

High-Throughput

**Rainin BenchSmart 96**

Automated Aspiration/Dispense

Multi-dispense

Interchangeable Heads

Four Trays, Small Footprint

Outstanding Speed & Versatility



**Faster, Better 96 & 384-Well Pipetting**

Ultra Efficient and Extremely Versatile

**METTLER TOLEDO**

# BenchSmart 96

## High-Throughput Pipetting... Simplified

**The Rainin BenchSmart 96 is designed for researchers who want the precision and reproducibility of automated liquid handling, yet need the speed and flexibility of a manual system.**

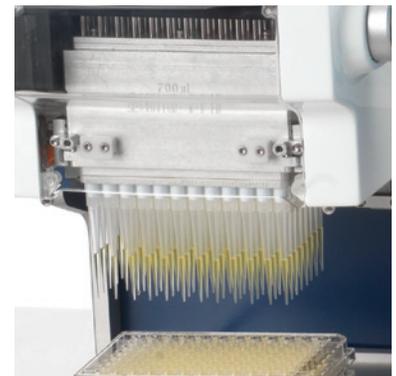
For complex protocols and precise liquid handling, nothing beats an automated pipetting system for accurate and consistent aspiration and dispensing. With its large touchscreen key pad, the Rainin BenchSmart 96 makes it easy to design, save and retrieve any protocol – from simple one-step procedures to complex, multi-step experiments. What's more, the BenchSmart 96 improves repeatability by virtually eliminating variability in how liquids are aspirated and dispensed.

There's an art to pipetting, which is why the BenchSmart 96 also gives users complete control over the instrument's mechanical movement. Whether it is the speed of movement, the exact position of the tips within a plate or reservoir, or a quick change in the order of a protocol, the BenchSmart 96 quickly adapts to almost any application. And with four tray stands to work with, you save time and reduce your risk of errors by minimizing the need to swap out trays and reservoirs.



### Smart high-throughput

With its large touchscreen key pad, Rainin's BenchSmart 96 makes it easy to design, save and retrieve any protocol, from simple one-step procedures to complex, multi-step experiments.



### Three pipetting heads

Get the precision you demand with the 0.5-20 µL head, the lab work-horse you need with the 5-200 µL head, and the ready for sample preparation / cleanup 100-1000 µL head.



**Save time and costs**

BenchSmart 96 simplifies and speeds workflows by significantly reducing, if not eliminating, the need to swap out tips and reservoirs.



**Proven tip technology**

Rainin guarantees that BenchSmart 96 LTS tips are free from RNase, DNase, DNA, ATP, and Pyrogens for contamination-free pipetting. Filter and pre-sterilized tips include certificates.

# Loaded with Features Designed for Research

## At last – a smart approach to high-throughput pipetting

BenchSmart is designed for the research environment, where experimental conditions can quickly change and frequent modifications to the protocol are required. Its large color touch-screen and graphical interface make modifying even complex protocols a snap. And with the ability to manually move the liquid end over the four tray stands in x, y and z axes, it's easy to see why BenchSmart excels in undefined, exploratory research protocols.

With built-in pipetting modes like advanced pipetting and multi-dispense, repetitive and oftentimes complicated components of liquid handling workflows are easily handled with exceptional consistency. For exploratory liquid handling work, BenchSmart's basic, dilute and reverse pipetting modes offer convenience and flexibility.



### Basic pipetting

Transfer individual liquid samples quickly, reproducibly and with minimal effort – everything you need for routine, everyday pipetting.



### Advanced pipetting

Take greater control of your workflow by making fine adjustments and advanced features like setting a fixed volume, volume sequencing and mixing.



### Multi-dispense

Dispense multiple aliquots from a single aspirated volume -- set a series of fixed volume aliquots or sequence of different volumes.



