

Automated Sample Management

Product Catalog



About Us

The Measure of Excellence®

Hamilton Company specializes in the development, manufacturing, and customization of precision measurement devices, automated liquid handling workstations, and sample management systems.

Hamilton's processes are optimized for quality and flexibility. Whether it's a custom needle with a quick delivery time frame, a special length pH sensor, or a comprehensive solution to fully automate your assay workflow, trust that Hamilton's products will always meet your needs.

Our Complete Portfolio



Storage

Hamilton Storage offers temperature and humidity controlled automated sample management systems for storage of a variety of sample containers. Hamilton's line of biobanking and sample management systems, benchtop devices, and consumables are designed for sample integrity, flexibility, and reliability.



Process Analytics

Hamilton Process Analytics includes innovative solutions for the online measurement of pH, dissolved oxygen, conductivity, ORP, viable cell density, and total cell density. Hamilton's proprietary Arc® intelligent sensor technology eliminates the need for transmitters and moves the functionality to your smartphone or tablet.



Laboratory Products

Hamilton Laboratory Products manufactures Microliter™ and Gastight® syringes that set the standard for analytical fluid measurement. Other products include custom needles, semi-automated diluters and dispensers, polymeric HPLC columns, pH electrodes, pipettes, and more.



OEM Solutions

Many of the world's top manufacturers utilize Hamilton products and expertise to get their innovations to market faster with lower development and manufacturing costs. As an OEM partner, we offer the ability to integrate our proven syringe pumps or pipetting channels, customize our proven liquid handling platforms, or design a complete system to automate your novel chemistry.



Robotics

Hamilton Robotics provides automated liquid handling workstations and laboratory automation technology for the scientific community. With a focus on innovative design, our products incorporate Hamilton's patented liquid handling technologies for fully automated solutions. In addition to liquid handling platforms, we also offer application-specific solutions, small devices, and consumables.

Hamilton Company has been a leading global manufacturer for more than 60 years, with headquarters in Reno, Nevada; Franklin, Massachusetts; Timișoara, Romania; and Bonaduz, Switzerland; and subsidiary offices throughout the world.



Expertise in Sample Management

Since 2007, Hamilton Storage, an affiliate entity of Hamilton Company, has been a global leader in the design and manufacturing of automated storage systems for biological and compound samples. By safeguarding the integrity of even the most precious samples, our solutions and expert knowledge empower researchers to reach new heights of laboratory efficiency while remaining focused on life science research.

Our sample storage solutions, benchtop devices, and consumables are designed for sample integrity, flexibility, and reliability for life science applications. Hamilton Storage continues to develop innovative technologies to fit market needs and be known as *the* sample care company for the life science industry.

Quality and Expertise in Automated Sample Management

Our commitment to designing customer-focused systems has allowed us to become a leading supplier within the life science industry. Combining our world-class engineering experience, scientific background, and extensive interactions with our customers has resulted in market-leading products that focus on sample integrity, reliability, and flexibility.

Integrated Solutions for Automated Storage and Liquid Handling

Hamilton Storage sample management systems are specifically designed to easily integrate with Hamilton Robotics liquid handling workstations, creating a comprehensive sample processing center that supports a broad range of applications. Additional devices such as decappers, readers, centrifuges, sealers, and shakers can be integrated as well, providing a wide range of solutions for the customer. Our unique and simple approach offers our customers a complete solution that is specific to their needs.

Extensive Customer Base and Support Network

As a global company, Hamilton Storage has an extensive customer base. Our products are installed and maintained in five continents. Throughout the world, our service organization provides our customers with top-of-the-line support, which ensures they are getting the most out of their investment.

History of Hamilton

- **1950** Clark Hamilton developed the first lead shielded syringe
- **1953** Incorporation of Hamilton Company USA
- **1968** Founded Hamilton Bonaduz AG
- **1974** Hamilton established R&D department for robotic instruments
- **1980** Introduced the first automated liquid handler
- **1984** Founded Hamilton Medical
- **2000** Introduced the air displacement Microlab® STAR liquid handler
- **2007** Established Hamilton Storage Technologies; Introduced ASM for -20°C sample storage
- **2012** Introduced BiOS for mid- to large-capacity biobanking with the first -80°C tube picker; East Coast headquarters built in Franklin, Massachusetts
- **2014** Introduced Verso for high-throughput sample storage down to -20°C; Introduced the LabElite product line for benchtop tube processing
- **2015** Established Hamilton Storage GmbH in Switzerland
- **2016** Introduced SAM HD for all-in-one -80°C biobanking
- **2020** Introduced Verso Q20 for compact automated sample storage down to -20°C; Introduced line of Tubes made specifically for automated processing
- **2022** Added Verso Q10, Q50, and Q75 to Verso Q-Series product family; introduced LabElite Handheld DeCapper

Product Guide

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Hamilton Storage headquarters
in Franklin, Massachusetts, USA

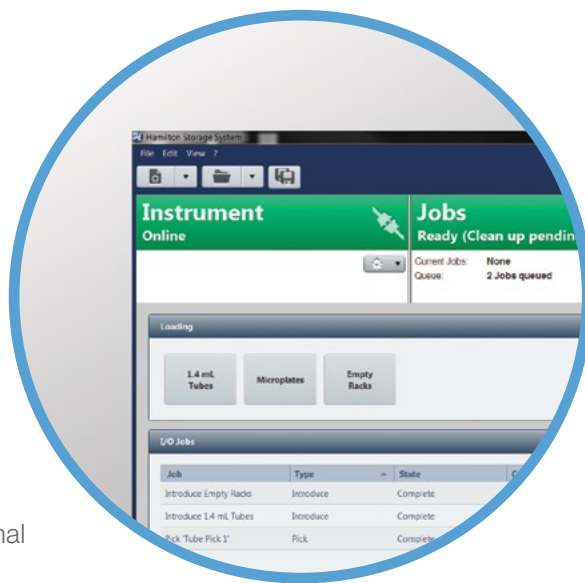


INSTINCT S Software

Powerful Software for All Platforms

INSTINCT S is the powerful, yet easy-to-use software that allows users to run daily operations without the single click of a button. This enables users to operate the system with minimal training.

