SoftGrip™ Pipette Catalog

User-centric designs that maximize quality, comfort and precision



Hamilton SoftGrip™ Pipettes

The Standard for Quality, Comfort and Precision

Outstanding Quality

The SoftGrip™ pipette, with its award-winning, innovative design,* is built to last just like our precision syringe products. SoftGrip manual pipettes are completely autoclavable for easy decontamination and sterilizations.

Total Comfort

The soft, ergonomic shape and low plunger forces of the SoftGrip pipette reduce hand and wrist fatigue as compared to other pipettes. Using SoftGrip pipettes decreases the risk factors associated with pipette-related repetitive stress injuries such as carpal tunnel syndrome.

Guaranteed Accuracy and Precision

SoftGrip pipettes deliver superior accuracy and precision. Every pipette is calibrated at the factory with standards traceable to N.I.S.T. and shipped with a Certificate of Calibration documenting the pipette's accuracy and precision. Accuracy is guaranteed with Hamilton AdvanTip™ Precision Pipette Tips.

*Outstanding design awards received from Industrial Designers Society of America, Business Week for Medical & Scientific Products, and the Chicago Anthenaeum Museum of Architecture and Design.

Volume Indicator

Dual pointer simplifies volume adjustment.



Enhanced Comfort

Separate tip ejector button with curved shape reduces hand motion.



Soft Plunger Action

Low-force, sloped plunger button lessens thumb extension and overuse.







Ergonomically contoured handle with soft, non-slip surface fits perfectly in your hand to minimize fatigue.



Isolated volume adjustment ring prevents accidental volume changes.



Light, Balanced Feel

Curved hilt supports the pipette to provide finer control while pipetting.



One Stroke Tip Ejection

Lever-action ejector removes all tips on the first stroke and is easily reset for left-handed operation.



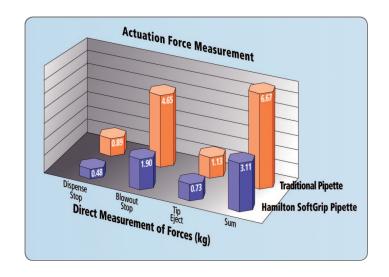
SoftGrip Pipettes

The Best Ergonomic Pipette, Proven Scientifically in an Independent Study

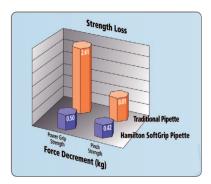
Use of the SoftGrip pipette decreases several of the risk factors associated with the development of repetitive stress injuries, including carpal tunnel syndrome.

Less Force = Less Fatigue and Discomfort

Pipette actuation force measurements were taken for the three pipetting actuation forces: (1) Dispense Stop, (2) Blowout Stop, and (3) Tip Eject. SoftGrip pipettes require less than half the overall force when compared to a traditional pipette.

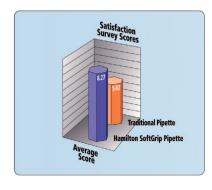


Less Fatigue and Discomfort = Increased User Satisfaction



Fatigue Experiment

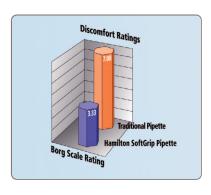
Loss in strength was measured following a one-hour pipetting session. Power grip strength retention was more than five times better with SoftGrip pipettes. Pinch grip strength loss was nearly



Highest User Satisfaction

The SoftGrip pipette received the highest average score out of 10 possible for 11 different aspects of a pipette, including plunger and eject forces, weight, diameter and texture.

half that experienced with a traditional pipette.



Discomfort Rating

Using the widely accepted Borg 10 point scale for discomfort, the SoftGrip pipette showed less than half the discomfort experienced with a traditional pipette after a one hour pipetting session.



Ergonomics, Hamilton Pipettes & You

Ergonomics has become a critical factor in today's laboratories. Research has shown that use of traditional pipettes for more than 300 hours per year is associated with an increased risk of hand and shoulder ailments¹. To address the ergonomic issues facing laboratories, Hamilton pipettes were ergonomically designed to minimize the amount of fatigue and discomfort typically experienced in pipetting. Overall, use of Hamilton pipettes decreases several of the risk factors associated with the development of repetitive stress injuries, including carpal tunnel syndrome. As proven in an independent study², the Hamilton pipette is the best ergonomic pipette design.

