



# Catalog 2018/19

Liquid Handling, Sample Handling, Cell Handling



# Have a Nize Day!

## VisioNize® – The Connected Lab System

The VisioNize system allows you to easily link your lab equipment to a central monitoring and data management software. It's a smart network that lets you manage your lab equipment efficiently whenever you want and wherever you are. Simply scan the QR code and visit our continuously updated website: [www.ependorf.com/visionize](http://www.ependorf.com/visionize) or see pages 12-13 for further information.



# Dear customers,

As a leading company in the life sciences sector we would like to welcome you to our world of products. In addition to our classic range of products, our new 2018 catalog features a series of high-quality, innovative products and technologies.

To name just a few; the new centrifuges 5425 and 5910 R and the associated rotors.  
Or our latest VisioNize software innovation for networking a range of Eppendorf products such as ULT freezers, cyclers and shakers. An overview of all the innovations can be found on pages 6-13. We wish you an enjoyable read!

As you can see, we at Eppendorf are remaining true to our goal of making laboratory processes safer, more precise, simpler and faster. We maintain close contact with research institutions and laboratories around the world in order to achieve this goal together. For our development department the needs of our customers are both a challenge and an incentive. Our customer service does not end with the delivery of the product.

We also offer an extensive range of other services related to our products through our webinars, epServices and liquid, sample and cell handling solutions. Read more on pages 390-427.

The Management Board of the Eppendorf Group



Thomas Bachmann



Detmar Ammermann



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# New Highlights 2018



## LIQUID HANDLING



### Eppendorf Varispenser 2/2x - see page 74

The new Varispenser 2/2x bottle top dispensers show top performance from the bottom to the top. Made for laboratory tasks with aliquots of aggressive solution like lyes, acids, solutions or bases taken from large supply bottles, these instruments can ease routine applications using the trusted PFA sealing lip technology.

With this technology crystal building from media residue is avoided by wiping of the inner cylinder wall during dispensing. The high chemical resistance of these bottle top dispensers and several optimizations of design elements and technical details will make this instrument indispensable in your laboratory.



## LIQUID HANDLING



### Eppendorf ViscoTip™ - see page 66

Experience the new member of the Combitips advanced® dispenser tip family. The ViscoTip is specifically designed and optimized for handling high viscosity liquids up to 14,000 mPa\*s such as Glycerol 99.5%, Tween, oils, cremes, shampoos or honey. The ViscoTip significantly reduces operating forces while handling such liquids. This enhances ergonomics, increases working speed and prolongs charge life time of your Multipipette battery.



## LIQUID HANDLING



### Eppendorf Pipette Holder System - see page 34

Carousels, stands and wall mount devices: The new Pipette Holder System is perfect for all users of handheld liquid handling instruments who need a highly flexible system for their Eppendorf pipettes and Multipipettes. Carousels and stands provide a robust design with a small footprint. To save precious benchtop space carousels carry both manual and electronic instruments. And only Eppendorf offers a charger carousel with intelligent charging electronics that carries up to 6 instruments.

## SAMPLE HANDLING



### **Eppendorf Tube Racks and Cuvette Racks - see page 155**

Optimize your workflows through user-friendly handling of clearly arranged samples. Almost all laboratory protocols require efficient and reliable processing, transport, and short term storage of sample vessels in benchtop racks. The new Eppendorf Cuvette Racks combine optimized functionality and high robustness with an attractive design. Six different formats offer the optimal solution and perfect fit for all tubes and cuvettes commonly used in laboratories. Compact dimensions require minimal space.

## SAMPLE HANDLING



### **Eppendorf Centrifuge 5425 - see pages 164 and 165**

The new air-cooled Centrifuge 5425 covers a range of very frequent applications and thus is an essential piece of equipment for modern labs. It replaces an Eppendorf success story, the Centrifuge 5424, to become the new laboratory standard. Developed with a high sense of customer orientation, it provides a top level of ergonomic comfort as well as great flexibility with its 6 rotor options. Especially the availability of a 5.0 mL rotor for the Centrifuge 5425 making sure that there will be even more opportunities to use and spin the popular Eppendorf Tubes® 5.0 mL.

## SAMPLE HANDLING



### **Eppendorf Centrifuge 5910 R - see pages 214 and 215**

The new refrigerated Centrifuge 5910 R combines high capacity and performance in a compact and ergonomic product design. It shares the modern user interface and the advanced temperature management system of its bigger brother, the Centrifuge 5920 R, which lab users have come to love\*<sup>1</sup>.

\*<sup>1</sup> Centrifuge 5920 R was voted Best New General Lab Product in 2017 by scientists around the world on SelectScience<sup>SM</sup>.

# New Highlights 2018

## SAMPLE HANDLING



### **Eppendorf Mastercycler® X50 Family - see page 264**

The creators of gradient technology is proud to present the Next Stage of PCR optimization. In addition to optimizing the annealing temperature using a traditional gradient, the Mastercycler X50 allows you to optimize a second step, e.g denaturation temperature - in the same run. Increased block control means we can do this whilst achieving unrivalled ramp rates -10 °C/s. You can connect up to 10 cyclers into a network, the highly responsive touch screen interface makes programming extremely quick and simple. In addition the Mastercycler X50 has maintained some traits of its predecessors – very low noise levels, very low power consumption, a footprint that uses a minimal width of bench-space and we have maintained an ‘open system’ that can accommodate consumables from single PCR tubes to fully skirted PCR plates.

In designing the Mastercycler X50 family, we have engineered beyond common conventional barriers. Let's address your PCR bottlenecks!

## SAMPLE HANDLING



### **Eppendorf CryoCube® F740 series - see page 286**

The CryoCube F740 ULT Freezer is the latest addition to the Eppendorf Freezer Family. Combining the high-quality tradition of our previous freezers with an increased capacity, the CryoCube F740 is designed to store more of your samples securely while maintaining optimal energy usage. The integration of the PhysioCare Concept® during development means that the CryoCube F740 is easier and more comfortable to use, reduces user stress, supports an ergonomic workspace, and provides optimal workflow in the lab.



## CELL HANDLING



### **Eppendorf CellTram® 4r Air/Oil - see page 348**

Working with the new generation of CellTrams is like taking a breath of fresh air.

Our new manual microinjectors have been designed with special emphasis on excellent ergonomics, ease of use and highest precision.

The CellTram 4r Air is a pneumatic microinjector for oil-free microinjection and gentle holding of cells in suspension. Due to its improved pressure control system the new CellTram 4m Air is also suitable for oil-free uptake and injection of cells (e.g. sperm, ES cells).



## CELL HANDLING



### **Eppendorf Innova® S44i Biological Shaker – see page 324**

Eppendorf is bringing the latest innovations in shaker technology to the market with the new Innova S44i - a large capacity, stackable shaker with temperature control functionality. It is designed to provide maximum flask and weight capacity at a very compact footprint. The proprietary Eppendorf X-Drive combines real time sensing of imbalances and semi-automated adjustment of counterweights for reliable shaking performance.

Intuitive touchscreen user interface with restrictive user access, and Ethernet port for integration to external networks make this the ideal shaker for sophisticated laboratories. The precise and uniform environment in the chamber results in high yields and reproducible results across the platform.

# The Eppendorf Knowledge Base



The needs of our customers are more than ever the focus of our actions.  
Our aim has always been to anticipate the requirements of tomorrow and to meet these needs without compromise.

In addition to our products, we therefore offer a lot of information for optimizing your daily work routines.  
For example, online operating manuals, customer magazines, mobile apps or the Eppendorf media library.

**Visit the Eppendorf Knowledge Base!**



Manuals



Brochures and Flyers



Catalog



Mobile App



Magazines



Notes and Papers



FAQs



Software Downloads



Media Center

# VisioNize® – The Connected Lab System

Imagine you could use a smart network in your lab to organize your lab equipment efficiently anytime and anywhere with a single glance. Now you can – with Eppendorf VisioNize.

Connect your lab equipment to VisioNize core and remotely monitor the performance from your office PC or with the mobile app VisioNize go. The Eppendorf VisioNize system basically consists of these two software components and the VisioNize box, an easy-to-use hardware integration interface to connect selected devices. Connectable devices are Eppendorf VisioNize-qualified devices that have to be connected via VisioNize box, and VisioNize-onboard devices that are already equipped with VisioNize functionalities and can be connected directly. Further lab devices can be added manually to VisioNize core with limited functionalities. That builds up a smart network for your lab organization.



## Monitor

### The PC Software to manage and monitor your lab equipment

- > Get a 24/7 tracking report with detailed trends and event information
- > Receive information about alarms via e-mail notification
- > Use a central database, e.g. for documents and service information



## Check

### The free mobile app for iOS® devices

- > Monitor your instruments at any time
- > See what's going on in the lab, wherever you are



## Enable

### The easy-to-install hardware hub

- > Connect your already installed freezers
- > Manage further devices in your existing workflow

VisioNize core is the central data server in the VisioNize system. It's connected to the lab instruments over your local network. All relevant device information and documents are stored on this data server, which is centrally installed (on premises) in your institution. Device information are routed through your local network infrastructure and safely archived in VisioNize core.

The mobile iOS app VisioNize go allows you to check the current status of your devices when you have left your lab or institution. This feature displays such relevant parameters as temperature and remaining runtime so you can efficiently organize your daily lab routine even if you are not in the lab. That gives you peace of mind, especially for overnight processes.

With VisioNize box you can connect Eppendorf VisioNize-qualified devices to the VisioNize system. The hub works as a data-decoding and translation system and lets you collect device data in VisioNize core. Many of the Eppendorf devices you may have already installed can be upgraded to a connectable instrument and then displayed and monitored using VisioNize core and VisioNize go.

# Labwork meets Network

The VisioNize system allows you to easily link your lab equipment to a central monitoring and data management software. It's a smart network that lets you monitor your lab equipment efficiently whenever you want and wherever you are.

The new interface design of different components of the VisioNize system provides an excellent user experience and simplifies operation.

If you're already familiar with using a component or instrument in the VisioNize system, you'll also find other instruments and components intuitive to operate because the user experience is consistent across product lines and platforms (PC software, mobile app and device display).

Experience the new VisioNize user interface concept across the touch interfaces of VisioNize-onboard devices as well as in the software applications VisioNize core and VisioNize go.

Consistent operation across product lines



VisioNize onboard devices



VisioNize core



VisioNize go

Touch display

PC software

Mobile

Consistent operation across platforms

# Pure Quality

## Eppendorf purity grades for consumables

Eppendorf consumables stand for the highest quality and purity achieved by:

- > using pure raw materials
- > automatic production in clean room conditions
- > quality and functional checks of all lots
- > continuous quality assurance throughout the entire production process

With the strictest control criteria, internally and externally monitored, we guarantee consistently high quality of our products – lot by lot. Our consumables are available in different purity grades for individual application demands: “Eppendorf Quality™” as well as advanced purity grades like “sterile”, “protein-free”, “PCR clean”, “Forensic DNA Grade (acc. to ISO 18385)”, and “Biopur®”. In addition to our internal process controls, and general quality certificates, lot-specific certificates are provided by an external test laboratory for the advanced purity grades. This allows us to consistently meet our customer’s high demands when it comes to the high quality and purity of our products. As a special service, our lot-specific certificates are available on request and on our website ([www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)).

The basis: Top-quality material

All plastics used by Eppendorf to produce consumables comply with international purity criteria.

The dyes used to color consumables are free of organic substances and substances containing heavy metals.

Plastics, such as polypropylene, have a high chemical resistance to organic and inorganic acids/ bases and organic solvents commonly used in laboratories.

## Eppendorf Quality™:

Products with the purity grade “Eppendorf Quality” are ideal for many tasks in the lab. To meet consistently our customer’s high demands on quality further measurements are performed specifically for individual product groups:

Precise molding guarantees high precision and accuracy. Each lot of tips is subject to gravimetric measurement during final testing. Low wetting ensures reliable volume readings and minimal adhesion.

Eppendorf Tubes® have to be opened and closed by one hand only; without sample material being contaminated. They are highly stable, even when exposed to extreme mechanical or thermal strain. Therefore, on a daily basis we check vapor tightness, lid-opening force, wall strength, force required

to pierce the lid as well as resistance to centrifugation.

We check high resistance to centrifugation and sealability of deepwell plates and microplates.

All production tools are subject to frequent checks at regular intervals in order to guarantee consistent quality throughout the entire production period.

## Eppendorf Protein-free:

Eppendorf consumables with this purity grade are free of proteins and thus free of unspecific signals or reactions due to protein contamination.

A colorimetric assay which can detect down to 1ng/μL is used for testing and detecting protein contamination. Lot-specific certificates provided by an external accredited laboratory are available on request and on our website.

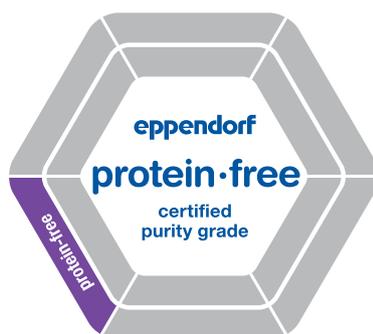
Furthermore, all Eppendorf protein-free products fulfill the quality standards defined for our purity grade “Eppendorf Quality”.

## Eppendorf Sterile:

Besides fulfilling the quality criteria of “Eppendorf Quality” Eppendorf consumables with the purity grade “sterile” are sterilized and free of pyrogens. Each lot is certified by



The Eppendorf purity grade “Eppendorf Quality” fulfill everything expected of reliable, easy-to-handle consumables. With the aid of high-quality base material and permanent checks during production, Eppendorf consumables in Eppendorf Quality are ideal for many tasks in the lab.



Eppendorf consumables with this purity grade are free of proteins and thus free of unspecific signals or reactions due to protein contamination.



Eppendorf consumables with the purity grade “Sterile” are sterilized in accordance with ISO 11137 or ISO 11135 with a Sterility Assurance Level (SAL) of 10<sup>-6</sup>. Lot-specific certificates document sterility and the absence of endotoxins in accordance with Ph. Eur. 2.6.14.

an external accredited laboratory. Eppendorf sterile consumables are sterilized in accordance with ISO 11137 or ISO 11135. A quality seal which assures customers of the suitability of their Eppendorf consumables for direct use in experiments and analysis without the need for further treatment. Lot-specific certificates are available on request and on our website.

#### Eppendorf PCR clean:

All Eppendorf consumables with the purity grade "PCR clean" ensure not to interfere with the PCR. Furthermore, all Eppendorf PCR clean products fulfill the quality criteria defined for our standard consumables (purity grade "Eppendorf Quality"). The purity grade "PCR clean" is essentially achieved in not even letting contamination develop. Therefore, the corresponding plastic items are manufactured comparable to clean-room conditions. The manufacturing areas are spatially separated and only personnel in special protective clothing are granted access. Lot-specific certificates provided by an external accredited laboratory confirm the compliance with the criteria DNase-, RNase-, PCR inhibitor-, and human DNA-free. The certificates are available on request and on our website. "PCR clean" – a quality seal

which assures customers of the suitability of their Eppendorf consumables for direct use in experiments and analysis.

#### Eppendorf Forensic DNA Grade (acc. to ISO 18385):

Human DNA contamination is one of the main concerns in forensic DNA analysis. The ISO 18385 has been implemented to further minimize the risk of DNA contamination. This standard specifies requirements for manufacturing products used in the collection, storage and analysis of biological material for forensic purposes. Highly automated production lines and stringent access controls are only two production conditions for "Eppendorf Forensic DNA Grade" consumables which contribute in fulfilling ISO 18385.

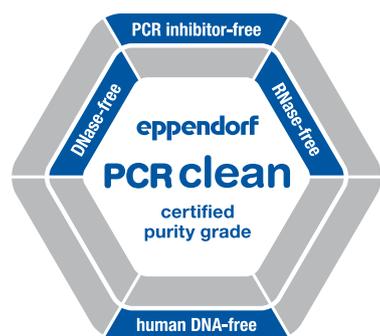
Individually blistered packaging or "mini batches" in re-sealable bags provide effective protection against contamination. Lot-specific certificates provided by an external accredited laboratory confirm the compliance with the criteria DNase-, RNase-, PCR inhibitor-, and human DNA-free. The certificates are available on request and on our website.

#### Eppendorf Biopur®:

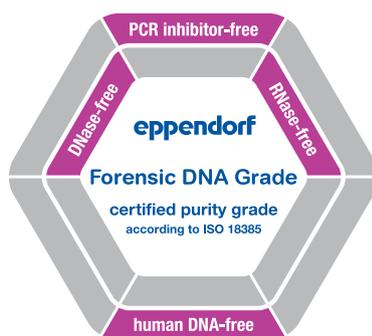
To meet the highest demands of the clinical, pharmaceutical, cosmetic, food industries and others, the quality and purity grade "Biopur" was defined. This purity is ensured by an elaborate, automated manufacturing process which safeguards the product against contamination with biological substances. Furthermore, all "Biopur" products fulfill the quality standards defined for our standard consumables (Purity grade "Eppendorf Quality").

Lot-specific certificates provided by an external accredited laboratory confirm the compliance with the criteria sterile, DNase-, RNase-, PCR inhibitor, ATP-, Pyrogen-, human and bacterial DNA-free. The certificates are available on request and on our website. "Biopur" – a quality seal which assures customers of the suitability of their Eppendorf consumables for direct use in experiments and analysis.

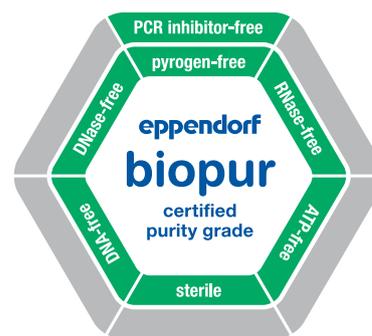
For further details please read pages 38-39 and 136.



All Eppendorf consumables with the purity grade "PCR clean" are DNase- and RNase-free, and free of PCR-inhibitors. It is also guaranteed that the consumables are free of contaminating human DNA.



The demanding requirements of the ISO 18385 are fulfilled by "Eppendorf Forensic DNA Grade" consumables. These products help to further minimize the risk of human DNA contamination in forensic DNA analysis. Individually blistered packaging or "mini batches" in re-sealable bags also help to protect against contamination.



Consumables available in this highest possible degree of Eppendorf purity grades are guaranteed to be sterile and free of pyrogens, RNases, DNases, DNA and ATP as well as PCR inhibitors. Individually blistered or "mini batches" in re-sealable boxes provide effective protection against soiling and contamination.

# Liquid Handling



<b>Model</b>	<b>Eppendorf Research® plus</b>	<b>Eppendorf Reference® 2</b>	<b>Eppendorf Xplorer®/Xplorer plus</b>
<b>Page(s)</b>	<b>24</b>	<b>28</b>	<b>31</b>
<b>Product type</b>	Pipette	Pipette	Pipette
<b>Operating mode</b>	Manual	Manual	Electronic
<b>Pipetting type</b>	Air-cushion	Air-cushion	Air-cushion
<b>Key features</b>	Ultra light weight and low pipetting forces for advanced ergonomics	Reliability in robustness and results	Intuitive operation and fast pipetting
<b>Application</b>	Pipetting of aqueous liquids, two-button operation	Pipetting of aqueous liquids, single-button operation	Pipetting of aqueous liquids
<b>Volume range</b>	0.1 µL – 10 mL	0.1 µL – 10 mL	0.5 µL – 10 mL
<b>Available options</b>	1-channel 8-channel 12-channel	1-channel 8-channel 12-channel	1-channel 8-channel 12-channel
<b>RFID tracking</b>	Yes (read option)	Yes (read and write option)	Yes (read and write option)
<b>Autoclavable</b>	Yes	Yes	Yes (lower part)
<b>Consumables</b>	epT.I.P.S.® and other pipette tips	epT.I.P.S.® and other pipette tips	epT.I.P.S.® and other pipette tips
<b>Purity grades of consumables</b>	> Eppendorf Quality™ > PCR clean and sterile > Eppendorf Biopur® > Forensic DNA Grade	> Eppendorf Quality™ > PCR clean and sterile > Eppendorf Biopur® > Forensic DNA Grade	> Eppendorf Quality™ > PCR clean and sterile > Eppendorf Biopur® > Forensic DNA Grade



<b>Model</b>	<b>epT.I.P.S./epT.I.P.S.® Long</b>	<b>ep Dualfilter T.I.P.S./ep Dualfilter T.I.P.S. SealMax</b>	<b>epT.I.P.S.® LoRetention/ep Dualfilter T.I.P.S.® LoRetention</b>
<b>Page(s)</b>	<b>40, 43</b>	<b>44-45</b>	<b>46</b>
<b>Applications</b>	> Pipetting liquids > Dispensing liquids > Mixing liquids > Filling plates and reaction vessels > Filling gels for electrophoresis > Phase extraction and removal of supernatants	> DNA applications > RNA applications > Protein applications > Cell Culture applications > Applications with radio actives > All applications which use aerosol <sup>1)</sup> binding liquids	> Cell culture (media) > Genomics > Enzymatic reactions > Isolation and purification of nucleic acid > Gel electrophoresis > Proteomics > Protein isolation and purification

<sup>1)</sup> An aerosol is a colloid of fine solid particles or liquid droplets, in air or another gas.



<b>epMotion® 96/epMotion® 96xl</b>	<b>Repeater® M4</b>	<b>Repeater® E3/E3x</b>
<b>78</b>	<b>58</b>	<b>62</b>
Semi-automated Pipette	Dispenser	Dispenser
Electronic	Manual	Electronic
Air-cushion	Positive displacement	Positive displacement
Intuitive and fast pipetting in 96 and 384 format	Time saving by speeding up long pipetting series with low effects from outside sources	Time saving by speeding up long pipetting series, with highest volume flexibility and lowest effects from outside forces
Pipetting of aqueous liquids	Contamination-free dispensing (up to 100 steps per Combitip filling) of aqueous, solutions and problem liquids (e.g., viscous, volatile, dense...)	Contamination-free dispensing (up to 100 steps per Combitip filling) of aqueous, solutions and problem liquids (e.g., viscous, volatile, dense...)
0.5 – 300 µL/5 – 1,000 µL	1 µL – 10 mL	1 µL – 50 mL
96-channel	1-channel	1-channel
No	Yes (read option)	Yes (read and write option)
No	No	No
epT.I.P.S.® motion reload system	Combitips advanced®	Combitips advanced®
<ul style="list-style-type: none"> <li>&gt; Eppendorf Quality™</li> <li>&gt; PCR clean</li> <li>&gt; PCR clean and sterile</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Eppendorf Quality™</li> <li>&gt; PCR clean</li> <li>&gt; Eppendorf Biopur®</li> <li>&gt; Forensic DNA Grade</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Eppendorf Quality™</li> <li>&gt; PCR clean</li> <li>&gt; Eppendorf Biopur®</li> <li>&gt; Forensic DNA Grade</li> </ul>



<b>epMotion® 96 T.I.P.S.</b>	<b>Maxitip®</b>	<b>Combitips advanced®</b>
<b>105</b>	<b>70</b>	<b>67</b>
<ul style="list-style-type: none"> <li>&gt; Replication and reformatting of microplates</li> <li>&gt; Cell seeding and media change</li> <li>&gt; Reagent and compound addition</li> <li>&gt; 384 wells by 4 times 96 well pipetting</li> <li>&gt; Cell-based assays</li> <li>&gt; ELISA handling (plate coating &amp; washing)</li> <li>&gt; Biochemical assays</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Pipetting aqueous solutions</li> <li>&gt; Extraction of liquids from deep receptacles</li> <li>&gt; Transfer of organic liquids (alcohols, org. acids etc.)</li> <li>&gt; Transfer of solvents with high vapor pressure</li> <li>&gt; Transfer of liquids with high density</li> <li>&gt; Transfer of viscous liquids</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Positive displacement principle (comparable to a syringe)</li> <li>&gt; High-precision dispensing regardless of the physical properties of the liquid</li> <li>&gt; Prevents aerosol contamination with hermetically sealed piston for secure dispensing</li> <li>&gt; Provides protection from radioactive and toxic substances</li> <li>&gt; Quick dispensing of long series with precise, repeated dispensing of identical volumes</li> </ul>



<b>Model</b>	<b>Varispenser® 2/Varispenser® 2x</b>	<b>Eppendorf Top Buret™</b>
<b>Page(s)</b>	<b>74</b>	<b>76</b>
<b>Product type</b>	Bottle-top dispenser	Bottle-top burette
<b>Operating mode</b>	Manual	Manual
<b>Pipetting type</b>	Positive displacement	Positive displacement
<b>Key features</b>	Varispenser 2 and 2x bottle-top dispensers combine trusted technology with improved benefits for safe and easy dispensing of liquids without compromise	Continuously and pulse-free manual titration
<b>Application</b>	Single stroke dispensing of lyes, acids, bases, aqueous liquids or solvents	Titration of aqueous liquids
<b>Volume range</b>	0.2 – 100 mL	0.1 – 999.9 mL
<b>Available options</b>	1-channel	1-channel
<b>RFID tracking</b>	No	No
<b>Autoclavable</b>	Yes	No
<b>Consumables</b>	–	–
<b>Purity grades of consumables</b>	–	–



<b>Model</b>	<b>GELoader®</b>	<b>Microloader™</b>
<b>Page(s)</b>	<b>42</b>	<b>42</b>
<b>Applications</b>	<ul style="list-style-type: none"> <li>&gt; Gel electrophoresis</li> <li>&gt; Loading of samples onto polyacrylamide gels</li> <li>&gt; Handling of smallest volumes</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Filling of microcapillaries for microinjection</li> <li>&gt; Recovery of excess solution from the capillary</li> <li>&gt; Pipetting smallest volumes where additional reach is needed</li> </ul>



<b>Eppendorf Easypet® 3</b>
<b>71</b>
Pipette controller
Electronic
Air-cushion
Overall ergonomic concept with new speed control for stress-free pipetting
Pipetting of aqueous liquids with serological and volumetric pipets
0.1 – 100 mL
1-channel
Yes (read option)
No (yes: pipette adapter and aspirating cone)
Eppendorf Serological Pipets and other volumetric and serological pipets
> Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic.



<b>Eppendorf Pipet Helper®</b>
<b>72</b>
Pipette controller
Manual
Air-cushion
A perfect instrument for inexperienced users because of its robust and intuitive design
Pipetting of aqueous liquids with serological and volumetric pipets
0.1 – 100 mL
1-channel
No
Yes
Eppendorf Serological Pipets and other volumetric and serological pipets
> Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic.



<b>Maxipettor®</b>
<b>70</b>
Pipette
Manual
Positive displacement
Fault tolerant pipetting of small/large volumes, independent of liquid properties or pipetting technique
Contamination-free pipetting of aqueous, viscous and volatile liquids
1 – 10 mL
1-channel
No
No
Maxitip®
> Eppendorf Quality™



<b>Serological pipets</b>
<b>73</b>
> Ideal for cell culture applications
> Individually wrapped for guaranteed purity



Model	epMotion® 5070	epMotion® 5070f
Page(s)	82	82
Dimensions (W x D x H)	65 x 48 x 63 cm / 26 x 19 x 25 in	65 x 48 x 63 cm / 26 x 19 x 25 in
Weight w/o accessories	45 kg	33 kg
Max. power consumption	150 W	150 W
Power supply	100 – 240 V ±10 %, 50 – 60 Hz ±5 %	100 – 240 V ±10 %, 50 – 60 Hz ±5 %
Optical confocal infrared detector	Contact-free recognition of fill level, inserted tools, labware, tip types and quantities	Contact-free recognition of fill level, inserted tools, labware, tip types and quantities
SLAS/ANSI positions	4	4
Volume range	200 nL – 1 mL	200 nL – 1 mL
Random measurement error	±0.1 mm	±0.1 mm
Systematic measurement error	±0.3 mm	±0.3 mm
Dispensing tool <sup>1)2)</sup>		
Random measurement error (1 µL)	≤3 %	≤3 %
Systematic measurement error (1 µL)	±5 %	±5 %
Random measurement error (50 µL)	≤0.4 %	≤0.4 %
Systematic measurement error (50 µL)	±1.2 %	±1.2 %
Random measurement error (1,000 µL)	≤0.15 %	≤0.15 %
Systematic measurement error (1,000 µL)	±0.7 %	±0.7 %
Pipetting type	Air-cushion	Air-cushion
Gripper option	no	no
Thermal module(s)	no	no
Thermal module (optional)		
Cooling rate	–	–
Heating rate	–	–
ThermoMixer upgrade option	no	no
ThermoMixer		
Max. load	–	–
Mixing period	–	–
Speed	–	–
Temperature range	–	–
Vacuum unit		
Vacuum max. output	–	–
Underground area	–	–
Suction time	–	–
Magnetic separation	no	no
Vacuum separation	no	no
Automatic tool exchange	2 tools	2 tools
UV/HEPA option	no	no
MagSep reagents for DNA/RNA purification	–	–
For operation in biosafety cabinet	–	yes

<sup>1)</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20 °C<sup>2)</sup> See Eppendorf Application Note 168 for typical pipetting performance

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)

**epMotion® 5073I****84**

65 × 61 × 67 cm / 26 × 24 × 27 in

50 kg

600 W

100 – 240 V ±10 %, 50 – 60 Hz ±5 %

Contact-free recognition of fill level, inserted tools, labware, tip types and quantities

6

200 nL – 1 mL

±0.1 mm

±0.3 mm

≤3 %

±5 %

≤0.4 %

±1.2 %

≤0.15 %

±0.7 %

Air-cushion

yes

no

4 °C/min

9 °C/min

no

–

–

–

–

–

–

–

with third party adapter and gripper

no

2 tools and gripper

yes

–

–

**epMotion® 5073m****86**

65 × 61 × 67 cm / 26 × 24 × 27 in

57 kg

600 W

100 – 240 V ±10 %, 50 – 60 Hz ±5 %

Contact-free recognition of fill level, inserted tools, labware, tip types and quantities

6

200 nL – 1 mL

±0.1 mm

±0.3 mm

≤3 %

±5 %

≤0.4 %

±1.2 %

≤0.15 %

±0.7 %

Air-cushion

yes

no

–

–

included

1,000 g (2.2 lb)

5 s – 120 min

300 rpm – 2,000 rpm

15 °C below RT to 95 °C

–

–

–

yes

no

2 tools and gripper

yes

yes

–



Model	epMotion® 5075I	epMotion® 5075v
Page(s)	88	94
Dimensions (W x D x H)	107 x 61 x 67 cm / 43 x 24 x 27 in	107 x 61 x 67 cm / 43 x 24 x 27 in
Weight w/o accessories	85 kg	86 kg
Max. power consumption	700 W	700 W
Power supply	100 – 240 V ±10 %, 50 – 60 Hz ±5 %	100 – 240 V ±10 %, 50 – 60 Hz ±5 %
Optical confocal infrared detector	Contact-free recognition of fill level, inserted tools, labware, tip types and quantities	Contact-free recognition of fill level, inserted tools, labware, tip types and quantities
SLAS/ANSI positions	15	12
Volume range	200 nL – 1 mL	200 nL – 1 mL
Random measurement error	±0.1 mm	±0.1 mm
Systematic measurement error	±0.3 mm	±0.3 mm
Dispensing tool <sup>1)2)</sup>		
Random measurement error (1 µL)	≤3 %	≤3 %
Systematic measurement error (1 µL)	±5 %	±5 %
Random measurement error (50 µL)	≤0.4 %	≤0.4 %
Systematic measurement error (50 µL)	±1.2 %	±1.2 %
Random measurement error (1,000 µL)	≤0.15 %	≤0.15 %
Systematic measurement error (1,000 µL)	±0.7 %	±0.7 %
Pipetting type	Air-cushion	Air-cushion
Gripper option	yes	included
Thermal module(s)	3	3
Thermal module (optional)		
Cooling rate	–	–
Heating rate	–	–
ThermoMixer upgrade option	yes	yes
ThermoMixer		
Max. load	–	–
Mixing period	–	–
Speed	–	–
Temperature range	–	–
Vacuum unit		
Vacuum max. output	–	35 NL/min
Underground area	–	–
Suction time	–	–
Magnetic separation	with third party adapter and gripper	with third party adapter and gripper
Vacuum separation	no	yes
Automatic tool exchange	4 tools and gripper	4 tools and gripper
UV/HEPA option	yes	yes
MagSep reagents for DNA/RNA purification	–	–
For operation in biosafety cabinet	–	–

<sup>1)</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20 °C<sup>2)</sup> See Eppendorf Application Note 168 for typical pipetting performance

Only for epMotion 5073m, 5073mc and 5075m: Limited Use Label License

Notice to purchaser; limited license for research use only

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Product appearance, specifications, and/or prices are subject to change without notice.

**epMotion® 5075t****90**

107 × 61 × 67 cm / 43 × 24 × 27 in

87 kg

700 W

100 – 240 V ±10 %, 50 – 60 Hz ±5 %

Contact-free recognition of fill level, inserted tools, labware, tip types and quantities

14.5

200 nL – 1 mL

±0.1 mm

±0.3 mm

≤3 %

±5 %

≤0.4 %

±1.2 %

≤0.15 %

±0.7 %

Air-cushion

yes

2

–

–

included

–

–

–

–

–

–

–

with third party adapter and gripper

no

4 tools and gripper

yes

–

–

**epMotion® 5075m****92**

107 × 61 × 67 cm / 43 × 24 × 27 in

88 kg

700 W

100 – 240 V ±10 %, 50 – 60 Hz ±5 %

Contact-free recognition of fill level, inserted tools, labware, tip types and quantities

14.5

200 nL – 1 mL

±0.1 mm

±0.3 mm

≤3 %

±5 %

≤0.4 %

±1.2 %

≤0.15 %

±0.7 %

Air-cushion

yes

2

–

–

included

–

–

–

–

–

–

–

yes

no

4 tools and gripper

yes

yes

–



# Eppendorf Research<sup>®</sup> plus

## Description

The Eppendorf Research plus is one of the most commonly used pipettes in the world. Besides safety and robustness, the main focus of its design lays in ergonomics. The Research plus protects the health of our customers during their daily work. It has pioneered the renowned PhysioCare Concept<sup>®</sup> and thus reduced the strain on hand and arm during pipetting essentially. The Research plus is the pipette family with the lowest weight and lowest operation forces in the Eppendorf product families. Lower operation forces can only be reached with our Eppendorf electronic pipettes. The spring loaded tip cone ensures low tip attachment and ejection forces. The Research plus has the ability to be autoclaved without the need to be disassembled. Fixed-volume pipettes and multichannel options are available; the Research plus pipette will become an indispensable tool in your laboratory.



## Product features

- > The ultralight Eppendorf Research plus was developed according to the strict criteria of the Eppendorf PhysioCare Concept
- > Eppendorf PerfectPiston<sup>®</sup>: Ultralight and highly resistant piston system
- > The positions and shapes of the control buttons/displays have been optimized for stress-free work procedures and intuitive operation
- > The spring-loaded tip cone provides you with an optimal pipette fit with minimal insertion force (not available for 5 mL and 10 mL pipettes)
- > The adjustment option allows you to perfectly adapt the pipette for liquids with different properties than water
- > With the new volume setting, you can switch from maximum to minimum volume in just a few turns
- > The 4-digit volume display with magnifying display makes quick and accurate volume settings easier than ever
- > The quick lock makes the lower part particularly easy to remove and service (not available for 5 mL and 10 mL pipettes)

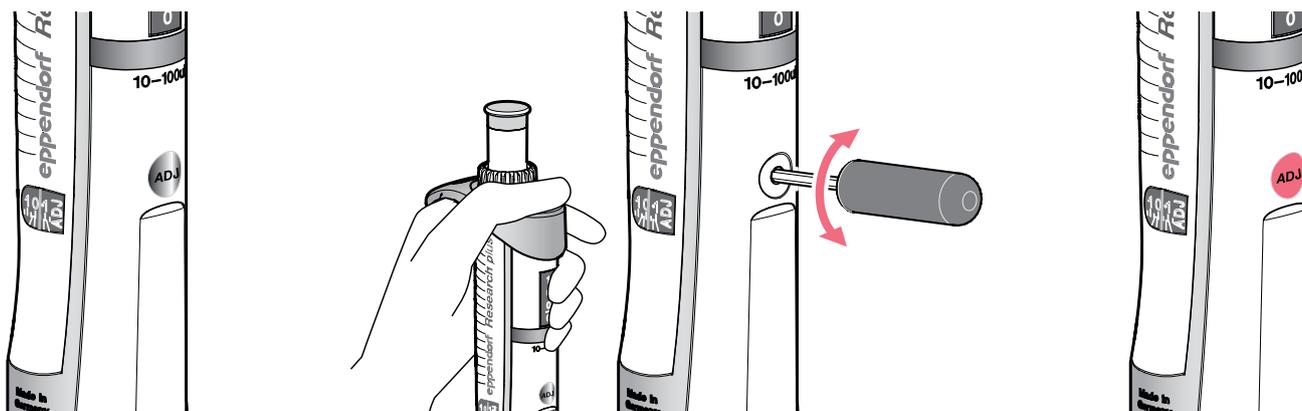
## Applications

- > Forward pipetting
- > Reverse pipetting
- > Removal of supernatants
- > Sample mixing
- > Phase extraction
- > Volume determination
- > Filling of plates, gels, and reaction vessels



### Advanced ergonomics

- > Feel the difference in weight, pipetting forces and the spring loaded tip cone
- > Low tip attachment force: Achieve optimal tightness and minimal attachment forces with the Eppendorf Research plus. The spring loaded tip cone helps to reduce stress without sacrificing tightness
- > Low tip ejection force: Even small differences in the tip ejection force make a big change if you do it day by day. The tip ejection force of the Eppendorf Research plus can be as low as 3.6 N, depending on the size and the force you use to fix the tip



User adjustment: User-friendly option to temporarily adjust the pipetting volume by up to  $\pm 2\%$  to offset inaccuracies when working with difficult liquids (e.g., warm, cold, volatile or high density liquids) or when external conditions change (e.g., altitude or use of elongated tips). Change back to factory adjustment without calibration



The large 4 digit volume display with magnifying window is easy to read and allows for more accurate volume setting



For efficient pipetting with well plates, the Research plus pipettes come in 8-channel and 12-channel models.



# Eppendorf Research<sup>®</sup> plus

## Ordering information

Volume range	Color code	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Research<sup>®</sup> plus, single-channel, fixed</b>							
10 µL	medium gray	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL	3124000024	\$263.00
10 µL	yellow	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL	3124000024	263.00
20 µL	light gray	±0.8 %	±0.16 µL	±0.3 %	±0.06 µL	3124000032	263.00
20 µL	yellow	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL	3124000040	263.00
25 µL	yellow	±1.0 %	±0.25 µL	±0.3 %	±0.08 µL	3124000059	263.00
50 µL	yellow	±0.7 %	±0.35 µL	±0.3 %	±0.15 µL	3124000067	263.00
100 µL	yellow	±0.6 %	±0.6 µL	±0.2 %	±0.2 µL	3124000075	263.00
200 µL	yellow	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	3124000083	263.00
200 µL	blue	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	3124000091	263.00
250 µL	blue	±0.6 %	±1.5 µL	±0.2 %	±0.5 µL	3124000105	263.00
500 µL	blue	±0.6 %	±3.0 µL	±0.2 %	±1.0 µL	3124000113	263.00
1,000 µL	blue	±0.6 %	±6.0 µL	±0.2 %	±2.0 µL	3124000121	263.00

<sup>1)</sup> 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.

## Ordering information

Volume range	Color code	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Research<sup>®</sup> plus, single-channel, variable, incl. epT.I.P.S.<sup>®</sup> Box</b>								
0.1 – 2.5 µL	dark gray	0.1 µL	±48.0 %	±0.048 µL	±12.0 %	±0.012 µL	3123000012	\$382.00
		0.25 µL	±12.0 %	±0.03 µL	±6.0 %	±0.015 µL		
		1.25 µL	±2.5 %	±0.031 µL	±1.5 %	±0.019 µL		
		2.5 µL	±1.4 %	±0.035 µL	±0.7 %	±0.018 µL		
0.5 – 10 µL	medium gray	0.5 µL	±8.0 %	±0.04 µL	±5.0 %	±0.025 µL	3123000020	382.00
		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		
2 – 20 µL	light gray	2 µL	±5.0 %	±0.1 µL	±1.5 %	±0.03 µL	3123000098	382.00
		10 µL	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL		
		20 µL	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL		
2 – 20 µL	yellow	2 µL	±5.0 %	±0.1 µL	±1.5 %	±0.03 µL	3123000039	382.00
		10 µL	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL		
		20 µL	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL		
10 – 100 µL	yellow	10 µL	±3.0 %	±0.3 µL	±1.0 %	±0.1 µL	3123000047	382.00
		50 µL	±1.0 %	±0.5 µL	±0.3 %	±0.15 µL		
		100 µL	±0.8 %	±0.8 µL	±0.2 %	±0.2 µL		
20 – 200 µL	yellow	20 µL	±2.5 %	±0.5 µL	±0.7 %	±0.14 µL	3123000055	382.00
		100 µL	±1.0 %	±1.0 µL	±0.3 %	±0.3 µL		
		200 µL	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL		
30 – 300 µL	orange	30 µL	±2.5 %	±0.75 µL	±0.7 %	±0.21 µL	3123000101	382.00
		150 µL	±1.0 %	±1.5 µL	±0.3 %	±0.45 µL		
		300 µL	±0.6 %	±1.8 µL	±0.2 %	±0.6 µL		
100 – 1,000 µL	blue	100 µL	±3.0 %	±3.0 µL	±0.6 %	±0.6 µL	3123000063	382.00
		500 µL	±1.0 %	±5.0 µL	±0.2 %	±1.0 µL		
		1,000 µL	±0.6 %	±6.0 µL	±0.2 %	±2.0 µL		
<b>Eppendorf Research<sup>®</sup> plus, single-channel, variable, incl. epT.I.P.S.<sup>®</sup> sample bag</b>								
0.5 – 5 mL	violet	0.5 mL	±2.4 %	±0.012 mL	±0.6 %	±0.003 mL	3123000071	382.00
		2.5 mL	±1.2 %	±0.03 mL	±0.25 %	±0.006 mL		
		5 mL	±0.6 %	±0.03 mL	±0.15 %	±0.008 mL		
1 – 10 mL	turquoise	1 mL	±3.0 %	±0.03 mL	±0.6 %	±0.006 mL	3123000080	382.00
		5 mL	±0.8 %	±0.04 mL	±0.2 %	±0.01 mL		
		10 mL	±0.6 %	±0.06 mL	±0.15 %	±0.015 mL		

<sup>1)</sup> 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.

! Pipette service and maintenance contracts can be found on page 394. Pipette tips can be found on page 40 onward.

## Ordering information

Volume range	Color code	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Research® plus</b> , 8-channel, variable, incl. epT.I.P.S.® Box								
0.5 – 10 µL	■ medium gray	0.5 µL	±12.0 %	±0.06 µL	±8.0 %	±0.04 µL	3125000010	\$ 904.00
		1 µL	±8.0 %	±0.08 µL	±5.0 %	±0.05 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		
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±2.0 %	±0.2 µL	3125000036	904.00
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL		
		100 µL	±0.8 %	±0.8 µL	±0.3 %	±0.3 µL		
30 – 300 µL	■ orange	30 µL	±3.0 %	±0.9 µL	±1.0 %	±0.3 µL	3125000052	904.00
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL		
		300 µL	±0.6 %	±1.8 µL	±0.3 %	±0.9 µL		
<b>Eppendorf Research® plus</b> , 12-channel, variable, incl. epT.I.P.S.® Box								
0.5 – 10 µL	■ medium gray	0.5 µL	±12.0 %	±0.06 µL	±8.0 %	±0.04 µL	3125000028	1,050.00
		1 µL	±8.0 %	±0.08 µL	±5.0 %	±0.05 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		
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±2.0 %	±0.2 µL	3125000044	1,050.00
		50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL		
		100 µL	±0.8 %	±0.8 µL	±0.3 %	±0.3 µL		
30 – 300 µL	■ orange	30 µL	±3.0 %	±0.9 µL	±1.0 %	±0.3 µL	3125000060	1,050.00
		150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL		
		300 µL	±0.6 %	±1.8 µL	±0.3 %	±0.9 µL		

<sup>1)</sup> 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.

## Eppendorf Research® plus 3-, 4-, and 6-packs



Get your lab up and running fast with our 3-, 4-, and 6-packs of Research plus pipettes.



In addition to three Research plus pipettes, each pack contains one set of matching Eppendorf tips.

## Ordering information

Description	Catalog No.	List USD
<b>3-pack</b> includes 3 single-channel, adjustable-volume pipettes and 1 full box of Eppendorf epT.I.P.S.® for each pipette <sup>1)</sup>		
Volumes: 0.5–10, 10–100 and 100–1,000 µL (Option 1)	3123000900	\$ 912.00
Volumes: 2–20 <sup>2)</sup> , 20–200 and 100–1,000 µL (Option 2)	3123000918	912.00
Volumes: 100–1,000 µL, 0.5–5 mL and 1–10 mL (Option 3)	3123000926	912.00
<b>4-pack</b> includes 4 single-channel, adjustable-volume pipettes, 1 full box of Eppendorf epT.I.P.S. for each pipette		
Volumes: 0.1–2.5, 0.5–10, 10–100 and 100–1,000 µL	2231300002	1,255.00
Volumes: 0.1–2.5, 2–20 <sup>2)</sup> , 20–200 and 100–1,000 µL	2231300004	1,255.00
Volumes: 0.5–10, 2–20 <sup>2)</sup> , 20–200 and 100–1,000 µL	2231300006	1,255.00
<b>6-pack</b> includes 6 single-channel, adjustable-volume pipettes, 1 full box of Eppendorf epT.I.P.S. for each pipette <sup>1)</sup> and 1 carousel stand <sup>3)</sup>		
Volumes: 0.1–2.5, 0.5–10, 2–20 <sup>2)</sup> , 10–100, 20–200 and 100–1,000 µL	2231300008	912.00
Volumes: 0.5–10, 10–100, 30–300, 100–1,000 µL, 0.5–5 mL and 1–10 mL	2231300010	912.00

<sup>1)</sup> Excludes 5 mL and 10 mL pipettes. <sup>2)</sup> The 2-20 µL pipette included has the yellow operating button. <sup>3)</sup> Carousel stand included in delivery package.



# Eppendorf Reference<sup>®</sup> 2

## Description

The Eppendorf Reference 2 is our premium pipette. Besides improved ergonomics the design focus lays in providing the most accurate results possible, optimum user safety, reliability and robustness for a long service life. The innovative single button operation is not only fast and easy, but it also allows active aerosol<sup>1)</sup> reduction and thus protects the user, the sample and the pipette. The sturdy handle manufactured with stainless steel protects the pipette from impact and in combination with the spring loaded bumpers the Reference 2 is likely to stay within calibration even if it takes a fall. These high levels of security make the Reference 2 ideal for use with precious liquids, or in any application requiring extremely high levels of accuracy. When there can be no compromise on quality and reproducibility, Eppendorf's Reference 2 is an ideal instrument for these Liquid Handling applications.

<sup>1)</sup> An aerosol is a colloid of fine solid particles or liquid droplets, in air or another gas.



## Product features

- > The one-button operation offers a fast and ergonomic handling with reduced operating effort and active aerosol reduction. To avoid an accidental tip ejection a clear haptic feedback is provided
- > The spring loaded tip cone improves user to user reproducibility and improved ergonomics by lowering tip attachment force
- > The Reference 2 multichannel offers a high flexibility including a spring-loaded tip cone which can be switched on/off optionally
- > The secondary adjustment supports the easy adjustment of your Reference 2 for the most accurate pipetting of different liquids or other external conditions without the need for a full calibration
- > The quick lock enables an easy cleaning and maintenance of your pipette
- > The outstanding precision and accuracy of Reference 2 provides reliable results
- > 4 digit volume display with magnifying window to allow for easier volume identification
- > External edges made from stainless steel equips the pipette with outstanding robustness
- > An embedded RFID chip contains all relevant data regarding the pipette and with Eppendorf TrackIT offers simple identification and documentation

## Applications

- > Forward pipetting
- > Reverse pipetting
- > Removal of supernatants
- > Sample mixing
- > Phase extraction
- > Volume determination
- > Filling of plates, gels, and reaction vessels



**i** For more information go to [www.eppendorf.com/Reference2](http://www.eppendorf.com/Reference2)

## Ordering information

Volume range	Color code	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
Eppendorf Reference® 2, single-channel, fixed							
1 µL	■ dark gray	±2.5 %	±0.025 µL	±1.8 %	±0.018 µL	4925000014	\$331.00
2 µL	■ dark gray	±2.0 %	±0.04 µL	±1.2 %	±0.024 µL	4925000022	331.00
5 µL	■ medium gray	±1.2 %	±0.06 µL	±0.6 %	±0.03 µL	4925000030	331.00
10 µL	■ medium gray	±1.0 %	±0.1 µL	±0.5 %	±0.05 µL	4925000049	331.00
10 µL	■ yellow	±1.2 %	±0.12 µL	±0.5 %	±0.05 µL	4925000057	331.00
20 µL	■ light gray	±0.8 %	±0.16 µL	±0.3 %	±0.06 µL	4925000065	331.00
20 µL	■ yellow	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL	4925000073	331.00
25 µL	■ yellow	±1.0 %	±0.25 µL	±0.3 %	±0.075 µL	4925000081	331.00
50 µL	■ yellow	±0.7 %	±0.35 µL	±0.3 %	±0.15 µL	4925000090	331.00
100 µL	■ yellow	±0.6 %	±0.6 µL	±0.2 %	±0.2 µL	4925000103	331.00
200 µL	■ yellow	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	4925000111	331.00
200 µL	■ blue	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL	4925000120	331.00
250 µL	■ blue	±0.6 %	±1.5 µL	±0.2 %	±0.5 µL	4925000138	331.00
500 µL	■ blue	±0.6 %	±3.0 µL	±0.2 %	±1.0 µL	4925000146	331.00
1,000 µL	■ blue	±0.6 %	±6.0 µL	±0.2 %	±2.0 µL	4925000154	331.00
2 mL	■ red	±0.6 %	±0.012 mL	±0.2 %	±0.004 mL	4925000162	331.00
2.5 mL	■ red	±0.6 %	±0.015 mL	±0.2 %	±0.005 mL	4925000170	331.00

<sup>1)</sup> 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.

## Ordering information

Volume range	Color code	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
Eppendorf Reference® 2, single-channel, variable, incl. epT.I.P.S.® Box								
0.1 – 2.5 µL	■ dark gray	0.1 µL	±48.0 %	±0.048 µL	±12.0 %	±0.012 µL	4924000010	\$440.00
		0.25 µL	±12.0 %	±0.03 µL	±6.0 %	±0.015 µL		
		1.25 µL	±2.5 %	±0.031 µL	±1.5 %	±0.019 µL		
		2.5 µL	±1.4 %	±0.035 µL	±0.7 %	±0.018 µL		
0.5 – 10 µL	■ medium gray	0.5 µL	±8.0 %	±0.04 µL	±5.0 %	±0.025 µL	4924000029	440.00
		1.0 µL	±2.5 %	±0.025 µL	±1.8 %	±0.018 µL		
		5.0 µL	±1.5 %	±0.075 µL	±0.8 %	±0.04 µL		
		10 µL	±1.0 %	±0.10 µL	±0.4 %	±0.04 µL		
2 – 20 µL	■ light gray	2.0 µL	±3.0 %	±0.06 µL	±1.5 %	±0.03 µL	4924000037	440.00
		10 µL	±1.0 %	±0.10 µL	±0.6 %	±0.06 µL		
		20 µL	±0.8 %	±0.16 µL	±0.3 %	±0.06 µL		
2 – 20 µL	■ yellow	2.0 µL	±5.0 %	±0.10 µL	±1.5 %	±0.03 µL	4924000045	440.00
		10 µL	±1.2 %	±0.12 µL	±0.6 %	±0.06 µL		
		20 µL	±1.0 %	±0.2 µL	±0.3 %	±0.06 µL		
10 – 100 µL	■ yellow	10 µL	±3.0 %	±0.3 µL	±0.7 %	±0.07 µL	4924000053	440.00
		50 µL	±1.0 %	±0.5 µL	±0.3 %	±0.15 µL		
		100 µL	±0.8 %	±0.8 µL	±0.2 %	±0.2 µL		
20 – 200 µL	■ yellow	20 µL	±2.5 %	±0.5 µL	±0.7 %	±0.14 µL	4924000061	440.00
		100 µL	±1.0 %	±1.0 µL	±0.3 %	±0.3 µL		
		200 µL	±0.6 %	±1.2 µL	±0.2 %	±0.4 µL		
30 – 300 µL	■ orange	30 µL	±2.5 %	±0.75 µL	±0.7 %	±0.21 µL	4924000070	440.00
		150 µL	±1.0 %	±1.5 µL	±0.3 %	±0.45 µL		
		300 µL	±0.6 %	±1.8 µL	±0.2 %	±0.6 µL		
100 – 1,000 µL	■ blue	100 µL	±3.0 %	±3.0 µL	±0.6 %	±0.6 µL	4924000088	440.00
		500 µL	±1.0 %	±5.0 µL	±0.2 %	±1.0 µL		
		1,000 µL	±0.6 %	±6.0 µL	±0.2 %	±2.0 µL		
Eppendorf Reference® 2, single-channel, variable, incl. epT.I.P.S.® sample bag								
0.25 – 2.5 mL	■ red	0.25 mL	±4.8 %	±0.012 mL	±1.2 %	±0.003 mL	4924000096	440.00
		1.25 mL	±0.8 %	±0.010 mL	±0.2 %	±0.0025 mL		
		2.5 mL	±0.6 %	±0.015 mL	±0.2 %	±0.005 mL		
0.5 – 5 mL	■ violet	0.5 mL	±2.4 %	±0.012 mL	±0.6 %	±0.003 mL	4924000100	440.00
		2.5 mL	±1.2 %	±0.030 mL	±0.25 %	±0.006 mL		
		5.0 mL	±0.6 %	±0.030 mL	±0.15 %	±0.0075 mL		
1 – 10 mL	■ turquoise	1.0 mL	±3.0 %	±0.030 mL	±0.6 %	±0.006 mL	4924000118	440.00
		5.0 mL	±0.8 %	±0.040 mL	±0.2 %	±0.010 mL		
		10.0 mL	±0.6 %	±0.060 mL	±0.15 %	±0.015 mL		

<sup>1)</sup> 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.