INSTINCT S is available across all of our platforms—Verso Q-Series, Verso, SAM HD, and BiOS systems.



Dashboard of INSTINCT S Software

Features of INSTINCT S:

- Run daily operations without the single click of a button
- Operate the system with minimal training
- Set up automated inventory, access control, and full audit trails
- Use the powerful Application Programming Interface (API) to interact directly with a LIMS or with Hamilton liquid handling workstations

LIMS Integration

Our RESTful-based API allows easy integration with a LIMS. Some examples for successful integration with LIMS and sample management software using our API include Titian Mosaic, LabWare LIMS, and Labvantage, to name just a few.

The API includes many functionalities that are available on the user interface such as:

- **Job Management**—create, modify, cancel, or pause jobs
- **Sample Inventory**—information on the sample in the system or historical placement of the sample
- **Notifications**—inform the LIMS when a job has changed states, or when a sample has been moved into or removed from the storage system to help keep the LIMS synchronized with the physical state

Furthermore, the API can be used for basic integrations, which can be set up quickly, to in-depth integrations, where the LIMS can control additional parameters of the storage system and job management.

API technical documentation, a simulation environment, and example code on how to integrate with the API is available.



Verso® Q-Series

Compact Automated Sample Management

The Verso Q-Series lineup of systems—Q20, Q50, and Q75—boasts many of the accommodating features of a large system in an extremely compact footprint, so your samples can be stored anywhere you need them.

Thanks to their fully automated designs, these small but powerful systems allow you to spend more time being productive and less time managing samples.

The Verso Q-Series sets a new standard in size and performance, providing the perfect opportunity to transition from manual sample storage to an automated process.

- Jobs can run without supervision. Simply input your pick list and move on to the next task, or run a job after hours to maximize productivity during the day.
- No-touch technology allows users to load samples without any software interaction. Just place the rack and go.
- A complete audit trail of each sample is available—the system automatically tracks and records the movement of every sample.
- Green refrigerant is used to help reduce your lab's carbon footprint.
- Verso Q50 and Verso Q75 are equipped with redundant refrigeration.



The Universal Picker provides the ability to pick multiple labware types with different diameters in one picker module



-20°C SAMPLE MANAGEMENT

Applications



COMPOUND MANAGEMENT



BIOBANKING



FORENSIC SCIENCE



SEED BANKING



ACADEMIA



PHARMACEUTICAL



LIFE SCIENCE RESEARCH & DEVELOPMENT

Technical Specifications

	Verso Q20	Verso Q50	Verso Q75
Width	0.8 m (2 ft, 8 in)	1.31 m (4 ft, 4 in)	1.81 m (6 ft)
Depth	0.8 m (2 ft, 8 in)	0.8 m (2 ft, 8 in)	0.8 m (2 ft, 8 in)
Height	1.99 m (6 ft, 7 in)	1.99 m (6 ft, 7 in)	1.99 m (6 ft, 7 in)
Temperature Range	Ambient to -20°C	Ambient to -20°C	Ambient to -20°C
Barcode Reader	1D and 2D for racks, plates, and tubes	1D and 2D for racks, plates, and tubes	1D and 2D for racks, plates, and tubes

Storage Capacities

Labware Type*	Verso Q20	Verso Q50	Verso Q75
Hamilton 0.3 mL Tubes	36,000	94,600	152,600
Hamilton 1.0 mL Tubes	17,600	45,200	72,800
Shallow-well plates	310	735	1,150

* Example labware types used. Verso Q20 is capable of storing almost any SBS-format labware. For capacity of a specific labware type, please consult the system specifications.

Verso Q10 Hotel

The Verso Q10 Hotel is an automated plate hotel with high storage density on a compact footprint at ambient temperature. Advanced functions like Inventory Management and Auto-Inventory allow for quicker integration and enable you to focus on your assays instead of plate and tip logistics.

- Store up to 180 SBS-plates
- Linear setup to achieve highest footprint-to-capacity ratio
- Direct manual access to all stackers, allowing quicker loading/unloading times
- Store various plate types in a single hotel, including tip boxes
- Automated identification of loaded stacker type
- Intuitive user interface for mobile devices and tablets
- Configurable to fit to the left-hand or right-hand side of a liquid handler



Features of Verso Q-Series:

- Processing speeds up to 500 tubes/hour*
- Easy-to-use INSTINCT S software allows users to run daily operations without the single click of a button
- No-touch technology allows users to load samples without any software interaction
- Control the system simply by using your smartphone or tablet
- The only automated sample storage systems in their class using natural refrigerant
- Complete audit trail of each sample is available—the system automatically tracks and records the movement of every sample
- Multiple labware types can be managed in one system and retrieved without jeopardizing the integrity of unpicked samples
- Robust, fully supported Application Programming Interface (API) for seamless integration into your laboratory and LIMS
- Automated integration with liquid handling workstations such as Microlab® STAR and VANTAGE Liquid Handling Systems, and other laboratory automation devices

* Processing speeds reflect the whole process, from order submission to retrieval.