In addition to using an ergonomically designed pipette, there are several steps that should be taken in the laboratory to decrease the risk of pipette-related repetitive stress injuries. Take a 1–2 minute break after every 20 minutes of pipetting, if possible. Alternate between tasks in the laboratory to minimize the duration of pipetting sessions. Ensure you are working in an ergonomic workspace. The bench should be at the proper height, and the chair should have an adjustable height with full back support.

Your feet should not be dangling; the chair should provide a foot support or a bench should be available to rest your feet on.

Use Hamilton AdvanTip Precision Pipette Tips to ensure a perfect fit on Hamilton pipettes for a positive seal without excess force during tip installation. The perfect fit minimizes tip eject forces.

¹ Bjorsten, M.G., B. Almby, and E.S. Jansson, Hand and shoulder ailments among laboratory technicians using modern plunger-operated pipettes, Applied Ergonomics, 1994 25(2): 88-94.

² Study conducted by Ergonomic Engineering, Inc., 20 Gulf Road, Pelham, Massachusetts, 01002; tel. (800) 375-ERGO(3746). For a complete copy of the study, please contact Hamilton Company.



SoftGrip Pipettes—Single Channel

- Wide Selection of Ergonomic Pipettes
- Completely Autoclavable
- Guaranteed Accuracy and Precision

SoftGrip pipettes routinely receive the highest user satisfaction score of 10 on 11 different aspects of a pipette, including plunger and eject forces, weight, diameter, and texture. Choose from six adjustable volume and ten fixed volume SoftGrip pipettes covering 0.2 μ L to 1 mL. All pipettes have color-coded plunger buttons and labels for easy volume identification.

SoftGrip air-displacement pipettes are built from high quality, state-of-the-art materials designed to provide years of reliable service. All pipettes are completely autoclavable for easy decontamination and sterilization without the need for disassembly and recalibration.

The isolated volume ring prevents accidental volume changes. A magnified, easy-to-read micrometer ensures reproducible, accurate volume setting. Each pipette meets or exceeds industry standards for accuracy and precision when used with Hamilton Universal AdvanTip Precision Pipette Tips.

Manual Single Channel Pipettes

SoftGrip Adjustable Volume Pipettes, 0.2 µL-1 mL

Part No.	Volume	Increments (µL)	Color	within ±%		Accuracy within ±%	
55019-30	0.2-2 µL	0.002	Aqua •	8.00	4.00	1.20	0.60
55019-32		0.02	Purple •	2.50	1.20	0.80	0.40
55019-34	2.5–25 μL	0.02	Forest Green	4.50	1.50	0.80	0.20
55019-36		0.2	Violet	1.80	0.70	0.60	0.15
55019-38	30-300 μL	0.2	Brick Red	1.20	0.40	0.40	0.15
	100 μL–1 mL		Sky Blue •		0.50	0.30	0.12



SoftGrip Fixed Volume Pipettes, 5 µL-1 mL

Part No.	Volume	Color	Accuracy within ±%	Precision within ±%
55019-01	5 μL	Steel Blue •	1.40	0.75
55019-03	10 μL	Purple •	0.80	0.40
55019-05	25 μL	Forest Green	0.80	0.30
55019-07	50 μL	Sandstone •	0.60	0.30
55019-09	100 μL	Violet	0.50	0.20
55019-11	200 μL	Mustard •	0.40	0.18
55019-13	250 μL	Burnt Orange	0.40	0.18
55019-15	300 µL	Brick Red •	0.40	0.18
55019-17	500 μL	Olive Green	0.40	0.18
55019-19	1 mL	Sky Blue •	0.30	0.12

Single Channel Pipette Accessories

Part No.	Product	Description
53578-01	Single Channel Pipette Carousel	Constructed of heavy, solvent- resistant plastic; holds six single and multi-channel pipettes
1987-01	Calibration Labels, 120/pk	Quickly record and view calibration data with labels on your pipettes
34002	Calibration Key	For simple calibration in the field



SoftGrip Single Channel Pipette Carousel







SoftGrip Pipettes-Multi-Channel

- Easily Adjusts for Left-Hand Operation
- Completely Autoclavable
- Guaranteed Accuracy and Precision

Hamilton SoftGrip pipettes are available as 8-channel and 12-channel adjustable volume manual pipettes in two volume ranges covering 5 μL to 50 μL and 30 μL to 300 μL. The pipettes have color-coded plunger buttons and labels for quick volume identification.