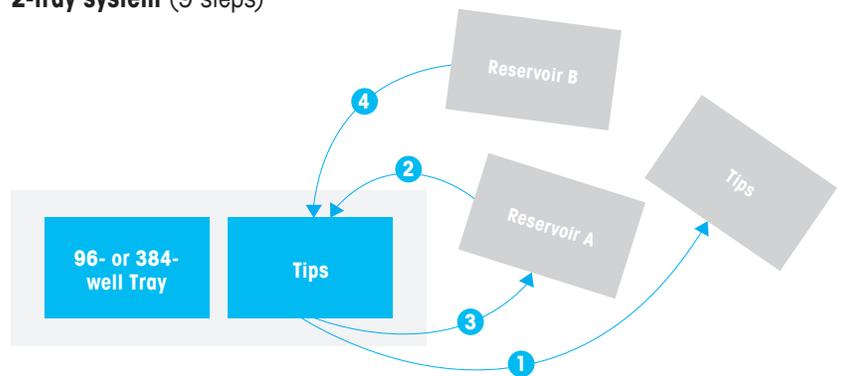
### Dilute

Simplify in-tip dilution of multiple sample volumes with BenchSmart's fixed or volume sequencing feature

#### 4-tray BenchSmart 96 (4 steps)



#### 2-tray system (9 steps)



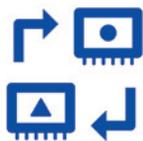
### Four tray for fewer steps, faster throughput

Constantly swapping trays, even for a single-solution protocol, increases your potential for error and poses greater ergonomic risk.



#### Reverse pipetting

Automates a procedure commonly used with viscous liquids – positioning the piston past the first stop, aspirating, then depressing only to the first stop to dispense the aliquot.



#### Head change

Changing the pipetting head is quick and easy with BenchSmart – on screen graphical instructions guide users through the simple procedure.



#### Auto load/eject

BenchSmart eliminates forces associated with tip loading and ejecting, plus assures a perfect fit on every channel every time.



#### Context Sensitive Help

Clear, easy to understand instructions for any screen you are on are available by touching the Help button.

# Superior Performance

## The Flexibility to Meet Most Any Challenge

The ideal pipetting station is one that easily adapts to modifications you make to your experiments and supports your need for accurate and reproducible data. As a researcher, your liquid handling needs are distinct and change often – that’s why BenchSmart 96 balances the precision of its automated features with the ability to quickly make adjustments to your experiment.

With three interchangeable heads, BenchSmart 96 can help you increase your throughput on a variety of applications. For example:

- Perform qPCR and enzymatic reactions with the 0.5-20  $\mu\text{L}$  head
- Process and wash ELISA plates using the 5-200  $\mu\text{L}$  head
- Set up bacterial cell cultures in 96-well plates with the 100-1000  $\mu\text{L}$  head

With three pipetting heads and the Advanced, Reverse and Multi-dispense pipetting modes, BenchSmart can simplify and accelerate your most challenging and repetitious liquid handling workflows.



### Interchangeable Heads

Quickly swap between three different heads to accommodate experimental workflows and pipetting applications.



### Onboard instructions

In Head Change mode, BenchSmart guides users through each step of the head change process with animated graphics.



### Full volume range

With three pipetting heads, BenchSmart accommodates pipetting from 0.5 to 1000  $\mu\text{L}$ .



## Your versatile new lab assistant

Loaded with features and three liquid head volumes, BenchSmart quickly adapts to most any protocol.

Technique	0.5-20 $\mu\text{L}$	5-200 $\mu\text{L}$	100-1000 $\mu\text{L}$
PCR	●	●	
qPCR	●	●	
DNA Sequencing	●	●	
RNA Transcription	●	●	●
ELISA		●	●
Protein Crystallography	●	●	
Luminex Assays	●	●	
Drug Compound Screening	●	●	
Sequencing Sample Preparation		●	●
Sequencing Sample Cleanup		●	●
Standard Enzymatic Assays	●	●	●
Cell Culture Set-up		●	●
Cell Culture siRNA Treatment	●	●	
Cell Lysis		●	●

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[www.mt.com/rainin](http://www.mt.com/rainin)

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