

Automatic Laboratory Unwind Rewind Machine And Unwind Rewind Device For Battery Electrodes Optical Films And Functional Materials

Item Number: DG09



Introduction

Automatic laboratory unwind rewind machine with servo tension control optical web guiding and split structure for lithium battery electrodes optical films and functional roll materials delivering accurate continuous rewinding and slitting performance for demanding research and production workflows.

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Application	Description	Key Benefit
Lithium-ion battery electrode rolling	Connect the unwind and rewind sections with a hydraulic two-roll press to process lithium-ion battery positive and negative electrode sheets in roll form.	Automatic tension and edge control support stable electrode transport and more consistent rolling results.
Battery electrode rewinding	Rewind coated or rolled electrode materials after laboratory processing and prepare them for storage or later cell fabrication steps.	Controlled winding helps maintain orderly rolls and reduces alignment variation during handling.
Optical film rewinding	Process optical films in roll-to-roll laboratory workflows where web position and surface handling must remain stable.	Photoelectric web guiding helps preserve edge alignment during continuous rewinding.
Functional film slitting and rewinding	Use the equipment for research and pilot-scale processing of functional films and other flexible roll materials.	Adjustable tension from 0 to 50 N accommodates controlled handling across development trials.
Materials science roll processing	Support experimental work involving flexible, coated, or laminated roll materials in university and industrial research laboratories.	An independent control system provides a repeatable platform for process comparison and parameter evaluation.

Parameter	Specification
Model	DG09
Equipment type	Automatic unwind and rewind device
Primary functions	Roll material rewinding and slitting
Unwind control	Servo automatic tension control
Rewind control	Servo automatic tension control
Web guiding	Photoelectric automatic edge alignment for unwind and rewind
Tension control range	0 to 50 N
Unwind and rewind diameter	250 mm
Winding accuracy	±0.5 mm
Running method	Continuous operation
Guide roller width	350 mm
Mechanical speed	Max. 6 m/min
Control system	Independent electrical control system

Parameter	Specification
Structural configuration	Separate unwind and rewind sections
Equipment integration	Can be connected with a hydraulic two-roll press
Unwind installation dimensions	W450 mm × D850 mm × H615 mm
Rewind installation dimensions	W650 mm × D850 mm × H615 mm
Unwind weight	Approximately 200 kg
Rewind weight	Approximately 237 kg
Standard power supply	Single-phase 220 VAC ±10%
Optional power supply	110 VAC, customizable
Power frequency	50 Hz/60 Hz
Rated power	1 kW