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Find the *Mettler Toledo / Rainin L12-200 Pipet-Lite* at our website: *Click HERE*

RAININ

Pipetting 360°

Pipet-Lite®

Multichannel Magnetic Assist Pipette

8-, 12-, 16- (2x8),
24-channel models



METTLER TOLEDO

Introduction

Pipet-Lite multichannel pipettes are based on the Pipet-Lite single-channel pipette which uses the patented LTS LiteTouch Tip Ejection System.

Four versions of the Multichannel Pipet-Lite are available: 8-channel (L8), 12-channel (L12), 16-channel in two rows (L2X8) and 24-channel in two rows (L24).

The 8- and 12-channel models are available in 6 volume ranges: 0.5 -10 µL, 2-20 µL, 5-50 µL, 20-200 µL, 20-300 µL, and 100-1200 µL. The 2x8- channel and 24-channel models are available in two volume ranges, 2-20 µL and 10-100 µL.

This is an addendum to the Pipet-Lite manual (9920-237) which describes pipetting operation.

Packing List

In addition to this manual, the pipette box should contain:

Pipet-Lite instruction manual 9920-237, Rainin Test Report, Performance Assurance Brochure, sample tips, and labels.

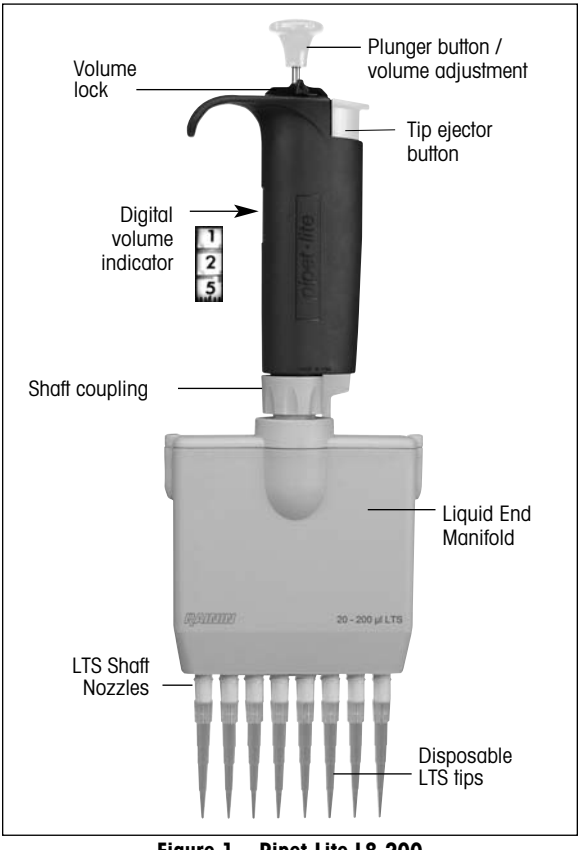


Figure 1 Pipet-Lite L8-200

Tip Selection

Pipet-Lite multichannel pipettes must use RAININ LTS tips.

L8-10, L8-20, L12-10, L12-20, L2X8-20 & L24-20: 20µL LTS tips
L8-50, L12-50, L8-200, L12-200, L2X8-100, L24-100: 250 µL LTS tips
L8-300 and L12-300: 300 µL LTS tips
L8-1200 and L12-1200: 1200 µL LTS tips (recommended)
OR 1000 µL LTS tips – picks up 1200 µL (except aerosol-resistant)

LTS tips have a cylindrical cross-section with a well-defined seal ring, thin wall, and positive stop. They seal properly on the shaft and cannot be jammed or forced too far onto the shaft nozzles.

Mounting LTS Tips: 8- and 12-channel

Mounting racked LTS tips onto L8 and L12 pipettes is simple. First align the shaft nozzles into the row of tips, holding the pipette at a slight angle. (Figure 2.1). Position the pipette upright and press the nozzles into the tips until the "positive stop" is reached. (Figure 2.2). The tips are now mounted with proper sealing.