The unique, long tip ejector lever and movable lower body can be rotated a full 360° relative to the handle to provide maximum comfort for left- or right-handed use. Additionally, the easily activated tip ejector lever releases all the tips in single stroke.

Made of the finest materials, the entire SoftGrip multi-channel pipette can be autoclaved without the need for disassembly or recalibration.





Manual Multi-Channel Pipettes

SoftGrip Multi-Channel Pipettes, 8-Channel, 5 μL-300 μL

Part No.	Volume	Increments (µL)	Color		Precision within ±%		Precision within ±%
55019-50	5-50 μL x 8	0.02	Sandstone •	2.00	2.00	0.80	0.35
	30-300 μL x 8		Brick Red		0.70	0.50	0.30

SoftGrip Multi-Channel Pipettes, 12-Channel, 5 μL-300 μL

Part No.	Volume	Increments (µL)	Color			Accuracy within ±%	
	5-50 μL x 12		Sandstone •		2.00	1.00	0.50
55019-56	30-300 μL x 12	0.2	Brick Red	2.40	1.20	1.00	0.50

Multi-Channel Pipette Accessories

Part No.	Product	Description
34195	Multi-Channel Pipette Carousel	Constructed of heavy, solvent- resistant plastic; holds one multi-channel pipette
1987-01	Calibration Labels, 120/pk	Quickly record and view calibration data with labels on your pipettes
34002	Calibration Key	For simple calibration in the field



Accuracy and Precision

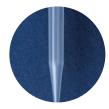
Unsurpassed Accuracy and Precision, Guaranteed

Guaranteed accuracy and precision are a function of both pipette and tip performance. Based on published specifications, the Hamilton SoftGrip pipette delivers the best overall accuracy and precision versus any other pipette brand. The SoftGrip pipette and Hamilton AdvanTip Precision Pipette Tips create a liquid handling system designed for optimal performance. Ensure you are getting the Hamilton accuracy and precision advantage by using only Hamilton AdvanTip Precision Pipette Tips.

High Quality Tips for High Performance

There are several key pipette tip features that are critical to accuracy and precision. Hamilton AdvanTip Precision Pipette Tips are manufactured to the exacting standards required to meet accuracy and precision specifications.

Critical Features for Pipette Tips



Clean hydroscopic surfaces

Hamilton tips are made from chemically resistant, virgin polypropylene to ensure excellent clarity and smooth surfaces for exceptional fluid handling and sample delivery.



Absence of flash (plastic burrs)

The presence of flash can severely diminish accuracy and precision, particularly at the tip orifice. Hamilton prevents flash with stringent specifications and tolerances for our precision tooling.



Consistent geometry and dimension

Uniform orifice geometry gives consistent drop size and less liquid retention. The tip cone geometry and dimensions are designed for a perfect fit.

The Difference is in the Quality

There can be tremendous differences in various pipette tips on the market that can affect the quality of precise fluid measurement. Using Hamilton AdvanTip Precision Pipette Tips guarantees maximum accuracy and precision performance.



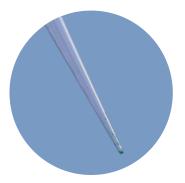
AdvanTip LT Tips—The Ultimate in Accuracy and Precision

- Maximum recovery of valuable samples and reagents
- No secondary chemicals or additives
- Consistent results, no sample leaching
- ► Highest accuracy and reproducibility
- Certified RNase, DNase, and pyrogen safe

New AdvanTip LT pipette tips virtually eliminate any retention of valuable samples and reagents. Unlike standard polypropylene products, the wall surfaces of AdvanTip LT tips are completely free of occlusions and cavities. This is achieved through a modification to the polypropylene resin combined with the use of ultra smooth, diamond polished moulds.

No secondary chemicals such as silicone or other substances are added, eliminating the possibility of sample leaching and performance inconsistencies. Tips are ideal for use in critical applications such as quantitative PCR, where the target DNA is present in very small quantities. The maximum volume of enzymes or DNA can be transferred during testing procedures, reducing expensive reagent cost.







