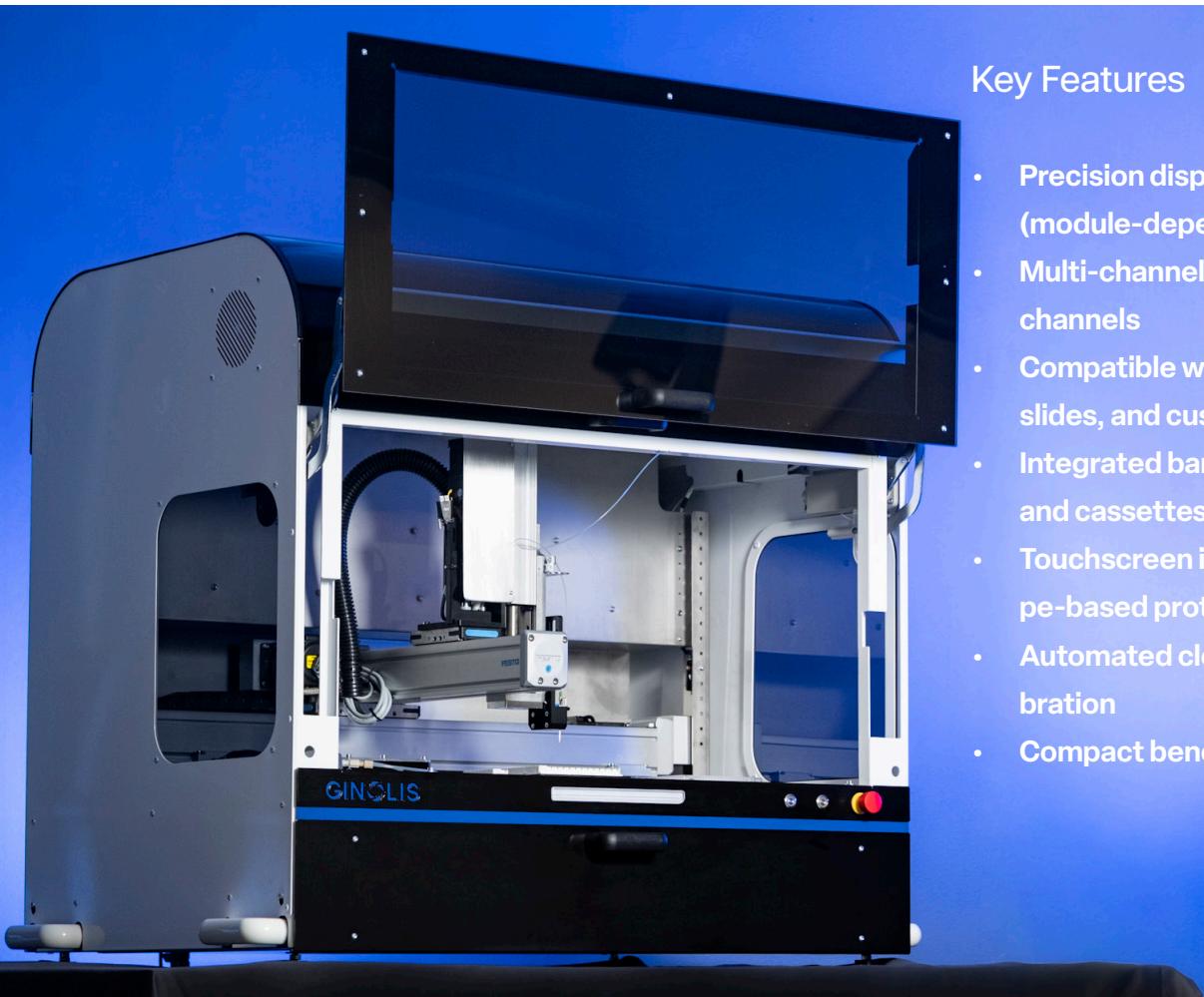


PRODUCT SHEET

Ginolis Kaste Lab

High Precision Automated Liquid Dispensing System

Kaste Lab is a high precision, fully automatic liquid handling system for labs that need production grade dispensing performance in a compact benchtop format. It delivers accurate and repeatable dosing of reagents, samples, and buffers from 2 nL to 10 mL into microplates, tubes, and custom cartridges, making it ideal for clinical diagnostics, pharmaceutical R&D, environmental analysis, and point of care assay development.



