



# Generation E

Repeater® E3 and E3x: Multi-dispensing without compromise on accuracy and precision



> Repeater E3 and Repeater E3x are the experts for long series pipetting and non-aqueous liquids.  
[www.eppendorf.com/e3](http://www.eppendorf.com/e3)

# »There are many reasons for a Repeater®. You are the most important one!«

In 1979, 17 years after introducing the first piston-stroke pipette, Eppendorf revolutionized the Life Science Market again – always having customer needs in mind.

The first positive displacement pipette with multi-dispensing feature, the Repeater, made serial pipetting without repeated liquid aspiration possible. Since then several generations of mechanical and electronic Repeater multi-dispensers have facilitated your daily laboratory work. The latest model in the Repeater family are our electronic Repeater E3 and E3x dispensers.

Read how a Repeater makes your everyday routines faster and easier.



## Save time

The Repeater pipettes make long pipetting series faster and easier. The aspirated liquid can be dispensed up to 100 times without a refill. It is an ideal and smart solution for filling plates or large series of tubes (e.g., when working with nucleic acid purification kits).



## Relax

With the lightweight Repeater E3 the risk of repetitive strain injuries can be reduced in various ways: It minimizes operation forces through an electronic motor drive, and buttons are positioned to accommodate natural hand movements. A large display reduces eyes strain when reviewing settings.



## Work precisely and safely

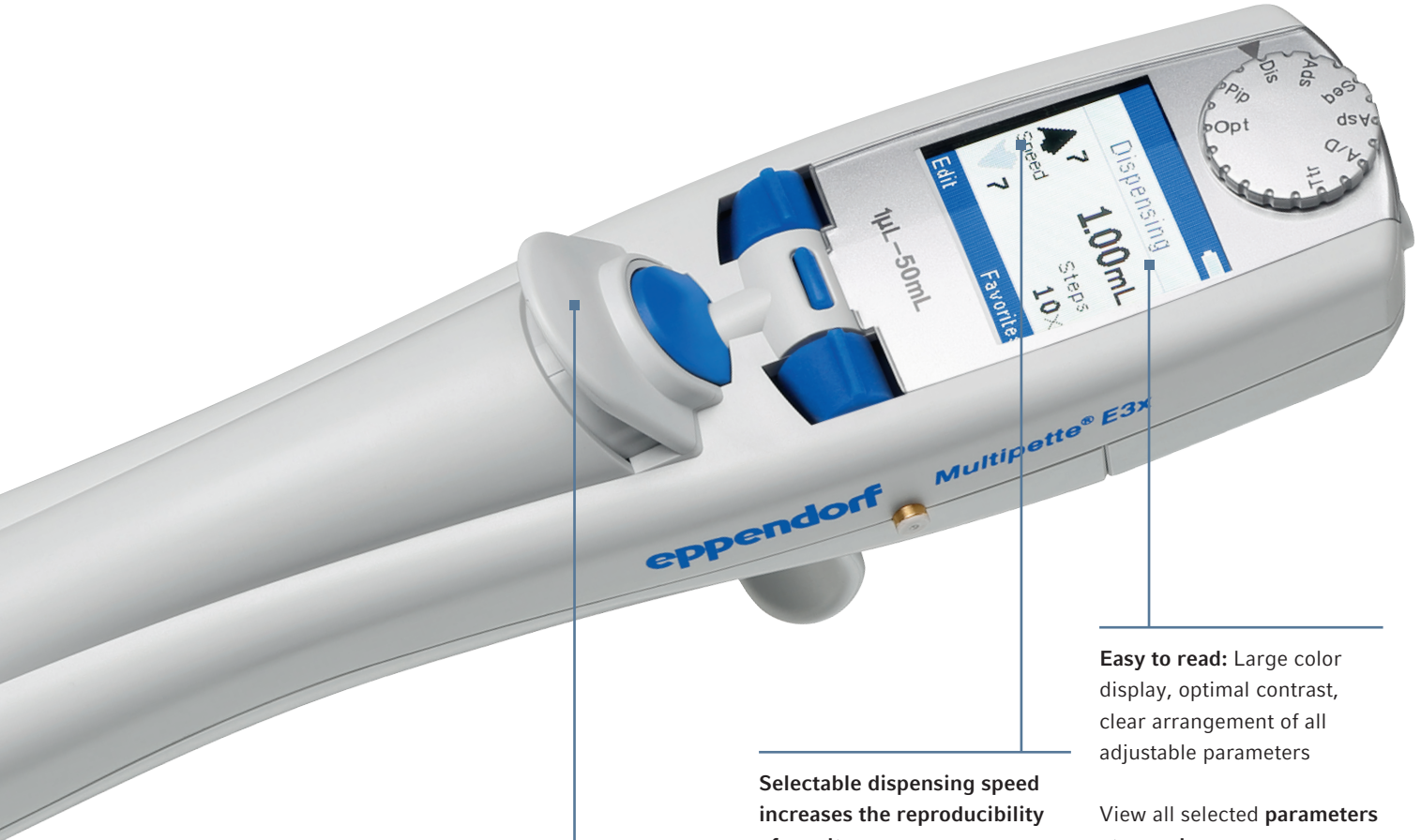
The optimized system of Repeater and Combipips® advanced allows automatic tip recognition for ease of use. The syringe-style Combipip maximizes pipetting accuracy and precision. It is not affected by liquid properties, most manual pipetting errors, and provides protection from aerosol contamination.

