

**По вопросам продаж и поддержки обращайтесь:**

Архангельск (8182)63-90-72	Краснодар (861)203-40-90	Рязань (4912)46-61-64
Астана (7172)727-132	Красноярск (391)204-63-61	Самара (846)206-03-16
Белгород (4722)40-23-64	Курск (4712)77-13-04	Санкт-Петербург (812)309-46-40
Брянск (4832)59-03-52	Липецк (4742)52-20-81	Саратов (845)249-38-78
Владивосток (423)249-28-31	Магнитогорск (3519)55-03-13	Смоленск (4812)29-41-54
Волгоград (844)278-03-48	Москва (495)268-04-70	Сочи (862)225-72-31
Вологда (8172)26-41-59	Мурманск (8152)59-64-93	Ставрополь (8652)20-65-13
Воронеж (473)204-51-73	Набережные Челны (8552)20-53-41	Тверь (4822)63-31-35
Екатеринбург (343)384-55-89	Нижний Новгород (831)429-08-12	Томск (3822)98-41-53
Иваново (4932)77-34-06	Новокузнецк (3843)20-46-81	Тула (4872)74-02-29
Ижевск (3412)26-03-58	Новосибирск (383)227-86-73	Тюмень (3452)66-21-18
Казань (843)206-01-48	Орел (4862)44-53-42	Ульяновск (8422)24-23-59
Калининград (4012)72-03-81	Оренбург (3532)37-68-04	Уфа (347)229-48-12
Калуга (4842)92-23-67	Пенза (8412)22-31-16	Челябинск (351)202-03-61
Кемерово (3842)65-04-62	Пермь (342)205-81-47	Череповец (8202)49-02-64
Киров (8332)68-02-04	Ростов-на-Дону (863)308-18-15	Ярославль (4852)69-52-93

**Единый адрес:** [hno@nt-rt.ru](mailto:hno@nt-rt.ru) **Веб-сайт:** [www.hamilton.nt-rt.ru](http://www.hamilton.nt-rt.ru)

## Каталог продукции Hamilton



# Automated Sample Management



# Our Expertise in Sample Management

Since 2007, Hamilton Storage, an affiliate entity of Hamilton Company, has offered comprehensive ultra-low temperature automated sample management systems for a broad array of life science processes. Our line of biobanking and compound storage solutions, as well as consumables and small devices, consists of products such as Hamilton BiOS®, Verso™, SAM™ and ASM™, specifically designed for sample integrity, flexibility and reliability. Hamilton Storage continues to develop innovative technologies to fit the 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; 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 the 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.

## 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



# 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.

## Sample Storage Product Guide:

Capacity (1.4 mL microtubes)	Sample Temperature				
	Ambient	+4°C	-20°C	-80°C	-150°C
2M–10M+ Samples	Verso p. 6			BiOS XL p. 10	Askion C-line® p. 12
500K–2M Samples				BiOS L p. 10	
100K–500K Samples	ASM p. 4	BiOS M p. 10			
< 100K Samples	-20°C SAM p. 8	-80°C SAM p. 8			

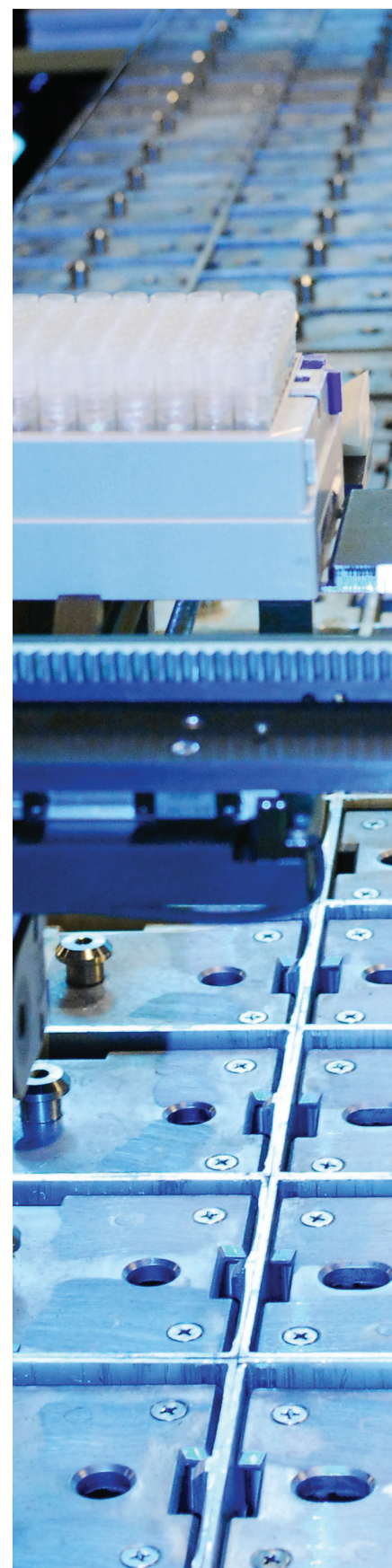
## Additional Products:

### Small Devices

LabElite™ I.D. Reader™ .....	14
LabElite DeCapper™ .....	15
LabElite I.D. Capper™ .....	15
LabElite Integrated I.D. Capper™ .....	16

### Consumables

RackWare™ 48 .....	18
RackWare HD138 .....	18
RackWare HD60 .....	18



# ASM™ — Active Sample Manager

## High-Throughput Sample Management

The ASM is our automated sample management system for high-throughput storage of tubes, vials and plates with a temperature range down to -20°C. One storage module can store up to 207,360 tubes or 2,160 plates, accommodating all the popular tube sizes, from 0.2 mL to 1 dram vials. Its modular design allows the capacity of the system to be conveniently expanded by combining multiple ASM Store modules.

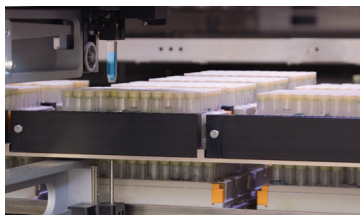
## Benefits of the ASM System:

- ▶ Modular expandability
- ▶ Enhanced alarm notification
- ▶ System monitoring for process safety
- ▶ Standard thaw stations
- ▶ Easy installation
- ▶ Seamless integration with Microlab® STAR Line workstations and third-party instruments



## Quick Processing Speeds!

Up to 120 tube racks and plates can be delivered out of storage per hour. The high-speed picking and return rates of 300 to 1,000 tubes per hour are unparalleled thanks to the adaptive process technology (APT).



## Storage Capacities:

Tube Type*	Capacity**	Throughput***
0.2 mL/0.3 mL screwcap	207,360	300-1,000 per hour
0.5 mL septum	207,360	300-1,000 per hour
0.5 mL/1.4 mL screwcap	99,840	300-1,000 per hour
0.7 mL/1.4 mL septum		
1 dram vials	24,960	300-1,000 per hour
SBS microplates	2,160	120 per hour

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

\*\*Capacity per Store module. Contact Hamilton for multiple Store capacities.

\*\*\*Throughput figures are based on rack distributions of >4%.



## Intelligent Design

Unlike the competition, our ASM system's picking speeds increase when additional Store modules are added to the system. Our design includes multiple pickers with simultaneous picking, instead of one single picker that becomes overburdened. Each additional Store module has its own gantry for rack selection, picker for tube selection and smart cache for look-ahead picking.

Because the Hamilton system is modular, the components can fit into standard elevators and through laboratory doorways. Minimal facilities work is typically required to accommodate the ASM system. The system is delivered as a finished product, which means installation and system commissioning is planned to be completed within a week.

### Applications

- ▶ Compound Management
- ▶ Drug Discovery
- ▶ Genomics
- ▶ Proteomics
- ▶ Oligos



Integrated hand-off arm for delivery to a Microlab STAR workstation and/or other third-party equipment.



Integrated thaw of 40 racks simultaneously.



1-D and 2-D barcode reading.

### Technical Specifications:

Module	Specification
ASM Store Dimensions	1041.0 mm (w) x 2559.0 mm (h) x 2146.0 mm (d) 41.0 in (w) x 100.7 in (h) x 84.5 in (d)
ASM Server Dimensions	787.4 mm (w) x 1981.2 mm (h) x 1295.0 mm (d) 31.0 in (w) x 78.0 in (h) x 50.9 in (d)
ASM Store Weight (empty)	1361 kg (3,000 lbs)
ASM Server Weight (empty)	431 kg (950 lbs)
Voltage	220 VAC ± 10%, 20 A service, 50 Hz/60 Hz
Operating Environment	10-30°C, relative humidity 5-80% with no condensation (Altitude <2,000 m)
ASM Store Sample Temperature	Ambient to -20°C
ASM Store Sample Atmosphere	Nitrogen or dry air (-40°C dew point or lower)
ASM Server Active Thaw	User selectable thaw temperature from ambient to 37°C
ASM Server Storage Capacities	40 rack positions for active thawing, input and output
Operating System	Windows® 7
Barcode Reader	1-D for plates and 2-D for tubes