Medium- to Large-Capacity High-Throughput Sample Management

Verso is a modular automated storage platform, which is easily configured to meet the needs of the most demanding sample management applications at temperatures from ambient to -20°C .

With its quick processing speeds, Verso allows more time to be spent on science instead of manual, labor-intensive tasks. Furthermore, the system can operate without supervision, allowing users to run jobs after hours to maximize productivity during the workday.

Verso handles a wide range of labware types, including tubes, vials, and plates, to accommodate current and future workflows. Additionally, the system can be expanded modularly to grow with future storage needs.

The system's user-friendly design features an automated Input/Output module that allows users to load racks of samples without needing a free hand to open a system door.



The Universal Picker provides the ability to pick multiple labware types with different diameters in one picker module



Custom Solutions

In addition to a wide range of standard configurations, Hamilton offers customized solutions to meet your most unique and demanding requirements. From small modifications to large integrated systems to simplify your entire process, our experts are glad to help.



Tray shuttle robot to move the samples to the storage locations and tube picker inside Verso

Applications



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Features of Verso:

- Processing speeds up to 1,500 tubes/hour* and over 170 plates/hour*
- Easy-to-use INSTINCT S software allows users to run daily operations without the single click of a button
- Up to 100 racks can be placed in the Input/Output (I/O) module at once
- Automatic sample tracking and auditability
- Optional active thawing module allows users to retrieve samples ready for pipetting by eliminating the time-consuming manual thawing step
- A 96-tube Picker-Puncher provides the ability to pick and punch tubes in the same module
- A Universal Picker provides the ability to pick multiple labware types with different diameters in one picker module
- Backup refrigeration with full redundancy available
- Optional dual tray shuttle on large systems increases throughput
- Robust, fully supported Application Programming Interface (API) for seamless integration into your laboratory and LIMS
- Automated integration with liquid handling workstations such as Hamilton Microlab® STAR and VANTAGE systems, and other laboratory automation devices

Technical Specifications

Height	2.3–4.8 m (7 ft, 6.6 in–15 ft, 9 in)
Depth	2.2–2.4 m (7 ft, 2.6 in–7 ft, 10.4 in)
Length	2.5–22.5 m (8 ft, 2.4 in–73 ft, 9.7 in)
Temperature Range	Ambient to -20°C
Internal Atmosphere	Ambient, dry air, or inert (Nitrogen)
I/O Capacity	Up to 100 racks
Barcode Reader	1D and 2D for racks, plates, and tubes

Storage Capacities

Labware Type*	Capacity
384-format tubes	1.4M to 72M
0.3 mL (screw cap)	264K to 18.8M
0.75 mL (TPE)	216K to 15.6M
1.4 mL (septum)	143K to 10.2M
2 mL	62K to 3.1M
1 dram vials	35K to 3.1M
Shallow-well plates	3K to 189K

* Example labware types used. Verso is capable of storing almost any SBS-format labware.

* Processing speeds reflect the whole process, from order submission to retrieval.

SAM HD

Automated Low-Capacity Sample Management

SAM HD is an automated sample management system for secure storage of tubes and plates at -80°C.

This compact, localized storage system easily fits into existing laboratory spaces. Additionally, users can increase storage capacity to store more samples in the same footprint using RackWare high-density storage racks.

To maintain sample integrity, the system eliminates heat and moisture from entering the system which can cause freeze-thaw cycles. The active automation is separated from the sample storage compartment so that heat does not affect the samples. Unlike manual freezers, the freezer door remains closed to prevent moisture and temperature fluctuations.

The environment is continuously monitored, even during picking, ensuring the samples never reach critical sample temperatures. A standard UPS and LN₂ backup is provided to help mitigate disaster scenarios and ensure samples are kept cold and safe.

Store Multiple Labware Types in One System

Up to six different tube and/or plate types can be managed in one system while maintaining secure sample documentation and tracking. Additionally, up to six different labware types can also be picked without the hassle of tooling changes, and without compromising the integrity of unpicked samples.

Increase Storage Capacity Using RackWare

Our high-density racks increase the number of tubes that can be placed in a rack. RackWare HDR-060 supports popular 48-format labware and increases storage capacity in a comparable SBS-format rack from 48 to 60 tubes—a 25% increase. RackWare HDR-138 supports most major 96-format labware and increases storage capacity in a comparable SBS-format rack from 96 to 138 tubes—a 43% increase.



