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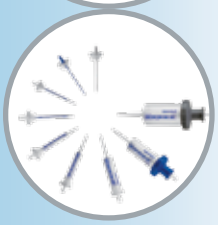
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Find the *Eppendorf Repeater Pro* at our website: ***Click HERE***

Fast
Efficient
Ergonomic







reddot design award
winner 2006



NEW!
Repeater Xstream
Repeater stream

Dispensing with style

Manual and electronic Repeater® hand dispensers

eppendorf
North America

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The beauty of a sophisticated system

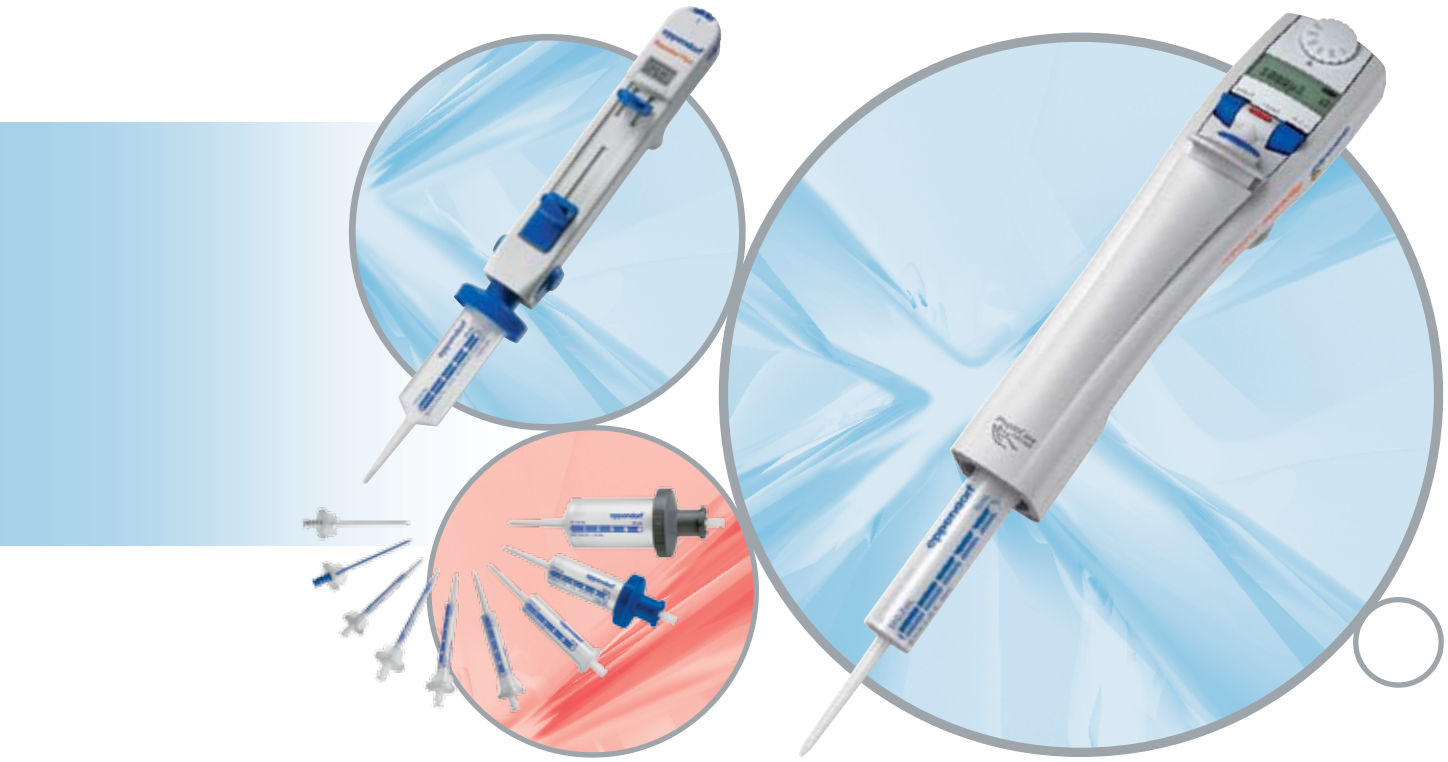
Electronic and manual Eppendorf Repeater® dispensers and Combitips Plus®

The Instruments
The manual Repeater Plus and the electronic Repeater stream/Xstream hand dispensers are ideal for process acceleration and saving time on long-series pipetting: their increased volume selection provides outstanding flexibility and exceptional support for research as well as routine tasks; and their smooth handling reduces the fatigue associated with repetitive work.