# 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.

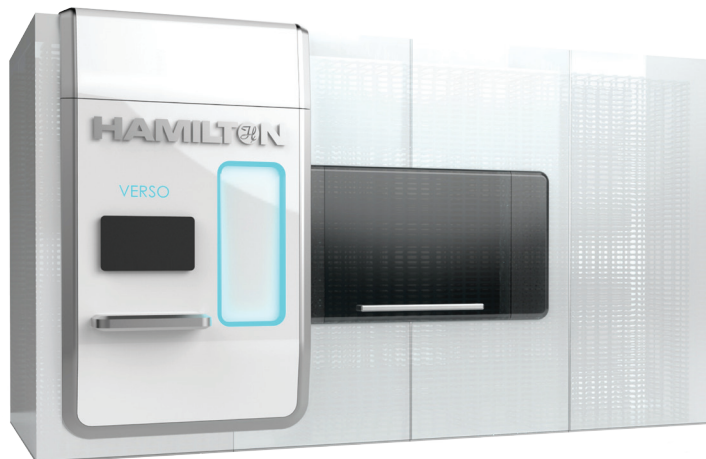
Seamlessly integrate Verso with liquid handling systems, such as the Microlab STAR or VANTAGE Liquid Handling System™, to support a fully automated workflow.

Whether converting a laboratory from manual storage or upgrading your current automation, Verso is the solution that fits into your lab, and how you work.

### Features of the Verso:

- ▶ Processing speeds up to 1,500 tubes/hr\* and over 170 plates/hr\*
- ▶ Quick and easy “3-click” software
- ▶ Automatic sample tracking and auditability
- ▶ Back-up refrigeration with total redundancy
- ▶ Robust, fully supported Application Programming Interface (API) for total integration into your lab and LIMS system
- ▶ Automated integration with liquid handling workstations such as Microlab STAR and VANTAGE Liquid Handling System, and other laboratory automation devices

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



### Instinct S Software

Operating a store has never been easier thanks to Hamilton's "3-click" Instinct S software. The simple software interface allows most common functions to be completed in only three steps, meaning anyone in the lab can quickly operate the system with minimal training.

### 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.

### Capacities for Verso Standard Configurations:

Labware Type*	Capacity
384-format tubes	468K to 5.5M
Greiner 0.3 mL (screwcap)	117K to 1.9M
Micronic 0.75 mL (TPE)	117K to 1.9M
Matrix™ 1.4 mL (DuraSeal™)	117K to 1.9M
Greiner 2 mL	34K to 322K
1 dram vials	19K to 228K
Shallow-well plates	3K to 28K

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

### Dimensions:

Height	2.4 m (7 ft 11 in) to 2.8 m (9 ft 3 in)
Depth	2.2 m (7 ft 3 in)
Length	3.5 m to 7.4 m (11 ft 6 in to 24 ft 4 in)

### Technical Specifications:

Temperature Range	Ambient to -20°C
Internal Atmosphere	Ambient, dry air or inert (Nitrogen)
I/O Capacity	Up to 70 racks
Barcode Reader	1-D and 2-D for racks, plates and tubes

- ### Applications
- ▶ Compound Management
  - ▶ Biobanking
  - ▶ Forensics
  - ▶ Pharmaceutical
  - ▶ Seed Banking
  - ▶ Academia
  - ▶ Life Science Research



Introduce and retrieve samples using the Input/Output station and the "3-click" software.



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



# SAM™ — Sample Access Manager

## Automated Low-Capacity Biobanking

SAM is an automated sample management system for secure storage of tubes and plates. The system is available in +4°C, -20°C, -40°C and -80°C platforms.

This compact, localized storage system requires minimum facilities work as the system easily fits into existing laboratory spaces.

To maintain sample integrity, the automation is driven by our external magnetic couplers to eliminate freeze-thaw cycles and moisture introduction which can occur when a freezer door is opened. Furthermore, the environment is continuously monitored, even during picking, ensuring the samples never reach critical sample temperatures.

For additional sample security, a standard UPS and LN<sub>2</sub> (or CO<sub>2</sub> for the -20°C SAM) backup is provided to help mitigate typical disaster scenarios and ensure samples are kept cold and safe.



## Features of the SAM System:

- ▶ SAMple Picker allows for a fast and easy way to cherry-pick tubes
- ▶ Retrieves samples in less than 70 seconds
- ▶ Provides sample safety—samples are stored securely in the system and user access rights can be controlled by the software
- ▶ Reads both 2-D barcodes on the bottom and 1-D/2-D barcodes on the side of the tube
- ▶ Remote monitoring and job execution
- ▶ Full alarm capabilities

## Storage Capacities:

Tube Type*	Standard Racks	RackWare High-Density Racks
0.2 mL screwcap	60,000	86,250
0.3 mL DuraSeal™/septum/screwcap	45,600	65,500
0.5 mL screwcap	34,080	48,990
1.4 mL septum**	34,080	48,990
1.0 mL/1.4 mL screwcap	28,800	41,400
5.0 mL screwcap***	8,496	n/a
10 mL vacutainers***	3,816	n/a
SBS microplates	803	n/a

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

\*\*Matrix™ 1.4 mL DuraSeal™ tubes have a capacity of 28,800.