Universal AdvanTip LT and Precision Pipette Tips

AdvanTip LT Pipette Tips—Low Retention Tips



10 µL Pipette Tips

Volume Range: 0.2–10 μL • Recommended for 2, 5 and 10 μL pipettes

Description	Low Retention	Standard	Total Tips
10 μL, Bulk, 1000 tips/bag	23008-10		1000
10 μL, Bulk, Extended Length, 1000 tips/bag	23005-14		1000
10 μL, Racked, 96 tips/rack	23006-01	68007-11	960
10 μL, Racked, Extended Length, 96 tips/rack	68007-24	11003-15	960
10 μL, Racked, Pre-Sterilized, 96 tips/rack	23003-01	11003-01	960
10 μL, Racked, Extended Length, Pre-Sterilized, 96 tips/rack	23003-25	11003-25	960
10 μL, Racked, Filter, Pre-Sterilized, 96 tips/rack	23003-02	11003-02	960
10 μL, Racked, Extended Length, Filter, Pre-Sterilized, 96 tips/rack	23003-26	11003-26	960
10 μL, Stacked Rack, 96 tips/rack, 5 racks/stack		11003-11	480



100 µL Pipette Tips

Volume Range: 2–100 μL • Recommended for 20, 25, 50 and 100 μL pipettes

Description	Low Retention	Standard	Total Tips
100 μL, Racked, Filter, Pre-Sterilized, 96 tips/rack	23003-10	960	1000





200 μL Pipette Tips

Volume Range: 2–200 μL • Recommended for 20, 25, 50, 100 and 200 μL pipettes Also, can be used with 300 μL pipettes when pipetting volumes of 200 μL or less

Description	Low Retention		Total Tips
200 μL, Bulk, 1000 tips/bag	23008-20		1000
200 μL, Racked, 96 tips/rack	68008-21	68008-11	960
200 μL, Racked, Pre-Sterilized, 96 tips/rack	68008-22	11003-03	960
200 μL, Racked, Filter, Pre-Sterilized, 96 tips/rack*	23003-04	68008-13	960
200 μL, Stacked Rack, 96 tips/rack, 5 racks/stack		11003-05	480
* Not for use with 100 µL SofTouch Pipettes. See 100 µL tips			



300 µL Pipette Tips

Volume Range: 2-300 μL • Recommended for 250 and 300 μL pipettes

Description	Low Retention		Total Tips
300 μL, Bulk, 1000 tips/bag	68009-20		1000
300 μL, Racked, 96 tips/rack	68009-21	68009-11	960
300 μL, Racked, Pre-Sterilized, 96 tips/rack	23003-06	11003-06	960
300 μL, Racked, Filter, Pre-Sterilized, 96 tips/rack	68009-23	11003-07	960



1 mL Pipette Tips

Volume Range: 100–1000 μL • Recommended for 500 and 1000 μL pipettes

Description	Low Retention		Total Tips
1000 μL, Bulk, 1000 tips/bag	68010-20	1000	1000
1000 μL, Racked, 100 tips/rack	23006-08	1000	960
1000 μL, Racked, Pre-Sterilized, 100 tips/rack	23003-08	68010-12	1000
1000 μL, Racked, Filter, Pre-Sterilized, 100 tips/rack	68010-23	68010-13	

SoftAide Pipette Controller

- ldeal for glass and plastic pipettes
- Precise measuring and dispensing from 100 μL to 200 mL
- Easy-to-read LED display for mode and speed

The SoftAide Pipette Controller is easy-to-use, reliable and will maximize your laboratory's efficiency. SoftAide is ideal for use with both glass and plastic standard pipettes. The reusable safety check valve and hydrophobic 0.2 µm PTFE membrane filter prevent contamination of the unit by liquid or vapors of the solution being aspirated into the pipette.

The NiMH batteries provide maximum productivity, with continuous use up to one week. SoftAide is supplied with a power supply, two replacement PTFE membrane filters, a replacement check valve, and a wall-mount holder.