The Consumables
Combitips Plus tips[1] easily attach to the Repeaters; their built-in sensor recognizes the size of the tip, and the volume appears automatically in the display—eliminating time-consuming volume calculations and incorrect dispensing volumes. The nine sizes of Combitips Plus allow a wider dispensing range up to 112 different volumes—and longer series dispensing (e. g., 100 x 250 µl) without stopping for a refill. Always contamination-free!

A wide variety of solutions
Combitips Plus tips function according to the positive displacement principle, which ensures that the correct volume is dispensed regardless of the density or viscosity of the liquid. The positive displacement system provides safer dispensing of solutions that contain radioactive and/or toxic substances as well as solutions that have a high vapor pressure because no aerosols are formed. Combitips are easily replaced—eject with a push of a button—and disposed after use, always contamination-free.

The Conclusion
The Repeater/Combitips system is a sophisticated solution for repetitive liquid handling applications. These contamination-free manual and electronic systems are designed with your productivity and safety in mind—especially when working with hazardous, volatile or viscous liquids.



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A quantum leap in serial dispensing

Repeater® stream and Repeater Xstream electronic hand dispensers

Electronic Repeater stream and Xstream combine easy handling with a broad range of features. When used with Combitips Plus® tips, the dispenser/tip forms an unbeatable system that are the quintessential lab tools for all applications: Repeater stream is suitable for all standard pipetting and dispensing applications; for added versatility, the Repeater Xstream can also perform titrations, sequential dispensing and aspiration of supernatants.

Applications

- Electronic dispensing with programmable memory functions
- Contamination-free dispensing using the positive displacement principle
- Ideal for viscous solutions (e.g., glycerol, oil) or liquids with high vapor pressure (e.g., acetone, ethanol)
- Dispensing in long series





Repeater stream and Repeater Xstream at a glance

Feature	Repeater stream	Repeater Xstream
Positive displacement principle	●	●
Rapid, ergonomic dispensing with motorized piston	●	●
Automatic Combitips Plus tip recognition	●	●
Two-year warranty	●	●
IVD conformity	●	●
One-button tip ejector	●	●
Volume range from 1 µl to 50 ml	●	●
Li-ion battery	●	●
Automatic dispensing	●	●
Pipetting	●	●
Dispensing	●	●
Aspiration (pipetting of supernatants)		●
Titration		●
Sequential dispensing		●

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Reliability in your hand

Repeater Plus® manual hand dispenser

Repeater Plus² is the ideal precision instrument for reducing the time associated with manual, long-series pipetting. Its increased volume selection provides outstanding flexibility and all-around support for research and routine tasks.

The electronic display ensures error-free dispensing, and the rounded, grooved grip make dispensing easier and ergonomic—with less stress on the hand and thumb muscles.

Applications

- Dispensing volumes in long series
- Contamination-free dispensing using the positive displacement principle
- Ideal for viscous solutions (e.g., glycerol, oil) or liquids with high vapor pressure (e.g., acetone, ethanol)

Product features

- Easy to read: automatic Combitips® recognition with electronic volume display
- Easy volume setting
- Extremely flexible with 112 different volumes from 1 µl to 10 ml
- Up to 100 dispensings per filling for easy processing of long series
- 20 different dispensing volumes per each size of Combitips
- Versatile, even for “odd” volumes (e.g., 1 µl, 3 µl or 17 µl)
- Safe, due to easy, contact-free Combitips attachment and ejection
- IvD conformity
- Two-year warranty

IVD conform

- The rounded, grooved grip of the Repeater Plus means easier dispensing with less stress on the hand and thumb muscles