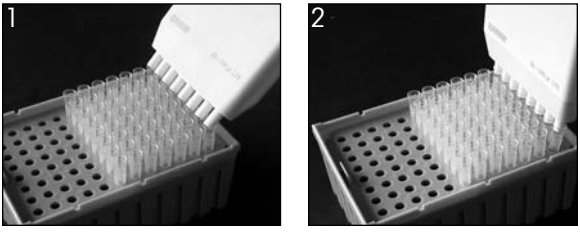


FIGURE 2: MOUNTING RACKED LTS TIPS, L-8 AND L12

You do not need to hand-tighten, use heavy pressure, or "rock" the nozzles onto the tips to obtain a good seal.

Mounting LTS Tips: 2x8- & 24-channel

1. Align the first row of shaft nozzles with the first row of tips, holding the pipette almost vertically. Move the pipette as shown by the arrow to align the second row of tips. You may need to "rock" or rotate the pipette to get all tips aligned.

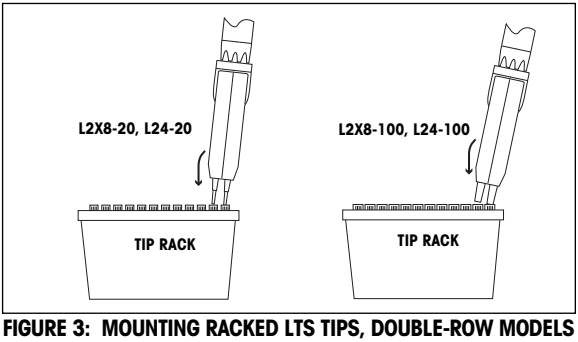


FIGURE 3: MOUNTING RACKED LTS TIPS, DOUBLE-ROW MODELS

2. When you are satisfied that all tip nozzles are aligned with the tips, lightly press both rows of shaft nozzles into the tips until you feel the "positive stops" in the tips.
3. While maintaining slight pressure, "rock" the pipette back and forth and in a circular direction to ensure both rows of tips are attached. Do not press very hard; a little practice will help you find the optimal pressure and amount of rocking.

The tips are now mounted with proper sealing.

Tip Immersion Depth

The recommended depth for tip insertion into the sample for each Pipet-Lite multichannel model is shown in the table below.

Pipet-Lite Model	Immersion Depth
L8-10, L12-10	2 - 3 mm
L8-20, L12-20, L2X8-20, L24-20	2 - 3 mm
L8-200, L12-200, L2X8-100, L24-100	3 - 6 mm
L8-300, L12-300	3 - 6 mm
L8-1200, L12-1200	6 - 10 mm

Tip immersion depth is important. If exceeded, the volume measured may be inaccurate, possibly out of specification.

Tip angle: Operate the pipette within 20 degrees of vertical.

Tip Ejection

Simply press on the tip ejector button. All tips are ejected cleanly with minimal pressure on the thumb.

Positioning the Liquid End Manifold

The liquid end manifold can be rotated to any angle for convenience. You do not need to loosen the coupling nut.

Note for 2x8- and 24-channel models

On the 2x8-channel and 24-channel models, both rows of tips need to be touched-off. At the end of the dispense stroke, hold the plunger button down long enough to touch-off both rows of tips, then release thumb pressure and allow the plunger to return.

You can also touch-off both rows at the same time. Touch-off all tips at the bottoms of the wells.

Practice both methods to develop your own technique.

Specifications

These manufacturer's specifications should be used as guidelines when establishing your own performance specification.

Model	Volume µL	Increment µL	Accuracy %	Accuracy µL (±)	Precision %	Precision µL (≤)
L8-10, L12-10 (range 0.5-10 µL)	1	0.02	2.5	0.025	1.2	0.012
	5		1.5	0.075	0.6	0.03
	10		1.0	0.10	0.4	0.04
L8-20, L12-20 L2X8-20, L24-20 (range 2-20 µL)	2	0.02	7.5	0.15	2.0	0.04
	10		1.5	0.15	0.5	0.05
	20		1.0	0.20	0.3	0.06
50 µL	5	0.05	3.5	0.18	1.5	0.075
	25		1.2	0.30	0.4	0.1
	50		0.8	0.40	0.2	0.1
L2X8-100, L24-100 (range 10-100 µL)	10	0.2	3.5	0.35	1.0	0.1
	50		0.8	0.4	0.24	0.12
	100		0.8	0.8	0.15	0.15
L8-200, L12-200 (range 20-200 µL)	20	0.2	2.5	0.5	1.0	0.2
	100		0.8	0.8	0.25	0.25
	200		0.8	1.6	0.15	0.3
L8-300, L12-300 (range 20-300 µL)	30	0.5	2.5	0.75	1.0	0.3
	150		0.8	1.2	0.25	0.375
	300		0.8	2.4	0.15	0.45
L8-1200 (range 100-1200 µL)	100	2.0	3.6	3.6	0.60	0.60
	600		0.8	4.8	0.20	1.20
	1200		0.8	9.6	0.15	1.80

(Specifications subject to change without notice)

Service

If you experience any problems with your multichannel Pipet-Lite, contact RAININ Technical Support at 800-543-4030.

