Pipette Performance Data Sheet



Eppendorf Xplorer®

People who give 100 % every day deserve the best tools and the best laboratory equipment. The Eppendorf Xplorer electronic pipettes are designed to aspirate and dispense liquids accurately and precisely, while eliminating many of the potential error risks associated with manual pipetting. With Eppendorf Xplorer, your work achieves a new level of simplicity, precision and reproducibility.

Features

> Electronic air-cushion pipette reaching new levels of simplicity, precision and reproducibility
> Intuitive handling via multi-function rocker with »up is up« (aspiration) & »down is down« (dispensing) logic; practical selection dial to access all pipetting modes
> Self-explanatory color display without cluttered submenus, ergonomic viewing angle for optimal readability in every position
> Spring-loaded tip cone in all Xplorer models up to 1,000 µL reduces tip attachment and ejection forces
> Powerful rechargeable battery for up to 8 hours use; work can continue while charging via power socket
> Pre-programmed and individual adjustment to external conditions (e.g. geographic height, liquids with high density, elongated tips)
> Autoclavable lower parts for easy decontamination
> ACT®-labeled single-channel pipettes and epT.I.P.S.® pipette tips help you make an informed choice when it comes to sustainability

Applications

> Automated pipetting of liquids (**Pip**)
> Dispensing (**Dis**) for manual filling of plates, gels, and reaction vessels
> Automatic dispensing (**Ads**) for automated filling of plates, gels, and reaction vessels
> Pipetting and mixing (**P/M**) for automated mixing of samples
> Manual pipetting (**Man**) for volume determination

Technical Specifications

Intended use	Electronic micropipettes for general laboratory use. Intended for dispensing liquids from 0.5 µL to 10 mL in combination with matching pipette tips.
Pipetting type	Air-cushion pipette
Channel options	1, 8, 12
Volume range	0.5 µL – 10,000 µL
Volume increments	0.01 µL – 10 µL
Operation	Electronic
Pipetting modes	5 (see Applications)
Aspiration & dispensing speed	8 levels
Display languages	Chinese, Dutch, English, French, German, Italian, Japanese, Portuguese, Spanish
Autoclavable	All lower parts (121 °C, 1 bar, 20 min)
UV resistance	Yes (254 nm)
Consumables	epT.I.P.S.® pipette tips
Open system (3rd party consumables)	Yes
Conforms with	ISO 8655
Temporary adjustment	> Pre-programmed adjustments for liquid types, altitude or elongated pipette tips > Individual adjustments in 1, 2 or 3 points
Power supply	Power supply/mains with plug adapters included (100-240 V ± 10 %, 50-60 Hz)
Battery type	Rechargeable lithium polymer (3.7 V)
Charging ports	> Connector socket for plug > Charging contacts for Carousel or Stand
Interface	Micro USB (for software updates)
Storage accessories (sold separately)	> Charger Carousel for 6 pipettes > Charger Stand > Pipette Holder for Carousel, Stand or wall mounting
Storage & transport conditions	> Temperature: -5 °C – 45 °C > Humidity: 10 % – 95 %
Operating conditions	> Temperature: 5 °C – 40 °C > Humidity: 10 % – 95 %
Others	> Designed according to the Eppendorf PhysioCare Concept®: lightweight, well-balanced, convenient handle > Easy maintenance, spare parts, accessories and calibration services available from Eppendorf

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Technical specifications are subject to change. Errors and omissions excepted.

Dimensions

Length	> 278 mm (1-channel, 1,000 µL) > 275 mm (8-channel, 300 µL) > 272 mm (16-channel, 100 µL)
Weight	> 158 g (1-channel, 1,000 µL) > 236 g (8-channel, 300 µL) > 242 g (16-channel, 100 µL)
Packaging (W x H x D)	32 cm x 16 cm x 12 cm (for all variants)
Shipping weight	650 g – 950 g (depending on model)