# Eppendorf Reference® 2



## Ordering information

Volume range	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Reference® 2, 8-channel, variable, incl. epT.I.P.S.® Box</b>							
0.5 – 10 µL ■ medium gray	0.5 µL	±12.0 %	±0.06 µL	±8.0 %	±0.04 µL	4926000018	\$1,078.00
	1.0 µL	±8.0 %	±0.08 µL	±5.0 %	±0.05 µL		
	5.0 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL		
	10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL		
10 – 100 µL ■ yellow	10 µL	±3.0 %	±0.3 µL	±2.0 %	±0.2 µL	4926000034	1,078.00
	50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL		
	100 µL	±0.8 %	±0.8 µL	±0.3 %	±0.3 µL		
30 – 300 µL ■ orange	30 µL	±3.0 %	±0.9 µL	±1.0 %	±0.3 µL	4926000050	1,078.00
	150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL		
	300 µL	±0.6 %	±1.8 µL	±0.3 %	±0.9 µL		
<b>Eppendorf Reference® 2, 12-channel, variable, incl. epT.I.P.S.® Box</b>							
0.5 – 10 µL ■ medium gray	0.5 µL	±12.0 %	±0.06 µL	±8.0 %	±0.04 µL	4926000026	1,277.00
	1.0 µL	±8.0 %	±0.08 µL	±5.0 %	±0.05 µL		
	5.0 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL		
	10 µL	±2.0 %	±0.2 µL	±1.0 %	±0.1 µL		
10 – 100 µL ■ yellow	10 µL	±3.0 %	±0.3 µL	±2.0 %	±0.2 µL	4926000042	1,277.00
	50 µL	±1.0 %	±0.5 µL	±0.8 %	±0.4 µL		
	100 µL	±0.8 %	±0.8 µL	±0.3 %	±0.3 µL		
30 – 300 µL ■ orange	30 µL	±3.0 %	±0.9 µL	±1.0 %	±0.3 µL	4926000069	1,277.00
	150 µL	±1.0 %	±1.5 µL	±0.5 %	±0.75 µL		
	300 µL	±0.6 %	±1.8 µL	±0.3 %	±0.9 µL		

<sup>1)</sup> 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.

## Ordering information

Description	Catalog No.	List USD
<b>3-pack</b> includes 3 single-channel, adjustable-volume pipettes and 1 full box of Eppendorf epT.I.P.S.® for each pipette <sup>1)</sup>		
Volumes: 0.5–10, 10–100 and 100–1,000 µL (Option 1)	4924000908	\$1,040.00
Volumes: 2–20 <sup>2)</sup> , 20–200 and 100–1,000 µL (Option 2)	4924000916	1,040.00
Volumes: 100–1,000 µL, 0.5–5 mL and 1–10 mL (Option 3)	4924000916	1,040.00
<b>4-pack</b> includes 4 single-channel, adjustable-volume pipettes, 1 full box of Eppendorf epT.I.P.S. for each pipette		
Volumes: 0.1–2.5, 0.5–10, 10–100 and 100–1,000 µL	2231302001	1,436.00
Volumes: 0.1–2.5, 2–20 <sup>2)</sup> , 20–200 and 100–1,000 µL	2231302003	1,436.00
Volumes: 0.5–10, 2–20 <sup>2)</sup> , 20–200 and 100–1,000 µL	2231302005	1,436.00
<b>6-pack</b> includes 6 single-channel, adjustable-volume pipettes, 1 full box of Eppendorf epT.I.P.S. for each pipette <sup>1)</sup> and 1 carousel stand <sup>3)</sup>		
Volumes: 0.1–2.5, 0.5–10, 2–20 <sup>2)</sup> , 10–100, 20–200 and 100–1,000 µL	2231302007	2,142.00
Volumes: 0.5–10, 10–100, 30–300, 100–1,000 µL, 0.5–5 mL and 1–10 mL	2231302009	2,142.00

<sup>1)</sup> Excludes 5 mL and 10 mL pipettes. <sup>2)</sup> The 2-20 µL pipette included has the yellow operating button. <sup>3)</sup> Carousel stand included in delivery package.

i Pipette service and maintenance contracts can be found on page 394. Pipette tips can be found on page 40 onward.

i For more information go to [www.eppendorf.com/Reference2](http://www.eppendorf.com/Reference2)

# Eppendorf Xplorer®/Xplorer plus

## Description

The Eppendorf Xplorer pipettes are electronic single, 8 and 12 channel pipettes designed to aspirate and dispense liquid volumes from 0.5 µL to 10 mL while eliminating many of the potential error risks associated with manual pipetting. The intuitive operating concept and ergonomic design, supported by Eppendorf PhysioCare Concept® set new standards in simplicity, precision and reproducibility. It can be set to 9 different languages: Chinese, Dutch, English, French, German, Italian, Japanese, Portuguese and Spanish. The Xplorer pipettes are the ideal instrument if you need precisely adjustable parameters, reproducible and accurate results while experiencing fatigue-free pipetting and always maintaining full control over pipetting procedures.



## Product features

- > Intuitive operating concept for quick and easy work
- > Multifunctional rocker
- > Selection dial
- > Innovative ejector
- > Ergonomic display angle
- > Convenient handle
- > Powerful rechargeable battery
- > Flexible charging concept
- > Spring-loaded tip cone (except 5 mL and 10 mL)
- > Adjustment to external conditions (e.g. geographic height, liquids with high density)



Modes of operation	Xplorer	Xplorer plus
Pipetting (Pip): Aspiration and Dispensing of liquids.	■	■
Manual Pipetting (Man): Aspiration of liquid can be manually stopped prior to reaching the max set volume; used for volume determination.	■	■
Pipetting and Mixing (P/M): Samples are aspirated and dispensed automatically followed by an adjustable number of mixing cycles.	■	■
Dispensing (Dis): Dispensing of liquid in equal partial volumes.	■	■
Automatic Dispensing (Ads): Automatic dispensing of liquid in equal partial volumes at user defined time intervals.	■	■
Special mode (Spc) – Multi Aspiration: Consecutive aspiration for pooling into one pipette tip.		■
Special mode (Spc) – Sequential Dispensing: Aspiration of liquid followed by dispensing it in up to 10 user-defined volume steps.		■
Special mode (Spc) – Reverse Pipetting: Over-aspiration of liquid followed by a regular dispensing step. Ideal for non-aqueous solutions.		■
Special mode (Spc) – Diluting: Aspiration of a diluent and a sample separated by an air bubble.		■
Special mode (Spc) – Sequential pipetting: Pipetting of up to 10 user-defined volumes in sequential order.		■
Fix Volume (Fix): Save up to 10 of your most frequently used volumes including aspiration and dispense speed for ease of operation.		■
Programming (Prg): Save up to 10 of your most common methods with up to 4 different pipetting steps each.		■
Options (Opt): Save favorite settings, set service intervals, activate key lock and more.	■	■

i For more information go to [www.eppendorf.com/Xplorer](http://www.eppendorf.com/Xplorer)



# Eppendorf Xplorer®

## Ordering information

Volume range	Color code	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Xplorer®, single-channel, variable</b>								
0.5 – 10 µL	medium gray	0.5 µL	±6.0 %	±0.03 µL	±3.0 %	±0.015 µL	4861000015	\$801.00
		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		
5 – 100 µL	yellow	5 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL	4861000023	801.00
		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		
15 – 300 µL	orange	15 µL	±5.0 %	±0.75 µL	±1.4 %	±0.21 µL	4861000031	801.00
		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	50 µL	±6.0 %	±3 µL	±1.0 %	±0.5 µL	4861000040	801.00
		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		
0.2 – 5 mL	violet	250 µL	±4.8 %	±12 µL	±1.2 %	±3 µL	4861000058	801.00
		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	500 µL	±6.0 %	±30 µL	±1.2 %	±6 µL	4861000066	801.00
		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		

<sup>1)</sup> 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.

## Ordering information

Volume range	Color code	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Xplorer®, 8-channel, variable</b>								
0.5 – 10 µL	medium gray	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL	4861000104	\$1,365.00
		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	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL	4861000120	1,365.00
		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	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL	4861000147	1,365.00
		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	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL	4861000163	1,365.00
		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		
<b>Eppendorf Xplorer®, 12-channel, variable</b>								
0.5 – 10 µL	medium gray	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL	4861000112	1,680.00
		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	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL	4861000139	1,680.00
		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	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL	4861000155	1,680.00
		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	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL	4861000171	1,680.00
		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 %	±14.2 µL	±0.3 %	±3.6 µL		

<sup>1)</sup> 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.

# Eppendorf Xplorer® plus

## Ordering information

Volume range	Color code	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Xplorer® plus, single-channel, variable</b>								
0.5 – 10 µL	medium gray	0.5 µL	±6.0 %	±0.03 µL	±3.0 %	±0.015 µL	4861000708	\$999.00
		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		
5 – 100 µL	yellow	5 µL	±4.0 %	±0.2 µL	±2.0 %	±0.1 µL	4861000716	999.00
		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		
15 – 300 µL	orange	15 µL	±5.0 %	±0.75 µL	±1.4 %	±0.21 µL	4861000724	999.00
		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	50 µL	±6.0 %	±3 µL	±1.0 %	±0.5 µL	4861000732	999.00
		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		
0.2 – 5 mL	violet	200 µL	±4.8 %	±12 µL	±1.2 %	±3 µL	4861000740	999.00
		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	500 µL	±6.0 %	±30 µL	±1.2 %	±6 µL	4861000759	999.00
		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		

<sup>1)</sup> 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.

## Ordering information

Volume range	Color code	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Xplorer® plus, 8-channel, variable</b>								
0.5 – 10 µL	medium gray	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL	4861000767	\$1,710.00
		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	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL	4861000783	1,710.00
		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	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL	4861000805	1,710.00
		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	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL	4861000821	1,710.00
		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		
<b>Eppendorf Xplorer® plus, 12-channel, variable</b>								
0.5 – 10 µL	medium gray	0.5 µL	±10.0 %	±0.05 µL	±6.0 %	±0.03 µL	4861000775	2,110.00
		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	5 µL	±6.0 %	±0.3 µL	±4.0 %	±0.2 µL	4861000791	2,110.00
		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	15 µL	±6.0 %	±0.9 µL	±2.0 %	±0.3 µL	4861000813	2,110.00
		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	50 µL	±8.0 %	±4.0 µL	±1.2 %	±0.6 µL	4861000830	2,110.00
		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 %	±14.2 µL	±0.3 %	±3.6 µL		

<sup>1)</sup> 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.



# NEW - Eppendorf Pipette Holder System

## Description

Carousels, stands and wall mount devices: The new Pipette Holder System is perfect for all users of handheld liquid handling instruments who need a highly flexible system for their Eppendorf pipettes and Repeaters. Carousels and stands provide a robust design with a small footprint. To save precious bench-top space, carousels carry both manual and electronic instruments. And only Eppendorf offers a charger carousel with intelligent charging electronics that carries up to 6 instruments.



1. The Charger Carousel 2 for electronic devices and the Pipette Carousel 2 for manual pipettes offer more flexibility and more capacity than ever before.

- > Charger Carousel 2 for up to six electronic devices with a magnetic power connector for fast and easy connection
- > Rotatable pipette holders carry all current manual Eppendorf pipettes and most predecessors





2. With Charger Stand 2, the Xplorer/ Xplorer plus or Repeater E3/E3x is always fully charged and ready for use. Pipette Stand 2 carries one Repeater M4.
- > Large rubber feet protect stands and carousels from liquids spilled on lab bench
  - > Charger Stand 2 with cord wrap functionality for more convenience



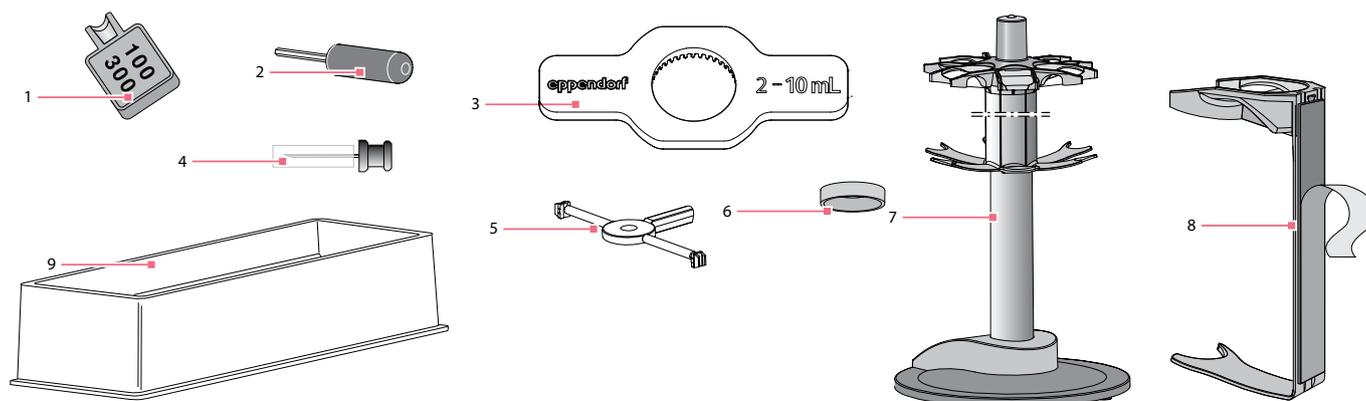
3. Place your pipette and Repeater where you need them: Mounted to a wall, on the shelf above your bench or inside a biological safety cabinet.
- > Pictograms on all holders for clear assignment in the lab
  - > Pipette holders are compatible with both Eppendorf Research and Reference pipettes

#### Ordering information

Description	Catalog No.	List USD
<b>Pipette Carousel 2</b> , for 6 Eppendorf Research®, Research® plus, Reference®, Reference® 2 or Biomaster®, additional pipette holders are optionally available	3116000015	\$154.00
<b>Charger Carousel 2</b> , for 6 Eppendorf Xplorer® or Xplorer® plus, mains/power adapter included, additional charger shells and pipette holders are optionally available	3116000023	794.00
<b>Charger Stand 2</b> , for one Eppendorf Xplorer® or Xplorer® plus, operated with mains/power adapter supplied with Eppendorf Xplorer® or Xplorer® plus	3116000031	264.00
<b>Charger Stand 2</b> , for one Eppendorf Repeater® E3/E3x or Repeater® stream/Xstream, operated with mains/power adapter supplied with Eppendorf Repeater® E3/E3x or Repeater® stream/Xstream	3116000040	264.00
<b>Pipette Stand 2</b> , for one Eppendorf Repeater® M4, without charging functionality, additional pipette holders are optionally available	3116000058	130.00
<b>Pipette Holder 2</b> , for one Eppendorf Research®, Research® plus, Reference® 2 or Biomaster®, for Pipette Carousel 2 and Charger Carousel 2 or wall mounting, sticky tape included	3116000112	34.50
<b>Pipette Holder 2</b> , for one Eppendorf Xplorer® or Xplorer® plus, for Pipette Carousel 2 or wall mounting, sticky tape included, without charging functionality	3116000120	53.00
<b>Pipette Holder 2</b> , for one Eppendorf Repeater® E3/E3x or Eppendorf Repeater® stream/Xstream, for Pipette Carousel 2 or wall mounting, sticky tape included, without charging functionality	3116000139	53.00
<b>Pipette Holder 2</b> , for one Eppendorf Repeater® M4, for Pipette Carousel 2 and Charger Carousel 2 or wall mounting, sticky tape included	3116000147	53.00
<b>Charger Shell 2</b> , for one Eppendorf Xplorer® or Xplorer® plus, for Charger Carousel 2 (with charging functionality)	3116602007	62.90
<b>Charger Shell 2</b> , for one Eppendorf Repeater® E3/E3x or Eppendorf Repeater® stream/Xstream, for Charger Carousel 2, with charging functionality	3116603003	62.90



# Pipetting Accessories



1. Cutting tool
2. Adjustment tool
3. Key for detachment
4. Pin
5. Safety plug tool
6. Locking ring
7. Pipette carousel
8. Holder or wall mount
9. Reagent reservoir Tip-Tub

## Research plus Accessories

Description	Catalog No.	List USD
<b>Pipette Carousel 2</b> , for 6 Eppendorf Research®, Research® plus, Reference®, Reference® 2 or Biomaster®, additional pipette holders are optionally available	3116000015	\$154.00
<b>Pipette Holder 2</b> , for one Eppendorf Research®, Research® plus, Reference® 2 or Biomaster®, for Pipette Carousel 2 and Charger Carousel 2 or wall mounting, sticky tape included	3116000112	34.50
<b>Eppendorf Research® plus red adjustment seal ADJ</b> , 1 set = 5 pieces	3120636005	7.80
<b>Adjustment tool</b> , for changing factory or secondary user adjustment	3120633006	11.70
<b>Safety plug tools</b> , 5 pieces	3120639004	19.10
<b>Eppendorf Research® plus protection filter, for tip cone, 5 mL</b> , color code: violet, 1 set = 50 pieces	3120632000	34.70
<b>Eppendorf Research® plus protection filter, for tip cone, 10 mL</b> , color code: turquoise, 1 set = 50 pieces	022472305	42.90
<b>O-ring for tip cones, 24 pcs.</b> , red, for 100 and 300 µL multichannel pipettes, with mounting aid (1 set = 24 pieces)	3122611000	29.80
<b>Cutting tool</b> , for O-rings of 100 and 300 µL multichannel pipettes	3122610003	11.70
<b>Key for detachment of 2-10 mL pipettes lower parts</b>	3120634002	11.70
<b>Locking ring</b> , to prevent spring action of 2.5 µL to 1,000 µL single channel pipettes tip cones	3120635009	6.70
<b>Tip-Tub reagent reservoir 70 mL</b> , autoclavable reservoir for aspirating liquids with multichannel pipettes, 1 set = 10 reservoirs and 10 lids	022265806	47.50
<b>Pipette grease with lint-free applicator</b>	0013022153	26.00
<b>Eppendorf TrackIT</b> , RFID Reader and Software	3903000014	654.00

**Reference 2 Accessories**

Description	Catalog No.	List USD
<b>Pipette Carousel 2</b> , for 6 Eppendorf Research®, Research® plus, Reference®, Reference® 2 or Biomaster®, additional	311600015	\$154.00
<b>Pipette Holder 2</b> , for one Eppendorf Research®, Research® plus, Reference® 2 or Biomaster®, for Pipette Carousel 2 and Charger Carousel 2 or wall mounting, sticky tape included	311600012	34.50
<b>Eppendorf Reference® 2 red adjustment seal ADJ</b> , incl. pin for removing the inserted seal, 1 set = 5 pieces	4920626004	11.20
<b>Eppendorf Reference® 2 red safety plug</b> , incl. pin for removing the inserted safety plug, 1 set = 5 pieces	4920625008	15.00
<b>Adjustment tool</b> , for changing factory or secondary user adjustment	3120633006	11.70
<b>Eppendorf Reference® 2 protection filter 2.5 mL</b> , 10 filters with 1 filter sleeve, for 0.25 – 2.5 mL variable, 2 mL fixed volume, 2.5 mL fixed volume, color code red	4920622009	18.50
<b>Eppendorf Reference® 2 protection filter 5 mL</b> , 10 filters with 1 filter sleeve, for 0.5 – 5 mL variable, color code violet	4920623005	18.50
<b>Eppendorf Reference® 2 protection filter 10 mL</b> , 10 filters with 1 filter sleeve, for 1 – 10 mL variable, color code turquoise	4920624001	18.50
<b>O-ring for tip cones, 24 pcs.</b> , red, for 100 and 300 µL multichannel pipettes, with mounting aid (1 set = 24 pieces)	3122611000	29.80
<b>Cutting tool</b> , for O-rings of 100 and 300 µL multichannel pipettes	3122610003	11.70
<b>Key for detachment of 2–10 mL pipettes lower parts</b>	3120634002	11.70
<b>Locking ring</b> , to prevent spring action of 2.5 µL to 1,000 µL single channel pipettes tip cones	3120635009	6.70

**Xplorer and Xplorer plus Accessories**

Description	Catalog No.	List USD
<b>Charger Carousel 2</b> , for 6 Eppendorf Xplorer® or Xplorer® plus, mains/power adapter included, additional charger shells and pipette holders are optionally available	311600023	\$794.00
<b>Charger Stand 2</b> , for one Eppendorf Xplorer® or Xplorer® plus, operated with mains/power adapter supplied with Eppendorf Xplorer® or Xplorer® plus	311600031	264.00
<b>Charger Shell 2</b> , for one Eppendorf Xplorer® or Xplorer® plus, for Charger Carousel 2 (with charging functionality)	3116602007	62.90
<b>Pipette Holder 2</b> , for one Eppendorf Xplorer® or Xplorer® plus, for Pipette Carousel 2 or wall mounting, sticky tape included, without charging functionality	3116000120	53.00
<b>Spare charging cable</b> , 100-240 VAC/5 VDC (c), with power plug adapters for Eppendorf Xplorer®, electronic Repeater® and use with charger stand	4986603005	34.70
<b>Spare charging cable</b> , incl. power plug adapters for charger carousel for Eppendorf Xplorer® and electronic Repeater®	4880603006	59.30
<b>Eppendorf protection filter 5 mL</b> , 10 filters with 1 filter sleeve, for 0.5-5 mL variable, color code violet	3120632000	34.70
<b>Eppendorf protection filter 10 mL</b> , 10 filters with 1 filter sleeve, for 1-10 mL variable, color code turquoise	022472305	42.90
<b>Cutting tool</b> , for O-rings of 100 and 300 µL multichannel pipettes	3122610003	11.70
<b>Cutting tool</b> , for O-rings of 1,200 µL multichannel pipettes	4860736000	21.60
<b>O-ring for tip cones, 24 pcs.</b> , red, for 100 and 300 µL multichannel pipettes, with mounting aid (1 set = 24 pieces)	3122611000	29.80
<b>O-rings for tip cones, 24 pcs.</b> , red, for 1,200 µL multichannel pipettes (1 set = 24 pieces)	4860716009	24.80
<b>Key for detachment of 2–10 mL pipettes lower parts</b>	3120634002	11.70
<b>Unlocking tool, to open 1,200 µL multichannel manifolds</b>	4861605006	25.30
<b>Locking ring</b> , to prevent spring action of 2.5 µL to 1,000 µL single channel pipettes tip cones	3120635009	6.70
<b>Locking clip for 8-channel pipette</b> , to prevent spring action of tip cones	3122612006	13.90
<b>Locking clip for 12-channel pipette</b> , to prevent spring action of tip cones	3122613002	15.90
<b>Tip-Tub reagent reservoir 70 mL</b> , autoclavable reservoir for aspirating liquids with multichannel pipettes, 1 set = 10 reservoirs and 10 lids	022265806	47.50



# Eppendorf Purity Grades for Tips



## Eppendorf epT.I.P.S.<sup>®</sup>, ep Dualfilter T.I.P.S.<sup>®</sup> and Combitips advanced<sup>®</sup> stand for highest quality and purity

The high precision and accuracy of pipette tips and Combitips<sup>®</sup> is guaranteed by precise molding. Each lot of pipette tips and Combitips is subject to gravimetric measurement during final testing. Low wetting ensures reliable volume readings and minimal adhesion.

Pipette tips and Combitip cylinders are made of PP (polypropylene). A relatively inert plastic characterized by low wettability as well as high dimensional and mechanical stability across a wide temperature range. For the Combitips advanced pistons PE (polyethylene) is used. This is due to the fact that ideal running properties between two parts can only be achieved by using two different types of plastic. Our tips are available in a variety of purity grades (see table beside). For further details please read page 434.

## Eppendorf Certificate

### Certificate of Purity – PCR clean

This package contains a high quality consumable manufactured under the PCR clean Eppendorf Purity Standard.

The Eppendorf PCR clean consumables are produced in a class 6 (according to VDI 2083) and a class 100,000 (according to U.S. Fed. Stand. 209 D) clean room environment.

For this product Eppendorf certifies the following [\*]:

Free of detectable

- Human DNA
- DNase
- RNase
- PCR inhibitors

Quality control and subsequent certification is done by an independent laboratory (accredited by DAkkS). Lot-specific certificates are available on request or on the internet at [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates).

The certification comprises the following tests:

**Human DNA Contamination Test**

A PCR master mix is prepared using the QuantiTect<sup>®</sup> Sybr<sup>®</sup> Green PCR Kit (Qiagen<sup>®</sup>) and primer for the detection of human DNA. The primers amplify a 294 bp fragment present in more than 1x10<sup>5</sup> copies per human cell. The master mix (15 µl) is added to 5 positive control vessels containing known amounts of human DNA (32, 16, 8, 4 and 2 pg in 10 µl H<sub>2</sub>O) plus a negative control (10 µl DNA-free H<sub>2</sub>O).

15 samples are rinsed one after another with DNA-free water. 10 µl of this solution is added to 15 µl master mix. PCR is done for 30 cycles.

The emittance of Sybr Green-induced fluorescence is detected in samples and controls. For the samples to pass certification, no fluorescence must be found corresponding to the negative control.

**DNase Test**

15 samples are rinsed one after another with DNA-free water. 17 µl of these solutions are mixed with 3 µl DNase-buffer containing 100 bp DNA-ladder in a DNase-free tube. A positive control is spiked with DNase, a negative control contains DNA-free water. All tubes are incubated for 24 h at 37 °C.

Page 1 of 2  
000 2557 051 07

[www.eppendorf.com](http://www.eppendorf.com)

## Certificate of Purity

### – Eppendorf PCR Clean & Sterile –

LADR GmbH  
Medizinisches Versorgungszentrum Bremen  
Bereich Labordiagnostik, Falschmittel- & Ursubstanzlab  
Leitung: Dipl.-Stat. Thomas Weigel

Accredited by

**epT.I.P.S.<sup>®</sup> LoRetention Dualfilter 0.1 - 10 µl S**

15x 80 Tip  
PCR clean / sterile

Order no.: 0000 077 018    Lot no.: 00170000

Expiry date: 2022-01

DAkkS 01709900

STERILE

<p><b>* Human DNA / humane DNA</b> Method / Methode: Polymerase Chain Reaction Limit / Grenzwert: + 2 pg. less than one human cell / weniger als eine humane Zelle</p> <p><b>* RNase</b> Method / Methode: DNase Digestion / DNA Verdauung mit abgewaschener / nicht nachgewiesener 6.000- Nucleosidsequenz Limit / Grenzwert: 1.0 x 10<sup>10</sup> Nucleotid-units</p> <p><b>* PCR Inhibition / PCR Inhibitoren</b> Method / Methode: Polymerase Chain Reaction Limit / Grenzwert: Less than 10 samples amplifiable / weniger als 10 amplifizierbare Proben</p>	<p><b>* Sterility / Sterilität</b> Test method / Prüfverfahren: Detection according to DIN EN ISO 11163:2015 + 25 µl of sterile distilled water with 50 µl (Sterility Assurance Level of 10<sup>-6</sup>) + 25 µl of sterile distilled water with 50 µl (method of detection for the product) Limit / Grenzwert: 0 Ausprägung gemäß DIN EN ISO 11163:2015 oder 0 (Sterilisation Distribution bei einem Lot von 10<sup>6</sup>) This certification is done in accordance with the standard requirements of the DAkkS Product.</p> <p>Test method / Prüfverfahren: USP, Ph. Eur. 2.6.12</p> <p><b>* Endotoxin</b> Test method / Prüfverfahren: Kinendotoxinaktivität LA, End (Ph. Eur. 2.6.14) / Kinendotoxinaktivität LAU-Test (Ph. Eur. 2.6.14) Limit / Grenzwert: &lt; 0.001 EU (EU I.E.) / 0.125 IU/ml</p>
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Testing of the above described lot showed conformity within the limits of detection. The lot is released for use.  
Die Prüfung des oben angegebenen Lots ergab eine Eintragung des Grenzwerts. Das Lot ist freigegeben.

Date / Datum: 02.01.2021    Registration number / Eingangsnummer: Ep 1701 1553    Dipl.-Stat. Thomas Weigel

The test results refer exclusively to the items tested. The certificate must not be copied partially without the approval of LADR GmbH.  
Die Prüfergebnisse beziehen sich ausschließlich auf die Probengetests. Das Zertifikat darf ausgenommen nicht ohne schriftliche Genehmigung der LADR GmbH vervielfältigt werden.

LADR GmbH MVZ Bremen, Bereich Labordiagnostik & Ursubstanzlab | Friesen-Kanal-Str. 22 | D-28205 Bremen | Germany  
Phone: +49 421 4307-000 | Fax: +49 421 4307-158 | [anforderungen@laborzentrum-bremen.de](mailto:anforderungen@laborzentrum-bremen.de) | [www.laborzentrum-bremen.de](http://www.laborzentrum-bremen.de)

## Pure Quality

With the strictest control criteria, internally and externally monitored, we guarantee the consistently high quality of our products from lot to lot. Our consumables are available in a variety of purity qualities. Eppendorf Quality™ as well as more advanced purity grades: "Sterile, Protein-free, PCR clean, Eppendorf Forensic DNA Grade, and Eppendorf Biopur". In addition to our internal process controls and general quality certificates, lot-specific certificates are provided by an external accredited laboratory for the Sterile, Protein-free, PCR clean, Eppendorf Forensic DNA Grade, and Eppendorf Biopur purity grades. This allows us to consistently meet our customers' high demands when it comes to purity ([www.eppendorf.com/purity](http://www.eppendorf.com/purity)). As a special service, we make the inspection certificate for each delivered lot available online ([www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)).



Purity grades	Eppendorf Quality™	Eppendorf sterile	Eppendorf PCR clean	Eppendorf sterile and PCR clean	Eppendorf Forensic DNA Grade <sup>4)</sup>	Eppendorf Biopur <sup>®</sup>
<b>Continuous quality control for the following relevant criteria:</b>						
Function, tightness, precision	■	■	■	■	■	■
Low wetting	■	■	■	■	■	■
High chemical resistance	■	■	■	■	■	■
High thermal resistance	■	■	■	■	■	■
High resistance to centrifugation forces <sup>1)</sup>	■	■	■	■	■	■
High transparency	■	■	■	■	■	■
Precisely shaped	■	■	■	■	■	■
<b>Lot-specific certified<sup>2)</sup> for the following purity criteria:</b>						
Pyrogen-free (endotoxin-free)		■		■		■
Sterile (Ph.Eur./USP)		■		■		■
Human DNA-free			■	■	■	■
DNA-free (Human- and bacteria DNA)						■
DNase-free			■	■	■	■
RNase-free			■	■	■	■
PCR-inhibitor-free			■	■	■	■
ATP-free						■
<b>Eppendorf tips</b>						
epT.I.P.S. <sup>®</sup> Standard, Box and Set	■					
epT.I.P.S. <sup>®</sup> Reloads	■		■			
epT.I.P.S. <sup>®</sup> Racks		■ <sup>3)</sup>				■
epT.I.P.S. <sup>®</sup> Singles						■
ep Dualfilter T.I.P.S. <sup>®</sup>				■	■	
ep Dualfilter T.I.P.S. <sup>®</sup> SealMax				■		
ep Dualfilter T.I.P.S. <sup>®</sup> LoRetention				■		
Combitips advanced <sup>®</sup>	■	■ <sup>3)</sup>	■		■	■
epT.I.P.S. <sup>®</sup> LoRetention	■		■			
epT.I.P.S. <sup>®</sup> Motion	■	■				
epT.I.P.S. <sup>®</sup> Motion filtertips		■	■	■		

<sup>1)</sup> For accurate details regarding resistance to centrifugation, please refer to the respective product pages. <sup>2)</sup> Lot-specific certificate can be downloaded from [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates). <sup>3)</sup> Only available in North America. <sup>4)</sup> According to ISO 18385.



## epT.I.P.S.®

### Description

For epT.I.P.S. – the original Eppendorf “Totally Integrated Pipetting System” – the tips are optimally coordinated to Eppendorf pipettes and, of course, meet EN ISO 8655 requirements. This has resulted in minimal attachment and ejection forces with the highest level of tightness. epT.I.P.S. pipette tips can be used with pipettes from other manufacturers. Optimal wetting properties, high transparency and special, certified purity grades are the visible expression of our product and production philosophy.

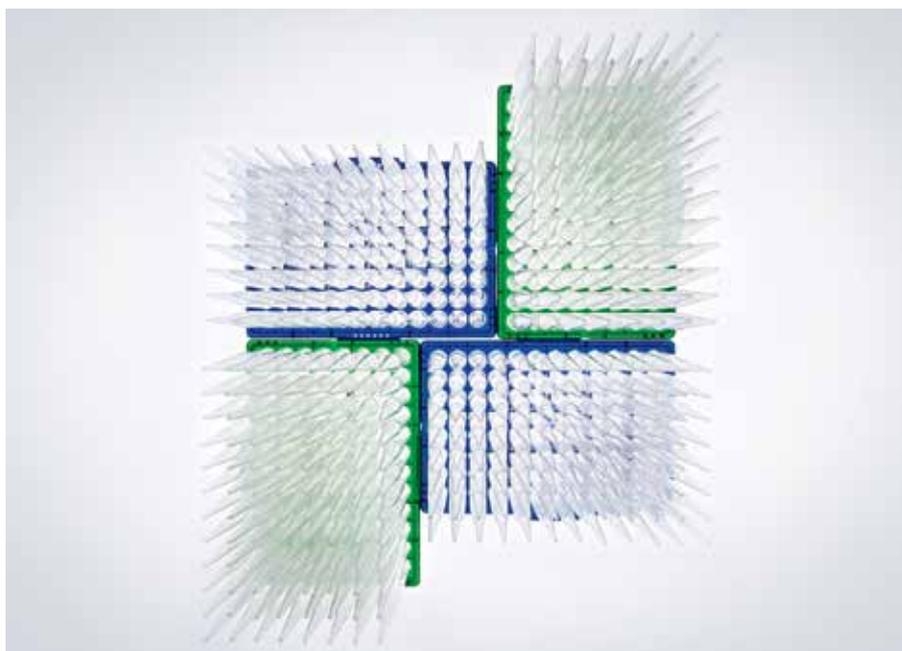


### Product features

- > The ergonomically optimized cone geometry provides the optimal pipette fit on the Eppendorf pipette
- > epT.I.P.S. pipette tips can be used universally, including pipette models from other manufacturers
- > Fine graduations make visual checks of the pipetting volume even easier
- > Long, narrow tips reach the base of narrow and high vessels without touching the top of the vessel edge
- > Fine retracted or extended tips simplify work with small volumes
- > Available in purity grades of: Eppendorf Quality, PCR clean, Eppendorf Biopur®
- > Color-coded trays make volume identification and allocation of Eppendorf pipettes easier than ever

### Applications

- > Pipetting liquids
- > Dispensing liquids
- > Mixing liquids
- > Filling plates and reaction vessels
- > Filling gels for electrophoresis
- > Phase extraction and removal of supernatants



**i** For more information go to [www.eppendorf.com/epTips](http://www.eppendorf.com/epTips)



### epT.I.P.S.<sup>®</sup> Standard

- > Original, high-quality Eppendorf pipette tips packaged in resealable bags
- > Available in sizes from 10  $\mu$ L to 10 mL in Eppendorf Quality purity grade
- > epT.I.P.S. Standard pipette tips can be autoclaved at 121  $^{\circ}$ C in 20 min.



### epT.I.P.S.<sup>®</sup> Box/epT.I.P.S.<sup>®</sup> Set

- > Contamination-free transfer of trays to stable working box
- > Extended footprint of the box provides stability during tip attachment
- > System optimized for use with multichannel pipettes
- > Color-coded trays for simple identification of tips and pipette
- > Tips can be attached to pipette from refill trays
- > Boxes and trays are autoclavable
- > epT.I.P.S. Box and epT.I.P.S. Set available in Eppendorf Quality



### epT.I.P.S.<sup>®</sup> Reloads

- > Reduced waste as compared with disposable racks
- > The refill trays can be autoclaved up to 121  $^{\circ}$ C 20 min., in packaging and without foil, for subsequent use
- > The refill system, depending on tips size, is packaged as either dual-sided or in stack form
- > Available in purity grades of Eppendorf Quality and PCR clean
- > Color-coded trays for simple volume and pipette identification



### epT.I.P.S.<sup>®</sup> Racks

- > Hinged lid can be flipped open with one hand
- > Ideal for when absolute purity is needed. Each rack is individually sealed to guarantee purity
- > Extended footprint provides stability during tip attachment
- > Fully autoclavable
- > Each production lot inspected continuously by independent laboratory
- > Lot-specific certificates available for PCR Clean, Sterile and Biopur racks at [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)
- > Packed in racks with 96, 48 or 24 tips



## epT.I.P.S.<sup>®</sup>



### epT.I.P.S.<sup>®</sup> Singles

- > Eppendorf Biopur pipette tip, individually wrapped
- > Guaranteed PCR clean, sterile, pyrogen-, ATP- and DNA-free
- > Batch number and expiration date on each blister package
- > Each production lot inspected continuously by independent laboratory
- > Lot-specific certificates available at [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)

## Special Tips



### Eppendorf GELoader<sup>®</sup>

- > Special tip for gel electrophoresis, loading of polyacrylamide gels
- > Flexible long and narrow tips for handling of smallest volumes
- > GELoader tips and rack autoclavable
- > Highest precision and accuracy when used with Eppendorf pipettes for 0.5 to 10  $\mu$ L (gray control button)



### Eppendorf Microloader<sup>™</sup>

- > Extremely long, fine and flexible tip for filling of microcapillaries for microinjection and where additional reach is needed
- > Microloader tips and rack autoclavable
- > Highest precision and accuracy when used with Eppendorf pipettes for 0.5 to 10  $\mu$ L (gray control button)

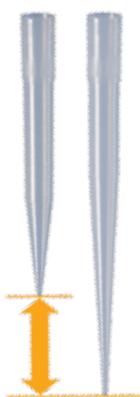
**i** Ordering information see page 48 and 53.

# epT.I.P.S.<sup>®</sup> Long

## Description

With the slim design of the extra long epT.I.P.S. and ep Dualfilter T.I.P.S. pipette tips, you always achieve best results when pipetting into Eppendorf Tubes<sup>®</sup> 5.0 mL, conical tubes, cell culture flasks, deep wells and other deep vessels. Furthermore, the risk of touching the walls of these deep vessels is minimized and cross-contamination is virtually eliminated. Extra long epT.I.P.S. are available in the following volumes:

- > 0.5 – 20  $\mu$ L (46 mm): Ideal for pipetting from 0.2, 0.5, 1.5, and 2.0 mL tubes and plates
- > 50 – 1,250  $\mu$ L (103 mm): Ideal for pipetting out of 1 mL or 2 mL deepwell plates
- > 0.2 – 5 mL (175 mm): Ideal for pipetting out of 5 mL tubes, 15 mL tubes, 50 mL tubes, 25 cm<sup>3</sup> cell culture flasks, volumetric flasks and 25 mL graduated cylinders
- > 0.5 – 10 mL (243 mm): Ideal for pipetting out of 15 mL tubes, 50 mL tubes, 75 cm<sup>3</sup> cell culture flasks, 1 L reagent bottles, and Erlenmeyer flasks or measuring cylinders



## Product features

- > Slim design of the extra long epT.I.P.S. and ep Dualfilter T.I.P.S. pipette tips
- > Always obtain best results when pipetting from and into Eppendorf Tubes<sup>®</sup> 5.0 mL, conical tubes, cell culture flasks, deep wells and other deep vessels
- > The risk of touching the walls of deep vessels is minimized and cross-contamination is virtually eliminated
- > Available in Eppendorf Quality, PCR clean, PCR clean/Sterile (sterile and pyrogen-free), and Eppendorf Biopur<sup>®</sup> purity grades
- > Also available as ep Dualfilter T.I.P.S. filter tips

## Applications

- > Pipetting liquids
- > Dispensing liquids
- > Mixing liquids
- > Filling plates and reaction vessels
- > Filling gels for electrophoresis
- > Phase extraction and removal of supernatants



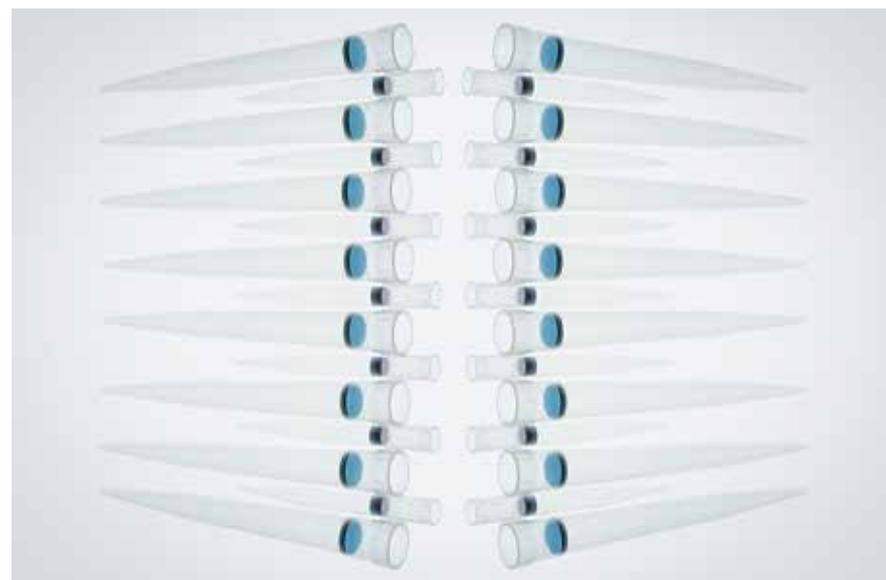
i For more information go to [www.eppendorf.com/epTips](http://www.eppendorf.com/epTips)



## ep Dualfilter T.I.P.S.<sup>®</sup>

### Description

ep Dualfilter T.I.P.S. filter tips are filter tips with a two-phase filter for contamination protection. The two filter layers made of flexible, hydrophobic material, fit perfectly in the tip cone, and retain practically 100 % of all aerosols<sup>1)</sup> and biomolecules. This filtering effect is achieved using various, well-defined pore sizes. The layer facing the sample provides protection from drops, splashes and aerosols. The layer facing the pipette cone functions as a second barrier from contamination, and dependably binds biomolecules. A defined air passage rate guarantees full sample recovery and the customary quick pipetting.



### Product features

- > Dual protection against aerosols<sup>1)</sup> and biomolecules
- > Dual protection for pipette and sample
- > Free of PCR inhibitor additives
- > Available in Eppendorf PCR clean/Sterile (sterile and pyrogen-free) and Eppendorf Forensic DNA Grade
- > Tested at the Fraunhofer Institute for Toxicology and Experimental Medicine (ITEM) in Hannover, Germany
- > Continuous inspection of each production lot by an independent laboratory
- > Lot-specific certificates are available at: [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates).
- > Certificate of filter efficiency acc. to EN 1822 available at: [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)



### Applications

- > DNA applications (e.g. PCR)
- > RNA applications (e.g. Gene expression analysis)
- > Protein applications (e.g. Antibody Research)
- > Cell Culture applications (e.g. Media)
- > Applications with radioactive material
- > All applications which use aerosol<sup>1)</sup> binding liquids

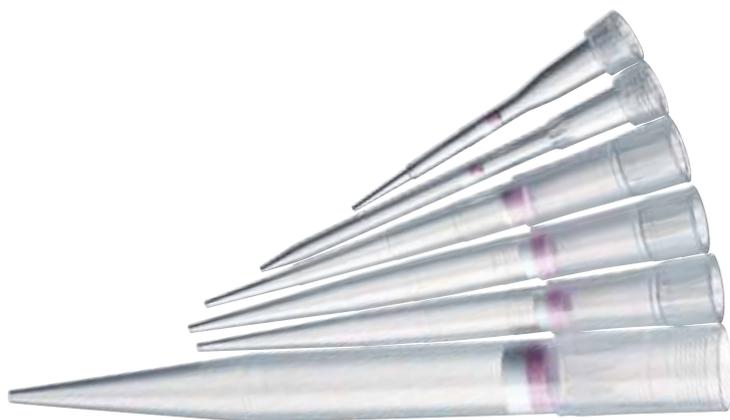
<sup>1)</sup> An aerosol is a colloid of fine solid particles or liquid droplets, in air or another gas.

**i** Ordering information see page 52.

# ep Dualfilter T.I.P.S.<sup>®</sup> SealMax

## Description

The violet and white filter for the ep Dualfilter T.I.P.S.<sup>®</sup> SealMax filter tips combine a reliable contamination protection for your pipette from your sample liquid with virtually 100 % protection from aerosols<sup>1)</sup> and biomolecules. This Dualfilter closes immediately when it comes into contact with the overpipetted sample without inhibiting valuable material. Additionally drops and splashes are retained by the white layer, the violet layer forms the highly-effective barrier against sample liquid. Further information and certification on specific sample recovery features, PCR inhibition and aerosol protection are available on your local Eppendorf website.



## Product features

- > Reliable protection from liquids
- > Reliable protection from aerosols<sup>1)</sup> and biomolecules
- > No PCR inhibiting additives
- > Protection of your pipette from aggressive liquids when over-aspiration occurs
- > Available in PCR clean/Sterile (sterile and pyrogen-free)
- > Continuous inspection of each production lot by an independent laboratory guarantees high purity and quality
- > Lot specific purity certificates available at: [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)
- > Certificate of filter efficiency acc. to EN 1822 available at: [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)



## Applications

- > DNA applications (e.g. PCR)
- > RNA applications (e.g. Gene expression analysis)
- > Protein applications (e.g. Antibody Research)
- > Cell Culture applications (e.g. Media)
- > Applications with radioactive material
- > All applications which use aerosol<sup>1)</sup> binding liquids

<sup>1)</sup> An aerosol is a colloid of fine solid particles or liquid droplets in air or another gas.

**i** For more information go to [www.eppendorf.com/epTips](http://www.eppendorf.com/epTips)



## epT.I.P.S.<sup>®</sup> LoRetention

### Description

epT.I.P.S. LoRetention pipette tips and ep Dualfilter T.I.P.S. LoRetention filter tips are particularly well-suited for applications with samples that contain detergents. Detergents or detergent containing liquids lower the liquid's surface tension. This leads to a phenomenon called "wetting": Residual liquid sticks to the tip wall and cannot be recovered. The invisible film left behind in standard tips shows a significantly high amount of valuable sample material, which becomes discarded together with the tip.

Particularly when it comes to sensitive PCR and *real-time* PCR applications, low retention surfaces can increase the reproducibility and significantly reduce the loss of expensive reagents.

The low retention property of epT.I.P.S. LoRetention pipette tips and ep Dualfilter T.I.P.S. LoRetention filter tips is generated by an ultrahydrophobic, extremely homogeneous surface. It is achieved through an innovative treatment at the molecular level – the "Pearl Effect" Technology. All pipette tips are uncoated, free of additives and do not leach into the sample. Liquids containing detergents simply roll off, so that practically no liquid remains in the tip. These outstanding material properties guarantee maximum sample recovery for cost saving and improved reproducibility.



The "Pearl Effect" – a comparison of the amount of residual liquid when pipetting solutions that contain detergents:

1. Significant loss of sample using standard tips
2. Maximum recovery with epT.I.P.S. LoRetention

### Applications

- > Cell culture (media)
- > Genomics: PCR, RT-PCR, qPCR and all other types of PCR
- > Enzymatic reactions (restriction decomposition, ligation)
- > Isolation and purification of nucleic acid
- > Gel electrophoresis (e.g., prefabricated DNA ladders) typical detergents: SDS, Triton<sup>®</sup>, X-100, Brij<sup>®</sup> 35, Tween<sup>®</sup> 20, CHAPS
- > Proteomics (all types of protein examinations)
- > Protein isolation and purification

### Product features

- > Ultrahomogenous surface for maximum reproducibility
- > Ultrahydrophobic surface for minimal sample loss
- > Rendered ultrahomogenous and ultrahydrophobic without the use of a surface coating
- > Significantly reduced foam formation during pipetting
- > Extreme resistance to chemicals
- > Available in PCR clean and Eppendorf Quality
- > Also available as ep Dualfilter T.I.P.S. in PCR clean/Sterile (sterile and pyrogen-free)
- > Lot-specific certificates are available at: [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates).

i Ordering information see page 48.

### Maximum reproducibility in Genomics

epT.I.P.S. LoRetention are especially recommended for applications where highest precision of DNA/RNA analysis results are needed, such as for PCR and *real-time* PCR. For example expensive master mixes and enzyme solutions tend to adhere to the tips inner surface. Specially treated low retention surfaces are created to repel detergent solutions to a maximum – for minimum loss of your valuable sample.

#### Examples for liquids with wetting effect:

- > Master mixes
- > Enzyme solutions: enzyme restrictions, ligation, DNase
- > DNA ladders for gel electrophoresis

epT.I.P.S. LoRetention perform considerably better in terms of precision and sample recovery than standard pipette tips as shown in **Fig. 1**.

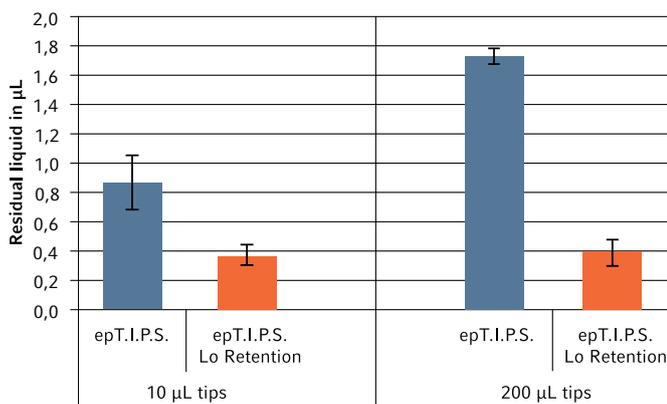
### Maximum reproducibility in Proteomics

Like molecular biology application, protein analysis and purification require extreme reliability and reproducibility in pipetting. The reagents and samples used in proteomics often contain detergents like SDS or Triton® X100; making epT.I.P.S. LoRetention an optimal solution. By minimizing sample retention and improving reproducibility of pipetting, epT.I.P.S. LoRetention pipette tips and ep Dualfilter T.I.P.S. LoRetention filter tips are especially advantageous in proteomic applications.

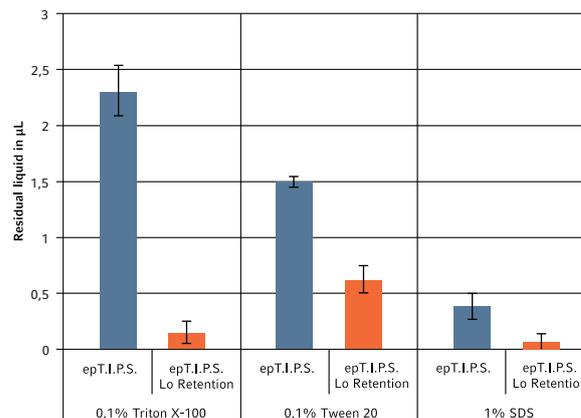
#### Routine protein applications:

- > Isolation
- > Purification
- > Denaturation

The facts are self explanatory – when compared to standard pipette tips, epT.I.P.S. LoRetention showed markedly better results in terms of precision and sample recovery, as displayed in **Fig. 1 and 2**.



**Fig. 1:** Comparison of residual liquid of epT.I.P.S. and epT.I.P.S. LoRetention with master mix for *real-time* PCR. Once the liquid had been dispensed, the residual liquid in the tips was determined. The measurements were repeated several times and the standard deviation was determined. epT.I.P.S. LoRetention resulted in the lowest residual liquid.