Replacement Parts



Item	Part No.
SoftAide Pipette Controller with a power supply, a replacement Safety Check Valve, two replacement 0.2 µm PTFE Membrane Filters and a Wall-Mount Holder	
SoftAide Pipette Controller (US)	51248-01
SoftAide Pipette Controller (AU)	51248-21
Silicone Pipette Adapter	51248-30
Safety Check Valve	51248-32
PTFE Membrane Filter Set, 0.2 μm (5 pcs)	51248-34
North American Power Supply	51248-40
Australian Power Supply	51248-45



SofTop™ Quik Dispenser

- Adjustable Volume Bottle Top Dispensing
- Maximum Chemical and Thermal Resistance with Ceramic Plunger
- Fast and Accurate Micrometer Volume Adjustment

The SofTop Quik Dispenser is safe and easy-to-use with an exceptional soft touch and sure-grip ergonomic design. Calibrated volumetric steps assure identical volume delivery every time. The graduated gauge offers user-independent reproducible volume delivery.

With an innovative plunger made of aluminum oxide ceramic, there is no chance of abrasions, scratching, swelling, or flaking of a coating layer. The SofTop Quik Dispenser has a screw-fitted suction hose, eliminating the possibility of air bubbles during aspiration.

The fully autoclavable SofTop Quik Dispenser is available in six versions from 0.2 mL to 60 mL. Each dispenser is individually tested and shipped with a Certificate of Quality.

Item	Part No.
SofTop Quik Dispenser, 0.2-1.0 mL	51249-01
SofTop Quik Dispenser, 0.4-2.0 mL	51249-20
SofTop Quik Dispenser, 1-5 mL	51249-50
SofTop Quik Dispenser, 2-10 mL	51249-10
SofTop Quik Dispenser, 5-30 mL	51249-30
SofTop Quik Dispenser, 10-60 mL	51249-60
Dispensing Nozzle for SofTop Quik Dispensers up to 10 mL	51249-70
Dispensing Nozzle for SofTop Quik Dispensers 30 mL and 60 mL	51249-72
Suction Tube for SofTop Quik Dispensers up to 10 mL, 12 in.	51249-74
Suction Tube for SofTop Quik Dispensers 30 mL and 60 mL, 12 in.	51249-76



Certification, Calibration and Repair Services

Hamilton is here to help you keep your SoftGrip and SofTouch pipettes performing to Hamilton's superior accuracy and precision specifications.

- Testing under stringent conditions on state-of-the-art equipment
- Calibrations pursuant to ANSI/NCSL Z-540-1-1994, with unbroken chain of calibrations traceable to N.I.S.T.
- New Certificate of Calibration documenting test conditions, data and results

To send in a pipette for re-calibration or service in the U.S.A., visit the Hamilton website or call 1-888-525-2123. For authorized service outside of the U.S.A., contact your local Hamilton Company office or representative.

Easy In-Lab Calibration for SoftGrip Pipettes

Calibration of SoftGrip pipettes is a simple procedure that requires only a single calibration key. For complete details visit our website at www.hamiltoncompany.com/pipettes/calibration.



1. Remove the calibration label. Initial and date a new calibration label and place on the pipette.



2. Locate the calibration reference mark and remove the plunger cap.



3. Insert the calibration key. Each vertical line on the calibration key is approximately 0.2% of the pipette's total volume.

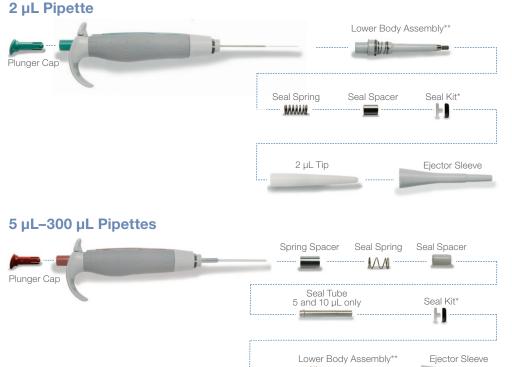


4. Turn the calibration key clockwise to increase volume, counter-clockwise to decrease volume.



SoftGrip Pipette Replacement Parts

SoftGrip pipettes can be easily serviced and calibrated in the lab. If you prefer to service your own pipette, replacement parts are readily available to ensure long pipette life. Service and calibration are also available through Hamilton; see page 15 for information on Hamilton's complete pipette service.