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A pure pleasure to work with

Combitips Plus® tips and accessories for Repeater dispensers

Tip purity ensured
In addition to standard purity, Combitips Plus tips are also available in Sterile and Eppendorf Biopur. Eppendorf Biopur, signifying outstanding biological purity, guarantees that these tips are sterile as well as pyrogen-, RNase-, DNA- and ATP-free. They meet the most stringent demands of the medical, pharmaceutical and food industries, PCR applications and molecular biology/cell technology labs. This purity is ensured through an automated manufacturing process, which safeguards the product against any contamination with biological substances. Individual lot certificates are available at **www.eppendorf.com.**

Accessories
As a safeguard against potentional contamination, our carousel stand does not hold the pipette at the bottom—like most other stands do. Eppendorf Repeater®, Repeater Plus and Maxipettor® pipettes easily fit on the carousel with an adapter. To store the electronic Repeater stream/Xstream, a charging stand is available (sold separately).

Is your bench space at a premium? We also offer the practical wall-mounted pipette bracket— it keeps your Repeater plus off the bench but still within reach.

Product features of Combitips Plus

- Ideal system component for all Repeater/Repeater Plus (manual), Repeater stream/Xstream (electronic) and as EDOS (automatic dispensing) systems
- Higher throughput with up to 100 dispensings per filling
- Reliable results ensured by positive displacement system
- Available in Eppendorf Quality, Sterile and Eppendorf Biopur purity levels
- Available in 9 different sizes from 0.1 ml to 50 ml
- Certified trace metal release
- Contamination-free use with Repeaters
- IvD conformity







- Wall-mounted pipette bracket





- Repeater stream/Xstream charging stand



- Carousel stand

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Precision and versatility for professionals

Application examples for the Repeater® Plus

Environmental analysis / Chemical laboratory

- **Application:** Complete breakdown of a soil sample, followed by ICP determination of the main and trace elements K, Mg, Ca, Mn, Si, Fe, P, S, Pb, Cu, Zn, Cd
- **Use:** Addition of 2 ml each of hydrofluoric acid (40%) and nitric acid (70%) to a microwave standard vessel HP 40; subsequent microwave treatment and addition of 2% nitric acid
- **Dispenser:** Repeater Plus with a 50 ml Combitips Plus tip
- **Location:** Schleswig Holstein State Laboratory

Diagnostics / Clinical laboratory

- **Application:** Quantitative determination of Protein S (free and total) by means of ELISA (Protein S plays a role in the blood coagulation process)
- **Use:** Addition of 100 µl of stop solution to a microtest plate; this produces a change in color
- **Dispenser:** Repeater Plus with 5 ml Combitips Plus tip
- **Location:** Laboratory at Dr. v. Froreich and Partners

Industrial research / Immunology laboratory

- **Application:** Phenylalanine screening assay (detection of L-phenylalanine in the blood spots of newborn babies)
- **Use:** Addition of 100 µl of stained trichloroacetic acid in connection with the further development of the assay
- **Dispenser:** Repeater Plus with 5 ml Combitips Plus tip
- **Location:** Schleswig Holstein State Laboratory

Repeater References

These well-known accounts are Repeater system customers:

- F. Hoffmann-La Roche Ltd.
- Bayer HealthCare AG
- Boehringer Ingelheim Pharma GmbH & Co. KG
- ALTANA Pharma AG
- ALTANA Chemie AG
- Lilly Deutschland GmbH
- AstraZeneca GmbH



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Dispensing acids, alkalis and organic solvents with the Repeater® Plus

A number of acids, alkalis and organic solvents with a variety of viscosities and densities have been tested in our laboratories with the Repeater Combitip system. The results appear in the chart below.

Other industrial applications
The Repeater Plus is also used in many other areas not directly associated with natural sciences. Its excellent ability to dispense highly viscous liquids make it ideal for use in the automotive, petroleum and jewelry industries, to name just a few. Varnishes, oils, even adhesives, can be dispensed with a great degree of accuracy and precision.