An internal carousel provides optimized and flexible storage capacities



2D barcode scanning for full sample tracking



Patented external magnetic couplers drive the internal robotics



Technical Specifications

Dimensions (WxHxD)	55 in x 87.5 in x 59 in 139 cm x 222 cm x 150 cm
Weight (empty)	861 kg (1,900 lbs)
Max. Labware Weight	0.64 kg (1.4 lbs)
Voltage	(2) 208–240 VAC, 15A Service, 50/60 Hz
Operating Environment	10–22°C, relative humidity ≤45% with no condensation
Storage Temperature	-80°C
Sample Atmosphere	Nitrogen or dry air (-40°C dew point or lower)
Operating System	Windows® 10
Barcode Reader	Racks: 1D Tubes: 1D and 2D (side) and 2D (bottom)

Tube/Plate Picker Retrieval Rates

Tube Picking	Maximum 100 tubes/hour at 5% hit rate
Plate Picking	50 plates/hour (retrieval only)

Storage Capacities

Labware Type	Standard Racks	RackWare High-Density Racks
0.3 mL FluidX screw cap	59,712	85,836
0.5 mL screw cap	34,080	48,990
1.4 mL septum	34,080	48,990
1.0 mL/1.4 mL screw cap	28,800	41,400
1.8 mL Nunc screw cap	14,448	18,060
5.0 mL screw cap	8,496	n/a
SBS microplates	803	n/a

Note: Storage capacity based on common labware types. Capacity may change based on labware type.

Features of SAM HD:

- Store and pick up to six different tube types to easily adapt to changing workflows
- Retrieves samples in less than 70 seconds
- Easy-to-use INSTINCT S software allows users to run daily operations without the single click of a button
- Provides sample safety—samples are stored securely in the system and user access rights are controlled by the software
- Reads 2D barcodes on the bottom and 1D and 2D barcodes on the side of the tube
- Integrate with a LIMS operating on Windows 10
- Remote monitoring and job execution
- Full alarm capabilities

Applications



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DRUG DISCOVERY



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PHARMACOGENOMICS



GENOTYPING

Automated Medium- to Large-Capacity Biobanking

Hamilton BiOS is an automated storage system specifically designed to store biological samples at -80°C.

BiOS maintains stable sample temperatures throughout the samples' entire life in the system—while introducing and sorting samples, managing the inventory, and processing and delivering orders. In addition, BiOS records a full audit trail and temperature log for all samples managed in the system.

Its modular and scalable design allows storage of 100,000 to over 10 million samples in a wide variety of labware. It seamlessly interfaces with your IT infrastructure and LIMS by providing the BiOS API and remote monitoring possibilities.



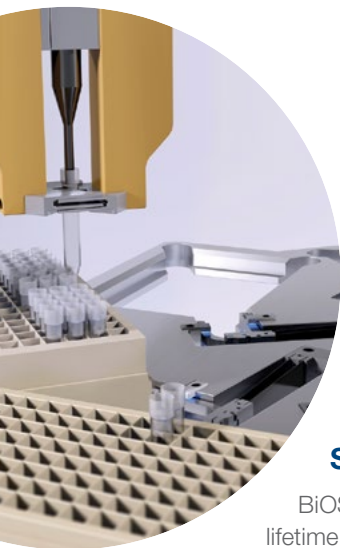
Dimensions

	BiOS M	BiOS L	BiOS XL
Height	2.9 m (9 ft, 8 in)	4.2 m (13 ft, 11 in)	4.9 m (16 ft, 1 in)
Width	4.3 m (14 ft, 3 in)	4.3 m (14 ft, 3 in)	5.1 m (16 ft, 7 in)
Length	3.9 m–10.5 m (12 ft, 10 in–34 ft, 6 in)	3.9 m–10.5 m (12 ft, 10 in–34 ft, 6 in)	7.1 m–22.5 m (23 ft, 4 in–73 ft, 10 in)

Storage Capacities

Labware Type	BiOS M	BiOS L	BiOS XL
0.3 mL	533K–7.25M	850K–11.6M	3.47M–23.2M
0.5 mL	362K–5.55M	591K–8.84M	2.54M–18.1M
1.0 mL	215K–3.29M	336K–5.14M	1.44M–10.5M
2 mL	114K–1.68M	181K–2.41M	780K–4.94M
5 mL	104K–698K	165K–1.18M	367K–2.44M





-80°C Tube Picker

Capable of processing multiple types of labware without the need for any mechanical changes or additional processing modules.

Sample Integrity

BiOS is designed to guarantee sample integrity throughout the lifetime of the sample. Temperature stability is key to maintaining the value of samples. By taking special measures to eliminate any significant temperature fluctuations, potential sample degradation is prevented. One of the key components for this is our patented -80°C tube picker, which helps maintain consistent sample temperatures during processing.

Flexibility

BiOS easily integrates into your applications. The system supports a wide range of labware in SBS-format racks or plates up to a height of 110 mm. A mixture of labware can be stored and sorted in the same tube picking module. This allows different labware formats from multiple sources to be easily stored in one system.

Additionally, the capacity of BiOS can be scaled to fit your specific storage needs, whether it is 100,000 or greater than 10 million samples.

- **BiOS M** is designed for smaller collections or laboratories with limited space.
- **BiOS L** provides the greatest storage capacity per square foot in laboratories with available ceiling height.
- **BiOS XL** is designed for the largest sample collections and provides the greatest levels of backup and redundancies.

Reliability

Performing consistently is the calling card of BiOS systems, allowing labs to operate at peak efficiency. As system reliability is key to maximizing productivity, BiOS was designed with its automation housed at -20°C in order to increase results and minimize downtime. Thanks to external refrigeration compartments, any necessary maintenance can be performed promptly without affecting stored samples, which are safely sealed in -80°C chest freezers within the system.