\*\*\*Cannot be picked if over 87 mm.



## New Features Available!

The upgraded SAM system provides users with:

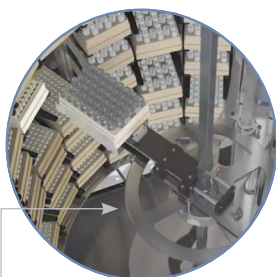
- ▶ Increased storage capacity
- ▶ Ability to store and process multiple labware types
- ▶ A new operating system—Instinct S

SAM is now compatible with our new RackWare high-density racks, which increases the storage capacity while maintaining the same footprint.

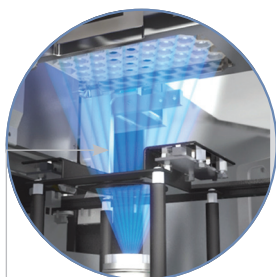
The new operating system, Instinct S, provides a similar User Interface and the same API as Hamilton BiOS and Verso. The software supports 21 CFR Part 11 compliance to meet the rigorous demands for sample security. Additionally, users can be granted different levels of system operation with access restrictions to specific sample sets.

### Applications

- ▶ Biobanking
- ▶ Forensics
- ▶ Drug Discovery
- ▶ Life Science Research
- ▶ Pharmacogenomics
- ▶ Genotyping



An internal carousel provides optimized and flexible storage capacities.



2-D barcode scanning for full sample tracking.



Our patented external magnetic couplers drive the internal robotics.

### Technical Specifications:

Dimensions	1270.0 mm (w) x 2210.0 mm (h) x 1346.0 mm (d) 50.0 in (w) x 87.0 in (h) x 53.0 in (d)
Weight (empty)	704 kg (1,550 lbs)
Max. Labware Weight	0.64 kg (1.4 lbs)
Voltage	208-240 VAC, 15 A service, 50 Hz/60 Hz
Operating Environment	10-30°C, relative humidity 0-80% with no condensation Altitude <2,000 m
Sample Temperature	+20°C to -40°C / -55°C to -80°C
Sample Atmosphere	Nitrogen or dry air (-40°C dew point or lower)
Operating System	Windows® 7
Barcode Reader	1-D for racks and 2-D for tubes

### SAMple Picker/Puncher Retrieval Rates Per Hour:

Tubes per Rack	48-Rack Cryovial (1-D)	48-Rack Cryovial (2-D)	96-Rack Cryovial (2-D)	96-Rack REMP (2-D)
1 tube	31	30	32	38
5 tubes	85	105	115	166
10 tubes	103	135	136	267
20 tubes	120	136	148	472

# Hamilton 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 keeps samples close to -80°C throughout their entire life inside the system—while introducing and sorting samples, managing the inventory, processing and delivering orders, and controlling sample access rights. 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 laboratory information management system (LIMS) by providing the BIOS Application Programming Interface (API) and remote monitoring options.



### Benefits of the BIOS System:

- ▶ 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—1-D and 2-D barcode reading during introduction, internal processes and retrieval
- ▶ Feature-rich software—Instinct S provides access restrictions, sample tracking and audit trails to support 21 CFR Part 11 compliance

### Technical Specifications:

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

### Ultra-Low Temperature 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 -80°C tube picker (patent pending) which helps maintain constant sample temperatures.

## 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 existing labs with limited accessibility that need a compact storage system.
- ▶ **BiOS L** is designed in a compact footprint for labs that require large storage needs.
- ▶ **BiOS XL** is designed for the largest studies to store millions of samples in dedicated facilities.

