HAMILTON

Automated Sample Management

Product Catalog

Innovation for a Better World

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.

Expertise in Sample Management
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 on 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

Hamilton Storage Headquarters
Located in Franklin, Massachusetts, USA

Hamilton Storage Headquarters
Located in Domat/Ems, Switzerland

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 Q50 and Q75 to Verso Q-Series product family; introduced LabElite Handheld DeCapper

Product Guide

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*Verso Q75 can store up to 152,900 Hamilton 0.3 mL Tubes

INSTINCT S Software

Powerful Software for All Platforms

INSTINCT S is the powerful, easy-to-use software that allows users to run daily operations with a few clicks of the mouse. 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.

LIMS Integration

Our RESTful-based API allows easy integration with a LIMS. Some examples of 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:

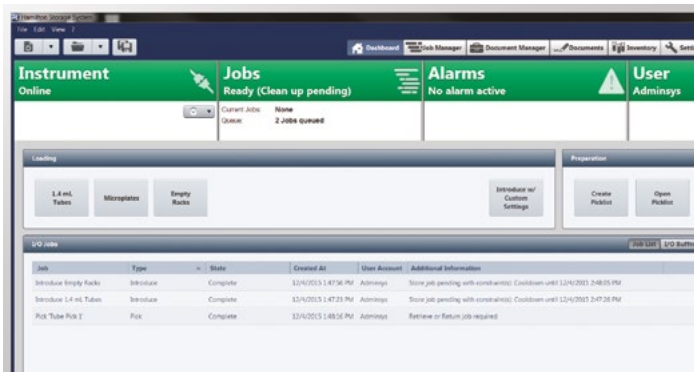
- **Job Management**: create, modify, cancel, or pause jobs
- **Sample Inventory**: information on the sample in the system or historical placement of the sample
- **Notifications:** inform the LIMS when a job has changed states, or when a sample has been moved into or removed from the storage system 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.

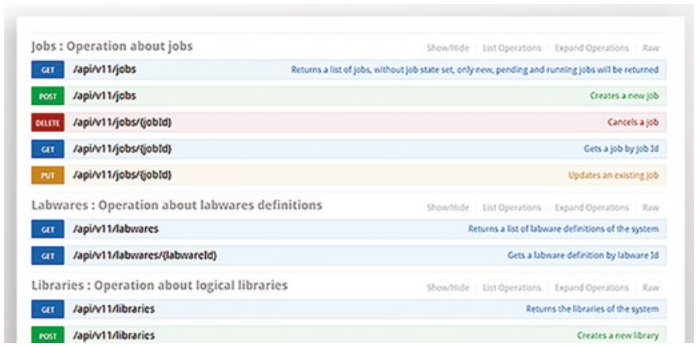
API technical documentation, a simulation environment, and example code on how to integrate with the API is available.

Features of INSTINCT S

- Run daily operations with a few clicks of the mouse
- 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



INSTINCT S Software Dashboard



LIMS Management Software

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.

Verso Q20, Verso Q50, and Verso Q75 shown above.

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

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	36,900	94,900	152,900
Hamilton 1.0 mL Tubes	17,800	45,400	73,000
Shallow-well Plates	268	688	1,108

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

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

Redundant Refrigeration

Redundant refrigeration, which is available for Verso Q50 and Verso Q75, means there are two independent refrigeration circuits built into the system. In the case of a problem with one circuit, the secondary unit will maintain storage temperature, keeping samples cold and allowing time to resolve the issue.

Features of Verso Q-Series

- Processing speeds up to 500 tubes/hour*
- Easy-to-use INSTINCT S software allows users to run daily operations with a few clicks of the mouse
- 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 system in its 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.

Verso®

Medium to Large-Capacity High-Throughput Sample Management

Verso is a modular automated storage platform that 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

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 (others upon request)
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.

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.

Sample Cart

The Sample Cart is used to transport samples quickly and efficiently to and from your automated sample storage system. It's a user-friendly option that allows users to avoid manually carrying large quantities of samples. The cart, which comes fully assembled, stores 20 trays holding up to 100 standard SBS-footprint racks.

