VACUUM PLANETARY MIXER

High Performance Mixing Solution for Battery Electrode Slurry Preparation

Designed for homogeneous mixing and degassing of high-viscosity slurries used in lithium-ion, sodium-ion, and solid-state battery electrodes.

KEY FEATURES

Double Planetary Mixing
Simultaneous revolution and rotation for highly uniform mixing and dispersion.

Vacuum Degassing
Removes trapped air bubbles for improved electrode performance.

Variable Speed Control
Adjustable mixing and dispersion speed for optimal process control.

Multiple Capacity Options
Available from lab scale to production scale to meet diverse requirements.

PLC with Touchscreen HMI
Intuitive control system with real-time monitoring and parameter setting.

Safe and Reliable Operation
Equipped with safety interlocks and alarm system for secure operation.

TECHNICAL SPECIFICATIONS

Parameter	Specification
Application	Battery electrode slurry preparation
Mixing Type	Double planetary mixing
Vacuum Level	≤ -0.095 MPa
Mixing Speed	0–600 rpm (variable)
Dispersion Speed (optional)	Up to 3000 rpm
Mixing Capacity	150 mL, 500 mL, 1 L, 2 L, 5 L, or higher
Mixing Container	SS304 / SS316 Stainless Steel
Control	PLC with Touchscreen HMI
Vacuum Pump	Oil rotary vacuum pump
Power Supply	220 V AC, 50 Hz (Lab model)
Motor Power	1.5 – 15 kW (depending on model)
Temperature Control (optional)	Jacketed mixing bowl, up to 120 °C
Temperature Accuracy	±1 °C
Timer Range	0 – 99 h 59 min
Safety Features	Overload protection, emergency stop, lid interlock, vacuum relief
Machine Material	SS304 / SS316 and Carbon Steel (coated)
Dimension (W×D×H)	Model dependent
Net Weight	Model dependent

ADDITIONAL FEATURES

- High shear dispersion for fine and uniform particle distribution
- Vacuum environment to prevent air entrapment and oxidation
- Easy cleaning and maintenance
- Data logging and parameter storage
- Customizable design for special requirements

TYPICAL APPLICATIONS

- Lithium-ion battery electrode slurry
- Sodium-ion battery electrode slurry
- Solid-state battery material mixing
- Supercapacitor electrode slurry
- Conductive paste and ceramic slurry
- Research and pilot-scale production


Slurry Mixing


Vacuum Degassing


Homogeneous Mixing


High Viscosity Slurry Handling

Uniform Mixing | Bubble Free | High Efficiency | Safe Operation | Easy Maintenance | Lab to Production Scalability

Engineered for Performance. Built for Reliability. | Empowering Battery Innovation.