

Small Laboratory Automatic Film Coating Drying Machine

Item Number: TB07



Introduction

Small laboratory automatic film coating drying machine with adjustable coating speed, precision thickness control, vacuum substrate fixation, and 130°C heated drying for battery, ceramic, crystal, and nanofilm research in glove boxes and advanced materials laboratories for consistent high temperature film preparation

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Application	Description	Key Benefit
Battery Material Film Research	Coat battery-material slurries such as lithium iron phosphate onto foil substrates before controlled heated drying.	Adjustable coating speed, vacuum fixation, and temperature control support repeatable electrode-film preparation.
Ceramic Thin-Film Development	Prepare ceramic film samples using flat-bed coating and drying conditions up to 130°C.	Controlled coating thickness and uniform heating improve process consistency during formulation and film evaluation.
Crystal Film Research	Apply crystal-material coatings to suitable laboratory substrates for high-temperature film research.	Motor-driven movement and adjustable coating travel provide controlled sample preparation.
Special Nanofilm Development	Process special nanofilm formulations where stable coating motion and precise thickness adjustment are required.	Fine coating control and vacuum substrate holding help reduce variation during small-area experiments.
Glove Box Processing	Perform coating operations in a glove box after transferring the compact equipment through the transition chamber.	Compact construction supports controlled-atmosphere research while conserving glove box workspace.
Coated Foil Preparation	Secure copper foil, aluminum foil, and other substrates on the vacuum aluminum plate for flat-bed coating.	Rapid substrate placement and removal improve handling efficiency and help avoid substrate deformation.

Parameter	Specification
Product Item Number	TB07
Coating Method	Flat-bed coating; supplied with a 100 film applicator; other metering devices such as coating rods are optional for manual doctor-blade coating
Maximum Coating Area	L200 × W100 mm
Coating Travel Adjustment	Continuously adjustable through the touch screen
Coating Drive	Motor-driven
Coating Speed Adjustment	Continuously adjustable through the touch screen
Coating Speed	0-120 mm/s, such as for lithium iron phosphate slurry
Vacuum Plate	Vacuum aluminum flat plate
Vacuum Plate Dimensions	L230 mm × W130 mm × H30 mm
Blade Thickness Adjustment Range	0-5 mm, adjustable
Coating Precision	±3 μm
Optional Thickness Display	1 μm dial indicator
Heated Drying System	Room temperature-130°C

Parameter	Specification
Temperature Controller	Digital temperature controller
Temperature Control Accuracy	±1°C
Power Supply	220 V/50 Hz
Power	0.4 kW
Weight	15 kg
External Dimensions	L375 mm × W225 mm × H190 mm
Vacuum Pump	One built-in oil-free vacuum pump included
Glove Box Vacuum Requirement	An external vacuum pump is required when the equipment is used inside a glove box