Liquid	Conc.	100 µl [d]	100 µl [cv]	1,000 µl [d]	1,000 µl [cv]	Vapor pressure at 20 °C [hPa]	Density at 20 °C [g/cm³]	Viscosity at 20 °C [mPa s]
Double-distilled water	100%	±0.6	≤0.6	±0.5	≤0.25	23	1	1
Acetone	100%	0.4	0.5	–0.2	0.3	240	0.79	0.32
Acetonitrile	100%	–0.4	1.1	–0.6	0.2	97	0.79	0.31 [25 °C]
Formid acid	98%	–1.7	0.3	–1.9	0.2	42	1.22	1.8
Ammonium hydroxide	32%	1.7	0.5	2.4	0.8	837	0.89	1.3 [26%]
Aniline	100%	–1.8	0.8	–1.3	0.3	0,5	1.03	4.4
Dimethyl formamide (DMF)	100%	0.4	0.6	0.3	0.1	3.77	0.94	0.82
Dimethyl sulfoxide (DMSO)	100%	0.1	0.7	0.1	0.2	0.56	1.1	2.14
Ethyl acetate	100%	–0.4	1.0	–0.4	0.2	97	0.9	0.44
Ethanol	98%	–0.1	0.6	0.1	0.1	58	0.78	1.20
Formaldehyde	37%	0.8	0.3	0.8	0.1	1.3	1.08	2.5 [25 °C]
Isopropanol	99%	–0.8	1.4	–0.3	0.2	43	0.78	2.2
Perchloric acid	60%	–2.0	0.5	–1.9	0.1	9	1.53	–
Phosphoric acid	85%	–1.7	0.9	–1.9	0.3	2	1.71	47
Nitric acid	65%	–1.3	0.3	–1.9	0.1	9.4/9	1.41	1.49 [40%]
Hydrochloric acid	37%	–2.1	0.5	–1.7	0.3	213	1.19	2.0
Sulfuric acid	95–97%	–2.6	0.6	–4.4	0.3	0.0016	1.84	26.9
Tetrachloromethane	100%	–0.5	1.0	–0.2	0.2	122	1.59	0.96
Tetrahydrofuran (THF)	100%	–2.7	0.7	–0.3	0.2	173	0.88	0.48
Toluene (methyl benzene)	100%	–0.7	0.9	–1.1	0.1	29	0.87	0.6
Trichloroethylene	100%	–0.4	1.9	–0.1	0.3	77	1.46	0.55
Trichloromethane (chloroform)	100%	–0.1	0.4	0.3	0.2	213	1.47	0.56
Triethylamine	100%	–0.4	0.4	0.1	0.1	69	0.72	0.36
Mean value		1.1	0.7	1.0	0.2			

Random [d] and systematic [cv] measurement deviations in percent when dispensing selected liquids
The experiments were performed using a Repeater Plus with liquids at room temperature; the results of 10 dispensing operations with a 5 ml Combitips Plus® tip are shown (in chart above).

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Combitips Plus® tips for Repeater Plus and Repeater stream/Xstream