# The One Pipette Missing in Your Pipette Set.

Save time and money.  
Work ergonomically and stress-free.  
Get reliable results.



In 2023, Repeater E3/E3x pipettes and Combitips advanced tips have been awarded the ACT® label. ACT certificates reflect the sustainability rating of our products, offering laboratories a transparent view of our eco-friendly practices. You can download the certificate at [www.eppendorf.com/e3](http://www.eppendorf.com/e3).



**One button tip ejection** enables one handed operation

**Selectable dispensing speed increases the reproducibility of results**

- > Eight different speed levels allow the optimum speed for each application
- > Reduced minimum speed increases the limit of viscosity of dispensable liquids
- > Increased maximum speed saves time without splashing

**Easy to read:** Large color display, optimal contrast, clear arrangement of all adjustable parameters

View all selected **parameters at one glance**; proven intuitive software navigation – updates available via [www.eppendorf.com/software-downloads](http://www.eppendorf.com/software-downloads)

**Display** in 9 different languages

**Selection wheel with seven operation modes with Repeater E3x**

- > *Dispensing (Dis):* Serial pipetting for up to 100 steps in a row.
- > *Automatic dispensing (Ads):* Volume is dispensed at fixed intervals between 0.1 s and 10 s.
- > *Pipetting (Pip):* Precise liquid transfer of up to 50 mL.
- > *Sequential dispensing (Seq):* Individual volume setting for up to 16 dispensing steps.
- > *Multi-aspirate (Asp):* Consecutive aspiration of liquid of the same volume into one Combitip.
- > *Aspirate and dispensing (A/D):* Uptake and volume calculation of an unknown volume with immediate dispense in desired partial volumes.
- > *Titrate (Ttr):* Sensitive dosing of liquids while volume is displayed.
- > *Store up to 225 different parameter settings* to save programming time for routine applications.
- > *Sleep Mode* saves battery when not in use, and wakes up when Repeater is moved; Long life lithium-ion battery allows filling of more than hundred 96-well plates in a row.

# Positive Displacement Principle

With the Repeater/Combitips system volumes are dispensed using the positive displacement principle.