Technical Specifications

Storage Temperature	-80°C
Picking Temperature	-80°C
Redundancy	Fully redundant mechanical refrigeration plus LN ₂ backup system
Barcode Reading	Racks and Plates: 1D and 2D Tubes: 2D (bottom) comes standard; 1D or 2D (side) is optional

Benefits of BiOS:

- **Sample integrity**—ensures samples are always kept at ultra-low temperatures, even during processing
- **Flexibility**—capable of storing and picking multiple types of labware and expanding modularly
- **Reliability**—redundant backup systems
- **Sample tracking**—1D and 2D barcode reading during introduction, internal processing, and retrieval
- **Feature-rich software**—INSTINCT S provides access restrictions, sample tracking, and audit trails to support 21 CFR Part 11 compliance

Applications



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GENOTYPING

LabElite[®] DeCapper SL

Automated Screw Cap Decapping

The DeCapper SL offers integration friendly automated decapping in a smaller footprint. The easy-to-use device provides automated decapping/capping of tubes in 24-, 48-, and 96-format tube racks, with internal or external threads.

The DeCapper SL easily fits where bench space is limited thanks to a 20% smaller footprint than the standard LabElite DeCapper. The device can be operated as a standalone unit, or integrated with Hamilton Robotics liquid handlers or third-party robotic arms.

Due to its smaller footprint and compact size, the DeCapper SL can be easily positioned next to liquid handling devices for access by on-deck grippers to move labware to and from the device. This maximizes space and leaves room for users to integrate other peripheral devices.



Features of the DeCapper SL:

- Easily swap decapping heads to decap tubes in 24-, 48-, and 96-format tube racks on a single device
- Decap only tubes needed— all rows, selected rows, or partial racks
- Processes tubes in landscape format
- Can be operated as a standalone device, or integrated with Hamilton Robotics liquid handlers or third-party robotic arms
- Built-in Secure Mode ensures an optimal seal during capping to eliminate cross threading
- Minimize the time a tube is open using optional Row Loop Mode—only one row is processed at a time by holding caps after decapping and immediately recapping

Technical Specifications

Dimensions (l x w x h)* 533.5 mm (21.0 in) x 334 mm (13.1 in) x 452 mm (17.8 in)			
Supported Labware	Microtubes	0.25 mL to 1.4 mL	Hamilton, FluidX, Greiner, LVL, Matrix, Micronic, Nunc, and others**
	Cryovials	1 mL to 10 mL	Hamilton, FluidX, Greiner, LVL, Micronic, Nunc, and others**
Connection Interface		Ethernet for integration	

*Actual dimensions may vary based on head in use.

**Others available upon request.

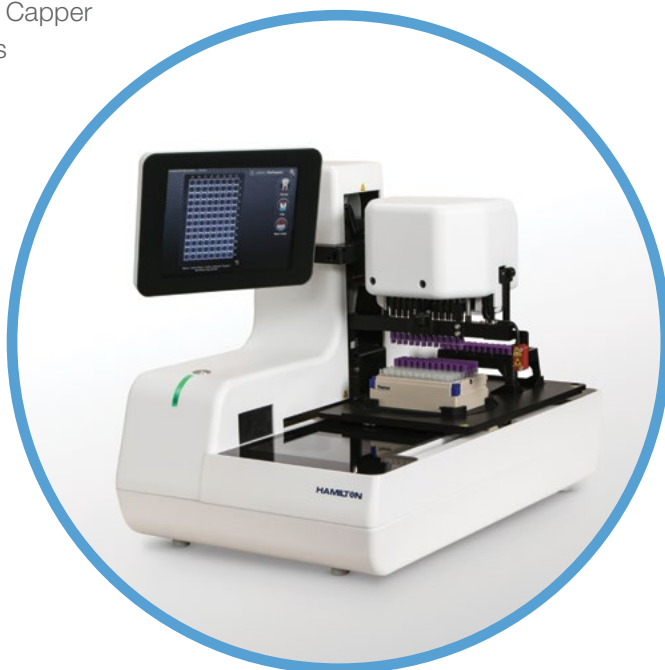


BENCHTOP DEVICES

LabElite® DeCapper and I.D. Capper

Automated Screw Cap Decapping

The DeCapper and I.D. Capper are easy-to-use devices that provide automated decapping/capping of tubes in 24-, 48-, and 96-format tube racks, with internal or external threads. The I.D. Capper enables labs to go one step further, combining decapping/capping and high-speed 2D barcode reading in one device without any additional hardware.



Features of the DeCapper and I.D. Capper:

- Easily swap decapping heads to decap tubes in 24-, 48-, and 96-format tube racks on a single device
- Decap only tubes needed—all rows, selected rows or columns, or partial racks
- Process tubes in portrait or landscape format within one device
- Can be operated as a standalone device, or integrated with Hamilton Robotics liquid handlers or third-party robotic arms
- Built-in Secure Mode ensures an optimal seal during capping to eliminate cross threading
- Minimize the time a tube is open using optional Row Loop Mode—only one row is processed at a time by holding caps after decapping and immediately recapping
- Single button execution of 1D and 2D scan and automatic upload of barcode information to a LIMS (I.D. Capper only)

Technical Specifications

Dimensions (l x w x h)*	600 mm (23.6 in) x 380 mm (15.0 in) x 440 mm (17.3 in)		
Supported Labware	Microtubes	0.25 mL to 1.4 mL	Hamilton, FluidX, Greiner, LVL, Matrix, Micronic, Nunc, and others**
	Cryovials	1 mL to 10 mL	Hamilton, FluidX, Greiner, LVL, Micronic, Nunc, and others**
Supported 1D Barcodes	2/5 Industrial / Interleaved, Code 39, Code 128, Pharmacode, Codabar, EAN 13		
Supported 2D Barcodes	Datamatrix ECC 200, PDF417, QR Code		
Connection Interface	Ethernet for integration		
Recommended PC (I.D. Capper only)	Windows 7 64-bit (Required), 2.8 GHz Core 2 Duo, 3GB RAM, 250GB HD, 16x DVD+/-RW		
Communication (I.D. Capper only)	One USB 2.0 port for the camera connection		

*Actual dimensions may vary based on head in use.

