HAMILTON
STORAGE

Automated Sample Management

Product Catalog

Available in Canada from...

MJS BioLynx INC.

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Hamilton Storage headquarters in Franklin, MA

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
- **2007** Introduced ASM for -20°C sample storage
- **2008** Introduced SAM for -80°C biobanking
- **2012** Introduced BiOS for mid- to large-capacity biobanking with the first -80°C tube picker
- **2012** East Coast headquarters built in Franklin, Massachusetts
- **2014** Introduced Verso for high-throughput sample storage down to -20°C
- **2014** Introduced the LabElite product line for benchtop tube processing
- **2015** Established Hamilton Storage GmbH in Switzerland
- **2016** Introduced SAM HD for -80°C biobanking

Our Expertise in Sample Management

Since 2007, Hamilton Storage, an affiliate entity of Hamilton Company, has been a global leader in the design and manufacture 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.

Hamilton Company is a privately-owned global enterprise with headquarters in Reno, Nevada; Franklin, Massachusetts; Timişoara, Romania; and Bonaduz, Switzerland. Additional subsidiary offices and distributors located throughout the world further strengthen the company's sales and support network.

Quality and Expertise in Automated Sample Management

Our commitment to designing customer-focused systems has allowed Hamilton Storage 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.

Customized 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 custom 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 all five of the main 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.

Product Guide

Sample Storage Product Guide

The product guide below is to help you choose the correct size storage system based on your sample capacity and sample temperature needs.

Description	Capacity*	Sample Temp	Product	Page Number
SAMPLE STORAGE	2M–10M+ SAMPLES	AMBIENT, +4°C, -20°C	VERSO®	PAGE 4
		-80°C	BIOS® XL	PAGE 8
	500K–2M SAMPLES	AMBIENT, +4°C, -20°C	VERSO	PAGE 4
		-80°C	BIOS L	PAGE 8
	100K–500K SAMPLES	AMBIENT, +4°C, -20°C	VERSO	PAGE 4
		-80°C	BIOS M	PAGE 8
	< 100K SAMPLES	AMBIENT, +4°C, -20°C	VERSO	PAGE 4
		AMBIENT, +4°C, -20°C	-20°C SAM HD	PAGE 6
		-80°C	-80°C SAM HD	PAGE 6

** 1.4 mL microtubes*

Benchtop Devices and Consumables

Description	Product	Page Number
SOFTWARE	INSTINCT® S	PAGE 10
BENCHTOP DEVICES	LABELITE® I.D. READER	PAGE 11
	LABELITE DECAPPER SL	PAGE 12
	LABELITE DECAPPER AND I.D. CAPPER	PAGE 13
	LABELITE INTEGRATED I.D. CAPPER	PAGE 14
CONSUMABLES	RACKWARE® HIGH-DENSITY RACKS	PAGE 16
	RACKWARE STANDARD DENSITY RACKS	PAGE 16
	RACKWARE CUSTOMIZED RACKS	PAGE 16
ACCESSORIES	SAMPLE CART	PAGE 18

Verso®

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 be run day and night without supervision, allowing users to run jobs after hours to maximize productivity during the day.

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 door 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

- COMPOUND MANAGEMENT
- BIOBANKING
- FORENSIC SCIENCE
- SEED BANKING
- ACADEMIA
- PHARMACEUTICAL
- LIFE SCIENCE RESEARCH

Dimensions and Technical Specifications

Height	2.3–4.8 m (7.55–15.75 ft)
Depth	2.2–2.4 m (7.22–7.87 ft)
Length	2.5–22.5 m (8.20–73.81 ft)
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

Capacities for Verso Configurations

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.*

Features of Verso:

- Processing speeds up to 1,500 tubes/hr* and over 170 plates/hr*
- INSTINCT S, quick and easy “3-click” software
- 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
- Back-up refrigeration with full redundancy
- Optional dual tray shuttle on large systems increases throughput
- Robust, fully supported Application Programming Interface (API) for seamless integration into your laboratory and LIMS system
- Automated integration with liquid handling workstations such as Microlab® STAR and Microlab VANTAGE Liquid Handling System, 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. The system is available in +20°C, +4°C, -20°C, and -80°C platforms.

An internal carousel provides optimized and flexible storage capacities

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 and causing 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 (or CO_2 for the -20°C SAM HD) backup is provided to help mitigate typical disaster scenarios and ensure samples are kept cold and safe.

2D barcode scanning for full sample tracking

Store Multiple Labware Types in One System

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

Our patented external magnetic couplers drive the internal robotics

Increase Storage Capacity Using RackWare

Our RackWare 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. RackWare HDR-138 supports most major 96-format labware and increases storage capacity in a comparable SBS-format rack from 96 to 138 tubes.