Technical specifications

Combitips Plus	Volume min./max.	Increment/ min. step size	Max. dispensing volume	Volume	Inaccuracy*	Imprecision*
for Repeater Plus						
0.1 ml	1 µl 20 µl	1 µl	20 µl	2 µl 20 µl	±1.6% ±1.0%	≤3.0% ≤2.0%
0.2 ml	2 µl 40 µl	2 µl	40 µl	4 µl 40 µl	±1.3% ±0.8%	≤2.0% ≤1.5%
0.5 ml	5 µl 100 µl	5 µl	100 µl	10 µl 100 µl	±0.9% ±0.8%	≤1.5% ≤0.6%
1 ml	10 µl 200 µl	10 µl	200 µl	20 µl 200 µl	±0.9% ±0.6%	≤0.9% ≤0.4%
2.5 ml	25 µl 500 µl	25 µl	500 µl	50 µl 500 µl	±0.8% ±0.5%	≤0.8% ≤0.3%
5 ml	50 µl 1,000 µl	50 µl	1,000 µl	100 µl 1,000 µl	±0.6% ±0.5%	≤0.6% ≤0.25%
10 ml	100 µl 2,000 µl	100 µl	2,000 µl	200 µl 2,000 µl	±0.5% ±0.5%	≤0.6% ≤0.25%
25 ml	250 µl 5,000 µl	250 µl	5,000 µl	500 µl 5,000 µl	±0.4% ±0.3%	≤0.6% ≤0.25%
50 ml	500 µl 10,000 µl	500 µl	10,000 µl	1,000 µl 10,000 µl	±0.3% ±0.3%	≤0.5% ≤0.25%
for Repeater stream and Xstream						
0.1 ml	1 µl 100 µl	0.1 µl	0.1 ml	10 µl 100 µl	±1.6% ±1.0%	≤2.5% ≤0.5%
0.2 ml	2 µl 200 µl	0.2 µl	0.2 ml	20 µl 200 µl	±1.3% ±1.0%	≤1.5% ≤0.5%
0.5 ml	5 µl 500 µl	0.5 µl	0.5 ml	50 µl 500 µl	±0.9% ±0.9%	≤0.8% ≤0.3%
1 ml	10 µl 1 ml	1 µl	1 ml	100 µl 1,000 µl	±0.9% ±0.6%	≤0.55% ≤0.2%
2.5 ml	25 µl 2.5 ml	2.5 µl	2.5 ml	250 µl 2,500 µl	±0.8% ±0.5%	≤0.45% ≤0.15%
5 ml	50 µl 5 ml	5 µl	5 ml	500 µl 5,000 µl	±0.8% ±0.5%	≤0.35% ≤0.15%
10 ml	100 µl 10 ml	10 µl	10 ml	1,000 µl 10,000 µl	±0.5% ±0.4%	≤0.25% ≤0.15%
25 ml	250 µl 25 ml	25 µl	25 ml	2,500 µl 25,000 µl	±0.3% ±0.3%	≤0.25% ≤0.15%
50 ml	500 µl 50 ml	50 µl	50 ml	5,000 µl 50,000 µl	±0.3% ±0.3%	≤0.25% ≤0.15%

*The data for imprecision (random measurement error) and inaccuracy (systematic measurement error) according to EN ISO 8655 is valid only when original Eppendorf Combitips Plus tips are used.

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Volume table for using Combitips Plus® tips with the Repeater Plus

(The positions and dispensing steps that are marked in **bold** are based on Combitips Plus used with the original Eppendorf® Repeater)
Position of the volume selection dial:

	0.5	1/**1**	1.5	2/**2**	2.5	3/**3**	3.5	4/**4**	4.5	5/**5**	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Maximum number of dispensing volumes:																				
	100	50/**48**	33	25/**23**	20	16/**15**	14	12/**11**	11	10/**8**	9	8	7	7	6	6	5	5	5	5
Combitips Plus with the following volumes:																				
0.1 ml	1 µl	2 µl	3 µl	4 µl	5 µl	6 µl	7 µl	8 µl	9 µl	10 µl	11 µl	12 µl	13 µl	14 µl	15 µl	16 µl	17 µl	18 µl	19 µl	20 µl
0.2 ml	2 µl	4 µl	6 µl	8 µl	10 µl	12 µl	14 µl	16 µl	18 µl	20 µl	22 µl	24 µl	26 µl	28 µl	30 µl	32 µl	34 µl	36 µl	38 µl	40 µl
0.5 ml	5 µl	10 µl	15 µl	20 µl	25 µl	30 µl	35 µl	40 µl	45 µl	50 µl	55 µl	60 µl	65 µl	70 µl	75 µl	80 µl	85 µl	90 µl	95 µl	100 µl
1.0 ml	10 µl	20 µl	30 µl	40 µl	50 µl	60 µl	70 µl	80 µl	90 µl	100 µl	110 µl	120 µl	130 µl	140 µl	150 µl	160 µl	170 µl	180 µl	190 µl	200 µl
2.5 ml	25 µl	50 µl	75 µl	100 µl	125 µl	150 µl	175 µl	200 µl	225 µl	250 µl	275 µl	300 µl	325 µl	350 µl	375 µl	400 µl	425 µl	450 µl	475 µl	500 µl
5 ml	50 µl	100 µl	150 µl	200 µl	250 µl	300 µl	350 µl	400 µl	450 µl	500 µl	550 µl	600 µl	650 µl	700 µl	750 µl	800 µl	850 µl	900 µl	950 µl	1.0 ml
10 ml	100 µl	200 µl	300 µl	400 µl	500 µl	600 µl	700 µl	800 µl	900 µl	1.0 ml	1.1 ml	1.2 ml	1.3 ml	1.4 ml	1.5 ml	1.6 ml	1.7 ml	1.8 ml	1.9 ml	2.0 ml
25 ml*	250 µl	500 µl	750 µl	1.0 ml	1.25 ml	1.5 ml	1.75 ml	2.0 ml	2.25 ml	2.5 ml	2.75 ml	3.0 ml	3.25 ml	3.5 ml	3.75 ml	4.0 ml	4.25 ml	4.5 ml	4.75 ml	5.0 ml
50 ml*	500 µl	1.0 ml	1.5 ml	2.0 ml	2.5 ml	3.0 ml	3.5 ml	4.0 ml	4.5 ml	5.0 ml	5.5 ml	6.0 ml	6.5 ml	7.0 ml	7.5 ml	8.0 ml	8.5 ml	9.0 ml	9.5 ml	10 ml