## 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. 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.

## Dimensions and Capacities:

	BiOS M	BiOS L	BiOS XL
Height	2.9 m (9 ft 7 in)	4.4 m (14 ft 6 in)	4.85 m (15 ft 10 in)
Width	3.9 m (12 ft 10 in)	3.9 m (12 ft 10 in)	5 m (16 ft 5 in)
Length	3.5 m to 10.2 m (11 ft 7 in to 33 ft 6 in)	3.5 m to 10.2 m (11 ft 7 in to 33 ft 6 in)	7.1 m to 22.5 m (23 ft 4 in to 73 ft 10 in)
<b>Example Capacities:</b>			
Greiner 2 mL	115K to 1.15M	187K to 1.87M	763K to 3.81M
FluidX 1.0 mL	259K to 2.59M	417K to 4.17M	1.7M to 8.51M
Micronic 0.5 mL	388K to 3.88M	633K to 6.33M	2.58M to 12.92M
Matrix™ 0.3 mL	489K to 4.89M	792K to 7.92M	3.23M to 16.15M

## Applications

- ▶ Biobanking
- ▶ Forensics
- ▶ Drug Discovery
- ▶ Life Science Research
- ▶ Pharmacogenomics
- ▶ Genotyping

# Askion C-line® Systems

## Automated -150°C Cryopreservation

The Askion C-line® system is a flexible and fully automatable biobank solution for temperatures below -150°C. It is an open and modular system for cryopreservation sample management. The innovative systems are designed to align with current requirements for cryobiotechnology. The cryogenic work areas employ controlled environmental conditions to provide a closed cooling chain and regulate sample material handling.

## Features and Benefits of the C-line® System:

- ▶ Modular expandability
- ▶ Uninterrupted cooling chain
- ▶ Tracks the history of every single sample in the biobank
- ▶ Ice-free
- ▶ Storage and handling in the vapor phase of LN<sub>2</sub>
- ▶ GMP compliance



## Technical Specifications:

	HS200 S*	WB220
Dimensions (l x w x h)	1250 mm x 1800 mm x 2450 mm (49.2 in x 70.9 in x 96.5 in)	1920 mm x 970 mm x 2150 mm ±150 mm (75.6 in x 38.9 in x 84.6 in ± 5.9 in)
Weight	Max. 840 kg (1851.9 lbs)	Empty: 300 kg (661.3 lbs) Full: 450 kg (992 lbs)
Barcode Reader	Integrated	Internal 1-D/2-D (optional)
Temperature of Working Room	Ambient down to -110°C	Ambient down to -100°C
Temperature of Freezer Room	n/a	+15°C down to -160°C
Storage of Samples	LN <sub>2</sub> vapor phase ≤-150°C	n/a

\* Please contact Hamilton for HS200 M & L technical specifications.

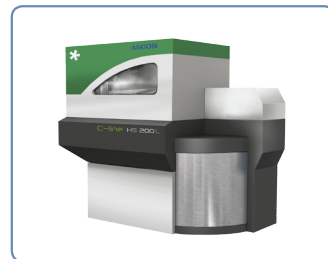


The Askion C-line® includes three systems for semi- or fully automated sample storage.

### -150°C Automated Storage—HS200 M & L

High-capacity semi- or fully automated storage and retrieval

- ▶ Fully compatible with the existing Askion C-line® system
- ▶ Storage capacity of 290,000 samples in HS200 M and 830,000 in HS200 L
- ▶ Sample handling at -130°C, LN gas phase storage below -150°C
- ▶ Capable of storing various sample formats in one storage module
- ▶ Automated single tube and SBS rack handling in one storage module



*The HS200 L for high-capacity storage and retrieval.*

### -150°C Automated Storage—HS200 S

Semi- or fully automated storage and retrieval

- ▶ Store cells, stem cells and biological samples in tubes, vials, straws and blood bags
- ▶ Tube picking at -100°C
- ▶ Cryogenic working area which includes an access tower with an integrated barcode scanner and operator ports with heated gloves for handling in the cryogenic working area
- ▶ Manual I/O lock station to eliminate penetration of moisture and formation of ice to maintain an ice-free system
- ▶ Storage capacity of up to 62,000 tubes or 84,000 straws



*The HS200 S for semi- and fully automated storage and retrieval.*

### Extended Storage and Retrieval—HS200A

Fully automated storage and retrieval

- ▶ Integrate multiple stores to consolidate samples into one biobank
- ▶ Pick-and-place sample processing for automatic picking of the samples into the storage racks in the cryogenic working area (below -100°C)
- ▶ Integrated barcode scanner and vial grip adapts to the sample format
- ▶ Temperature stability through controls reduces temperature oscillations during sample storage and retrieval



*The HS200A for fully automated storage and retrieval.*

### -150°C Controlled-Rate Freezing—WB220

Cryogenic working area with freezer

- ▶ A freezer with up to three freezers running independently of each other providing reproducible freezing (0.01-50 °C/min), programmable freezing curves and control of the seeding process
- ▶ Cryogenic (below -110°C) working area integrated with a dry and ice-free nitrogen atmosphere
- ▶ Maintains cold chain for shipping



*The WB220 for a cryogenic working area with a freezer.*

# LabElite™ I.D. Reader™

## Automated Barcode Reading

The new high-speed I.D. Reader automatically decodes 2-D barcoded tubes on most common tube racks, including honeycomb-shaped racks, providing complete sample tracking during sample processing. Intelligent features like automatic rack type detection and integrated 1-D barcode reading set a new standard for tube rack readers.

