

Tips, Accessories & Service

Whether the requirements for your application require tips that are sterile, filtered, certified RNase/ DNase free, non-pyrogenic, Low Retention or Trace Metal Certified, there's a genuine Ovation tip to meet your needs. See the tip chart (right) or visit our web site www.vistalab.com for complete information on all the tip options for the Ovation Pipette, plus accessories and calibration and repair services.

Catalog number

4060-1332

Note:

Filtered tips contain a unique hydrophobic filter which acts as a barrier to aqueous liquids and aerosols, protecting the pipette and sample from trace amounts of carryover.

Service Options

VistaLab Technologies offers comprehensive calibration and repair programs to meet all regulatory requirements and ensure optimum pipette performance. Vistalab is now ISO/IEC 17025:2005 accredited. See www.vistalab.com/services for more information or to order service.

Ovation Quick-Set adjustable volume models:		0.2-2µL	10-100µL	20-200µL	100-1000µL	
		MICRO	SMALL	LARGE		
NON-STERILE	VistaRak 192 tips/rack, 5 racks	4060-1002	4060-2004	4060-3004		
	VistaRak, Low Retention 192 tips/rack, 5 racks	4070-1002LR	4070-2004LR	4070-3004LR		
	VistaStak, 192 tips/layer, 5 layers (small size) or 3 layers (micro and large size)	4060-9024	4060-9025	4060-9026		
	Stacked Rack, 200 tips/layer, 5 layers (small size) or 3 layers (large size)		9025	9026		
	Stacked Rack, Trace Metal Certified, 200 tips/layer 5 layers (small size) or 3 layers (large size)		9022	9023		
	VistaBulk™, 1000 tips/bag, or 250 tips/bag (5mL) or 100 tips/bag (10mL)	4058-1000	4058-2000	4058-3000		
	Protectainer™ Bulk Pack, 1000 tips (small) or 750 tips (large)		4025	4026		
	Econo-Pak™ Bulk Pack, 1000 tips		4225	4226		
	STERILE	VistaRak, Sterile, non-pyrogenic, certified RNase/DNase free, 192 tips/rack, 5 racks	4060-1032	4060-2132	4060-3132	
		VistaRak, Sterile, non-pyrogenic, Low Retention, certified RNase/DNase free, 192 tips/rack, 5 racks	4070-1032LR	4070-2132LR	4070-3132LR	
VistaTip™ Individually Wrapped Sterile, 200 tips			2025	2026		
VistaTip Individually Wrapped, Sterile, non-pyrogenic, 200 tips			2027	2028		
FILTERED	VistaRak, Filtered, Sterile, non-pyrogenic, certified RNase/DNase free, 192 tips/rack, 5 racks <small>2 2µL tip for Ovation 0.2-2µL</small>	4060-1332 ¹ 4060-1333 ²	4060-2332	4060-3332		
	VistaRak, Filtered, Sterile, non-pyrogenic, Low Retention, certified RNase/DNase free 192 tips/rack, 5 racks <small>2 2µL tip for Ovation 0.2-2µL</small>	4070-1332LR ¹ 4070-1333LR ²	4070-2332LR	4070-3332LR		
ACCESSORIES	Nozzle, 5/box (0.2-2µL) or 10/box <small>2 for Ovation 0.2-2µL only</small>	9057-1013 ² 9057-1010	9057-2010	9057-3017		
	Nozzle Replacement Filters, 25/bag	n/a	9057-2009	9057-3009		
	Type A Nozzle, 5/box	n/a	n/a	9057-1017		
	Nozzle Extender (except 0.2-2µL)	9057-1012		9057-3012		
	Ejector Sleeve	9057-1011		9057-3011		
	CR2 Battery – for all models		9057-4001			
	Calibration Labels, 5/box		9057-4002			
	Ovation Pipette Stand		9057-4003			
	Cap Opener Kit, Qty 3		9057-4004			
	Replacement thumb button		9057-4005			
Replacement base screw		9057-4006				

Notes: 1. Not for use with Ovation Quick-Set 0.2-2µL.