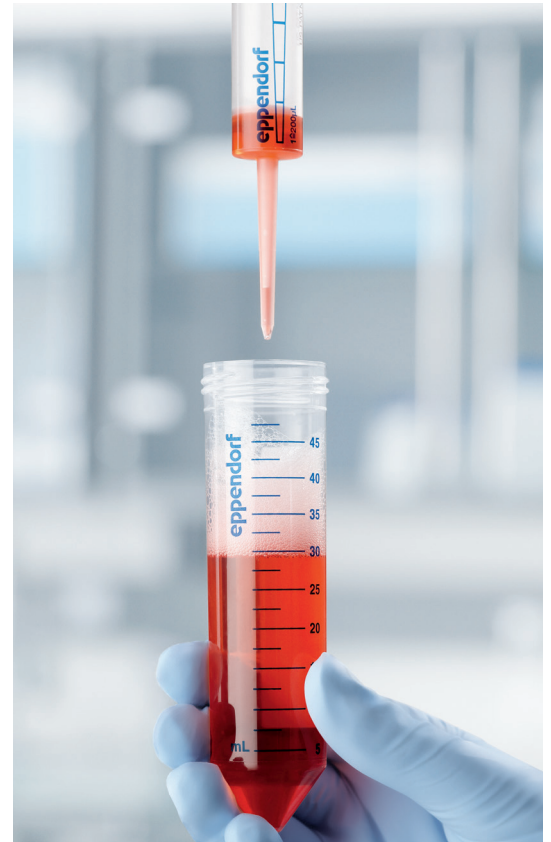
The liquid is directly dispensed without an air cushion, ensuring the correct volume is always dispensed regardless of the density, viscosity and volatility of the liquid.

In addition to serial dispensing, the Repeater/Combitips system is the perfect instrument to go beyond the limitations of a standard pipette.

## Your benefits:

- > Allows high-precision dispensing regardless of the physical properties of the liquid\*
- > Prevents aerosol contamination with hermetically sealed piston for secure dispensing
- > Provides protection from radioactive and toxic substances
- > Enables quick dispensing of long series with precise, repeated dispensing of identical volumes

\*Viscous liquids with high resistance to flow e.g. glycerol, liquids with a different density than water, liquids with high vapor pressure e.g. acetone, liquids containing detergent lowering the surface tension, foaming liquids and liquids with different temperatures.



# User Quotes

Participants of an independent usability study conducted at the Institute of Human Factors Engineering, Technical University Darmstadt, Germany, showed positive responses.

» *The display always shows exactly what to do.* «

**Anonymous Tester**

» *User-friendly operation and clear menu navigation – complex settings made easy.* «

**M. Reinhard**

Dipl.-Biol., Darmstadt, Germany

» *Aspirating liquid and dispensing in individual steps was easy. The settings were also easily made.* «

**C. Bender**

Biology student, Darmstadt, Germany

# Repeater® E3 and Repeater® E3x at a Glance

| Feature                                       | Repeater E3 | Repeater E3x |
|---|-------------|--------------|
| High speed dispensing with motorized piston   | ■           | ■            |
| Automatic Combitips® advanced tip recognition | ■           | ■            |
| One button tip ejection                       | ■           | ■            |
| Volume range from 1 µL to 50 mL               | ■           | ■            |
| Rechargeable lithium-ion battery              | ■           | ■            |
| Illuminated display                           | ■           | ■            |
| Automatic dispensing (Ads)                    | ■           | ■            |
| Pipetting (Pip)                               | ■           | ■            |
| Dispensing (Dis)                              | ■           | ■            |
| Aspirate (pipetting of supernatants) (Asp)    |             | ■            |
| Titrate (Ttr)                                 |             | ■            |
| Sequential dispensing (Seq)                   |             | ■            |
| Combined aspiration and dispensing mode (A/D) |             | ■            |

