diameter Φ100mm
Slitting Width	Adjustment range 20~480mm, customizable
Burr Condition	≤15µm
Slitting Accuracy	±0.09mm
Blade Engagement	0.2~0.4mm adjustable, dial indicator display

Parameter	Specification
Slitting Speed	Max. 4m/min
Power Supply	Voltage single-phase 220VAC±10%, frequency 50Hz/60Hz, power 1kW
Operating Environment	Recommended ambient temperature 25±3℃, humidity 30~90RH, no vibration or electromagnetic interference
Dimensions	L920mmW1150mmH780mm
Net Weight	Approx. 680Kg

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