LABORATORY OVERHEAD STIRRER

MODEL LS-100 • TECHNICAL PRODUCT SPECIFICATION SHEET

Efficient and Versatile Mixing: The LS-100 Overhead Laboratory Stirrer delivers precise mixing capabilities for demanding laboratory tasks—ranging from delicate chemical synthesis to biological sample preparations. Powered by a quiet, long-lasting brushless DC motor with an integrated speed control panel, this system guarantees smooth and noiseless operation up to a 2-liter fluid volume matrix.

PRODUCT PERFORMANCE & BUILD QUALITY

Crafted from corrosion-resistant Stainless Steel and an impact-resistant ABS body shell, the LS-100 is intentionally engineered for lasting longevity in challenging chemical environments. Its IP42 protection rating safeguards internal electronics from unexpected splashes or ambient dust entry. Equipped with a micro-adjustable heavy cast clamp framework supporting up to 16 mm rod lengths, the instrument provides absolute stability during high-load mixing processes.

COMPREHENSIVE TECHNICAL SPECIFICATIONS

Model Designation	LS-100
Equipment Category	Overhead Laboratory Stirrer
Fluid Batch Capacity Range	Up to 2 Liters (2 Ltr Capacity)
Rotational Speed Range	100 RPM to 2000 RPM (Continuous Regulation)
Measurement & Speed Accuracy	± 2 % Precise Deviation Tolerance
Motor Configuration	Brushless DC Motor (1/20 H.P. Equivalent Performance)
Control Panel Interface	Analog Layout with Dedicated Speed Adjustment Knob
Core Materials	Stainless Steel Shaft & Accessories with ABS Protective Outer Body
Stirring Shaft Length	250 mm Standard Stainless Steel Rod
Operational Noise Level	Exceptionally Quiet Operation (< 55 dB)
Environmental Temperature Scope	Ambient to 100°C (Celsius) Solutions Range
Automation & Control Grade	Manual Speed Adjustment
Electronic Protection Class	IP42 Splash & Dust Protection Ingress Class
Universal Clamp Scope	Up to 16 mm Secure Gripping Range
Electrical Input Parameters	Voltage: 220 Volt (V) | Frequency: 50 Hertz (Hz)
Power Consumption	60 Watts (W) Energy-Efficient Output
Physical Footprint (L x W x H)	230 x 190 x 400 Millimeters (mm)
Equipment Net Weight	4.5 Kilograms (kg) Heavy Cast Base Footprint

KEY OPERATIONAL FEATURES

- **Flexible Mechanical Articulation:** The overall operating height and position angle of the stirring rod can be altered effortlessly along the C.P. rod vertical slide to suit various container sizes.
- **Brushless Motor Efficiency:** Delivers high mechanical efficiency with next-to-no upkeep requirements, outlasting traditional brushed motors.
- **Corrosion Barrier Design:** Heavy-gauge stainless steel prevents oxidation and component degradation during regular chemical exposure or aggressive washdowns.

SYSTEM CONFIGURATIONS & OPTIONS

Core Components Package: Every system comes fully shipped with the main high-torque drive motor block, vertical slider support assembly, adjustable attachment frame, and a 250 mm stainless steel stirring rod.

Optional Upgrades: Integrated mechanical 0-60 minutes operational countdown timer modules are available on request to automate basic sample cycle steps.

FREQUENTLY ASKED QUESTIONS (FAQ)

Q: How do I adjust the stirring speed on the LS-100 Laboratory Stirrer?

A: The LS-100 features an intuitive, manually operated speed adjustment knob mounted directly onto the analog front control board. Simply turn the control dial clockwise or counter-clockwise to scale the mechanical blending rate between 100 and 2000 RPM.

Q: What types of laboratory tasks is this overhead stirrer suitable for?

A: This instrument is ideal for uniform solution blending, particle dispersion, liquid emulsification, and suspension prep pathways. It is optimized for industrial, academic research, and chemical testing labs managing batches up to 2 liters.

Q: Where should the LS-100 be installed and set up in my laboratory?

A: It should be positioned on a flat, level, and structurally solid laboratory workbench away from direct plumbing outlets or water splashing. Ensure the full structural area (230 x 190 x 400 mm) is free of clutter to allow adequate heat dissipation around the motor unit shell.

Q: What technical benefits does the integrated brushless DC motor provide?

A: A brushless DC framework ensures long operational periods with minimal maintenance. It avoids internal carbon brush wear, reduces friction noise to stay comfortably under 55 dB, and actively maintains speed accuracy within a tight 2% threshold.

Q: How does the solution temperature range affect safe daily operation?

A: The LS-100 stirrer can safely run with its stirring rod immersed in containers tracking between ambient room temperature up to 100°C, allowing hassle-free blending of ambient and moderately heated chemical mixtures.

Q: What is the correct procedure for securing vessels in the integrated clamp?

A: Fit the heavy cast base clamp around the vertical rod line, checking that the gripping teeth line up cleanly with your sample container or framework. Tighten securely within its 16 mm clamp range to remove any chance of container slippage at higher rotational RPMs.