Key Features

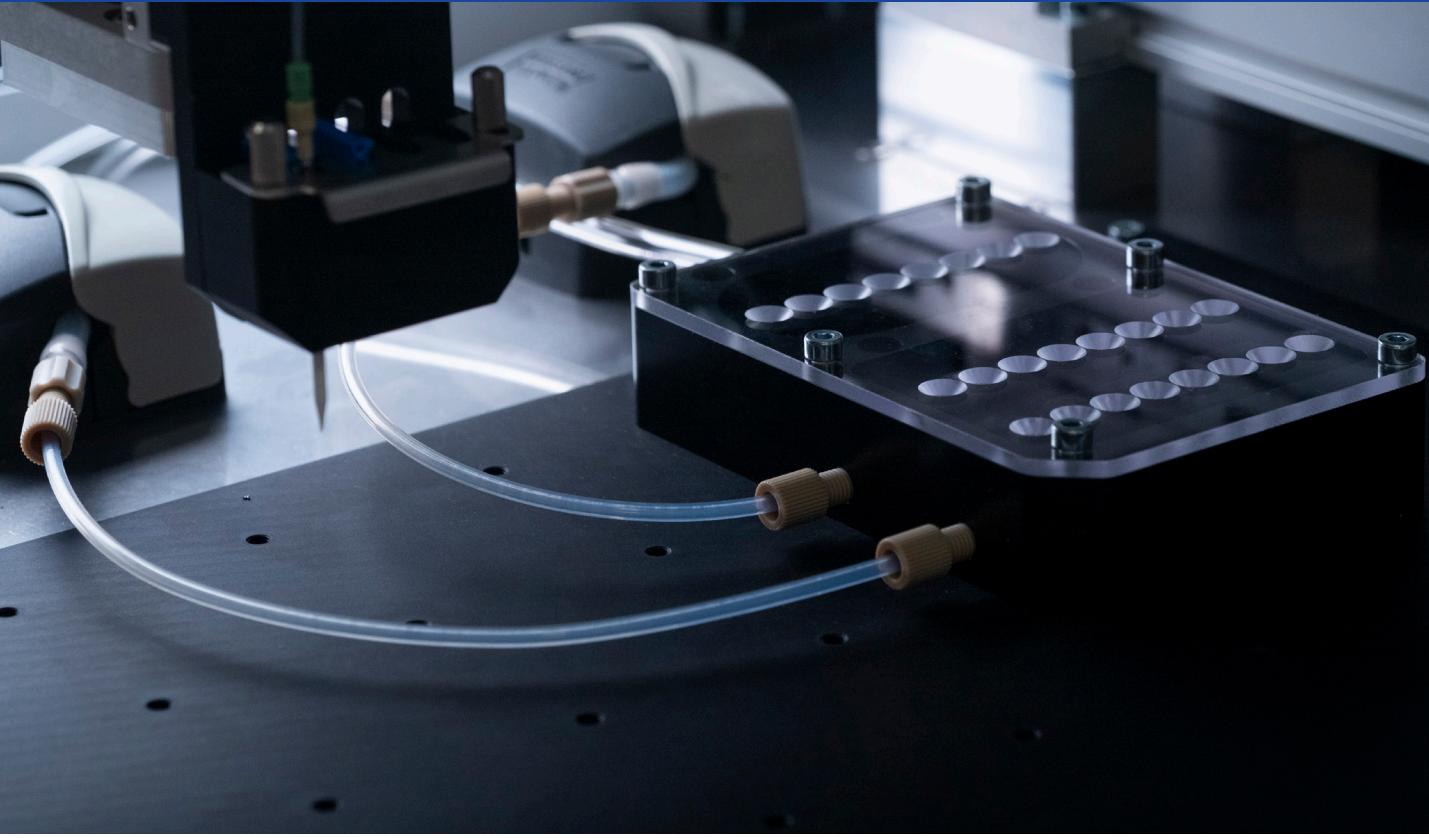
- **Precision dispensing: 2 nL to 10 mL (module-dependent)**
- **Multi-channel head: 1–8 configurable channels**
- **Compatible with microplates, tubes, slides, and custom carriers**
- **Integrated barcode tracking for samples and cassettes**
- **Touchscreen interface with recipe-based protocol design**
- **Automated cleaning, priming, and calibration**
- **Compact benchtop footprint**