**Others available upon request.

LabElite® Handheld DeCapper

Semi-Automated Screw Cap Decapping

The new Handheld DeCapper is designed to provide fast, repeatable 6- or 8-channel decapping/capping of tubes in 48- and 96-format tube racks with internal or external threads. The device incorporates the same interchangeable adapter technology used in Hamilton Storage's line of benchtop decappers, allowing for superior labware flexibility in terms of both brand and format.

With an ergonomic grip, along with intuitive Decap, Cap, and Eject buttons, the Handheld DeCapper provides a user-friendly experience while adding efficiency and speed to workflows. Additionally, the device helps maintain sample integrity and prevent sample loss by capping tubes with optimal torque thanks to five preset torque levels to accommodate a variety of labware.

Technical Specifications

Dimensions (l x w x h)	11.38 cm (4.48 in) x 5.99 cm (2.36 in) x 25.5 cm (10.04 in)	
Weight	725 g (1.6 lb)	
Supported Labware	48-format	Hamilton, FluidX, Greiner, LVL, Micronic, Nunc, and others*
	96-format	Hamilton, FluidX, Greiner, LVL, Matrix, Micronic, Nunc, and others*

*Others available upon request. Contact Hamilton for specific tube compatibility.

NEW!



Features and Benefits of the Handheld DeCapper:

- 6-/8-channel decapping of 48-/96-format labware
- Incorporates Hamilton's interchangeable adapter technology from its benchtop decapper
- Flexibility in supporting globally recognized labware manufacturers
- Ergonomically friendly grip and design
- Intuitive decap/cap push buttons and eject features
- Adjustable torque features to securely fasten caps
- Charging/docking station for accelerated workflows
- Drip tray for quick and convenient cleaning
- CE approved device



BENCHTOP DEVICES

LabElite[®] DeFroster

Automated Tube Rack Frost Remover

The LabElite DeFroster removes frost from a tube rack that has been retrieved from cold storage in either manual or automated freezers. Using mechanical brushes and a liquid solvent, the DeFroster is able to quickly and safely remove frost that may obscure barcodes on racks—this while avoiding the potentially detrimental hazard of sample warming or thawing.

The DeFroster boasts a small footprint and is completely mobile, allowing users to perform work while using battery power. Additionally, the device's revolutionary hands-free design eliminates both the handling of harsh liquids and inhalation of noxious fumes during the defrosting process.



Features of the DeFroster:

- Operational using either an electrical outlet or battery power
- Won't warm samples more than 15°C, ensuring sample integrity
- Offers hands-free operation and a run time of less than 30 seconds
- The platform can operate in a cold room environment ranging from +10°C to +30°C
- Accepts SBS-format tube racks ranging in temperature from -20°C to -80°C
- Compatible with tube types up to 90 mm in height

Technical Specifications

Dimensions (l x w x h) 730 mm (28.7 in) x 304.9 mm (12.0 in) x 353.4 mm (13.9 in)

Supported Labware Any SBS-format rack up to 90 mm in height

Sample Cart

The Sample Cart is used to transport samples quickly and efficiently from your automated sample storage system around your laboratory.

It is a user-friendly option that allows users to avoid manually carrying large quantities of samples, and it extends the ease-of-use of Hamilton Storage's systems to the whole laboratory.

The Sample Cart can hold all tray types compatible with Verso, ranging from SBS-footprint rack trays to dedicated High Density Trays. Please note that the trays must be purchased separately.



Features and Benefits of the Sample Cart:

- Stores 20 trays holding up to 100 standard SBS-footprint racks
- Two front-opening doors keep samples securely inside during transport
- Comes fully assembled
- Saves time by transporting racks in large quantities
- Reduces the hassle of multiple trips
- Whole trays can be loaded into Verso

Technical Specifications

Dimensions (l x w x h)	60 cm (23.62 in) x 44 cm (17.32 in) x 112 cm (44.09 in)
Weight	50 kg
Material	Aluminum frame



RackWare®

RackWare is part of our sample containment product line featuring efficient storage containers for tubes, cryovials, glass vials, DNA collection cards, and more.

RackWare includes standard- and high-density racks with an SBS footprint, as well as optional lids available in different heights.

High-Density Racks

By increasing the number of samples per rack, the storage capacity in a given footprint increases up to 43%.

Standard-Density Racks

The rack is designed with a rectangular arrangement of vials/tubes for labware types that do not have these racks available, such as 1 dram and scintillation vials.

Custom-Designed Racks

Hamilton Storage offers the service to develop, design, and produce customized storage racks for customers' special needs.

For more information, visit www.hamiltoncompany.com/rackware.

