

automated liquid handling system that has 96 channels

The Automated Liquid Handling System is a highly efficient, fully automated pipetting platform based on 96-channel technology that automates complex liquid handling processes.

Automated Liquid Handling System

Main Features

1. High-throughput processing: 96-channel synchronized pipetting handles an entire 96-well plate at once for maximum efficiency.
2. Flexible pipetting modes: Supports single/multi-channel, one-to-many, many-to-one, sequential/staggered pipetting, and multi-range adjustment—adaptable to diverse experimental protocols.
3. Visualization interface: Graphical drag-and-drop process editor for easy workflow setup—no programming required.
4. Standard consumables compatibility: Works with SBS-standard 96/384-well plates and various reagent tanks for broad compatibility.
5. Automatic pipette tip change: Robotic arm enables automatic tip loading/ejection to prevent cross-contamination.



System Advantages

1. Stable & reliable: Industrial-grade motion platform and sensors guarantee precision and error-free operation.
2. Labor-saving: Automation reduces manual workload and operator fatigue.
3. Consistent results: Standardized process improves repeatability and data comparability.
4. Expandable: Supports module upgrades and integration with oscillation, heating, cooling, and optical detection modules.

Working Principle

1. Air displacement pipetting: Piston motion in channels controls air pressure for precise liquid aspiration/dispensing via tips.
2. Volume calibration: Algorithms ensure accuracy for liquids of varying viscosities.
3. Path planning: Optimizes tip movement paths for speed and efficiency.
4. Anti-cross-contamination: Automatic tip replacement or washing module prevents sample mix-ups.

Application Areas

1. Molecular biology: PCR/qPCR setup, DNA/RNA extraction.
2. Drug screening: Compound preparation, gradient dilution, dose-response curves.
3. Cellular experiments: Cell plating, media exchange, drug treatment.

4. Immunoassays: ELISA sampling, antibody screening, dilutions.
5. Clinical testing: Automated sample distribution and handling.
6. Environmental/food safety: Liquid dispensing for microbial/toxicology analyses.

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Model	AH96-20	AH96-200
Pipetting range	1uL to 20uL	5uL to 200uL
Accuracy	20uL±1.0%	200uL±1.0%
	10uL±1.0%	100uL±1.0%
	2uL±5.0%	20uL±2.0%
	1uL±10.0%	5uL±5.0%
Volume increment	0.1uL	

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Model	AH96-20	AH96-200
compatibility	SBS standard plates, 96-well and 384-well plates	
Technical principles	air displacement type	
Number of plate positions	6	
External dimensions	600x285x445mm	885x285x445mm