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What are the benefits

Assay Grade Precision and Repeatability



Kaste Lab combines rigid mechanics, stable motion control, and closed-loop monitoring to lock down volume consistency across diverse pumps and assay formats. Whether you choose Ginolis Kaste or qualified third-party dispensers, the platform ensures tight end-to-end performance.

- Clinical & POC: Nanoliter-milliliter dosing reduces conjugate and buffer variability, cutting invalid runs and verification cycles.
- Pharma R&D: Reproducible dispensing into microplates and microfluidic cartridges supports dose-response curves and screening without manual recalibration.
- Diagnostics Manufacturing: Lot-to-lot consistency in coating, dispensing, and assembly workflows translates directly to higher yield and faster time-to-clinic.

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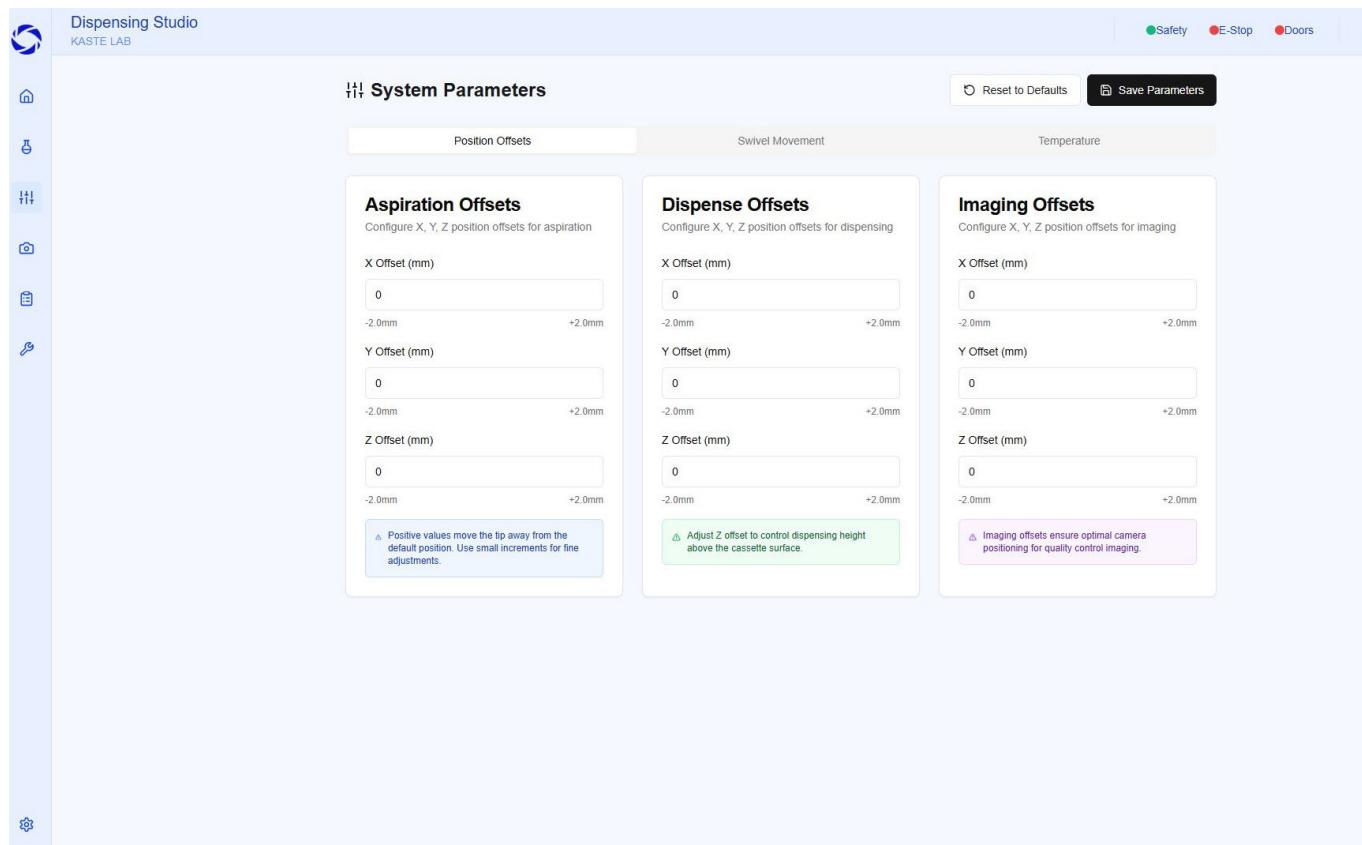
Software and Control

