

100 X 200 Mm Laboratory Heated Roller Press Battery Electrode Sheet Calendering Machine

Item Number: DG16



Introduction

100 x 200 mm laboratory heated roller press for battery electrode sheet calendering delivers independently controlled rolls adjustable gaps and variable speed for dense consistent lithium electrode research and pilot line processing.

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Application	Description	Key Benefit
Lithium battery electrode calendering	Compresses lithium battery electrode sheets after coating or during laboratory process development to reduce thickness and increase density.	Supports controlled electrode densification with adjustable gap, pressure, heating, and speed.
Clean-energy electrode research	Provides a research-scale rolling step for investigating electrode plate density and thickness in clean-energy material programs.	Enables repeatable adjustment of key thermal-mechanical rolling conditions.
University battery laboratories	Serves educational and research laboratories conducting small-scale electrode fabrication and trial-line studies using 220 V power.	Offers a compact, accessible rolling platform for experimental workflows.
Enterprise pilot-line trials	Supports laboratory and small trial-line evaluation of electrode rolling conditions before wider process implementation.	Accommodates up to 200 mm working width for representative sheet samples.
Precious metal laboratory rolling	Manually rolls limited quantities of gold and silver materials where laboratory-scale thickness reduction is required.	Combines adjustable roll opening with independently controllable roll temperature.
Copper and aluminum sheet processing	Processes small amounts of copper, aluminum, and other non-ferrous materials for material research or sample preparation.	High-hardness rolls and controlled geometry support consistent contact across the material width.
Composite electrode development	Provides heat-assisted compression conditions relevant to evaluating dense composite electrode structures in laboratory research.	Independent roll heating and adjustable pressure conditions support process comparison.
Polymer solid-state electrolyte research	Supports heat-assisted pressing studies involving polymer solid-state electrolytes and composite electrodes.	Thermal-mechanical rolling conditions can help researchers assess interface adhesion and material densification processes.

Parameter	Specification
Item number	DG16
Power supply and rated power	220 V, 2.4 KW
Roll temperature	Approximately 130 degrees C
Dual-roll temperature control	The temperature of the two rolls can be independently controlled and adjusted arbitrarily
Roll dimensions	Phi100 mm x 200 mm
Roll surface hardness	HRC62
Roll cylindricity	<= +/-2 um
Effective gap	Adjustable from 0-3 mm
Working speed	Stepless variable speed; adjustable linear speed 0-4.0 m/min

Parameter	Specification
Roller surface finish	Not specified in the reference material
Maximum working width	200 mm
Roll surface hardening depth	5 mm
Maximum pressure	3 T
Overall dimensions	550 x 320 x 850 mm (L x W x H)
Approximate weight	110 kg
Drive and adjustment principle	A geared motor drives high-hardness pressure rolls; mechanical adjustment of the roll gap forms the electrode sheet under pressure and increases electrode compactness and density
Intended power environment	Single-phase 220 V
Intended use environment	University and enterprise experimental lines; laboratory rolling of battery materials, limited quantities of gold and silver, and copper, aluminum, and other non-ferrous materials