

# 200Mm Roll To Roll Film Unwinding And Rewinding Machine

Item Number: DG03



## Introduction

200mm roll to roll unwinding and rewinding machine for laboratory film processing lithium battery electrode calendaring optical films functional films continuous operation constant torque tension control with 1.5 m/min speed 50 N tension capacity and three inch cores

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| Application                                    | Description                                                                                                                                                | Key Benefit                                                                                                        |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Lithium-ion battery positive electrode rolling | Supports the controlled unwinding and rewinding of positive electrode sheets while a compatible laboratory twin-roll machine performs the rolling process. | Maintains an organized material path for continuous electrode processing and sample collection.                    |
| Lithium-ion battery negative electrode rolling | Handles negative electrode roll material during laboratory calendaring and related process development work.                                               | Enables repeatable web movement and active collection of processed electrode sheets.                               |
| Electrode calendaring research                 | Connects roll handling with a small laboratory rolling line for testing speed, tension, and material behavior during electrode densification studies.      | Reduces manual intervention and supports more consistent process comparisons.                                      |
| Optical film processing                        | Transfers optical film rolls through a laboratory-scale winding and unwinding workflow.                                                                    | Provides controlled handling for roll-based film development and evaluation.                                       |
| Functional film development                    | Supports continuous movement of functional films used in materials research and process trials.                                                            | Offers a compact roll-to-roll platform with defined width, speed, and tension limits.                              |
| Roll material collection                       | Rewinds processed continuous materials onto three-inch cores after laboratory treatment or rolling.                                                        | Produces a practical collected roll format for inspection, storage, or subsequent testing.                         |
| Academic materials research                    | Provides a small-scale web handling solution for university and research laboratory experiments involving continuous sheet materials.                      | Combines compact dimensions, low power consumption, and configurable electrical input for laboratory installation. |

| Specification Category | Parameter                          | Value                                                                                                         |
|------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Product identification | Site-facing identifier             | DG03                                                                                                          |
| System configuration   | Equipment structure                | Unwind and rewind sections are separate; requires matching use with a compatible laboratory twin-roll machine |
| Operating mode         | Web transport mode                 | Continuous running                                                                                            |
| Web handling           | Guide roller width                 | 200mm                                                                                                         |
| Web handling           | Mechanical speed                   | Max. 1.5 m/min                                                                                                |
| Tension control        | Control method                     | Open-loop constant-torque tension control                                                                     |
| Tension control        | Maximum tension                    | Max. 50 N                                                                                                     |
| Roll compatibility     | Unwind and rewind core             | Three-inch roll core                                                                                          |
| Roll compatibility     | Maximum unwind and rewind diameter | Max. 200mm                                                                                                    |
| Unwind section         | Installation dimensions            | W300mm × D250mm × H280mm                                                                                      |
| Rewind section         | Installation dimensions            | W300mm × D350mm × H280mm                                                                                      |

| SpecificationCategory | Parameter           | Value                                                       |
|-----------------------|---------------------|-------------------------------------------------------------|
| Electrical supply     | Voltage             | Single-phase 220 VAC $\pm 10\%$ ; 110 VAC can be customized |
| Electrical supply     | Frequency           | 50Hz/60Hz                                                   |
| Power                 | Rated power         | 100W                                                        |
| Weight                | Unwind section      | Approximately 15kg                                          |
| Weight                | Rewind section      | Approximately 20kg                                          |
| Weight                | Total system weight | Approximately 35kg                                          |