The I.D. Reader combines 10 years of experience in imaging and decoding technology with top-notch hardware and software, providing users with a reliable device for tracking samples in their laboratories.



## Features of the I.D. Reader:

- ▶ Processes a 96-tube rack in less than three seconds and a 384-tube rack in five seconds
- ▶ Cutting-edge decoding technology allows for robust and secure identification of even challenging codes
- ▶ Optional 1-D 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
- ▶ Automatically detects the tube rack type to use optimal settings

## Technical Specifications:

<b>Dimensions (l x w x h)</b>	364 mm x 135 mm x 181 mm (14.3 in x 5.3 in x 7.13 in)
<b>Supported Labware</b>	12-, 24-, 48-, 96-, 384-tube racks Matrix™, Micronic, Nunc™, Corning, Greiner, FluidX, Matrical, WHEATON®, ABgene™, Axygen and REMP®*
<b>Supported 1-D Barcodes</b>	2/5 Industrial / Interleaved, Code 39, Code 128, Pharmacode, Codabar, EAN 13
<b>Supported 2-D Barcodes</b>	Datamatrix ECC 200, PDF417, QR Code
<b>Camera</b>	10 megapixel CMOS
<b>Recommended PC</b>	Windows 7 64 bit (Required), 2.8 GHz Core 2 Duo, 3GB RAM, 250GB HD, 16x DVD+/-RW
<b>Communication</b>	One USB 2.0 port for the camera connection

\*Others available upon request.



# LabElite™ DeCapper™ and I.D. Capper™

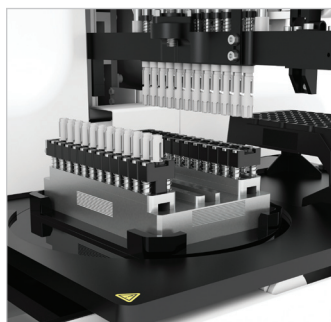
## Automated Screwcap Decapping

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



### New Feature: AutoSwap™

Save time and effort by swapping adapter sets automatically for easy processing of multiple labware types.



## Features of the DeCapper and I.D. Capper:

- ▶ Easily swap decapping heads to decap tubes in both 48- and 96-tube racks on a single device (patent pending)
- ▶ Process a full rack of tubes or row of tubes in portrait or landscape format within one device (patent pending)
- ▶ Can be operated as a standalone device or integrated with a VANTAGE Liquid Handling System or third-party robotic arms
- ▶ Point-of-use decapping—limit risk of exposure or contamination from environment
- ▶ Touchscreen panel provides easy navigation through the system
- ▶ New turntable allows racks to be automatically turned after decapping for better positioning in pipetting workflows
- ▶ Single button execution of 2-D scan and automatic upload of barcode information to LIMS (I.D. Capper only)

## Technical Specifications:

<b>Dimensions (l x w x h)</b>	600 mm x 380 mm x 440 mm (23.6 in x 15.0 in x 17.3 in)		
<b>Supported Labware</b>	Microtubes	0.25 mL to 1.4 mL	Matrix™, Greiner, Micronic, Nunc™, Corning and FluidX*
	Cryovials	1 mL to 4 mL**	FluidX, Greiner, Micronic and Nunc™
<b>Connection Interface</b>	Ethernet for integration		
<b>Recommended PC (I.D. Capper only)</b>	Windows 7 64 bit (Required), 2.8 GHz Core 2 Duo, 3GB RAM, 250GB HD, 16x DVD+/-RW		
<b>Communication (I.D. Capper only)</b>	One USB 2.0 port for the camera connection		

\*Others available upon request.

\*\*Contact Hamilton for specific tube compatibility.



# LabElite™ Integrated I.D. Capper™

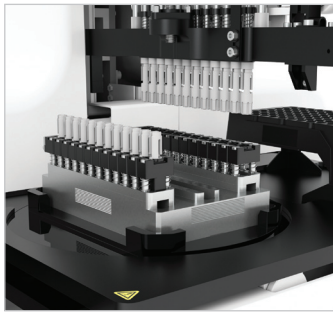
## Automated Screwcap Decapping for Integration

The Integrated I.D. Capper features all of 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.



### New Feature: AutoSwap™

Save time and effort by swapping adapter sets automatically for easy processing of multiple labware types.