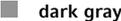


**Fig. 2:** Comparison of resistance of the low retention property when subjected to solvents typically used in proteomics. 200 µL epT.I.P.S. and epT.I.P.S. LoRetention were treated with the solvents specified. An enzymatic buffer containing detergents was then pipetted and the residual moisture was determined. epT.I.P.S. LoRetention resulted in reproducible low levels of residual liquids.

i For more information go to [www.eppendorf.com/LoRetention](http://www.eppendorf.com/LoRetention)



## Liquid Handling

Volume range/epT.I.P.S. <sup>®</sup> epT.I.P.S. <sup>®</sup> LoRetention (all tips shown are actual size)	Standard/Bulk		Reloads		Reloads	
 <b>dark gray</b>	1,000 tips (2 bags × 500 tips)		960 tips (10 trays × 96 tips)		960 tips (10 trays × 96 tips)	
<b>0.1 – 10 µL, 34 mm</b> 	022492004	\$73.50	022491504 022493018 LoRetention	\$90.00 \$100.00	022491709 022493010 LoRetention	\$104.00 \$114.50
 <b>medium gray</b>	1,000 tips (2 bags × 500 tips)		960 tips (10 trays × 96 tips)		960 tips (10 trays × 96 tips)	
<b>0.1 – 20 µL, 40 mm</b> 	022492012	\$73.50	022491512	\$90.00	022491717	\$104.00
 <b>light gray</b>	1,000 tips (2 bags × 500 tips)		960 tips (10 trays × 96 tips)		960 tips (10 trays × 96 tips)	
<b>0.5 – 20 µL L, 46 mm</b> 	022492021	\$73.50	022491521 022493020 LoRetention	\$90.00 \$100.00	022491725 022493012 LoRetention	\$104.00 \$114.50
 <b>yellow</b>	1,000 tips (2 bags × 500 tips)		960 tips (10 trays × 96 tips)		960 tips (10 trays × 96 tips)	
<b>2 – 200 µL, 53 mm</b> 	022492039	\$58.50	022491539 022493022 LoRetention	\$69.00 \$81.00	022491733 022493014 LoRetention	\$83.00 \$93.50
 <b>orange</b>	1,000 tips (2 bags × 500 tips)		960 tips (10 trays × 96 tips)		960 tips (10 trays × 96 tips)	
<b>20 – 300 µL, 55 mm</b> 	022492047	\$58.50	022491547	\$69.00	022491741	\$85.00
 <b>blue</b>	1,000 tips (2 bags × 500 tips)		960 tips (10 trays × 96 tips)		960 tips (10 trays × 96 tips)	
<b>50 – 1,000 µL, 71 mm</b> 	022492055	\$64.00	022491555 022493024 LoRetention	\$77.50 \$91.50	022491750 022493016 LoRetention	\$90.00 \$100.00
 <b>green</b>	1,000 tips (2 bags × 500 tips)		960 tips (10 trays × 96 tips)		960 tips (10 trays × 96 tips)	
<b>50 – 1,250 µL, 76 mm</b> 	022492063	\$64.00	022491563	\$77.50	022491768	\$90.00

<sup>1)</sup> Eppendorf Quality. <sup>2)</sup> PCR clean Quality. <sup>3)</sup> Sterile Quality. <sup>4)</sup> Biopur Quality. <sup>5)</sup> 480 tips (5 racks × 96 tips). <sup>6)</sup> 100 tips individually packed. <sup>7)</sup> 1000 tips individually packed.



## Liquid Handling



Box		Set		Singles		Racks	
1 reusable box x 96 tips		480 tips (5 trays x 96 tips), 1 reusable box				960 tips (10 racks x 96 tips)	
022491300	\$41.50	022491407	\$72.50			022491903 <sup>1</sup>	\$113.50
		0030072251 LoRetention	\$79.00			022491806 <sup>2</sup>	\$134.50
1 reusable box x 96 tips		480 tips (5 trays x 96 tips), 1 reusable box		Individually wrapped		960 tips (10 racks x 96 tips)	
022491318	\$41.50	022491415	\$72.50	022491130 <sup>4,6</sup>	\$35.00	022491911 <sup>1</sup>	\$113.50
						022491814 <sup>2</sup>	\$134.50
						022492250 <sup>3</sup>	\$129.00
						022491067 <sup>4,5</sup>	\$105.00
1 reusable box x 96 tips		480 tips (5 trays x 96 tips), 1 reusable box				960 tips (10 racks x 96 tips)	
022491326	\$41.50	022491423	\$72.50			022491920 <sup>1</sup>	\$113.50
		0030072260 LoRetention	\$79.00			022491822 <sup>2</sup>	\$134.50
1 reusable box x 96 tips		480 tips (5 trays x 96 tips), 1 reusable box		Individually wrapped		960 tips (10 racks x 96 tips)	
022491334	\$41.50	022491431	\$59.50	022492209 <sup>3,7</sup>	\$153.50	022491938 <sup>1</sup>	\$88.50
		0030072278 LoRetention	\$65.50	022491148 <sup>4,6</sup>	\$28.50	022491831 <sup>2</sup>	\$106.00
						022492276 <sup>3</sup>	\$102.00
						022491083 <sup>4,5</sup>	\$97.00
1 reusable box x 96 tips		480 tips (5 trays x 96 tips), 1 reusable box		Individually wrapped		960 tips (10 racks x 96 tips)	
022491342	\$41.50	022491440	\$59.50	022492209 <sup>3,7</sup>	\$153.50	022491946 <sup>1</sup>	\$91.00
				022491148 <sup>4,6</sup>	\$28.50	022491849 <sup>2</sup>	\$106.00
						022492284 <sup>3</sup>	\$102.00
						022491091 <sup>4,5</sup>	\$98.50
1 reusable box x 96 tips		480 tips (5 trays x 96 tips), 1 reusable box		Individually wrapped		960 tips (10 racks x 96 tips)	
022491351	\$41.50	022491458	\$59.50	022492225 <sup>3,7</sup>	\$153.50	022491954 <sup>1</sup>	\$96.00
		0030072286 LoRetention	\$71.00	022491156 <sup>4,6</sup>	\$29.50	022491857 <sup>2</sup>	\$115.00
						022492292 <sup>3</sup>	\$111.50
						022491105 <sup>4,5</sup>	\$104.00
1 reusable box x 96 tips		480 tips (5 trays x 96 tips), 1 reusable box				960 tips (10 racks x 96 tips)	
022491369	\$41.50	022491466	\$62.50			022491962 <sup>1</sup>	\$96.00
						022491865 <sup>2</sup>	\$118.00
						022492306 <sup>3</sup>	\$111.50
						022491113 <sup>4,5</sup>	\$104.00



## Liquid Handling



Volume range/epT.I.P.S.<sup>®</sup>  
epT.I.P.S.<sup>®</sup> LoRetention  
(all tips shown are actual size)

Standard/Bulk

Reloads

Reloads

■ dark green

1,000 tips (2 bags × 500 tips)

960 tips (10 trays × 96 tips)

960 tips (10 trays × 96 tips)

50 – 1,250 µL L, 103 mm

022494018

\$64.50

022494004

\$80.50

022494006

\$93.00



■ red

500 tips (5 bags × 100 tips)

480 tips (10 trays × 48 tips)

480 tips (10 trays × 48 tips)

0.25 – 2.5 mL, 115 mm

022492071

\$73.50

022491571

\$77.50

022491776

\$90.00



■ violet

500 tips (5 bags × 100 tips)

0.1 – 5 mL, 120 mm

022492080

\$102.00



■ violet

300 tips (3 bags × 100 tips)

0.2 – 5 mL L, 175 mm

0030000650

\$56.00



■ turquoise

200 tips (2 bags × 100 tips)

0.5 – 10 mL, 165 mm

022492098

\$56.00



■ turquoise

200 tips (2 bags × 100 tips)

0.5 – 10 mL L, 243 mm

022492101

\$63.50



(Image reduced size)

<sup>1)</sup> Eppendorf Quality. <sup>2)</sup> PCR clean Quality. <sup>3)</sup> Sterile Quality. <sup>4)</sup> Biopur Quality. <sup>5)</sup> 480 tips (5 racks × 96 tips).



## Liquid Handling



Box	Set	Singles	Racks
1 reusable box x 96 tips 022494016 \$41.50			480 tips (5 racks x 96 tips) 022494014 <sup>4</sup> \$104.00
1 reusable box x 48 tips 022491377 \$41.50	240 tips (5 trays x 48 tips), 1 reusable box 022491474 \$72.50		240 tips (5 racks x 48 tips) 022491971 <sup>1</sup> \$52.00 022491873 <sup>2</sup> \$58.50 022491121 <sup>4</sup> \$104.00
1 reusable box x 24 tips 022491385 \$41.50			120 tips (5 racks x 24 tips) 022491989 \$57.50 022491881 \$69.00 022492314 \$111.50 0030075137 \$79.50
			120 tips (5 racks x 24 tips) 0030075188 \$94.00
			120 tips (5 racks x 24 tips) 022491997 <sup>1</sup> \$83.00 022491164 <sup>4</sup> \$88.50



## Liquid Handling

Volume range/ ep Dualfilter T.I.P.S.<sup>®</sup>/  
ep Dualfilter T.I.P.S.<sup>®</sup> LoRetention/  
ep Dualfilter T.I.P.S.<sup>®</sup> SealMax



	Racks PCR clean/Sterile (sterile and pyrogen-free)				Forensic DNA Grade			
<b>dark gray</b>	960 tips (10 racks × 96 tips)							
0.1 – 10 µL S, 34 mm	022491202	\$168.50	022493000 LoRetention	\$184.50	0030077806 SealMax	\$176.50		
								
<b>medium gray</b>	960 tips (10 racks × 96 tips)							
0.1 – 10 µL M, 40 mm	022491211	\$168.50					0030077768	\$181.50
								
<b>light gray</b>	960 tips (10 racks × 96 tips)							
0.5 – 20 µL L, 46 mm	022491229	\$168.50	022493002 LoRetention	\$184.50	0030077814 SealMax	\$176.50		
								
<b>yellow</b>	960 tips (10 racks × 96 tips)							
2 – 20 µL, 53 mm	022491270	\$168.00					003007776	\$181.50
								
<b>yellow</b>	960 tips (10 racks × 96 tips)							
2 – 100 µL, 53 mm	022491237	\$162.50	022493006 LoRetention	\$172.50	0030077822 SealMax	\$171.50		
								
<b>yellow</b>	960 tips (10 racks × 96 tips)							
2 – 200 µL, 55 mm	022491296	\$163.00			0030077830 SealMax	\$171.50	0030077784	\$170.50
								
<b>orange</b>	960 tips (10 racks × 96 tips)							
20 – 300 µL, 55 mm	022491245	\$162.50	022493004 LoRetention	\$184.50	0030077849 SealMax	\$171.50		
								
<b>blue</b>	960 tips (10 racks × 96 tips)							
50 – 1,000 µL, 76 mm	022491253	\$168.00	022493008 LoRetention	\$184.50	0030077857 SealMax	\$171.50	0030077792	\$181.50
								
<b>dark green</b>	480 tips (5 racks × 96 tips)							
50 – 1,250 µL L, 103 mm	022494002	\$88.00						
								



Volume range/ ep Dualfilter T.I.P.S.<sup>®</sup>/  
ep Dualfilter T.I.P.S.<sup>®</sup> LoRetention/  
ep Dualfilter T.I.P.S.<sup>®</sup> SealMax



**Racks**  
**PCR clean/Sterile (sterile and pyrogen-free)**

<b>violet</b>	120 tips (5 racks x 24 tips)		
0.1 – 5 mL, 120 mm	022491261	\$93.00	



<b>violet</b>	120 tips (5 racks x 24 tips)		
0.2 – 5 mL L, 175 mm	0030077725	\$83.00	



<b>turquoise</b>	100 tips, individually packed		
0.5 – 10 mL L, 243 mm	022491288	\$78.50	



(Image reduced size)

## Special Tips



**Volume range/ pipette tip**

<b>light gray</b>	<b>Eppendorf GELoader<sup>®</sup></b>		
0.5 – 20 $\mu$ L, 62 mm	192 tips (2 racks x 96 tips)		
	022351656	\$143.50	



<b>light gray</b>	<b>Microloader<sup>™</sup></b>		
0.5 – 20 $\mu$ L, 100 mm	192 pcs. (2 racks x 96 pcs.)		
	930001007	\$175.00	





## Liquid Handling

Eppendorf Research® plus	0.1 – 10 µL S, dark gray	0.1 – 10 µL M, medium gray	0.1 – 20 µL medium gray	0.5 – 20 µL L, light gray	2 – 20 µL yellow	2 – 100 µL yellow	2 – 200 µL yellow	20 – 300 µL orange
	■	■	■	■	■	■	■	■
epT.I.P.S.®	■		■	■			■	■
epT.I.P.S.® LoRetention	■			■			■	
ep Dualfilter T.I.P.S.®	■	■		■	■	■	■	■
ep Dualfilter T.I.P.S.® LoRetention	■			■		■		■
ep Dualfilter T.I.P.S.® SealMax	■		■			■	■	■
<b>Fixed volume</b>								
10 µL	■ ■	■	■	■				
20 µL	■	■	■	■				
10 µL	■				■	■	■	
20 µL	■				■	■	■	■
25 µL/50 µL/100 µL	■					■	■	■
200 µL	■						■	■
200/ 250/ 500/ 1,000 µL	■							
<b>Adjustable volume</b>								
0.1 – 2.5 µL	■ ■	■	■					
0.5 – 10 µL	■ ■	■	■	■				
2 – 20 µL	■ ◆	◆	■	■				
2 – 20 µL	■				■	■	■	◆
10 – 100 µL	■				◆	■	■	■
20 – 200 µL	■				◆	◆	■	■
30 – 300 µL	■				◆	◆	◆	■
100 – 1,000 µL	■							
0.5 – 5 mL	■							
1 – 10 mL	■							

■ normal volume ◆ limited volume

Eppendorf Xplorer®/ Eppendorf Xplorer® plus	0.1 – 10 µL S, dark gray	0.1 – 10 µL M, medium gray	0.1 – 20 µL medium gray	0.5 – 20 µL L, light gray	2 – 20 µL yellow	2 – 100 µL yellow	2 – 200 µL yellow	20 – 300 µL orange
	■	■	■	■	■	■	■	■
epT.I.P.S.®	■		■	■			■	■
epT.I.P.S.® LoRetention	■			■			■	
ep Dualfilter T.I.P.S.®	■	■		■	■	■	■	■
ep Dualfilter T.I.P.S.® LoRetention	■			■		■		■
ep Dualfilter T.I.P.S.® SealMax	■		■			■	■	■
0.5 – 10 µL	■ ■	■	■	■				
5 – 100 µL	■				◆	■	■	◆
15 – 300 µL	■				◆	◆	◆	■
50 – 1,000 µL	■							
50 – 1,200 µL	■							
0.2 – 5 mL	■							
0.5 – 10 mL	■							

■ normal volume ◆ limited volume





## Liquid Handling

Eppendorf Reference® 2	0.1 – 10 µL S, dark gray	0.1 – 10 µL M, medium gray	0.1 – 20 µL medium gray	0.5 – 20 µL L, light gray	2 – 20 µL yellow	2 – 100 µL yellow	2 – 200 µL yellow	20 – 300 µL orange
epT.I.P.S.®	■	■	■	■	■	■	■	■
epT.I.P.S.® LoRetention	■		■	■			■	
ep Dualfilter T.I.P.S.®	■	■		■	■	■	■	■
ep Dualfilter T.I.P.S.® LoRetention	■			■		■		■
ep Dualfilter T.I.P.S.® SealMax	■			■		■	■	■
<b>Fixed volume</b>								
1 µL/2 µL	■ ■	■	■					
5 µL/10 µL	■ ■	■	■	■				
20 µL	■		■	■				
10 µL	■				■	■	■	
20 µL	■				■	■	■	■
25 µL/50 µL/100 µL	■					■	■	■
200 µL	■						■	■
200/ 250/ 500/ 1,000 µL	■							
2 mL/2.5 mL	■							
<b>Adjustable volume</b>								
0.1 – 2.5 µL	■ ■	■	■					
0.5 – 10 µL	■ ■	■	■	■				
2 – 20 µL	■ ◆	◆	■	■				
2 – 20 µL	■				■	■	■	◆
10 – 100 µL	■				◆	■	■	■
20 – 200 µL	■				◆	◆	■	■
30 – 300 µL	■				◆	◆	◆	■
100 – 1,000 µL	■							
0.25 – 2.5 mL	■							
0.5 – 5 mL	■							
1 – 10 mL	■							

■ normal volume ◆ limited volume





# Repeater<sup>®</sup> M4

## Description

With the Repeater M4/Combitip 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. The Repeater M4 offers a unique volume range of 1  $\mu$ L – 10 mL, and is the only mechanical dispenser that dispenses the aspirated liquid up to 100 times without refilling the tip. The innovative step counter supports error-free working even after an interruption or distraction during the dispensing procedure. A fully emptied Combitip can be easily ejected with one hand using the operation lever without directly touching the tip.



## Product features

- > Repetitive dispensing modes decrease the number of movements by allowing the user to fill the tip once and dispense up to 100 times without a refill
- > Automatic Combitip recognition eliminates time consuming volume calculations
- > Wide dispensing range: 1  $\mu$ L to 10 mL
- > Stress-free work via integrated step counter: dispensing procedures can be continued error-free after an interruption or distraction
- > Central Combitip ejector: fully emptied Combitip can be easily ejected with one hand
- > Perfect for viscous or foaming solutions and liquids with high vapor pressure due to its positive displacement principle
- > Safe handling of toxic, radioactive or infectious material

## Applications

- > Repetitive dispensing of volumes in long series such as tube or plate filling, aliquoting reagents and kit usage
- > Contamination-free dispensing of toxic, radioactive and other hazardous liquids
- > Precise and accurate dispensing of viscous solutions (e.g. glycerol) or liquids with high vapor pressure (e.g. ethanol)



**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Clearly arranged and easy-to-read display to ensure stress-free and intuitive operation. In addition to the displayed dispensing volume, the integrated step counter supports error-free filling of plates or large series of tubes.



Repeater M4 in combination with 9 different Combitips advanced volume sizes (0.1 mL – 50 mL) offers a unique volume range of 1 µL – 10 mL. The Combitip Rack features trouble-free and single-hand operation during dispensing work.

### 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/Combitip system is the instrument to go beyond the limitations of a standard pipette.

### The Repeater/Combitip positive-displacement principle:

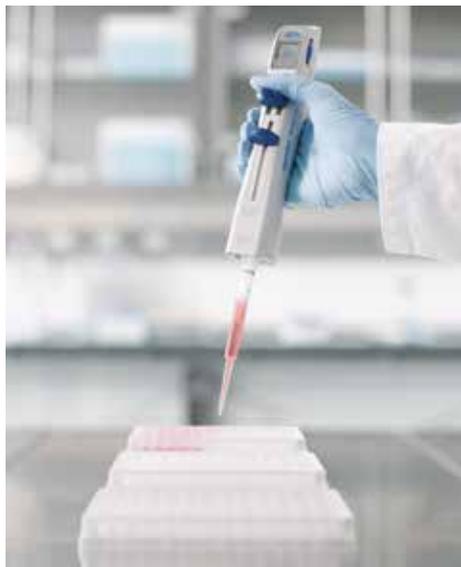
- > Allows high-precision dispensing regardless of the physical properties of the liquid (viscous liquids with high resistance to flow [e.g. glycerol], liquids with a different density than water, liquids with high vapor pressure [e.g. acetone], liquids containing detergent lowering the surface tension, foaming liquids and liquids with different temperatures)
- > Prevents aerosol contamination with hermetically sealed piston for secure dispensing of hazardous samples
- > Provides protection from radioactive and toxic substances
- > Enables quick dispensing of long series with precise, repeated dispensing of identical volumes
- > Accurate pipetting independent of common errors such as pipetting angle and immersion depth of the tip seen with air-cushion pipettes

See videos of the Repeater system in action at:  
[repeater-system.eppendorf.com](http://repeater-system.eppendorf.com)





# Repeater<sup>®</sup> M4



## Unmistakably Eppendorf

The Eppendorf Combitips advanced feature the characteristic Eppendorf 3D design on the upper rim of the Combitip, allowing you to easily and confidently recognize the Eppendorf original!

Combitips advanced <sup>®</sup>	Min. volume	Max. volume	Increment	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>
0.1 mL	1 µL	20 µL	1 µL	2 µL	± 1.6 %	± 0.032 µL	± 3.0 %	± 0.06 µL
				10 µL	± 1.2 %	± 0.12 µL	± 2.4 %	± 0.24 µL
				20 µL	± 1.0 %	± 0.2 µL	± 2.0 %	± 0.4 µL
0.2 mL	2 µL	40 µL	2 µL	4 µL	± 1.3 %	± 0.052 µL	± 2.0 %	± 0.08 µL
				20 µL	± 0.8 %	± 0.16 µL	± 1.5 %	± 0.3 µL
				40 µL	± 0.8 %	± 0.32 µL	± 1.5 %	± 0.6 µL
0.5 mL	5 µL	100 µL	5 µL	10 µL	± 0.9 %	± 0.09 µL	± 1.5 %	± 0.15 µL
				50 µL	± 0.8 %	± 0.4 µL	± 0.8 %	± 0.4 µL
				100 µL	± 0.8 %	± 0.8 µL	± 0.6 %	± 0.6 µL
1 mL	10 µL	200 µL	10 µL	20 µL	± 0.9 %	± 0.18 µL	± 0.9 %	± 0.18 µL
				100 µL	± 0.6 %	± 0.6 µL	± 0.6 %	± 0.6 µL
				200 µL	± 0.6 %	± 1.2 µL	± 0.4 %	± 0.8 µL
2.5 mL	25 µL	500 µL	25 µL	50 µL	± 0.8 %	± 0.4 µL	± 0.8 %	± 0.4 µL
				250 µL	± 0.6 %	± 1.5 µL	± 0.6 %	± 1.5 µL
				500 µL	± 0.5 %	± 2.5 µL	± 0.3 %	± 1.5 µL
5 mL	50 µL	1,000 µL	50 µL	100 µL	± 0.6 %	± 0.6 µL	± 0.6 %	± 0.6 µL
				500 µL	± 0.5 %	± 2.5 µL	± 0.5 %	± 2.5 µL
				1,000 µL	± 0.5 %	± 5 µL	± 0.25 %	± 2.5 µL
10 mL	100 µL	2,000 µL	100 µL	200 µL	± 0.5 %	± 1 µL	± 0.6 %	± 1.2 µL
				1,000 µL	± 0.5 %	± 5 µL	± 0.4 %	± 4 µL
				2,000 µL	± 0.5 %	± 10 µL	± 0.25 %	± 5 µL
25 mL	250 µL	5,000 µL	250 µL	500 µL	± 0.4 %	± 2 µL	± 0.6 %	± 3 µL
				2,500 µL	± 0.3 %	± 7.5 µL	± 0.5 %	± 12.5 µL
				5,000 µL	± 0.3 %	± 15 µL	± 0.25 %	± 12.5 µL
50 mL	500 µL	10,000 µL	500 µL	1,000 µL	± 0.3 %	± 3 µL	± 0.5 %	± 5 µL
				5,000 µL	± 0.3 %	± 15 µL	± 0.5 %	± 25 µL
				10,000 µL	± 0.3 %	± 30 µL	± 0.3 %	± 30 µL

<sup>1)</sup> The error data, according to EN ISO 8655, only apply if original Eppendorf Combitips advanced are used. Technical specifications are subject to change. Errors and omissions excepted.

**Volume table for using the Combitips advanced with the Repeater® M4**

Position of the volume selection dial:																				
	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Maximum number of dispensing steps:																				
	100	50	33	25	20	16	14	12	11	10	9	8	7	7	6	6	5	5	5	5
Combitips advanced with the following dispensing 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
5.0 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 <sup>1</sup>	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	4.50 mL	4.75 mL	5.0 mL
50 mL <sup>1</sup>	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

**Ordering information**

Description	Catalog No.	List USD
<b>Repeater® M4</b> , with Combitip Rack and Combitip assortment pack (1 Combitip of each size)	4982000322	\$590.00
<b>Pipette Holder 2</b> , for one Eppendorf Repeater® M4, for Pipette Carousel 2 and Charger Carousel 2 or wall mounting, sticky tape included	3116000147	53.00
<b>Spare battery</b> , 3 V, for Repeater® M4 and Repeater® plus	4980215003	13.90



# Repeater® E3/E3x

## Description

The Repeater E3/E3x, in combination with the Combitips advanced®, creates a versatile dispensing system that functions according to the positive displacement principle and is therefore capable of pipetting any liquid while maintaining the highest standards for accurate results. The motor-driven dispenser gives you full volume control, improved accuracy and reproducibility while reducing physical strain during use. The repetitive dispensing modes contribute to reducing fatigue by decreasing the number of movements for the user; filling the tip once allows dispensing up to 100 times. The system is an essential lab tool ideal for all liquid handling applications, accommodating more than 5,000 different dispensing volumes between 1 µL to 50 mL.



## Product features

- > Automatic Combitip recognition: Eliminates time consuming volume calculations, avoiding incorrect dispensing volumes
- > Ergonomic one-button tip ejector: For one handed operation and contact-free Combitips advanced ejection
- > Speed Adjustment: Program aspiration and dispensing speed for the utmost in precision and accuracy while also preventing splashing
- > Repetitive dispensing modes: Decrease the number of movements for the user by allowing them to fill the tip once and dispense up to 100 times without a refill
- > Wide dispensing range: 1 µL to 50 mL provides up to 5,000 dispensing volumes with increments as low as 100 nanoliters
- > Motor driven function reduces the human error to a minimum and reduces risk of repetitive strain injuries (RSI)
- > Safe and ergonomic operation with 9 different selectable languages
- > Large illuminated color display reduces eye strain when reading
- > Positive displacement system: Not affected by liquid properties, most manual pipetting errors and provides protection from aerosol contamination
- > Eppendorf TrackIT compatible: Editable data chip contains all relevant information. [www.eppendorf.com/trackit](http://www.eppendorf.com/trackit)

## Applications

- > Repetitive dispensing of volumes in long series such as tube or plate filling, aliquoting reagents and kit usage (Dispensing/Automatic Dispensing modes)
- > Contamination-free dispensing for toxic, radioactive and other hazardous liquids (all available modes)
- > Precise and accurate dispensing of viscous solutions (e.g. glycerol) or liquids with high vapor pressure (e.g. ethanol) (all available modes)
- > Pooling of supernatants (Aspiration mode)
- > Creation of dilution series (Sequential Dispensing mode)
- > Concentration Determination (Titration mode)
- > Pooling and volume determination with subsequent dispensing (Aspirate and Dispense mode)



**i** Further information about Combitips advanced see on page 67.



Repeater E3



Repeater E3x

Repeater E3 and Repeater E3x at a glance	Repeater E3	Repeater E3x
High speed dispensing with motorized piston	■	■
Speed adjustment to match the viscosity of your liquid and the size of your vessel to prevent air bubbles and splashing	■	■
Automatic Combitip advanced® tip recognition	■	■
One button tip ejection	■	■
Volume range from 1 µL to 50 mL, over 5,000 possible dispensing volumes	■	■
<b>NEW!</b> Big Illuminated color display in 9 languages	■	■
<b>NEW!</b> Sleep mode saves battery when not in use	■	■
Long life Li-ion battery	■	■
Modes of operation	4	8
Pipetting (Pip): Precise liquid transfer of up to 50 mL	■	■
Dispensing (Dis): Serial dispensing for up to 100 steps in a row	■	■
Automatic dispensing (Ads): Volume is dispensed at fixed intervals between 0.1 s and 10 s	■	■
Sequential dispensing (Seq): Individual volume setting for up to 16 dispensing steps		■
Aspirate (Asp): consecutive aspiration of liquid for pooling into one Combitip		■
<b>NEW!</b> Aspirate and Dispense (A/D): Uptake and volume calculation of an unknown volume with immediate dispense in desired partial volumes		■
Titration (Tit): Sensitive dosing of liquids while dispensed volume is measured		■
<b>NEW!</b> Options (Opt): Save favorite settings, set service intervals, activate key lock and more	■	■



# Repeater® E3/E3x



## Relax

With the light weight Repeater E3 the risk of repetitive strain injuries is reduced in various ways. It minimizes operation forces through an electronic motor drive, and buttons are positioned to accommodate natural hand movements. A new enlarged display reduces eye strain when reviewing settings.



## Work precisely and safely

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

Combitips advanced®	Min. volume	Max. volume	Increment	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>
0.1 mL	1 µL	100 µL	0.1 µL	10 µL	± 1.6 %	± 0.16 µL	± 2.5 %	± 0.25 µL
				50 µL	± 1.0 %	± 0.5 µL	± 1.5 %	± 0.75 µL
				100 µL	± 1.0 %	± 1 µL	± 0.5 %	± 0.5 µL
0.2 mL	2 µL	200 µL	0.2 µL	20 µL	± 1.3 %	± 0.26 µL	± 1.0 %	± 0.2 µL
				100 µL	± 1.0 %	± 1 µL	± 1.0 %	± 1 µL
				200 µL	± 1.0 %	± 2 µL	± 0.5 %	± 1 µL
0.5 mL	5 µL	500 µL	0.5 µL	50 µL	± 0.9 %	± 0.45 µL	± 0.8 %	± 0.4 µL
				250 µL	± 0.9 %	± 2.25 µL	± 0.5 %	± 1.25 µL
				500 µL	± 0.9 %	± 4.5 µL	± 0.3 %	± 1.5 µL
1 mL	10 µL	1 mL	1 µL	100 µL	± 0.9 %	± 0.9 µL	± 0.55 %	± 0.55 µL
				500 µL	± 0.6 %	± 3 µL	± 0.2 %	± 1 µL
				1,000 µL	± 0.6 %	± 6 µL	± 0.3 %	± 3 µL
2.5 mL	25 µL	2.5 mL	2.5 µL	250 µL	± 0.8 %	± 2 µL	± 0.45 %	± 1.125 µL
				1,250 µL	± 0.5 %	± 6.25 µL	± 0.30 %	± 3.75 µL
				2,500 µL	± 0.5 %	± 12.5 µL	± 0.15 %	± 3.75 µL
5 mL	50 µL	5 mL	5 µL	500 µL	± 0.8 %	± 4 µL	± 0.35 %	± 1.75 µL
				2,500 µL	± 0.5 %	± 12.5 µL	± 0.25 %	± 6.25 µL
				5,000 µL	± 0.5 %	± 25 µL	± 0.15 %	± 7.5 µL
10 mL	100 µL	10 mL	10 µL	1,000 µL	± 0.5 %	± 5 µL	± 0.25 %	± 2.5 µL
				5,000 µL	± 0.4 %	± 20 µL	± 0.25 %	± 12.5 µL
				10,000 µL	± 0.4 %	± 40 µL	± 0.15 %	± 15 µL
25 mL	250 µL	25 mL	25 µL	2,500 µL	± 0.3 %	± 7.5 µL	± 0.35 %	± 8.75 µL
				12,500 µL	± 0.3 %	± 37.5 µL	± 0.25 %	± 31.25 µL
				25,000 µL	± 0.3 %	± 75 µL	± 0.15 %	± 37.5 µL
50 mL	500 µL	50 mL	50 µL	5,000 µL	± 0.3 %	± 15 µL	± 0.50 %	± 25 µL
				25,000 µL	± 0.3 %	± 75 µL	± 0.20 %	± 50 µL
				50,000 µL	± 0.3 %	± 150 µL	± 0.15 %	± 75 µL

<sup>1)</sup> The error data, according to EN ISO 8655, only apply if original Eppendorf Combitips advanced are used. Technical specifications are subject to change. Errors and omissions excepted.

## Ordering information

Description	Catalog No.	List USD
<b>Repeater® E3</b> , single-channel, with charging cable and Combitips advanced® assortment pack (1 Combitip of each size), 1 µL – 50 mL	4987000118	\$1,035.00
<b>Repeater® E3 bundle incl. charger stand</b> , single-channel, with charging cable and Combitips advanced® assortment pack (1 Combitip of each size), 1 µL – 50 mL	4987000398	1,135.00
<b>Repeater® E3x</b> , single-channel, with charging cable and Combitips advanced® assortment pack (1 Combitip of each size), 1 µL – 50 mL	4987000134	1,240.00
<b>Repeater® E3x bundle incl. charger stand</b> , single-channel, with charging cable and Combitips advanced® assortment pack (1 Combitip of each size), 1 µL – 50 mL	4987000410	1,340.00
<b>Pipette Holder 2</b> , for one Eppendorf Repeater® E3/E3x or Eppendorf Repeater® stream/Xstream, for Pipette Carousel 2 or wall mounting, sticky tape included, without charging functionality	3116000139	53.00
<b>Spare charging cable</b> , for Eppendorf Xplorer®, electronic Repeater®, and charger stand	4986603005	34.70



# NEW – ViscoTip™

## Description

Experience the new member of the Combitips advanced® dispenser tip family. The ViscoTip is specifically designed and optimized for handling high viscosity liquids up to 14,000 mPa\*s such as Glycerol 99.5%, Tween, oils, cremes, shampoos or honey. It sharply reduces operating forces while handling such liquids leading to enhanced ergonomics, increased working speed, and longer charge life time of your Repeater battery.



1. The optimized geometry sharply reduces operating forces. It allows manual handling of liquids which otherwise would be too viscous for dispensing.
2. The tip allows dispensing volumes in a range from 100  $\mu$ L up to 10 mL with increments of 10 microliters.
3. An adjusted volume scale and a color coded double ring allow instant identification of the tip.

## Applications

- > Positive displacement principle (comparable to a syringe)
- > High viscosity liquids with dynamic viscosities up to 14,000 mPa\*s
- > Provides protection from radioactive and toxic substances



# Eppendorf Combitips advanced®

## Description

In 1978 Eppendorf revolutionized the industry and laboratory workflow with the introduction of the Combitip/Repeater system and has been the leader in market innovations for more than 38 years. The Eppendorf Combitips advanced have been completely redesigned and optimized to meet all the needs of any modern laboratory. The Combitips advanced also function according to the positive displacement principle, thus they always dispense the correct volume independently of the density of the liquid and its flow characteristics (e.g., increased vapor pressure or increased viscosity). Working with radioactive or toxic materials also becomes safer due to the hermetically sealed piston preventing aerosol contamination.

## Product features

- > Combitips advanced are the ideal system components for all Eppendorf Repeaters
- > The 9 volume sizes (0.1 mL – 50 mL) offer a maximum range of dispensing volumes with increments as low as 100 nanoliters depending on the Combitip used
- > Elongated Combitips in volumes 2.5 mL, 5.0 mL and 10 mL make it possible to reach the bottom of the most common laboratory vessels
- > An individual color coding facilitates the quick identification of the desired Combitips
- > The unique funnel geometry ensures comfortable handling while preventing damage to gloves
- > Combitips advanced are offered in 5 different purity grades to support a range of applications
- > The appropriate purity grade for each application: Eppendorf Quality™, Sterile, PCR Clean, Forensic DNA Grade or Biopur®

## Applications

- > Positive displacement principle (comparable to a syringe)
- > High-precision dispensing regardless of the physical properties of the liquid (e.g., viscosity, volatility, density, temperature...)
- > Prevents aerosol contamination with hermetically sealed piston for secure dispensing
- > Provides protection from radioactive and toxic substances
- > Quick dispensing of long series with precise, repeated dispensing of identical volumes (with Repeater hand dispensers)

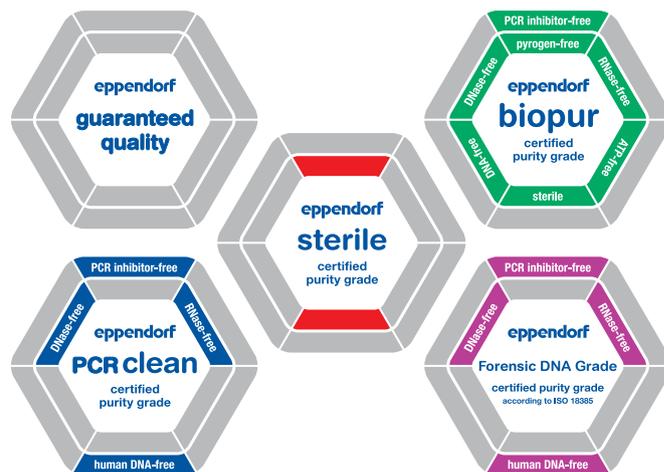
## Always easy to reach

The new Combitip Rack features trouble-free and single-hand operation during dispensing work. The rack holds up to 8 Combitips advanced in sizes ranging from 0.1 mL to 10 mL. The transparent tray allows for the sizes of the Combitips to be easily identified using the color coding.





# Eppendorf Combitips advanced®



## Unmistakably Eppendorf

The Eppendorf Combitips advanced features the characteristic Eppendorf 3D design on the upper rim of the Combitip, allowing you to easily and confidently recognize the Eppendorf original!

## Variety and selection

5 purity grades (Eppendorf Quality, PCR clean, Sterile, Eppendorf Biopur® and Eppendorf Forensic DNA Grade) are available, so that you will always find the perfect Combitip for your application! The Eppendorf Biopur and Forensic DNA Grade Combitips advanced are individually blister-wrapped and feature an access tab which makes them easier to open, even with gloves!

Technical Specifications									
Eppendorf Combitips advanced®	Eppendorf Safe-Lock Tubes				Conical Tubes		Eppendorf Deepwell Plates		
	0.5 mL	1.5 mL	2.0 mL	5.0 mL	15 mL	50 mL	96/500 µL	96/1000 µL	96/2000 µL
0.1 mL	+	+	+	+	-	-	+	+	+
0.2 mL	+	+	+	+	-	-	+	+	+
0.5 mL	+	+	+	+	-	-	+	+	+
1.0 mL	+	+	+	+	-	-	+	+	+
2.5 mL	++	++	++	+	++	++	+	++	++
5.0 mL	+	+	+	+	++	++	+	+	+
10 mL	+	+	+	-	-	++	+	+	+
25 mL	-	+	+	-	-	-	+	+	+
50 mL	-	+	+	-	-	-	+	+	+
ViscoTip™									
10 mL	+	+	+	-	-	++	+	+	+

++ = improved compatibility compared to Combitip plus generation



## Ordering information

Eppendorf Combitips advanced®	Color code	Eppendorf Quality™	PCR clean	Sterile	Eppendorf Biopur®	Forensic DNA Grade
		100 pcs. (4 bags x 25 pcs.)	100 pcs. (4 reclosable bags x 25 pcs.)	100 pcs., individually wrapped	100 pcs., individually blister-wrapped	100 pcs., individually blister-wrapped
0.1 mL	white	0030089405 \$123.50	0030089766 \$156.00	0030089510 \$156.00	0030089618 \$176.50	
0.2 mL	light blue	0030089413 \$123.50	0030089774 \$156.00	0030089529 \$156.00	0030089626 \$176.50	
0.5 mL	violet	0030089421 \$123.50	0030089782 \$156.00	0030089537 \$156.00	0030089634 \$176.50	
1.0 mL	yellow	0030089430 \$123.50	0030089790 \$156.00	0030089545 \$156.00	0030089642 \$176.50	0030089855 \$169.00
2.5 mL	green	0030089448 \$123.50	0030089804 \$156.00	0030089553 \$156.00	0030089650 \$176.50	0030089863 \$169.00
5.0 mL	blue	0030089456 \$123.50	0030089812 \$156.00	0030089561 \$156.00	0030089669 \$176.50	0030089871 \$169.00
10 mL	orange	0030089464 \$123.50	0030089820 \$156.00	0030089570 \$156.00	0030089677 \$176.50	
25 mL <sup>1)</sup>	red	0030089472 \$156.00	0030089839 \$182.50	0030089588 \$182.50	0030089685 \$200.50	
50 mL <sup>1)</sup>	light gray	0030089480 \$156.00	0030089847 \$182.50	0030089596 \$182.50	0030089693 \$200.50	
<b>ViscoTip™</b>	orange					
10 mL		0030089502 Inquire				
<b>Accessories</b>						
<b>Adapter advanced</b>						
25 mL, autoclavable, 1 piece	red	0030089715 \$23.50				
25 mL, autoclavable, 7 pcs., individually wrapped	red				0030089731 \$138.00	
50 mL, autoclavable, 1 piece	light gray	0030089723 \$23.50				
50 mL, autoclavable, 7 pcs., individually wrapped	light gray				0030089740 \$138.00	
<b>Combitips advanced® Rack</b> , for 8 Combitips advanced® (0.1 – 10 mL)		0030089758 \$43.50				
<b>Combitips advanced® Assortment Pack</b> , contains one sample of each size		0030089936 \$20.00				

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

# Maxipettor®



## Description

The Eppendorf Maxipettor is a large volume pipette optimized for work with viscous or high-vapor pressure solutions. It also allows for aspirating liquids from large bottles or tall, narrow vessels when using the Maxitip® S system. Its super easy, one-hand operation significantly speeds up pipetting tasks: Simply press down the operating lever to aspirate liquid from the reservoir. Press the lever again and the liquid will be dispensed into your sample vessel.

## Product features

- > Volume range: 1 mL to 10 mL
- > Fast pipetting and convenient operation due to unique one-hand operation. Liquid automatically aspirates and dispenses by simply pressing the operating lever
- > 4-digit volume display and adjustable in 10 µL increments for accurate volume setting
- > Eppendorf Maxitips® P (fig.1) is a syringe-style, positive displacement tip that allows for accurate pipetting of viscous solutions or liquids with high-vapor pressure
- > The Eppendorf Maxitips® S system, consisting of the dispensing part (fig.2) and Maxitip (fig.3), is optimized for aspiration liquids from large bottles or tall, narrow vessels
- > The valve for use together with the Maxitips® S system ensures drip-free dispensing of volatile solutions

Combination	Volume range	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>
Varipette 4720 and Maxitips S system	2.5 – 10 mL	2.5 mL	±1.0 %	0.025 mL	±0.2 %	0.005 mL
		5 mL	±0.4 %	0.02 mL	±0.2 %	0.01 mL
		10 mL	±0.3 %	0.03 mL	±0.2 %	0.02 mL
Varipette 4720 and Maxitips P	1 – 10 mL	1 mL	±0.6 %	0.006 mL	±0.2 %	0.002 mL
		5 mL	±0.5 %	0.025 mL	±0.1 %	0.005 mL
		10 mL	±0.3 %	0.03 mL	±0.1 %	0.01 mL

<sup>1)</sup> 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.

## Ordering information

Description	Catalog No.	List USD
<b>Maxipettor</b> , single-channel, with continuous volume selection, 1 – 10 mL	022290002	\$809.00
<b>Maxitips® P</b> , to remove liquid from smaller vessels, 100 pieces	022291050	219.00
<b>Eppendorf Maxitips® S Starter Kit</b> , to remove liquid from narrow-necked vessels and measuring flasks, consisting of 100 Maxitips, 10 dispensing parts, 10 valves	022291301	206.00
<b>Eppendorf Maxitips® S dispensing part</b> , 30 pieces	022291408	159.00
<b>Eppendorf Maxitips® S</b> , graduated, 200 pieces	022291351	176.00
<b>Eppendorf Maxitips® S valve</b> , 100 pieces	022291459	78.50

# Eppendorf TrackIT



## Description

To increase the traceability of your pipette portfolio Eppendorf offers Eppendorf TrackIT. This product contains a RFID reader and software to scan the device data of an embedded RFID chip within liquid handling instruments and save it in a database which can be opened at any time.

## Applications

- > Instrument identification
- > Traceability of instruments used in an experiment
- > Individualization of the instrument
- > Printed documentation of all relevant instrument data
- > Make all relevant instrument information available for digital documentation
- > Documentation of service history

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf TrackIT</b> , RFID Reader and Software	390300014	\$654.00

# Eppendorf Easypet® 3

## Description

Experience a new dimension of electronic pipetting with the Eppendorf Easypet 3. The latest technological developments give you complete speed control with the utmost precision. The lightweight, well-balanced Easypet 3 has been designed considering all ergonomic findings to fit comfortably in your hand and matches its shape to allow for fatigue-free pipetting.



## Product features

- > Intuitive and convenient speed adjustment simply done with the tips of your fingers
- > Lightweight, well-balanced and ergonomic design that allows for fatigue-free pipetting
- > Vibrant backlit LEDs provide optical feedback of the remaining battery life
- > Lithium polymer rechargeable battery offers long cordless runtime
- > Smooth setting of pump speed
- > Operation while recharging is possible
- > Autoclavable pipette adapter for sterile applications
- > Quick release of aspirating cone for easy exchange of membrane filters

## Applications

- > Pipette controller for use with pipettes from 0.1 – 100 mL
- > Serial dispensing of aliquots of different volumes
- > Resuspension of bacteria or cell pellets
- > Aspiration of cell layer from, e.g., Ficoll® gradient

Technical specifications	
<b>Model</b>	Eppendorf Easypet® 3
<b>Weight</b>	160 g
<b>Rechargeable battery</b>	
Capacity	1,100 mAh/3.7 V
Charging time	~3 h
Type	Lithium polymer
Number of dispensings	~2,000 (with a 25 mL pipette)
Operation	Electronic
Pipetting type	Air-cushion
<b>Mains/power supply</b>	
Input	100 V – 240 V AC ± 10 %, 50 Hz – 60 Hz, 0.5 A
Output	5 V DC, 1.0 A

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Easypet® 3</b> , incl. mains/power supply device, wall mounting device, shelf stand, 2 membrane filters 0.45 µm, 0.1 – 100 mL	4430000018	\$480.00
<b>Membrane filter</b> , for Easypet® 4421 and Easypet® 3, 0.2 µm, sterile, PTFE, 5 pcs.	4430606005	129.00
<b>Membrane filter</b> , for Easypet® 4421 and Easypet® 3, 0.45 µm, sterile, PTFE, 5 pcs.	4421601009	129.00
<b>Li-polymer battery</b> , for Easypet® 3	4430605009	38.10



# Eppendorf Pipet Helper®

## Description

The Eppendorf Pipet Helper is the perfect instrument for inexperienced users as its robust and intuitive design allows everybody to adjust the meniscus precisely. In addition, the valve unit is optimized so that liquids can be drawn up simply, without exerting pressure. The aspiration bulb provides rapid filling of the pipet. The aspiration and dispensing of liquids are controlled gently by the ergonomic lever. Additionally a splash free blow-out is provided. The specially designed aspirating cone ensures secure seating for all measuring and volumetric pipets (glass and plastic).



## Product features

- > Lightweight with reduced operating force
- > Easy maintenance and cleaning due to easy disassembly, few parts and fully autoclavable
- > Comfortable working because of the good balance and pleasing material
- > The aspirating bulb enables pipetting of volumes up to 100 mL at once
- > Single lever controls low force aspirating and dispensing
- > High control over the liquid movement due to very sensitive valve unit
- > Drop wise dispensing and blow out without splashing
- > Drainage without any additional pressure delivers very reproducible results
- > Drip stop via hydrophobic membrane filter (3 µm)
- > The special silicon pipet adapter guarantees a secure fit

## Applications

- > Preparation of a buffer for chromatography
- > Preparation of a fluid for fermentation
- > Sample transfer within petrochemistry
- > Generate a sample within water analytics
- > Preparation of assays

## Ordering information

Description	Catalog No.	List USD
Eppendorf Pipet Helper®, 0.1 – 200 mL	4423000010	\$85.50
Membrane filter, for Eppendorf Pipet Helper®, 3 µm, not sterile	022231103	59.30

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)

# Eppendorf Serological Pipets

## Description

Eppendorf completes its portfolio in liquid handling with the new line of Eppendorf Serological Pipets. Experience the quality and convenience in liquid handling you have trusted in for decades with Eppendorf's system: Eppendorf Easyset® 3 and Eppendorf Serological Pipets.

Eppendorf's serological pipets are designed to work in perfect harmony with your Easyset 3. The pipets offer precise graduations overlaid on the ultra-clear pipet material to facilitate quick and easy reading of the volume. The pipets are individually wrapped and packaged in a robust dispenser box to ensure consistent premium quality.



## Product features

- > Clear and precise graduations for easy volume determination
- > Color-coding for easy identification of pipet sizes
- > Subunits with dispenser option to keep stored products safe
- > Individually wrapped pipets for reliable sterility
- > Ultra-pure virgin polystyrene meeting the requirement of USP VI
- > Harmonized and well-fitting operation with Easyset 3, compatibility with all existing pipet helpers
- > Sterility assurance level of  $10^{-6}$
- > Certified absence of detectable pyrogens, DNA, RNase and DNase
- > Certified non-cytotoxic

## Ordering information

Description	Color code	Catalog No.	List USD
<b>Eppendorf Serological Pipets, sterile, free of detectable pyrogens, DNA, RNase and DNase. Non-cytotoxic</b>			
1 mL, 800 pcs. (4 boxes × 200 pcs.)	yellow	0030127692	\$178.50
2 mL, 600 pcs. (4 boxes × 150 pcs.)	green	0030127706	149.00
5 mL, 400 pcs. (4 boxes × 100 pcs.)	blue	0030127714	126.50
10 mL, 400 pcs. (4 boxes × 100 pcs.)	orange	0030127722	141.00
25 mL, 200 pcs. (4 boxes × 50 pcs.)	red	0030127730	134.00
50 mL, 160 pcs. (4 boxes × 40 pcs.)	violet	0030127749	312.00





## NEW – Varispenser® 2/Varispenser® 2x

### Description

The new Eppendorf Varispenser 2 and Varispenser 2x are the ideal choice for dispensing aliquots of liquid from supply and reagent bottles. Advanced sealing lip technology enables dispensing of nearly all kinds of acids, solutions or bases. Available in 6 sizes for dispensing volumes from 0.2 – 100 mL, these instruments are designed to consistently dispense selected volumes without reagent waste. All Varispenser bottle top dispensers are fully autoclavable for maximum safety in your lab. The Varispenser 2x has a recirculation valve which prevents reagent loss while ventilating.



### Product features

- > New! Safety valve balls in discharge valve close and prevent leakage when discharge tube is not mounted
- > New! Oval-shaped dispenser housing ensures safe grip during transportation and adjustment
- > New! Standard GL 45 thread on all sizes for most common bottle threads plus 3 or 5 adapters to cover additional bottle thread sizes
- > New! Air vent cap can be unscrewed for easy assembly of optional drying tube to protect sensitive reagent against humidity or CO<sub>2</sub>
- > PFA sealing lip technology prevents crystal building from media residue by wiping off the inner cylinder wall during dispensing
- > The fixation slide on the interior toothed track allows rapid and accurate volume adjustment and prevents accidental changes
- > Telescopic filling-tubes in several lengths allow use with bottles up to a height of 35 cm
- > The flexible discharge tube facilitates serial dispensing and filling of inflexible or distant vessels
- > The drying tube, filled with absorbing agent, protects reagent against humidity or CO<sub>2</sub>
- > Extra air vent cap with Luer-cone for assembly of microfilter available to prevent supply bottle contamination

## Ordering information

Volume range	Volume	Dispensing step	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Varispenser® 2</b> , bottle top dispenser with adapters GL 25, GL 28/S 28, GL 32, GL 38, S 40 and telescopic intake tube (length 125 – 240 mm)								
0.2 – 2 mL	0.2 mL	0.05 mL	±5 %	±10 µL	±1 %	±2 µL	4966000010	\$ 490.00
	1 mL	0.05 mL	±1 %	±10 µL	±0.2 %	±2 µL		
	2 mL	0.05 mL	±0.5 %	±10 µL	±0.1 %	±2 µL		
0.5 – 5 mL	0.5 mL	0.1 mL	±5 %	±25 µL	±1 %	±5 µL	4966000029	490.00
	2.5 mL	0.1 mL	±1 %	±25 µL	±0.2 %	±5 µL		
	5 mL	0.1 mL	±0.5 %	±25 µL	±0.1 %	±5 µL		
1 – 10 mL	1 mL	0.2 mL	±5 %	±50 µL	±1 %	±10 µL	4966000037	490.00
	5 mL	0.2 mL	±1 %	±50 µL	±0.2 %	±10 µL		
	10 mL	0.2 mL	±0.5 %	±50 µL	±0.1 %	±10 µL		
<b>Varispenser® 2</b> , bottle top dispenser with adapters GL 32, GL 38, S 40 and telescopic intake tube (length 170 – 330 mm)								
2.5 – 25 mL	2.5 mL	0.5 mL	±5 %	±120 µL	±1 %	±25 µL	4966000045	650.00
	12.5 mL	0.5 mL	±1 %	±120 µL	±0.2 %	±25 µL		
	25 mL	0.5 mL	±0.5 %	±120 µL	±0.1 %	±25 µL		
5 – 50 mL	5 mL	1 mL	±5 %	±250 µL	±1 %	±50 µL	4966000053	680.00
	25 mL	1 mL	±1 %	±250 µL	±0.2 %	±50 µL		
	50 mL	1 mL	±0.5 %	±250 µL	±0.1 %	±50 µL		
10 – 100 mL	10 mL	1 mL	±5 %	±500 µL	±1 %	±100 µL	4966000061	1,000.00
	50 mL	1 mL	±1 %	±500 µL	±0.2 %	±100 µL		
	100 mL	1 mL	±0.5 %	±500 µL	±0.1 %	±100 µL		
<b>Varispenser® 2x</b> , bottle top dispenser with recirculation valve with adapters GL 25, GL 28/S 28, GL 32, GL 38, S 40 and telescopic intake tube (length 125 – 240 mm)								
2 mL	0.2 mL	0.5 mL	±5 %	±10 µL	±1 %	±2 µL	4967000014	520.00
	1 mL	0.5 mL	±1 %	±10 µL	±0.2 %	±2 µL		
	2 mL	0.5 mL	±0.5 %	±10 µL	±0.1 %	±2 µL		
0.5 – 5 mL	0.5 mL	0.1 mL	±5 %	±25 µL	±1 %	±5 µL	4967000022	520.00
	2.5 mL	0.1 mL	±1 %	±25 µL	±0.2 %	±5 µL		
	5 mL	0.1 mL	±0.5 %	±25 µL	±0.1 %	±5 µL		
0.1 – 10 mL	1 mL	0.2 mL	±5 %	±50 µL	±1 %	±10 µL	4967000030	520.00
	5 mL	0.2 mL	±1 %	±50 µL	±0.2 %	±10 µL		
	10 mL	0.2 mL	±0.5 %	±50 µL	±0.1 %	±10 µL		
<b>Varispenser® 2x</b> , bottle top dispenser with recirculation valve with adapters GL 32, GL 38, S 40 and telescopic intake tube (length 170 – 330 mm)								
2.5 – 25 mL	2.5 mL	0.5 mL	±5 %	±120 µL	±1 %	±25 µL	4967000049	680.00
	12.5 mL	0.5 mL	±1 %	±120 µL	±0.2 %	±25 µL		
	25 mL	0.5 mL	±0.5 %	±120 µL	±0.1 %	±25 µL		
5 – 50 mL	5 mL	1 mL	±5 %	±250 µL	±1 %	±50 µL	4967000057	710.00
	25 mL	1 mL	±1 %	±250 µL	±0.2 %	±50 µL		
	50 mL	1 mL	±0.5 %	±250 µL	±0.1 %	±50 µL		
10 – 100 mL	10 mL	1 mL	±5 %	±500 µL	±1 %	±100 µL	4967000065	1,030.00
	50 mL	1 mL	±1 %	±500 µL	±0.2 %	±100 µL		
	100 mL	1 mL	±0.5 %	±500 µL	±0.1 %	±100 µL		

<sup>1)</sup> The data for systematic error and random error are given according to EN ISO 8655. Technical specifications are subject to change. Errors and omissions excepted. The Varispenser 2 and Varispenser 2x are not a substitution for a bottle closure. Volatile liquids can disappear.



