Automatic Battery Electrode Sheet Cutting Machine

Item Number: MQ06

Introduction

Automatic battery electrode sheet cutting machine delivers programmable length cutting or fiber sensor tracking, 500 mm maximum width, adjustable 1–8 m/min speed, and precise pneumatic cutting for consistent electrode preparation in battery research, laboratory, and pilot-line production environments.

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Application	Description	Key Benefit
Battery electrode sample preparation	Cuts electrode sheets to controlled dimensions before downstream cell-assembly work in battery R&D.	Programmable lengths and ± 0.25 mm cutting accuracy support consistent sample formats.
Electrode development laboratories	Prepares repeated electrode-sheet pieces for formulation, coating, and process-development evaluations.	Touchscreen length setting, quantity control, and adjustable speed support changing experimental requirements.
Pilot-scale battery cell fabrication	Processes electrode sheets for pilot-line workflows where repeatable dimensions and visible counts are required.	A 500 mm maximum cutting width and adjustable 1-8 m/min speed support controlled pilot-scale throughput.
Sensor-referenced electrode cutting	Cuts electrode sheet when a fiber sensor detects the required tracking position.	The fiber-sensor tracking mode provides a defined alternative to length-only cutting.
Fixed-length electrode-sheet production	Produces pieces according to an operator-defined length set through the touchscreen.	The feed-and-pneumatic-cut sequence creates a controlled cutting cycle for repeated pieces.
Long-run standard cutting operations	Runs repeat cutting jobs using the standard configuration's adjustable 0.25-10 m cutting length range.	Quantity and count settings from 1-99,999 support higher-volume programmed cutting tasks.
Electrode-sheet incoming material processing	Converts roll-fed electrode sheet stock into specified pieces using a pneumatic expanding unwinding shaft.	Tension-control components and driven rollers provide an organized route from unwinding to cutting.
Advanced materials sheet processing	Supports cutting of electrode sheets and similar sheet materials in laboratory and materials-processing environments.	The two available configurations let users select the sensing, length, and unwinding arrangement appropriate to the task.

Parameter	MQ06 Fixed-Length and Fiber-Sensor Tracking Configuration	MQ06 Standard Configuration
Cutting method	Fixed-length cutting and fiber-sensor tracking cutting	Automatic cutting with photoelectric eye
Operating principle	Stepper motor drives rubber transmission rollers to feed the electrode sheet; pneumatic cylinder actuates the cutting blade when the set length is reached or the photoelectric sensor detects position	Imported stepper motor and driver with rubber and steel feed rollers; photoelectric eye and pneumatic cutting cylinder
Maximum cutting width	500 mm	500 mm
Cutting length	Can be set freely	0.25-10 m adjustable
Positioning accuracy	Not specified	± 0.5 mm
Cutting accuracy	± 0.25 mm	± 0.25 mm
Cutting quantity setting	1-9999 freely set	1-99999 freely set
Count setting	1-9999	1-99999
Cutting speed	1-8 m/min, adjustable	1-8 m/min, adjustable
Edge-cutting accuracy	±0.5 mm	±0.5 mm

Parameter	MQ06 Fixed-Length and Fiber-Sensor Tracking Configuration	MQ06 Standard Configuration
Cut-edge flatness	±0.5 mm	Not specified
Unwinding arrangement	Unwinding section, unwinding motor, and tension-control mechanism	Pneumatic-shaft unwinding with magnetic-powder tension-control mechanism and magnetic-powder clutch
Unwinding shaft	Ø75 pneumatic expanding shaft	Ø75 pneumatic expanding shaft
Drive components	Stepper motor and driver; unwinding motor	Imported stepper motor and driver
Feed rollers	Rubber transmission rollers	Rubber roller and steel roller set
Material-holding component	Not specified	Material-pressing cylinder
Cutting actuator	Airtac cutting cylinder	Airtac cutting cylinder
Blade	Inlaid high-speed-steel blade	SKD11 blade
Sensor	Fiber sensor for tracking	Photoelectric eye
HMI and control	Taiwan Weinview touchscreen; Panasonic PLC	Taiwan Weinview touchscreen; Panasonic PLC
Overall equipment dimensions (L × W × H)	1060x910x1350 mm	1200x1000x1100 mm
Power supply	AC220V/50HZ	AC220V/50HZ
Power	2.5KW	1.5KW
Equipment weight	Approx. 380KG	Approx. 1.0 ton
Packaging dimensions (L × W × H)	1150*1300*1650 mm	Not specified
Packaging weight	Approx. 430kg	Not specified