Ovation QS Quick Set Pipette Specifications

Quick-Set Adjustable Volume Models	VistaLab Catalog #	Color	Volume Range	Dispensing Increments	Accuracy	Precision
	1057-0002	●	0.2 – 2µL	0.002µL	±1.5% at 2µL ±2.7% at 1µL ±9% at 0.2µL	0.9% at 2µL 1.8% at 1µL 7.6% at 0.2µL
1057-0010	●	1 – 10µL	0.01µL	±1% at 10µL ±1.5% at 5µL ±2.5% at 1µL	0.4% at 10µL 0.6% at 5µL 1.2% at 1µL	
1057-0020	●	2 – 20µL	0.02µL	±1% at 20µL ±1.5% at 10µL ±7% at 2µL	0.3% at 20µL 0.5% at 10µL 2% at 2µL	
1057-0100	●	10 – 100µL	0.1µL	±0.8% at 100µL ±0.8% at 50µL ±3.5% at 10µL	0.15% at 100µL 0.24% at 50µL 1% at 10µL	
1057-0200	●	20 – 200µL	0.2µL	±0.8% at 200µL ±0.8% at 100µL ±2.5% at 20µL	0.15% at 200µL 0.25% at 100µL 1% at 20µL	
1057-1000	●	100 – 1000µL	1.0µL	±0.8% at 1000µL ±0.8% at 500µL ±3% at 100µL	0.15% at 1000µL 0.2% at 500µL 0.6% at 100µL	

Warranty

VistaLab Technologies, Inc. warrants the Ovation QS Pipette against defects in materials and workmanship for two years from the date of purchase. Register your pipette and activate the warranty at www.vistalab.com.

This warranty is void if defects or damage result from improper handling, unauthorized modification, or use of ancillary products not supported by VistaLab Technologies. This warranty is exclusive; no other warranty is expressed or implied.

Should the pipette need to be returned for service or calibration verification, contact Customer Service for a return authorization. Repack the pipette in its original packaging. Customer is responsible for shipping and insurance charges. If original packaging is unavailable, contact VistaLab Technologies for alternative packaging instructions. Damage to the pipette as a result of improper packaging is the responsibility of the customer.

Operating Temperature & Environment:

Temperature Range: 15° – 35°C
Relative Humidity Range, non-condensing:
10-85% Atmospheric Pressure: 70-106 kPa

To send in your pipette for factory maintenance and/or calibration verification, see the [Calibration & Repair](#) area of our website – www.vistalab.com. For technical assistance, contact us at: techservice@vistalab.com

VistaLab TECHNOLOGIES
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Ovation QS
The Better Way to Pipette

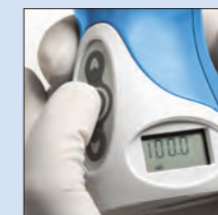
Quick Reference Guide For Quick Set Adjustable Volume Pipettes

Refer to Operator's Guide at www.vistalab.com for complete instructions.



To Pick Up Ovation QS

1. Allow body to fill palm
2. Rotate adjustable hook to rest comfortably on your forefinger



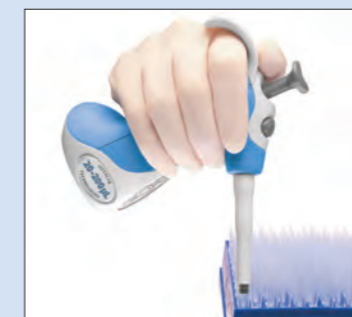
To Select Volume

Press button to select among 5 pre-programmed volumes, or press buttons until desired volume appears on LCD display. "Lock in" setting by holding plunger down until three "beeps" are heard.

To modify a pre-programmed volume setting, press and release button until volume setting to be changed appears on LCD. Press buttons to scroll display to a new volume setting (**volume display will be flashing**). Press and hold the button (~3 seconds) until a "chirp" is heard. This saves the new setting.



The Ovation QS pipette is an adjustable volume, air displacement, 2 stroke piston pipette for aspirating and dispensing precise volumes.



