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Find the *Mettler Toledo / Rainin E12-200 EDP3* at our website: *Click HERE*

edp 3™

Multichannel Electronic Pipette

with LTS™ LiteTouch™ Tip Ejection

The Ultimate Ergonomic Multichannel Pipette



Models:
E8-10
E8-20
E8-200
E12-10
E12-20
E12-200

RAININ®

ISO 9001 CERTIFIED

EDP3 Electronic Multichannel Pipette with LTS

EDP3 E8 and E12 series are multichannel pipettes based on the EDP3 single-channel pipette with LTS LiteTouch Tip Ejection System*. The LTS system reduces tip ejection forces to a fraction of those in conventional multichannel pipettes.

Two versions of the multichannel EDP3 are available: 8-channel (E8) and 12-channel (E12). Both are available in 3 volume ranges: 0.5-10, 2-20 and 20-200 µL.

This document is an addendum to the EDP3 manual (9920-235) which describes unpacking, set-up and operating procedures in general and is also supplied with the pipette.

*Patents Pending

Speed Setting

The maximum speed setting for E8 and E12 multichannel pipettes is **9** for 10 µL & 20 µL models and **8** for all others.

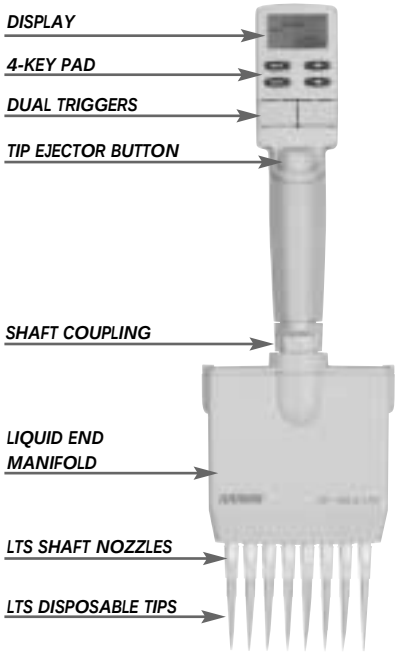


Figure 1 E8-200 Pipette

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Tip Selection

Rainin LTS tips must be used with EDP3 multichannel pipettes. E8-10, E8-20, E12-10 and E12-20 use 20µL LTS tips, E8-200 and E12-200 use 250 µL LTS tips.

Mounting LTS Tips

Mounting racked LTS tips onto Model E8 and E12 pipettes is simple. First align the shaft nozzles into the row of tips, holding the pipette at a slight angle. See Figure 2.1. Then position the pipette upright and press the nozzles into the tips until the "positive stop" is reached. See Figure 2.2. The tips are now mounted with proper sealing.

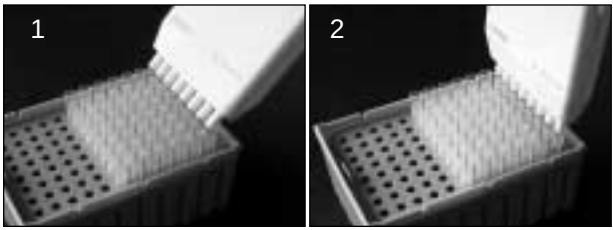


Figure 2: Mounting racked LTS Tips

You do not need to use heavy pressure or "rock" the nozzles onto the tips to obtain a good seal. And you never have to hand-tighten LTS tips.

Each LTS tip end is cylindrical with a well-defined seal ring, thin wall, and positive stop. The tip seals properly on the shaft, first time, every time. LTS tips cannot be jammed or forced too far onto the shaft nozzles.

Ejecting tips is also easy: press on the tip ejector button. The tips are ejected with minimal pressure on the thumb.

Tip Immersion Depth

The recommended depth for tip insertion into the sample for each EDP3 multichannel model is shown in the table below.

EDP3 Model	Volume Range	Immersion Depth
E8-10, E12-10	1 - 10 µL	2 - 3 mm
E8-20, E12-20	2 - 20 µL	2 - 3 mm
E8-200, E12-200	20 - 200 µL	2 - 4 mm

Tip immersion depth is important. If these depths are exceeded, the volume measured may be inaccurate, possibly out of specification. Tip angle is also important. Hold the pipette vertically, or within 20 degrees of vertical.

