Galatek

LIQUID HANDLING WORKSTATION

Galatek G-Micro Liquid Handling Workstation

Satisfying all application scenarios of liquid handling
Building a smart and collaborative laboratory ecology

Personal-ized

Plat-form-based

Multi-mod-ule

Full-fea-tured

Liquid Workstation

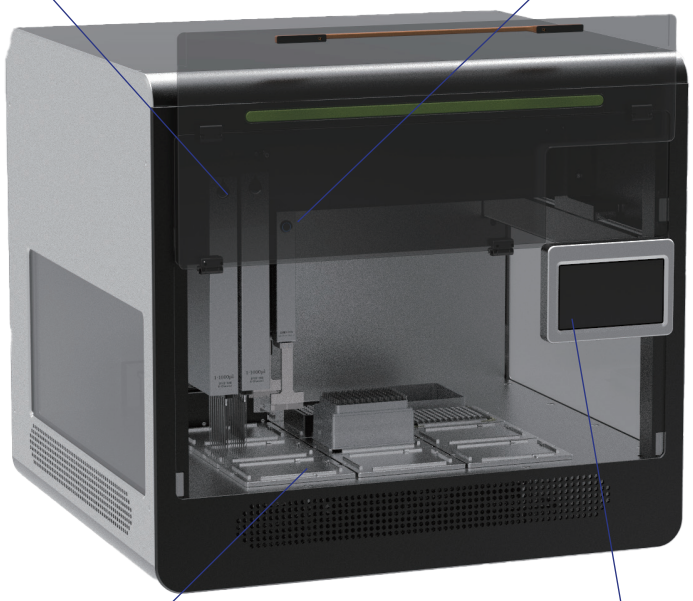
Galatek focuses on the research and development of robot and artificial intelligence technology and deeply integrates it into industrial applications, providing advanced intelligent automation products and solutions for customers. Its self-developed workstation is compatible with all kinds of samples, reagents, consumables, and modules, the whole workstation also can be configured freely and integrated according to different application scenarios. With special and powerful robotic arm expansion ability, it supports parallel processing of plate handling and pipetting, and can connect and integrate multiple devices to ensure that it fulfills the needs of various complex laboratory automation scenarios. This workstation is widely used in the fields of bio-pharmaceuticals and life sciences to continuously optimize experimental reliability and automated uptime, greatly improving the efficiency of laboratory.

Flexible pipetting modes

8 fixed and optional 1/2 independent channels

Upgradable to Integrate with Gripper

To meet the requirements of complex workflows, including plate transfer



Open platform

Compatible with various functional modules, including thermocycler, heater-shaker, temperature and magnetic module
Compatible with SBS-based consumables

Touchscreen for easy protocol setup

PC and iPad-based software
Drag and drop to easy design the protocol

Application Scenario

- Proteomics
- Cell Biology
- Drug Discovery
- Synthetic Biology

Multi-Channel Design

- Processes 8 samples simultaneously, greatly reducing operational time
- Reduces human error to ensure high consistency and repeatability of experimental results
- Utilizes advanced pipetting technology to ensure high precision in every pipetting operation

Highly Open Software

- Graphical real-time programming via PC/iPad
- Built-in comprehensive consumables library, supporting adjustment of various liquid parameters

Product Features

Special expansion ability for the robotic arm to support parallel processing

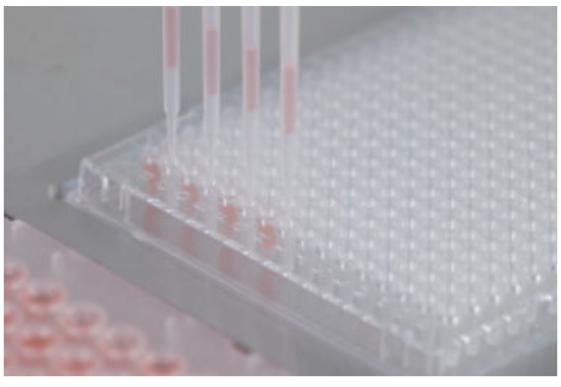
- According to the different application requirements, a platform can be equipped with up to two robotic arms, including a plate handling robotic arm
- Enables consumables transfer between different functional areas

High capability for multiple module integration, free configuration of workspace

- Compatible with all kinds of consumables, including SBS plates, sample tubes, and tips, supports multiple application scenarios
- Multiple functional modules are available, including temperature control, shaking, and magnetic stand, which can be integrated and customized as needed
- The composed 12 standard SBS plate positions can meet various throughput requirements

Professional liquid handling capability

- Whole-plate duplication or dispensing
- Liquid transfer between any plates
- Precise gradient dilution of reagents