To Install a Tip

1. Insert nozzle into tip.
2. Lightly press down until a "click" is heard. This indicates the tip is securely sealed onto the nozzle.



To Aspirate & Dispense

1. Press plunger to first stop.
2. Place tip in sample and release plunger, wait one second, then remove tip.
3. Depress plunger to first stop, wait one second and fully depress plunger.



To Eject a Tip

1. Point tip into a waste container.
2. Press the tip eject button. The ejector sleeve is activated, effortlessly discarding the tip.

Pipetting Hints for Optimal Performance

- When using viscous or volatile reagents, pre-wetting the pipette tip may be appropriate. To pre-wet, aspirate and dispense the liquid back into the original vessel. Then fill the tip and dispense contents into receiving vessel.

- If an air bubble forms in the tip during aspiration, return the sample, discard the tip, and use a fresh tip.

- Smoothly depress and release the plunger when pipetting, maintaining the same speed of motion for all samples. Do not let the plunger “snap back” to the uppermost position.

- When finished aspirating, touch the pipette tip against the side of the vessel as it is being withdrawn to remove any liquid that may have adhered to the outside of the tip. Wipe the pipette tip **ONLY** if there is liquid adhering to the outside. Be careful not to “wick out” any of the contents from the the pipette tip.

- Dispense against the side of the receiving vessel or above the liquid surface. To remove any of the measured liquid that may have adhered to the pipette tip, touch off the tip against the side of the receiving vessel.



If the pipette is to be used with hazardous fluids, safe laboratory practice should be followed. Refer to manufacturer’s Material Safety Data Sheets for proper handling instructions. Always use VistaLab filtered tips (see tips table for catalog numbers) when pipetting potentially caustic, corrosive or volatile solutions. Failure to do so may result in premature wear and damage to the internal seals and piston, and void the pipette’s warranty. When organic or volatile solutions are routinely used, VistaLab Technologies recommends the use of VITON seals. See the chemical compatibility chart in the Ovation documentation library at www.vistalab.com for more information.

Taking Care of your Ovation Pipette

The Ovation QS pipette requires minimal routine maintenance. Always store it in its “standing” position when not in use. Clean outer surfaces as needed with a soft cloth dampened with warm water. To decontaminate outer surfaces, wipe with a 70% aqueous solution of ethanol or isopropanol, or use a 10% bleach solution followed by water. Remove ejector sleeve and wipe outside of nozzle and inside of ejector sleeve with 70% alcohol to remove any accumulated deposits. **ONLY WIPE THE LCD SCREEN DISPLAY WITH WATER.**

Pipette body chemical compatibility: Water, diluted ethanol or isopropanol, diluted bleach. See the document “Ovation Chemical Compatibility” in the support area at www.vistalab.com about other specific chemical formulations concerning the pipette or VistaLab tips.

Nozzles and Nozzle Filters

Ovation pipettes feature a removeable nozzle with an internal aerosol/liquid barrier filter which prevents liquid from being aspirated into the pipette. If this filter becomes wet, the pipette will not aspirate fluid until the filter or entire nozzle is replaced.

To remove a nozzle:

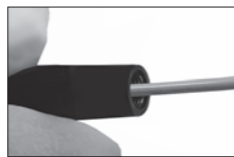
Note: Wear gloves when doing this procedure.

- Pull off ejector sleeve, place tubing on nozzle, and unscrew it.
- Replace the nozzle’s filter or use a new nozzle; Place tubing on nozzle, and screw the nozzle onto the extension tube in a clockwise direction. Firmly tighten.
- Remove tube and slide ejector sleeve back on.
- Push sleeve firmly into place with rocking or twisting motion.

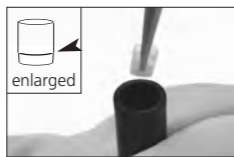


To replace a nozzle filter: (10–100µL, 20–200µL and 100–1000µL only)

- Pull off ejector sleeve, place tubing on nozzle, and unscrew it.
- Remove rubber plug at tip end of nozzle by inserting a straightened paperclip into small hole in plug. Use inserted end of paperclip to pry plug out of end of the nozzle.
- Insert the paperclip into the threaded end of the nozzle and push out the old filter.



