

Heated Roll To Roll Roller Press Battery Electrode Two Roll Mill Laboratory Two Roll Mill

Item Number: DG07



Introduction

Heated laboratory roll to roll roller press for battery electrode calendaring and nonferrous materials with adjustable gap independent heating digital temperature control and continuous web handling for repeatable research scale processing and dense electrode development in advanced laboratories

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Application	Description	Key Benefit
Lithium Battery Electrode Calendaring	Reduce the thickness of lithium battery electrode sheets and increase active-layer density under adjustable mechanical and thermal conditions.	Supports controlled electrode compaction and repeatable clean energy material development.
Heated Battery Materials Research	Study how rolling temperature, gap, and feed speed affect electrode structure, thickness, and density.	Enables parameter-by-parameter process evaluation on a laboratory scale.
Continuous Electrode Strip Processing	Feed electrode web material from an unwind roll through the heated rolls and onto a rewind roll for continuous operation.	Improves handling consistency for longer samples and repeated strip experiments.
Copper and Aluminum Materials	Process small quantities of copper, aluminum, and other nonferrous materials at selected temperatures and adjustable thickness settings.	Provides electrically driven, temperature-assisted rolling for specialized material studies.
Gold and Silver Material Research	Perform controlled rolling trials on small quantities of precious-metal materials where sample conservation and process observation are important.	Offers adjustable reduction with a compact laboratory setup.
Advanced Materials Laboratories	Investigate the relationship between thermal-mechanical processing and material densification in research samples.	Combines controlled temperature, gap, speed, and web tension in one platform.
University and Pilot Research	Support repeatable experiments in battery engineering, materials science, and related laboratory programs.	Provides accessible operation and digital parameter monitoring for routine research workflows.

Parameter	Specification
Product item number	DG07
Equipment type	Heated electric laboratory roll to roll roller press and two roll mill
Roll diameter	Φ100 mm
Roll hardness	HRC62
Roll surface finish	Ra0.4 or better
Roll cylindricity	≤±2 μm
Rolling thickness	0 to 2 mm; gap adjustable
Adjustable gap	0 to 2 mm
Heating width	80 mm
Roll arrangement	Vertically positioned
Rolling temperature	Upper and lower rolls independently heated; room temperature to 130°C adjustable; digitally displayed

Parameter	Specification
Temperature control accuracy	±0.5°C
Temperature resolution	0.1°C
Operation method	Electric
Feed speed	0 to 40 mm/s; digitally displayed with precise speed observation and adjustment
Continuous operation	Continuous running
Guide roll width	200 mm
Mechanical speed	Maximum 1.5 m/min
Tension control	Maximum 20 N
Unwind and rewind core	3 inch roll core
Maximum unwind and rewind diameter	200 mm
Rolling unit voltage and frequency	AC220V/50Hz
Rolling unit power	1 kW
Rolling unit dimensions	L670 mm × W220 mm × H330 mm
Rolling unit weight	70 kg

Parameter	Unwind Component	Rewind Component
Installation dimensions	W300 mm × D250 mm × H280 mm	W300 mm × D350 mm × H280 mm
Weight	Approximately 15 kg	Approximately 20 kg

Parameter	Specification
Combined unwind and rewind weight	35 kg total
Power supply	Single-phase 220 VAC ±10%; 110 VAC customizable
Power supply frequency	50 Hz/60 Hz
Unwind and rewind power	100 W