Ginolis Dispensing Studio

Kaste Lab is powered by Kaste Dispensing Studio, the primary control and monitoring interface for the benchtop system. Through a touchscreen optimized UI, users can:

- Design and execute protocols via drag-and-drop
- Monitor system status and environmental conditions in real time
- Track reagents, consumables, and cassette positions
- Adjust temperature, movement, and pressure setpoints on the fly
- Verify dispenses with integrated vision control
- Access logs and images for QC and troubleshooting

Kaste Dispensing Studio also supports real time data logging, optional remote access and diagnostics, and integration with lab automation systems where required.



The screenshot shows the Dispensing Studio software interface for Kaste Lab. The top navigation bar includes the title 'Dispensing Studio KASTE LAB' and status indicators for 'Safety' (green), 'E-Stop' (red), and 'Doors' (red). The left sidebar features a vertical menu with icons for Home, System, Camera, Logs, and Settings. The main content area is titled 'System Parameters' and contains three sections: 'Position Offsets', 'Swivel Movement', and 'Temperature'. The 'Position Offsets' section is currently active, showing three sub-sections: 'Aspiration Offsets', 'Dispense Offsets', and 'Imaging Offsets'. Each sub-section has input fields for X, Y, and Z offsets. A note in the Aspiration Offsets section states: 'Positive values move the tip away from the default position. Use small increments for fine adjustments.' A note in the Dispense Offsets section states: 'Adjust Z offset to control dispensing height above the cassette surface.' A note in the Imaging Offsets section states: 'Imaging offsets ensure optimal camera positioning for quality control imaging.' Buttons for 'Reset to Defaults' and 'Save Parameters' are located at the top right of the 'Position Offsets' section.



Precision Robotics

Technical Specification

Dispensing performance:

- Dispensing volume range: 2 nL – 10 mL (depending on dispensing module)
- Accuracy: $\pm 1\%$ (module and volume dependent)
- Repeatability: CV $< 1\%$ (module and volume dependent)
- Supported liquids: Aqueous solutions, solvents, and common assay reagents

Environment and mechanics:

- Operating temperature: 15–30 °C
- Dimensions (W × D × H): 1000 × 730 × 880 mm (typical configuration)
- Weight: 80 kg (depending on options)

Electrical and connectivity:

- Power supply: 100–240 V AC, 50/60 Hz
- Connectivity: Ethernet (LAN) for control and system integration

Applications

- Clinical diagnostics
- Pharmaceutical R&D
- Environmental analysis
- Food and beverage testing
- Academic research

Ordering Information

- **Product Code:** GMA101570
- **Available Models:** Single channel and multi channel configuration
- **Lead Time:** 12 weeks

Options & Accessories

- Disposable tips or fixed nozzles
- Sample racks and holders for plates, tubes, and custom cartridges
- HEPA filtered or custom safety enclosure (optional)
- Customizable dispensing modules, including Ginolis Kaste Nano pumps
- Integrated washing station
- Camera/vision inspection modules
- Additional barcode readers and rocker function for gentle mixing
- Consumables incl. tips, collection boxes, tubing kits

Compliance & Safety

- CE marked
- RoHS compliant
- ISO 9001 compatible
- Built-in safety sensors and emergency stop

Software & Control

- Protocol editor with drag-and-drop interface
- Real-time monitoring and logging
- Integration with LIMS and lab automation systems (optional)
- Remote access and diagnostics (optional)

Contact

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