

Polymer Lithium Battery Electrode Sheet Manual Punching Machine

Item Number: MQ05



Introduction

Manual punching machine for polymer lithium battery electrode sheets combines 10T pneumatic hydraulic force, precise platen parallelism, adjustable timing, dual-button operation, and light-curtain safety for consistent laboratory electrode die cutting.

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Application	Description	Key Benefit
Polymer lithium battery electrode preparation	Punch coated polymer-cell positive and negative electrode sheets after sheet cutting and before cell assembly.	Provides a defined manual punching sequence for converting larger sheets into die-cut electrode pieces.
Battery R&D laboratory prototyping	Prepare electrode pieces for experimental polymer lithium battery cells where material batches, coatings, and die shapes may change frequently.	Adjustable punching time and manual die loading support flexible research workflows.
Pilot-line electrode processing	Support pre-assembly punching of electrode sheets in pilot-scale battery process development.	Less-than-4-second no-load cycle supports repetitive preparation activities.
Electrode quality-control sample preparation	Produce punched electrode samples from prepared sheets for downstream inspection, comparison, or cell-build evaluation.	Platen parallelism of no more than 0.15 mm supports consistent die engagement.
Battery cell assembly support	Create punched electrode components for polymer lithium battery assembly operations.	The 10T pneumatic-hydraulic cylinder supplies a defined punching-force platform for die cutting.
Advanced materials research	Punch suitable sheet-form research materials using a die-based, manually controlled process where the application procedure permits.	Two working-area options allow the equipment footprint to be matched to die and sheet size requirements.
Academic battery teaching laboratories	Demonstrate a controlled electrode punching sequence in laboratory-scale polymer lithium battery fabrication.	Two-button actuation and safety light curtain protection support a more disciplined operating process.

Parameter	MQ05-400	MQ05-500
Site-facing identifier	MQ05-400	MQ05-500
Intended application	Polymer lithium battery electrode-sheet punching	Polymer lithium battery electrode-sheet punching
Booster cylinder	10T pneumatic-hydraulic booster cylinder	10T adjustable pneumatic-hydraulic booster cylinder
Nominal cylinder capacity	10T	10T
Cylinder adjustment	Not specified	Adjustable
Upper and lower working area	400 x 400 mm	500 x 500 mm
Upper platen thickness	40 mm	40 mm
Lower platen thickness	40 mm	40 mm
Upper and lower platen parallelism	<=0.15 mm	<=0.15 mm

Parameter	MQ05-400	MQ05-500
No-load compressed-air operation cycle	Less than 4 seconds	Less than 4 seconds
Punching-time control	OMRON time relay; punching time adjustable	OMRON time relay; punching time adjustable
Start-delay control	Hydraulic start delay adjustable	Start delay adjustable
Operating method	Dual-button operation	Dual-button operation
Power source	Compressed air (5-8 atmospheres)	Compressed air (5-8 atmospheres)
Safety system	Safety light curtain and safety control	Safety light curtain and safety control
Positioning aid	Not specified	Laser positioning
Main structural material	45# steel for major structural components, electroplated	45# steel for major structural components, electroplated
Sheet-metal finish	Baked gray-white paint	Baked gray-white paint
Approximate overall dimensions (L x W x H)	Not specified	Approximately 750 x 760 x 1850 mm
Basic configuration	10T pneumatic-hydraulic booster cylinder; safety light curtain; safety control; OMRON time relay	10T adjustable pneumatic-hydraulic booster cylinder; safety light curtain; safety control; OMRON time relay; laser positioning
Operating sequence	Place the cut large electrode sheet on the die, push the die to the punching position, press both start buttons to close the upper die, then release the buttons to open the upper die and complete punching.	Not specified