# Eppendorf Top Buret™

## Description

The Eppendorf Top Buret sets standards for manual titration. With each turn of the dial, liquid is continuously dispensed. This eliminates the need for new liquid aspiration and makes titration simpler and safer. The Top Buret comes in two different models: Model M features a dispensing rate of 2,500  $\mu\text{L}$  per rotation; Model H features a rate of 5,000  $\mu\text{L}$  per rotation. The digital display readings on both models range from 10  $\mu\text{L}$  to 999.9 mL with the size of your supply bottle being the only limiting factor. Its clearly labeled user-friendly digital display and simple knob control provides for easy, ergonomic and fatigue free operation.



## Product features

- > Continuous, pulse-free dispensing technology
- > Recirculation valve with valve lever
- > Voltage supply with long-life battery and battery status indicator
- > Dispensing range 0.1 mL to 999.9 mL
- > Electronic control pad can be easily removed
- > Service-friendly modular design incl. simple calibration program
- > High chemical resistance
- > Variable discharge tube, horizontal 142 – 220 mm, vertical 10 – 200 mm and rotatable by 360°
- > Telescopic aspirating tube for automatic length adjustment of 210 – 370 mm
- > Suitable for GL 32, GL 38, GL 45 and S 40 buttress thread with included adapters. Additional adapters available

## Ordering information

Volume range	Volume	Rel. systematic error <sup>1)</sup>	Abs. systematic error <sup>1)</sup>	Rel. random error <sup>1)</sup>	Abs. random error <sup>1)</sup>	Catalog No.	List USD
<b>Eppendorf Top Buret™ M</b>							
0.1 –	2.5 mL	±2.0 %	±0.05 mL	±1.0 %	±0.025 mL	4965000017	\$1,172.00
999.9 mL	12.5 mL	±0.4 %	±0.05 mL	±0.2 %	±0.025 mL		
	25 mL	±0.2 %	±0.05 mL	±0.1 %	±0.025 mL		
<b>Eppendorf Top Buret™ H</b>							
0.1 –	5 mL	±2.0 %	±0.1 mL	±1.0 %	±0.05 mL	4965000025	1,172.00
999.9 mL	25 mL	±0.4 %	±0.1 mL	±0.2 %	±0.05 mL		
	50 mL	±0.2 %	±0.1 mL	±0.1 %	±0.05 mL		

<sup>1)</sup> The data for systematic error and random error are given according to EN ISO 8655. Technical specifications are subject to change. Errors and omissions excepted. The Top Buret is not a substitution for a bottle closure. Volatile liquids can disappear.

Accessories		
Description	Catalog No.	List USD
<b>Telescoping aspirating tube from FEP</b> , individually adjustable length 125 mm – 240 mm, for Varispenser 2(x) with nominal volume of 2 mL, 5 mL or 10 mL, outer diameter 6 mm, standard size	4966504000	\$ 39.76
<b>Telescoping aspirating tube from FEP</b> , individually adjustable length 195 mm – 350 mm, for Varispenser 2(x) with nominal volume of 2 mL, 5 mL or 10 mL, outer diameter 6 mm, special size for large cylinders	4966505007	39.76
<b>Telescoping aspirating tube from FEP</b> , individually adjustable length 250 mm – 480 mm, for Varispenser 2(x) with nominal volume of 2 mL, 5 mL or 10 mL, outer diameter 6mm, special size for very large cylinders and canisters	4966506003	39.76
<b>Telescoping aspirating tube from FEP</b> , individually adjustable length 70 mm – 140 mm, for Varispenser 2(x) with nominal volume of 2 mL, 5 mL or 10 mL, outer diameter 6 mm, special size for small cylinders	4966503004	39.76
<b>Telescoping aspirating tube from FEP</b> , individually adjustable length 170 mm – 330 mm, for Varispenser 2(x) with nominal volume of 25 mL, 50 mL or 100 mL, outer diameter 7.6 mm, standard size	4966507000	39.76
<b>Telescoping aspirating tube from FEP</b> , individually adjustable length 250 mm – 480 mm, for Varispenser 2(x) with nominal volume of 25 mL, 50 mL or 100 mL, outer diameter 7.6 mm, special size for very large cylinders and canisters	4966508006	39.76
<b>Telescopic aspirating tube</b> , for Eppendorf Top Buret™, Varispenser® and Varispenser® plus	4960805009	54.80
<b>Bottle thread adapter from GL 32 to GL 25, PP</b>	4960800040	20.60
<b>Bottle thread adapter from GL 32 to GL 27, PP</b>	4960800139	20.60
<b>Bottle thread adapter from GL 32 to GL 28, PP</b>	4960800058	20.60
<b>Bottle thread adapter from GL 32 to GL 38, PP</b>	4960800066	20.60
<b>Bottle thread adapter from GL 32 to GL 40, PP</b>	4960800074	20.60
<b>Bottle thread adapter from GL 32 to GL 45, PP</b>	4960800112	20.60
<b>Bottle thread adapter from GL 32 to NS 19/26, PP</b>	4960800082	20.60
<b>Bottle thread adapter from GL 32 to NS 24/29, PP</b>	4960800090	20.60
<b>Bottle thread adapter from GL 32 to NS 29/32, PP</b>	4960800104	20.60
<b>Bottle thread adapter from GL 45 to GL 32, PP</b>	4960800120	20.60
<b>Bottle thread adapter from GL 45 to GL 38, PP</b>	4960800155	20.60
<b>Bottle thread adapter from GL 45 to S 40 (Buttress thread), PP</b>	4960800147	20.60
<b>Bottle thread adapter from GL 32 to GL 25, ETFE</b>	4966614000	39.76
<b>Bottle thread adapter, from GL 32 to GL 28, ETFE</b>	4960835005	32.00
<b>Bottle thread adapter from GL 32 to GL 38, ETFE</b>	4960836001	32.00
<b>Bottle thread adapter from GL 32 to GL 40, ETFE</b>	4960833002	29.50
<b>Bottle thread adapter from GL 32 to GL 45, ETFE</b>	4960837008	32.00
<b>Bottle thread adapter, from GL 45 to GL 38, ETFE</b>	4960839000	32.00
<b>Bottle thread adapter, from GL 45 to GL 40, ETFE</b>	4960834009	32.00
<b>Bottle thread adapter from GL 45 to GL 32, ETFE</b>	4966615007	39.76
<b>Thread adapter for 5L-jerrycan from 45 mm to 17/8" thread</b>	4960832006	92.80
<b>Flexible discharge tube with recirculation valve, coiled from PTFE</b> , approx. 80 cm long, with safety hand grip, for Varispenser 2(x) with nominal volume of 2 mL, 5 mL or 10 mL, outer tube diameter 3 mm, inner tube diameter 2 mm	4966501001	137.20
<b>Flexible discharge tube with recirculation valve, coiled from PTFE</b> , approx. 80 cm long, with safety hand grip, for Varispenser 2(x) with nominal volume of 25 mL, 50 mL or 100 mL, outer tube diameter 4.5 mm, inner tube diameter 3 mm	4966502008	137.20
<b>Drying tube</b> , without drying agent, including PTFE sealing ring, for Varispenser 2(x), all sizes	4966509002	54.50
<b>Drying tube</b> , without drying agent, for Eppendorf Top Buret™, Varispenser® and Varispenser® plus	4960851000	80.40
<b>Ventilation screw with Luer cone made of PP for microfilter</b> , including PTFE sealing ring, for Varispenser 2(x), all sizes	4966511007	50.00
<b>Thread adapter for jerrycan 5L from 45 mm to 17/8" thread</b>	4960832006	92.80



# epMotion® 96

## Description

The Eppendorf epMotion 96 is a semi-automated electronic pipette for fast and precise parallel 96 channel microplate processing. It is an easy to use bench top system for high precision pipetting in 96 and 384 well plates. Without changes to the system, a large volume range of 0.5 µL to 300 µL or 5 µL to 1,000 µL is available for convenient use over a range of applications. Its ergonomic design and intuitive handling makes the epMotion 96 a great tool for anyone in the lab who needs fast and precise liquid handling in 96 format.



1. Compact design—Small footprint, fits under laminar flow hood and can be easily moved in between labs
2. Control unit (Apple® iPod®)—High quality touch screen for convenient system control. Accessible by other iOS® 7 devices (iPhone®, iPad®) via WiFi
3. Loading frame—For quick exchange of epT.I.P.S.® Motion reload tip trays
4. Lifting table—Supports a variety of SBS-size labware such as micro plates, reservoirs, and ThermoAdapters. 384 well plates can be pipetted by indexing
5. Manually lift plates up and lock in place—Easy/fast adjustments to different labware heights and filling levels
6. Tip attachment lever—Minimal force needed uniformly to attach tips to the 96 nose-cone array for ergonomic operation
7. Auto-detect function for tip size—Verification between 50, 300, and 1,000 µL tips allows for more accurate volume settings and better pipetting performance
8. Height adjustment—Possibility to pre-set labware height for repetitive tasks or auto-pipetting mode
9. Accessory plate—for handling 384 well plates by indexing with the lifting table

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Fast and easy positioning of labware via adjustable lifting table



Stacking of plates accelerates filling of multiple 96-well plates

#### Product features

- > Two system options that cover either the 0.5  $\mu\text{L}$  to 300  $\mu\text{L}$  or 5  $\mu\text{L}$  to 1000  $\mu\text{L}$  range with one pipetting head
- > Electronic pipetting with synchronous 96 channel piston movement for better precision and reproducibility of results
- > Auto-detect function for tip size
- > Intuitive and industry proven software concept and convenient touch screen control
- > Intelligent, preset applications: aspiration, dilution, multi dispense, pipette and mix
- > Individual speed setting, set parameters that match the liquid class
- > Easy and rapid tip loading and reloading
- > Optional dual position slider for source and target vessel available
- > Remotely controlled using an iPod® with the epMotion 96 app
- > Compact design to fit under the laminar flow hood
- > Reduced risk of repetitive stress injury (RSI)

#### Applications

- > Replication and reformatting of microplates
- > PCR set-up in 96 well format
- > Cell seeding and media change
- > Reagent and compound addition
- > 384 wells by 4 times 96 well pipetting
- > Cell-based assays
- > ELISA handling (plate coating & washing)
- > Biochemical assays
- > Nucleic acid purification in 96-well format

# epMotion® 96



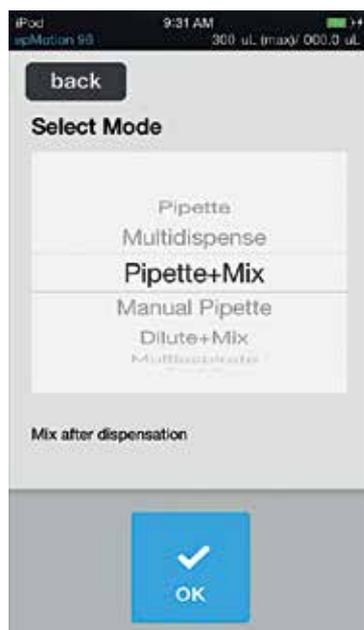
## Intuitive Operation

- > Software based on Eppendorf Xplorer® electronic pipettes provided as free Apple app
- > Intelligent, preset applications: aspiration, dilution, sequential dispensing, multi dispensing
- > Set individual parameters for aspiration or dispensing speed to match your current liquid class
- > Save frequently used volumes for quick programming
- > Possibility to program multi-step pipetting tasks for complex applications

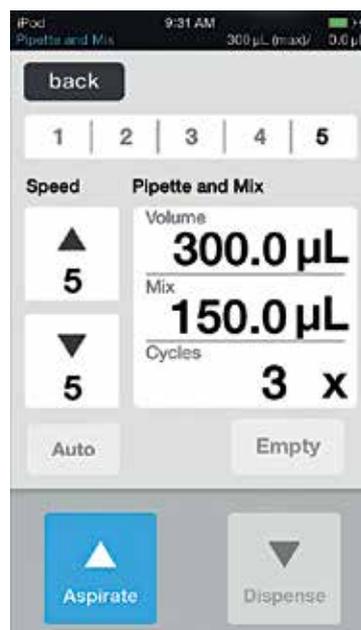
Technical specifications		
	epMotion 96	epMotion 96xl
Dimension of device	Width: 9 in/22.9 cm Depth: 18 in/45.7 cm	
	Height: 21 in/53.3 cm	Height: 23 in/57.6 cm
Weight of device	42 lb/19 kg	44 lb/20 kg
Power supply	100-240 V $\pm$ 10 %, 50-60 Hz $\pm$ 5 %, 175 W (max. output)	
Compatible plate formats	96- and 384-well microplates, shallow and deepwell (epMotion 96 limited to 1.3 in / 3.4 cm height)	
Controller*	Capacitive touch full color LCD (via Apple iPod device WiFi connected)	
Modes		
Pipette	Aspiration and dispensing of liquids	
Multidispense	Dispensing of liquid in multiple equal volumes	
Pipette + Mix	Aspiration and dispensing followed by user defined mixing cycles	
Manual Pipette	Aspiration of liquid can be manually stopped prior to reaching the max set volume; used for volume determination or gentle aspiration of supernatants	
Dilute + Mix	Aspiration of a concentrate and a diluent separated by an air gap. Mix after dispensing	
Multiaspirate	Aspiration of multiple equal liquid volumes; used for pooling from multiple plates	
Reverse pipetting	Mode recommended for viscous or foaming liquids	
Small volume	Special mode for very small target volume, which is separated by an air gap from a larger volume of system fluid in the tip	
Pipetting technology	96-channel air displacement	
Volume range	<b>50 <math>\mu</math>L tips</b>	<b>1000 <math>\mu</math>L tips</b>
	0.5 to 50 $\mu$ L	10 to 1000 $\mu$ L
	<b>300 <math>\mu</math>L tips</b>	
	5 to 300 $\mu$ L	

\*Apple iPod controller must be ordered separately.

Performance	Volume	Systematic measurement error	Random measurement error
with epMotion 96	1 $\mu$ L (50 $\mu$ L tips)	$\pm$ 2 %	< 3 %
	10 $\mu$ L (300 $\mu$ L tips)	$\pm$ 2 %	< 3 %
with epMotion 96xl	5 $\mu$ L (300 $\mu$ L tips)	$\pm$ 2 %	< 3 %
	10 $\mu$ L (1000 $\mu$ L tips)	$\pm$ 2 %	< 3 %



Convenient touch control for quick programming



Easy selection of pipetting parameters

#### Ordering information

Description	Catalog No.	List USD
epMotion 96 for parallel 96-channel pipetting , 0.5–300 µL, 1-position deck, without iPod® controller	5069000004	Inquire
epMotion 96 for parallel 96-channel pipetting , 0.5–300 µL, 2-position deck, without iPod controller	5069000101	Inquire
epMotion 96xl for parallel 96-channel pipetting , 5–1000 µL, 1-position deck, without iPod controller	5069000209	Inquire
epMotion 96xl for parallel 96-channel pipetting , 5–1000 µL, 2-position deck, without iPod controller	5069000306	Inquire
iPod touch 16 GB Blue (epMotion 96 controller)	960002580	Inquire

#### epT.I.P.S.® Motion pipette tips

50 µL, Reloads, Filter, PCR clean and sterile, 12 × 2 trays with 96 tips	0030014529	\$480.00
50 µL, Reloads, Filter, PCR clean, 12 × 2 trays with 96 tips	0030014430	419.00
50 µL, Reloads, Eppendorf Quality™, 12 × 2 trays with 96 tips	0030014421	210.00
300 µL, Reloads, Filter, PCR clean and sterile, 12 × 2 trays with 96 tips	0030014537	480.00
300 µL, Reloads, Filter, PCR clean, 12 × 2 trays with 96 tips	0030014472	419.00
300 µL, Reloads, Eppendorf Quality™, 12 × 2 trays with 96 tips	0030014464	210.00
1000 µL, Reloads, Filter, PCR clean and sterile, 12 × 2 trays with 96 tips	0030014570	480.00
1000 µL, Reloads, Filter, PCR clean, 12 × 2 trays with 96 tips	0030014510	419.00
1000 µL, Reloads, Eppendorf Quality™, 12 × 2 trays with 96 tips	0030014502	210.00
Low dead volume reservoir 195 mL, single well with 96 cavities, PCR clean, 4 × 5 reservoirs	0030126556	Inquire



# epMotion® 5070/5070f

## Description

epMotion 5070 is the most compact solution for accurate and reproducible automated pipetting. It is a perfect match for routine applications, such as serial dilutions, reagent distribution, sample transfer from tube to plate and sample normalization. Due to its excellent pipetting accuracy the epMotion is the recommended solution for real-time PCR - resulting in excellent reproducibility and enabling setup with less reagent volume lowering costs per reaction. Its pipetting technology is based on the classic Eppendorf piston-stroke pipettes; thus, manual protocols are easily transferred to epMotion 5070. A wide range of compatible consumables allows established procedures to be maintained. Before every run the optical sensor checks the tip type and quantity, fill level of all vessels, and the identity of the deck-installed labware.



## Product features

- > 4 ANSI/SLAS worktable and unlimited virtual park positions
- > Pipetting range from 200 nL to 1,000 µL
- > Compatible with micro- and PCR plates up to 384 wells
- > Compatible with 0.2 mL to 50 mL tubes
- > Optical sensor\*<sup>1</sup> provides contact-free tool and liquid detection
- > Available MultiCon touch, mouse, and keyboard PC controller
- > Safety hood with monitored front door
- > Automatic exchange of pipetting tools
- > User guided LH assistant for general liquid handling tasks
- > Virtual positions that allow for programming additional labware

\*<sup>1</sup> Patent US 6,819,437 B2

## Applications

- > Serial dilutions
- > Reagent distribution
- > Assay set-up
- > Sample transfer from tubes to plates
- > Reformatting into plates
- > PCR and real-time PCR setup
- > Cell-based assay set-up
- > Immunoassay set-up
- > Media change for cell cultures

## Special features for epMotion 5070f

- > Compatible with most laminar flow hoods
- > Innovative light barrier safety lock technology
- > Pre-programmed cell culture labware
- > Sterile pipet tips available
- > Autoclavable pipetting tools

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



epMotion 5070f was specially designed without outer housing for improved air flow inside laminar flow benches.



5070f integrated in laminar flow cell bench. The built-in light barrier beam monitors that the sash is closed for safe operation.

Technical specifications		
Model	epMotion® 5070	epMotion® 5070f
Volume range	200 nL – 1 mL	200 nL – 1 mL
Power supply	100 – 240 V ±10 %, 50 – 60 Hz ± 5 %	100 – 240 V ±10 %, 50 – 60 Hz ± 5 %
Max. power consumption	150 W	150 W
Dimensions (W x D x H)	26 x 19 x 25 in / 65 x 48 x 63 cm	26 x 19 x 25 in / 65 x 48 x 63 cm
Weight w/o accessories	99.2 lb / 45 kg	72.8 lb / 33 kg
Conductor – X, Y, Z Positioning		
Random measurement error	±0.1 mm	±0.1 mm
Systematic measurement error	±0.3 mm	±0.3 mm
Detector		
Optical confocal infrared detector	Contact-free recognition of fill level, inserted tools, labware, tip types and quantities	Contact-free recognition of fill level, inserted tools, labware, tip types and quantities
Dispensing tool <sup>1)2)</sup>		
Random measurement error (1 µL)	≤ 5 %	≤ 5 %
Systematic measurement error (1 µL)	±15 %	±15 %
Random measurement error (1,000 µL)	≤ 0.15 %	≤ 0.15 %
Systematic measurement error (1,000 µL)	±0.7 %	±0.7 %
Random measurement error (50 µL)	≤ 0.4 %	≤ 0.4 %
Systematic measurement error (50 µL)	±1.2 %	±1.2 %
Operation	electronic	electronic
Pipetting type	air-cushion	air-cushion
SLAS/ANSI deck positions	4 plus unlimited virtual park positions	4 plus unlimited virtual park positions

<sup>1)</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20 °C <sup>2)</sup> See Eppendorf Application Note 168 for typical pipetting performance



# epMotion® 5073l

## Description

The epMotion 5073 is a flexible system for automating time consuming and complex pipetting procedures. The epBlue software makes programming new protocols easier than ever. The EasyCon controller comes pre-loaded with a PCR Assistant providing step-by-step guidance through various protocols. The high accuracy of the epMotion 5073 makes all pipetting procedures more precise, reproducible and fully standardized, resulting in the highest quality data. The epMotion P5073 bundle package includes all accessories required for preparing PCR samples; only consumables need to be ordered separately.



## Product features

- > 6 ANSI/SLAS microplate positions
- > Compact control tablet with touchscreen or mouse operation, USB data transfer
- > Software assistants for simple, step-by-step application programming
- > Optical sensor\*<sup>1</sup> for detecting liquids, labware, tips
- > Automatic replacement of 2 pipetting tools
- > Volume range of 200 nL to 1,000 µL for maximum pipetting accuracy
- > Compatible with tubes (0.1 to 50 mL) and microplates with up to 384 wells
- > Calibrated 1-channel and 8-channel pipetting tools
- > Optional UV lamp and HEPA filter system for decontamination and clean air conditions
- > Fully enclosed, compact housing with door lock
- > Optional MultiCon touch PC controller with mouse and keyboard. Thermal module for heating or cooling of samples or reagents.

\*<sup>1</sup> US patent 6,819,437 B2

## Applications

- > PCR set-up
- > Serial dilution and normalization of samples
- > Sample or reagent transfer
- > Sample mixing and tempering
- > Assay set-up
- > Media change and other cell culture applications

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



### More flexibility

The 6 positions of the epMotion® 5073 systems, automatic change between 2 tools, and gripper option open up a wide variety of applications.



epMotion MultiCon is a powerful all-in-one touch-screen PC that enables the use of the 3D run simulation feature. The MultiCon also allows upgrading to the epBlue™ ID barcode tracking or the epBlue GxP 21 CFR part 11 compliant software.

Technical specifications		
Model	epMotion 5073/P5073	epMotion 5073I with CleanCap
Noise level	~ 56 dB(A)	~ 56 dB(A) HEPA off
Volume	200 nL–1 mL	200 nL–1 mL
Power supply	100–240 V ± 10%, 50/60 Hz ± 5%	100–240 V ± 10%, 50/60 Hz ± 5%
Max. power consumption	600 W	600 W
Dimensions (W × D × H)	65 × 61 × 67 cm / 26 × 24 × 27 in	65 × 61 × 77 cm / 26 × 24 × 31 in
Weight w/o accessories	50 kg / 110.2 lb	55 kg / 121.3 lb
Conductor—X, Y, Z Positioning	same as 5075 models	same as 5075 models
Gripper carrying capacity	1,200 g	1,200 g
HEPA filter		
Filter class according to EN 1822		E 10
Volume flow		70–80 m <sup>3</sup> /h
UV lamp		
Irradiation period per run		15 min
Radiation capacity at a distance of 1 m		39 μW/cm <sup>2</sup>
Radiation capacity after 100 h		3.9 W
Main wavelength		254 nm (UV-C)
Dispensing tool <sup>1,2</sup>		
Random measurement error (1 μL)	≤ 5%	≤ 5%
Systematic measurement error (1 μL)	± 15%	± 15%
Random measurement error (1,000 μL)	≤ 0.15%	≤ 0.15%
Systematic measurement error (1,000 μL)	± 0.7%	± 0.7%
Random measurement error (50 μL)	≤ 0.4%	≤ 0.4%
Systematic measurement error (50 μL)	± 1.2%	± 1.2%
Pipetting type	air-cushion	air-cushion
SBS/ANSI deck positions	6 plus unlimited virtual park positions	6 plus unlimited virtual park positions
Thermal module (optional)		
Cooling rate	4°C/min	4°C/min
Heating rate	9°C/min	9°C/min
Temperature range	0°C–110°C	0°C–110°C

<sup>1</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20°C. <sup>2</sup> See Eppendorf Application Note 168 for typical pipetting performance.



# epMotion® 5073m

## Description

The epMotion 5073m is 2 systems in one. First, a customized system for automated nucleic acid purification of 1 to 24 samples using the MagSep reagent kits. The Eppendorf EasyCon tablet and Prep Assistant software provide simple operation with step-by-step guidance through the process. Secondly, a flexible system for automating time-consuming and complex pipetting procedures with the epBlue software, making routine liquid handling tasks easier than ever. The pipetting procedure is more precise, reproducible and fully standardized, making your workplace more ergonomic and safer. The epMotion M5073 bundle package includes all accessories required for nucleic acid purification; consumables sold separately.



## Product features

- > Optical sensor\*<sup>1</sup> for detecting liquids, labware, and tips
- > Volume range of 200 nL to 1,000 µL for maximum versatility
- > Optional UV lamp and HEPA filter system for sterilization and clean air conditions.
- > Calibrated 1- channel and 8- channel pipetting tools
- > Software assistants for simple, step-by-step application programming
- > Automatic replacement of 2 pipetting tools and gripper
- > Compact control tablet with touchscreen or mouse controls and USB data transfer
- > 6 ANSI/SBS worktable positions
- > 3D MagSep technology; mixing, temperature control, and magnetic separation in one location
- > Compatible with microplates of up to 384 wells and 0.2 mL to 50 mL tubes

\*<sup>1</sup> US patent 6,819,437 B2

## Applications

- > DNA and RNA purification
- > PCR set-up
- > Sample or reagent transfer
- > Sample mixing and tempering
- > Assay set-up
- > Media change and other cell culture applications

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



**3D MagSep technology** - Unique combination of magnet finger module and Eppendorf Thermomixer allow you to separate, mix and temperature control at one position.



MagSep reagent kits are optimized for use with epMotion® 5073m/M5073 and 5075m to automatically purify nucleic acids from biological samples.

Technical specifications	epMotion® 5073m/M5073	epMotion 5073m with CleanCap
Model	epMotion® 5073m/M5073	epMotion 5073m with CleanCap
Volume	200 nL–1 mL	200 nL–1 mL
Power supply	100–240 V ± 10%, 50/60 Hz ± 5%	100–240 V ± 10%, 50/60 Hz ± 5%
Max. power consumption	600 W	600 W
Dimensions (W × D × H)	65 × 61 × 67 cm / 26 × 24 × 27 in	65 × 61 × 77 cm / 26 × 24 × 31 in
Weight w/o accessories	57 kg / 125.6 lb	62 kg / 136.7 lb
Conductor—X, Y, Z Positioning	same as 5075 models	same as 5075 models
Gripper carrying capacity	1,200 g	1,200 g
HEPA filter		
Filter class according to EN 1822		E 10
Volume flow		70–80 m <sup>3</sup> /h
UV lamp		
Irradiation period per run		15 min
Radiation capacity at a distance of 1 m		39 μW/cm <sup>2</sup>
Radiation capacity after 100 h		3.9 W
Main wavelength		254 nm (UV-C)
Dispensing tool <sup>1,2</sup>		
Random measurement error (1 μL)	≤ 5%	≤ 5%
Systematic measurement error (1 μL)	± 15%	± 15%
Random measurement error (1,000 μL)	≤ 0.15%	≤ 0.15%
Systematic measurement error (1,000 μL)	± 0.7%	± 0.7%
Random measurement error (50 μL)	≤ 0.4%	≤ 0.4%
Systematic measurement error (50 μL)	± 1.2%	± 1.2%
Pipetting type	air-cushion	air-cushion
SBS/ANSI deck positions	6 plus unlimited virtual park positions	6 plus unlimited virtual park positions
Thermomixer		
Max. load	1,000 g (2.2 lb)	1,000 g (2.2 lb)
Mixing period	5 s–120 min	5 s–120 min
Speed	300 rpm–2,000 rpm	300 rpm–2,000 rpm
Temperature range	4°C–95°C	4°C–95°C

<sup>1</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20 °C. <sup>2</sup> See Eppendorf Application Note 168 for typical pipetting performance.

Only for epMotion 5073m and M5073c: Limited Use Label License

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# epMotion® 50751

## Description

The epMotion 5075 is the perfect solution for more complex pipetting tasks. It offers the same precision and accuracy as the epMotion 5070, making it the ideal tool for demanding applications such as the purification of nucleic acids with magnetic beads, or routine applications with several plates. With 15 working positions, automatic changing of pipetting tools, and the plate gripper, the epMotion 5075I is one of the most flexible automated liquid handling systems.



## Product features

- > 15 ANSI/SLAS worktable positions
- > Maximum pipetting accuracy from 200 nL to 1,000 µL
- > Automatic exchange of tools (gripper, 1-channel & 8-channel)
- > Optical sensor\*1 for detecting liquids, labware, tips
- > Compatible with 0.2 mL to 50 mL tubes and microplates with up to 384 wells
- > Eppendorf MultiCon PC controller to run preinstalled LH assistant or epBlue software by touch or mouse
- > Optional software extensions for handling samples with barcodes or for integration to LIMS and ELN
- > Optional software extensions for integration to regulated process environments (GLP, GMP, 21 CFR)
- > CleanCap option – UV lamp & HEPA filter for decontamination and clean air conditions
- > Up to 3 thermal modules are available for heating or cooling (0–110 °C) of samples or reagents

\*1 US patent 6,819,437 B2

## Applications

- > NGS library preparation
- > Distributing reagents & serial dilutions
- > Sample transfer from individual tubes to plates
- > Reformatting plates
- > Media change and other cell culture applications
- > Sample pooling
- > Real-time PCR set-up
- > Cell-based assay set-up
- > Immunoassay set-up
- > Setting concentrations or volumes

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Large deck space gives you all the flexibility you need for your application.



epMotion MultiCon is a powerful all-in-one touch-screen PC that enables the use of the 3D run simulation feature. The MultiCon also allows upgrading to the epBlue™ ID barcode tracking or the epBlue GxP 21 CFR part 11 compliant software.

Technical specifications		
Model	epMotion 5075I	epMotion 5075I with CleanCap
Noise level	~ 56 dB(A)	~ 56 dB(A) HEPA off
Volume	200 nL–1 mL	200 nL–1 mL
Power supply	100–240 V ± 10%, 50/60 Hz ± 5%	100–240 V ± 10%, 50/60 Hz ± 5%
Max. power consumption	700 W	700 W
Dimensions (W × D × H)	107 × 61 × 67 cm / 43 × 24 × 27 in	107 × 61 × 77 cm / 43 × 24 × 30.1 in
Weight w/o accessories	85 kg / 187.4 lb	91.7 kg / 208.5 lb
Conductor—X, Y, Z Positioning		
Random measurement error	± 0.1 mm	± 0.1 mm
Systematic measurement error	± 0.3 mm	± 0.3 mm
Detector		
Optical confocal infrared detector	Contact-free recognition of fill level of inserted tools, labware, tip types and quantities	Contact-free recognition of fill level of inserted tools, labware, tip types and quantities
Gripper carrying capacity	1,200 g	1,200 g
HEPA filter		
Filter class according to EN 1822		E 10
Volume flow		70–80 m <sup>3</sup> /h
UV lamp		
Irradiation period per run		15 min
Radiation capacity at a distance of 1 m		39 μW/cm <sup>2</sup>
Radiation capacity after 100 h		3.9 W
Main wavelength		254 nm (UV-C)
Dispensing tool <sup>1,2</sup>		
Random measurement error (1 μL)	≤ 5%	≤ 5%
Systematic measurement error (1 μL)	± 15%	± 15%
Random measurement error (1,000 μL)	≤ 0.15%	≤ 0.15%
Systematic measurement error (1,000 μL)	± 0.7%	± 0.7%
Random measurement error (50 μL)	≤ 0.4%	≤ 0.4%
Systematic measurement error (50 μL)	± 1.2%	± 1.2%
Pipetting type	air-cushion	air-cushion
SBS/ANSI deck positions	15 plus unlimited virtual park positions	15 plus unlimited virtual park positions

<sup>1</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20 °C. <sup>2</sup> See Eppendorf Application Note 168 for typical pipetting performance.



# epMotion® 5075t

## Description

The epMotion 5075t includes an integrated Thermomixer module to mix, heat or cool samples and reagents. The module can be loaded and unloaded with the gripper and pipetting to the mixer is possible before and after mixing steps. The Thermomixer module is fully software controlled enabling pipetting onto other worktable positions while the mixer is in operation.



## Product features

- > All the features of the epMotion 5075i, plus
- > Integrated Eppendorf ThermoMixer® with 2<sup>o</sup>Mix-Control technology
- > Temperature control range 15 °C below RT to 95 °C
- > Automatic fixing of labware for mixing up to 2000 rpm
- > Pipetting at other positions during shaking
- > 14.5 deck positions, 14 SLAS/ANSI plus position for special reagent reservoir rack (3 reservoirs)
- > 2 thermal module options

## Applications

- > Like 5075i, plus
- > Bead applications with mixing and tempering
- > Sequencing and PCR clean-up
- > Nucleic acid purification
- > Cell disruption
- > Immunoassays
- > NGS library preparation

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Large deck space gives you all the flexibility you need for your application.



The outstanding <sup>2D</sup>Mix-Control technology mixes liquids in a controlled, circular movement. The lack of splashing enables mixing without lid wetting or cross contamination.

Technical specifications		
<b>Model</b>	<b>epMotion 5075t</b>	<b>epMotion 5075t with CleanCap</b>
<b>Noise level</b>	~ 56 dB(A) Mixer off	~ 56 dB(A) HEPA off, Mixer off
<b>Volume</b>	200 nL–1 mL	200 nL–1 mL
<b>Power supply</b>	100–240 V ± 10%, 50/60 Hz ± 5%	100–240 V ± 10%, 50/60 Hz ± 5%
<b>Max. power consumption</b>	700 W	700 W
<b>Dimensions (W × D × H)</b>	107 × 61 × 67 cm / 43 × 24 × 27 in	107 × 61 × 77 cm / 43 × 24 × 30.1 in
<b>Weight w/o accessories</b>	87 kg / 191.8 lb	93.7 kg / 212.9 lb
<b>Conductor—X, Y, Z Positioning</b>		
<b>Random measurement error</b>	± 0.1 mm	± 0.1 mm
<b>Systematic measurement error</b>	± 0.3 mm	± 0.3 mm
<b>Detector</b>		
<b>Optical confocal infrared detector</b>	Contact-free recognition of fill level of inserted tools, labware, tip types and quantities	Contact-free recognition of fill level of inserted tools, labware, tip types and quantities
<b>Gripper carrying capacity</b>	1,200 g	1,200 g
<b>HEPA filter</b>		
<b>Filter class according to EN 1822</b>		E 10
<b>Volume flow</b>		70–80 m <sup>3</sup> /h
<b>UV lamp</b>		
<b>Irradiation period per run</b>		15 min
<b>Radiation capacity at a distance of 1 m</b>		39 μW/cm <sup>2</sup>
<b>Radiation capacity after 100 h</b>		3.9 W
<b>Main wavelength</b>		254 nm (UV-C)
<b>Dispensing tool<sup>1,2</sup></b>		
<b>Random measurement error (1 μL)</b>	≤ 5%	≤ 5%
<b>Systematic measurement error (1 μL)</b>	± 15%	± 15%
<b>Random measurement error (1,000 μL)</b>	≤ 0.15%	≤ 0.15%
<b>Systematic measurement error (1,000 μL)</b>	± 0.7%	± 0.7%
<b>Random measurement error (50 μL)</b>	≤ 0.4%	≤ 0.4%
<b>Systematic measurement error (50 μL)</b>	± 1.2%	± 1.2%
<b>Pipetting type</b>	air-cushion	air-cushion
<b>SBS/ANSI deck positions</b>	14.5 plus unlimited virtual park positions	14.5 plus unlimited virtual park positions
<b>Thermomixer</b>		
<b>Max. load</b>	1,000 g (2.2 lb)	1,000 g (2.2 lb)
<b>Mixing period</b>	5 s–120 min	5 s–120 min
<b>Speed</b>	300 rpm–2,000 rpm	300 rpm–2,000 rpm
<b>Temperature range</b>	4°C–95°C	4°C–95°C

<sup>1</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20 °C. <sup>2</sup> See Eppendorf Application Note 168 for typical pipetting performance.



# epMotion® 5075m

## Description

The epMotion 5075m is the most flexible member of the epMotion family of automated pipetting systems. With the large number of deck positions and mixing, temperature control and magnetic bead separation abilities, it's ideally suited for various applications in the lab.



## Product features

- > All the features of the epMotion 5075t, plus
- > Combination of magnetic finger module and Eppendorf ThermoMixer®
- > Dedicated MagSep reagent kits for nucleic acid purification from 1–24 samples
- > 3 x Prep assistants for user guided automation of nucleic acid purification with MagSep kits
- > 4 x PCR assistants to streamline PCR set-up workflow
- > 3 thermal module options for heating or cooling of samples or reagents
- > CleanCap option- UV lamp and HEPA filtration for decontamination and clean air conditions

## Applications

- > Like 5075t, plus
- > Bead applications with mixing and tempering
- > Sequencing and PCR clean-up
- > Nucleic acid purification
- > Cell disruption
- > Immunoassays
- > NGS library preparation

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Large deck space gives you all the flexibility you need for your application.



**3D MagSep technology** - Unique combination of magnet finger module and Thermomixer (TMX) allow you to separate, mix and temperature control at one position. Ideal for use with Eppendorf MagSep nucleic acid purification kits.

Technical specifications	<i>epMotion 5075m</i>	<i>epMotion 5075m with CleanCap</i>
<b>Model</b>	<i>epMotion 5075m</i>	<i>epMotion 5075m with CleanCap</i>
<b>Noise level</b>	~ 56 dB(A) Mixer off	~ 56 dB(A) HEPA off, Mixer off
<b>Volume</b>	200 nL–1 mL	200 nL–1 mL
<b>Power supply</b>	100–240 V ± 10%, 50/60 Hz ± 5%	100–240 V ± 10%, 50/60 Hz ± 5%
<b>Max. power consumption</b>	700 W	700 W
<b>Dimensions (W × D × H)</b>	107 × 61 × 67 cm / 43 × 24 × 27 in	107 × 61 × 77 cm / 43 × 24 × 30.1 in
<b>Weight w/o accessories</b>	88 kg / 194 lb	94.7 kg / 215.2 lb
<b>Conductor—X, Y, Z Positioning</b>		
<b>Random measurement error</b>	± 0.1 mm	± 0.1 mm
<b>Systematic measurement error</b>	± 0.3 mm	± 0.3 mm
<b>Detector</b>		
<b>Optical confocal infrared detector</b>	Contact-free recognition of fill level of inserted tools, labware, tip types and quantities	Contact-free recognition of fill level of inserted tools, labware, tip types and quantities
<b>Gripper carrying capacity</b>	1,200 g	1,200 g
<b>HEPA filter</b>		
<b>Filter class according to EN 1822</b>		E 10
<b>Volume flow</b>		70–80 m <sup>3</sup> /h
<b>UV lamp</b>		
<b>Irradiation period per run</b>		15 min
<b>Radiation capacity at a distance of 1 m</b>		39 μW/cm <sup>2</sup>
<b>Radiation capacity after 100 h</b>		3.9 W
<b>Main wavelength</b>		254 nm (UV-C)
<b>Dispensing tool<sup>1,2</sup></b>		
<b>Random measurement error (1 μL)</b>	≤ 5%	≤ 5%
<b>Systematic measurement error (1 μL)</b>	± 15%	± 15%
<b>Random measurement error (1,000 μL)</b>	≤ 0.15%	≤ 0.15%
<b>Systematic measurement error (1,000 μL)</b>	± 0.7%	± 0.7%
<b>Random measurement error (50 μL)</b>	≤ 0.4%	≤ 0.4%
<b>Systematic measurement error (50 μL)</b>	± 1.2%	± 1.2%
<b>Pipetting type</b>	air-cushion	air-cushion
<b>SBS/ANSI deck positions</b>	14.5 plus unlimited virtual park positions	14.5 plus unlimited virtual park positions
<b>Thermomixer</b>		
<b>Max. load</b>	1,000 g (2.2 lb)	1,000 g (2.2 lb)
<b>Mixing period</b>	5 s–120 min	5 s–120 min
<b>Speed</b>	300 rpm–2,000 rpm	300 rpm–2,000 rpm
<b>Temperature range</b>	4°C–95°C	4°C–95°C

<sup>1</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20 °C. <sup>2</sup> See Eppendorf Application Note 168 for typical pipetting performance.



# epMotion® 5075v

## Description

The epMotion 5075v is all about productivity. With its integrated vacuum station the epMotion 5075v allows true walk-away automation of purification protocols that rely on vacuum filtration. The adjustable vacuum manifold can accommodate most kits from leading suppliers.



## Product features

- > All the features of the epMotion 5075i, plus
- > 12 SLAS/ANSI deck positions
- > Integrated vacuum pump – silent operation, no tubing, wiring, or reservoirs to maintain
- > Vacuum station fully integrated that automatically adapts software to defined filter plates and adapters
- > CleanCap option – UV lamp & HEPA filter for decontamination and clean air conditions
- > Gripper for plate & labware transport
- > Up to 3 optional thermal modules (2 in case of 5075vt)
- > Available with an integrated Eppendorf ThermoMixer and vacuum station (epMotion 5075vt)

## Special features for epMotion 5075vt

- > Integrated Eppendorf Thermomixer with <sup>2D</sup>Mix-Control technology
- > Temperature control range RT –15 °C to 95 °C
- > Automatic securing of labware for mixing at up to 2000 rpm

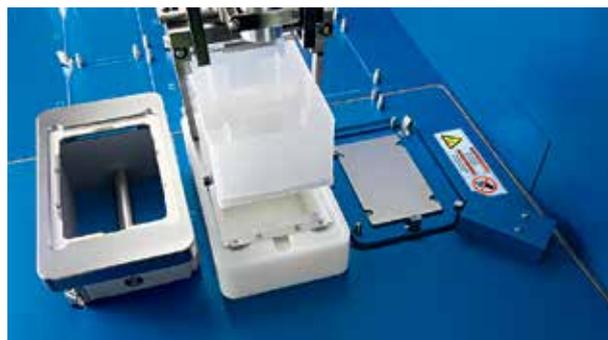
## Applications

- > Like 5075i with vacuum purification technologies
- > Solid phase extraction
- > Filtration
- > DNA from blood, tissue and cells
- > DNA from plants and bacteria
- > Sequencing and PCR clean-up
- > Total RNA isolation

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



**Integrated Vacuum Station** - Silent operation of internal pump with no need for extra tubes, wiring, or reservoir maintenance.



Vacuum station automatically adapts to the filter plate type. Gripper loads and unloads plates. Also available as 5075vt with integrated Eppendorf ThermoMixer.

Technical specifications		
<b>Model</b>	<b>epMotion® 5075v</b>	<b>epMotion® 5075vt</b>
<b>Volume range</b>	200 nL – 1 mL	200 nL – 1 mL
<b>Power supply</b>	100 – 240 V ±10 %, 50 – 60 Hz ± 5 %	100 – 240 V ±10 %, 50 – 60 Hz ± 5 %
<b>Max. power consumption</b>	700 W	700 W
<b>Dimensions (W x D x H)</b>	43 x 24 x 27 in / 107 x 61 x 67 cm	43 x 24 x 27 in / 107 x 61 x 67 cm
<b>Weight w/o accessories</b>	189.6 lb / 86 kg	198.4 lb / 90 kg
<b>Conductor – X, Y, Z Positioning</b>		
<b>Random measurement error</b>	±0.1 mm	±0.1 mm
<b>Systematic measurement error</b>	±0.3 mm	±0.3 mm
<b>Detector</b>		
<b>Optical confocal infrared detector</b>	Contact-free optical sensor for detecting liquid levels, labware, and tips	Contact-free optical sensor for detecting liquid levels, labware, and tips
<b>Dispensing tool<sup>1)2)</sup></b>		
<b>Random measurement error (1 µL)</b>	≤ 5 %	≤ 5 %
<b>Systematic measurement error (1 µL)</b>	±15 %	±15 %
<b>Random measurement error (1,000 µL)</b>	≤ 0.15 %	≤ 0.15 %
<b>Systematic measurement error (1,000 µL)</b>	±0.7 %	±0.7 %
<b>Random measurement error (50 µL)</b>	≤ 0.4 %	≤ 0.4 %
<b>Systematic measurement error (50 µL)</b>	±1.2 %	±1.2 %
<b>Gripper carrying capacity</b>	1,200 g	1,200 g
<b>Operation</b>	electronic	electronic
<b>Pipetting type</b>	air-cushion	air-cushion
<b>SLAS/ANSI deck positions</b>	12 plus unlimited virtual park positions	12 plus unlimited virtual park positions
<b>Vacuum unit</b>		
<b>Vacuum max. output</b>	35 NL/min	35 NL/min
<b>Suction range</b>	0.1-85 kPa	0.1-85 kPa
<b>Suction time</b>	1 sec to 36 min	1 sec to 36 min

<sup>1)</sup> In pipetting mode, free jet, without pre-wetting, with distilled water, at 20 °C <sup>2)</sup> See Eppendorf Application Note 168 for typical pipetting performance



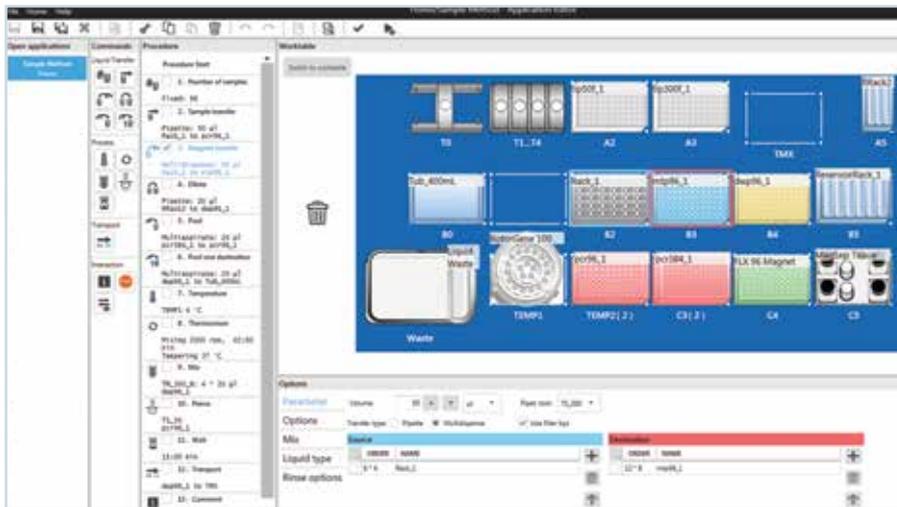
# epMotion Software—Simplify Your Programming

## Description

The epBlue software features an intuitive interface that allows for fast mastery and rapid method design while maintaining versatility and usability. The easy to use drag and drop visual interface makes setting up new methods fast and simple. A variety of commands are available each with its own set of preset parameters that the user can modify to fit particular needs. Features such as the ability to reuse tips and a multidispense mode minimize tip use reducing the cost per sample. The optional barcode reading tool allows for easy tracking of samples throughout your whole process.

## Application support

Get up and running quickly even with the most complex protocols by utilizing our optional expert application support. Over 1400 labware definitions from a large array of manufacturers and the ability to customize new labware allows the epMotion to work with a large array of protocols.



## Product features

- > Intuitive drag and drop programming for easy method setup
- > Cut and paste feature allows for fast method modification and adaptation
- > 3D view of workstation and run simulation for easier method optimization
- > Protocol setup using CSV files allows for easy setup of normalization and cherry picking protocols
- > Create, edit and simulate applications on any Windows 7, 8 or 10 PC with epMotion Editor 40 software
- > Pierce function allows the use of foil sealed plates reducing the risk of contamination
- > The ability to leave comments makes it easy to collaborate on methods
- > Surface teaching allows for the user to identify the bottom tolerance of labware
- > Unlimited virtual deck positions increases the versatility of the system

## Customization

- > Optional epBlue ID software allows sample tracking throughout any protocol through barcode reading
- > Optional epBlue GxP software for GMP and GLP labs complies with 21 CFR part 11 regulations and provides full transparency and accountability through maintenance of log files and digital signatures

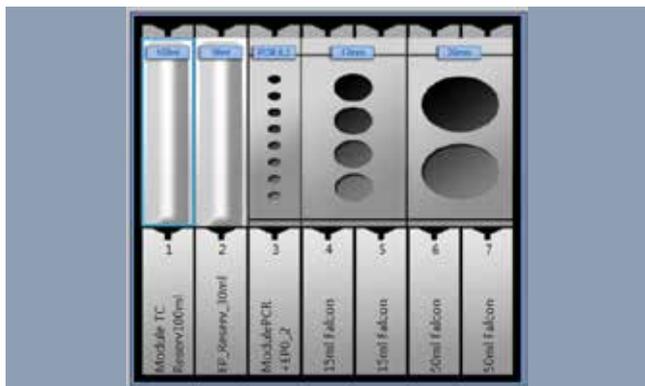
**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)

# epMotion Software — Simplify Your Programming



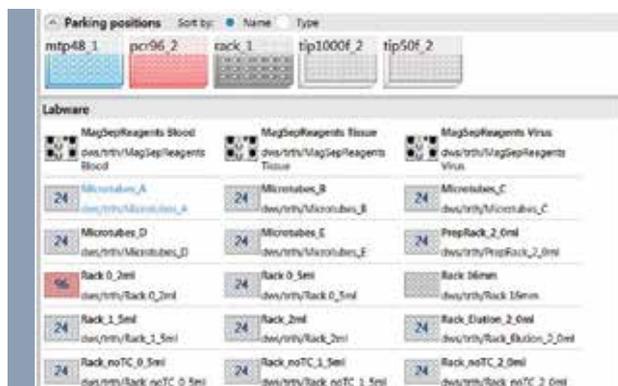
## Labware and application versatility

- > Whether you are using kit specific tubes, plates, or other vessels, the epMotion allows you to work with almost any labware to fit your workflow
- > Using different labware is made easy with Eppendorf's labware definition service



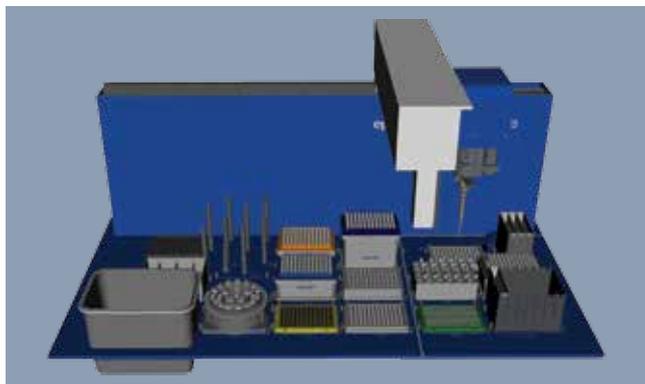
## Reservoir flexibility to fit your needs

- > Combine vessels from 0.2  $\mu$ L tubes to 100 mL reservoirs in one SBS deck position through an easy to use drag and drop labware editor
- > Build reservoir racks for your specific needs and easily export the newly defined labware file to be used on any comparable epMotion system



## Expanded deck space

- > Unlimited virtual positions with predefined user intervention steps increases the versatility of the epMotion and allows for complex protocol setup with unlimited tips, tubes, plates, and reservoirs
- > User intervention steps allow you to add tips or plates to your deck during the run, increasing the capabilities of your system



## 3D run simulation

- > Optimize the speed and efficiency of new protocols with the help of the 3D simulation tool that is available with all MultiCon PC versions. In addition to the regular "Check Method" function of the epBlue software, the 3D run simulation also allows you to verify that your method was programmed correctly.



