# Pipette Performance Data Sheet




## Multipette® E3/E3x

Dispense easily and precisely, regardless of liquid properties with the Multipette E3/E3x electronic multi-dispenser pipettes. Fill plates or long series of tubes without strain thanks to the light weight and easy operation of this repeater pipette. Used with Combitips® advanced dispenser tips or ViscoTip® for highly viscous liquids.

## Features

> Electronic hand dispenser with several functions e.g. for dilution series, titration, automatic dispensing into microplates and vessel series
> Automatic Combitips® advanced recognition: Eliminates time-consuming volume calculations, avoiding incorrect dispensing volumes
> Accurate, contamination-free dispensing of viscous solutions (e.g., glycerol), high vapor pressure liquids (e.g., ethanol), and hazardous samples via positive displacement principle
> Motor-driven operation: Reduces the human error to a minimum and minimizes risks of repetitive strain injuries (RSI)
> Speed adjustment: Program aspiration and dispensing speed to meet your throughput, precision and accuracy goals while also preventing splashing
> Ergonomic one-button tip ejector: For one-handed operation and contact-free Combitips® advanced pipette tip ejection
> Increase your efficiency when filling plates and series of tubes: Fill the tip once and dispense up to 100 times without a refill
> 1 µL to 50 mL dispensing range providing up to 5,000 dispensing volumes with increments as low as 100 nanoliters
> Eco-conscious production: ACT®-labeled to help you make an informed choice when it comes to sustainability

## Applications

> Dispensing **(Dis)** or Automatic dispensing **(Ads)** for repetitive aliquoting of set volumes to fill tubes/plates
> Pipetting **(Pip)** for refilling of liquids
> Sequential dispensing **(Seq)** to create dilution series[1)]
> Aspiration **(Asp)** for pooling of supernatants from different vessels[1)]
> Aspirate and dispensing **(A/D)** for pooling and volume determination with subsequent dispensing[1)]
> Titration **(Ttr)** for controlled dropwise dispensing and concentration determination[1)]

## Technical Specifications

| | |
|---|---|
| Intended use | Handheld electronic dispenser for general laboratory use. Intended for dispensing liquids in the volume range of 1 µL – 50 mL in combination with a matching Combitips® advanced or ViscoTip® dispenser tip. |
| Pipetting type | Positive displacement dispenser |
| Channel options | 1 |
| Volume range | 1 µL – 50,000 µL (depending on tip) |
| Volume increments | 0.1 µL – 50 µL (depending on tip) |
| Operation | Electronic |
| Pipetting modes | > 3 with Multipette E3<br>> 7 with Multipette E3x |
| Aspiration & dispensing speed | 8 levels |
| Display languages | Chinese, Dutch, English, French, German, Italian, Japanese, Portuguese, Spanish |
| Autoclavable | No |
| UV resistance | Yes (254 nm) |
| Consumables | > Combitips® advanced in 9 different volume sizes and 4 purity grades<br>> ViscoTip® for highly viscous liquids |
| Conforms with | ISO 8655 |
| Power supply | Power supply/mains with plug adapters included (100-240 V ± 10 %, 50-60 Hz) |
| Battery type | Rechargeable lithium ion (3.7 V) |
| Charging ports | > Connector socket for plug<br>> Charging contacts for Carousel or Stand |
| Interface | Micro USB (for software updates) |
| Storage accessories | > Charger Stand (incl. in bundle variants)<br>> Charger Carousel for 6 pipettes (with optional charger shell, sold separately)<br>> Pipette Holder for Carousel, Stand or wall mounting (sold separately, without charging feature) |
| Operating conditions | > Temperature: 5 °C - 40 °C<br>> Humidity: 10 % - 95 %<br>> Atmospheric pressure: 795 hPa - 1060 h |
| Others | > Designed according to the Eppendorf PhysioCare Concept® for optimal ergonomics<br>> Color display with wide viewing angle; all parameters visible at one glance<br>> Motion sensor: switches off the E3/E3x when not in use<br>> Pipette software updates available via www.eppendorf.com/software-downloads |

## Dimensions

| | |
|---|---|
| Length | 221 mm |
| Weight | 190 g |
| Packaging (W x H x D) | 31.4 cm x 10.9 cm x 15.7 cm |
| Shipping weight | 388 g |

[1)] Feature only available with Multipette E3x
Technical specifications are subject to change. Errors and omissions excepted.

