

HAMILTON

SAM HD Pro

Automated Sample Storage System



SAM HD Pro

Walkaway automated storage solution

SAM HD Pro is the latest version of the SAM HD storage system. Like its predecessor, it is a compact solution designed to safely and securely store valuable samples at -80°C in a frost-free environment. Despite its small size, the SAM HD Pro platform is a robust, fully automated biobank capable of picking up to 100 tubes per hour and accommodating various labware types.

Enhancements to the tube picker significantly boost the system's reliability, while the new Runtime 2.0 software introduces a web-based INSTINCT S user interface, allowing users to interact with SAM HD Pro from remote devices like phones and tablets.

Additional hardware upgrades include a touchscreen monitor, a new PC with the latest processor, increased RAM, and a larger hard drive. The SAM HD Pro freezer also features notable improvements, such as updated variable drive compressors for better performance, faster pull-down, and quicker recovery times.

Convenience at Your Fingertips

SAM HD Pro effortlessly transports samples from cold storage to the access port in less than 70 seconds.

- The system uses INSTINCT® S—a powerful, easy-to-use software platform that drives Hamilton's Verso Q-Series, Verso, and BIOS platforms.
- Web based INSTINCT S UI allows customers to interface with SAM HD from remote devices such as phones and tablets.
- Robotic integration capabilities with AMR (automated mobile robots) as well as fixed robotic arms, such as the Hamilton HMotion.
- 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.

Flexibility Enhances Function

Easily adapt to changing workflows by storing and managing multiple tube types within one system.

- Different labware types can be picked without the hassle of tooling changes and without compromising the integrity of unpicked samples.

Environmentally Conscious

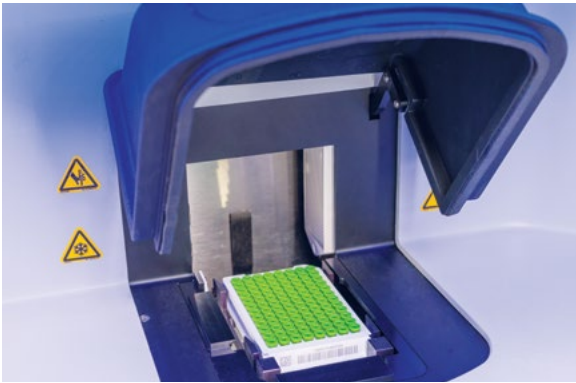
SAM HD Pro utilizes a natural refrigerant to help reduce your lab's carbon footprint.

- 20% reduction in environmental footprint over the previous generation.
- Users can now enjoy an expanded setpoint range of up to -40°C .
- Universal Variable Drive technology delivers tighter control and faster recovery times.
- 33% improvement in energy efficiency over the previous generation by using TSX Series ULTs, from 0.36 kW/hr to 0.24 kW/hr.
- Whisper-quiet operation under 44 decibels.

Efficiency Meets Security

Enjoy peace of mind knowing that samples are safe in SAM HD Pro's continuously monitored environment.

- A complete chain of custody for each sample is available—the system automatically tracks and records the movement of all samples.
- Heat and moisture are prevented from entering the system, thus eliminating harmful freeze-thaw cycles.
- UPS and LN_2 backup capability helps mitigate common disaster scenarios.



Storage Temperature:
-80°C



Capacity:
Up to 85,836 tubes



Throughput:
Up to 100 tubes/hour

Storage Capacities

Labware Type*	Standard Rack	RackWare® High-Density Rack
0.3 mL DuraSeal™/septum/screw cap	59,712	85,836
0.5 mL screw cap	34,080	48,990
1.0 mL/1.4 mL screw cap	28,800	41,400
5 mL screw cap	8,496	n/a
10 mL screw cap	4,272	n/a
SBS microplate	803	n/a

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

Technical Specifications

System Width	139 cm (4 ft, 7 in)	Barcode Reading	Racks: 1D Tubes: 1D and 2D (side) and 2D (bottom)
System Depth	150 cm (4 ft, 11 in)	Dry Air Purge	Nitrogen or dry air (-40°C dew point or lower)
System Height	222 cm (7 ft, 3.5 in)	Tube Retrieval	100 tubes/hour at 5% hit rate
System Weight (empty)	861 kg (1,900 lbs)	Plate Retrieval	50 plates/hour



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