## Technical specifications (information refers to the Repeater E3/Repeater E3x/Combitips® advanced system)

| Combitips advanced | Min. dispensing volume | Increment/step size | Max. dispensing volume | Volume    | Systematic error* <sup>1</sup> | Random error* <sup>1</sup> |
|--------------------|------------------------|---------------------|------------------------|-----------|--------------------------------|----------------------------|
| 0.1 mL             | 1 µL                   | 0.1 µL              | 100 µL                 | 10 µL     | ±1.6%                          | ±2.5 %                     |
|                    |                        |                     |                        | 50 µL     | ±1.0%                          | ±1.5 %                     |
|                    |                        |                     |                        | 100 µL    | ±1.0%                          | ±0.5 %                     |
| 0.2 mL             | 2 µL                   | 0.2 µL              | 200 µL                 | 20 µL     | ±1.3%                          | ±1.5 %                     |
|                    |                        |                     |                        | 100 µL    | ±1.0%                          | ±1.0 %                     |
|                    |                        |                     |                        | 200 µL    | ±1.0%                          | ±0.5 %                     |
| 0.5 mL             | 5 µL                   | 0.5 µL              | 500 µL                 | 50 µL     | ±0.9%                          | ±0.8 %                     |
|                    |                        |                     |                        | 250 µL    | ±0.9%                          | ±0.5 %                     |
|                    |                        |                     |                        | 500 µL    | ±0.9%                          | ±0.3 %                     |
| 1 mL               | 10 µL                  | 1 µL                | 1 mL                   | 100 µL    | ±0.9%                          | ±0.55 %                    |
|                    |                        |                     |                        | 500 µL    | ±0.6%                          | ±0.3 %                     |
|                    |                        |                     |                        | 1,000 µL  | ±0.6%                          | ±0.2 %                     |
| 2.5 mL             | 25 µL                  | 2.5 µL              | 2,5 mL                 | 250 µL    | ±0.8%                          | ±0.45 %                    |
|                    |                        |                     |                        | 1,250 µL  | ±0.5%                          | ±0.3 %                     |
|                    |                        |                     |                        | 2,500 µL  | ±0.5%                          | ±0.15 %                    |
| 5 mL               | 50 µL                  | 5 µL                | 5 mL                   | 500 µL    | ±0.8%                          | ±0.35 %                    |
|                    |                        |                     |                        | 2,500 µL  | ±0.5%                          | ±0.25 %                    |
|                    |                        |                     |                        | 5,000 µL  | ±0.5%                          | ±0.15 %                    |
| 10 mL              | 100 µL                 | 10 µL               | 10 mL                  | 1,000 µL  | ±0.5%                          | ±0.25 %                    |
|                    |                        |                     |                        | 5,000 µL  | ±0.4%                          | ±0.25 %                    |
|                    |                        |                     |                        | 10,000 µL | ±0.4%                          | ±0.15 %                    |
| 25 mL              | 250 µL                 | 25 µL               | 25 mL                  | 2,500 µL  | ±0.3%                          | ±0.35 %                    |
|                    |                        |                     |                        | 12,500 µL | ±0.3%                          | ±0.25 %                    |
|                    |                        |                     |                        | 25,000 µL | ±0.3%                          | ±0.15 %                    |
| 50 mL              | 500 µL                 | 50 µL               | 50 mL                  | 5,000 µL  | ±0.3%                          | ±0.5 %                     |
|                    |                        |                     |                        | 25,000 µL | ±0.3%                          | ±0.2 %                     |
|                    |                        |                     |                        | 50,000 µL | ±0.3%                          | ±0.15 %                    |

\*<sup>1</sup>The data for imprecision (random error) and inaccuracy (systematic error) according to EN ISO 8655 only apply when using original Eppendorf Combitips advanced, speed 5, dispensing mode.

## Repeater® E3/E3x ordering information

| Description  | Order number |
|--|--------------|
| Repeater® E3 incl. charging cable and Combitips® advanced assortment pack (1 tip of each size)   | 4987000118   |
| Repeater® E3 bundle incl. Charger Stand 2, charging cable and Combitips® advanced assortment pack  | 4987000398   |
| Repeater® E3x incl. charging cable and Combitips® advanced assortment pack (1 tip of each size)  | 4987000134   |
| Repeater® E3x bundle incl. Charger Stand 2, charging cable and Combitips® advanced assortment pack                                       | 4987000410   |
| Charger Stand 2 for Repeater® stream/Repeater® Xstream/Repeater® E3 & E3x, for one device  | 3116000040   |
| Pipette Holder 2 for one Repeater® E3/E3x, for Pipette Carousel 2 or wall mounting, sticky tape included, without charging functionality | 3116000139   |
| Lithium ion rechargeable battery for Repeater® E3/E3x  | 022462407    |