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

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 with a few clicks of the mouse
- 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

* 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 LN_2 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.

Patented external magnetic couplers drive the internal robotics

2D barcode scanning for full sample tracking

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.

An internal carousel provides optimized and flexible storage capacities

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 with a few clicks of the mouse
- 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

BiOS®

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 20 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.

-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 of 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.

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–22.5 m (12 ft, 10 in–73 ft, 10 in)	3.9 m–22.5 m (12 ft, 10 in–73 ft, 10 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–14.25M	850K–23.2M	3.47M–23.7M
0.5 mL	362K–8.14M	591K–12.3M	2.54M–13.3M
1.0 mL	215K–6.51M	336K–11M	1.44M–11.2M
2 mL	114K–3.01M	181K–4.78M	780K–4.88M
5 mL	104K–1.42M	165K–2.39M	367K–2.44M

-80°C Tube Picker capable of processing multiple types of labware

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

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.

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
- **Environmentally Friendly:**
  Green refrigerants offer significant benefits in ultra-low temperature refrigeration applications thanks to their high cooling capacity, energy efficiency, negligible ozone depletion potential, and negligible global warming potential (GWP).
- **Phased Expansion:**
  Each -80°C freezer can be independently activated and deactivated for energy savings so that customers may turn on just the freezer compartments needed at the time. Additionally, BiOS systems are capable of system field expansion by addition of new chest freezer compartments and lengthening of cold room enclosures.

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 percent 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.

Technical Specifications	
Dimensions (LxWxH)*	533.5 mm x 334 mm x 452 mm (21.0 in x 13.1 in x 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.

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

LabElite®
DeCapper and I.D. Capper

Technical Specifications	
Dimensions (LxWxH)*	600 mm x 380 mm x 440 mm (23.6 in x 15 in x 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 64-bit (Required), 2.8 GHz Core 2 Duo, 3GB RAM, 250GB HD
Communication (I.D. Capper only)	One USB 3.0 port for the camera connection

*Actual dimensions may vary based on head in use.
**Others available upon request.

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)

LabElite®
Integrated I.D. Capper

Automated Screw Cap Decapping for Integration

The Integrated I.D. Capper features all the utility of the standalone version and allows users to seamlessly integrate these features with their Microlab STAR. With the addition of an extended linear rail, tube racks and cap holder racks can be presented directly onto the deck of the STAR allowing for easy automation of tube processing workflows.

Technical Specifications	
Dimensions (LxWxH)	**Configuration left of STAR Deck:** 904 mm x 380 mm x 540 mm (35.6 in x 15.0 in x 21.3 in) **Configuration on STAR Deck:** 770 mm x 380 mm x 540 mm (30.3 in x 15.0 in x 21.3 in)
Supported Labware	**Microtubes:** 0.25 mL to 1.4 mL FluidX, Greiner, Hamilton, LVL, Matrix,Micronic, and Nunc* **Cryovials:** 1 mL to 10 mL** FluidX, Greiner, Hamilton, LVL, Micronic, and Nunc
Supported 1D Barcodes	2/5 Industrial / Interleaved, Code 39, Code 128, Pharmacode, Codabar, EAN 13
Supported 2D Barcodes	Datamatrix ECC 200, PDF417, QR Code
Camera	10 megapixel CMOS
Recommended PC	Windows 64-bit (Required), 2.8 GHz Core 2 Duo, 3GB RAM, 250GB HD, 16x DVD+/-RW
Communication	One USB 2.0 port for the camera connection

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

Features of the Integrated I.D. Capper

- Decap in 24-, 48-, and 96-format tube racks with internal and external threads from all common labware suppliers
- Multiple integration configuration options allow users to directly pipette into decapped tube racks in track positions 1 through 6, or conserve deck space and integrate left of track 1
- Eliminates risk of cross contamination by not moving over opened tubes
- Automated 2D barcode and 1D side barcode reading
- Using optimized libraries, users can easily incorporate the device into existing VENUS software methods on the Microlab STAR and utilize all of its features to streamline workflows
- Simple touchscreen interface for walk-up access in between long automated runs

LabElite®
Handheld DeCapper

Technical Specifications	
Dimensions (LxWxH)*	2.36 in x 4.48 in x 10.04 in (60 mm x 114 mm x 255 mm)
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.