Technical Specifications

Dimensions (l x w x h)	1.44 m (4.75 ft) x 1.48 m (4.92 ft) x 2.21 m (7.25 ft)
Weight (empty)	704 kg (1,550 lbs)
Max. Labware Weight	0.64 kg (1.4 lbs)
Voltage	(2) 208–240 VAC, 15A Service, 50/60 Hz
Operating Environment	10–30°C, relative humidity 0–80% with no condensation
Storage Temperature	+20°C to -40°C or 55°C to -80°C
Sample Atmosphere	Nitrogen or dry air (-40°C dew point or lower)
Operating System	Windows® 10
Barcode Reader	Racks: 1D and 2D Tubes: 1D (side) and 2D (bottom)

Tube Picker Module Retrieval Rates Per Hour

Tubes per Rack	48-Format Cryovial Rack (1D)	48-Format Cryovial Rack (2D)	96-Format Tube Rack (2D)
1 tube	31	30	32
5 tubes	85	105	115
10 tubes	103	135	136
20 tubes	120	136	148

Storage Capacities

Tube Type*	Standard Racks	RackWare High-Density Racks
0.3 mL	59,712	85,836
0.5 mL	34,080	48,990
1.0 mL	28,896	41,538
1.8 mL	14,448	18,060
SBS microplates	803	N/A

** Please contact Hamilton for verification of labware type and system capacities.*

Features of SAM HD:

- Store and pick multiple tube types to easily adapt to changing workflows
- Retrieves samples in less than 70 seconds
- Operate the system using INSTINCT S, the standard software across Hamilton Storage platforms
- Provides sample safety—samples are stored securely in the system and user access rights are controlled by the software
- Reads both 2D barcodes on the bottom and 1D barcodes on the side of the tube
- Integrate with LIMS systems operating on Windows 10
- Remote monitoring and job execution
- Full alarm capabilities

Applications


BIOBANKING


FORENSIC SCIENCE


DRUG DISCOVERY


LIFE SCIENCE RESEARCH


PHARMACOGENOMICS


GENOTYPING

BiOS®

Automated Medium- to Large-Capacity Biobanking

Hamilton BiOS is an automated storage system specifically designed to store sensitive 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 options.

Dimensions

	BiOS M	BiOS L	BiOS XL
Height	2.9 m (9.58 ft)	4.4 m (14.5 ft)	4.85 m (15.83 ft)
Width	3.9 m (12.83 ft)	3.9 m (12.83 ft)	4.4 m (14.5 ft)
Length	3.5 m (11.58 ft) to 10.2 m (33.5 ft)	3.5 m (11.58 ft) to 10.2 m (33.5 ft)	7.1 m (23.33 ft) to 22.5 m (73.83 ft)

Example Capacities for Standard Configurations

	BiOS M		BiOS L		BiOS XL	
	Standard Racks	RackWare HD Racks	Standard Racks	RackWare HD Racks	Standard Racks	RackWare HD Racks
0.2 mL	457K–4.86M	637K–6.78M	739K–7.87M	1.02M–10.9M	3.18M–16.1M	4.40M–22.3M
0.5 mL	362K–3.86M	522K–5.55M	591K–6.29M	831K–8.84M	2.54M–12.8M	3.57M–18.1M
1.0 mL	215K–2.29M	309K–3.29M	336K–3.57M	483K–5.14M	1.44M–7.32M	2.08M–10.5M
2 mL	114K–1.35M	143K–1.68M	181K–1.93M	227K–2.41M	780K–3.95M	975K–4.94M

-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 standard 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** is designed for the smallest system footprint in laboratories with available height.
- **BiOS XL** is designed for the largest sample collections and provides the greatest levels of backup and redundancies.

Reliability

Reliability and ease of service are designed into the system, keeping operations at peak performance. System reliability is key to maximizing productivity. Hamilton realizes this by keeping all automation in the -20°C area to increase reliability and minimize downtime. Additionally, service to the system can be done quickly and efficiently because the refrigeration compartments are externally accessible. Inside BiOS, samples are safely sealed in lidded -80°C chest compartments allowing service to be performed without affecting the samples.

Technical Specifications

Storage Temperature	-80°C
Processing Temperature	-80°C
Redundancy (Options)	Two independent refrigeration systems and LN_2 backup
Barcode Reader	1D and 2D for plates, 2D for tubes

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

- BIOBANKING
- FORENSIC SCIENCE
- DRUG DISCOVERY
- LIFE SCIENCE RESEARCH
- PHARMACOGENOMICS
- GENOTYPING

INSTINCT® S Software

Powerful Software for All Platforms

INSTINCT S is the powerful, yet simple to use software that allows users to run daily operations with only three clicks. This enables users to operate the system with minimal training.

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

Dashboard of INSTINCT S Software

Features of INSTINCT S:

- Run daily operations with only three clicks
- 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 LIMS or with Hamilton Robotics liquid handling workstations

LIMS Integration

Our RESTful-based API allows easy integration with LIMS systems. Sample management software, such as Mosaic, LabWare LIMS, or Labvantage, can be connected using drivers from the software providers.

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

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.

