

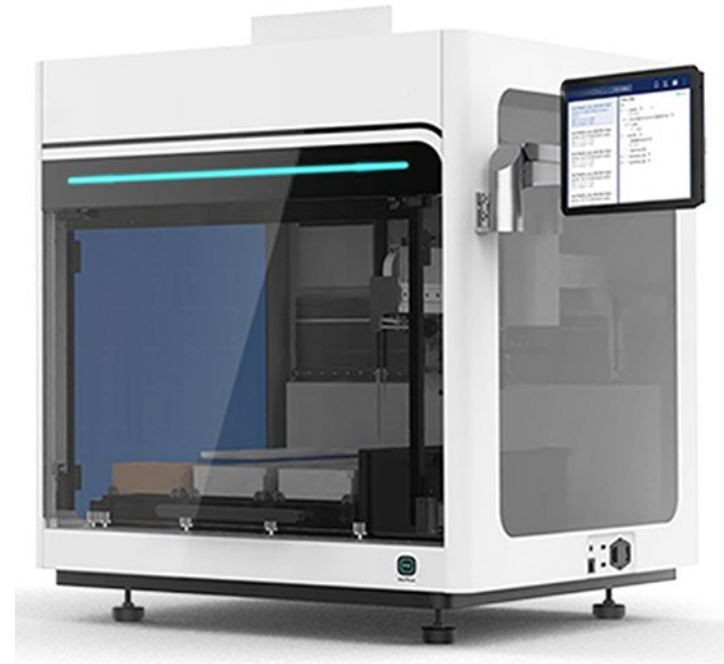
automated liquid handling equipment with hepa and uv lamp

The automated liquid handling equipment is a highly modular and scalable laboratory automation platform that can be flexibly configured with different functional modules and number of boards according to the user's needs in order to cope with various liquid handling tasks.

Automated Liquid Handling Equipment (HEPA & UV Biosafety)

Main Features

1. Multi-functional module configuration: Flexible 2-channel and 8-channel pipetting modules; wrench gripper for plate transfer; customizable for different experiment types.
2. High safety design: Pressure-sensitive liquid level detection and transfer process monitoring prevent overflow and operational errors.
3. Fully automated operation: Integrates modules for heating, oscillation, temperature control, etc.—adaptable for complex workflows and minimal manual intervention.
4. Flexible table configuration: Customizable layout supports varying plate quantities and arrangements for greater space utilization.



5. Multi-functional module support: Heating, oscillation, temperature control, oscillation temperature control, and magnetic separation for diverse liquid handling needs.
6. Air-displacement pipetting: Ensures precise handling for a range of viscosities and volumes.
7. Dual liquid level detection: Capacitance and pressure-sensing technologies for real-time, accurate monitoring.
8. Biosafety protection: HEPA filtration and UV lamp isolate airborne contaminants and microorganisms for safe operation.

System Advantages

1. Flexible & expandable: Choose 2- or 8-channel modules and plate configurations to suit any workflow.
2. Efficient & safe: Biosafety features guarantee clean, contamination-free operation.
3. Accurate liquid distribution: Air displacement pipetting ensures reliability, even with micro-volume or viscous liquids.
4. Automated workflow: Reduces manual work, boosts consistency, and improves repeatability.
5. Space-saving & safe: Compact, configurable design maximizes lab space and maintains biosafety.

Working Principle

1. Air displacement pipetting: Servo-driven piston modulates gas pressure, aspirating or dispensing liquid precisely.
2. Pressure-sensing detection: Real-time liquid level monitoring for accurate, safe operation.
3. Automated modular control: System adapts workflow to experimental needs for optimal results.
4. Transfer monitoring: Plate transfer process is monitored to prevent spillage or contamination.

Application Areas

1. Life science research: PCR setup, gene extraction, cell culture, and liquid mixing/distribution.
2. Drug screening & preparation: High-throughput screening, gradient dilution, compound spiking for drug R&D and dose-response curves.
3. Clinical testing & diagnostics: Efficient sample distribution/testing for consistent, reproducible results.
4. Immunoassay & ELISA: Automated ELISA/antibody screening, sample dilution—reduces human error, improves accuracy.
5. Environmental & food safety: Microbial and toxicological testing, liquid dispensing, sample analysis.
6. Chemical analysis: Accurate, efficient solution mixing, reaction system prep, and chemical workflows.

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Model	AH8P
Pipetting range	1uL to 1000uL
Accuracy	2uL less than 5%, 200uL less than 0.75%
Volume increment	0.1uL
Technical principles	air displacement type
Functional Modules	Heating, oscillation, temperature control, oscillation temperature control, magnetic module
Number of plate positions	20 to 35
Safety protection	UV and HEPA
Robot arm	8-Channel Pipette Module, Flexible 2-Channel Pipette Module, Grab Wrench
Robot arm accuracy	±0.1 mm on X,Y,Z axes
External dimensions	750mmx730mmx890mm

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Model	AH8P
Weight	90kg
Liquid level detection	capacitive sensing and pressure sensing
Power supply	100Vac to 240Vac, 50/60Hz