Semi-Automated Screw Cap Decapping

The 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.

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

LabElite®
I.D. Reader

Automated Barcode Reading

The high-speed I.D. Reader automatically decodes 2D barcoded tubes on most common tube racks, including honeycomb-shaped racks, providing complete sample tracking during sample processing.

The I.D. Reader also features ColdScan, a technology that actively moves air across the scanning window to minimize condensation when scanning frozen tube racks. This allows users to easily and accurately identify frozen samples. It also saves time and ensures sample integrity by eliminating the need to thaw.

Features of the I.D. Reader

- Processes a 96-format tube rack in less than three seconds and a 384-format tube rack in five seconds
- Cutting-edge decoding technology allows for robust and secure identification of even challenging codes
- Optional 1D barcode reading for racks
- Multiple tube heights can be read within the same rack
- Compatible with SiLA (Standard in Laboratory Automation)
- Highly configurable output options for smooth integration into LIMS or databases
- Compact and ergonomic design supports efficient workflow

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

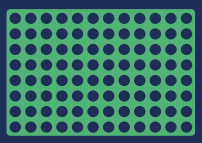
Technical Specifications	
	All Racks
Rack Footprint (SBS Footprint)	127.76 mm x 85.48 mm (5.03 in x 3.37 in)
Temperature Range	+35°C to -80°C

Increase Your Storage Capacity Up To 43% With High-Density Racks

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

x 10
Standard-Density Racks



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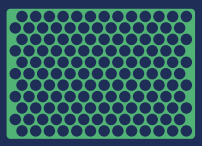
x 7
High-Density Racks



43 %
Potential Storage Capacity Increase

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
- SAM HD
- Verso
- Verso Q-Series
- Hamilton Liquid Handling Platforms

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

0.3 mL | **0.6 mL** | **1.0 mL** | **2.0 mL Internal** | **2.0 mL External**

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 **HDR-138-03:** 20.4 mm	**SDR-096-02:** 33.8 mm **HDR-138-04:** 34.1 mm	**SDR-096-03:** 51.1 mm **HDR-138-05:** 51.1 mm	**SDR-048-03:** 49.3 mm **HDR-060-02:** 49.4 mm	**SDR-048-03:** 49.3 mm **HDR-060-02:** 49.4 mm
Temperature Range	-196°C to +37°C	-196°C to +37°C	-196°C to +37°C	-196°C to +37°C	-196°C to +37°C
Sterilization	SAL 10^-5	SAL 10^-5	SAL 10^-5	SAL 10^-6	SAL 10^-6
Bottom Barcode	• 2D Datamatrix • Human readable code applied	• 2D Datamatrix • Human readable code applied	• 2D Datamatrix • Human readable code applied	• 2D Datamatrix • Human readable code applied	• 2D Datamatrix • Human readable code applied
Purity Level	• Free of detectable DNase/Rnase, Human DNA, and endotoxins[1] • Non-cytotoxic	• Free of detectable DNase/Rnase, Human DNA, and endotoxins[1] • Non-cytotoxic	• Free of detectable DNase/Rnase, Human DNA, and endotoxins[1] • Non-cytotoxic	• Free of detectable DNase/Rnase, Human DNA, and endotoxins[1] • Non-cytotoxic	• 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.

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	960 Tubes in 10 Racks
0.6 mL	Internal	Bulk	960 Tubes
0.6 mL	Internal	SDR-096-02 with Lid	960 Tubes in 10 Racks
1.0 mL	Internal	Bulk	960 Tubes
1.0 mL	Internal	SDR-096-03 with Lid	960 Tubes in 10 Racks
2.0 mL	Internal	Bulk	500 Tubes
2.0 mL	Internal	SDR-048-03 with Lid	480 Tubes in 10 Racks
2.0 mL	External	Bulk	500 Tubes
2.0 mL	External	SDR-048-03 with Lid	480 Tubes in 10 Racks

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

Automated Integration

Verso integrated with Microlab VANTAGE Liquid Handling System

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.

