200X300Mm Laboratory Heated Calender Battery Electrode Roll Press Electrode Sheet Roll Press

Item Number: DG12

Introduction

200x300mm laboratory heated calender with independently controlled rolls for lithium battery electrode densification and thickness reduction plus small-batch precious metal and nonferrous sheet rolling in research laboratories and pilot lines requiring adjustable 0-4mm gaps 15T pressure and variable speed.

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Application	Description	Key Benefit
Lithium-ion battery electrode densification	Calender cathode or anode electrode sheets after coating to reduce thickness and increase compact density.	Adjustable 0-4 mm roll clearance and up to 15T pressure support controlled electrode compaction.
Battery electrode plate thinning	Process clean-energy material electrode plates where a thinner sheet profile is required during laboratory development.	Heated rolls and adjustable line speed provide controllable rolling conditions.
University battery research	Support small-scale electrode-sheet experiments in university laboratories studying material density, thickness, and rolling response.	A 300 mm maximum working width fits laboratory-scale sheet development.
Enterprise pilot-line trials	Use in enterprise experimental lines for evaluating electrode rolling parameters before broader process decisions.	Stepless 0-4.0 m/min line speed allows practical parameter adjustment during trials.
Precious-metal manual rolling	Roll small quantities of gold or silver material for laboratory research and manual sample processing.	Heated dual-roll operation and mechanically adjustable clearance suit small-batch rolling work.
Copper and aluminum material studies	Process copper, aluminum, and other nonferrous materials in research-focused rolling evaluations.	HRC62 roll-face hardness and a 10 mm quench depth support repeated pressure-contact operation.
Advanced materials compression studies	Examine how applied pressure, roll temperature, gap, and line speed affect sheet materials during laboratory calendering.	Independently controllable roll temperatures isolate an important thermal process variable.

Parameter	Specification
Site-facing identifier	DG12
Referenced application	Small lithium battery electrode-sheet rolling process
Referenced user environment	University and enterprise experimental lines
Referenced material uses	Laboratory battery materials; small quantities of gold and silver precious metals; copper, aluminum, and other nonferrous materials
Referenced battery process purpose	Lithium battery electrode plate thinning and compact-density increase
Working principle	A reduction motor drives high-hardness pressure rolls; mechanical adjustment of the roll gap compresses and forms the electrode sheet to increase compact density
Power	380V□ 6KW
Electrical supply stated in overview	Single-phase 220V power supply
Roll temperature	150°C
Two-roll temperature control	The temperatures of the two rolls can be independently controlled and adjusted as required

Parameter	Specification
Pressure roll dimensions	Φ200mm×300mm
Roll-face hardness	HRC62
Roll cylindrical accuracy	≤±□ μm
Effective gap	0-4mm adjustable
Working speed	Stepless variable speed; line speed 0-4.0 meters/min adjustable
Roll-face finish	Not specified in the reference material
Maximum working width	300mm
Roll-face quench depth	10mm
Maximum pressure	15T