

Tips and Accessories

		0.2-2 μ L 1.0-10 μ L 2.0-20 μ L	10-100 μ L 20-200 μ L	100-1000 μ L
	TIP SIZE:	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
Accessories	VistaRak, Filtered, Sterile, non-pyrogenic, certified RNase/DNase free, 192 tips/rack, 5 racks † 2 μ L tip for Ovation 0.2-2 μ L	4060-1332 ¹ 4060-1333 [†]	4060-2332	4060-3332
	VistaRak, Filtered, Sterile, non-pyrogenic, Low Retention, certified RNase/DNase free 192 tips/rack, 5 racks † 2 μ L tip for Ovation 0.2-2 μ L	4070-1332LR ¹ 4070-1333LR [†]	4070-2332LR	4070-3332LR
	Nozzle, 5/box (0.2-2 μ L) or 10/box † for Ovation 0.2-20 μ L only	9057-1013 [†] 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 0.2-2 μ L)	9057-1012		9057-3012
	Ejector Sleeve	9057-1011 ²		9057-3011
	Calibration Labels, 5/box		9057-4002	
	Ovation Pipette Stand		9057-4003	
	Calibration Key		9070-4007	

Notes: 1. Not for use with Ovation M .02-2 μ L. 2. Ejector sleeve not available for Ovation M .02-2 μ L.

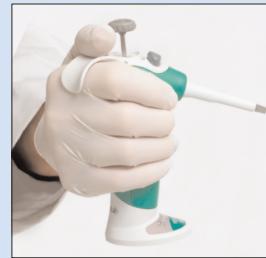
4060-1002 Example Catalog number



The Better Way to Pipette

Quick Reference Guide for Mechanical Volume-Adjust Pipettes

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



To Pick Up Ovation

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



To Set Volume

1. Rotate the plunger to display the desired volume.
(clockwise to decrease, counter clockwise to increase).
- Do not rotate beyond the pipette's volume limits!
This will damage the pipette and void its warranty.

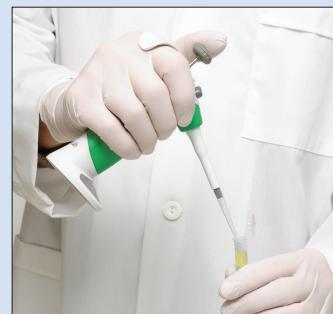


The Ovation M pipette is a variable volume, air displacement, 2 stroke pipette intended to aspirate and dispense precise fluid volumes.



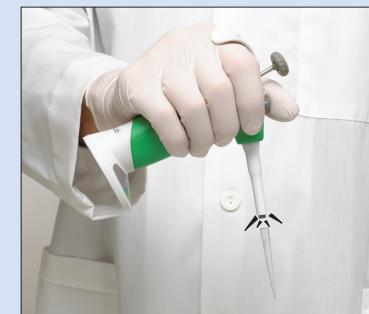
To Install a Tip

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. Depress plunger to the first stop.
2. Place tip in sample and release plunger, wait one second, then remove tip from sample.
3. Depress plunger to first stop, wait one second and then 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 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 aspirating from 15mL or 50mL centrifuge or other tall tubes, an optional Nozzle Extender accessory is available which lengthens the pipette's overall reach.
- If aspirating from PCR or microtubes, the Ovation M has a built-in cap opener. Simply insert the cap into the pipette's base.



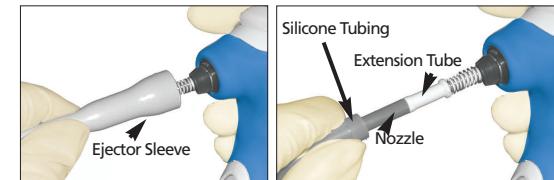
Calibrating the Ovation M

The Ovation M pipette can be easily in-lab calibrated. To make a calibration adjustment, insert the calibration key into the calibration ring at the base of the plunger rod, and turn clockwise to decrease volume delivery or counterclockwise to increase. Each 1/4 turn equals 1.7% of the pipette's volume range. (example: on 100 μ L model, each 1/4 turn adjusts the volume 1.7 μ L)



Replacing a Nozzle

If the Ovation M is not aspirating and dispensing properly, it could be caused by (a) poor fitting alternate source tip, (b) nozzle is loose and needs to be tightened by turning it clockwise, or (c) a nozzle or nozzle filter needs to be replaced as liquid has been aspirated into it.