# Versatile Software Gives You Control



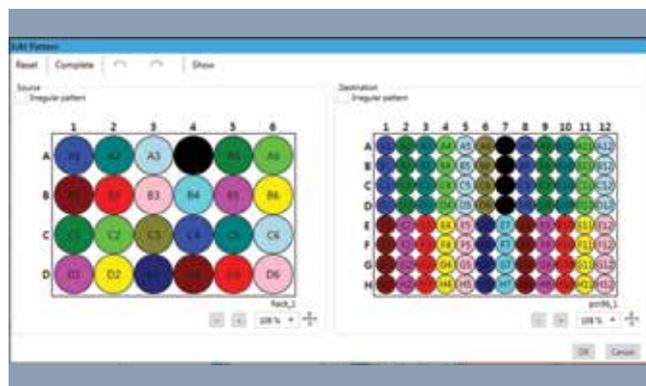
## Easy to use liquid handling commands

- > Simple yet powerful commands make setting up protocols easy and intuitive
- > Drag and drop programming of methods get you up and running quickly
- > Scroll over text clearly identifies all commands and parameters making programming what you want easy.
- > Cut and paste feature allows for fast method modification and adaptation



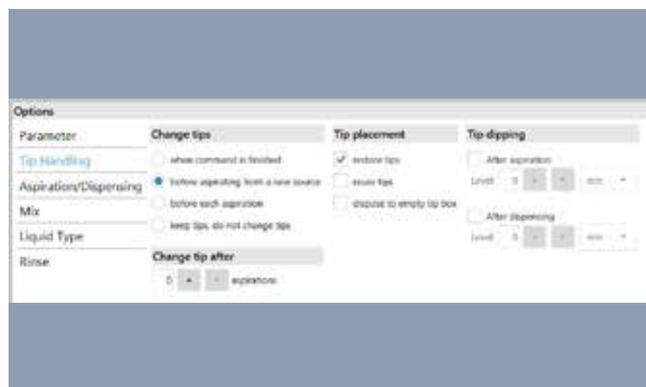
## Command options

- > Each command comes preset with the most commonly used parameters to fit most standard applications
- > For more complex methods, the epBlue software allows the user to modify pipetting parameters to fit specific requirements for demanding applications
- > Mix your samples before aspiration in order to ensure that your reagent is mixed properly and mix after dispensing creating uniform reactions



## Pipetting pattern recognition

- > Pipetting from tubes and reservoirs to plates, plates to tubes and reservoirs, and any plate format to any other tube or plate format makes reformatting and cherry picking easy
- > Automatic recognition of pipetting patterns allows for fast and easy setup of pipetting protocols from any combination of source and destination vessels

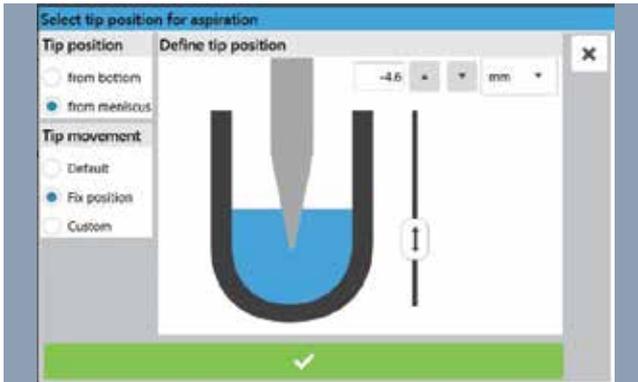


## Tip handling options

- > Options such as "Reuse tips" decrease tip usage while increasing the versatility of the system. Reused tips will only be used to pipette from the same source well eliminating the chances of cross contamination.
- > Rinse tip option allows the user to wash a tip before discarding it improving waste management
- > Discard tips to empty tip box increases the waste management options

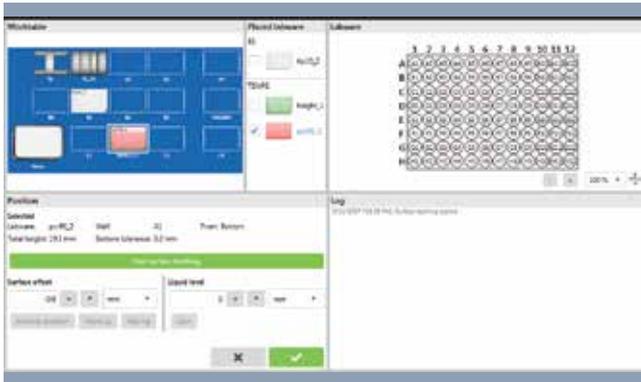


# Flexibility with Ease of Use



## Pipetting versatility through height adjustment

- > Define the height of aspiration and dispensing from either the bottom of labware or from the meniscus for added liquid handling versatility
- > Allows for optimal magnetic bead cleanup, supernatant removal, media exchange, and many other applications



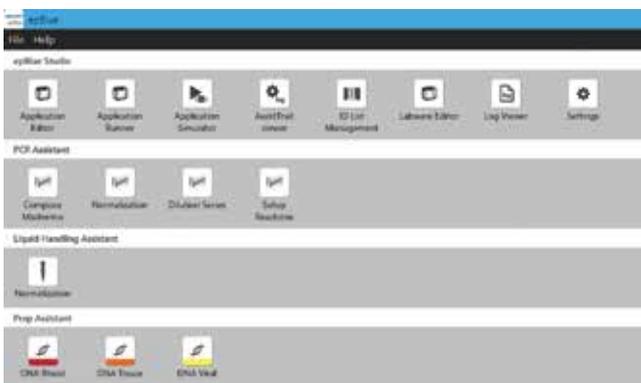
## Teaching function to define bottom tolerance

- > Change the bottom tolerance for labware in a given command without effecting the labware handling outside of the given protocol allowing for more method development versatility
- > Surface teaching allows you to optimize bead based cleanups, aspirating from filters, seeding plates, and many other applications.



## Predefined liquid classes

- > The most common liquid classes are predefined in the software ensuring maximum pipetting accuracy
- > User defined parameters are available to further optimize liquid handling for a wide variety of liquids



## User guided programming assistant

- > Step by step guide for setting up many common automated laboratory protocols such as PCR setup, nucleic acid extraction, and liquid handling assistants that facilitates easy setup of general liquid handling tasks



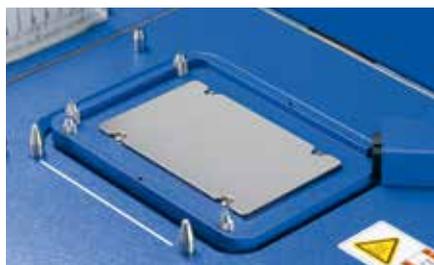
## Factory-installed and Upgrade Options



### Thermal module

(Catalog No. 960002181)

- > Peltier powered thermal module for on deck incubations
- > Temperature range is 0°C–110°C
- > Available as upgrade for epMotion® 5073I/P5073 (1 per unit), 5075I (3 per unit), 5075t (2 per unit), 5075m (2 per unit), 5075v (3 per unit) and 5075vt (2 per unit). For epMotion 5075 with serial number < 4,000 upgrades are possible for 5075 LH (3 per unit), 5075 TMX (1 per unit), 5075 VAC (2 per unit) but none for 5075 VACTMX (0 per unit).



### ThermoMixer® (TMX)

(Catalog No. 960021055 for epMotion serial number <4,000)  
(Catalog No. 5075000630 for epMotion serial number >4,000)

- > Peltier powered module integrated into epMotion deck (5075t) for on deck incubations at temperature and vigorous 2-dimensional mixing
- > Temperature range 4°C–95°C
- > Mixing speed range 300–2,000 rpm
- > Available as upgrade for 5075I and 5075v



### ThermoMixer with MagSep module

- > Peltier powered module integrated into epMotion deck (5073m/M5073 and 5075m) for on deck incubations at temperature and vigorous 2-dimensional mixing and magnetic separation
- > Temperature range 4°C–95°C
- > Mixing speed range 300–2,000 rpm
- > Compatible with 2 mL microcentrifuge tubes
- > Available as a factory-installed option with epMotion 5073 and 5075



### Vacuum module (VAC)

(Catalog No. 960021011)

- > Adjustable vacuum manifold for fully automated handling of filter plates for nucleic acid isolation integrated into epMotion deck (5075v, 5075vt)
- > Multiple frames and spring construction makes it compatible with most filter plates
- > Suction range 0.1–0.85 ± 0.05 Pa
- > Available as upgrade for 5075I and 5075t



### CleanCap

- > Built-in UV lights for decontamination and HEPA filters for clean air inside
- > HEPA filter with E10 filter classification according to EN 1822
- > Available as a factory-installed option with epMotion 5073 and 5075



## epMotion® Accessories



### Dispensing tools—Single-channel

- > High precision single channel dispensing tools for delivery of volumes from 1–1,000  $\mu\text{L}$
- > Built in calibration sensor can detect when tool may need adjustment
  - 5280000100 – Dispensing tool TS10, 0.2–10  $\mu\text{L}$
  - 960001010 – Dispensing tool TS50, 1–50  $\mu\text{L}$
  - 960001028 – Dispensing tool TS300, 20–300  $\mu\text{L}$
  - 960001036 – Dispensing tool TS1000, 40–1,000  $\mu\text{L}$



### Dispensing tools—8-Channel

- > High precision 8-channel dispensing tools for delivery of volumes from 1–1,000  $\mu\text{L}$  to SBS format plates and tube strips up to 384 wells
- > Built in calibration sensor can detect when tool may need adjustment
  - 5280000304 – Dispensing tool TM10, 0.2–10  $\mu\text{L}$
  - 960001044 – Dispensing tool TM50, 1–50  $\mu\text{L}$
  - 960001052 – Dispensing tool TM300, 20–300  $\mu\text{L}$
  - 960001061 – Dispensing tool TM1000, 40–1,000  $\mu\text{L}$



### epMotion tips

- > Highly precise tips engineered to maximize pipetting accuracy
- > Available in multiple purity grades in filtered and unfiltered versions
- > Come in regular or in SafeRack boxes that are optimized for tip reuse
- > Reload tip trays available that lower costs and minimize plastics waste from tip boxes
- > Manufactured without the use of slip agents, plasticizers, and biocides – substances that have been shown to leach from plastic consumables into the sample and negatively affect bio-assay results



### Gripper tool

- > Tool allows for fully automated transport of tube racks, plates and accessories during an epMotion method
- > Tool automatically recognized and exchanged when needed
- > Available for 5073I/P5073, 5073m/M5073, 5075I, 5075t, 5075m and 5075v
  - 960002270 – Gripper



## epMotion® Accessories



### Reservoir rack

- > Versatile rack for holding up to 7 bulk reagents in either 30 mL or 100 mL reservoirs or various tubes from 0.2 mL PCR tubes to 50 mL conical tubes
- > Temperature control possible when used in combination with a thermal module and Reservoir Rack Modules TC
- > 2 Reservoir Rack options are available
  - 960002148 – 7-place rack for use on standard SBS/ANSI deck position
  - 5075754070 – 3-place rack for use on half-position deck position with 5075m and 5075t



### Reagent reservoirs

- > Autoclavable reservoir for storing bulk reagents and accessible with multichannel tool
- > Includes lids to prevent contamination when not in use
- > Their special geometry minimizes residual volume.
  - 0030126521 – Reagent reservoir 10 mL, PCR clean, pk/50
  - 960051009 – Reagent reservoir 30 mL, PCR clean, pk/50
  - 960051017 – Reagent reservoir 100 mL, PCR clean, pk/50



### Reservoir Rack Module TC

- > For use in Reservoir racks and temperature controlled when used with a thermal module
- > 10 modules are available for tube volumes from 0.2 mL to 50 mL
  - 960002601 – for 8 x 0.2 mL PCR tubes
  - 960002620 – for 4 x 1.5/2.0 mL tubes, incl. 0.5 mL tube sleeves
  - 960002630 – for 4 x Tubes 12 mm
  - 960002640 – for 4 x Tubes 16 mm
  - 5075799340 – for 4 x Eppendorf Tubes® 5.0 mL
  - 960002650 – for 4 x 15 mL conical tubes
  - 960002660 – for 2 x 50 mL conical tubes
  - 5075799421 – for 1 x reservoir 10 mL
  - 960002670 – for 1 x reservoir 30 mL
  - 960002680 – for 1 x reservoir 100 mL



### Reagent reservoirs (SBS-size)

- > Autoclavable reservoir for storing bulk reagents or for collecting liquid waste
- > Two volume sizes are available
  - 0030126556 – Low dead volume reservoir 195 mL, PCR clean, pk/20
  - 5075751364 – Reagent reservoir 400 mL, PCR clean, pk/10



### 96-magnets

- > For use in magnetic bead-based applications such as next generation sequencing (NGS), DNA and RNA extraction, clean up of PCR or sequencing reactions
- > Universally compatible with 96 well microplates
- > Suitable for volumes up to 2 mL
- > 2 magnet types are available
  - 960066123 – Magnum EX (min elution volume 30 µL<sup>1)</sup>)
  - 960066124 – Magnum FLX (min elution volume 10 µL<sup>1)</sup>)

<sup>1)</sup> Certain microplate types may require higher elution volumes.



### Racks

- > 18 different racks available to allow for maximum versatility
- > No temperature control
  - 5075751453 – for 24 x 1.5/2.0 mL tubes, incl. 0.5 mL tube sleeves
  - 5075751275 – for 24 x 1.5/2.0 mL tubes
  - 960002318 – for 96 x 1.5/2.0 mL tubes (requires 2 deck positions)
  - 960002320 – SnapCap adapter for 96 x 1.5/2 mL rack
  - 960002380 – for 24 x Tubes Ø 12 mm; H24 mm (e.g., HPLC vials)
  - 960002351 – for 24 x Tubes Ø 12 mm; H45 mm
  - 960002059 – for 24 x Tubes Ø 12 mm; H63 mm
  - 960002342 – for 24 x Tubes Ø 13 mm; H45 mm
  - 960002041 – for 24 x Tubes Ø 13 mm; H63 mm
  - 960002334 – for 24 x Tubes Ø 14 mm; H45 mm
  - 960002369 – for 24 x Tubes Ø 14 mm; H63 mm
  - 960002326 – for 24 x Tubes Ø 15 mm; H45 mm
  - 960002377 – for 24 x Tubes Ø 15 mm; H63 mm
  - 960002164 – for 24 x Tubes Ø 16 mm; H45 mm
  - 960002032 – for 24 x Tubes Ø 16 mm; H63 mm
  - 960002156 – for 24 x Tubes Ø 17 mm; H45 mm
  - 960002024 – for 24 x Tubes Ø 17 mm; H63 mm (e.g., 15 mL conical)
  - 960002520 – for 1 x SmartCycler® tube rack
  - 960002511 – for 96 x LightCycler® 20 µL/100 µL capillaries
  - 5075751747 – Rack ILMN tube rack works with up to 12 Eppendorf 1.5 mL and 2 mL tubes as well as up to 40 1.1 mL Micronic tubes



### Thermoracks/Thermoblocks

- > Rapid temperature transfer when used with a thermal module
- > Thermoracks can be moved by the gripper
- > Available as TMX version optimized for high speed mixing with ThermoMixer (TMX)
  - 960002083 – for 1 x 96-well PCR plate
  - 5075751666 – for 1 x 96-well PCR plate. With orientation control and 2 clamps for mixing and piercing of semi-skirted plates.
  - 960002091 – for 1 x 384-well PCR plate
  - 960002067 – for 24 x 1.5/2.0 mL tubes, incl. 0.5 mL tube sleeves
  - 960002070 – for 24 x 1.5/2.0 mL tubes, incl. 0.5 mL tube sleeves (TMX)
  - 960002075 – for 24 x 1.5/2.0 mL tubes
  - 960002080 – for 24 x 1.5/2.0 mL tubes (TMX version)
  - 960002491 – for 24 x Cryotubes Ø 12.5 mm
  - 5075751526 – for 1 x 72- or 100-tube Qiagen® Rotor-Gene® Rotor-Disc® and 20 x 1.5/2.0 mL tubes (requires 2 deck positions)
  - 960002500 – for 384 x Corbett® 0.1 mL strip-tubes



### Thermoadapter

- > Rapid temperature transfer when used with a thermal module
- > Plates can be added/removed from the Thermoadapters by the gripper
  - 960002199 – for 1 x 96-well PCR plate
  - 960002202 – for 1 x 384-well PCR plate
  - 5075751577 – for 1 x Microplate 96 (U or V bottom)
  - 960002391 – for 1 x Eppendorf Deepwell Plate 96/1,000
  - 5075751330 – for 1 x Eppendorf Deepwell Plate 96/2,000
  - 5075751305 – for 1 x MagNA Pure® sample cartridge

# epT.I.P.S.<sup>®</sup> Motion

## Description

Automated pipetting processes place high demands on the design and material of pipette tips used. Eppendorf has specially designed the epT.I.P.S. for use on the epMotion<sup>®</sup> 5070, 5073 and 5075 Liquid Handling Workstation. epT.I.P.S. Motion pipette tips, with and without filters, are racked in torsion resistant, contamination free racks ensuring secure tip attachment.



## Product features

- > Color-coded trays for direct volume identification
- > Double O-ring on dispensing tools assures an optimal fit each time
- > Optical sensor automatically identifies tip type

## Applications

- > Available in multiple purity grades
- > Easily exchangeable, no additional labware files required
- > Also available as a reload system
- > Available as epT.I.P.S. Motion SafeRacks recommended for the reuse tips feature

## Ordering information

Description	Catalog No.	List USD
<b>epT.I.P.S.<sup>®</sup> Motion</b>		
Eppendorf Quality™, 10 µL, 960 tips (10 racks x 96 tips)	0030014383	\$ 95.00
Eppendorf Quality™, 50 µL, 960 tips (10 racks x 96 tips)	0030014405	95.00
Eppendorf Quality™, 300 µL, 960 tips (10 racks x 96 tips)	0030014448	95.00
Eppendorf Quality™, 1,000 µL, 960 tips (10 racks x 96 tips)	0030014480	95.00
sterile, 10 µL, 960 tips (10 racks x 96 tips)	0030015185	109.00
sterile, 50 µL, 960 tips (10 racks x 96 tips)	0030015207	109.00
sterile, 300 µL, 960 tips (10 racks x 96 tips)	0030015223	109.00
sterile, 1,000 µL, 960 tips (10 racks x 96 tips)	0030015240	109.00
<b>epT.I.P.S.<sup>®</sup> Motion Filtrertips, with filter</b>		
PCR clean, 10 µL, 960 tips (10 racks x 96 tips)	0030014391	183.00
PCR clean, 50 µL, 960 tips (10 racks x 96 tips)	0030014413	183.00
PCR clean, 300 µL, 960 tips (10 racks x 96 tips)	0030014456	183.00
PCR clean, 1,000 µL, 960 tips (10 racks x 96 tips)	0030014499	183.00
PCR clean and sterile, 10 µL, 960 tips (10 racks x 96 tips)	0030015193	218.00
PCR clean and sterile, 50 µL, 960 tips (10 racks x 96 tips)	0030015215	218.00
PCR clean and sterile, 300 µL, 960 tips (10 racks x 96 tips)	0030015231	218.00
PCR clean and sterile, 1,000 µL, 960 tips (10 racks x 96 tips)	0030015258	218.00
<b>epT.I.P.S.<sup>®</sup> Motion as SafeRack tips</b>		
Eppendorf Quality™, 50 µL, 960 tips (10 racks x 96 tips)	0030014600	115.00
Eppendorf Quality™, 300 µL, 960 tips (10 racks x 96 tips)	0030014626	115.00
Eppendorf Quality™, 1,000 µL, 960 tips (10 racks x 96 tips)	0030014642	115.00
<b>epT.I.P.S.<sup>®</sup> Motion as SafeRack tips, with filter</b>		
PCR clean, 50 µL, 960 tips (10 racks x 96 tips)	0030014618	218.00
PCR clean, 300 µL, 960 tips (10 racks x 96 tips)	0030014634	218.00
PCR clean, 1,000 µL, 960 tips (10 racks x 96 tips)	0030014650	218.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)

# epT.I.P.S.<sup>®</sup> Motion as Reload System

## Description

epT.I.P.S. Motion can be used with epMotion 96 or integrated into your workstation as a reload system when combined with the tip holder. The high-quality reload tips are delivered in a PET thermoformed tray with sealed lid. Upgrading to the autoclavable, aluminum tip holder, which replaces the disposable box, provides waste reduction of up to 40 percent.



## Product features

- > Delivered in a PET blister packaging with a sealed cap to assure quality
- > Color coded trays for easy volume identification
- > Reload system with autoclavable aluminium tip holder reduces plastic waste of tip boxes by up to 40%
- > Available with standard and filter/PCR clean tips

## Applications

- > Easy conversion with TipHolder Adapter
- > TipHolder Adapter is autoclavable

## Ordering information

Description	Catalog No.	List USD
<b>epT.I.P.S.<sup>®</sup> Motion as Reload System (for use with TipHolder)</b>		
Eppendorf Quality™, 10 µL, 2304 tips (24 trays x 96 tips)	0030014545	\$210.00
Eppendorf Quality™, 50 µL, 2304 tips (24 trays x 96 tips)	0030014421	210.00
Eppendorf Quality™, 300 µL, 2304 tips (24 trays x 96 tips)	0030014464	210.00
Eppendorf Quality™, 1,000 µL, 2304 tips (24 trays x 96 tips)	0030014502	210.00
<b>epT.I.P.S.<sup>®</sup> Motion as Reload System, with filter (for use with TipHolder)</b>		
PCR clean, 10 µL, 2304 tips (24 trays x 96 tips)	0030014553	419.00
PCR clean, 50 µL, 2304 tips (24 trays x 96 tips)	0030014430	419.00
PCR clean, 300 µL, 2304 tips (24 trays x 96 tips)	0030014472	419.00
PCR clean, 1,000 µL, 2304 tips (24 trays x 96 tips)	0030014510	419.00
PCR clean and sterile, 10 µL, 2304 tips (24 trays x 96 tips)	0030014561	480.00
PCR clean and sterile, 50 µL, 2304 tips (24 trays x 96 tips)	0030014529	480.00
PCR clean and sterile, 300 µL, 2304 tips (24 trays x 96 tips)	0030014537	480.00
PCR clean and sterile, 1,000 µL, 2304 tips (24 trays x 96 tips)	0030014570	480.00
<b>TipHolder</b> , for epT.I.P.S. <sup>®</sup> Motion Reloads	5075751399	598.00



# MagSep Reagent Kits

## Description

MagSep reagent kits are used with the *epMotion*® 5073m/M5073 and 5075m to automatically purify nucleic acids from biological samples. Magnetic beads, Proteinase K and all other reagents are prepackaged in special trays for the *epMotion* for 4 sets of 24 purifications. MagSep reagents deliver highly purified nucleic acids with very high yields. The special Prep Assistant software, combined with the *epMotion* 5073m/M5073 or 5075m, offers simple, step-by-step guided automatic nucleic acid purification for everyday use.



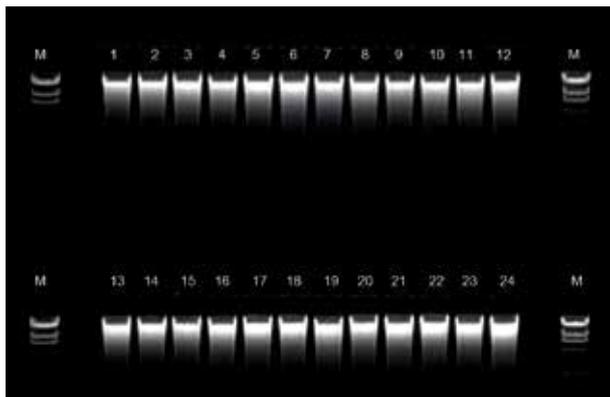
## Product features

- > Higher yields compared to manual purifications
- > High nucleic acid purity, suitable for PCR or other enzymatic reactions
- > Automatic recognition of kit type and remaining reaction quantity
- > Variable use for 1 to 24 samples per tray
- > Minimal preparation time due to reagent trays
- > Elution in DNA LoBind vessels (supplied)

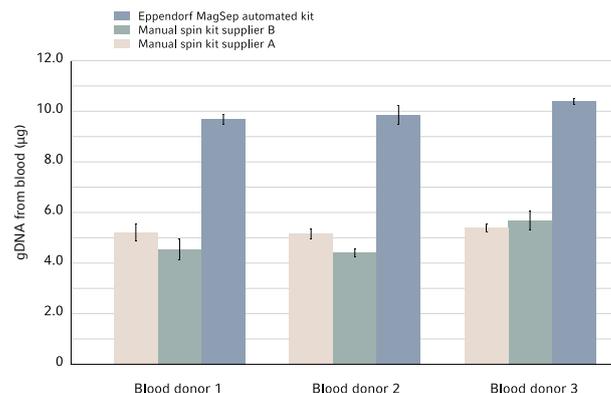
## Applications

- > Genomic DNA from tissue, cell culture, or bacteria - MagSep Tissue gDNA kit
- > Genomic DNA from 200 µL of whole blood - MagSep Blood gDNA kit
- > Viral nucleic acids from serum, plasma or other cell-free body fluids - MagSep viral DNA/RNA kit

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Gel analysis of 24 mouse tail samples purified with MagSep Tissue gDNA kit; typical yield 10  $\mu$ g high molecular weight DNA out of 10 mg tissue; 7.5  $\mu$ L of 75  $\mu$ L loaded on gel.



Typical yield of 9  $\mu$ g gDNA from 200  $\mu$ L of blood purified via MagSep Blood gDNA kit versus manual process of purification (n=3).



**3D MagSep technology** - Unique combination of magnet finger module and Eppendorf Thermomixer allow you to separate, mix and temperature control at one position. Available with epMotion 5073m/M5073 and 5075m.



Reagent kits, labware racks, MagSep hardware components and software programming PREP assistants are fully integrated to provide a ready-to-go solution for automated nucleic acid purification.

#### Ordering information

Description	Catalog No.	List USD
<b>MagSep Tissue gDNA Kit</b> , reagent kit for genomic DNA purification of 4 $\times$ 24 samples from cells & tissues	0030450000	\$ 535.00
<b>MagSep Blood gDNA Kit</b> , reagent kit for genomic DNA purification of 4 $\times$ 24 samples from blood	0030451007	435.00
<b>MagSep Viral DNA/RNA Kit</b> , reagent kit for viral DNA/RNA purification of 4 $\times$ 24 samples	0030452003	491.00
<b>PrepRack</b> , for 24 $\times$ Eppendorf Safe-Lock tubes 1.5/2.0 mL, for magnetic separation in 1.5/2.0 mL tubes using the MagSep module of epMotion 5073m/M5073 or 5075m	5073751006	1,330.00
<b>ReagentRack to hold the reagent tray</b> , for MagSep reagent kits	5075751429	159.00

## epMotion® Systems

## Ordering information

Description	Catalog No.	List USD
<b>epMotion 96</b>		
<b>epMotion 96</b> , semi-automated electronic pipette for parallel 96 channel microplate processing, (without iPod controller), 100 – 240 V $\pm$ 10 %/50 – 60 Hz $\pm$ 5 %, 0.5 – 300 $\mu$ L	5069000004	Inquire
<b>epMotion 96 with 2-position slider</b> , semi-automated electronic pipette for parallel 96 channel microplate processing (with 2 positions, without iPod controller), 0.5–300 $\mu$ L	5069000101	Inquire
<b>epMotion 96xl</b> , semi-automated electronic pipette for parallel 96 channel microplate processing (without iPod controller), 5–1000 $\mu$ L	5069000209	Inquire
<b>epMotion 96xl with 2-position slider</b> , semi-automated electronic pipette for parallel 96 channel microplate processing (without iPod controller), 5–1000 $\mu$ L	5069000306	Inquire
<b>iPod touch controller (for use with epMotion 96)</b> , 16 GB, blue	960002580	Inquire
<b>epMotion 5070</b>		
<b>epMotion 5070</b> , 100 – 240 V/50 – 60 Hz, incl. EasyCon tablet, epBlue software, LH Assistant, mouse, and waste box	5070007001	Inquire
<b>epMotion 5070</b> , 100 – 240 V/50 – 60 Hz, incl. MultiCon PC, epBlue software, LH Assistant, keyboard, mouse and waste box	5070007011	Inquire
<b>epMotion 5070f</b> , for use inside a cell culture bench or fume hood, 100 – 240 V/50 – 60 Hz, incl. EasyCon tablet, epBlue software, LH Assistant, mouse, and waste box	5070007101	Inquire
<b>epMotion 5070f</b> , for use inside a cell culture bench or fume hood, 100 – 240 V/50 – 60 Hz, incl. MultiCon PC, epBlue software, LH Assistant, keyboard, mouse and waste box	5070007111	Inquire
<b>epMotion 5073</b>		
<b>epMotion 5073l</b> , 100 – 240 V/50 – 60 Hz, incl. EasyCon tablet, epBlue software, LH Assistant, mouse and waste box	5073007401	Inquire
<b>epMotion 5073l</b> , 100 – 240 V/50 – 60 Hz, incl. MultiCon PC, epBlue software, LH Assistant, keyboard, mouse and waste box	5073007411	Inquire
<b>epMotion 5073l with CleanCap</b> , 100 – 240 V/50 – 60 Hz, incl. EasyCon tablet, epBlue software, LH Assistant, mouse and waste box	5073007501	Inquire
<b>epMotion 5073l with CleanCap</b> , 100 – 240 V/50 – 60 Hz, incl. MultiCon PC, epBlue software, LH Assistant, keyboard, mouse and waste box	5073007511	Inquire
<b>epMotion 5073m</b> , with integrated ThermoMixer and MagSep module, 100 – 240 V/50 – 60 Hz, incl. EasyCon tablet, epBlue software, PREP Assistant, mouse and waste box	5073007801	Inquire
<b>epMotion 5073m</b> , with integrated ThermoMixer and MagSep module, 100 – 240 V/50 – 60 Hz, incl. MultiCon PC, epBlue software, PREP Assistant, keyboard, mouse and waste box	5073007811	Inquire
<b>epMotion 5073m with CleanCap</b> , with integrated ThermoMixer and MagSep module, 100 – 240 V/50 – 60 Hz, incl. EasyCon tablet, epBlue software, PREP Assistant, mouse and waste box	5073007901	Inquire
<b>epMotion 5073m with CleanCap</b> , with integrated ThermoMixer and MagSep module, 100 – 240 V/50 – 60 Hz, incl. MultiCon PC, epBlue software, PREP Assistant, keyboard, mouse and waste box	5073007911	Inquire
<b>epMotion P5073 bundle package</b> , for automatic preparation of PCR reactions, 100 – 240 V/50 – 60 Hz, incl. epMotion 5073l with EasyCon tablet, epBlue software, PCR Assistant, mouse, dispensing tools TS 50 and TS 300, thermoblock PCR 96, rack for 24 x 1.5/2.0 mL tubes and waste box	5073000019	Inquire
<b>epMotion P5073 bundle package (with CleanCap)</b> , for automatic preparation of PCR reactions, 100 – 240 V/50 – 60 Hz, incl. epMotion 5073l with CleanCap and EasyCon tablet, epBlue software, PCR Assistant, mouse, dispensing tools TS 50 and TS 300, thermoblock PCR 96, rack for 24 x 1.5/2.0 mL tubes and waste box	5073007201	Inquire
<b>epMotion M5073 bundle package</b> , for automated nucleic acid preparation from 1-24 samples using Eppendorf MagSep kits, 100 – 240 V/50 – 60 Hz, incl. epMotion 5073m with EasyCon tablet, epBlue software, PREP Assistant, mouse, single-channel dispensing tools TS 50 and TS 1000, MagSep Reagent Rack, PrepRack for 24 x 1.5/2 mL tubes, Rack for 24 x 1.5/2.0 mL tubes, waste box and liquid waste tub	5073000213	Inquire
<b>epMotion M5073 bundle package (with CleanCap)</b> , for automated nucleic acid preparation from 1-24 samples using Eppendorf MagSep kits, 100 – 240 V/50 – 60 Hz, incl. epMotion 5073m with CleanCap and EasyCon tablet, epBlue software, PREP Assistant, mouse, single-channel dispensing tools TS 50 and TS 1000, MagSep Reagent Rack, PrepRack for 24 x 1.5/2 mL tubes, Rack for 24 x 1.5/2.0 mL tubes, waste box and liquid waste tub	5073007301	Inquire

## epMotion® Systems

Ordering information		
Description	Catalog No.	List USD
<b>epMotion 5075</b>		
<b>epMotion 5075l</b> , 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, LH Assistant, keyboard, mouse and waste box	5075006018	Inquire
<b>epMotion 5075l with CleanCap</b> , 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, LH Assistant, keyboard, mouse and waste box	5075006019	Inquire
<b>epMotion 5075v</b> , with integrated vacuum system, 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, keyboard, mouse, gripper, Vac Frame 2, Vac Frame holder and waste box	5075006020	Inquire
<b>epMotion 5075v with CleanCap</b> , with integrated vacuum system, 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, keyboard, mouse, gripper, Vac Frame 2, Vac Frame holder and waste box	5075006021	Inquire
<b>epMotion 5075t</b> , with integrated ThermoMixer, 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, keyboard, mouse and waste box	5075006022	Inquire
<b>epMotion 5075t with CleanCap</b> , with integrated ThermoMixer, 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, keyboard, mouse and waste box	5075006023	Inquire
<b>epMotion 5075vt</b> , with integrated vacuum system and ThermoMixer, 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, keyboard, mouse, gripper, Vac Frame 2, Vac Frame holder and waste box	5075006035	Inquire
<b>epMotion 5075vt with CleanCap</b> , with integrated vacuum system and ThermoMixer, 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, keyboard, mouse, gripper, Vac Frame 2, Vac Frame holder and waste box	5075006034	Inquire
<b>epMotion 5075m</b> , with integrated ThermoMixer and MagSep module, 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, PREP Assistant, PCR Assistant, keyboard, mouse and waste box	5075006024	Inquire
<b>epMotion 5075m with CleanCap</b> , with integrated ThermoMixer and MagSep module, 100 – 240 V/50 – 60 Hz, incl. MultiCon all-in-one PC, epBlue software, PREP Assistant, PCR Assistant, keyboard, mouse and waste box	5075006025	Inquire

## epMotion® Upgrade Kits

Ordering information		
Description	Catalog No.	List USD
<b>Thermal Module upgrade option</b> , thermal module for heating or cooling thermoadapters, thermoblock and thermoracks. Requires installation by an Eppendorf service technician, extra cost applies.	960002181	Inquire
<b>ThermoMixer upgrade option</b> (for units SN>4000), for heating, cooling and mixing of tubes and plates. Additional deck extension plate might be required. Requires installation by an Eppendorf service technician, extra cost applies.	5075000630	Inquire
<b>ThermoMixer upgrade option</b> (for units SN<4000), for heating, cooling and mixing of tubes and plates. Additional deck extension plate might be required. Requires installation by an Eppendorf service technician, extra cost applies.	960021055	Inquire
<b>Vacuum Module upgrade option</b> , for automated processing of filter plates. Additional deck extension plate might be required. Requires installation by an Eppendorf service technician, extra cost applies.	960021011	Inquire
<b>MultiCon PC upgrade kit</b> , for upgrading epMotion 5070 and 5073 EasyCon versions to a MultiCon PC. Includes MultiCon PC with preinstalled epBlue™ software, PREP Assistant, and PCR Assistant.	5075000725	Inquire
<b>Software &amp; Hardware upgrade kit</b> , for upgrading an epMotion 5075 with serial number 1,000 - 4,000 to the revision of an epMotion SN >4,000. Additional deck extension plate might be required. Requires installation by an Eppendorf service technician (901513510), extra cost applies.	5075000709	Inquire
<b>Deck extension plate 5075l, for units SN&gt;4000</b>	5075000641	Inquire
<b>Deck extension plate 5075t, for units SN&gt;4000</b>	5075000642	Inquire
<b>Deck extension plate 5075 TMX, for units SN&lt;4000</b>	960021066	Inquire
<b>Deck extension plate 5075v and 5075 VAC</b>	5075000643	Inquire
<b>Deck extension plate 5075vt and 5075 VACTMX</b>	5075000640	Inquire



## epMotion® Consumables

## Ordering information

Description	Catalog No.	List USD
<b>epT.I.P.S. Motion, non-filter</b>		
Eppendorf Quality™, 10 µL, 960 tips (10 racks x 96 tips)	0030014383	\$95.00
Eppendorf Quality, 50 µL, 960 tips (10 racks x 96 tips)	0030014405	95.00
Eppendorf Quality, 300 µL, 960 tips (10 racks x 96 tips)	0030014448	95.00
Eppendorf Quality, 1,000 µL, 960 tips (10 racks x 96 tips)	0030014480	95.00
Sterile, 10 µL, 960 tips (10 racks x 96 tips)	0030015185	109.00
Sterile, 50 µL, 960 tips (10 racks x 96 tips)	0030015207	109.00
Sterile, 300 µL, 960 tips (10 racks x 96 tips)	0030015223	109.00
Sterile, 1,000 µL, 960 tips (10 racks x 96 tips)	0030015240	109.00
<b>epT.I.P.S. Motion, with filter</b>		
PCR clean, 10 µL, 960 tips (10 racks x 96 tips)	0030014391	183.00
PCR clean, 50 µL, 960 tips (10 racks x 96 tips)	0030014413	183.00
PCR clean, 300 µL, 960 tips (10 racks x 96 tips)	0030014456	183.00
PCR clean, 1,000 µL, 960 tips (10 racks x 96 tips)	0030014499	183.00
PCR clean and sterile, 10 µL, 960 tips (10 racks x 96 tips)	0030015193	218.00
PCR clean and sterile, 50 µL, 960 tips (10 racks x 96 tips)	0030015215	218.00
PCR clean and sterile, 300 µL, 960 tips (10 racks x 96 tips)	0030015231	218.00
PCR clean and sterile, 1,000 µL, 960 tips (10 racks x 96 tips)	0030015258	218.00
<b>epT.I.P.S. Motion SafeRack (optimized for reuse tip function)</b>		
Eppendorf Quality, 50 µL, 960 tips (10 racks x 96 tips)	0030014600	115.00
Eppendorf Quality, 300 µL, 960 tips (10 racks x 96 tips)	0030014626	115.00
Eppendorf Quality, 1,000 µL, 960 tips (10 racks x 96 tips)	0030014642	115.00
<b>epT.I.P.S. Motion SafeRack, with filter (optimized for reuse tip function)</b>		
PCR clean, 50 µL, 960 tips (10 racks x 96 tips)	0030014618	218.00
PCR clean, 300 µL, 960 tips (10 racks x 96 tips)	0030014634	218.00
PCR clean, 1,000 µL, 960 tips (10 racks x 96 tips)	0030014650	218.00
<b>epT.I.P.S. Motion as reload system</b>		
Eppendorf Quality, 10 µL, 2,304 tips (24 trays x 96 tips)	0030014545	210.00
Eppendorf Quality, 50 µL, 2,304 tips (24 trays x 96 tips)	0030014421	210.00
Eppendorf Quality, 300 µL, 2,304 tips (24 trays x 96 tips)	0030014464	210.00
Eppendorf Quality, 1,000 µL, 2,304 tips (24 trays x 96 tips)	0030014502	210.00
<b>epT.I.P.S. Motion as reload system, with filter</b>		
PCR clean, 10 µL, 2,304 tips (24 trays x 96 tips)	0030014553	419.00
PCR clean, 50 µL, 2,304 tips (24 trays x 96 tips)	0030014430	419.00
PCR clean, 300 µL, 2,304 tips (24 trays x 96 tips)	0030014472	419.00
PCR clean, 1,000 µL, 2,304 tips (24 trays x 96 tips)	0030014510	419.00
PCR clean and sterile, 10 µL, 2304 tips (24 trays x 96 tips)	0030014561	480.00
PCR clean and sterile, 50 µL, 2304 tips (24 trays x 96 tips)	0030014529	480.00
PCR clean and sterile, 300 µL, 2304 tips (24 trays x 96 tips)	0030014537	480.00
TipHolder, for epT.I.P.S. Motion Reloads	5075751399	598.00
Reservoir 10 mL, large-volume container for reagent presentation on the epMotion, can only be inserted with the Reservoir Rack; production batch testing, certified 10 mL, 10 x 5 reservoirs in the bag, PCR clean, polypropylene	0030126521	243.50
Reservoir 30 mL, large-volume container for reagent presentation on the epMotion, can only be inserted with the Reservoir Rack; production batch testing, certified 30 mL, 10 x 5 reservoirs in the bag, PCR clean, polypropylene	960051009	243.50
Reservoir 100 mL, large-volume container for reagent presentation on the epMotion, can only be inserted with the Reservoir Rack; production batch testing, certified 100 mL, 10 x 5 reservoirs in the bag, PCR clean, polypropylene	960051017	355.00
Reservoir 400 mL, large-volume container in SBS format for reagent presentation on the epMotion; production batch testing, certified 400 mL, 10 reservoirs, autoclavable, polypropylene	5075751364	231.00
<b>Eppendorf MagSep reagent kits for nucleic acid purification</b>		
MagSep Tissue gDNA Kit, reagent kit for genomic DNA purification of 4 x 24 samples from cells and tissues	0030450000	535.00
MagSep Blood gDNA Kit, reagent kit for genomic DNA purification of 4 x 24 samples from blood	0030451007	435.00
MagSep Viral DNA/RNA Kit, reagent kit for viral DNA/RNA purification of 4 x 24 samples	0030452003	491.00

# epMotion® Tools and Accessories

Ordering information		
Description	Catalog No.	List USD
<b>Dispensing Tools</b>		
<b>TS 10 single-channel dispensing tool</b> , 0.2–10 µL volume range	5280000100	Inquire
<b>TS 50 single-channel dispensing tool</b> , 1–50 µL volume range	960001010	Inquire
<b>TS 300 single-channel dispensing tool</b> , 20–300 µL volume range	960001028	Inquire
<b>TS 1000 single-channel dispensing tool</b> , 40–1,000 µL volume range	960001036	Inquire
<b>TM 10-8 eight-channel dispensing tool</b> , 0.2–10 µL volume range	5280000304	Inquire
<b>TM 50-8 eight-channel dispensing tool</b> , 1–50 µL volume range	960001044	Inquire
<b>TM 300-8 eight-channel dispensing tool</b> , 20–300 µL volume range	960001052	Inquire
<b>TM 1000-8 eight-channel dispensing tool</b> , 40–1,000 µL volume range	960001061	Inquire
<b>Holder for 6 dispensing tools</b>	960001109	Inquire
<b>epMotion Gripper</b>		
<b>Gripper</b> , incl. holder, for transporting plates on the worktable and automatic operation of the vacuum manifold	960002270	Inquire
<b>Holder for gripper</b>	960002211	Inquire
<b>Waste solutions</b>		
<b>Waste container with lid</b> , for holding used pipette tips	960002016	\$132.00
<b>Liquid Waste Tub</b> , incl. lid, with working volume of 175 mL for mounting in waste box for use with 5073 and 5075	5075751500	134.00
<b>Accessories for use with vacuum module (VAC)</b>		
Vacuum lid	960002245	404.00
Mat for vacuum lid	960002407	264.00
Vac Frame 1	960002253	1,209.00
Vac Frame 2	960002261	1,209.00
Vac Frame holder	960002237	596.00
Elution plate adapter, for processing micro tubes in racks	960002531	152.00
Elution plate adapter, type for VAC station	960002571	183.00
Anticontamination plate adapter, for vacuum processes with foaming solutions in multiwell plates	960002540	67.50
Vac Thermo lid	960002551	2,192.00
Collection Plate adapter for M&N kits	960002571	183.00
<b>Reservoir Rack 7-positions</b> , holds up to 7 reservoirs (30 mL and 100 mL) or Reservoir Rack TC modules	960002148	200.00
<b>Reservoir Rack 3-positions</b> , holds up to 3 reservoirs (30 mL and 100 mL) or Reservoir Rack TC modules. For use on half-position deck position with 5075m and 5075t.	5075754070	169.00
<b>Reservoir Rack Temperature Control (TC) Modules</b> , for use in epMotion Reservoir Rack		
for 8 x PCR tubes 0.2 mL	960002601	453.00
for 4 x Eppendorf Safe-Lock tubes 1.5/2.0 mL, incl. 0.5 mL tube sleeves	5075799081	453.00
for 4 x Eppendorf Tubes 5.0 mL	5075799340	453.00
for 4 x reaction vessels Ø 12 mm	960002630	453.00
for 4 x reaction vessels Ø 16 mm	960002640	453.00
for 4 x reaction vessels Ø 17 mm (e.g. 15 mL conical)	960002650	453.00
for 2 x reaction vessels Ø 29 mm (e.g. 50 mL conical)	960002660	453.00
for 1 x reservoir 10 mL	5075799421	183.00
for 1 x reservoir 30 mL	960002670	183.00
for 1 x reservoir 100 mL	960002680	183.00
<b>Adapter sleeves</b> , to retrofit the 1.5/2.0 mL thermoracks for use with 0.5 mL vessels		
1 set of 25 pieces	960002172	385.00

## epMotion® Accessories

## Ordering information

Description	Catalog No.	List USD
<b>Racks for single test tubes, no temperature control</b>		
for 24 x Eppendorf Safe-Lock tubes 1.5/2.0 mL	5075751275	\$ 639.45
for 24 x Eppendorf Safe-Lock tubes 1.5/2.0 mL, incl. 0.5 mL tube sleeves	5075751453	680.05
for 96 x 1.5/2.0 mL screw cap tubes (requires 2 deck positions)	960002318	1,060.00
SnapCap adapter for 96 x 1.5/2 mL rack, to hold tube lids in open position	960002320	659.00
for 24 x tubes Ø 12 mm; H24 mm (e.g., HPLC vials)	960002380	419.00
for 24 x tubes Ø 12 mm; H45 mm	960002351	419.00
for 24 x tubes Ø 12 mm; H63 mm	960002059	419.00
for 24 x tubes Ø 13 mm; H45 mm	960002342	419.00
for 24 x tubes Ø 13 mm; H63 mm	960002041	419.00
for 24 x tubes Ø 14 mm; H45 mm	960002334	419.00
for 24 x tubes Ø 14 mm; H63 mm	960002369	419.00
for 24 x tubes Ø 15 mm; H45 mm	960002326	419.00
for 24 x tubes Ø 15 mm; H63 mm	960002377	419.00
for 24 x tubes Ø 16 mm; H45 mm	960002164	419.00
for 24 x tubes Ø 16 mm; H63 mm	960002032	419.00
for 24 x tubes Ø 17 mm; H45 mm	960002156	419.00
for 24 x tubes Ø 17 mm; H63 mm (e.g., 15 mL conical tubes)	960002024	419.00
Rack ILMN, for 12 x 1.5/2.0 mL screw cap/snap cap tubes and 40 x Ø 8.4 mm tubes (e.g., Illumina Index and Oligo screw cap tubes, 1.1 mL Micronic® tubes)	5075751747	690.00
Rack Smart, for 1 x SmartCycler reaction tube rack	960002520	419.00
Rack LC, for 96 x 20 µL or 100 µL LightCycler® capillaries. Also suitable for use with Centrifuge 5804/5804 R or 5810/5810 R, set of 2.	960002511	2,943.00
PrepRack, for 24 x Eppendorf Safe-Lock tubes 1.5/2.0 mL, for magnetic separation in 1.5/2.0 mL tubes using the MagSep module of epMotion® 5073m/M5073 or 5075m	5073751006	1,330.00
ReagentRack to hold the reagent tray, for MagSep reagent kits	5075751429	159.00
<b>Thermorack (Thermoblock)</b> , for temperature control of plates and tubes, plates and tubes can be transported together with the thermorack		
for 1 x PCR plate, 96-well, or 96 x 0.2 mL PCR tubes	960002083	934.00
for 1 x PCR plate, 96-well, with orientation control and 2 clamps for safe mixing and piercing of semi-skirted plates.	5075751666	964.00
for 1 x PCR plate, 384-well	960002091	1,035.00
for 24 x Eppendorf Safe-Lock tubes, 1.5/2.0 mL	960002075	1,205.00
for 24 x Eppendorf Safe-Lock tubes, 1.5/2.0 mL, incl. 0.5 mL tube sleeves	960002067	1,250.00
for 24 x Eppendorf Safe-Lock tubes, 1.5/2.0 mL (TMX version)	960002080	1,208.00
for 24 x Eppendorf Safe-Lock tubes, 1.5/2.0 mL, incl. 0.5 mL tube sleeves (TMX version)	960002070	1,250.00
for 24 x Cryotubes® Ø 12.5 mm	960002491	1,505.00
for 384 x Corbett® 0.1 mL strip-tubes	960002500	1,578.00
for 1 x 72- or 100-tube Qiagen® Rotor-Gene® Rotor-Disc® and 20 x 1.5/2.0 mL tubes (requires 2 deck positions)	5075751526	1,070.00
Lid cover with holder for Qiagen Rotor-Gene adapter	5075751640	335.00
<b>Thermoadapter</b> , for temperature control of plates, plates can be removed by the gripper		
for 1 x PCR plate, 96-well	960002199	934.00
for 1 x PCR plate, 384-well	960002202	1,035.00
for 1 x Microplate 96 (U or V bottom)	5075751577	659.00
for 1 x DWP 96/1000, for Eppendorf Deepwell Plates 96/1,000 µL	960002391	1,715.00
for 1 x DWP 96/2000, for Deepwell Plates 96/2,000 µL	5075751330	659.00
for 1 x MagNA Pure LC sample cartridge	5075751305	746.00
<b>Thermoadapter Frosty</b> , combination of height adapter and PCR-Cooler, for cooling 1 x PCR plate, 96-well, skirted	960002300	913.00

## epMotion® Accessories

Ordering information		
Description	Catalog No.	List USD
<b>Height adapter</b> , for leveling labware, enables faster plate processing		
40 mm, 1 pc.	960002121	\$ 596.00
55 mm, 1 pc.	960002113	596.00
85 mm, 1 pc.	960002105	596.00
<b>Height adapter</b> , for elevating epMotion by 55 mm, provides for storage space underneath the epMotion	5070752001	375.00
<b>Eppendorf Magnum EX Magnet</b> , for magnetic bead separation in 96 well plates	960066123	Inquire
<b>Eppendorf Magnum FLX Magnet</b> , for magnetic bead separation in 96 well plates	960066124	Inquire

## epMotion® Software

Ordering information		
Description	Catalog No.	List USD
<b>epBlue™ ID barcode and tracking software incl. manual barcode scanner</b> , modular expansion of epBlue™ for barcode support. Incl. manual barcode reader with stand. Compatible with epBlue™ version 40.1 and higher	5075002701	Inquire
<b>epBlue™ ID software and hardware modification kit</b> , for 5070 and 5075 PC versions, barcode support includes software, barcode reader and stand, compatible with all epMotion® PC versions except epMotion® 5075 MC PC version, not compatible with the epMotion® control panel versions	5075000830	Inquire
<b>epBlue™ GxP software</b> , for use in regulated process environments (according to GLP, GMP, 21 CFR), as configuration option or for pre-installed epMotion® MultiCon versions with epBlue™ version 40.1 or higher, with epBlue™ GxP software, corresponding firmware, certificates	5075002728	Inquire
<b>epBlue™ GxP software modification kit</b> , for use in regulated process environments (according to GLP, GMP, 21 CFR), for pre-installed epMotion® PC versions, with epBlue™ GxP software, corresponding firmware, USB hardware key, certificates. Requires 627B version of integrated PC	5075000849	Inquire
<b>epMotion® Editor 40</b> , software CD ROM with instructions, used to create, edit and simulate application on a PC, compatible with epBlue™ version >40.x	5075014220	Inquire
<b>epMotion® Editor 40 additional license</b> , compatible with epBlue™ version > 40.x	5075014300	Inquire
<b>epMotion® Editor</b> , incl. editor key, for creating and editing applications, runs on the PC, compatible with epBlue™ 10.x versions, complete software package	960000269	Inquire
<b>epMotion® Editor</b> , incl. editor key, for creating and editing applications, runs on the PC, compatible with epBlue™ 10.x versions, additional user license	960000300	Inquire
<b>LH Assistant software license</b> , provides step-by-step programming guidance to set up for general liquid handling tasks like Reformatting, Assay set up, Dilution series, Normalization, Cherry picking, Pool samples and Wash	5075002507	Inquire
<b>PCR Assistant software license</b> , designed to streamline and automate the whole PCR set up workflow. Facilitates easy method set up for PCR steps like Compose MasterMix, Normalize Concentrations, Create Dilution Series and Setup PCR Reactions	5075002515	Inquire
<b>PREP Assistant software license</b> , provides step-by-step programming guidance to set up nucleic acid purification protocols for the Eppendorf MagSep reagent kits	5075002523	Inquire

