

500MI To 5L Battery Slurry Laboratory Vacuum Mixer

Item Number: JL15



Introduction

Explore a 500ML to 5L battery slurry laboratory vacuum mixer with 2L effective capacity, variable speed control, dual dispersing blades, precision 304 stainless steel construction, reliable vacuum retention, timed operation, and efficient mixing for demanding research workflows and development.

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Application	Description	Key Benefit
Battery Electrode Slurry Preparation	Mix active materials, conductive additives, binders, and solvents before electrode coating or subsequent cell fabrication steps.	Promotes uniform dispersion and supports repeatable slurry preparation between development batches.
Battery R&D Process Development	Evaluate mixing speed, torque, vacuum exposure, and processing time during formulation screening and laboratory-scale process optimization.	Provides adjustable operating conditions for comparing material recipes and process parameters.
Slurry Preparation Before Electrode Coating	Prepare consistent slurry for coating experiments where viscosity and particle distribution influence coating quality.	Helps create a stable material feed for controlled coating trials and process evaluation.
Advanced Materials Research	Process viscous or particulate formulations used in materials science research and laboratory-scale product development.	Combines vacuum treatment with adjustable agitation in a compact research platform.
Powder Metallurgy Research	Mix fine powders with binders or other formulation components before forming, pressing, or thermal processing studies.	Supports controlled circulation and improved batch-to-batch process consistency.
Ceramic Formulation Development	Prepare ceramic slurries and related compositions requiring controlled mixing and reduced air entrapment.	Enables adjustable speed selection for materials with different viscosities and mixing responses.
Academic Laboratory Experiments	Support teaching, research, and repeatable sample preparation in university and institutional laboratories.	Simplifies operation through pneumatic opening, timer control, and a compact laboratory-scale design.

Parameter	Specification
Model	JL15
Rated Power	0.75 kW, 220 V
Mixing Speed	0-1400 rpm; speed regulated through a variable-frequency drive
Effective Volume	2 L
Vessel Opening Method	Dual-arm pneumatic cylinder lifts the cover
Vessel Internal Dimensions	Φ125 mm inner wall diameter x 220 mm height
Overall Dimensions	Approximately 0.6 x 0.7 x 0.32 m, height x length x width
Weight	Approximately 75 kg
Timer Function	Available; freely settable from 0 to 99 hours
Automatic Operation	Automatically stops after the selected time and maintains the vacuum condition
Vacuum Retention	The soft-sealing process can maintain -0.098 MPa for more than 24 hours
Vessel Material	304 stainless steel
Vessel Finishing Process	Precision machining on a large horizontal lathe followed by polishing with a precision automatic polishing machine

Parameter	Specification
Mixing Blade Design	Dual dispersing blades circulate material upward, downward, and around the vessel
Motor Adjustment	Gearbox variable-frequency adjustment for selecting speed and torque according to process requirements and material viscosity
Support Structure	Dual precision guide columns
Cover Drive	Pneumatic cylinder drive