### Features of the Integrated I.D. Capper:

- ▶ Decap 48- and 96-tube racks with internal and external threads from all common labware suppliers
- ▶ Multiple integration configuration options allows 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 2-D barcode and 1-D 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

### Technical Specifications:

<b>Dimensions</b> (l x w x h)	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)
<b>Supported Labware</b>	Microtubes 0.25 mL to 1.4 mL	Matrix™, Greiner, Micronic, Nunc™, Corning and FluidX*
	Cryovials 1 mL to 4 mL**	FluidX, Greiner, Micronic and Nunc™
<b>Supported 2-D Barcodes</b>	Datamatrix ECC 200, PDF417, QR Code	
<b>Camera</b>	10 megapixel CMOS	
<b>Recommended PC</b>	Windows 7 64 bit (Required), 2.8 GHz Core 2 Duo, 3GB RAM, 250GB HD, 16x DVD+/-RW	
<b>Communication</b>	One USB 2.0 port for the camera connection	

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



# Liquid Handling Integration

## Liquid Handling Integration

Our liquid handling integration allows rapid, simple, cost-effective implementations of a fully integrated automated sample management system. Hamilton's workstations 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, DeCappers, or third-party equipment such as hotels, incubators and plate readers.

HMotion is sold through Hamilton Robotics.

## 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

## API

Hamilton Storage's API Web Services allows integration with external systems, including Hamilton Robotics' liquid handling workstations, and LIMS systems. 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 samples in the system or historical placement of the sample), and Notifications from the system itself. The notifications can be used to alert a user when a job has changed a state or when a sample has been moved into or removed from the storage system. This can be extremely helpful when keeping the LIMS synchronized. A simulation environment and documentation on how to integrate with the API is available.



*The HMotion used to integrate automated storage systems with liquid handling workstations.*



*Our ASM system integrated with two Microlab STAR workstations for compound storage and screening.*

Job	Type	State	Created At	User A
Introduce Empty Racks	Introduce	Complete	12/4/2015 1:47:56 PM	Admins
Introduce 1.4 mL Tubes	Introduce	Complete	12/4/2015 1:47:23 PM	Admins
Pick 'Tube Pick 1'	Pick	Complete	12/4/2015 1:48:16 PM	Admins

*Dashboard of Instinct S Software.*

# RackWare™

RackWare is Hamilton's new consumable product line featuring two types of SBS-footprint racks—standard racks and high-density racks. These racks are specifically designed to increase the storage capacity in our automated storage systems, but can also be used in manual freezers.

## RackWare 48

This 48-position cryovial/microtube rack is a honeycomb design for use as an automation-friendly rack for larger labware. The rack can hold labware from Corning, FluidX, Greiner and Nunc™.



RackWare 48

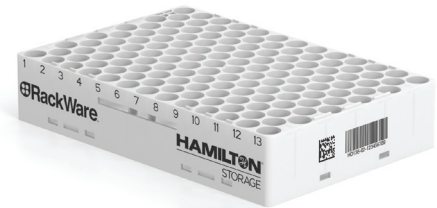
## RackWare HD60 and HD138

These high-density SBS-footprint racks for microtube and cryovial storage are designed for use with Verso, BiOS, and SAM systems. These racks increase the storage capacity in an automated or manual storage system by increasing the number of tubes that can be placed in the rack.



RackWare HD60

RackWare HD60 supports popular 48-format labware and increases storage capacity in a comparable SBS-footprint from 48 to 60 tubes.



RackWare HD138

RackWare HD138 supports most major 96-format labware and increases storage capacity in a comparable SBS-footprint from 96 to 138 tubes.

## Technical Specifications:

	RackWare 48	RackWare HD60	RackWare HD138
Rack Dimensions (SBS Standard Footprint)	127.76 mm x 85.48 mm (5.03 in x 3.37 in)		
Temperature Range	-100°C to 120°C	-80°C to +35°C (-150°C in manual storage only)	-80°C to +35°C (-150°C in manual storage only)
Cryovial/Tube Diameter	10.0 mm to 12.0 mm (0.39 in to 0.47 in)	10.5 mm* (0.41 in)	8.5 to 9.0 mm* (0.34 in to 0.35 in)
Autoclavable	Yes	No	No

\*Contact Hamilton for complete line of compatible tubes.