A simulation environment and documentation on how to integrate with the API is available.

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.

Technical Specifications

Dimensions (l x w x h)	364 mm (14.3 in) x 135 mm (5.3 in) x 181 mm (7.13 in)	
Supported Labware	12-, 24-, 48-, 96-, 384-format tube racks	ABgene™, Axygen, Corning, Greiner, FluidX, LVL, Matrical, Matrix, Micronic, Nunc™, REMP®, and WHEATON®*
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 7 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.*

New Feature: ColdScan

This new technology actively moves air across the scanning window to minimize condensation when scanning frozen tube racks.

- Easily and accurately identify frozen samples
- Save time and ensure sample integrity by eliminating the need to thaw
- Eliminate scan errors due to fog buildup

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

LabElite® DeCapper SL

Automated Screw Cap Decapping

The DeCapper SL is the latest device in the LabElite product line, and offers 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 in where bench space is limited due to its 20% decrease in size compared to the standard LabElite DeCapper. The device can be operated as a standalone unit, or integrated to 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 (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	FluidX, Greiner, LVL, Matrix, Micronic, and Nunc*
	Cryovials	1 mL to 10 mL**	FluidX, Greiner, LVL, Micronic, and Nunc
Connection Interface	Ethernet for integration		

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

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 a liquid handling system
- 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

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.

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	FluidX, Greiner, LVL, Matrix, Micronic, and Nunc*
	Cryovials	1 mL to 10 mL**	FluidX, Greiner, 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		
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		

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

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 a Microlab VANTAGE Liquid Handling System 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 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 (l x w x h)	Configuration left of STAR Deck: 904 mm (35.6 in) x 380 mm (15.0 in) x 540 mm (21.3 in)		
	Configuration on STAR Deck: 770 mm (30.3 in) x 380 mm (15.0 in) x 540 mm (21.3 in)		
Supported Labware	Microtubes	0.25 mL to 1.4 mL	FluidX, Greiner, LVL, Matrix, Micronic, and Nunc*
	Cryovials	1 mL to 10 mL**	FluidX, Greiner, 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 7 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

Liquid Handling Integration

Rapid, Simple Integrations

Our liquid handling integration allows rapid, simple, cost-effective implementations of a fully integrated automated sample management system. Hamilton Robotics workstations 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 hotels, 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

RackWare®

RackWare is our consumable product line featuring efficient storage containers for tubes, cryovials, glass vials, DNA collection cards, and more. The product line includes standard and high-density racks with a SBS-footprint, as well as optional lids available in different heights.

Our racks are specifically designed for use with Verso, BiOS, and SAM HD systems, as well as manual storage.

HDR-138-03

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

HDR-060-01

High-Density Racks

High-density racks improve the layout of standard racks by concentrating the amount of samples that can be stored in one rack. By increasing the number of samples per rack, the storage capacity in a given footprint increases up to 43%.

SDR-008-01

Standard Density Racks

Standard density racks provide a SBS-footprint rack for labware types that do not commonly have these racks available, such as 1 dram vials, and scintillation vials.

SDR-024-01

Custom Designed Racks

Hamilton Storage offers the service to develop, design, and produce customized storage consumables for customers' special needs, such as SBS-footprint racks, trays, cryoboxes, and other formats, as required.

HDR-066-01

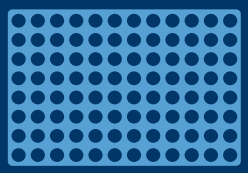
Labware Compatibility

A complete compatibility list with all our RackWare consumables is available on our website: www.hamiltoncompany.com/rackware

HDR-138-04

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

You can store 960 tubes in **10 Standard Density Racks**



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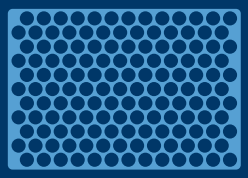

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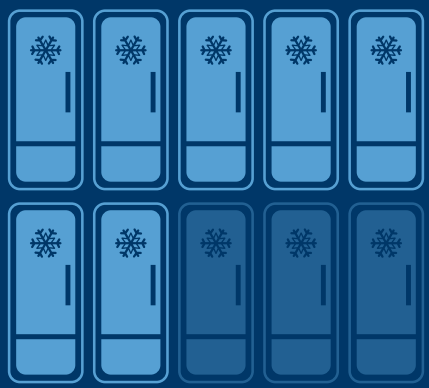
or in **7 High-Density Racks**

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**



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's shelves are made up of trays that slide in and out. The trays hold standard SBS-footprint racks, and need to be purchased separately.

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

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

About Hamilton

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

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.

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.

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.

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.

Storage

Hamilton Storage offers ultra-low temperature automated sample management systems for storage of a variety of labware. Hamilton's line of biobanking and compound management systems, benchtop devices, and consumables are designed for sample integrity, flexibility, and reliability.

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.

Your Canadian Distributor:

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SAMPLE MANAGEMENT FOR LIFE SCIENCE STORAGE

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