

Laboratory Compact Hydraulic Positioning Die Cutting Machine

Item Number: MQ01



Introduction

Compact hydraulic positioning die cutting machine for laboratory battery electrode and lithium foil preparation delivers accurate burr free cuts glovebox compatibility and protected adjustable pressure control for reliable research cell fabrication workflows with fast die changes daily use

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Application	Description	Key Benefit
Lithium-Ion Battery Electrode Preparation	Die cutting of positive and negative electrode sheets into required specimen or cell-component shapes during battery research.	Produces accurate cuts with a specified precision of ± 0.1 mm and avoids burrs, powder shedding, and pressure marks.
Lithium Sheet Cutting	Cutting and forming lithium sheets for laboratory battery work where enclosed material handling is needed.	Compact equipment can be placed and operated inside a glovebox.
Battery R&D Cell Fabrication	Preparation of electrode components before downstream laboratory cell assembly activities.	Quick die replacement supports changes between cutting geometries used in research workflows.
Coin Cell Research Sample Preparation	Forming small electrode pieces for battery research sample sets and comparative material studies.	A maximum punching size of 120x80mm accommodates compact electrode-sheet cutting tasks.
Electrode Material Development	Preparing consistently shaped positive or negative electrode specimens while evaluating active-material formulations and coating conditions.	Hydraulic cutting without vibration supports stable forming of electrode sheets.
Academic Battery Laboratories	Teaching and research laboratories preparing battery electrode or lithium-sheet samples in limited laboratory space.	Small overall dimensions and straightforward manual operation suit compact laboratory environments.
Glovebox Battery Processing	Enclosed preparation of lithium sheets and electrode pieces in workflows that require glovebox placement.	The unit can be positioned within the glovebox while retaining pressure observation through its embedded gauge.
Repetitive Electrode Cutting	Routine cutting of electrode sheets for ongoing battery R&D programs.	Die life of at least 30,000 cycles under normal use supports repeated laboratory preparation.

Parameter	Specification
Product Item Number	MQ01
Suitable Materials	Battery positive electrode sheets, battery negative electrode sheets, lithium sheets
Primary Function	Die cutting and forming
Maximum Punching Size	120x80mm (can be customized according to customer requirements)
Punching Precision	± 0.1 mm
Die-Cutting Stroke	35mm
Drive Method	Hydraulic drive
Pressure Observation	Embedded pressure gauge
Pressure Protection	Built-in safety relief oil valve; adjustable pressure and settable pressure upper limit
Guided Structure	Four guide posts
Die Replacement	Convenient and quick replacement

Parameter	Specification
Die Life	≥30,000 times under normal use
Cut Quality	No burrs, powder shedding, or pressure marks
Operating Characteristics	No vibration and no oil leakage during die cutting
Structural Material	High-strength chrome steel
Surface Treatment	Environmentally friendly electroplating and spray coating treatment
Glovebox Use	Can be placed and operated inside a glovebox
Overall Dimensions	223170325mm
Weight	25kg
Manual Operating Sequence	Place electrode sheet; tighten oil-release valve handwheel clockwise to the limit position; repeatedly move hand lever to raise and press; loosen handwheel counterclockwise by half a turn for automatic die opening and part removal