

Revolutionize Liquid Handling in Your Lab

Formulatrix® Liquid Handling Portfolio

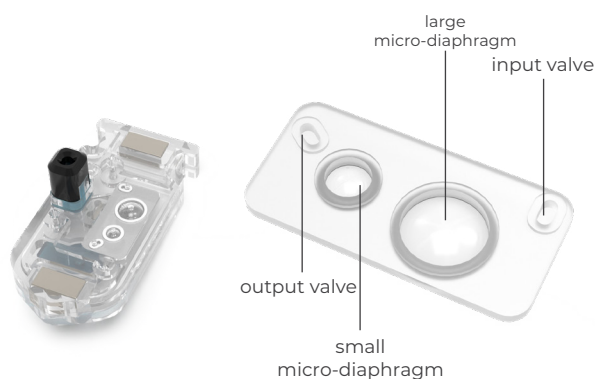
Formulatrix instruments and software combine innovation with intelligent features, proprietary technologies, and intuitive user interfaces to make automation accessible to everyone in the lab while enabling researchers to achieve the most precise and efficient liquid handling for generating reliable results.



MANTIS® Low Volume Dispenser – Small, Versatile, Precise

The Mantis is a programmable, low volume, low dead volume, consumables-free non-contact liquid dispenser that can reliably dispense a variety of solutions, including those containing beads, cells, proteins, enzymes, probes, and master mixes, utilizing Formulatrix's proprietary microdiaphragm pump technology.

- Low volume dispensing from 100 nL
- Usable for any SBS template up to 1536-well plates
- High precision (< 2%) and accuracy (< 5%)
- Minimal dead volume of just < 6 µL
- Use up to 48 different reagents
- Compatible with aqueous and organic solutions
- High speed: 500 nL into 384-well plate = 120 seconds



Mantis chip and micro-diaphragm technology

- **Verify Every Dispense Run:** The Quality Control Droplet Detection Station verifies drop dispensing at the start and end of your run
- **Define your Labware in Seconds:** The Interactive Labware Teaching module simplifies adding new labware
- **Tackle High Viscosity Reagents:** High Viscosity Continuous Flow Chips can dispense thicker reagents than ever before
- **Seamless Operation in Regulatory Environments:** optional 21 CFR Part 11 Capable Software

Chip Type	Diaphragm Vol.	Min Vol.	Max Vol.	Pulses per Second	Dead Vol.	CVs
Low Volume	0.1 µL + 0.5 µL	0.1 µL	∞	@ 0.1 µL: 10, @ 0.5 µL: 7	6 µL	< 2% at 0.1 µL
High Volume	1 µL + 5 µL	1 µL	∞	@ 1 µL: 10, @ 5 µL: 4	15 µL	< 2% at 1 µL
Continuous Flow	N/A	5 µL	∞	dispenses up to ~600 µL / sec	150 µL	< 3% at 5 µL

TEMPEST® High-Throughput Dispenser – Non-Contact Liquid Dispensing

The Tempest is a consumable-free, non-contact, multipurpose liquid dispenser that leverages microdiaphragm pump and continuous flow chip technologies for high-throughput liquid dispensing. It allows researchers to dispense up to 12 different reagents simultaneously through 96 independently controlled outputs—delivering any volume, of any reagent, into any well.

- Compatible with any SBS footprint labware up to 1536-well plates
- Low volume non-contact dispensing down to 200 nL
- Rapid, bulk plate filling with continuous flow chip
- Up to 25 plates per stacker
- High precision and accuracy
- Easy dispensing of viscous and organic solutions



Direct pipette tip dispenses reduce dead volumes of only 100 µL

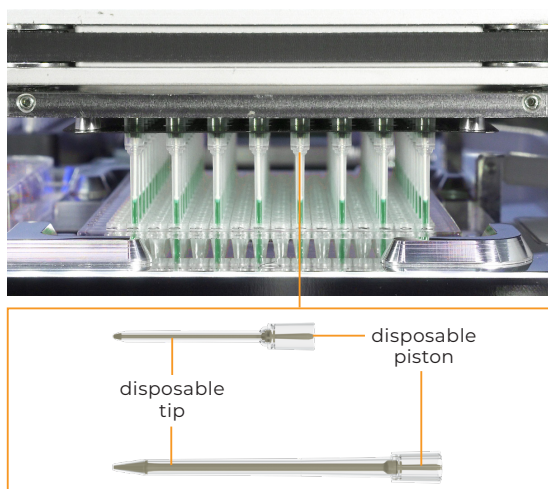
- **Precise:** Non-contact, microdiaphragm technology ensures high accuracy and precision across a broad range of reagent types
- **Low Dead-Volume:** Non-recoverable dead volume as low as 48 µL per chip
- **Flexible:** Tempest supports all SBS plate types, and can easily be integrated with other robotic automation, with optional plate stackers and barcode reader
- **Fast:** Dispense 200 nL to 96-well plate in 3 seconds, 1 µL to 384-well plate in 5 seconds

