

Integrated Dual Servo Heated Horizontal Two Roll Mill For Battery Electrode Calendering

Item Number: DG10



Introduction

Integrated dual servo heated horizontal two roll mill for battery electrode calendering provides adjustable thickness independent temperature control precise speed regulation reversible electric operation and PLC control with hard chromium plated rollers for consistent laboratory processing and material density control

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Application	Description	Key Benefit
Lithium Battery Electrode Densification	Roll battery electrode sheets to reduce thickness and increase material density during laboratory cell-material development.	Supports controlled electrode geometry and repeatable densification studies.
Clean-Energy Material Research	Process nonferrous clean-energy materials under selected thermal conditions using electrically driven rolling.	Allows direct comparison of heated and unheated rolling conditions.
Battery Electrode Thickness Development	Adjust the roll gap and feed speed while observing digitally displayed thickness and speed values.	Helps researchers establish suitable thickness and processing windows efficiently.
Thermally Assisted Material Rolling	Independently heat the upper and lower rolls from room temperature to 130°C during material processing.	Provides controlled thermal conditions for temperature-sensitive rolling experiments.
Powder-to-Sheet Laboratory Processing	Feed powder-form material through the supplied hopper for electrically driven compaction and rolling trials.	Simplifies powder introduction and supports small-scale process development.
Advanced Materials Research	Evaluate the effects of roll speed, temperature, gap, and rolling direction on material behavior.	Provides flexible control of multiple variables in a compact research platform.

Parameter	Specification
Product Item Number	DG10
Product Type	Integrated dual servo heated horizontal two-roll mill
Primary Function	Electrically driven rolling of battery materials and other nonferrous materials at selected temperatures
Roll Diameter	Φ96 mm
Roll Cylindricity	≤±2 μm
Roll Hardness	HRC62
Roll Surface Finish	0.8
Roll Surface Treatment	Hard chromium plating
Rolling Thickness	0-3 mm; gap adjustable
Sheet Width	0-200 mm
Roll Arrangement	Horizontal
Rolling Temperature	Upper and lower rolls independently heated; room temperature to 130°C adjustable

Parameter	Specification
Temperature Display	Digital display
Temperature Resolution	0.1°C
Temperature Control Accuracy	±2°C
Heating Mode	Selectable heated or unheated operation
Drive and Operation Mode	Electric
Servo Control	Upper and lower servo control; precise independent speed adjustment; asynchronous rotation available
Rotation Direction	Forward and reverse operation
Speed Adjustment	Upper and lower roll speeds can be adjusted independently
Feed Speed	0-40 mm/s
Control System	PLC screen control
Thickness Display	Digital display
Speed Display	Digital display
Material Feeding	Hopper included for powder-form feeding
Voltage and Frequency	AC220V/50Hz
Power	1.5 kW
Overall Dimensions	L770 mm × W540 mm × H530 mm
Equipment Weight	105 kg