E-mail: tech.support@rainin.com

Rainin, Pipet-Lite, and LTS are registered trademarks, and Lite-Touch and Hang-Ups are trademarks of Rainin Instrument, LLC. Pipet-Lite: U.S. Patent Nos. 5,614,153; 5,700,959; 5,849,248. Tip/Shaft System: For use under U.S. Patent Nos. 6,168,761 B1; 6,171,553 B1; 6,568,288 B2; 6,737,023 B1; 6,745,636 B2; 6,967,004 B2.

L2X8-100



L24-20



L8-1200



L12-1200



Ordering Information

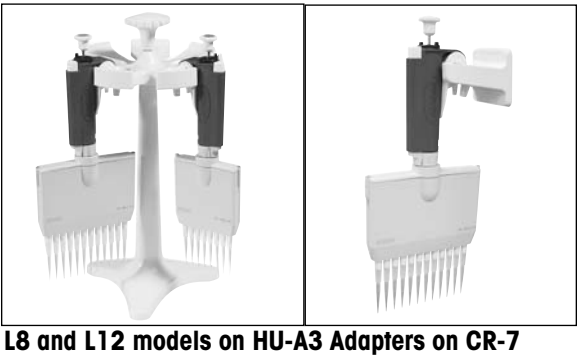
Cat. No	Description
8-Channel	
L8-10	8-channel, 0.5 µL to 10 µL
L8-20	8-channel, 2 µL to 20 µL
L8-50	8-channel, 5 µL to 50 µL
L8-200	8-channel, 20 µL to 200 µL
L8-300	8-channel, 20 µL to 300 µL
L8-1200	8-channel, 100 µL to 1200 µL
12-Channel	
L12-10	12-channel, 0.5 µL to10 µL
L12-20	12-channel, 2 µL to 20 µL
L12-50	12-channel, 5 µL to 50 µL
L12-200	12-channel, 20 µL to 200 µL
L12-300	12-channel, 20 µL to 300 µL
L12-1200	12-channel, 100 µL to 1200 µL
2x8 (16-Channel)	
L2X8-20	16-channel in 2x8 configuration, 2 µL to 20 µL
L2X8-100	16-channel in 2x8 configuration, 10 µL to 100 µL
24-Channel	
L24-20	24-channel in 2x12 configuration, 2 µL to 20 µL
L24-100	24-channel in 2x12 configuration, 10 µL to 100 µL

LTS multichannel pipettes require LTS tips.

Accessories

Cat. No	Description
HU-M3	Package of 3 Magnetic Hang-Ups. Includes adhesive disk for attachment to a non-ferrous vertical surface
HU-S3	Clamp with 3 Hang-Ups attached, for attachment to a shelf
CR-7	Free-standing Pipette Carousel, for holding up to 7 pipettes
HU-A3	Adapter for Multichannel pipettes for HU-M3, HU-S3 & CR-7

To order pipettes or accessories:
800-472-4646 • pipets@rainin.com • www.rainin.com.



L8 and L12 models on HU-A3 Adapters on CR-7 Carousel (L) and HU-M3 Hang-Up (R)

Limited Warranty

See the Limited Warranty and Limitations of Liability Statement. Please complete and return the Warranty Registration Card on receipt of your pipette.

RAININ pipettes are calibrated with RAININ tips. To assure excellent reproducibility and performance, use only RAININ tips as recommended in this manual. Specified performance is guaranteed only when RAININ tips are used.

Contacting RAININ

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Direct Order Line:
T: 800-472-4646 F: 510-564-1617 pipets@rainin.com
RAININ website: www.rainin.com

From outside North America: T: +1-510-564-1600
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