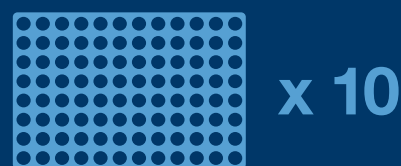
Technical Specifications

All Racks

Rack Footprint (SBS Footprint)	127.76 mm (5.03 in) x 85.48 mm (3.37 in)
Temperature Range	+35°C to -80°C

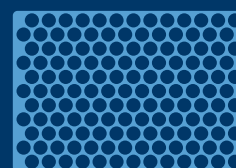
Increase Your Storage Capacity Up to 43% with High-Density Racks

You can store 960 tubes in **10 standard-density racks**



x 10

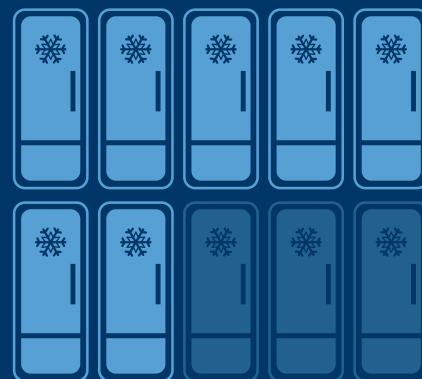
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x 7

or in **7 high-density racks**

By using high-density 138-format racks instead of standard-density 96-format racks, you can **reduce your number of freezers from 10 to 7**

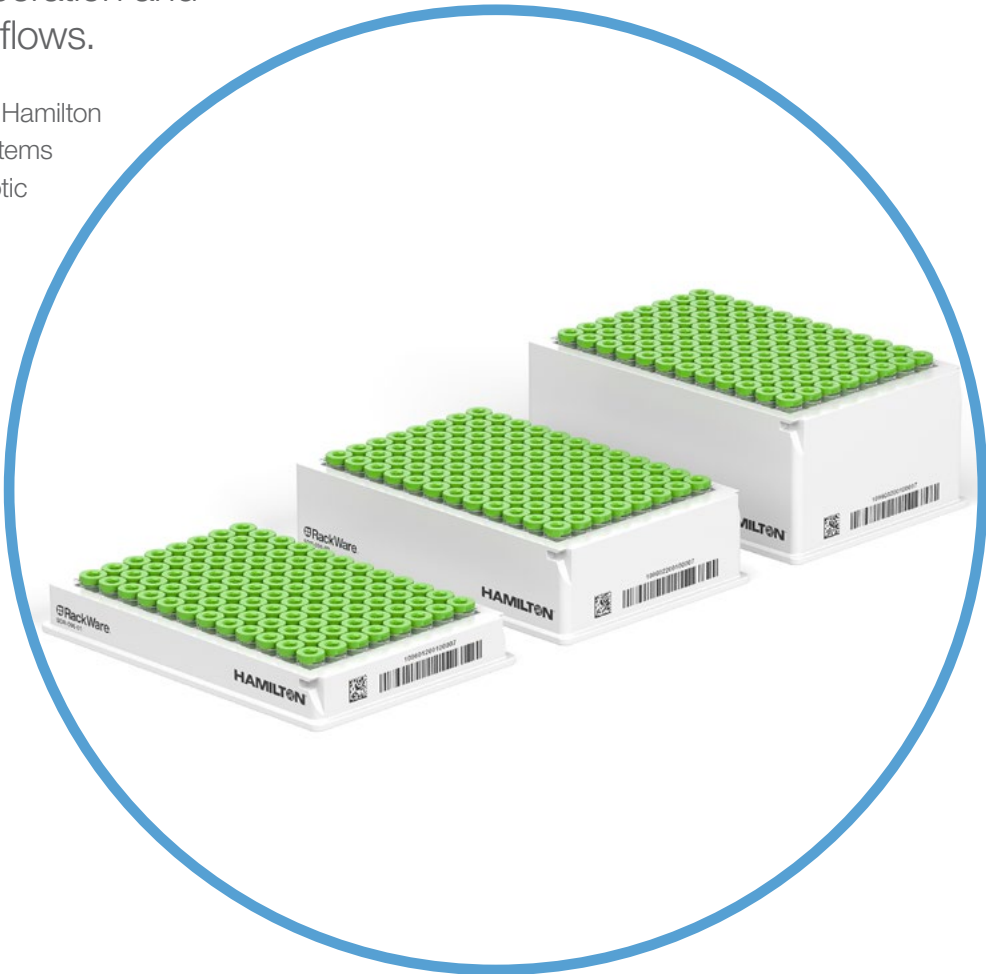


Labware

Our line of sample storage tubes was designed for hassle-free operation and stability in automated workflows.

The tubes are optimized for use with all Hamilton Storage automated sample storage systems and decapping devices, as well as robotic liquid handling platforms from Hamilton Company.

- BiOS
- LabElite Decapping Devices
- LabElite DeFroster
- SAM HD
- Verso
- Verso Q-Series
- Hamilton Liquid Handling Platforms



Technical Specifications

Volume	Thread	Bulk (Bag) or Racked	Quantity
0.3 mL	Internal	Bulk	960 tubes
0.3 mL	Internal	SDR-096-01 with Lid	10 racks
0.6 mL	Internal	Bulk	960 tubes
0.6 mL	Internal	SDR-096-02 with Lid	10 racks
1.0 mL	Internal	Bulk	960 tubes
1.0 mL	Internal	SDR-096-03 with Lid	10 racks
2.0 mL	Internal	Bulk	500 tubes
2.0 mL	External	Bulk	500 tubes

Note: All tubes are capped, feature a 2D bottom barcode, and are available with the following options: Sterile/Non-Sterile, Bulk/Pre-racked.