- Pick up a new nozzle filter with tweezers or fingers and place it into the tip end (non-threaded) of the nozzle. The end of the filter with the visible ridge should be inserted first.



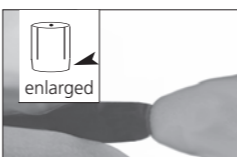
- Use the filter insertion tool to push filter into position. Firmly press down until filter is pushed to the bottom of the nozzle.



- Tap nozzle on counter to remove any loose cellulose material



- Re-insert rubber nozzle plug into front end of nozzle. End of plug without side ridges is inserted first. Press in until plug is even with surface edge of nozzle. If filter is not completely seated, plug will extend beyond end of nozzle. Remove plug and firmly seat filter with insertion tool.



- Place rubber tubing back onto nozzle, and screw nozzle onto pipette in a clockwise direction. **Firmly tighten** and remove tubing from nozzle. Re-install ejector sleeve.

Battery

The Ovation QS pipette has a user replaceable CR2, 3 volt lithium battery (catalog # 9057-4001) with an expected life of one (1) year or more of typical use. **Use of any other battery can cause damage to the pipette and void its warranty.** The battery symbol on the LCD indicates the battery capacity remaining. When **r2.03**, or **r2.11** (or higher) appears on the display or the battery symbol appears “empty”, the battery should be replaced. Current volume setting, pre-set volumes, and current calibration factor are not lost during a battery change.

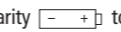


Replacing the Battery

- Loosen the captive screw on the base of the pipette and gently lower the base from the body, being careful not to stretch, loosen or disconnect the cable from the circuit board.





Do not separate the front and back sections of the body at any time. Doing so will void the pipette warranty.

- Note orientation of battery. Pull battery out of clips, being careful not to break them off. Gently pinch clips so when new battery is installed there will be a tight fit and good contact on battery terminals.
- Install the new battery, matching the polarity  to the symbol imprinted between the battery clips.
- Carefully fit the base back onto the body of the pipette and tighten the screw. Do not overtighten.

Calibration

The Ovation QS pipette can be easily in-lab calibrated $\pm 10\%$ for optimum performance for your operating conditions. In addition, the calibration factor can be pre-determined and set at the appropriate value for a liquid to be dispensed. Returning calibration factor to 1.000 will re-set the Ovation pipette to its original factory calibration.



















Prior to performing calibration procedures, “home” the plunger by simultaneously pressing and holding   buttons until **CAL** appears on LCD. Depress plunger to first stop, and release it. Then depress plunger to first stop again and hold until 3 “beeps” are heard.

For optimum performance over the entire pipetting range, verify and calibrate pipette using the maximum volume setting. Note: Unless using a specific liquid at one volume, always verify and calibrate at the maximum volume.

With the pipette set to the desired volume, determine the actual volume dispensed. Then use the Ovation’s calibration function to determine the appropriate calibration factor.









It is recommended that whenever the calibration factor is changed from the factory setting, that the current factor be recorded on a calibration label on the base of the pipette. The user may also wish to record the new factor in the laboratory’s quality control log.

Determining a New Calibration Factor:

- Simultaneously press and hold the   buttons (about 3 seconds) until **CAL** appears on the LCD display. If **CAL** is not displayed and the volume on the LCD is flashing, then re-press the  and  buttons, ensuring equal pressure is applied to each button.
- Press  and release and **TARGET** (target) is displayed.
- Press  and release again. Press  or  buttons until the maximum volume is displayed.
- Press  and release and **MEAS** (measured) is displayed.
- Press  and release again, then press  or  buttons until value shown is the actual volume dispensed during calibration verification.
- Press  and release and **FACt** (factor) is displayed.
- Press  and release again, and the new calibration factor is displayed. Record this factor.
- Press  and release again and **SET** (set) is displayed. After one second, pipette exits the calibration program and a volume is displayed.
- “Lock In” verification volume by depressing plunger to the first stop and hold until three “beeps” are heard. If volume changed, use   buttons or  to adjust the dispensing volume, and “Lock In”.
- Verify volume delivery at the new calibration factor.