*25 ml and 50 ml Combitips Plus must be used with the supplied adapter.

Repeater pipettes, Combitips Plus tips and accessories

Ordering information

Description	Catalog No.	List USD
Repeater Plus	022260201	$425.00
Repeater stream, includes charging adapter, 100–240 V/50–60 Hz	022460803	800.00
Repeater Xstream, includes charging adapter, 100–240 V/50–60 Hz	022460811	960.00
Charging stand, for Repeater stream/Xstream, holds one unit	022460897	185.00
Stand for Repeater pipettes, holds two units	022260651	59.00
Repeater Plus adapter, for new pipette carousel stand	022260588	16.70
Repeater Plus Wall Mount	022260596	26.60
Pipette Carousel Stand, for six pipettes	022444905	113.00
Combitips Rack, for mounting Combitips Plus tips	022268007	30.00

Description	Catalog No.	List USD	Catalog No.	List USD	Catalog No.	List USD
Combitips Plus tips	**Standard** (set of 100)		**Sterile** (10 bags of 10 tips = 100 tips)		**Eppendorf Biopur**** (individually wrapped, set of 100)	
0.1 ml	022265954	$ 90.00	022267001	$114.75	022496000	$130.00
0.2 ml	022266004	90.00	022267108	114.75	022496026	130.00
0.5 ml	022266101	90.00	022267205	114.75	022496042	130.00
1 ml	022266209	90.00	022267302	114.75	022496069	130.00
2.5 ml	022266306	90.00	022267400	114.75	022496085	130.00
5 ml	022266403	90.00	022267507	114.75	022496107	130.00
10 ml	022266501	90.00	022267604	114.75	022496123	130.00
25 ml	022266551	113.00	022267655	133.00	022496131	148.50
50 ml	022266608	113.00	022267701	133.00	022496140	148.50
25 ml adapter (1 piece), blue	022266993	16.25				
50 ml adapter (1 piece), dark gray	022266705	16.25				
25 ml adapter (set of 7)					022496158	101.00
50 ml adapter (set of 7)					022496166	101.00
Combitips Plus tips assortment pack, includes five of each size plus one 50 ml and one 25 ml adapter	022266624	73.00				
Combitube (set of two), aspirating aid for removing liquids from volumetric flasks and tall bottles; Combitips Plus tips sizes 5 ml, 25 ml and 50 ml	022261550	45.00				

**Eppendorf Biopur Combitips (individually wrapped) are guaranteed to be sterile, RNase-, DNA-, ATP- and pyrogen-free.

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PhysioCare Concept website
www.physiocare-concept.info

- Check out online how good your pipette really is!
- Read more about the PhysioCare Concept!
- Get valuable tips and tricks on pipetting!

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