Features of the Sample Storage Tubes:

- Sealed with a silicone ring
- Marked with a unique, high definition 2D bottom barcode
- Height-optimized and automation friendly cap
- Rotation stoppers on the tube neck ensure high precision tube positioning in the rack

Geometric and Mechanical Properties

	96-Format Tubes			48-Format Tubes	
	0.3 mL	0.6 mL	1.0 mL	2.0 mL Internal	2.0 mL External
Working Volume	235 µL	580 µL	975 µL	2.0 mL	2.2 mL
Measurements	8.8 mm x 18.3 mm	8.8 mm x 33.3 mm	8.8 mm x 50.5 mm	12.5 mm x 47.7 mm	13.1 mm x 47.7 mm
Racked Heights	■ SDR-096-01: 18.8 mm	■ SDR-096-02: 33.8 mm	■ SDR-096-03: 51.1 mm	■ SDR-048-03: 49.3 mm	■ SDR-048-03: 49.3 mm
	■ HDR-138-03: 20.4 mm	■ HDR-138-04: 34.1 mm	■ HDR-138-04: 51.1 mm	■ HDR-060-02: 49.4 mm	■ HDR-060-02: 49.4 mm
Temperature Range	-196°C to +121°C			-196°C to +100°C	
Sterilization	SAL 10 ⁻⁵			SAL 10 ⁻⁶	
Bottom Barcode	■ 2D Datamatrix ■ Human readable code applied				
Purity Level	■ Free of detectable DNase/Rnase, Human DNA, and endotoxins ⁽¹⁾ ■ Non-cytotoxic				

⁽¹⁾For the most reliable results, products must be free of detectable DNase, RNase, and human DNA. Endotoxins are complex lipopolysaccharides that can cause fever. The U.S. Pharmacopoeia guidelines state that consumables in contact with cerebrospinal fluid should have a minimum endotoxin level of 0.06 EU/mL.

Automated Integration

Rapid, Simple Integrations



Our liquid handling integration allows rapid, simple, cost-effective implementations of a fully integrated automated sample management system. Hamilton liquid handlers are designed specifically for our storage platforms, creating a comprehensive sample processing center with a broad range of life science applications.

*Verso integrated with
Microlab VANTAGE Liquid Handling System*

Integration Robot

The HMotion is a fast, precise, and reliable robot used to integrate our automated storage systems with several devices including Microlab STAR Line workstations, additional storage systems, decapping devices, or third-party equipment such as hotplates, incubators, and plate readers.

HMotion is sold through Hamilton Robotics.



HMotion Robotic Arm

Features of the HMotion:

- Easy programming of all the needed transport steps by a dedicated VENUS driver
- Operator can easily teach positions by moving the arm with automatic motor assist
- Safety measures that disable motor power as soon as a counterforce is given
- Versatility to choose between two heights and three different linear axis integrations
- Ability to increase the total envelope using an extended reach arm



Support & Service

Outstanding. Reliable. Everywhere.

For more than 40 years, the Hamilton name has been associated worldwide with uncompromising quality in automated storage systems for biological and compound samples as well as precision fluid measuring products.

Outstanding

Hamilton Storage's service organization is committed to providing the best quality service and support in the industry. Worldwide, we offer highly qualified support from field service engineers. Trained by certified Hamilton trainers, these engineers are supported by our local service headquarters and distribution partners.

Our commitment to high quality standards is evident not only in our ISO 9001 certification, but also in the ongoing training provided to all of our service engineers. With Hamilton Storage as your automation partner, you can feel confident that you'll receive the best support possible.

Reliable

Investment in a high-performance storage system or benchtop device sets high expectations of quality, reliability, and precision. From in-house manufacturing to state-of-the-art quality control systems and final inspection, Hamilton guarantees high standards for all of our products. Reliability is an essential part of our products and our support team. From our technical support hotline to field service engineers and dedicated product specialists, know that Hamilton Storage is available with qualified support teams.

Everywhere

Our field service and support network links our headquarters with our worldwide subsidiaries to ensure quick response time, thus minimizing downtime. Whether you need routine maintenance, service, or application support, Hamilton Storage is there to support you. Customer satisfaction has the highest value at Hamilton, and we've built our worldwide support network to meet all of your needs.

System Installation

All Hamilton Storage systems are installed according to strict procedures in conformity with ISO 9001. Each system includes a comprehensive Installation Qualification (IQ) and detailed documentation.

Service Contracts

Ensure the longevity of your storage system or benchtop device by choosing a Hamilton Storage service contract. Service contracts include regular monitoring and preventative maintenance for peak performance of your system. Allowing service costs to be budgeted in advance, we offer three levels of service and support contracts to meet the various needs of our customers.

Training Courses

Hamilton Storage training courses have been specifically developed to cover the requirements and needs of our diverse customer base. They may follow an established standard format suitable for our broad client base, or they can be designed to meet the needs of a specific customer. Theoretical knowledge is combined with practical application to give a comprehensive understanding of course content to the trainee, and all participants receive a certificate from Hamilton Storage upon completion of a course. Our trainings take place at our headquarters in Franklin, Massachusetts, USA, and Domat/Ems, Switzerland, or we can arrange for certain courses to take place on-site at your company.



Your Hamilton Representative

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HAMILTON  **®**
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FOR LIFE SCIENCE

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