Chip Type	Diaphragm Vol.	Min Vol.	Max Vol.	Pulses per Second	Dead Vol. With Tube	Dead Vol. Pipette	CVs
Low Volume	0.2 µL + 1 µL	0.2 µL	∞	8	40 µL	100 µL	< 5% at 0.2 µL
High Volume	1 µL + 5 µL	1 µL	∞	4	40 µL	100 µL	< 4% at 1 µL
Continuous Flow	N/A	As low as ~5 µL	∞	Dispenses up to ~400 µL/sec	~150 µL	N/A	< 3%

F.A.S.T.™ Liquid Handler – 96 Channel Positive Displacement Sample Transfer

The F.A.S.T. (Flow Axial Seal Tip) is a reliable and easy-to-use liquid transfer system designed to move any viscosity of liquid quickly with its one-of-a-kind positive displacement, 96-channel head. With its high accuracy, precision, and reliability for low-volume sample transfers, the F.A.S.T. system saves researchers time and reduces reagent costs.

- Interchangeable, barcode labelled tray with 6 SBS format positions
- Built-in camera for automatic tip rearrangement
- Automated labware and tray calibration
- Volume range: 100 nL to 50 μ L (100 nL steps)
- Increased accuracy and precision (CV 5% at 0.1 μ L)
- No dead or excess volume in tips
- 384 tips per caddy



13 μ L and 50 μ L positive displacement tips

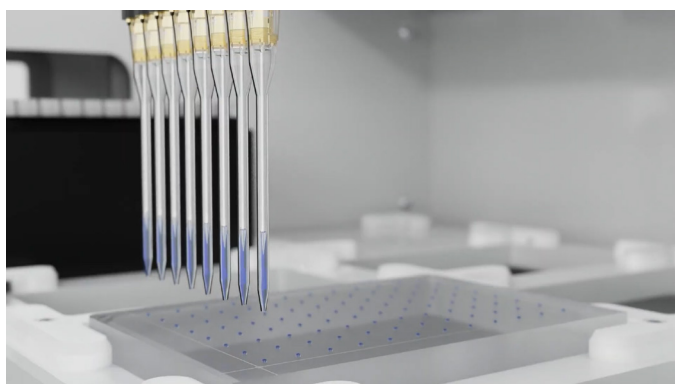
- **Fast:** Save time on your liquid transfers with the unique 96-tip head that can pick up both low volume (13 μ L) and high volume (50 μ L) tips
- **Flexible:** Reduce consumable use with flexible tip formats and optional tip disposal storage to minimize workflow interruptions
- **Versatile:** Perform cherry-picking, serial dilutions, and plate copies (broadcast, mother-daughter transfers) with ease
- **Liquid Class Agnostic:** No need to program liquid classes—positive displacement tips ensure accurate, viscosity-independent dispensing

- **Compact:** Save on lab space as the system's small footprint allows for desktop use yet is open for integration with complementary automation
- **No Cross-Contamination:** The positive displacement disposable tips ensure the integrity of your samples without any risk of cross-contamination
- **Smart:** Conduct your transfers with confidence as the system features multiple state-of-the-art failsafes including tip position sensors, automatic tip arrangement, and ultra-sensitive collision detection

FLO i8® PD – General Purpose Liquid Handler

The FLO i8 PD is a positive displacement general-purpose liquid handler with 8 channels independent in span, Z axis, and volume. It features non-contact dispensing down to 200 nL, providing speed and saving consumables. Its intuitive software ensures precise liquid transfers without the need to specify source volumes, well geometries, and liquid properties.

- 8 fully independent positive displacement channels
- Liquid class agnosticism
- Non-contact droplet dispensing
- Wide volume range (200 nL - 1000 µL)
- Precise and accurate transfers with a CV of <5% at 0.5 µL
- Smooth deck motion
- Sense of touch embedded into each channel
- Vision-based scanning to locate tips and labware
- Dynamic liquid level detection and tracking



Non-contact dispensing with positive displacement tips

- **Liquid Class Agnostic Pipetting:** Handle a wide range of liquid viscosities with positive displacement tips without programming liquid classes
- **Save Time and Cost:** The FLO i8 PD offers non-contact dispensing for rapid aliquoting with minimal tip usage, saving you time and money
- **Incredibly Easy Software:** Design your protocol with ease using our intuitive, drag-and-drop interface
- **Flexible:** Simplify all of your tube and plate-based labwork using the independent spanning channels with a pipetting range of 0.2 µL to 1000 µL

- **Intelligent:** Automatically locate labware and detect and track liquid levels with sensing technology built into each pipetting channel
- **Automation-Friendly:** The FLO i8 PD's software offers an open API for seamless integration

Contact us today at:

info@formulatrix.com

FORMULATRIX LLC
5 DeAngelo Drive
Bedford, MA 01730 – United States

Formulatrix Europe Limited
12 South Mall, 3rd Floor
T12 RD43 - Cork, Ireland

Formulatrix Trading FZCO
2E 104b, First Floor, 2 East
Dubai Airport Freezone
Dubai, United Arab Emirates

