automated liquid handling workstation with other functions

In addition to the basic liquid pipetting, gradient dilution, continuous dispensing and other functions, the automated liquid handling workstation also extends a variety of modules such as well plate transfer, magnetic separation and temperature-controlled oscillation.

Automated Liquid Handling Workstation

Main Features

1. Accurate pipetting: Servo drive technology and enhanced sealing deliver precise, repeatable liquid handling with minimal leakage risk.
2. Diversified functions: Equip with clamp jaws, magnetic separation, temperature control, and more for varied experimental needs—ideal for cell culture, drug screening, etc.
3. Quick disassembly: Pipetting module supports fast removal for easy cleaning, maintenance, and reduced downtime.
4. Space-saving: Innovative tray mechanism reduces lateral running space by 50%—compact design fits smaller labs.

5. Strong compatibility: Supports SBS standard plates (96/384-well), adaptable for different reagent and sample types.
6. Air displacement pipetting: Advanced technology ensures accurate handling of liquids across different volumes and viscosities.
7. Integrated modules: Includes heating, oscillation, temperature control, oscillation temperature control, and magnetic modules.

System Advantages

1. High precision & efficiency: Servo-driven air displacement achieves reliable, error-reduced liquid handling for complex tasks.
2. Flexible operation: Modular and quick-change design lets users configure and upgrade system functions as needed.
3. Space & cost savings: Compact design lowers lab footprint and boosts efficiency—saving labor and time.
4. High stability: Precision hardware/software tuning keeps system stable in complex environments, ensuring consistent results.

Working Principle

1. Air displacement pipetting: Servo-controlled piston regulates gas pressure for precise liquid aspiration and dispensing.
2. Modular control: Each functional module—magnetic separation, temperature, oscillation—operates independently as needed.
3. Intelligent path planning: Optimizes pipette tip movement to speed up workflow and maximize efficiency.

Application Areas

1. Molecular biology: PCR/qPCR setup, DNA/RNA extraction—automated for accuracy and speed.
2. Drug screening: Compound spiking, gradient dilution, dose-response curve generation—supports discovery and high-throughput screening.
3. Cellular experiments: Automated cell suspension addition and medium replacement for reproducible culture.
4. Immunoassay: ELISA spiking, antibody screening, dilution—reduces errors and improves consistency.
5. Clinical testing: Automated sample distribution/processing—widely used in hospital labs.
6. Environmental/food safety: Microbiological and toxicological testing—precise liquid dispensing for reliable results.
7. Chemical laboratory: Sample distribution, liquid mixing, efficient/accurate chemical experiments.

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Model	**AH96S-4**	**AH96S-6**
Pipetting range	1uL to 1000uL	
Uniformity	CV≤2.0%	
Volume increment	0.1uL	
compatibility	SBS standard plates, 96-well and 384-well plates	
Technical principles	air displacement type	
Functional Modules	Heating, oscillation, temperature control, oscillation temperature control, magnetic module	
Number of plate positions	4	6
External dimensions	711mmx392mmx582mm	998mmx392mmx582mm