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## Measurement Deviations

**Multipette® E3/E3x with Combitips® advanced**

| Tip size | Color code | Min. volume | Max. volume | Increment | Volume | Systematic error[1)] | Random error[1)] |
|---|---|---|---|---|---|---|---|
| 0.1 mL | □ white | 1 µL | 100 µL | 0.1 µL | 1 µL | ±11.0 % | ±14.0 % |
| | | | | | 10 µL | ±1.6 % | ±2.5 % |
| | | | | | 50 µL | ±1.0 % | ±1.5 % |
| | | | | | 100 µL | ±1.0 % | ±0.5 % |
| 0.2 mL | ■ light blue | 2 µL | 200 µL | 0.2 µL | 2 µL | ±4.0 % | ±5.5 % |
| | | | | | 20 µL | ±1.3 % | ±1.5 % |
| | | | | | 100 µL | ±1.0 % | ±1.0 % |
| | | | | | 200 µL | ±1.0 % | ±0.5 % |
| 0.5 mL | ■ violet | 5 µL | 500 µL | 0.5 µL | 5 µL | ±3.0 % | ±6.0 % |
| | | | | | 50 µL | ±0.9 % | ±0.8 % |
| | | | | | 250 µL | ±0.9 % | ±0.5 % |
| | | | | | 500 µL | ±0.9 % | ±0.3 % |
| 1 mL | ■ yellow | 10 µL | 10 mL | 1 µL | 10 µL | ±3.5 % | ±7.0 % |
| | | | | | 100 µL | ±0.9 % | ±0.55 % |
| | | | | | 500 µL | ±0.6 % | ±0.30 % |
| | | | | | 1.000 µL | ±0.6 % | ±0.20 % |
| 2.5 mL | ■ green | 25 µL | 2.5 mL | 2.5 µL | 25 µL | ±2.0 % | ±3.5 % |
| | | | | | 250 µL | ±0.8 % | ±0.45 % |
| | | | | | 1.250 µL | ±0.5 % | ±0.30 % |
| | | | | | 2.500 µL | ±0.5 % | ±0.15 % |
| 5 mL | ■ blue | 50 µL | 5 mL | 5 µL | 50 µL | ±2.5 % | ±6.0 % |
| | | | | | 500 µL | ±0.8 % | ±0.35 % |
| | | | | | 2.500 µL | ±0.50 % | ±0.25 % |
| | | | | | 5.000 µL | ±0.50 % | ±0.15 % |
| 10 mL | ■ orange | 100 µL | 10 mL | 10 µL | 100 µL | ±1.5 % | ±3.5 % |
| | | | | | 1.000 µL | ±0.5 % | ±0.25 % |
| | | | | | 5.000 µL | ±0.4 % | ±0.25 % |
| | | | | | 10.000 µL | ±0.4 % | ±0.15 % |
| 25 mL | ■ red | 250 µL | 25 mL | 25 µL | 250 µL | ±2.5 % | ±3.0 % |
| | | | | | 2.500 µL | ±0.3 % | ±0.35 % |
| | | | | | 12.500 µL | ±0.3 % | ±0.25 % |
| | | | | | 25.000 µL | ±0.3 % | ±0.15 % |
| 50 mL | ■ light gray | 500 µL | 50 mL | 50 µL | 500 µL | ±2.0 % | ±3.0 % |
| | | | | | 5.000 µL | ±0.3 % | ±0.50 % |
| | | | | | 25.000 µL | ±0.3 % | ±0.20 % |
| | | | | | 50.000 µL | ±0.3 % | ±0.15 % |

[1)] The data for systematic and random errors, according to EN ISO 8655, only apply if original Combitips advanced are used.

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