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Functional Modules

Photo	Name	Functions	Parameters
	Heating and shaking module	Supports heating incubation and mixing for multiple consumables, including 96-well plates, 384-well plates, centrifuge tubes, and deep-well plates	Temperature range: RT +5-105 ℃
	Heating, cooling & shaking module	Supports heating/cooling temperature control for multiple consumables, including 96-well plates, 384-well plates, centrifuge tubes, and deep-well plates	Heating time: 25-105 ℃ (≤ 5min); 4-25 ℃ (≤ 2min) Cooling time: 105-25 ℃ (≤ 8min); 25-4 ℃ (≤ 5min)
	Heating and shaking module with clamp-plate	Provides three main functions: heating, shaking, and plate clamping, and enables high-precision repositioning after heating and shaking	Shaking amplitude: 2/3 mm Temperature range: RT +5-105 ℃ Shaking speed: 100-3000RPM/ 100-2500RPM
	Heating, cooling & shaking module with clamp-plate	Heating/cooling temperature control, shaking, plate clamping	Shaking amplitude: 2/3 mm Temperature range: RT +4-105 ℃ Shaking speed: 100-3000RPM/100-2500RPM
	Heating & cooling module	Provides a constant temperature function	Temperature range: RT +4-105 ℃
	HEPA module	Basic safety module of the protective barrier for laboratory biosafety	Supports positive or negative pressure, depending on demand
	Special temperature control module for DNA methylation conversion	Special temperature control module designed for DNA methylation processes	Temperature range: RT 12-100 ℃ Temperature uniformity: ±0.2 ℃
	Incubator	Mainly used for constant temperature incubation and culture of cell culture plates, 96-well ELISA plates, and 96-well deep-well plates	Temperature range: RT 5-80 ℃ Temperature precision: 37±1 ℃ Temperature uniformity: 37°C; ≤1°C between plates; ≤0.5°C within a plate
	Magnetic suction module	Bottom-suction enrichment magnetic beads based on the magnetic bead method	Enrichment time of magnetic bead: 5 s

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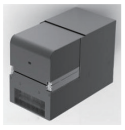
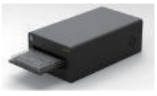
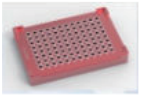
Functional Modules

Photo	Name	Functions	Parameters
	ODTC thermal cycling module	Meets the requirements of repeated heating and cooling in the process of molecular biological experiments	Temperature range: RT +4-105°C (minimum increment: 0.1°C), capable of maintaining an extreme low temperature of 2°C and a standard low temperature of 4°C
	Thermal cycling module with fluorescence detection for 96-well plates	Supports heating incubation and mixing for multiple consumables, including 96-well plates, 384-well plates, centrifuge tubes, and deep-well plates	Temperature range: RT +5-105 °C Temperature precision: ±0.5 C Shaking speed: 100-2500RPM
	High-through putfluores-cence detection module for 96-well plates (bottom-read)	Meets many scenarios such as fluorescence quantification detection in molecular biology laboratory	Loading volume: 0-200 μL Detection time: <60s per 96 samples Repeatability: < 1.5% Stability: < 1.5%
	High-throughput fluorescence detection module for 96-well plates (top-read)	Meets many scenarios such as fluorescence quantification detection in molecular biology laboratory	Light source: Monochromatic LED (475 nm) Excitation: Blue, 475 nm Emission: Green, 525 nm Repeatability: < 1.5% Stability: < 1.5%
	24-Channel fluorescence detection module	For fluorescence detection of single wavelength	Sensitivity (limit of detection): <0.01 ng/μl (dsDNA) Detection time: ≤30s per 24 samples Repeatability: < 1.5% Stability: < 1.5%
	High-throughput multi-wave-length absorbance reader module for 96-well plates	For fluorescence detection of multiple wavelengths	Detection time: ≤ 30 s Loading volume: 20-200uL Absorbance range: 0.0-4.0 OD
	96-well PCR plate magnetic stand	For magnetic bead adsorption	Applicable consumables: 0.1/0.2 ml PCR plate Magnetic strength: 5000 GS (Strong magnet) Magnetization direction: Axial magnetization

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Multi-level Liquid Handling Workstation

Suitable for various application scenarios

Name		Parameters		
Appearance	Dimensions	774 x 722 x 710 mm		
	Net weight	75 kg		
Power supply	Voltage	220 V		
	Frequency	50 Hz		
	Rated power	1,000 W		
Operation Environment	Temperature	10 C - 30 C		
	Humidity	≤ 80%		
Pipetting Environment	Temperature	10 C - 30 C		
	Humidity	≤ 80%		
Pipetting Performance	Pipetting principle	Air displacement		
	Pipetting range	Single channel: 1uL-1000uL; 8 channels: 1uL-1000uL		
	Liquid level detection and follow-up	Pressure liquid level detection and follow-up		
	Pipetting precision	Tip Size	Pipetting Volume	Precision
		10 µL	2 µL	5.0 %
		50 µL	10 µL	1.5 %
		200 µL	50 µL	0.5 %
		1000 µL	50 µL	0.5 %
Number of SBS plate positions		12 plate positions		
Robotic Arm	Positioning precision	0.1 mm		
	Maximum number of robotic arms	2		
	Maximum load of plate handling robotic arm	2 kg		

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