SoftGrip Single Channel Pipette, 2 µL

Part Description	2 μL Part No.
Plunger Cap	54190-02
Lower Body Assembly**	4118-07
Seal Spring	1288-12
Seal Spacer	4029-01
Seal Kit*	1708-79
2 μL Tip	4028-01
Ejector Sleeve	54758-01

* Seal Kit contains 5 PTFE seals with O-rings, and 1 tube of lubricant ** Lower body assembly comes with one seal kit

SoftGrip Single Channel Pipette, 5 to 300 µL

Part Description	Part Numbers							
	5 μL	10 μL	25 μL	50 μL	100 μL	200 μL	250 μL	300 μL
Plunger Cap	54190-13	54190-11	54190-03	54190-06	54190-12	54190-07	54190-08	54190-10
Spring Spacer	34189 for 5–300 μL pipettes							
Seal Spring	1390-01A for 5–300 μL pipettes							
Seal Spacer	34106	34106	34136	34062	34107	34012	34012	34012
Seal Tube	34064	34064		•				
Seal Kit*	1708-70	1708-70	1708-71	1708-72	1708-73	1708-74	1708-75	1708-76
Lower Body Assembly**	4118-08	4118-09	4118-10	4118-11	4118-12	4118-13	4118-14	4118-15
Ejector Sleeve	54758-01	54758-01	54757-01	54757-01	54757-01	54757-01	54757-01	54757-01

^{*} Seal Kit contains 5 PTFE seals with O-rings, and 1 tube of lubricant ** Lower body assembly comes with one seal kit

500 μL-1 mL Pipettes



Seal Spacer

Lower Body Assembly*3

Seal Kit*

Ejector Sleeve

Cover

SoftGrip Single Channel Pipette, 500 to 1,000 µL

	Part Numbers			
Part Description	500 μL	1,000 µL		
Plunger Cap	54190-04	54190-01		
Retainer Assembly	34196	34196		
Eject Spring	1288-06	1288-06		
Adapter	34154	34154		
Seal Spring	1288-13A	1288-13A		
Seal Spacer	34132	34133		
Seal Kit*	1708-77	1708-78		
Lower Body Assembly**	4118-16	4118-17		
Ejector Sleeve	54756-01	54756-01		

^{*} Seal Kit contains 5 PTFE seals with O-rings, and 1 tube of lubricant ** Lower body assembly comes with one seal kit

50 μL and 300 μL Multi-Channel Pipettes



SoftGrip Multi-Channel Pipette, 50 μL and 300 μL

Part Description	Part Numbers				
	8 x 50 μL	12 x 50 μL	8 x 300 μL	12 x 300 μl	
Plunger Cap	54190-06	54190-06	54190-10	54190-10	
Spring Clip	34354	34354	34354	34354	
Piston Chamber Assembly***	6385-01	6385-01	6385-02	6385-02	
Ejector Plate	4923-01	4922-01	4923-01	4922-01	
Cover	4917-01	4916-01	4917-01	4916-01	

^{***}Comes pre-assembled with seals installed by the factory



About Hamilton Company

Hamilton Company is a global enterprise with headquarters in Reno, Nevada; Franklin, Massachusetts; and Bonaduz, Switzerland and subsidiary 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 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, the BioLevitator™ 3D Cell Culture System, 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 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's platforms include Hamilton VANTAGE™, its newest vertically-integrated liquid handler, Microlab STAR, Hamilton's highest selling automated pipetting platform, and Microlab NIMBUS®, the first in its class of compact, high-speed, personalized pipetting workstations.





Hamilton Storage Technologies offers comprehensive ultra-low temperature automated sample management systems for microtube and microplate storage.

Hamilton's line of biobanking and compound storage solutions, as well as consumables, are designed for a broad array of life science processes. Products include BiOS™, SAM™ and ASM™, designed for sample integrity, flexibility and reliability.

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



©2013 Hamilton Company. All rights reserved. All trademarks are owned and/or registered by Hamilton Company in the U.S. and/or other countries. Lit. No. L70067

HAMILT®N°

Web: www.hamiltoncompany.com USA: 800-648-5950 Europe: +41-81-660-60-60

Hamilton Americas & Pacific Rim

Hamilton Company Inc. 4970 Energy Way Reno, Nevada 89502 USA Tel: +1-775-858-3000 Fax: +1-775-856-7259 sales@hamiltoncompany.com

Hamilton Europe, Asia, & Africa Hamilton Bonaduz A.G. Via Crusch 8 CH-7402 Bonaduz, Switzerland Tel: +41-81-660-60-60 Fax: +41-81-660-60-70 contact@hamilton.ch

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