Measurement Deviations

Single-channel pipettes

Eppendorf Xplorer®, single-channel

Volume range	Color code	Volume	Systematic error[1]		Random error[1]	
0.5 – 10 µL	medium gray (for epT.I.P.S.® 20 µL)	0.5 µL	±6.0 %	±0.03 µL	±3.0 %	±0.015 µL
		1 µL	±2.5 %	±0.025 µL	±1.8 %	±0.018 µL
		5 µL	±1.5 %	±0.075 µL	±0.8 %	±0.04 µL
		10 µL	±1.0 %	±0.1 µL	±0.4 %	±0.04 µL
1 – 20 µL	light gray (for epT.I.P.S.® 20 µL)	2 µL	±5.0 %	±0.1 µL	±1.5 %	±0.03 µL
		10 µL	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL
		20 µL	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL
5 – 100 µL	yellow (for epT.I.P.S.® 200 µL)	5 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL
		10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL
		50 µL	±1.0 %	±0.5 µL	±0.3 %	±0.15 µL
		100 µL	±0.8 %	±0.8 µL	±0.2 %	±0.2 µL
10 – 200 µL		20 µL	±2.5 %	±0.5 µL	±0.7 %	±0.14 µL
		100 µL	±1.0 %	±1.0 µL	±0.3 %	±0.3 µL
		200 µL	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL
15 – 300 µL	orange (for epT.I.P.S.® 300 µL)	15 µL	±5.0 %	±0.75 µL	±1.4 %	±0.21 µL
		30 µL	±2.5 %	±0.75 µL	±0.7 %	±0.21 µL
		150 µL	±1.0 %	±1.5 µL	±0.3 %	±0.45 µL
		300 µL	±0.6 %	±1.8 µL	±0.2 %	±0.6 µL
50 – 1,000 µL	blue (for epT.I.P.S.® 1000 µL)	50 µL	±6.0 %	±3 µL	±1.0 %	±0.5 µL
		100 µL	±3.0 %	±3 µL	±0.6 %	±0.6 µL
		500 µL	±1.0 %	±5 µL	±0.2 %	±1 µL
		1,000 µL	±0.6 %	±6 µL	±0.2 %	±2 µL
0.1 – 2.5 mL	red (for epT.I.P.S.® 2.5 mL)	125 µL	± 5 %	± 6.25 µL	± 1.4 %	± 1.75 µL
		250 µL	±4.8 %	±12 µL	±1.2 %	±3.0 µL
		1,250 µL	±0.8 %	±10 µL	±0.2 %	±2.5 µL
		2,500 µL	±0.6 %	±15 µL	±0.2 %	±5.0 µL
0.2 – 5 mL	violet (for epT.I.P.S.® 5 mL)	250 µL	±4.8 %	±12 µL	±1.2 %	±3 µL
		500 µL	±3.0 %	±15 µL	±0.6 %	±3 µL
		2,500 µL	±1.2 %	±30 µL	±0.25 %	±6.25 µL
		5,000 µL	±0.6 %	±30 µL	±0.15 %	±7.5 µL
0.5 – 10 mL	turquoise (for epT.I.P.S.® 10 mL)	500 µL	±6.0 %	±30 µL	±1.2 %	±6 µL
		1,000 µL	±3.0 %	±30 µL	±0.6 %	±6 µL
		5,000 µL	±0.8 %	±40 µL	±0.2 %	±10 µL
		10,000 µL	±0.6 %	±60 µL	±0.15 %	±15 µL

[1] The error data, according to EN ISO 8655, only apply if original Eppendorf tips are used. Technical specifications are subject to change. Errors and omissions excepted.

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Measurement Deviations

8- & 12-channel pipettes, for 96 well plates

Eppendorf Xplorer®, 8- or 12-channel

Volume range	Color code	Volume	Systematic error[1]		Random error[1]	
0.5 – 10 µL	medium gray (for epT.I.P.S.® 20 µL)	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL
		1 µL	±5.0 %	±0.05 µL	±3.0 %	±0.03 µL
		5 µL	±3.0 %	±0.15 µL	±1.5 %	±0.075 µL
		10 µL	±2.0 %	±0.2 µL	±0.8 %	±0.08 µL
5 – 100 µL	yellow (for epT.I.P.S.® 200 µL)	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL
		10 µL	±2.0 %	±0.2 µL	±2.0 %	±0.2 µL
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL
		100 µL	±0.8 %	±0.8 µL	±0.25 %	±0.25 µL
15 – 300 µL	orange (for epT.I.P.S.® 300 µL)	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL
		30 µL	±2.5 %	±0.75 µL	±1.0 %	±0.3 µL
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL
		300 µL	±0.6 %	±1.8 µL	±0.25 %	±0.75 µL
50 – 1,200 µL	green (for epT.I.P.S.® 1,250 µL)	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL
		120 µL	±6.0 %	±7.2 µL	±0.9 %	±1.08 µL
		600 µL	±2.7 %	±16.2 µL	±0.4 %	±2.4 µL
		1,200 µL	±1.2 %	±14.4 µL	±0.3 %	±3.6 µL

[1] The error data, according to EN ISO 8655, only apply if original Eppendorf tips are used. Technical specifications are subject to change. Errors and omissions excepted.

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Your local distributor: www.eppendorf.com/contact
Eppendorf SE · 22339 Hamburg · Germany
E-mail: eppendorf@eppendorf.com

www.eppendorf.com

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