# Sample Handling



Model	Eppendorf ThermoMixer® C	ThermoStat C	Eppendorf ThermoMixer® F0.5
Page(s)	120	122	126
Dimensions (W x D x H)	8.1 x 11.9 x 5.3 in	8.1 x 11.9 x 5.3 in	8.1 x 11.9 x 6.4 in
Weight w/o accessories	13.9 lb	9.7 lb	13.6 lb
Power supply	100 – 130 V, 50 – 60 Hz	100 – 130 V, 50 – 60 Hz	100 – 130 V, 50 – 60 Hz
Max. power consumption	200 W	200 W	200 W
Heating rate	Max. 7 °C/min (when using SmartBlock plates) <sup>1)</sup>	Max. 9 °C/min (when using the SmartBlock PCR 384) <sup>1)</sup>	Max. 15 °C/min
Cooling rate	Max. 2.5 °C/min between 100 °C and RT	Max. 5.0 °C/min between 110 °C and RT <sup>1)</sup>	–
Timer	15 sec to 99:30 h, continuous	15 s to 99:30 h, continuous	–
Mixing and vortexing radius	1.5 mm	–	1.5 mm
Mixing orbit	3 mm	–	3 mm
Mixing frequency	300 – 3,000 rpm <sup>1)</sup>	–	300 – 2,000 rpm
Max. speed	3,000 rpm <sup>1)</sup>	–	2,000 rpm
Temperature settings	1 °C / 100 °C	-10 °C/110 °C (110 °C when using the SmartBlocks 12 mm or cryo)	1 °C / 100 °C
Temperature range	Min: 15 °C (depends on SmartBlock used) below RT, max: 100 °C	Min: 30 °C <sup>1)</sup> below RT, max: 110 °C (110 °C when using the 12 mm and cryo SmartBlocks)	Min: 4 °C above RT, max: 100 °C
Temperature accuracy	Max. ±0.5 °C at 20 – 45 °C	Max. ±0.5 °C at 20 – 45 °C <sup>1)</sup>	Max. ±0.5 °C at 20 – 45 °C
Interfaces	USB interface	USB interface	USB interface
Applications	<ul style="list-style-type: none"> <li>&gt; Plasmid/RNA/DNA purification</li> <li>&gt; cDNA synthesis</li> <li>&gt; Extraction of DNA fragments from agarose gels</li> <li>&gt; Enzymatic reactions (e.g., DNA restriction digestion, Proteinase K digestion and ligation)</li> <li>&gt; Transformation of bacteria strains and plasmids</li> <li>&gt; Denaturation of DNA, RNA, and proteins</li> <li>&gt; Labeling of DNA, RNA, and proteins</li> <li>&gt; Bacterial growth in microreaction vessels, conical tubes, and Deepwell Plates</li> <li>&gt; Lysis reactions at 100 °C</li> <li>&gt; Mixing of PCR setups</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Gentle thawing and cooling buffers and samples at low temperatures</li> <li>&gt; Preheating media</li> <li>&gt; Biochemical reactions at low temperatures</li> <li>&gt; Ligation</li> <li>&gt; cDNA synthesis</li> <li>&gt; Denaturation of RNA, DNA, and protein</li> <li>&gt; Proteinase K digestion</li> <li>&gt; ELISA assays</li> <li>&gt; Immunoprecipitation</li> <li>&gt; Cell lysis</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Growth of bacteria and yeasts</li> <li>&gt; Enzymatic reactions</li> <li>&gt; Transformation of bacteria strains and plasmids</li> <li>&gt; Denaturation of DNA, RNA, and proteins</li> <li>&gt; Lysis reactions at 100 °C</li> <li>&gt; Labeling of nucleic acids and proteins</li> <li>&gt; Proteinase K digestion of cells and tissues</li> <li>&gt; Resuspension of pellets</li> <li>&gt; Mixing protein quantification assays</li> <li>&gt; ELISA assays</li> </ul>

<sup>1)</sup> depends on SmartBlock used



Eppendorf ThermoMixer® F1.5	Eppendorf ThermoMixer® F2.0	Eppendorf ThermoMixer® FP	MixMate®
<b>126</b>	<b>126</b>	<b>126</b>	<b>127</b>
8.1 x 11.9 x 6.7 in	8.1 x 11.9 x 6.7 in	8.1 x 11.9 x 6.4 in	6.7 x 9.0 x 5.1 in
13.9 lb	13.9 lb	13.4 lb	9.2 lb
100 – 130 V, 50 – 60 Hz	100 – 130 V, 50 – 60 Hz	100 – 130 V, 50 – 60 Hz	100 – 130 V, 50 – 60 Hz
200 W	200 W	200 W	40 W
Max. 11 °C/min	Max. 13 °C/min	Max. 18 °C/min	–
–	–	–	–
–	–	–	–
1.5 mm	1.5 mm	1.5 mm	1.5 mm
3 mm	3 mm	3 mm	3 mm
300 – 1,500 rpm	300 – 1,500 rpm	300 – 2,000 rpm	300 – 3,000 rpm
1,500 rpm	1,500 rpm	2,000 rpm	3,000 rpm
1 °C / 100 °C	1 °C / 100 °C	1 °C / 100 °C	–
Min: 4 °C above RT, max: 100 °C	Min: 4 °C above RT, max: 100 °C	Min: 4 °C above RT, max: 100 °C	N/A
Max. ±0.5 °C at 20 – 45 °C	Max. ±0.5 °C at 20 – 45 °C	Max. ±0.5 °C at 20 – 45 °C	–
USB interface	USB interface	USB interface	–
<ul style="list-style-type: none"> <li>&gt; Growth of bacteria and yeasts</li> <li>&gt; Enzymatic reactions</li> <li>&gt; Transformation of bacteria strains and plasmids</li> <li>&gt; Denaturation of DNA, RNA, and proteins</li> <li>&gt; Lysis reactions at 100 °C</li> <li>&gt; Labeling of nucleic acids and proteins</li> <li>&gt; Proteinase K digestion of cells and tissues</li> <li>&gt; Resuspension of pellets</li> <li>&gt; Mixing protein quantification assays</li> <li>&gt; ELISA assays</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Growth of bacteria and yeasts</li> <li>&gt; Enzymatic reactions</li> <li>&gt; Transformation of bacteria strains and plasmids</li> <li>&gt; Denaturation of DNA, RNA, and proteins</li> <li>&gt; Lysis reactions at 100 °C</li> <li>&gt; Labeling of nucleic acids and proteins</li> <li>&gt; Proteinase K digestion of cells and tissues</li> <li>&gt; Resuspension of pellets</li> <li>&gt; Mixing protein quantification assays</li> <li>&gt; ELISA assays</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Growth of bacteria and yeasts</li> <li>&gt; Enzymatic reactions</li> <li>&gt; Transformation of bacteria strains and plasmids</li> <li>&gt; Denaturation of DNA, RNA, and proteins</li> <li>&gt; Lysis reactions at 100 °C</li> <li>&gt; Labeling of nucleic acids and proteins</li> <li>&gt; Proteinase K digestion of cells and tissues</li> <li>&gt; Resuspension of pellets</li> <li>&gt; Mixing protein quantification assays</li> <li>&gt; ELISA assays</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Resuspending pellets (e.g., bacteria, DNA, cell culture pellets)</li> <li>&gt; Mixing PCR setups</li> <li>&gt; Mixing viscous liquids and suspensions (incl. beads)</li> <li>&gt; Mixing restriction digestions</li> <li>&gt; Immunoassays (e.g., ELISA)</li> <li>&gt; Colorimetric assays (e.g., Bradford, Lowry, BCA)</li> <li>&gt; Reporter gene assays (e.g. β-galactosidase, luciferase)</li> <li>&gt; Vortexing numerous tube formats (e.g., 15 and 50 mL conical tubes)</li> </ul>



Model	Flex-Tube®	Safe-Lock Tube 0.5 mL	Safe-Lock Tube 1.5 mL
Page(s)	137	138	138
Volume	1.5 mL	0.5 mL	1.5 mL
Bottom shape	conical	conical	conical
Max. RCF Eppendorf Quality™	30,000 × g	30,000 × g	30,000 × g
Max. RCF PCR clean	30,000 × g	30,000 × g	30,000 × g
Max. RCF Eppendorf Biopur®	–	22,000 × g	22,000 × g
Max. RCF Sterile	–	–	–

<sup>1)</sup> Test conditions: Rotor FA-45-6-30 in Eppendorf Centrifuge 5810 R (using a suitable centrifuge adapter for 15 mL tube), sample: saline solution (density: 1.0 g/mL), controlled centrifugation temp.: 25 °C, centrifugation time: 90 min



Model	Protein LoBind Tubes/ DNA LoBind, 0.5 mL	Protein LoBind Tubes/ DNA LoBind, 1.5 mL	Protein LoBind Tubes/ DNA LoBind, 2.0 mL
Page(s)	151 / 153	151 / 153	151 / 153
Bottom shape	conical	conical	round
Max. RCF PCR clean	18,000 × g/ 30,000 × g	18,000 × g/ 30,000 × g	18,000 × g/ 25,000 × g

**Safe-Lock Tube 2.0 mL**

<b>138</b>
2.0 mL
round
25,000 × g
25,000 × g
22,000 × g
–

**Eppendorf Tubes® 5.0 mL**

<b>140</b>
5.0 mL
conical
25,000 × g

**Eppendorf Conical Tubes 15 mL**

<b>142</b>
15 mL
conical
–
–
–
19,500 × g <sup>1)</sup>

**Eppendorf Conical Tubes 50 mL**

<b>142</b>
50 mL
conical
–
–
–
19,500 × g

**Protein LoBind Tubes/ DNA LoBind, 5.0 mL, conical tubes**

<b>151 / 153</b>
conical
25,000 × g/ 25,000 × g

**Protein LoBind Tubes/ DNA LoBind, 15 mL, conical tubes**

<b>143 / 153</b>
conical

**Protein LoBind Tubes/ DNA LoBind, 50 mL, conical tubes**

<b>143 / 153</b>
conical



## Microplates

Model	MTP 96/F	MTP 96/U	MTP 96/V
Page(s)	144	144	144
Number of wells	96 wells	96 wells	96 wells
Total volume per well	400 $\mu$ L	360 $\mu$ L	350 $\mu$ L
Working volume	50 – 350 $\mu$ L	20 – 320 $\mu$ L	20 – 320 $\mu$ L
Material	polypropylene	polypropylene	polypropylene
Bottom shape	flat	round	conical
Dimensions (W x D x H)	127.8 x 85.5 x 14.4 mm	127.8 x 85.5 x 14.4 mm	127.8 x 85.5 x 14.4 mm
Max. RCF	6,000 x g	6,000 x g	6,000 x g

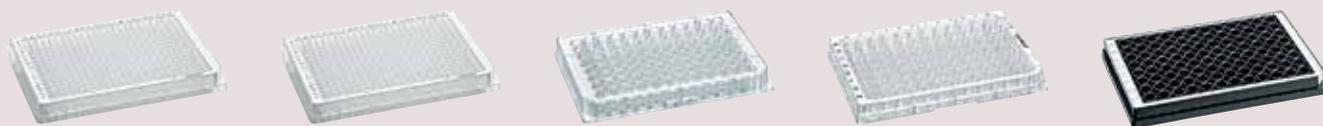
<sup>1)</sup> For more Assay/Reader MTPs go to page 146.

For Cell Imaging plates go to chapter Cell Imaging Consumables. For twin.tec PCR Plates go to chapter PCR.



## Deepwell Plates

Model	DWP 96/500	DWP 96/1000	DWP 96/2000	DWP 384/200
Page(s)	148	148	148	148
Number of wells	96 wells	96 wells	96 wells	384 wells
Total volume per well	700 $\mu$ L	1.200 $\mu$ L	2.400 $\mu$ L	240 $\mu$ L
Working volume	30 – 550 $\mu$ L	30 – 1,000 $\mu$ L	50 – 2,000 $\mu$ L	20 – 225 $\mu$ L
Material	polypropylene	polypropylene	polypropylene	polypropylene
Bottom shape	conical	conical	conical	conical
Dimensions (W x D x H)	127.8 x 85.5 x 27.1 mm	127.8 x 85.5 x 44.1 mm	127.8 x 85.5 x 44.1 mm	127.8 x 85.5 x 25.1 mm
Max. RCF	6,000 x g	6,000 x g	6,000 x g	6,000 x g

**Microplates**

MTP 384/F	MTP 384/V	MTP UV-VIS 96/F	MTP VIS 96/F	Assay MTP 96/F <sup>1)</sup>
<b>144</b>	<b>144</b>	<b>144</b>	<b>144</b>	<b>146</b>
384 wells	384 wells	96 wells	96 wells	96 wells
150 µL	140 µL	400 µL	400 µL	400 µL
10 – 120 µL	10 – 120 µL	50 – 350 µL	50 – 350 µL	50 – 350 µL
polypropylene	polypropylene	polystyrene/film	polystyrene	polypropylene
flat	conical	flat	flat	flat
127.8 × 85.5 × 14.4 mm				
6,000 × g	6,000 × g	300 × g	3,000 × g	6,000 × g

**Protein LoBind Plates/ DNA LoBind Plates**

MTP 96/V	MTP 384/V	DWP 96/500	DWP 96/1000	DWP 96/2000	DWP 384/200
<b>150 / 152</b>	<b>150 / 152</b>	<b>150 / 152</b>	<b>150 / 152</b>	<b>150 / 152</b>	<b>150 / 152</b>
96 wells	384 wells	96 wells	96 wells	96 wells	384 wells
350 µL	140 µL	700 µL	1,200 µL	2,400 µL	240 µL
20 – 300 µL	5 – 120 µL	30 – 550 µL	30 – 1,000 µL	50 – 2,000 µL	20 – 225 µL
polypropylene	polypropylene	polypropylene	polypropylene	polypropylene	polypropylene
conical	conical	conical	conical	conical	conical
127.8 × 85.5 × 14.4 mm	127.8 × 85.5 × 14.4 mm	127.8 × 85.5 × 27.1 mm	127.8 × 85.5 × 44.1 mm	127.8 × 85.5 × 600 mm	127.8 × 85.5 × 25.1 mm
6,000 × g	6,000 × g	6,000 × g	6,000 × g	6,000 × g	6,000 × g

# Eppendorf ThermoMixer® C

## Description

Do you need everything? The Eppendorf ThermoMixer C combines excellent mixing performance with excellent temperature control to guarantee complete, dependable and reproducible test results. Improve your assay results by mixing and incubating samples at the same time. The Eppendorf ThermoMixer C convinces users with its quick and easy-to-exchange SmartBlocks for all common lab vessels, new and improved program functions, and high level of stability for every mixing frequency. There is almost no limit to the variety of applications waiting for you!



	Plate type	96-well plates	384-well plates
<b>Mixing of different buffers</b>			
Buffer with detergent	PCR	30 s 1,800 rpm	30 s 2,800 rpm
Buffer without detergent	PCR	1 min 2,000 rpm	30 s 3,000 rpm
Buffer with high salt concentration	DWP	5 s 1,400 rpm	30 s 2,000 rpm
Buffer with DMSO	MTP	5 s 1,100 rpm	5 s 2,000 rpm
<b>Mixing of viscous solutions</b>			
Genomic-DNA	PCR	30 s 2,000 rpm	1 min 3,000 rpm
<b>Resuspension of pellets</b>			
Bacteria cell pellets	DWP	30 s 2,000 rpm	2 min 2,000 rpm

Eppendorf ThermoMixer C provides enough mixing power to handle challenging mixing tasks. Most samples are efficiently mixed within less than a minute independent of vessel geometry or sample properties. For more information see AppNote 130.

## Product features

- > Mixing, heating, and cooling in one instrument for high flexibility
- > All common vessels and plate formats from 5 µL to 50 mL by different Eppendorf SmartBlocks for standard applications
- > Excellent <sup>20</sup>Mix-Control technology results in excellent sample mixing
- > Anti-spill technology prevents lid wetting and cross-contamination
- > Increased mixing frequency of up to 3,000 rpm for effective sample mixing
- > Excellent temperature management for maximum temperature accuracy, resulting in safe handling
- > Compatible with Eppendorf ThermoTop (**condens.protect**®) for condensation-free sample handling (for Eppendorf SmartBlocks up to 2.0 mL)
- > Predefined program keys and clearly arranged menu guides enable simple and intuitive operations
- > Freely programmable program keys for individual optimization
- > Eppendorf PhysioCare Concept® provides ergonomic design and operation

## 50 µL sample mixing with 1,800 rpm

Competitor 1 min



Suboptimal sample mixing

Eppendorf <sup>20</sup>Mix-Control 1 min (MixMate®)



Reliable sample mixing

Eppendorf <sup>20</sup>Mix-Control 1 min (Eppendorf ThermoMixer®)



Reliable sample mixing



# Transfer Racks Eppendorf SmartBlock™

## Description

Are you performing a 60-sec-incubation step for 24 samples in parallel? The Eppendorf Transfer Rack enables a safe and easy transfer of up to 24 samples in parallel to or from the Eppendorf SmartBlock. This provides similar reaction conditions for all samples of your experiment. The Transfer Rack is available for the SmartBlock 0.5 mL as well as the SmartBlock 1.5 and 2.0 mL. These SmartBlocks include a Transfer Rack by standard.



## Product features

- > Holds up to 24 microtubes (i.e. 0.5 mL, 1.5 mL, or 2.0 mL) for easy transfer of multiple vessels in parallel
- > Convenient transfer of up to 24 hot vessels without burning the fingers
- > Temperature range from -96 °C to 121 °C for broad flexibility
- > Optimized block design guarantees maximum temperature transfer to the sample
- > Eppendorf QuickRelease™ technology enables fast and simple block exchange – no need for tools

## Ordering information

Description	Catalog No.	List USD
Eppendorf ThermoMixer® C, basic device without thermoblock, 100 – 130 V/50 – 60 Hz	5382000023	\$3,835.00
Transfer Rack 0.5 mL, for Eppendorf SmartBlock™ 0.5 mL	3880000305	50.00
Transfer Rack 1.5/2.0 mL, for Eppendorf SmartBlock™ 1.5 mL and Eppendorf SmartBlock™ 2.0 mL	3880000151	50.00
Lid, for Eppendorf ThermoMixer® F0.5/F1.5/F2.0 and FP, for Eppendorf SmartBlock™ 0.5 – 2.0 mL, plates, PCR 96, PCR 384, and DWP	5363000233	186.00
Eppendorf ThermoTop®, with condens.protect® technology	5308000003	685.00
Eppendorf SmartBlock™ 0.5 mL, thermoblock for 24 reaction vessels 0.5 mL, incl. Transfer Rack 0.5 mL	5361000031	775.00
Eppendorf SmartBlock™ 1.5 mL, thermoblock for 24 reaction vessels 1.5 mL, incl. Transfer Rack 1.5/2.0 mL	5360000038	775.00
Eppendorf SmartBlock™ 2.0 mL, thermoblock for 24 reaction vessels 2.0 mL, incl. Transfer Rack 1.5/2.0 mL	5362000035	775.00
Eppendorf SmartBlock™ 5 mL, thermoblock for 8 Eppendorf Tubes® 5.0 mL, 8 x 5.0 mL reaction vessels	5309000007	775.00
Eppendorf SmartBlock™ 15 mL, thermoblock for 8 conical tubes 15 mL	5366000021	775.00
Eppendorf SmartBlock™ 50 mL, thermoblock for 4 conical tubes 50 mL	5365000028	775.00
Eppendorf SmartBlock™ 12 mm, thermoblock for 24 reaction vessels, diameter up to 12 mm, height 35 mm – 76 mm	5364000024	775.00
Eppendorf SmartBlock™ PCR 96, thermoblock for PCR plates 96, incl. lid	5306000006	1,025.00
Eppendorf SmartBlock™ PCR 384, thermoblock for PCR plates 384, incl. lid	5307000000	1,025.00
Eppendorf SmartBlock™ DWP 500, thermoblock for Eppendorf Deepwell Plates 96/500 µL, incl. lid	5316000004	1,025.00
Eppendorf SmartBlock™ DWP 1,000, thermoblock for Eppendorf Deepwell Plate 96/1000 µL, incl. lid	5310000002	1,025.00
Eppendorf SmartBlock™ cryo, thermoblock for 24 cryo tubes, 1.5 mL – 2 mL, max. external diameter 12.5 mm, all base designs	5367000025	775.00
Eppendorf SmartBlock™ plates, thermoblock for microplates and Deepwell Plates, incl. lid	5363000039	1,025.00

For technical specifications, see page 124.

# Eppendorf ThermoStat™ C

## Description

Many experiments require fast heating and cooling steps in a very accurate manner. Precise temperature control is achieved for the ThermoStat C by using optimally balanced heating and cooling elements (peltier technology).



## Product features

- > Heating and active cooling in all common vessel and plate formats from 5 µL to 50 mL for high flexibility
- > Broad range of SmartBlocks enables high vessel flexibility
- > Excellent temperature accuracy for safe sample handling
- > Very fast cooling rates of up to 5 °C/min, reducing your waiting time
- > Low temperature (e.g. 4 °C or 0 °C) even at higher ambient temperatures for safe sample incubation
- > Temperature keys (4 °C, 16 °C, 37 °C, 56 °C, and 95 °C) provide quick access to commonly used experimental temperatures
- > Eppendorf ThermoTop (**condens.protect**®) compatibility prevents condensation and improves temperature homogeneity within sample tubes (up to 2.0 mL)
- > Comprehensive range of program slots (up to 15) for flexible usage of device

## Ordering information

Description	Catalog No.	List USD
Eppendorf ThermoStat™ C, basic device without thermoblock, 100 – 130 V/50 – 60 Hz	5383000027	\$2,790.00
Eppendorf ThermoTop®, with <b>condens.protect</b> ® technology	5308000003	685.00

For technical specifications, see page 128.

**i** Ordering information for Eppendorf SmartBlocks, please see page 124.

**i** For more information go to [www.eppendorf.com/thermostat-c](http://www.eppendorf.com/thermostat-c)



# Eppendorf SmartBlock™

## Description

Are you using different vessel sizes within your lab workflow? Flexibility has never been this easy. Eppendorf offers a broad range of SmartBlocks for tubes from 0.2 mL to 50 mL as well as plates (MTP, DWP, and PCR plates 96 / 384) to use with Eppendorf ThermoMixer® C and ThermoStat C. All SmartBlocks are equipped with the outstanding Eppendorf QuickRelease system that makes the block exchange super fast and easy. Just press the lever on the front of the block and the block can be removed – no tools are needed, done in seconds.



## Product features

- > Optimized block design supports optimal temperature transfer within your sample to receive excellent results
- > Eppendorf SmartBlock-specific calibration by integrated sensor technology maximizes temperature accuracy and homogeneity
- > Every SmartBlock is individually inspected in production for temperature accuracy and is delivered incl. a serial-number specific certificate for documentation purpose
- > Insulated thermoblocks for ergonomic operation – you won't burn your fingers (PhysioCare Concept)
- > Automatic block recognition for safe handling
- > Optimized block design guarantees maximum temperature transfer to the sample
- > Eppendorf QuickRelease™ technology enables fast and simple block exchange – no need for tools

## Eppendorf SmartBlocks for the following reaction vessels:

- A. 24 lab vessels up to 12 mm in diameter
- B. 8 × 15 mL conical tubes
- C. 4 × 50 mL conical tubes
- D. Eppendorf Deepwell Plates 96/500 µL
- E. Eppendorf Deepwell Plates 96/1000 µL
- F. 24 × cryo tubes
- G. 8 × Eppendorf Tubes® 5.0 mL
- H. Lid for Eppendorf SmartBlock plates, PCR 96, PCR 384, DWP, 0.5 mL, 1.5 mL and 2.0 mL
- I. 384-well PCR plates
- J. 96-well PCR plates
- K. 24 × 0.5 mL vessels
- L. 24 × 1.5 mL vessels
- M. 24 × 2.0 mL vessels
- N. MTPs and Deepwell Plates

i For more information go to [www.eppendorf.com/smartblocks](http://www.eppendorf.com/smartblocks)



# Eppendorf SmartBlock™



Technical specifications					
Description	Lid <sup>1)</sup>	Max. speed <sup>2)</sup>	Max. temp.	ThermoMixer C ThermoStat C	ThermoTop
Eppendorf SmartBlock™ 0.5 mL	■	2,000 rpm	100 °C	■	■
Eppendorf SmartBlock™ 1.5 mL	■	2,000 rpm	100 °C	■	■
Eppendorf SmartBlock™ 2.0 mL	■	2,000 rpm	100 °C	■	■
Eppendorf SmartBlock™ 5 mL		1,000 rpm	100 °C	■	
Eppendorf SmartBlock™ 15 mL		1,000 rpm	100 °C	■	
Eppendorf SmartBlock™ 50 mL		1,000 rpm	100 °C	■	
Eppendorf SmartBlock™ 12 mm		2,000 rpm	110 °C <sup>4)</sup>	■	
Eppendorf SmartBlock™ cryo		2,000 rpm	110 °C <sup>4)</sup>	■	
Eppendorf SmartBlock™ plates	■	3,000 rpm <sup>3)</sup>	100 °C	■	■
Eppendorf SmartBlock™ PCR 96	■	2,000 rpm	100 °C	■	■
Eppendorf SmartBlock™ PCR 384	■	3,000 rpm	100 °C	■	■
Eppendorf SmartBlock™ DWP 500	■	1,500 rpm	100 °C	■	■
Eppendorf SmartBlock™ DWP 1,000	■	1,500 rpm	100 °C	■	■

<sup>1)</sup> Maximum mixing frequency is 2,000 rpm when lid is used <sup>2)</sup> Max. speed depends on exact fitting of vessel <sup>3)</sup> max. mixing frequency using DWP is 2,000 rpm (80°C and higher: limited to 1,000 rpm) <sup>4)</sup> Only available with ThermoStat C

## Ordering information

Description	Catalog No.	List USD
Transfer Rack 0.5 mL, for Eppendorf SmartBlock™ 0.5 mL	3880000305	\$ 50.00
Transfer Rack 1.5/2.0 mL, for Eppendorf SmartBlock™ 1.5 mL and Eppendorf SmartBlock™ 2.0 mL	3880000151	50.00
Lid, for Eppendorf ThermoMixer® F0.5/F1.5/F2.0 and FP, for Eppendorf SmartBlock™ 0.5 – 2.0 mL, plates, PCR 96, PCR 384, and DWP	5363000233	186.00
Eppendorf SmartBlock™ 0.5 mL, thermoblock for 24 reaction vessels 0.5 mL, incl. Transfer Rack 0.5 mL	5361000031	775.00
Eppendorf SmartBlock™ 1.5 mL, thermoblock for 24 reaction vessels 1.5 mL, incl. Transfer Rack 1.5/2.0 mL	5360000038	775.00
Eppendorf SmartBlock™ 2.0 mL, thermoblock for 24 reaction vessels 2.0 mL, incl. Transfer Rack 1.5/2.0 mL	5362000035	775.00
Eppendorf SmartBlock™ 5 mL, thermoblock for 8 Eppendorf Tubes® 5.0 mL, 8 x 5.0 mL reaction vessels	5309000007	775.00
Eppendorf SmartBlock™ 15 mL, thermoblock for 8 conical tubes 15 mL	5366000021	775.00
Eppendorf SmartBlock™ 50 mL, thermoblock for 4 conical tubes 50 mL	5365000028	775.00
Eppendorf SmartBlock™ 12 mm, thermoblock for 24 reaction vessels, diameter up to 12 mm, height 35 mm – 76 mm	5364000024	775.00
Eppendorf SmartBlock™ PCR 96, thermoblock for PCR plates 96, incl. lid	5306000006	1,025.00
Eppendorf SmartBlock™ PCR 384, thermoblock for PCR plates 384, incl. lid	5307000000	1,025.00
Eppendorf SmartBlock™ DWP 500, thermoblock for Eppendorf Deepwell Plates 96/500 µL, incl. lid	5316000004	1,025.00
Eppendorf SmartBlock™ DWP 1,000, thermoblock for Eppendorf Deepwell Plate 96/1000 µL, incl. lid	5310000002	1,025.00
Eppendorf SmartBlock™ cryo, thermoblock for 24 cryo tubes, 1.5 mL – 2 mL, max. external diameter 12.5 mm, all base designs	5367000025	775.00
Eppendorf SmartBlock™ plates, thermoblock for microplates and Deepwell Plates, incl. lid	5363000039	1,025.00

# Eppendorf ThermoTop®

## Description

Are you tired of condensation in your tubes? We combined the Eppendorf ThermoMixer® with the PCR cyclor approach of a heated lid and generated the Eppendorf ThermoTop. The outstanding Eppendorf **condens.protect** technology reliably prevents condensation within the tube lid – sample concentrations are consistent for the incubation time. In addition, the temperature homogeneity is further improved. Get optimal sample reaction conditions to produce optimal results.



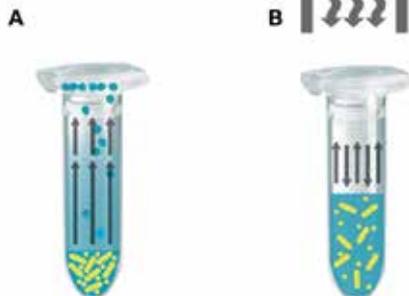
## Applications

- > All temperature control procedures for which the formation of condensation on the tube lid and wall should be reliably avoided



## Product features

- > Efficient and reliable condensation prevention for safe sample heating
- > Get constant reaction conditions for optimal enzymatic performance within your samples
- > Wireless connection with automatic recognition and operation for user-friendly handling
- > Suitable for use with Eppendorf ThermoMixer F0.5/F1.5/F2.0/FP as well as Eppendorf ThermoMixer C and ThermoStat C with Eppendorf SmartBlocks 0.5 mL, 1.5 mL, 2.0 mL, plates, PCR 96, and PCR 384 (not in combination with Eppendorf Transfer Rack)



## Principle:

A = Condensation without ThermoTop

B = Free of contamination with ThermoTop

## Ordering information

Description	Catalog No.	List USD
Eppendorf ThermoTop®, with <b>condens.protect</b> ® technology	530800003	\$685.00

i For more information go to [www.eppendorf.com/thermotop](http://www.eppendorf.com/thermotop)

# Eppendorf ThermoMixer® F

## Description

Are you doing routine sample prep steps often? Whether you regularly work with 0.5/1.5/2.0 mL vessels or plates (MTP and DWP) – our customized fixed-block Eppendorf ThermoMixer F family offers you the perfect solution for your special application. Just simplify your routine work load.



## Product features

- > Heating and mixing in 0.5/1.5/2.0 mL reaction vessels (F0.5/F1.5/F2.0) or plates (FP)
- > Up to 1,500 rpm (F1.5/F2.0) or 2,000 rpm (F0.5/FP) for efficient sample mixing
- > Outstanding <sup>2D</sup>Mix-Control technology results in excellent mixing performance
- > Anti-spill technology prevents lid wetting and cross-contamination
- > Compatible with Eppendorf ThermoTop (**condens.protect**®) for condensation-free sample handling
- > Predefined temperature keys (37 °C, 42 °C, 56 °C, and 95 °C) for simple and intuitive operation
- > Very fast heat up speed of up to 18 °C/min, reducing your waiting time
- > Eppendorf PhysioCare Concept provides ergonomic design and operation

## Ordering information

Description	Catalog No.	List USD
Eppendorf ThermoMixer® FP, with thermoblock for Microplates and Deepwell Plates, including lid, 100 – 130 V/50 – 60 Hz	5385000024	\$3,150.00
Eppendorf ThermoMixer® F0.5, with thermoblock for 24 reaction vessels 0.5 mL, 100 – 130 V/50 – 60 Hz	5386000028	3,000.00
Eppendorf ThermoMixer® F1.5, with thermoblock for 24 reaction vessels 1.5 mL, 100 – 130 V/50 – 60 Hz	5384000020	2,900.00
Eppendorf ThermoMixer® F2.0, with thermoblock for 24 reaction vessels 2.0 mL, 100 – 130 V/50 – 60 Hz	5387000021	2,900.00
Eppendorf ThermoTop®, with <b>condens.protect</b> ® technology	5308000003	685.00

For technical specifications, see page 129.

# MixMate®

## Description

Do you require just mixing? Mix your samples in seconds, fully and reliably. Whether in plates (96 or 384-wells) or reaction tubes, your samples will be optimally processed. With the integrated ergonomic vortex function, the MixMate is your perfect lab assistant. The innovative additional 2 second run timer allows vortexing your next sample without restarting.



	Plate type	96-well plates	384-well plates
<b>Mixing of different buffers</b>			
Buffer with detergent	PCR	15 s	45 s
		1,800 rpm	2,800 rpm
Buffer without detergent	PCR	30 s	30 s
		2,100 rpm	3,000 rpm
Buffer with high salt concentration	DWP	5 s	1 min
		1,400 rpm	2,000 rpm
Buffer with DMSO	MTP	5 s	5 s
		1,100 rpm	2,200 rpm
<b>Mixing of viscous solutions</b>			
Genomic-DNA	PCR	30 s	45 s
		2,000 rpm	3,000 rpm
<b>Resuspension of pellets</b>			
Bacteria cell pellets	DWP	30 s	3 min
		2,000 rpm	2,000 rpm

MixMate provides enough mixing power to handle the most challenging mixing tasks. Most samples are efficiently mixed within less than a minute independent of vessel geometry or sample properties. For more information see AppNote 130.

## Product features

- > High-speed mixer (3,000 rpm) for fast and efficient mixing of small volumes in all common vessel formats up to 2 mL
- > <sup>2D</sup>Mix-Control technology (planar mixing orbit without vertical movement) for controlled mixing and reproducible results in seconds
- > Anti-spill technology for controlled mixing movements without lid wetting and cross-contamination
- > 3 different tube holders (0.5 mL, 1.5/2.0 mL, PCR 96 plates) for high vessel flexibility
- > Integrated ergonomic vortex function for various vessel formats for distinct sample mixing
- > Minimal hand/arm vibration transfer during vortexing (certificate available) for ergonomic operation (PhysioCare Concept®)
- > 5 soft keys with pre-defined standard mixing parameters for easy usage
- > Very stable - remains stationary even at maximum mixing speed
- > Whisper quiet operation to benefit the work environment



## Ordering information

Description	Catalog No.	List USD
MixMate®, incl. 3 tube holders: PCR 96, 0.5 mL, 1.5/2.0 mL, 120 V/50 – 60 Hz	022674200	\$2,350.00
Tube Holder 0.5 mL, for 24 × 0.5 mL reaction vessels	022674021	50.50
Tube Holder 1.5/2.0 mL, for 24 × 1.5 mL or 2.0 mL reaction vessels	022674048	50.50
Tube Holder PCR 96, for 96 × 0.2 mL PCR tubes, PCR strips or 1 × 96-well PCR plate, semi-skirted or unskirted	022674005	50.50

For technical specifications, see page 129.



Technical specifications	
<b>Model</b>	ThermoMixer C
<b>Timer</b>	15 sec to 99:30 h, continuous
<b>Heating rate</b>	Max. 7 °C/min (when using SmartBlock plates) <sup>1)</sup>
<b>Cooling rate</b>	Max. 2.5 °C/min between 100 °C and RT
<b>Interfaces</b>	USB interface
<b>Power supply</b>	100 – 130 V, 50 – 60 Hz
<b>Max. power consumption</b>	200 W
<b>Dimensions (W x D x H)</b>	8.1 x 11.9 x 5.3 in / 20.6 x 30.4 x 13.6 cm
<b>Weight w/o accessories</b>	13.8 lb / 6.3 kg
<b>Temperature range</b>	Min: 15 °C <sup>1)</sup> below RT, max: 100 °C
<b>Mixing and vortexing radius</b>	1.5 mm
<b>Mixing orbit</b>	3 mm
<b>Mixing frequency</b>	300–3,000 rpm <sup>1)</sup>
<b>Max. speed</b>	3,000 rpm <sup>1)</sup>
<b>Temperature accuracy</b>	Max. ±0.5 °C at 20 – 45 °C
<b>Temperature settings</b>	1 °C / 100 °C

<sup>1)</sup> depends on SmartBlock used

Technical specifications	
<b>Model</b>	ThermoStat C
<b>Timer</b>	15 s to 99:30 h, continuous
<b>Heating rate</b>	Max. 9 °C/min (when using the SmartBlock PCR 384) <sup>1)</sup>
<b>Cooling rate</b>	Max. 5.0 °C/min between 110 °C and RT <sup>1)</sup>
<b>Interfaces</b>	USB interface
<b>Power supply</b>	100 – 130 V, 50 – 60 Hz
<b>Max. power consumption</b>	200 W
<b>Dimensions (W x D x H)</b>	8.1 x 11.9 x 5.3 in / 20.6 x 30.4 x 13.6 cm
<b>Weight w/o accessories</b>	9.7 lb / 4.4 kg
<b>Temperature range</b>	Min: 30 °C below RT, max: 110 °C (110 °C when using the 12 mm or cryo SmartBlocks)
<b>Temperature accuracy</b>	Max. ±0.5 °C at 20–45 °C <sup>1)</sup>
<b>Temperature settings</b>	-10 °C / 110 °C (110 °C when using the 12 mm or cryo SmartBlocks)

<sup>1)</sup> depends on SmartBlock used



Technical specifications				
Model	Eppendorf ThermoMixer® F0.5	Eppendorf ThermoMixer® F1.5	Eppendorf ThermoMixer® F2.0	Eppendorf ThermoMixer® FP
Max. speed	2,000 rpm	1,500 rpm	1,500 rpm	2,000 rpm
Timer	-	-	-	-
Heating rate	Max. 15 °C/min	Max. 11 °C/min	Max. 13 °C/min	Max. 18 °C/min
Cooling rate	-	-	-	-
Interfaces	USB interface	USB interface	USB interface	USB interface
Power supply	100 – 130 V, 50 – 60 Hz	100 – 130 V, 50 – 60 Hz	100 – 130 V, 50 – 60 Hz	100 – 130 V, 50 – 60 Hz
Max. power consumption	200 W	200 W	200 W	200 W
Dimensions (W × D × H)	8.1 x 11.9 x 6.4 in / 20.6 x 30.4 x 16.3 cm	8.1 x 11.9 x 6.7 in / 20.6 x 30.4 x 17.0 cm	8.1 x 11.9 x 6.7 in / 20.6 x 30.4 x 17.0 cm	8.1 x 11.9 x 6.4 in / 20.6 x 30.4 x 16.4 cm
Weight w/o accessories	13.6 lb / 6.2 kg	13.8 lb / 6.3 kg	13.8 lb / 6.3 kg	13.4 lb / 6.1 kg
Temperature range	Min: 4 °C above RT, max: 100 °C	Min: 4 °C above RT, max: 100 °C	Min: 4 °C above RT, max: 100 °C	Min: 4 °C above RT, max: 100 °C
Mixing and vortexing radius	1.5 mm	1.5 mm	1.5 mm	1.5 mm
Mixing orbit	3 mm	3 mm	3 mm	3 mm
Mixing frequency	300-2,000 rpm	300-1,500 rpm	300-1,500 rpm	300-2,000 rpm
Temperature accuracy	Max. ±0.5 °C at 20– 45 °C	Max. ±0.5 °C at 20– 45 °C	Max. ±0.5 °C at 20– 45 °C	Max. ±1 °C at 20– 45 °C
Temperature settings	1 °C / 100 °C			

Technical specifications	
Model	MixMate®
Sample capacity	max. 96 x 0.2 mL, 24 x 0.5 mL, 24 x 1.5 mL, 24 x 2.0 mL, 1 x DWP or 1 x PCR plate
Timer	15 s–99.3 h, continuous
Noise level	< 50 dB(A)
Heating rate	-
Cooling rate	-
Interfaces	-
Max. power consumption	40 W
Dimensions (W × D × H)	6.7 x 9 x 5.1 in / 17 x 23 x 13 cm
Weight w/o accessories	9.2 lb / 4.2 kg
Temperature range	N/A
Mixing and vortexing radius	1.5 mm
Mixing orbit	3 mm
Mixing frequency	300 – 3,000 rpm
Temperature accuracy	-
Temperature settings	-
Touch vortex frequency	3,500 rpm

# Accessories



## IsoTherm-System®

- > IsoTherm-System: IsoRack (work rack), IsoSafe (insulating box), and two IsoPacks (cool packs)
- > Ideal for cooling, transporting, and storing deep-frozen samples
- > Dry incubation technology reduces contamination risk associated with classical icebath incubation for safe sample handling
- > Holds up to 24 micro tubes (e.g., 0.5 mL or 1.5 mL/2.0 mL) for broad flexibility
- > Two versions of IsoPack (cold pack) available: White maintains 0 °C for up to 6 hours. Blue maintains -21 °C for up to 3 hours
- > Racks are stackable, autoclavable and can be centrifuged in the MTP rotor



## PCR-Cooler

- > Handling system for sample set-up, protection, transport, and storage of sensitive samples – keep your samples safe
- > Clear temperature indicator: Color of PCR cooler changes when temperature exceeds 7 °C
- > Accommodates PCR-vessels as tubes, strips, or plates for flexible vessel usage
- > Dry incubation technology reduces contamination risk of samples
- > Keeps an entire 96-well PCR plate cold for more than an hour at 0 °C (with two-hour precooling at -20 °C) for safe samples

### Color change

Eppendorf PCR-cooler changes color depending on temperature (up to 1 h at 0 °C after precooling at -20 °C)

below 7 °C

above 7 °C



**Ordering information**

Description	Catalog No.	List USD
<b>IsoTherm-System® starter set</b> , includes IsoSafe, IsoRack, 0 °C IsoPack and -21 °C IsoPack		
for 0.5 mL tubes	022510002	\$174.00
for 1.5/2.0 mL tubes	022510053	172.00
<b>IsoPack and IsoRack set</b> , includes one IsoPack and one IsoRack		
for 0.5 mL vessels, 0 °C	022510282	55.00
for 0.5 mL vessels, -21 °C	022820291	55.00
for 1.5/2.0 mL vessels, 0 °C	022510240	55.00
for 1.5/2.0 mL vessels, -21 °C	022510258	55.00
<b>IsoSafe and IsoPack</b> , includes 1 IsoSafe and 3 IsoPack		
for 1.5/2.0 mL vessels, 0 °C	022510185	105.00
for 1.5/2.0 mL vessels, -21 °C	022510207	105.00

**Ordering information**

Description	Catalog No.	List USD
<b>PCR-Cooler 0.2 mL Starter Set</b> , (1 × pink, 1 × blue)	022510509	\$151.00
<b>PCR-Cooler 0.2 mL</b> , Pink	022510541	78.00
<b>PCR-Cooler 0.2 mL</b> , Blue	022510525	78.00

# Vacufuge® plus Centrifugal Vacuum Concentrator

## Description

The Vacufuge plus with its new design was designed with the customer in mind to deliver an ergonomic, intuitive and durable solution that fits comfortably right on the lab bench. An advanced heating technology provides best treatment for your sample which assures quick, efficient and gentle vacuum concentration of DNA/RNA, nucleotides, proteins and other liquid or wet samples. Our new coated lid provides superior chemical resistance against aggressive acids and organic solvents (e.g. TFA, DMSO).

The Concentrator plus is available with three configurations to meet the customers' lab specific needs:

- 1) Basic Concentrator for connecting to an existing vacuum pump
- 2) Complete system with an integrated solvent-resistant, maintenance and oil-free PTFE pump, and condensation trap
- 3) Complete system with vacuum port adds extra capability. It allows for using the integrated vacuum pump separately – without having to disconnect it from the system



## Product features

- > Comes in 3 system configurations
- > Extremely quiet operation <50 dB(A)
- > Chemical-resistant, maintenance-free PTFE diaphragm pump eliminates the need for changing pump oil
- > Small footprint saves valuable bench space
- > Wide variety of 15 different rotor options to accommodate tubes from 0.2 mL to 50 mL, microplates and PCR plates
- > Motorless induction drive and chemical-resistant, stainless steel chamber for trouble-free operation
- > Can be connected with most commercially available cold traps for use with vapors
- > Coated lid with superior chemical resistance

Technical specifications			
Model	Vacufuge plus basic	Vacufuge plus system	Vacufuge plus system w/port
Vacuum	–	20 hPa (20 mbar)	20 hPa (20 mbar)
Fixed speed	1,400 rpm	1,400 rpm	1,400 rpm
Tube volume	0.2 – 50 mL	0.2 – 50 mL	0.2 – 50 mL
Sample capacity	max. 144 vessels/2 microplates	max. 144 vessels/2 microplates	max. 144 vessels/2 microplates
Port to connect external devices to vacuum pump	no	no	yes
Max. power consumption	150 W	350 W	350 W
Dimensions (W × D × H)	12.6 × 14.5 × 9 in	12.6 × 21 × 11.7 in	12.6 × 21 × 11.7 in
Weight w/o accessories	37.4 lb	68.2 lb	68.2 lb

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)

**Vacufuge with port system**

The complete system with port adds extra capability/flexibility. It allows you to use the integrated vacuum pump separately – without having to disconnect it from the system; simply connect the port to any external device that requires vacuum (e.g. gel dryer).

**Easy-to-use**

- > Timer selection between 1 min and 9:59 as well as Brake function
- > Temperature preselection: room temperature, 30 °C, 45 °C and 60 °C
- > Mode/vent function: choose between three solvent modes
- > Start/Stop of concentration process

**Superior chemical resistance**

- > Superior chemical resistance with integrated PTFE diaphragm pump (Complete system only) and new coated lid allows use for greater variety of applications

**Outstanding rotor versatility**

- > Outstanding rotor versatility with 15 rotor options, accommodating 0.2 to 50 mL tubes, microplates and PCR plates



# Vacufuge plus

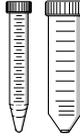
## Ordering information

Description	Catalog No.	List USD
<b>Vacufuge plus basic device</b>		
120 V/50 – 60 Hz, with Rotor F-45-48-11	022820001	\$ 5,390.00
<b>Vacufuge plus complete system</b>		
120 V/50 – 60 Hz, with integrated diaphragm vacuum pump, with Rotor F-45-48-11	022820109	10,375.00
120 V/50 – 60 Hz, with integrated diaphragm vacuum pump, without rotor	022822993	9,560.00
120 V/50 – 60 Hz, with integrated diaphragm vacuum pump; with connection, e.g., for a gel dryer; without rotor	022820168	11,640.00
Condensation trap	022830309	760.00
Hose for connecting condensation trap to Vacufuge	022830295	71.10
External Power Cable <sup>1</sup>	022820110	124.00
External Vacuum Control Cable and Solenoid <sup>2</sup> , 120 V	022820112	396.00
<b>Adapter</b> , for 1 tube 0.5 mL, max. Ø 6 mm or microtainer 0.6 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636227	35.50
<b>Adapter</b> , for 1 PCR tube 0.2 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636260	35.50
<b>Adapter</b> , for 1 PCR tube 0.2 mL, for Rotor F-45-72-8, set of 6 pcs.	022036286	35.50
<b>CombiSlide® Adapter</b> , for 12 slides, for plate rotors, set of 2 pcs.	022628963	275.00
<b>Rotor spacer</b> , required for stacking rotors F-45-72-8 and F-45-48-11	022022101	60.50
<b>Work tray</b> , for semi/unskirted PCR plates, PCR strips and 0.2 mL PCR tubes, for Rotor A-2-VC, set of 10 pcs.	951010031	50.00
<b>Frame for work tray</b> , for Rotor A-2-VC, set of 5 pcs.	951910049	46.00

<sup>1</sup> Attaches directly from the Basic concentrator to power an external vacuum pump (< 400 Watts). Concentrator automatically powers on/off pump as needed for vacuum.

<sup>2</sup> Allows the Basic concentrator to control and turn on/off the incoming vacuum line. Powered solenoid attaches in-line with the vacuum line. For use with vacuum pumps > 400 Watts.

## Ordering information

	Description	Max. tube dimensions Ø x L	Sample capacity	Catalog No.	List USD
	Rotor F-45-72-8	8 x 31 mm <sup>1)</sup>	72 x 0.5 mL	022822080	\$ 803.00
	Rotor F-45-70-11	11 x 41/47 mm	70 x 1.5 mL, 70 x 2.0 mL	022822047	803.00
	Rotor F-45-48-11	11 x 41/47 mm <sup>1)</sup>	48 x 1.5 mL / 2.0 mL	022822004	803.00
	Rotor F-40-36-12	12 x 32 mm	36 x 1.5 mL	022822209	803.00
	Rotor F-45-36-15	15 x 45 – 48 mm <sup>2)</sup>	36 x 3.0/5.0 mL	022822128	803.00
	Rotor F-45-16-20	20 x 42 – 55 mm <sup>2)</sup>	16 x 6.5/10 mL	022822136	803.00
	Rotor F-40-18-19	19 x 66 mm	18 x 10 mL	022822161	803.00
	Rotor F-45-12-31	31 x 55 mm	12 x 20 mL	022822217	803.00
	Rotor F-35-8-24	24 x 86 – 105 mm <sup>2)</sup>	8 x 25 mL	022822187	803.00
	Rotor F-45-24-12	12 x 67 – 100 mm <sup>2) 3)</sup>	24 x 5 – 7 mL	022822144	803.00
	Rotor F-50-8-16	16 x 105 – 120 mm <sup>2)</sup>	8 x 8 – 12 mL	022822233	803.00
	Rotor F-50-8-18	18 x 105 – 128 mm <sup>2)</sup>	8 x 10 – 18 mL	022822179	803.00
	Rotor F-45-8-17	17 x 116 – 123 mm <sup>2)</sup>	8 x 15 mL conical tubes	022822225	803.00
	Rotor F-35-6-30	17 x 116 – 123 mm or 30 x 116 – 123 mm <sup>2)</sup>	6 x 15 mL conical tubes or 6 x 50 mL conical tubes	022822228	803.00
	Rotor A-2-VC	128 x 86 x 27 mm	2 x MTP or skirted PCR plates 2 x Deepwell plates (DWP) (max. height = 27 mm)	022822241	1,310.00

<sup>1)</sup> Rotor is stackable for double capacity using spacer 5301 316.005. <sup>2)</sup> Min./max. tube length. <sup>3)</sup> Tube length = 75 mm: max capacity 24 tubes, tube length > 75 mm: max capacity 12 tubes.



**48 x 1.5/2.0 mL rotor (F-45-48-11)  
(Catalog No. 022822004)**

- > Rotor for 48 x 1.5/2.0 mL microcentrifuge tubes
- > A spacer enables additional stacking (double capacity)



**6 x 50 mL conical rotor (F-35-6-30)  
(Catalog No. 022822228)**

- > Rotor for 6 x 50 mL conical tubes
- > Also accommodates 6 x 15 mL conical tubes



**2 x MTP/PCR plate rotor (A-2-VC)  
(Catalog No. 022822241)**

- > For use with MTP, PCR and Deepwell Plates up to 27 mm high
- > A work tray with frame is available for PCR test plates and microplates without frames
- > Rotor can be autoclaved for 20 min. at 121°C
- > Suitable for the CombiSlide Adapter



**8 x 15 mL conical rotor (F-45-8-17)  
(Catalog No. 022822225)**

- > Rotor for 8 x 15 mL conical tubes



# Eppendorf Purity Grades for Tubes and Plates



## Eppendorf sample handling consumables stand for highest quality and purity

Our tubes and plates are available in a variety of purity grades (see table below) [www.eppendorf.com/purity](http://www.eppendorf.com/purity). The purity grades “sterile”, “PCR clean”, “Biopur®” and “Forensic DNA Grade” are certified by an accredited external lab. As a special service, we make the lot-specific certificates available online ([www.eppendorf.com/certificates](http://www.eppendorf.com/certificates))

Purity grades	Eppendorf Quality™	Eppendorf sterile	Eppendorf PCR clean	Eppendorf Forensic DNA Grade <sup>5)</sup>	Eppendorf Biopur®
<b>Eppendorf purity grades for tubes and plates</b>					
<b>Continuous quality control for the following relevant criteria:</b>					
Function, tightness, precision	■	■	■	■	■
Low wetting	■	■	■	■	■
High chemical resistance	■	■	■	■	■
High thermal resistance	■	■	■	■	■
High resistance to centrifugation forces <sup>1)</sup>	■	■	■	■	■
High transparency	■	■	■	■	■
Precisely shaped	■	■	■	■	■
<b>Lot-specific certificates<sup>2)</sup> for the following purity criteria:</b>					
Pyrogen-free (endotoxin-free)		■			■
Sterile (Ph.Eur./USP)		■			■
Human DNA-free			■	■	■
DNA-free (Human- and bacteria DNA)					■
DNase-free			■	■	■
RNase-free			■	■	■
PCR-inhibitor-free			■	■	■
ATP-free					■
<b>Eppendorf Tubes®</b>					
Safe-Lock Tubes	■		■	■	■ <sup>3)</sup>
Flex-Tube®	■		■		
Eppendorf Tubes® 5.0 mL	■	■	■	■	■ <sup>3)</sup>
Conical Tubes 15 mL and 50 mL		■ <sup>4)</sup>		■ <sup>3)</sup>	
DNA and Protein LoBind Tubes			■		
PCR Tubes (PCR and real-time PCR)			■	■	
Cap Strips (PCR and real-time PCR)			■	■	
<b>Eppendorf Plates® and accessories</b>					
Deepwell Plates and Microplates		■	■		
Protein LoBind Deepwell Plates			■		
DNA LoBind Deepwell Plates			■		
Eppendorf twin.tec® PCR Plates (PCR and real-time PCR)			■	■ <sup>3)</sup>	
Heat Sealing Film and Foil			■		
PCR Storage Films and Foils			■		
Plate Lid		■	■		

<sup>1)</sup> For accurate details regarding resistance to centrifugation, please refer to the respective product pages. <sup>2)</sup> Lot-specific certificate can be downloaded from [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates).