Positioning the Liquid End Manifold

The liquid end manifold can be rotated to any angle for convenience.

1. Slightly loosen the shaft coupling.
2. Rotate the manifold to the new position.
3. Retighten the shaft coupling.

Do not overtighten the shaft coupling nut.

Autopace

AUTOPACE (AP) allows multiple aliquots of the same volume to be dispensed repeatedly at equal time intervals after the dispense trigger is pressed once. For example, on the 200 µL volume pipette, all channels can dispense ten 20µL aliquots at 2-second intervals with one touch of the pipette trigger.

Enter MULTIDISPENSE mode by pressing and releasing the MODE button until MULTI is displayed. If the MODE button does not switch between the modes when it is tapped, press the RESET button, then tap the MODE button again.

To activate AUTOPACE, hold the MODE button for 2 seconds while MULTI is displayed. Either AP or SPEED will appear in the lower portion of the display window.

If SPEED is displayed, tap the MODE button once to reveal AP. The arrow keys turn AUTOPACE on and off, and control the dispense rate, from 0.5 to 25 seconds. When AUTOPACE is activated, MULTI will flash in the display.

Exit AUTOPACE by pressing the RESET button.

Sample is aspirated into the tip(s) after a trigger is pressed while AUTOPACE is active. Pressing either trigger a second time will begin dispensing samples. Pressing either trigger anytime during AUTOPACE pauses sample delivery until a trigger is pressed again.

Pressing RESET (or double-clicking the trigger) after all aliquots are dispensed ejects all remaining sample and resets the pipette for the next cycle. If RESET is pressed while dispensing in AUTOPACE, the remainder of the sample in the tips will be dispensed immediately and the pipette cycle reset.

Service

If you experience any problems with your multichannel EDP3 pipette contact Rainin Technical Service at 800-543-4030.

For service in Europe call +31 (0) 71 54122668

For service in Japan call 03-5689-8311.

Specifications (subject to change without notice)

Model	Volume µL	Increment µL	Accuracy (mean error) Rel % (±)	Accuracy (mean error) Abs µL (±)	Precision (repeatability) Rel CV % (≤)	Precision (repeatability) Abs SD µL (≤)
E8-10, E12-10	1	0.05	2.5	0.025	1.2	0.012
	5		1.5	0.075	0.6	0.03
	10		1.0	0.1	0.4	0.04
E8-20, E12-20	2	0.1	7.5	0.15	2.0	0.04
	5		3.0	0.15	0.9	0.045
	10		1.5	0.15	0.5	0.05
	20		1.0	0.2	0.3	0.06
E8-200, E12-200	20	1	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

Ordering Information

Cat. No	Description
E8-10	8-channel, 0.5 to 10 µL
E8-20	8-channel, 2 µL to 20 µL
E8-200	8-channel, 20 µL to 200 µL
E12-10	12-channel, 0.5 to 10 µL
E12-20	12-channel, 2 µL to 20 µL
E12-200	12-channel, 20 µL to 200 µL

LTS multichannel pipettes require LTS tips.

One of the charging devices below must be used to charge EDP3 battery.

Cat. No	Description
E3-WPS	Wall Power Supply. Recharges EDP3 in about an hour. Allows the pipette to be used while being charged.
E3-RCS	Rapid Charge Stand. Recharge up to three EDP3 pipettes. Includes E3-WPS. Bench or wall mounting.

To order pipettes or accessories, call 800-472-4646.

Limited Warranty

See the enclosed 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

Technical Information:
Phone: 800-543-4030
Fax: 781-938-1152
E-mail: tech.service@rainin.com

Pipette Service:
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Fax: 781-935-7631
E-mail: service@rainin.com

Direct Order Line:
Phone: 800-472-4646
Fax: 781-938-1152
E-mail: pipets@rainin.com

Web: www.rainin.com

From outside the U.S.:
Massachusetts Office: 001-781-935-3050
California Office: 001-510-654-9142

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