NOTE: Wear gloves when doing this procedure.

1. Remove ejector sleeve by pulling it away from the pipette body to expose the nozzle assembly.
2. Place silicone tubing provided on nozzle, and unscrew nozzle in a counter-clockwise direction. Gently wipe the exposed end of the extension tube with a slightly dampened, lint-free tissue, then dry it off.
3. Place silicone tubing on a new nozzle, and screw the nozzle onto the extension tube in a clockwise direction. Firmly tighten and remove silicone tubing.
4. Slide the ejector sleeve over the nozzle assembly.
5. Push the sleeve firmly into place while using a slight rocking or twisting motion.

Autoclaving the Ovation M

Set the Ovation M to its highest volume setting and place it in the autoclave at 121°C for 15 minutes, followed by a 15 minute drying cycle. Allow the pipette to cool to room temperature for at least 2 hours before use. Calibration should be verified after each autoclave treatment.

Note: The Ovation M nozzle should be replaced after 3 autoclave cycles as it will lose its liquid blocking capability.

Taking Care of the Ovation M

The Ovation 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 VOLUME DISPLAY WINDOW 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.

Ovation M Pipette Specifications

Model	Volume Range (μ L)	Dispensing Increments (μ L)	Accuracy	Precision
Ovation M 2 μ L (1070-0002)	0.2 – 2	.002	$\pm 1.5\%$ at 2 μ L $\pm 2.7\%$ at 1 μ L $\pm 12\%$ at 0.2 μ L	0.9% at 2 μ L 1.8% at 1 μ L 7.6% at 0.2 μ L
Ovation M 10 μ L (1070-0010)	1 – 10	.01	$\pm 1\%$ at 10 μ L $\pm 1.5\%$ at 5 μ L $\pm 2.5\%$ at 1 μ L	0.4% at 10 μ L 0.6% at 5 μ L 1.2% at 1 μ L
Ovation M 20 μ L (1070-0020)	2 – 20	.02	$\pm 1\%$ at 20 μ L $\pm 1.5\%$ at 10 μ L $\pm 7\%$ at 2 μ L	0.3% at 20 μ L 0.5% at 10 μ L 2% at 2 μ L
Ovation M 100 μ L (1070-0100)	10 – 100	.1	$\pm 0.8\%$ at 100 μ L $\pm 0.8\%$ at 50 μ L $\pm 3.5\%$ at 10 μ L	0.15% at 100 μ L 0.24% at 50 μ L 1% at 10 μ L
Ovation M 200 μ L (1070-0200)	20 – 200	.2	$\pm 0.8\%$ at 200 μ L $\pm 0.8\%$ at 100 μ L $\pm 2.5\%$ at 20 μ L	0.15% at 200 μ L 0.25% at 100 μ L 1% at 20 μ L
Ovation M 1000 μ L (1070-1000)	100 – 1000	1.0	$\pm 0.8\%$ at 1000 μ L $\pm 0.8\%$ at 500 μ L $\pm 3\%$ at 100 μ L	0.15% at 1000 μ L 0.2% at 500 μ L 0.6% at 100 μ L

Note: Performance data is based on the use of Ovation tips from VistaLab Technologies. If using tips from another manufacturer, the above performance claims may not be achieved. Specifications subject to change. See www.vistalab.com for current information.

Operating Temperature & Environment:

Temperature Range: 15° – 35°C

Relative Humidity Range, non-condensing: 10-85%

Atmospheric Pressure: 70-106 kPa



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.

Warranty

VistaLab Technologies, Inc. warrants the Ovation M 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.

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:

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