<sup>3)</sup> Individually packaged. <sup>4)</sup> Eppendorf sterile, RNase free, DNase free, DNA free (human and bacteria DNA) <sup>5)</sup> According to ISO 18385.



# Eppendorf Flex-Tube®

## Description

The easy-to-open, securely closing, Eppendorf Flex-Tube® offers comfort and dependability for sample preparation, centrifugation, and storage. One vessel for all applications in molecular biology, chemistry, and biochemistry.

**Safer than ever: Eppendorf Flex-Tube®** can be centrifuged up to 30,000 × g without any problems!



## Product features

- > Tube lid is easy to open and close for ergonomic operation
- > Polypropylene provides high resistance to chemicals, mechanical stress, and temperature extremes
- > g-Safe®: Exceptional centrifugation stability up to 30,000 × g prevents sample loss due to tube breakage and provides extra safety when working with hazardous samples
- > Manufactured without the use of slip agents, plasticizers, and biocides – substances that have been shown to leach from plastic consumables into the sample and negatively affect bio-assay results
- > Graduation for simple verification of the pipetted volume
- > Frosted lid and surface on the side for easy labeling
- > Guaranteed functionality from -86 °C to 100 °C
- > Autoclavable when open (121 °C, 20 min)
- > Available in Eppendorf Quality and lot-certified PCR clean purity grade

The Eppendorf Flex-Tube® guarantees tried and tested tight lid closure and easy, stress-free opening and closing.

## Ordering information

Description	Color	Catalog No.	List USD
<b>Eppendorf Flex-Tube®</b> , 1.5 mL, g-safe® centrifugation stability			
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> colorless	022364111	\$36.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> yellow	022363590	47.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> red	022363573	47.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> blue	022363531	47.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> green	022363557	47.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> amber	022363514	47.00
PCR clean, 500 pcs.	<input type="checkbox"/> colorless	022364120	47.00
<b>Eppendorf Tube Rack</b> , 36 positions, for 1.5 mL and 2.0 mL tubes, 2 pcs.		0030119819	53.00
<b>Storage Box</b> , for 1-2 mL tubes, 8 x 8, 3 pcs., 2 inch, for freezing to -86 °C		0030140524	32.50

i For more information go to [www.eppendorf.com/consumables](http://www.eppendorf.com/consumables)



# Eppendorf Safe-Lock Tubes

## Description

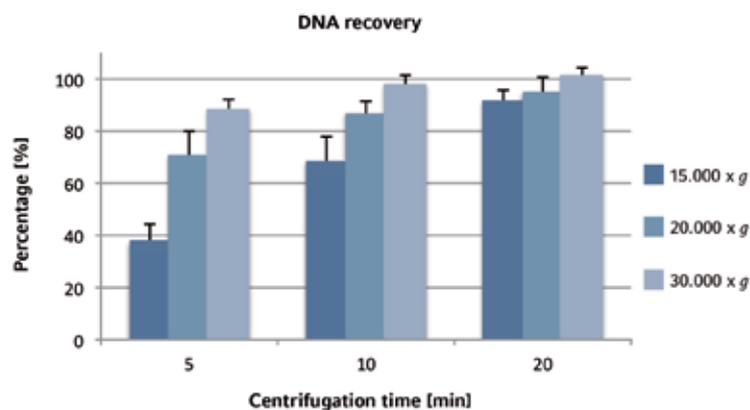
Eppendorf Safe-Lock Tubes are the result of 50 years of continuous improvement and development. The original Safe-Lock tubes protect your sample with excellent centrifugation stability, feature perfect sealing properties, and reliably prevent sample evaporation. Trust in the original Eppendorf Safe-Lock Tubes, because your samples deserve nothing but the best.

**Safer than ever!** Tests at 30,000 × g have shown that vessels can break during centrifugation. Eppendorf Safe-Lock Tubes are guaranteed to withstand forces up to 30,000 × g, allowing you to safely centrifuge without sample losses.



## Product features

- > Hinged Eppendorf Safe-Lock lid prevents unintentional lid opening during incubation and storage
- > Polypropylene provides high resistance to chemicals, mechanical stress and temperature extremes
- > Manufactured without the use of slip agents, plasticizers, and biocides – substances that have been shown to leach from plastic consumables into the sample and negatively affect bio-assay results
- > g-Safe®: Exceptional centrifugation stability up to 30,000 × g prevents sample loss due to tube breakage and provides extra safety when working with hazardous samples
- > Precise lid sealing for minimal evaporation rates during long-term storage
- > Large frosted lid and surface on the side for easy labeling
- > Guaranteed functionality from -86 °C to 100 °C
- > Autoclavable when open (121 °C, 20 min)
- > Available in lot-certified PCR clean, Eppendorf Forensic DNA Grade, and Biopur quality for guaranteed purity
- > Available in Eppendorf Protein and DNA LoBind material for maximum recovery of valuable samples



Using the Eppendorf 30,000 × g system comprising of Safe-Lock Tubes and Centrifuge 5430 R with high-speed rotor, the effect of relative centrifugal force (rcf), duration of centrifugation and the amount of isopropanol on the recovery rate of plasmid DNA from alcohol precipitation were investigated. All three factors play a role, with rcf having the greatest effect. By centrifuging the Eppendorf Safe-Lock Tubes at 30,000 × g, nearly 90 % of DNA could be recovered from a 5 min centrifugation. For more information see Application Note 234.



Ordering information				
Description			Catalog No.	List USD
<b>Eppendorf Safe-Lock Tubes, 0.5 mL</b>				
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> colorless		022363611	\$56.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> yellow		022363671	68.50
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> red		022363662	68.50
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> blue		022363646	68.50
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> green		022363654	68.50
PCR clean, 500 pcs.	<input type="checkbox"/> amber (light protection)		022363638	68.50
Eppendorf Quality, 500 pcs.		assorted colors (per 100)	022363697	68.50
PCR clean, 50 pcs., individually packed	<input type="checkbox"/> colorless		022363719	76.00
Eppendorf Forensic DNA Grade, 500 pcs. (10 bags x 50 pcs.)	<input type="checkbox"/> colorless		0030123603	82.00
Eppendorf Biopur®, 50 pcs., individually packed	<input type="checkbox"/> colorless		022600001	35.50
<b>Eppendorf Safe-Lock Tubes, 1.5 mL</b>				
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> colorless		022363204	51.50
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> yellow		022363301	64.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> red		022363280	64.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> blue		022363247	64.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> green		022363263	64.00
PCR clean, 500 pcs.	<input type="checkbox"/> amber (light protection)		022363221	64.00
Eppendorf Quality, 500 pcs.		assorted colors (per 200)	022363328	64.00
PCR clean, 500 pcs.	<input type="checkbox"/> colorless		022363212	72.50
Eppendorf Forensic DNA Grade, 500 pcs. (10 bags x 50 pcs.)	<input type="checkbox"/> colorless		0030123611	79.00
Eppendorf Biopur®, 100 pcs., individually packed	<input type="checkbox"/> colorless		022600028	51.00
<b>Eppendorf Safe-Lock Tubes, 2.0 mL</b>				
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> colorless		022363352	56.00
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> yellow		022363450	68.50
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> red		022363433	68.50
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> blue		022363395	68.50
Eppendorf Quality, 500 pcs.	<input type="checkbox"/> green		022363417	68.50
PCR clean, 500 pcs.	<input type="checkbox"/> amber (light protection)		022363379	68.50
Eppendorf Quality, 500 pcs.		assorted colors (per 200)	022363476	68.50
PCR clean, 500 pcs.	<input type="checkbox"/> colorless		022363344	76.00
Eppendorf Forensic DNA Grade, 500 pcs. (10 bags x 50 pcs.)	<input type="checkbox"/> colorless		0030123620	82.00
Eppendorf Biopur®, 100 pcs., individually packed	<input type="checkbox"/> colorless		022600044	59.00
<b>Eppendorf Tube Rack</b> , 36 positions, for 1.5 mL and 2.0 mL tubes, 2 pcs.			0030119819	53.00
<b>Storage Box</b> , for 1-2 mL tubes, 8 x 8, 3 pcs., 2 inch, for freezing to -86 °C			0030140524	32.50

i For more Tube information go to [www.eppendorf.com/SafeLock](http://www.eppendorf.com/SafeLock)

# Eppendorf Tubes® 5.0 mL

## Description

Eppendorf Tubes are the benchmark for simple and safe sample preparation from 0.5 to 2.0 mL. For larger volumes, 15 mL and 50 mL conical tubes are available. With medium sample volumes you may face an issue: they need to be processed with large conical screw cap tubes - impractical, inconvenient and often prone to contamination. The availability of snap cap and screw cap formats enable the optimal choice for different requirements in sample preparation, incubation, storage, or other applications.

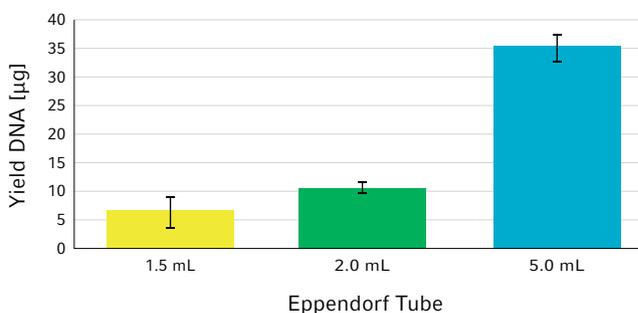


## Product features

- > Matching high-speed rotors for Eppendorf Centrifuges 5430/R, 5427 R, 5804/R and 5810/R
- > 5.0 mL adapters and inserts for all existing Eppendorf rotors, with bore holes for 15 mL or 50 mL tubes
- > Functional rack for bench work
- > Storage boxes for freezing
- > 5.0 mL thermoblocks for Eppendorf ThermoMixer® C, Eppendorf Thermomixer® comfort, ThermoStat C and ThermoStat plus
- > 5.0 mL Reservoir Rack Module for the automated pipetting system epMotion
- > Available in Eppendorf Protein and DNA LoBind material for maximum recovery of valuable samples when only low sample amount is available

## Applications

- > Easier processing of samples up to 5.0 mL
- > Higher yields in DNA isolation, especially with samples with limited quantity of source material
- > Convenient and safe cell culture applications
- > Easier sample access lowers the risk of contamination
- > Preparation of mastermixes and buffers
- > Less storage space needed
- > Safe cell and tissue lysis
- > Storage of samples and liquid solutions



## Higher yields in DNA isolation

e.g. the yield of low-copy plasmid DNA can be significantly improved by increasing the culture volume to 5 mL. Data shown in the diagram were generated with 5.0 mL snap cap format – or for additional information and protocol description please see Application Note 262.

i For more information go to [www.eppendorf.com/5mL](http://www.eppendorf.com/5mL)



The ideal solution for sample preparation and storage: The new Eppendorf Tube Racks and Storage Boxes (see pages 154 and 155)

### Ordering information

Description		Catalog No.	List USD
<b>Eppendorf Tubes® 5.0 mL</b>			
Eppendorf Quality™, 200 tubes (2 bags × 100 tubes)	<input type="checkbox"/> colorless	0030119401	\$ 56.00
PCR clean, 200 tubes (2 bags × 100 tubes)	<input type="checkbox"/> colorless	0030119460	59.00
Forensic DNA Grade, 200 tubes (4 bags × 50 tubes)	<input type="checkbox"/> colorless	0030119606	65.00
Sterile, 200 tubes (10 bags × 20 tubes)	<input type="checkbox"/> colorless	0030119487	61.00
Eppendorf Biopur®, 50 tubes, individually wrapped	<input type="checkbox"/> colorless	0030119479	62.00
PCR clean, 200 tubes (2 bags × 100 tubes)	<input checked="" type="checkbox"/> amber (light protection)	0030119452	68.50
<b>Eppendorf Tubes® 5.0 mL starter pack</b> , 5.0 mL, 400 tubes (2 packages with 2 bags of 100 each), 2 racks (with 12 locations each), white, 8 universal adapters for rotors with bore holes for 15 mL conical tubes, PCR clean, colorless		0030119380	179.50
<b>DNA LoBind Tubes</b> , 5.0 mL, PCR clean, 200 tubes (4 bags × 50 tubes)	<input type="checkbox"/> colorless	0030108310	66.50
<b>Protein LoBind Tubes</b> , 5.0 mL, PCR clean, 100 tubes (2 bags × 50 tubes)	<input type="checkbox"/> colorless	0030108302	56.00
<b>Tube Clip for Eppendorf Tubes® 5.0 mL</b> , Eppendorf Quality™, 10 pcs.	<input type="checkbox"/> colorless	0030119509	27.50
<b>Storage Box</b> for snap cap 5.0 mL tubes, 5 × 5, 2 pcs., 2.5 inch, for freezing to -86 °C	<input checked="" type="checkbox"/> gray with colorless lid	0030140532	47.50
<b>Eppendorf Tubes® 5.0 mL with screw cap</b>			
Eppendorf Quality™, 200 tubes (2 bags × 100 tubes)	<input type="checkbox"/> colorless	0030122305	62.00
PCR clean, 200 tubes (2 bags × 100 tubes)	<input type="checkbox"/> colorless	0030122313	70.00
Forensic DNA Grade, 200 tubes (4 bags × 50 tubes)	<input type="checkbox"/> colorless	0030122402	76.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free, 200 tubes (2 bags × 100 tubes)	<input type="checkbox"/> colorless	0030122321	77.00
<b>Storage Box</b> for screw cap 5.0 mL tubes, 5 × 5, 2 pcs., 3 inch, for freezing to -86 °C	<input checked="" type="checkbox"/> gray with colorless lid	0030140613	23.00
<b>Tube Rack</b> , 12 wells, for 5.0 mL tubes, 2 pcs., white, also suitable for 15 mL conical screw cap tubes	<input type="checkbox"/> white	0030119827	53.00
<b>Accessories for Centrifuges</b>			
<b>Universal insert</b> , for using Eppendorf Tube 5.0 mL in rotors and adapters with 15 mL conical bore holes, set of 8 pcs.		5820732008	30.50
<b>Universal adapter 1 x 5.0 mL</b> , for rotors with 50 mL conical bore hole, set of 2 pcs.		5820730005	166.00
<b>Universal adapter 1 x 5.0 mL</b> , for rotors with 100 mL round bore hole, set of 2 pcs.		5804777000	166.00
<b>Eppendorf adapter 1 x 5.0 mL</b> , 6 x 15/50 mL rotor (F-35-6-30), Centrifuge 5430/R, sm. bore, 2 pcs.		5427746005	155.00
<b>Eppendorf adapter 1 x 5.0 mL</b> , 6 x 15/50 mL rotor (F-35-6-30), Centrifuge 5430/R, lg. bore, 2 pcs.		5427747001	155.00
<b>Eppendorf adapter 8 x 5.0 mL</b> , 4 x 250 mL rotor (S-4-72), Centrifuge 5804/R/5810/R, 2 pcs.		5804793005	290.00
<b>Eppendorf adapter 14 x 5.0 mL</b> , 4 x 750 mL rotor (S-4-104), Centrifuge 5810/R, set of 2 pcs.		5825739000	311.00
<b>Eppendorf adapter 16 x 5.0 mL</b> , 4 x 750 mL rotor (S-4xUniversal), Centrifuge 5910 R, set of 2 pcs.		5910752008	305.00
<b>Eppendorf adapter 27 x 5.0 mL</b> , 4 x 1000 mL rotor (S-4x1000), Centrifuge 5920 R, set of 2 pcs.		5920716000	310.00
<b>Eppendorf rotor 10 x 5.0 mL for Centrifuge 5425</b> (FA-10x5), max 21,330 x g, with aerosol-tight QuickLock lid		5495505008	1,080.00
<b>Eppendorf rotor 12 x 5.0 mL for Centrifuge 5427 R</b> (FA-45-12-17), max. 20,600 x g, with aerosol-tight QuickLock® lid		5409700006	1,300.00
<b>Eppendorf rotor 16 x 5.0 mL for Centrifuge 5430/5430 R</b> (FA-45-16-17) <sup>1)</sup> , max. 21,191 x g, with aerosol-tight QuickLock lid		5427750002	1,350.00
<b>Accessories for Eppendorf Thermomixer® and ThermoStat™</b>			
<b>Eppendorf Thermoblock 8 x 5.0 mL</b> , for Eppendorf Thermomixer® R and ThermoStat plus		5309000333	777.00
<b>Eppendorf SmartBlock™ 8 x 5.0 mL</b> , for Eppendorf ThermoMixer® C and ThermoStat C		5309000007	775.00
<b>Reservoir Rack Module TC 4 x Eppendorf Tubes 5.0 mL</b> , for use in eMotion® Reservoir Racks, temperable		5075799340	453.00

<sup>1)</sup> Please note that rotors FA-45-48-11, F-45-48-11, S-24-11-AT, and FA-45-16-17 can be used for 120 V models starting with serial number: 5430 (> 16,000), 5430 R (> 16,000). If you own a unit with an older serial number please contact Eppendorf Customer Support to learn about your options.

# Eppendorf Conical Tubes 15 mL and 50 mL

## Description

The Conical Tubes 15 mL and 50 mL extend the volume range of the Eppendorf Tubes®. Safe design and easy handling ensure best sample processing. They represent the optimal solution for cell culture and cell biology applications as well as for sample preparation protocols in microbiology and molecular biology laboratories. Whether centrifugation, mixing, or other applications – the Eppendorf Conical Tubes 15 mL and 50 mL will perfectly fit into your workflows.

### Premium raw material and no use of slip agents, plasticizers, and biocides during manufacturing ensure

- > highest sample integrity
- > high g-Safe® centrifugation stability
- > optimal sample and pellet visibility

### Cap with flattened and grooved sides

- > supports a user-friendly ergonomic handling
- > enables a stable upright positioning
- > minimizes contamination risk

### Reliable and safe labeling due to a large writing area on the tube and due to a flat and light-colored cap

### Precise dimensions enable maximum compatibility with centrifuge rotors, mixers and shakers

### Certified purity

- > individual purity certificates are available for each lot

### Applications

- > Convenient and safe cell culture applications
- > Sample preparation in microbiology and molecular biology labs
- > Storage of samples and solution with larger volumes
- > Preparation of mastermixes and buffers

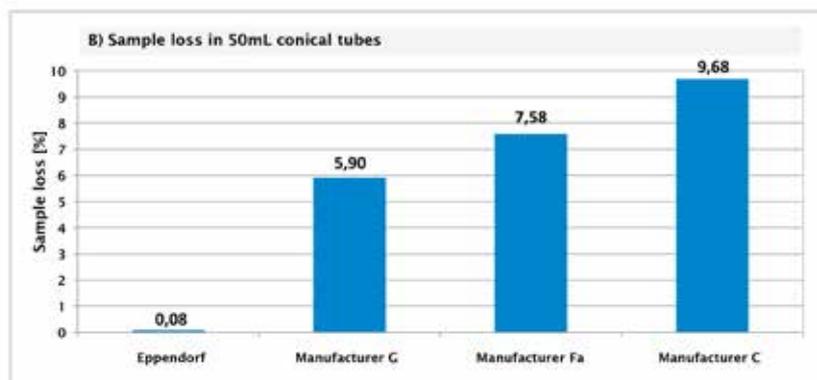


Figure 2: Sample loss after horizontal storage of ethanol in different conical tubes at -86°C for 24 hours. Sample loss is expressed as percentage of initial weight before storage. For more information see Application Note 343.

i For more information go to [www.eppendorf.com/consumables](http://www.eppendorf.com/consumables)



Eppendorf Tubes® 5.0 mL with snap cap or screw cap: The ideal complement for smaller volumes (see page 140)

Whether centrifugation, mixing, or other applications – the Eppendorf Conical Tubes 15 and 50 mL will perfectly fit into your workflows

Technical specifications		
Model	Eppendorf Conical Tubes 15 mL	Eppendorf Conical Tubes 50 mL
External height / Dimensions external	121 mm / 17 mm	116 mm / 30 mm
Operating temperature	-86 °C – 100 °C	-86 °C – 100 °C
Centrifugation stability	19,500 x g	19,500 x g

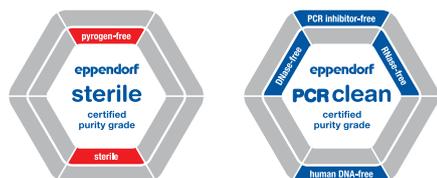
#### Ordering information

Description		Catalog No.	List USD
<b>Eppendorf Conical Tubes, 15 mL</b>			
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free, 500 tubes (10 bags x 50 tubes)	<input type="checkbox"/> colorless	0030122151	\$212.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free, 200 tubes (4 bags x 50 tubes)	<input checked="" type="checkbox"/> amber (light protection)	0030122194	Inquire
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free, 300 tubes (12 racks x 25 tubes)	<input type="checkbox"/> colorless	0030122160	Inquire
Forensic DNA Grade, colorless, 100 tubes, individually wrapped		0030122259	92.00
<b>DNA LoBind Tubes</b> , DNA LoBind, 15 mL, conical tubes, PCR clean, 200 tubes (4 bags x 50 tubes)	<input type="checkbox"/> colorless	0030122208	79.00
<b>Protein LoBind Tubes</b> , Protein LoBind, 15 mL, PCR clean, 200 tubes (4 bags x 50 tubes)	<input type="checkbox"/> colorless	0030122216	Inquire
<b>Eppendorf Conical Tubes, 50 mL</b>			
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free, 500 tubes (20 bags x 25 tubes)	<input type="checkbox"/> colorless	0030122178	265.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free, 200 tubes (4 bags x 50 tubes)	<input checked="" type="checkbox"/> amber (light protection)	0030122224	Inquire
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free, 300 tubes (12 racks x 25 tubes)	<input type="checkbox"/> colorless	0030122186	Inquire
Forensic DNA Grade, colorless, 48 tubes, individually wrapped		0030122267	58.00
<b>DNA LoBind Tubes</b> , DNA LoBind, 50 mL, conical tubes, PCR clean, 200 tubes (4 bags x 50 tubes)	<input type="checkbox"/> colorless	0030122232	95.00
<b>Protein LoBind Tubes</b> , Protein LoBind, 50 mL, PCR clean, 200 tubes (4 bags x 50 tubes)	<input type="checkbox"/> colorless	0030122240	Inquire
<b>Eppendorf Tube Rack</b> , 12 positions, for 5.0 mL and 15 mL tubes, 2 pcs., polypropylene, numbered positions, autoclavable	<input type="checkbox"/> white	0030119827	53.00
<b>Eppendorf Tube Rack</b> , 12 positions, 6 for 5.0 mL and 15 mL tubes and 6 for 50 mL tubes, 2 pcs., polypropylene, numbered positions, autoclavable	<input type="checkbox"/> white	0030119835	53.00
<b>Storage Box</b> for 15 mL conical tubes, 5 x 5, 2 pcs., 5 inch, for freezing to -86 °C		0030140583	24.00
<b>Storage Box</b> for 9 – 50 mL conical tubes and 4 – 15 mL conical tubes, 3 x 3, 2 pcs., 5 inch, for freezing to -86 °C		0030140591	24.00

# Eppendorf Microplates

## Description

The Eppendorf Microplates bring an outstanding clarity to your laboratory! It has never been this easy to pipette, control and recover samples with a polypropylene microplate. The easy-to-read alphanumeric label of the OptiTrack® matrix on each plate makes it unbelievably easy to identify individual wells, speeds up the filling process and significantly reduces the risk of errors. The high transparency is “one-of-a-kind” and ensures that you can always quickly locate your samples. The Microplates are also available in Eppendorf LoBind material for maximum sample recovery when only limited amount of sample material is available.



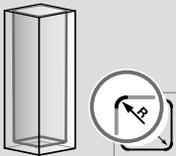
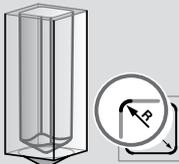
## Product features

- > Unmatched, transparent polypropylene (PP) for improved sample visibility
- > OptiTrack® Matrix: up to 30 % faster sample identification and fewer pipetting errors via high-contrast alphanumeric labeling
- > RecoverMax® well design: Optimized well geometry for minimal remaining volume and excellent mixing properties
- > Raised well rims and smooth surface for reliable closing, even with heat sealing
- > g-Safe®: exceptional centrifugation stability up to 6,000 × g
- > Polypropylene guarantees high resistance to chemicals, mechanical stress and temperature extremes
- > Manufactured without slip agents, plasticizers or biocides – Materials which could have a negative effect on bioassays
- > Guaranteed functionality from -86 °C to 100 °C
- > Autoclavable (121 °C, 20 min)
- > Available with barcode. Additional details available at: [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

## Applications

- > Sample storage and preparation
- > Assays that require high resistance against temperature or solvents
- > Active ingredient screening
- > Combinatorial chemistry
- > Storage of cDNA or genomic banks
- > Protein analysis
- > Genotyping
- > Storage of siRNA or oligonucleotide libraries
- > Preparation of tissue and plant lysates

**i** For more information go to [www.eppendorf.com/consumables](http://www.eppendorf.com/consumables)

Technical specifications					
Description	Microplate 96/F	Microplate 96/U	Microplate 96/V	Microplate 384/F	Microplate 384/V-PP
Number of wells	96 wells	96 wells	96 wells	384 wells	384 wells
Total volume per well	400 µL	360 µL	350 µL	150 µL	140 µL
Working volume	50 – 350 µL	20 – 320 µL	20 – 320 µL	10 – 120 µL	5 – 120 µL
Bottom shape	flat	round	conical	flat	conical
					

## Ordering information

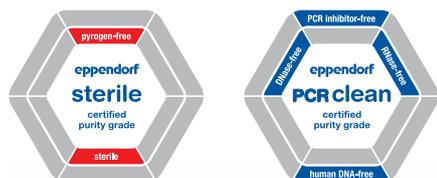
Description	OptiTrack® frame color	Catalog No.	List USD
<b>Microplate 96/F</b> , wells clear, RecoverMax® well design			
PCR clean, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040005	\$206.00
Sterile, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040021	229.50
<b>Microplate 96/U</b> , wells clear, RecoverMax® well design			
PCR clean, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040048	206.00
Sterile, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040081	229.50
<b>Microplate 96/V</b> , wells clear, RecoverMax® well design			
PCR clean, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040188	206.00
Sterile, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040227	229.50
<b>Microplate 384/F</b> , wells clear, RecoverMax® well design			
PCR clean, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040341	402.50
Sterile, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040383	424.00
<b>Microplate 384/V</b> , wells clear, RecoverMax® well design			
PCR clean, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040421	403.00
Sterile, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040464	424.00

# Eppendorf Assay/Reader Microplates

## Description

Eppendorf assay plates are optimized for measuring absorbance assays in the visible and UV range, fluorescence and chemiluminescence assays. Solid plates are suitable for top-reading plate readers. Clear plates and black/clear plates can be used with top- and bottom-reading plate readers.

The black Eppendorf Microplates are ideal for fluorescence detection. An excellent signal-to-noise ratio provides low detection limits in assays – for clear signals even with low-concentration samples! The white Eppendorf Microplates maximize reflection for high sensitivity during detection of luminescence or weak fluorescence signals.



## Product features

- > UV-VIS Microplates feature an ultrathin film bottom for excellent light transmission in the UV range
- > Black Eppendorf Microplates offer an excellent signal-to-noise ratio – for clear signals even with low-concentration samples
- > White Eppendorf Microplates are optimized for highest sensitivity in the detection of luminescence signals by maximizing reflection
- > Solid black and white assay plates are made of polypropylene resulting in high resistance to chemicals, mechanical stress, and temperature extremes
- > All plates are optimized for minimal autofluorescence and autoluminescence
- > Available in lot-certified sterile or PCR clean purity grade

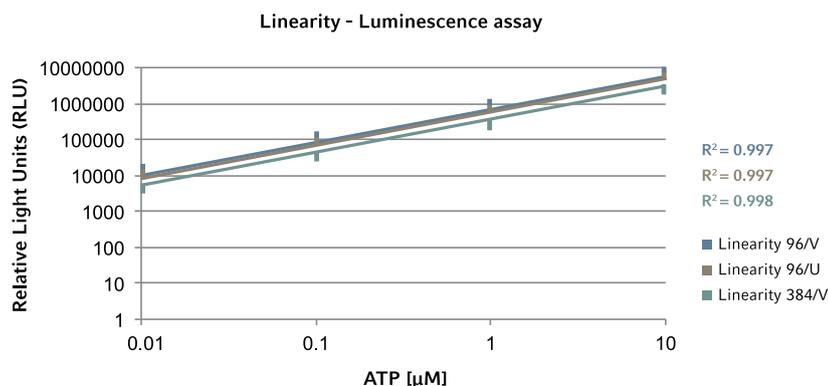
## Applications

- > Clear VIS and UV-VIS plates for all absorbance assays in the visible and UV range
- > Black and white Microplates for Fluorescence and Luminescence detection
- > DNA- and Protein concentration with absorbance or fluorescent dyes
- > Cell based assays
- > Cell viability and apoptosis assays
- > Cell imaging
- > Protocols that require high resistance against temperature or solvents
- > Dilution series
- > Preparation of tissue and plant lysates

i For more information go to [www.eppendorf.com/consumables](http://www.eppendorf.com/consumables)



The Eppendorf Microplates 96/V, 96/U and 384/V were tested in a luminescence assay. A ten-fold serial dilutions of ATP in culture medium were prepared. Logarithmic plot of data showing linearity of results for the Eppendorf Microplates in the range between 0.01 and 10  $\mu\text{M}$  ATP. For more information see Application Note 215.



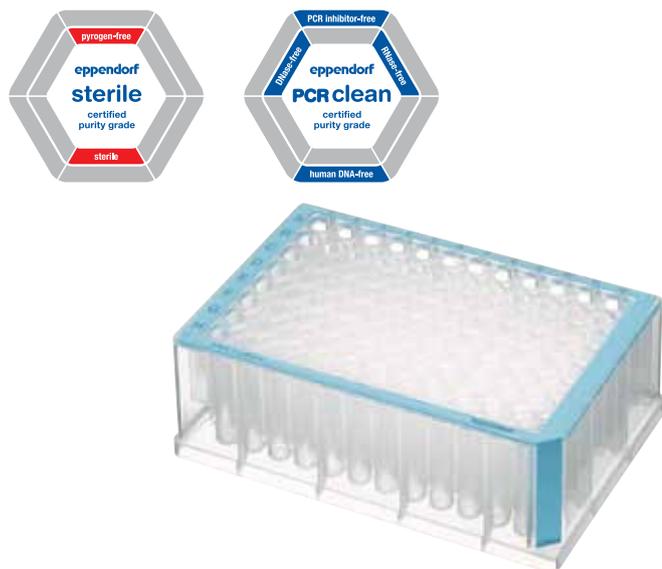
#### Ordering information

Description	Catalog No.	List USD
<b>Microplate 96/F</b> , wells white		
PCR clean, border gray, 80 plates (5 bags $\times$ 16 plates)	951040137	\$271.50
<b>Microplate 96/U</b> , wells white		
PCR clean, border gray, 80 plates (5 bags $\times$ 16 plates)	951040145	271.50
<b>Microplate 96/V</b> , wells white		
PCR clean, border gray, 80 plates (5 bags $\times$ 16 plates)	951040308	271.50
<b>Microplate 384/V</b> , wells white		
PCR clean, border gray, 80 plates (5 bags $\times$ 16 plates)	951040503	469.00
<b>Microplate 96/F</b> , wells black		
PCR clean, border white, 80 plates (5 bags $\times$ 16 plates)	951040196	271.50
<b>Microplate 96/U</b> , wells black		
PCR clean, border white, 80 plates (5 bags $\times$ 16 plates)	951040102	271.50
<b>Microplate 96/V</b> , wells black		
PCR clean, border white, 80 plates (5 bags $\times$ 16 plates)	951040260	271.50
<b>Microplate 384/V</b> , wells black		
PCR clean, border white, 80 plates (5 bags $\times$ 16 plates)	951040481	469.00
<b>Microplate UV-VIS 96/F</b> , wells clear		
PCR clean, border colorless, 40 plates (4 bags $\times$ 10 plates)	0030741048	522.50
<b>Microplate VIS 96/F</b> , wells clear		
PCR clean, border colorless, 40 plates (4 bags $\times$ 10 plates)	0030730020	174.50

# Eppendorf Deepwell Plates

## Description

Eppendorf Deepwell Plates 96 and 384 are high-performance plates for all manual and automated applications – from sample storage at -86 °C to DNA denaturation at 100 °C. Manufactured from pure polypropylene (PP), these plates offer innovative features: More dependability. More efficiency. More stability. The plates are available with a white, yellow, green, or blue border. For easy identification of wells, a high-contrast alphanumeric label is laser-engraved in the border. This OptiTrack® matrix allows you to find your sample up to 30 % more quickly while reducing pipetting errors. With all of these sophisticated features, these plates set new standards in your laboratory.

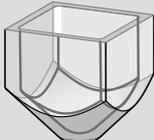
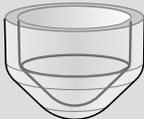
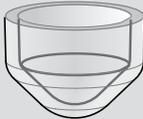
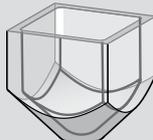


## Applications

- > Sample storage and preparation
- > Bacteria and yeast cultivation
- > DNA and RNA isolation with high throughput
- > Storage of cDNA or genomic banks
- > Storage of siRNA or oligonucleotide libraries
- > Protein analysis
- > Storage of valuable protein and DNA samples in Eppendorf LoBind plates
- > Plasmid purification with high throughput
- > Creating dilution series

## Product features

- > OptiTrack® matrix: up to 30 % faster sample identification and fewer pipetting errors via high-contrast alphanumeric labeling
- > RecoverMax® well design: Optimized well geometry for maximum sample recovery and excellent mixing properties
- > Minimal remaining volume and high uniformity from well to well
- > Raised well rims and smooth surface for reliable closing, even with heat sealing
- > Easy and reliable stacking
- > g-Safe®: exceptional centrifugation stability up to 6,000 × g for faster protocols and improved sample quality
- > High-quality polypropylene guarantees high resistance to chemicals, mechanical stress and temperature extremes
- > Manufactured without slip agents, plasticizers, and biocides – Materials which could have a negative effect on bioassays
- > Autoclavable (121 °C, 20 min)
- > Available with barcode. Additional details available at: [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

Technical specifications				
Model	Deepwell Plates 96/2000 µL	Deepwell Plates 96/1000 µL	Deepwell Plates 96/500 µL	Deepwell Plates 384/200 µL
Number of wells	96 wells	96 wells	96 wells	384 wells
Total volume per well	2,400 µL	1,200 µL	700 µL	240 µL
Working volume per well	50 – 2 000 µL	30 – 1 000 µL	30 – 550 µL	20 – 225 µL
Bottom shape	conical	conical	conical	conical
				

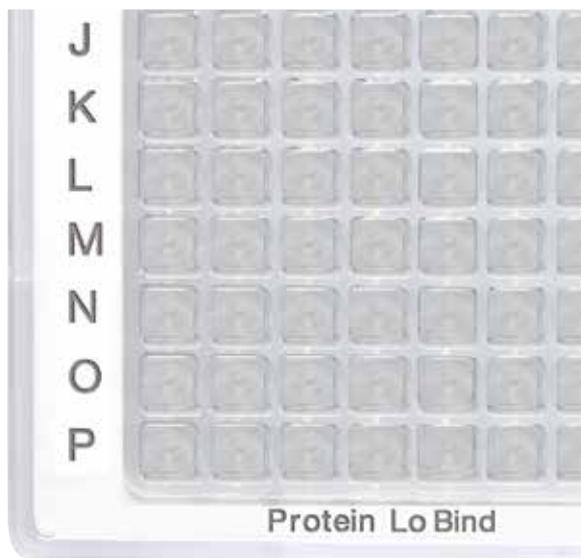
i For more information go to [www.eppendorf.com/Deepwellplates](http://www.eppendorf.com/Deepwellplates)

Ordering information			
Description	OptiTrack® frame color	Catalog No.	List USD
<b>Deepwell Plate 96/2000 µL, wells clear, 2,000 µL</b>			
PCR clean, 20 plates (5 bags × 4 plates)	 white	951033405	\$146.00
PCR clean, 20 plates (5 bags × 4 plates)	 yellow	951033421	146.00
PCR clean, 20 plates (5 bags × 4 plates)	 green	951033464	146.00
PCR clean, 20 plates (5 bags × 4 plates)	 blue	951033481	146.00
PCR clean, 80 plates (10 bags × 8 plates)	 white	951033600	500.50
Sterile, 20 plates (5 bags × 4 plates)	 white	951033502	164.00
Sterile, 20 plates (5 bags × 4 plates)	 yellow	951033529	164.00
Sterile, 20 plates (5 bags × 4 plates)	 green	951033561	164.00
Sterile, 20 plates (5 bags × 4 plates)	 blue	951033588	164.00
Sterile, 80 plates (10 bags × 8 plates)	 white	951033707	566.00
<b>Deepwell Plate 96/1000 µL, wells clear, 1,000 µL</b>			
PCR clean, 40 plates (5 bags × 8 plates)	 white	951032603	119.50
PCR clean, 40 plates (5 bags × 8 plates)	 yellow	951032620	119.50
PCR clean, 40 plates (5 bags × 8 plates)	 green	951032662	119.50
PCR clean, 40 plates (5 bags × 8 plates)	 blue	951032689	119.50
PCR clean, 80 plates (10 bags × 8 plates)	 white	951033006	409.00
Sterile, 20 plates (5 bags × 4 plates)	 white	951032701	135.50
Sterile, 20 plates (5 bags × 4 plates)	 yellow	951032727	135.50
Sterile, 20 plates (5 bags × 4 plates)	 green	951032760	135.50
Sterile, 20 plates (5 bags × 4 plates)	 blue	951032786	135.50
Sterile, 80 plates (10 bags × 8 plates)	 white	951033103	457.00
<b>Deepwell Plate 96/500 µL, wells clear, 500 µL</b>			
PCR clean, 40 plates (5 bags × 8 plates)	 white	951031801	302.00
PCR clean, 40 plates (5 bags × 8 plates)	 yellow	951031828	302.00
PCR clean, 40 plates (5 bags × 8 plates)	 green	951031861	302.00
PCR clean, 40 plates (5 bags × 8 plates)	 blue	951031887	302.00
PCR clean, 120 plates (10 bags × 12 plates)	 white	951032204	816.00
Sterile, 40 plates (5 bags × 8 plates)	 white	951031909	337.50
Sterile, 40 plates (5 bags × 8 plates)	 yellow	951031925	337.50
Sterile, 40 plates (5 bags × 8 plates)	 green	951031968	337.50
Sterile, 40 plates (5 bags × 8 plates)	 blue	951031984	337.50
Sterile, 120 plates (10 bags × 12 plates)	 white	951032301	893.00
<b>Deepwell Plate 384/200 µL, wells clear, 200 µL</b>			
PCR clean, 40 plates (5 bags × 8 plates)	 white	951031003	337.50
PCR clean, 120 plates (10 bags × 12 plates)	 white	951031402	881.50
Sterile, 40 plates (5 bags × 8 plates)	 white	951031101	370.50
Sterile, 120 plates (10 bags × 12 plates)	 white	951031500	990.50

# Protein LoBind Plates

## Description

Eppendorf LoBind Plates maximize sample recovery by significantly reducing sample binding to the surface. A special, two-component polymer mix creates a hydrophilic surface that guarantees optimal recovery rates of valuable samples. Protein LoBind Plates have been specially designed for use in protein research or with sensitive proteomic test methods, and frequently provide significantly improved analysis results.



## Product features

- > Eppendorf LoBind material guarantees maximum sample recovery for improved assay results
- > Free of surface coating (e.g., silicone) to minimize the risk of sample interference
- > Lot-certified PCR clean purity grade: free of human DNA, DNase, RNase and PCR inhibitors
- > Available in tube, microplate, and deepwell plate formats for easy-up scaling
- > High-contrast Unique OptiTrack® matrix: up to 30 % faster sample identification and fewer pipetting errors
- > RecoverMax® well design: optimized well geometry for minimal remaining/dead volume and excellent mixing properties
- > Raised well rims and a smooth surface guarantee reliable sealing in plates
- > Available with barcode. Additional details available at: [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

## Applications

- > Preparation or storage of protein, peptide or antibody samples
- > Enzymatic assays – the hydrophilic surface reduces denaturation when it comes into contact with the tube inner wall
- > Prevention of sample loss during storage of virus stock solutions
- > Storage of cell suspensions

## Ordering information

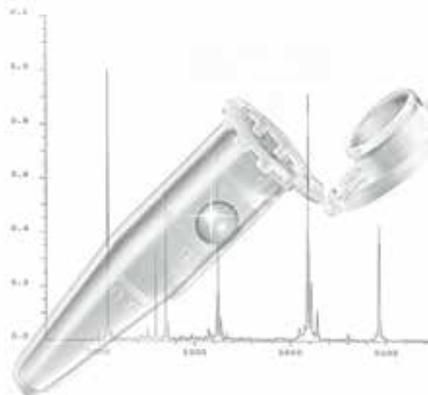
Description	OptiTrack® frame color	Catalog No.	List USD
<b>Deepwell Plate 96/2000 µL</b> , Protein LoBind, 2,000 µL			
PCR clean, 20 plates (5 bags × 4 plates)	<input type="checkbox"/> white	0030504305	\$ 279.50
<b>Deepwell Plate 96/1000 µL</b> , Protein LoBind, 1,000 µL			
PCR clean, 20 plates (5 bags × 4 plates)	<input type="checkbox"/> white	951032905	234.50
PCR clean, 80 plates (10 bags × 8 plates)	<input type="checkbox"/> white	951033308	816.00
<b>Deepwell Plate 96/500 µL</b> , Protein LoBind, 500 µL			
PCR clean, 40 plates (5 bags × 8 plates)	<input type="checkbox"/> white	951032107	604.00
PCR clean, 120 plates (10 bags × 12 plates)	<input type="checkbox"/> white	951032506	1,630.00
<b>Deepwell Plate 384/200 µL</b> , Protein LoBind, 200 µL			
PCR clean, 40 plates (5 bags × 8 plates)	<input type="checkbox"/> white	951031305	665.00
PCR clean, 120 plates (10 bags × 12 plates)	<input type="checkbox"/> white	951031704	1,767.00
<b>Microplate 384/V-PP</b> , Protein LoBind, wells clear			
PCR clean, 80 plates (5 bags × 16 plates)	<input type="checkbox"/> white	951040589	740.50
PCR clean, 240 plates (10 bags × 24 plates)	<input type="checkbox"/> white	951040601	1,998.50



# Protein LoBind Tubes

## Description

When biological samples are stored or incubated in standard vessels, over 90 % of the sample can be lost within 24 hours as a result of binding to the plastic surface. Eppendorf LoBind Tubes maximize sample recovery by significantly reducing sample binding to the surface. A special, two-component polymer mix creates a hydrophilic surface that guarantees optimal recovery rates of valuable samples. Protein LoBind Tubes have been specially designed for use in protein research or with sensitive proteomic test methods, and frequently provide significantly improved analysis results.



## Product features

- > Eppendorf LoBind material guarantees maximum sample recovery for improved assay results
- > Free of surface coating (e.g., silicone) to minimize the risk of sample interference
- > Lot-certified PCR clean purity grade: free of human DNA, DNase, RNase and PCR inhibitors
- > Available in tube, microplate, and deepwell plate formats for easy-up scaling
- > Precise lid sealing to minimize evaporation

## Applications

- > Preparation or storage of protein, peptide or antibody samples
- > Enzymatic assays – the hydrophilic surface reduces denaturation when it comes into contact with the tube inner wall
- > Prevention of sample loss during storage of virus stock solutions
- > Storage of cell suspensions

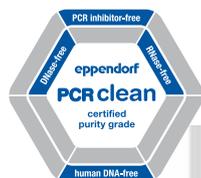
## Ordering information

Description	Catalog No.	List USD
0.5 mL, PCR clean, colorless, 100 tubes (2 bags × 50 tubes)	022431064	\$25.50
1.5 mL, PCR clean, colorless, 100 tubes (2 bags × 50 tubes)	022431081	25.50
2.0 mL, PCR clean, colorless, 100 tubes (2 bags × 50 tubes)	022431102	25.50
5.0 mL, PCR clean, colorless, 100 tubes (2 bags × 50 tubes)	0030108302	56.00
15 mL, PCR clean, colorless, 200 tubes (4 bags × 50 tubes)	0030122216	Inquire
50 mL, PCR clean, colorless, 200 tubes (4 bags × 50 tubes)	0030122240	Inquire

# DNA LoBind Plates

## Description

DNA LoBind plates improve recovery of nucleic acids by reducing their adsorption to the tube wall. A combination of special manufacturing technologies and selected polypropylene batches ensures nearly 100 % recovery of DNA/RNA molecules-without surface coating to eliminate the risk of sample contamination. Eppendorf DNA LoBind plates are ideal for sample preparation of long-term storage of nucleic acids in forensic, microarrays, NGS applications, and many others.



## Product features

- > Eppendorf LoBind material guarantees maximum sample recovery for improved assay results
- > Free of surface coating (e.g. silicone) to minimize the risk of sample interference
- > Lot-certified PCR clean purity grade: free of human DNA, DNase, RNase and PCR inhibitors
- > Available in tube, microplate, and deepwell plate formats for easy-up scaling
- > High-contrast Unique OptiTrack® matrix: up to 30 % faster sample identification and fewer pipetting errors
- > RecoverMax® well design: optimized well geometry for minimal remaining/dead volume and excellent mixing properties
- > Raised well rims and a smooth surface guarantee reliable sealing
- > Available with barcode. Additional details available at: [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

## Applications

- > Preparation or storage of DNA and RNA samples
- > Forensic trace analysis
- > Preparing dilution series in quantitative qPCR
- > Sample preparation in next-generation sequencing
- > Creation of genomic or oligonucleotide libraries

## Ordering information

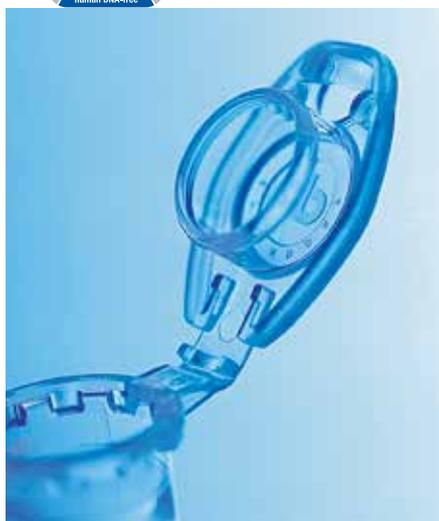
Description		OptiTrack® frame color	Catalog No.	List USD
<b>Deepwell Plate 96/500 µL</b>				
PCR clean, 40 plates (5 bags × 8 plates)	<input type="checkbox"/>	white	951032808	\$ 145.00
PCR clean, 120 plates (10 bags × 12 plates)	<input type="checkbox"/>	white	951033201	500.50
<b>Deepwell Plate 96/1000 µL</b>				
PCR clean, 20 plates (5 bags × 4 plates)	<input type="checkbox"/>	white	951032000	364.00
PCR clean, 80 plates (10 bags × 8 plates)	<input type="checkbox"/>	white	951032409	979.50
<b>Deepwell Plate 384/200 µL</b>				
PCR clean, 40 plates (5 bags × 8 plates)	<input type="checkbox"/>	white	951031208	403.00
PCR clean, 120 plates (10 bags × 12 plates)	<input type="checkbox"/>	white	951032409	979.50
<b>Microplate 96/V-PP</b>				
PCR clean, 80 plates (5 bags × 16 plates)	<input type="checkbox"/>	white	951040464	424.00
<b>Microplate 384/V-PP</b>				
PCR clean, 80 plates (5 bags × 16 plates)	<input type="checkbox"/>	white	951040546	469.00
PCR clean, 240 plates (10 bags × 24 plates)	<input type="checkbox"/>	white	951040562	1,243.50



# DNA LoBind Tubes

## Description

DNA LoBind tubes maximize sample recovery of nucleic acids by significantly reducing sample-to-surface binding. A combination of special manufacturing technologies and selected polypropylene batches ensures nearly 100 % recovery of DNA/RNA molecules-without surface coating to eliminate the risk of sample contamination. DNA LoBind tubes are batch-tested and certified by an independent laboratory to be free from DNA, DNase, RNase, and PCR inhibitors. Eppendorf DNA LoBind tubes are ideal for sample preparation of long-term storage of nucleic acids in forensic, microarrays, NGS applications, and many others.