## Ordering information

| Combitips® advanced  | Color code   | Eppendorf Quality<br>100 pcs.<br>(4 bags × 25 pcs.) | PCR clean<br>100 pcs.<br>(4 recl. bags × 25 pcs.) | sterile<br>100 pcs.,<br>ind. wrapped | Biopur®<br>100 pcs., ind.<br>blister-wrapped | Forensic DNA Grade<br>100 pcs., ind.<br>blister-wrapped |
|--|--------------|---|---|--------------------------------------|--|---|
| 0.1 mL   | □ white      | 0030 089 405  | 0030 089 766                                      | 0030 089 510                         | 0030 089 618                                 |   |
| 0.2 mL   | □ light blue | 0030 089 413  | 0030 089 774                                      | 0030 089 529                         | 0030 089 626                                 |   |
| 0.5 mL   | □ violet     | 0030 089 421  | 0030 089 782                                      | 0030 089 537                         | 0030 089 634                                 |   |
| 1.0 mL   | □ yellow     | 0030 089 430  | 0030 089 790                                      | 0030 089 545                         | 0030 089 642                                 | 0030 089 855  |
| 2.5 mL   | □ green      | 0030 089 448  | 0030 089 804                                      | 0030 089 553                         | 0030 089 650                                 | 0030 089 863  |
| 5.0 mL   | □ blue       | 0030 089 456  | 0030 089 812                                      | 0030 089 561                         | 0030 089 669                                 | 0030 089 871  |
| 10 mL  | □ orange     | 0030 089 464  | 0030 089 820                                      | 0030 089 570                         | 0030 089 677                                 |   |
| 25 mL <sup>1)</sup>  | □ red        | 0030 089 472  | 0030 089 839                                      | 0030 089 588                         | 0030 089 685                                 |   |
| 50 mL <sup>1)</sup>  | □ light gray | 0030 089 480  | 0030 089 847                                      | 0030 089 596                         | 0030 089 693                                 |   |
| <b>ViscoTip®</b>   |              |   |   |                                      |  |   |
| 10 mL  | □ orange     | 0030 089 502  |   |                                      |  |   |
| <b>Accessories</b>   |              |   |   |                                      |  |   |
| <b>Adapter advanced</b>  |              |   |   |                                      |  |   |
| 25 mL, autoclavable, 1 piece   | □ red        | 0030 089 715  |   |                                      |  |   |
| 25 mL, autoclavable, 7 pcs., individually wrapped  | □ red        |   |   |                                      | 0030 089 731                                 |   |
| 50 mL, autoclavable, 1 piece   | □ light gray | 0030 089 723  |   |                                      |  |   |
| 50 mL, autoclavable, 7 pcs., individually wrapped  | □ light gray |   |   |                                      | 0030 089 740                                 |   |
| <b>Combitips® advanced Box 2.0</b> , empty box for 8 Combitips advanced (0.1 - 10 mL), Eppendorf Quality.  |              | 0030 089 952  |   |                                      |  |   |
| <b>Combitips® advanced Assortment Pack</b> , contains one Combitips® advanced sample of each size and Adapter advanced 25 and 50 mL, Eppendorf Quality |              | 0030 089 936  |   |                                      |  |   |

<sup>1)</sup> 4 boxes of 25 pcs. each. Each box containing one adapter.

## Care for Your Pipettes

Regular maintenance and calibration ensure that your pipettes continue to generate reproducible results. With our pipette calibration service offering, we provide validated and reliable services according to ISO 8655 in ISO 17025 accredited Service Centers to help you maintain premium performance.



> More details: [www.eppendorf.com/pipette-service](http://www.eppendorf.com/pipette-service)

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