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 hotels, incubators, and plate readers.

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 counter force 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 and 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.

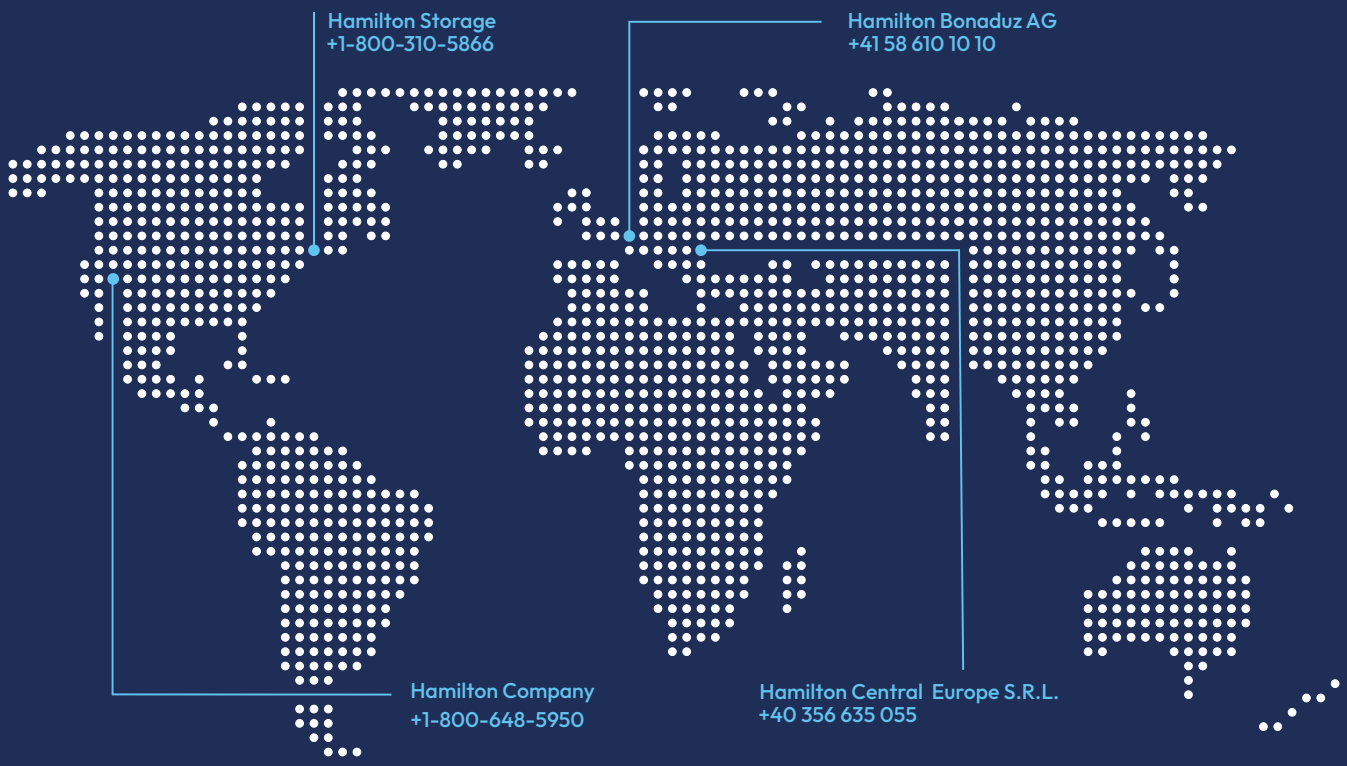
Service Contracts

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.

HAMILTON



Years of Experience
75+

Locations Worldwide
22+

Employees Internationally
3,000+

To find a representative in your area, please visit: www.hamiltoncompany.com/contacts

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