# About Hamilton Company

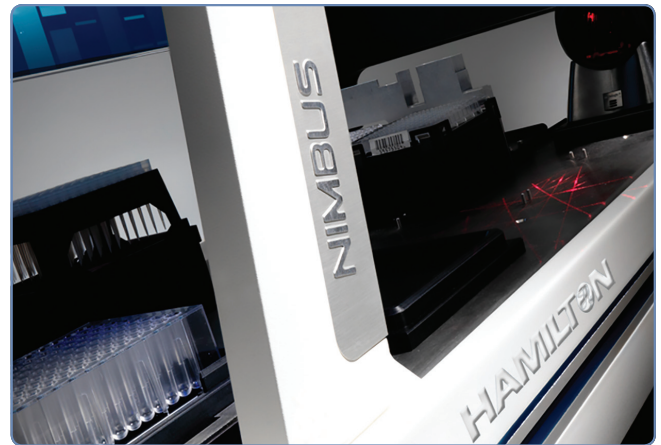
Hamilton Company is a global enterprise with affiliates in Reno, Nevada; Franklin, Massachusetts; and Bonaduz, Switzerland and sales offices throughout the world.

We are an industry leader in the design and manufacture of liquid handling, process analytics, robotics and automated storage solutions. For more than 60 years, Hamilton has been satisfying customer needs by combining quality materials with skilled workmanship to ensure the highest level of performance. Hamilton's lifelong commitment to precision and quality has earned us global ISO 9001 Certification.



Founded on the technology of analytical Microliter™ and Gastight® syringes, Hamilton Company has a broad offering of laboratory products including manual and semi-automated precision fluid measuring instruments, chromatography products, process sensors, laboratory electrodes, pipettes and more. Top innovations from these lines include Arc® pH, DO and Conductivity Intelligent Sensors, Microlab® 600 Diluters/Dispensers and the Microlab® 300 Guided Pipetting System.

A pioneer in liquid handling equipment and laboratory automation technology, Hamilton Robotics is known for advancing life science and biotechnology industries through reliability, performance and flexibility. Hamilton Robotics is the industry leader in design and manufacturing with patented technologies such as Compression-induced O-Ring Expansion (CO-RE®), Total Aspiration and Dispensing Monitoring (TADM®) and Anti-Droplet Control (ADC™). Hamilton Robotics' platforms include Hamilton VANTAGE™ Liquid Handling System, its newest vertically-integrated liquid handler, Microlab STAR™, Hamilton Robotics' highest selling automated pipetting platform, and Microlab NIMBUS®, the first in its class of compact, high-speed, personalized pipetting workstations.



Hamilton Storage offers comprehensive ultra-low temperature automated sample management systems for microtube and microplate storage. Hamilton Storage's line of biobanking and compound storage solutions, as well as consumables, are designed for a broad array of life science processes. Products include Hamilton BIOS®, SAM™, Verso™ and ASM™, designed for sample integrity, flexibility and reliability.

Hamilton Company is focused on blending invention and accuracy to deliver customers unparalleled products.

**По вопросам продаж и поддержки обращайтесь:**

Архангельск (8182)63-90-72	Краснодар (861)203-40-90	Рязань (4912)46-61-64
Астана (7172)727-132	Красноярск (391)204-63-61	Самара (846)206-03-16
Белгород (4722)40-23-64	Курск (4712)77-13-04	Санкт-Петербург (812)309-46-40
Брянск (4832)59-03-52	Липецк (4742)52-20-81	Саратов (845)249-38-78
Владивосток (423)249-28-31	Магнитогорск (3519)55-03-13	Смоленск (4812)29-41-54
Волгоград (844)278-03-48	Москва (495)268-04-70	Сочи (862)225-72-31
Вологда (8172)26-41-59	Мурманск (8152)59-64-93	Ставрополь (8652)20-65-13
Воронеж (473)204-51-73	Набережные Челны (8552)20-53-41	Тверь (4822)63-31-35
Екатеринбург (343)384-55-89	Нижний Новгород (831)429-08-12	Томск (3822)98-41-53
Иваново (4932)77-34-06	Новокузнецк (3843)20-46-81	Тула (4872)74-02-29
Ижевск (3412)26-03-58	Новосибирск (383)227-86-73	Тюмень (3452)66-21-18
Казань (843)206-01-48	Орел (4862)44-53-42	Ульяновск (8422)24-23-59
Калининград (4012)72-03-81	Оренбург (3532)37-68-04	Уфа (347)229-48-12
Калуга (4842)92-23-67	Пенза (8412)22-31-16	Челябинск (351)202-03-61
Кемерово (3842)65-04-62	Пермь (342)205-81-47	Череповец (8202)49-02-64
Киров (8332)68-02-04	Ростов-на-Дону (863)308-18-15	Ярославль (4852)69-52-93

**Единый адрес:** [hno@nt-rt.ru](mailto:hno@nt-rt.ru) **Веб-сайт:** [www.hamilton.nt-rt.ru](http://www.hamilton.nt-rt.ru)