Entering a Calibration Factor:

The Ovation QS pipette allows the user to enter a known calibration factor for a specific liquid, or return to the factory setting.

- Repeat step 1 from “Determining a New Calibration Factor”. Then press and release  button until **FACt** (factor) appears on the LCD.
- Press  and release again, then press the  or  buttons to adjust the value to the desired factor. Record current factor.
- Press  and release until **SET** (set) appears on the LCD. After one second, the pipette will exit the calibration program.
- If the volume now displayed is the dispensing volume, then “Lock In” the volume. If the volume has changed, use the  and  buttons or  to adjust the volume to the dispensing volume, and “Lock In”.
- Verify volume delivery at the new factor, or begin to use pipette.


Note: To preserve battery life the Ovation QS pipette has a time-out feature. If the calibration sequence is not completed within approximately two minutes, the display will return to the last volume that was “Locked In”. The user should re-initiate the calibration sequence and complete the entries.

Note: To interrupt the calibration sequence, depress the plunger to the first stop and release. No changes will be saved. To “Lock In” the dispensing volume, press the plunger and hold until three “beeps” are heard.

Troubleshooting

For complete information and instructions, go to Support, then select Ovation Quick-Set at www.vistalab.com

Display is blank, r2.03 . . . r2.xx is displayed, or  is displayed

- Battery is low or depleted. Replace with a fresh one.
- Battery end clips are not making good contact. Remove battery, gently pinch end clips. Reinsert battery.
- Press  to reset and return to routine operations.

Pipette is not aspirating properly and/or plunger action is sluggish

- Nozzle and/or extender may be loose. Firmly tighten.
- Liquid may have gotten into the nozzle/filter. Replace the nozzle and/or filter
- Plunger seals may be worn. Replace seals in plunger assembly.
- Liquid may be in lower plunger cylinder assembly. See Seal Kit Instructions. Clean plunger with alcohol. Lubricate with appropriate lubricant (included in seal kits).


When setting volume, “alert” sound is heard and “----” is flashing on LCD

- Press and hold plunger at first stop until 3 “beeps” are heard.



Volume on the LCD is blinking

- Press and hold plunger until 3 “beeps” are heard.

Pre-set stored volume not available

-  button was not pressed and held until a “chirp” was heard.
- See “To Select Volume”.

The pipette has been dropped

- “Home” the plunger by simultaneously pressing and holding the  and  buttons until **CAL** appears on the LCD.
- Depress the plunger to the first stop, and release it.

Tips are not ejecting

- Non-Ovation or non-MLA tips are being used
- If using manufacturer tips, internal ejector spring may be broken. Return pipette to factory for service.


Hook is loose

- Tighten screw located in front of the adjustable hook using 2.4mm (or 0.1”) flat blade screwdriver. Do not overtighten as plastic could be damaged.

Ejector sleeve will not stay on

- Pipette has been dropped and black socket under ejector sleeve has broken. Return pipette to factory for service.



Liquid in lower body of the pipette

- Carefully remove the base. If any liquid or residue is seen, remove the battery, wipe the circuit board with 70% alcohol. Allow to air dry. Replace the battery.
- Press the  button to reset and return to routine operations.

E-03 is displayed on LCD

- Calibration factor is outside acceptable limits.
- Reset internal cal factor to 1.000
- Repeat calibration sequence.

E-01, E-13 or E-14 is displayed on LCD

- “Home” the plunger by simultaneously pressing and holding the  and  buttons until **CAL** appears on the LCD.
- Depress the plunger to the first stop, and release it.
- Lock in volume and return to routine operations.

If any errors continue, or if additional troubleshooting assistance is required, call 914-244-6226, then press 2 for Technical Service.