## Product features

- > Eppendorf LoBind material guarantees maximum sample recovery for improved assay results
- > Free of surface coating (e.g., silicone) to minimize the risk of sample interference
- > Lot-certified PCR clean purity grade: free of human DNA, DNase, RNase and PCR inhibitors
- > Available in tube, microplate, and deepwell plate formats for easy-up scaling
- > Precise lid sealing for minimal evaporation rates in tube format
- > Rated up to 30,000 × g (25,000 × g for 2.0 mL tube) centrifugation speed for molecular biology applications

## Applications

- > Preparation or storage of DNA and RNA samples
- > Forensic trace analysis
- > Preparing dilution series in quantitative qPCR
- > Sample preparation in next-generation sequencing
- > Creation of genomic or oligonucleotide libraries

## Ordering information

Description	Catalog No.	List USD
0.5 mL, PCR clean, colorless, 250 tubes (5 bags × 50 tubes)	022431005	\$37.50
1.5 mL, PCR clean, colorless, 250 tubes (5 bags × 50 tubes)	022431021	37.50
2.0 mL, PCR clean, colorless, 250 tubes (5 bags × 50 tubes)	022431048	37.50
5.0 mL, conical tubes, PCR clean, colorless, 200 tubes (4 bags × 50 tubes)	0030108310	66.50
15 mL, conical tubes, PCR clean, colorless, 200 tubes (4 bags × 50 tubes)	0030122208	79.00
50 mL, conical tubes, PCR clean, colorless, 200 tubes (4 bags × 50 tubes)	0030122232	95.00

# Accessories



## Sealing options for Sample Preparation and Storage

- > Storage Film and Foil self-adhesive seals for simple and dependable sealing during sample storage
- > Heat Sealing Film and Foil for continuous locking with the best evaporation protection
- > Foil products are made of aluminum, can be pierced, and protect light-sensitive samples
- > Film products are transparent and provide protection against unwanted punctures
- > Eppendorf Plate Lid: stable, flexible protection of samples during short-term storage
- > Eppendorf Sealing Mats are autoclavable and reusable

### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Storage Film</b> , self-adhesive, PCR clean, 100 pcs. (2 bags × 50 pcs.)	0030127870	\$143.00
<b>Eppendorf Storage Foil</b> , self-adhesive, PCR clean, 100 pcs.	0030127889	143.00
<b>Eppendorf Sealing Mat</b> , for DWP 96/2000 , PCR clean, 50 pcs. (5 bags × 10 pcs.)	0030127960	232.50
<b>Eppendorf Sealing Mat</b> , for DWP 96/1000 and DWP 96/500, PCR clean, 50 pcs. (5 bags × 10 pcs.)	0030127978	232.50
<b>Eppendorf Plates® Lid</b> , for MTP and DWP, PCR clean, 80 pcs. (5 bags × 16 pcs.)	0030131517	132.00
<b>Eppendorf Plates® Lid</b> , for MTP and DWP, Sterile, 80 pcs. (5 bags × 16 pcs.)	0030131525	154.50
<b>Eppendorf Heat Sealing Film</b> , PCR clean, 100 pcs.	0030127838	216.50
<b>Eppendorf Heat Sealing Foil</b> , PCR clean, 100 pcs.	0030127854	142.00



## Eppendorf Storage Boxes

- > Made of polypropylene (PP) for high stability in freezing applications and smooth opening and closing
- > For freezing to -86 °C
- > High-contrast permanent alphanumeric marking of each location through laser labeling enables easy sample reference and minimizes risk of sample mix-up
- > Autoclavable (121 °C, 20 min)
- > Transparent lid for easy and fast sample inspection
- > Flexible labeling on the light colored box and on the 5 writing areas of the lid
- > Optimal use of freezer space due to flexible combination of the different formats
- > For more information see: [www.eppendorf.com/storageboxes](http://www.eppendorf.com/storageboxes)

### Ordering information

Description	Catalog No.	List USD
<b>Storage Box</b> for cryogenic tubes (with internal threading), 10 × 10, 3 pcs., 2 inch, for freezing to -86 °C	0030140508	\$32.00
<b>Storage Box</b> for cryogenic tubes 1-2 mL , 9 × 9, 2 pcs., 3 inch, for freezing to -86 °C	0030140516	32.50
<b>Storage Box</b> for cryogenic tubes 3 mL , 9 × 9, 2 pcs., 3 inch, for freezing to -86 °C	0030140540	22.50
<b>Storage Box</b> for cryogenic tubes 4-5 mL , 9 × 9, 2 pcs., 4 inch, for freezing to -86 °C	0030140567	23.00
<b>Storage Box</b> for tubes 1-2 mL , 8 × 8, 3 pcs., 2 inch, for freezing to -86 °C	0030140524	32.50
<b>Storage Box</b> for tubes 5.0 mL (snap-cap), 5 × 5, 4 pcs., 2.5 inch, for freezing to -86 °C	0030140532	47.50
<b>Storage Box</b> for tubes 5.0 mL screw cap, 5 × 5, 2 pcs., 3 inch, for freezing to -86 °C	0030140613	23.00
<b>Storage Box</b> for tubes 15 mL, 5 × 5, 2 pcs., 5 inch, for freezing to -86 °C	0030140583	24.00
<b>Storage Box</b> for 9 - 50 mL conical tubes and 4 – 15 mL conical tubes, 3 × 3, 2 pcs., 5 inch, for freezing to -86 °C	0030140591	24.00



### Eppendorf Tube and Cuvette Racks

- > Made from high quality polypropylene (PP):
  - Ensuring dimensional stability across a broad temperature range (-86 ° C to 121° C)
  - Providing chemical resistance
- > Six different formats always offer the optimal choice for all common tubes and cuvettes
- > A wavelike design enables you to clearly identify your samples, even when tubes are placed vertically in a column
- > Non-slip silicone feet ensure safe handling
- > The racks are laboratory washer-safe for fast and easy cleaning
- > The racks are autoclavable (121° C/20 min) and stackable
- > For more information see: [www.eppendorf.com/tube-racks](http://www.eppendorf.com/tube-racks)

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Tube Rack</b> , 48 positions, for 0.5 mL tubes, 2 pcs., polypropylene, numbered positions, autoclavable	0030119800	\$53.00
<b>Eppendorf Tube Rack</b> , 36 positions, for 1.5 mL and 2.0 mL tubes, 2 pcs., polypropylene, numbered positions, autoclavable	0030119819	53.00
<b>Eppendorf Tube Rack</b> , 12 positions, for 5.0 mL and 15 mL tubes, 2 pcs., polypropylene, numbered positions, autoclavable	0030119827	53.00
<b>Eppendorf Tube Rack</b> , 12 positions, 6 for 5.0 mL and 15 mL tubes and 6 for 50 mL tubes, 2 pcs., polypropylene, numbered positions, autoclavable	0030119835	53.00
<b>Eppendorf Cuvette Rack</b> , 36 positions, for glass and plastic cuvettes, 2 pcs., polypropylene, numbered positions, autoclavable	0030119851	53.00
<b>Eppendorf Tube Rack</b> , 36 positions, for cryogenic tubes, 2 pcs., polypropylene, numbered positions, autoclavable	0030119843	53.00



### Micropestle

- > Two sides for optimal fit in 1.5 mL and 2.0 mL vessels
- > Autoclavable (121 °C, 20 min)

#### Ordering information

Description	Catalog No.	List USD
<b>Micropestle</b> , for resuspending pellets in 1.5/2.0 mL vessels, 10 pcs.	022365622	\$93.50

# Sample Handling



Model	MiniSpin®/MiniSpin® plus	5418/5418 R
Positioning	Entry-level	Medium capacity for molecular biology
Page(s)	160	162
Max. capacity	12 × 1.5/2.0 mL	18 × 1.5/2.0 mL
Max. RCF	12,100 × g/14,100 × g	16,873 × g
Max. speed	13,400 rpm/14,500 rpm	14,000 rpm
Rotors available	2	1
Temperature control range	–	0 °C to +40 °C
Dimensions (W × D × H)	8.9 × 9.4 × 4.7 in	8.2 × 11.8 × 8.3 in / 11.7 × 18.2 × 9.8 in
Height (with open lid)	9.8 in	16.7 in / 20 in
Weight w/o accessories	9.5 lb	17 lb / 48.5 lb
Max. power consumption	70 W/85 W	320 W
Tubes/plates capacity **		
1.5/2.0 mL Eppendorf tubes	12	18
Eppendorf Tubes® 5.0 mL	–	–
8-place PCR strips	2	–
15 mL conical	–	–
50 mL conical	–	–
2.6 – 7 mL (13 mm)	–	–
3 – 15 mL (16 mm)	–	–
7 – 17 mL (17.5 mm)	–	–
MTP/PCR-plates	–	–
Deepwell plates (DWP)	–	–

\*\* F = Fixed-angle rotor, S = Swing-bucket rotor

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)

Product appearance, specifications, and/or prices are subject to change without notice.



5425	5424 R	5427 R	5430/5430 R
The new laboratory standard	The laboratory standard	High throughput	Microcentrifuge with multipurpose capabilities
164	166	168	172
10 x 5 mL	24 x 1.5/2.0 mL	48 x 1.5/2.0 mL	48 x 1.5/2.0 mL, 6 x 50 mL, 2 x MTP
21,330 x g	21,130 x g	25,000 x g	30,130 x g
15,060 rpm	15,000 rpm	16,220 rpm	17,500 rpm
6	4	9	12
-10 °C to +40 °C	-10 °C to +40 °C	-11 °C to 40 °C	-11 °C to 40 °C
9.4 x 15.3 x 9.4 in	11.4 x 18.9 x 10 in	12.6 x 21.3 x 10 in	13 x 16.3 x 9.8 in / 15 x 25.2 x 11.7 in
18.8 in	20 in	21.9 in	21.8 in / 24.8 in
34.3 lb	46.3 lb	66.1 lb	63.8 lb / 123.5 lb
280 W	350 W	550 W	475 W/1.050 W
24	24	48	48
10	-	12	16
12	4	6	8
-	-	-	6
-	-	-	6
-	-	-	12
-	-	-	12
-	-	-	12
-	-	-	2
-	-	-	2



Model	5702/5702 R/5702 RH	5804/5804 R
<b>Positioning</b>	Low speed centrifuge optimized for medium capacity needs in clinical research and cell culture labs	Compact high speed centrifuge for medium capacity needs
<b>Page(s)</b>	178	184
<b>Max. capacity</b>	4 x 100 mL	4 x 250 mL/ 2 x 5 MTP
<b>Max. RCF</b>	3,000 x g	20,913 x g
<b>Max. speed</b>	4,400 rpm	14,000 rpm
<b>Temperature control range</b>	-/-9 °C to 40 °C/-9 °C to 42 °C	-/-9 °C to 40 °C
<b>Dimensions (W x D x H)</b>	12.5 x 15.6 x 9.5 in / 15 x 22.8 x 10.2 in / 15 x 22.8 x 10.2 in	18 x 20 x 13 in / 25 x 20 x 13 in
<b>Height (with open lid)</b>	20.7 in / 23.4 in / 23.4 in	29 in
<b>Footprint (dimensions w/o front panel, WxD)</b>	12.5 x 15.6 x 9.5 in / 15 x 22.8 x 10.2 in / 15 x 22.8 x 10.2 in	18.5 x 19.6 in / 25.1 x 19.6 in
<b>Weight w/o accessories</b>	44 lb / 78 lb / 78 lb	121 lb / 176 lb
<b>Max. power consumption</b>	200 W/380 W/380 W	900 W/1,650 W
<b>Tubes/plates capacity **</b>		
<b>1.5/2.0 mL Eppendorf tubes</b>	24 (F)/16 (S)	104
<b>Eppendorf Tubes® 5.0 mL</b>	4	20 (F)/32 (S)
<b>8-place PCR strips</b>	–	6
<b>15 mL conical</b>	20 (F)/8 (S)	40 (F)/32 (S)
<b>50 mL conical</b>	4 (S)	6 (F)/16 (S)
<b>2.6 – 7 mL (13 mm)</b>	36	6 (F)/56 (S)
<b>3 – 15 mL (16 mm)</b>	30	6 (F)/52 (S)
<b>7 – 17 mL (17.5 mm)</b>	24	6 (F)/48 (S)
<b>180 – 250 mL bottle</b>	–	4
<b>500 mL Corning®</b>	–	–
<b>750 mL bottle</b>	–	–
<b>1,000 mL bottle</b>	–	–
<b>MTP/PCR-plates</b>	–	10
<b>Deepwell plates (DWP)</b>	–	4

\*\* F = Fixed-angle rotor, S = Swing-bucket rotor

For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)

Product appearance, specifications, and/or prices are subject to change without notice.

**5810/5810 R**

The workhorse for medium to high-throughput

184  
4 x 750 mL/4 x 4 MTP20,913 x g  
14,000 rpm  
- /-9 °C to 40 °C  
21 x 21 x 13 in / 28 x 21 x 13 in  
31 in  
21.2 x 21.2 in / 27.5 x 21.2 in150 lb / 218 lb  
900 W/1,650 W200  
20 (F)/56 (S)  
6  
40 (F)/56 (S)  
6 (F)/28 (S)  
6 (F)/100 (S)  
6 (F)/80 (S)  
6 (F)/80 (S)4  
4  
4-  
16  
4**5910 R**

The workhorse for medium to high throughput; high performance

214  
4 x 750 mL/4 x 5 MTP22,132 x g  
14,000 rpm  
-11 °C to 40 °C  
28.3 x 25.9 x 14.5 in  
33.4 in  
28.3 x 24.4 in240 lb  
1,650 W48 (F)/200 (S)  
20 (F)/64 (S)  
-  
40 (F)/64 (S)  
6 (F)/36 (S)  
6 (F)/120 (S)  
6 (F)/104 (S)  
6 (F)/84 (S)  
6 (F)/4 (S)4  
4-  
20  
4**5920 R**

The workhorse for high to very high-throughput laboratories: Highly versatile, high speed and high capacity

216  
4 x 1,000 mL/4 x 7 MTP21,194 x g  
13,700 rpm  
-11 °C to 40 °C  
29 x 28 x 15 in  
37 in  
29.1 x 26.3 in306 lb  
1,650 W48 (F)/368 (S)  
20 (F)/108 (S)  
-  
6 (F)/108 (S)  
6 (F)/52 (S)  
6 (F)/196 (S)  
6 (F)/144 (S)  
6 (F)/80 (S)  
6 (F)/8 (S)4  
44  
28  
8

# MiniSpin®/MiniSpin® plus

## Description

Powerful and user-friendly MiniSpin and MiniSpin plus are small enough so that each workstation can be equipped with a “personal” centrifuge. Two models are available to meet your performance requirements. MiniSpin plus provides speed sufficient for molecular biology separations.



### Product features

- > Rotor capacity: 12 × 1.5/2.0 mL vessels, 2 × PCR strip
- > Max. speed: 14,100 × g (14,500 rpm)
- > Extremely compact footprint
- > Acceleration and deceleration time < 13 s
- > User-friendly digital display for time and speed
- > Metal rotor bowl
- > Separate short-spin key for fast and comfortable centrifugation
- > Optimal ventilation flow reduces heating and protects temperature-sensitive samples
- > Soft-touch lid closure for ergonomic lid locking
- > Automatic lid opening at the end of the run to prevent sample warming and to allow easy access to samples

### Special features for MiniSpin plus

- > Automatic rpm/rcf conversion
- > Extended time to 99 min or continuous centrifugation

## Ordering information

Description	Catalog No.	List USD
Centrifuge MiniSpin®, with Rotor F-45-12-11, 120 V/50 – 60 Hz	022620100	\$1,490.00
Centrifuge MiniSpin® plus, with Rotor F-45-12-11, 120 V/50 – 60 Hz	022620207	1,750.00



## Rotors for MiniSpin<sup>®</sup>/MiniSpin<sup>®</sup> plus



**Rotor 12 x 1.5/2.0 mL  
(F-45-12-11)**  
**(Catalog No. 022668498)**

- > for 12 x 1,5/2.0 mL tubes
- > Rotor lifetime: unlimited cycles



**Rotor 2 x PCR-Strip  
(F-55-16-5 PCR)**  
**(Catalog No. 022665821)**

- > for 2 x PCR strips
- > Rotor lifetime: unlimited cycles

### Ordering information

Description	Catalog No.	List USD
<b>Rotor 12 x 1.5/2.0 mL, with lid (F-45-12-11)</b>	022668498	\$452.00
<b>Rotor 2 x PCR-strip, with lid (F-55-16-5-PCR)</b>	022665821	338.00
<b>Adapter, for 1 tube 0.5 mL, max. Ø 8 mm or microtainer 0.6 mL, max. Ø 8 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636227	35.50
<b>Adapter, for 1 tube 0.4 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636243	35.50
<b>Adapter, for 1 PCR tube 0.2 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636260	35.50

# Centrifuge 5418/5418 R

## Description

Centrifuges 5418 and 5418 R with their 18-place capacity rotor is specifically designed for low to medium capacity in 1.5/2.0 mL tubes and Microtainer®. Their speed of up to 16,873 × g allows for standard molecular biology applications. Moreover, these compact devices have an especially low access height and are characterized by a remarkably quiet operation.



## Product features

- > Max. rotor capacity: 18 × 1.5/2.0 mL vessels
- > Max. speed: 16,873 × g (14,000 rpm)
- > Small footprint and low access height of 23 cm
- > OptiBowl® design for quiet operation – even without a rotor lid
- > Eppendorf QuickLock® rotor allows for fast and ergonomic lid locking
- > Soft-touch one-finger lid closure for ergonomic operation
- > Automatic lid opening at the end of the run - prevents sample warming and allows easy access to samples (only Centrifuge 5418)
- > Certified aerosol-tight rotor comes standard for safe centrifugation of hazardous samples

## Special features for Centrifuge 5418 R

- > Temperature range from 0 °C to +40 °C
- > Guaranteed temperature of 4 °C at maximum rotational speed
- > FastTemp function for quick pre-cooling and maximum temperature accuracy inside the rotor
- > ECO power shut-off engages after 8 hours of nonuse to reduce energy consumption (46 % over night) and extend compressor life (can be deactivated)
- > The patented compressor technology reduces vibrations and protects your samples
- > Built-in condensation drain to eliminate water accumulation in the rotor chamber

## Ordering information

Description	Catalog No.	List USD
Centrifuge 5418, with Rotor FA-45-18-11 and rotor lid, 120 V/50 – 60 Hz	022620304	\$2,360.00
Centrifuge 5418 R, refrigerated, with Rotor FA-45-18-11 and rotor lid, 120 V/50 – 60 Hz	5401000137	6,600.00



# Rotors and Adapters for Centrifuge 5418/5418 R



## 18 x 1.5/2.0 mL rotor (FA-45-18-11) (Catalog No. 022652061)

- > for 18 x 1.5/2.0 mL tubes comes standard with unique Eppendorf QuickLock aerosol-tight lid for fast and reliable locking
- > Rotor lifetime: unlimited cycles



## Adapter for 0.2 mL PCR Tubes

- > Ideal to spin down PCR Tubes after reaction setup. Adapter fits in any Eppendorf 1.5/2.0 mL rotor



## Adapter for 0.8 mL BD Microtainer® and 0.5 mL tubes

- > The adapter can be used with every Eppendorf rotor for 1.5/2.0 mL tubes

### Ordering information

Description	Catalog No.	List USD
<b>Rotor 18 x 1.5/2.0 mL, with aerosol-tight QuickLock lid (FA-45-18-11)</b>	022652061	\$765.00
<b>Spare seals, for rotor lid FA-45-18-11, set of 5</b>	022652109	
<b>Adapter, for 1 tube 0.5 mL, max. Ø 8 mm or microtainer 0.6 mL, max. Ø 8 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636227	35.50
<b>Adapter, for 1 tube 0.4 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636243	35.50
<b>Adapter, for 1 PCR tube 0.2 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636260	35.50

# NEW - Centrifuge 5425

## Description

Centrifuge 5425 is the new laboratory standard with its 24-place capacity and speed up to 21,330 × g. Focusing on standard applications, it is an essential piece of equipment for modern labs ensuring optimal separation. The Centrifuge 5425 serves as a reliable partner especially for high-throughput users expecting a top level of ergonomic comfort and provides great flexibility with its 6 rotor options.

## Product features

- > Max. rotor capacity: 24 × 1.5/2.0 mL vessels, 10 × 5 mL
- > Max. speed: 21,330 × g (15,060 rpm)
- > Eppendorf QuickLock technology which allows for fast and ergonomic locking of the rotor lid
- > Increased software features (e.g. 10 acceleration and braking ramps, 3 program buttons, short function without continuous pressing of the key)
- > Increased rotor program (5.0 mL rotor, swing-bucket rotor for PCR strips)
- > OptiBowl® design for quiet operation, even without a rotor lid
- > Soft-touch one-finger lid closure for ergonomic operation
- > Low noise level (< 51 db) for a quiet work environment
- > Automatic lid opening at the end of the run – prevents sample warming and allows easy access to samples
- > Certified aerosol-tight rotor comes standard for safe centrifugation of hazardous samples



## Ordering information

Description	Catalog No.	List USD
Centrifuge 5425, with Rotor FA-24x2, rotary knobs, 120 V/50 – 60 Hz	5405000441	\$3,035.00
Centrifuge 5425, with Rotor FA-24x2, keypad, 120 V/50 – 60 Hz	5405000042	3,035.00
Centrifuge 5425, without rotor, rotary knobs, 120 V/50 – 60 Hz	5405000646	2,760.00
Centrifuge 5425, without rotor, keypad, 120 V/50 – 60 Hz	5405000247	2,760.00

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



## Rotors for Centrifuge 5425



### Rotors FA-24x2 (Catalog No. 5495500006)

- > Max. speed: 21,330 × g (15,060 rpm)
- > Max. capacity: 24 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking



### Rotor F-24x2-PTFE (Catalog No. 5495503005)

- > Max. speed: 21,330 × g (15,060 rpm)
- > Max. capacity: 24 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > PTFE coating for increased chemical resistance



### Rotor FA-10x5 (Catalog No. 5495505008)

- > Max. speed: 21,330 × g (15,060 rpm)
- > Max capacity: 10 × Eppendorf Tubes® 5.0 mL
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking



### Rotor FA-18x2 Kit (Catalog No. 5495508007)

- > Max. speed: 18,565 × g (15,060 rpm)
- > Rotor with higher edge for safe centrifugation of up to 18 spin columns
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking



### Rotor F-32x0.2-PCR (Catalog No. 5495510001)

- > Max. speed: 18,134 × g (15,060 rpm)
- > for 4 × PCR strips or 32 × PCR tubes (0.2 mL)



### Rotor 96x0.2-PCR (Catalog No. 5495512004)

- > Max. speed: 3,217 × g (6,000 rpm)
- > New swing bucket rotor
- > for 12 × 8 PCR strips 0.1/0.2 mL or 4 × 1/4 twin.tec PCR plate 96, unskirted divisible or 96 × PCR tubes with 0.2 mL

#### Ordering information

Description	Catalog No.	List USD
<b>Rotor FA-24x2</b> , for 24 × 1.5/2.0 mL tubes, with aerosol-tight QuickLock lid	5495500006	\$ 900.00
<b>Rotor FA-24x2-PTFE</b> , with PTFE coating, for 24 × 1.5/2.0 mL tubes, incl. aerosol-tight QuickLock lid	5495503005	1,080.00
<b>Rotor FA-10x5</b> , for 10 × 5.0 mL tubes (snap and screw cap), with aerosol-tight QuickLock lid	5495505008	1,080.00
<b>Rotor FA-18x2-Kit</b> , for 18 × 1.5/2.0 mL tubes or spin columns, with aerosol-tight QuickLock lid	5495508007	725.00
<b>Rotor F-32x0.2-PCR</b> , for 32 × 0.2 mL PCR tubes or 4 × 8 PCR strips, incl. lid	5495510001	725.00
<b>Rotor S-96x0.2-PCR</b> , for 96 × 0.2 mL PCR tubes or 12 × 8 PCR strips, incl. buckets	5495512004	850.00
<b>Adapter</b> , for 1 vessel 1.5 – 2.0 mL, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820768002	45.00
<b>Adapter</b> , for 1 cryotube, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820769009	45.00
<b>Adapter</b> , for 1 HPLC tube, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820770007	45.00
<b>Adapter</b> , for 1 tube 0.5 mL, max. Ø 8 mm or microtainer 0.6 mL, max. Ø 8 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636227	35.50
<b>Adapter</b> , for 1 tube 0.4 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636243	35.50
<b>Adapter</b> , for 1 PCR tube 0.2 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636260	35.50

# Centrifuge 5424 R

## Description

Refrigerated Centrifuge 5424 R is the laboratory standard when it comes to efficient cooling performance (e.g. quick cooling down from room temperature to set temperature) in a very ergonomic product design. It features state of the art cooling technology to ensure high temperature accuracy for maximum sample protection and best separation results. Ideal for everyday laboratory use.

## Product features

- > Max. rotor capacity: 24 × 1.5/2.0 mL vessels
- > Max. speed: 20,238 × g (14,680 rpm)
- > OptiBowl® design for quiet operation, even without a rotor lid
- > Soft-touch one-finger lid closure for ergonomic operation
- > Automatic lid opening at the end of the run - prevents sample warming and allows easy access to samples (only Centrifuge 5424)
- > Certified aerosol-tight rotor comes standard for safe centrifugation of hazardous samples
- > Available as a rotary knob version for fast parameter selection, or keypad version for easy cleaning
- > Temperature range from -10 °C to +40 °C
- > ECO power shut-off engages after 8 hours of non-use to reduce energy consumption (40 % over night) and extend compressor life (can be deactivated)
- > FastTemp function for quick pre-cooling of the centrifuge, e.g. from ~ 21 °C to 4 °C in only 8 minutes
- > Guaranteed temperature of 4 °C at maximum rotational speed
- > Built-in condensation drain to eliminate water accumulation in the rotor chamber
- > The patented compressor technology reduces vibrations and protects your samples



## Ordering information

Description	Catalog No.	List USD
Centrifuge 5424 R, refrigerated, with Rotor FA-45-24-11, rotary knobs, 120 V/50 – 60 Hz	5404000537	\$6,500.00
Centrifuge 5424 R, refrigerated, with Rotor FA-45-24-11, keypad, 120 V/50 – 60 Hz	5404000138	7,370.00
Centrifuge 5424 R, refrigerated, without rotor, rotary knobs, 120 V/50 – 60 Hz	5404000731	6,500.00
Centrifuge 5424 R, refrigerated, without rotor, keypad, 120 V/50 – 60 Hz	5404000332	7,370.00



## Rotors for Centrifuge 5424 R



### 24 x 1.5/2.0 mL rotor (FA-45-24-11)

(Catalog No. 022653008)

- > Max. speed: 21,130 × g (15,000 rpm)
- > Max. capacity: 24 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Rotor lifetime: unlimited cycles



### 24 x 1.5/2.0 mL rotor, PTFE-coated (FA-45-24-11-Special)

(Catalog No. 022653041)

- > Max. speed: 21,130 × g (15,000 rpm)
- > Max. capacity: 24 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > PTFE coating for increased chemical resistance
- > Rotor lifetime: unlimited cycles



### 18 x spin column rotor (F-45-18-11-Kit)

(Catalog No. 022653083)

- > Max. speed: 18,111 × g (15,000 rpm)
- > Max. capacity: 18 × spin columns or 1.5/2.0 mL tubes
- > Extended rim that protects tube caps from shearing off
- > Rotor lifetime: unlimited cycles



### 4 x PCR strip rotor (F-45-32-5-PCR)

(Catalog No. 022653121)

- > Max. speed: 18,615 × g (15,000 rpm)
- > Max. capacity: 4 × PCR strips
- > Rotor lifetime: unlimited cycles

#### Ordering information

Description	Catalog No.	List USD
<b>Rotor 24 x 1.5/2.0 mL, with aerosol-tight lid (FA-45-24-11)</b>	022653008	\$ 934.00
<b>Rotor lid, for FA-45-24-11, aerosol tight</b>	022653024	260.00
<b>Rotor 24 x 1.5/2.0 mL, with aerosol-tight lid, PTFE-coated (FA-45-24-11-Special)</b>	022653041	1,090.00
<b>Rotor lid, for FA-45-24-11-Special, aerosol-tight</b>	022653067	290.00
<b>Rotor 18 x 1.5/2.0 mL spin columns, including lid (F-45-18-11-Kit)</b>	022653083	765.00
<b>Rotor lid, for F-45-18-11-Kit</b>	022653105	209.00
<b>Rotor 4 x PCR-strip, including lid (F-45-32-5-PCR)</b>	022653121	765.00
<b>Rotor lid, for F-45-32-5-PCR</b>	022653148	209.00
<b>Adapter, for 1 tube 0.5 mL, max. Ø 8 mm or microtainer 0.6 mL, max. Ø 8 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636227	35.50
<b>Adapter, for 1 tube 0.4 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636243	35.50
<b>Adapter, for 1 PCR tube 0.2 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.</b>	022636260	35.50

# Centrifuge 5427 R

## Description

The Centrifuge 5427 R was designed with high-throughput research applications in mind. With its aerosol-tight 48-place rotor it handles even the toughest challenges in a safe and reliable manner to provide you the efficiency boost you need. All aerosol-tight rotors, including the new rotors for Eppendorf Tubes® 5.0 mL as well as the 24 × 1.5/2.0 mL swing-bucket rotor are equipped with the Eppendorf QuickLock® lids for easy rotor lid opening and closing. Choose the Centrifuge 5427 R if a 24-place microcentrifuge (e.g. our Centrifuge 5424 R) doesn't meet your needs regarding tube capacity and if you don't need the extra versatility that our cross-over Centrifuge 5430 R can offer you.

## Product features

- > Rotor capacity: 48 × 1.5/2.0 mL, 12 × 5.0 mL; Eppendorf QuickLock® rotor allows for fast and ergonomic lid locking
- > Max. speed: 25,000 × g (16,220 rpm)
- > High capacity 48-place rotor significantly increases productivity to save you valuable time
- > Whisper quiet operation due to optimized sound design
- > Soft touch one-finger closure for ergonomic operation
- > Temperature range from -10 °C to 40 °C
- > FastTemp function for quick pre-cooling of the centrifuge, e.g., from ~ 23 °C to 4 °C in only 11 minutes
- > ECO shut-off can be programmed to engage after 1, 2, 4 or 8 hours of non-use for maximum energy savings and extended compressor life
- > Built-in condensation drain to eliminate water accumulation
- > Automatic rotor recognition and imbalance detection for maximum operational safety
- > Eppendorf QuickLock® rotor allows for fast and ergonomic lid locking



## Ordering information

Description	Catalog No.	List USD
Centrifuge 5427 R, without rotor, 120 V	5409000136	\$7,500.00
Centrifuge 5427 R, 30 × 1.5/2.0 mL aerosol-tight QuickLock® rotor, 120 V	022620701	8,530.00
Centrifuge 5427 R, 48 × 1.5/2.0 mL aerosol-tight QuickLock rotor, 120 V	022620700	8,630.00
Centrifuge 5427 R, 24 × 1.5/2.0 mL aerosol-tight QuickLock rotor, 120 V	022620702	8,620.00
Centrifuge 5427 R, 24 × 1.5/2.0 mL swing-bucket aerosol-tight QuickLock rotor, 120 V	022620703	9,140.00
Centrifuge 5427 R, 12 × 5.0 mL aerosol-tight QuickLock rotor, 120 V	022620704	8,530.00

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



## Rotors for Centrifuge 5427 R



### 48 x 1.5/2.0 mL rotor (FA-45-48-11)

(Catalog No. 5409710001)

- > Max. speed: 18,210 × g (12,700 rpm)
- > Max. capacity: 48 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Rotor lifetime: 100,000 cycles



### 48 x 1.5/2.0 mL rotor (F-45-48-11)

(Catalog No. 5409712004)

- > Max. speed: 18,210 × g (12,700 rpm)
- > Max. capacity: 48 × 1.5/2.0 mL tubes
- > Rotor lifetime: 100,000 cycles



### 30 x 1.5/2.0 mL rotor (FA-45-30-11)

(Catalog No. 5409706004)

- > Max. speed: 20,800 × g (14,000 rpm)
- > Max. capacity: 30 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Rotor lifetime: unlimited cycles



### 30 x 1.5/2.0 mL rotor (F-45-30-11)

(Catalog No. 540908007)

- > Max. speed: 20,800 × g (14,000 rpm)
- > Max. capacity: 30 × 1.5/2.0 mL tubes
- > Rotor lifetime: unlimited cycles



### 24 x 1.5/2.0 mL rotor, High Speed (FA-45-24-11)

(Catalog No. 540902009)

- > Max. speed: 25,000 × g (16,220 rpm)
- > Max. capacity: 24 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Rotor lifetime: unlimited cycles



### 24 x 1.5/2.0 rotor, for Spin Columns (FA-45-24-11-Kit)

(Catalog No. 540904001)

- > Max. speed: 19,100 × g (13,200 rpm)
- > Rotor with higher edge for safe centrifugation of up to 24 spin columns
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Rotor lifetime: unlimited cycles

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



**24 x 1.5/2.0 mL rotor,  
Swing Bucket (S-24-11-AT)**  
(Catalog No. 5409715003)

- > Max. speed: 16,049 × g (12,700 rpm)
- > Swing-bucket rotor for 24 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Perfect for phase-separation applications such as phenol-chloroform extraction
- > Rotor lifetime: 100,000 cycles



**12 x 5.0 mL rotor  
(FA-45-12-17)**  
(Catalog No. 5409700006)

- > Max. speed: 20,600 × g (14,000 rpm)
- > Max capacity: 12 × Eppendorf Tubes® 5.0 mL
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Rotor lifetime: 100,000 cycles



**6 x PCR-Strip rotor  
(F-45-48-5-PCR)**  
(Catalog No. 5409714007)

- > Max. speed: 11,710 × g (10,500 rpm)
- > PCR strip rotor for up to 48 × 0.2 mL PCR tubes
- > Rotor lifetime: unlimited cycles

#### Ordering information

Description	Catalog No.	List USD
<b>Rotor 48 x 1.5/2.0 mL</b> , including aerosol-tight QuickLock® lid (FA-45-48-11)	5409710001	\$1,160.00
<b>Spare seals</b> , for rotor lid FA-45-48-11, set of 5	5409718002	275.00
<b>Rotor 48 x 1.5/2.0 mL</b> , including lid (F-45-48-11)	5409712004	899.00
<b>Rotor 30 x 1.5/2.0 mL</b> , including aerosol-tight QuickLock® lid (FA-45-30-11)	5409706004	1,040.00
<b>Spare seals</b> , for rotor lid FA-45-30-11, set of 5	5820762004	275.00
<b>Rotor 30 x 1.5/2.0 mL</b> , including lid (F-45-30-11)	5409708007	731.00
<b>Rotor 24 x 1.5/2.0 mL</b> , including aerosol-tight QuickLock® lid (FA-45-24-11)	5409702009	1,040.00
<b>Spare seals</b> , for rotor lid FA-45-24-11, set of 5	5409717006	275.00
<b>Rotor 24 x Spin column</b> , including aerosol-tight QuickLock® lid (FA-45-24-11-Kit)	5409704001	1,160.00
<b>Spare seals</b> , for rotor lid FA-45-24-11-Kit, set of 5	5820767006	275.00
<b>Rotor 24 x 1.5/2.0 mL swing-bucket</b> , including aerosol-tight QuickLock® lid (S-24-11-AT)	5409715003	1,645.00
<b>Spare seals</b> , for rotor lid S-24-11-AT, set of 5	5409719009	396.00
<b>Rotor 6 x PCR strip</b> , including lid (F-45-48-5-PCR)	5409714007	812.00
<b>Rotor 12 x 5.0 mL</b> , including aerosol-tight QuickLock® lid (FA-45-12-17)	5409700006	1,300.00
<b>Spare seals</b> , for rotor lid FA-45-12-17, set of 5	5409716000	275.00
<b>Adapter</b> , for 1 vessel 1.5 – 2.0 mL, for all 5.0 mL rotors, set of 4 pcs.	5820768002	45.00
<b>Adapter</b> , for 1 cryotube, for all 5.0 mL rotors, set of 4 pcs.	5820769009	45.00
<b>Adapter</b> , for 1 HLPC tube, for all 5.0 mL rotors, set of 4 pcs.	5820770007	45.00
<b>Adapter</b> , for 1 tube 0.5 mL, max. Ø 8 mm or microtainer 0.6 mL, max. Ø 8 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636227	35.50
<b>Adapter</b> , for 1 tube 0.4 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636243	35.50
<b>Adapter</b> , for 1 PCR tube 0.2 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636260	35.50



# Centrifuge 5430/5430 R

## Description

Unique cross-over Centrifuge 5430 and 5430 R combine the best features of a microcentrifuge (small footprint) and multipurpose centrifuge (versatility) in one instrument. These centrifuges spin rotors for Eppendorf tubes and PCR strips as you would expect from any microcentrifuge. But that's not all. In a compact size, Centrifuge 5430 and 5430 R also accommodate rotors for microplates and 15/50 mL conical tubes. The rotor program features Eppendorf QuickLock® rotors. This includes 48-place rotors (1.5/2.0 mL), a 16-place rotor for Eppendorf Tubes® 5.0 mL and a swing-bucket rotor (24 x 1.5/2.0 mL). With their unmatched versatility, Centrifuge 5430 and Centrifuge 5430 R are the flagship products among the Eppendorf microcentrifuge portfolio.



## Product features

- > Max. rotor capacity: 48 x 1.5/2.0 mL, 6 x 50 mL, 2 x MTP
- > Max. speed: 30,130 x g (17,500 rpm)
- > Remarkable versatility with 12 different rotors
- > Soft-touch one-finger lid closure for ergonomic operation
- > Menu-driven, multi lingual operation menu (English, German, French, Spanish) with large backlit display
- > 5 program keys for easy access to routine programs
- > Saves up to 50 user-defined programs
- > Automatic rotor recognition and imbalance detection for maximum operational safety
- > Eppendorf QuickLock® – System for quickly opening and closing the rotor lid

## Special features for Centrifuge 5430 R

- > Temperature range: -11 °C to +40 °C
- > The patented compressor technology reduces vibrations and protects your samples
- > Continuous cooling maintains a constant temperature after the run has been completed – your samples stay cool
- > FastTemp pro® function for programmable pre-cooling according to day and time
- > ECO shut-off engages after 8 hours of nonuse to reduce energy consumption (37 % overnight) and extend compressor life (can be deactivated in menu)
- > Built-in condensation drain to eliminate water accumulation

## Ordering information

Description	Catalog No.		List USD
	Knob	Keypad	
<b>Centrifuge 5430</b>			
with 48 x 1.5/2.0 mL aerosol-tight QuickLock® rotor, 120 V	022620515	022620513	\$ 5,180.00
with 30 x 1.5/2.0 mL aerosol-tight QuickLock rotor, 120 V	022620511	022620509	4,970.00
with 24 x Kit aerosol-tight QuickLock rotor, 120 V	022620557	022620541	5,180.00
with 16 x 5 mL aerosol-tight QuickLock rotor, 120 V	022620562	022620560	5,180.00
with 6 x 15/50 mL rotor, including adapters for 15 mL and 50 mL conical tubes, 120 V	022620580	022620576	5,970.00
with 2 x MTP/PCR plate rotor, 120 V	022620572	022620568	5,900.00
without rotor, 120 V	022620596	022620584	4,040.00
<b>Centrifuge 5430 R (refrigerated)</b>			
with 48 x 1.5/2.0 mL aerosol-tight QuickLock rotor, 120 V	022620625	022620603	9,750.00
with 30 x 1.5/2.0 mL aerosol-tight QuickLock rotor, 120 V	022620623	022620601	9,650.00
with 16 x 5 mL aerosol-tight QuickLock rotor, 120 V	022620642	022620638	9,740.00
with 6 x 15/50 mL rotor, including adapters for 15 mL and 50 mL conical tubes, 120 V	022620663	022620659	10,400.00
with 2 x MTP/PCR plate rotor, 120 V	022620656	022620645	10,350.00
without rotor, 120 V	022620689	022620667	8,600.00



## Rotors for Centrifuge 5430/5430 R



**48 x 1.5/2.0 mL  
(FA-45-48-11)<sup>1)</sup>**

**(Catalog No. 5427754008)**

- > Max. speed: 18,210 × g (12,700 rpm)
- > Max. capacity: 48 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Rotor lifetime: 100,000 cycles



**48 x 1.5/2.0 mL  
(F-45-48-11)<sup>1)</sup>**

**(Catalog No. 5427755004)**

- > Max. speed: 18,210 × g (12,700 rpm)
- > Max. capacity: 48 × 1.5/2.0 mL tubes
- > Rotor lifetime: 100,000 cycles



**30 x 1.5/2.0 mL  
(FA-45-30-11)**

**(Catalog No. 022654047)**

- > Max. speed: 20,817 × g (14,000 rpm)
- > Max. capacity: 30 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > PTFE coating for increased chemical resistance
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Rotor lifetime: unlimited cycles



**30 x 1.5/2.0 mL  
(F-45-30-11)**

**(Catalog No. 022654004)**

- > Max. speed: 20,817 × g (14,000 rpm)
- > Max. capacity: 30 × 1.5/2.0 mL tubes
- > PTFE coating for increased chemical resistance
- > Rotor lifetime: unlimited cycles



**24 x 1.5/2.0 mL Swing-Bucket  
(S-24-11-AT)<sup>1)</sup>**

**(Catalog No. 5427757007)**

- > Max. speed: 16,049 × g (12,700 rpm)
- > Swing-bucket rotor for 24 × 1.5/2.0 mL tubes
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Perfect for phase-separation applications such as phenol-chloroform extraction
- > Rotor lifetime: 100,000 cycles



**16 x 5.0 mL  
(FA-45-16-17)<sup>1)</sup>**

**(Catalog No. 5427750002)**

- > Max. speed: 21,191 × g (14,200 rpm)
- > Max. capacity: 16 × Eppendorf Tubes® 5.0 mL
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Eppendorf Tubes® 5.0 mL with screw caps only can use up half (8 ×) of the places in the rotor
- > Rotor lifetime: 100,000 cycles

<sup>1)</sup> Please note that rotors FA-45-48-11, F-45-48-11, S-24-11-AT, and FA-45-16-17 can be used for 120 V models starting with serial number: 5430 (> 16,000), 5430 R (> 16,000). If you own a unit with an older serial number please contact Eppendorf Customer Support to learn about your options.

**i** For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



**24 x Spin column  
(FA-45-24-11-Kit)**  
(Catalog No. 022654128)

- > Max. speed: 19,090 × g (13,200 rpm)
- > Rotor with higher edge for safe centrifugation of up to 24 spin columns
- > Aerosol-tight for safe centrifugation of hazardous samples
- > Eppendorf QuickLock® lid provides fast and ergonomic lid locking
- > Rotor lifetime: unlimited cycles



**24 x 1.5/2.0 mL High Speed  
(FA-45-24-11-HS)**  
(Catalog No. 022654080)

- > Max. speed: 30,130 × g (17,500 rpm)
- > Max. capacity: 24 × 1.5/2.0 mL tubes
- > Extremely fast separation results
- > Aerosol-tight for safe centrifugation of hazardous samples
- > PTFE coating for increased chemical resistance
- > Rotor lifetime: 100,000 cycles



**6 x 15/50 mL Conical  
(F-35-6-30)**

- (Catalog No. 022654306)
- > Max. speed: 7,745 × g (7,830 rpm)
  - > Rotor for 6 × 15/50 mL conical or 12 × Vacutainer® tubes
  - > Rotor lifetime: 100,000 cycles



**2 x MTP/PCR plate  
(A-2-MTP)**  
(Catalog No. 022654403)

- > Max. speed: 2,204 × g (4,680 rpm)
- > 2-place swing-bucket rotor for MTP, PCR and Deepwell Plates
- > Windshield design for whisper quiet operation
- > Maximum loading height of 29 mm
- > Rotor lifetime: 100,000 cycles



**8 x PCR-strip  
(F-45-64-5-PCR)**  
(Catalog No. 022654209)

- > Max. speed: 13,543 × g (11,800 rpm)
- > PCR strip rotor for up to 64 × 0.2 mL PCR tubes
- > Rotor lifetime: 100,000 cycles



**18 x cryotubes or HPLC vials  
(F-45-18-17-cryo)**  
(Catalog No. 022654161)

- > Max. speed: 8,324 × g (8,900 rpm)
- > 18-place rotor for Cryovials®
- > Rotor lifetime: unlimited cycles



# Rotors for Centrifuge 5430/5430 R

## Ordering information

Description	Catalog No.	List USD
<b>Rotor 48 x 1.5/2.0 mL</b> , including aerosol-tight QuickLock® lid (FA-45-48-11)	5427754008	\$1,160.00
<b>Spare seals</b> , for rotor lid FA-45-48-11, set of 5	5409718002	275.00
<b>Rotor 48 x 1.5/2.0 mL</b> , including lid (F-45-48-11)	5427755004	899.00
<b>Rotor 30 x 1.5/2.0 mL</b> , including aerosol-tight QuickLock® lid (FA-45-30-11)	022654047	1,040.00
<b>Spare seals</b> , for rotor lid FA-45-30-11, set of 5	5820762004	275.00
<b>Rotor 30 x 1.5/2.0 mL</b> , including lid (F-45-30-11)	022654004	731.00
<b>Rotor 24 x 1.5/2.0 mL</b> , including aerosol-tight lid (FA-45-24-11-HS)	022654080	1,040.00
<b>Spare seals</b> , for rotor lid FA-45-24-11, set of 5	5409717006	275.00
<b>Rotor 24 x spin column</b> , including aerosol-tight QuickLock® lid (FA-45-24-11-Kit)	022654128	1,150.00
<b>Spare seals</b> , for rotor lid FA-45-24-11-Kit, set of 5	5820767006	275.00
<b>Rotor 24 x 1.5/2.0 mL swing-bucket</b> , including aerosol-tight QuickLock® lid (S-24-11-AT)	5427757007	1,645.00
<b>Spare seals</b> , for rotor lid S-24-11-AT, set of 5	5409719009	396.00
<b>Rotor 16 x 5.0 mL</b> , including aerosol-tight QuickLock® lid (FA-45-16-17)	5427750002	1,350.00
<b>Spare seals</b> , for rotor lid FA-45-12-17, set of 5	5409716000	275.00
<b>Rotor 6 x 15/50 mL</b> , including lid, with adapters for 15 mL/50 mL conical tubes (F-35-6-30)	022654306	1,955.00
<b>Rotor 2 x MTP/PCR plate</b> , including lid, with plate buckets (A-2-MTP)	022654403	1,865.00
<b>Rotor 8 x PCR Strip</b> , including lid, with adapters (F-45-64-5-PCR)	022654209	1,155.00
<b>Rotor 18 x cryotubes</b> , including lid, with cryotube adapters (F-45-18-17-Cryo)	022654161	731.00
<b>Adapter</b> , for 1 – 2 mL cryotubes, max. length 50 mm, for Rotor F-45-18-17-Cryo, set of 6 pcs.	022639498	91.50
<b>Adapter</b> , for 1 cryotube, for all 5.0 mL rotors, set of 4 pcs.	5820769009	45.00
<b>Adapter</b> , for 1 vessel 1.5 – 2.0 mL, for all 5.0 mL rotors, set of 4 pcs.	5820768002	45.00
<b>Adapter</b> , for 1 HPLC tube, for all 5.0 mL rotors, set of 4 pcs.	5820770007	45.00
<b>Adapter</b> , for 1 tube 0.5 mL, max. Ø 6 mm or microtainer 0.6 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636227	35.50
<b>Adapter</b> , for 1 tube 0.4 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636243	35.50
<b>Adapter</b> , for 1 HPLC vessel 1.5 mL, for Rotor F-45-18-17-Cryo	5427708006	248.00
<b>Adapter</b> , for 1 PCR tube 0.2 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636260	35.50

## Adapter options 6 x 15/50 mL conical tube rotor

Adapter	Rotor capacity <sup>3)</sup>	Max. tube dimensions Ø x L	Max. RCF	For bore hole	Catalog No. <sup>4)</sup>	List USD
13 mm round	12	13 x 65 – 89 mm	6,443 x g	small	5427740007	\$155.00
			6,100 x g	large	5427742000	155.00
13 mm round	12	13 x 90 – 110 mm	7,471 x g	small	5427741003	155.00
			7,129 x g	large	5427743006	155.00
16 mm round	12	13 x 75 – 105 mm	7,005 x g	small	022654512	155.00
			7,005 x g	large	022654524	155.00
17 mm round	12	13 x 90 – 125 mm	7,745 x g	small	022654538	155.00
			7,403 x g	large	022654545	155.00
Eppendorf Tubes® 5.0 mL	12	17.5 x 80 mm	6,327 x g	small	5427746005	155.00
			7,129 x g	large	5427747001	155.00
15 mL conical	6	17.5 x 100 – 125 mm	7,540 x g	small	022654365	155.00
30 mL round	6	26 x 92 – 112 mm	7,087 x g	large	022654556	155.00
50 mL round	6	29 x 100 – 125 mm	7,581 x g	large	022654567	155.00
50 mL conical	6 <sup>1) 2)</sup>	29.5 x 100 – 125 mm	7,197 x g	large	022654349	155.00
Centriprep®	6	29.5 x 100 – 125 mm	7,567 x g	large	022654331	155.00

<sup>1)</sup> Three sets of 2 included within 6 x 15/50 mL rotor package. <sup>2)</sup> Adapter accommodates skirted 50 mL conical tubes. <sup>3)</sup> Please perform a manual test to determine the actual loading capacity. <sup>4)</sup> Set of 2.



# Technical Specification Microcentrifuges

Technical specifications					
Model	MiniSpin®	MiniSpin® plus	5418	5418 R	5425
Max. RCF	12,000 × g	14,100 × g	16,873 × g	16,873 × g	21,330 × g
Max. speed	800–13,400 rpm (100 rpm steps)	800–14,500 rpm (100 rpm steps)	100–14,000 rpm (100 rpm steps)	100–14,000 rpm (100 rpm steps)	100–15,060 rpm (50 rpm steps)
Max. capacity	12 × 1.5/2.0 mL	12 × 1.5/2.0 mL	18 × 1.5/2.0 mL	18 × 1.5/2.0 mL	24 × 1.5/2.0 mL, 10 × 5.0 mL
Rotors available	2	2	1	1	6
Acceleration time	13 s	13 s	16 s	11 s	15 s
Deceleration time	12 s	12 s	18 s	12 s	15 s
Timer	15 s – 30 min	15 s to 99 min, with continuous run function	30 s – 9:59 h, with continuous run function	30 s – 99 min, with continuous run function	10 s to 9:59 h, with continuous run function
SOFT brake function	no	no	no	no	10 ramps
Noise level	< 49 dB(A)	< 52 dB(A)	< 51 dB(A)	< 57 dB(A), with rotor lid: < 47 dB(A)	< 51 dB(A) with rotor FA-24x2
Max. power consumption	70 W	85 W	170 W	320 W	280 W
Dimensions (W × D × H)	8.9 × 9.4 × 4.7 in	8.9 × 9.4 × 4.7 in	8.2 × 11.8 × 8.3 in	11.7 × 18.2 × 9.8 in	9.4 × 15.3 × 9.4 in
Height (with open lid)	9.8 in	9.8 in	16.7 in	20 in	18.8 in
Weight w/o accessories	9.5 lb	9.5 lb	17 lb	48.5 lb	34.3 lb
Cooling	non-refrigerated	non-refrigerated	non-refrigerated	refrigerated	non-refrigerated
Temperature control range	-	-	-	0 °C to +40 °C	-

Technical specifications				
Model	5424 R	5427 R	5430	5430 R
Max. RCF	21,130 × g	25,000 × g	30,130 × g	30,130 × g
Max. speed	100–15,000 rpm (50 rpm steps)	100–16,220 rpm (50 rpm steps)	100–17,500 rpm (100 rpm steps)	100–17,500 rpm (100 rpm steps)
Max. capacity	24 × 1.5/2.0 mL	48 × 1.5/2.0 mL, 12 × 5.0 mL	48 × 1.5/2.0 mL, 6 × 50 mL, 2 × MTP	48 × 1.5/2.0 mL, 6 × 50 mL, 2 × MTP
Rotors available	4	9	12	12
Acceleration time	15 s	18 s	14 s	14 s
Deceleration time	16 s	18 s	15 s	15 s
Timer	30 s to 9:59 h, with continuous run function	10 s to 9:59 h, with continuous run function	30 s to 99:59 h, with continuous run function	30 s to 99:59 h, with continuous run function
SOFT brake function	yes	yes	yes	yes
Noise level	< 54 dB(A), with rotor lid: < 48 dB(A) with Rotor FA- 45-24-11	< 46 dB(A) with Rotor F-45-48-11	< 58 dB(A) with Rotor F-45- 30-11	< 54 dB(A) with Rotor F-45-30-11
Max. power consumption	350 W	550 W	475 W	1.050 W
Dimensions (W × D × H)	11.4 × 18.9 × 10 in	31.9 × 54 × 25.4 in	13 × 16.3 × 9.8 in	15 × 25.2 × 11.7 in
Height (with open lid)	20 in	21.9 in	21.8 in	24.8 in
Weight w/o accessories	46.3 lb	66.1 lb	63.8 lb	123.5 lb
Cooling	refrigerated	refrigerated	non-refrigerated	refrigerated
Temperature control range	-10 °C to +40 °C	-11 °C to 40 °C	-	-11 °C to 40 °C

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)

# Meet the Next Generation of Microcentrifugation

## Description

We introduced our very first centrifuge in 1964 as an integral part of the Eppendorf® Microliter System, and revolutionized life science research practices worldwide. To this day, the Eppendorf name remains synonymous with innovative design, technology, and performance that stands the test of time.

The Eppendorf approach to product development is—and has always been—about giving you more. More quality, more innovation. All of our centrifuges personalize this philosophy. They all go beyond speed and capacity to offer you unparalleled ergonomic operation, superior temperature control, and outstanding product quality. Each centrifuge is designed to operate at low noise levels for a relaxing work environment, soft-touch lid closures for ease-of-use and low profiles for easy loading and unloading of samples. Refrigerated model centrifuges have exclusive features such as ECO shut-off and dynamic compressor control for maximum sample protection and energy savings. Metal safety containment provides for longevity of the unit, little to no downtime, and safe centrifugation. With accessories available such as certified aerosol tight caps, the safety of you and your lab will never be compromised.

With their outstanding quality, Eppendorf centrifuges provide you a safe and cost efficient solution for your lab. Reward yourself with an Eppendorf centrifuge.



Register your Eppendorf products online now to benefit from numerous advantages! You receive bonus epPoints immediately for each Eppendorf device registered. You can also easily manage your devices online and are always kept up-to-date on any news.

[www.eppendorf.com/myeppendorf](http://www.eppendorf.com/myeppendorf)

# Centrifuge 5702/5702 R/5702 RH

## Description

The 5702 family of low speed, general purpose centrifuges was especially designed to meet the requirement of low- to mid-throughput clinical research and cell culture labs. They are compact in design so that one can fit comfortably on every lab bench, quiet in operation to benefit your work environment, and provide 6 different rotor options to accommodate any type of tube.

## The right model for your application:

- > Centrifuge 5702 for standard applications
- > Refrigerated Centrifuge 5702 R for heat sensitive samples
- > Heated and refrigerated Centrifuge 5702 RH allows centrifugation under biological conditions to improve cell viability for more accurate results in downstream applications (e.g. cell cultivation)



## Product features

- > Max. speed: 3,000 × g (4,400 rpm)
- > Very compact footprint to fit on every lab bench
- > Very quiet operation to benefit your environment
- > Low access height for simple loading and unloading of samples
- > SOFT brake function for slow acceleration and braking. Optimized for cell separation by gradient centrifugation
- > "At set RPM" function starts the timer when the selected rotational speed is reached for reproducible centrifugation runs
- > Key lock to prevent unintentional adjustments
- > Stainless steel rotor chamber is rust-free and easy to clean
- > Electronic imbalance detection for maximum safety

## Special features for Centrifuge 5702 R and Centrifuge 5702 RH

- > Temperature settings from -9 °C to 40 °C
- > FastTemp function for fast precooling
- > Continuous cooling maintains a constant temperature after the run has been completed – your samples stay cool
- > ECO shut-off engages after 8 hours of non-use to reduce energy consumption and extend compressor life
- > Two program keys to store routine programs
- > Active heating guarantees high temperature accuracy during the entire centrifugation cycle (only 5702 RH)

**i** For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



Centrifuge 5702 display



Centrifuge 5702 R and 5702 RH display

Technical specifications			
Model	5702	5702 R	5702 RH
Max. RCF	3,000 × g	3,000 × g	3,000 × g
Speed	100 – 4,400 rpm (100 rpm steps)	100 – 4,400 rpm (100 rpm steps)	100 – 4,400 rpm (100 rpm steps)
Max. capacity	4 × 100 mL	4 × 100 mL	4 × 100 mL
Rotors available	6	6	6
Acceleration time	25 s	25 s	25 s
Deceleration time	25 s	25 s	25 s
Timer	0 – 99 min, with continuous run function	0 – 99 min, with continuous run function	0 – 99 min, with continuous run function
SOFT brake function	yes	yes	yes
Noise level	< 52 dB(A) with Rotor A-4-38	< 46 dB(A) with Rotor A-4-38	< 46 dB(A) with Rotor A-4-38
Max. power consumption	200 W	380 W	380 W
Dimensions (W × D × H)	12.5 × 15.6 × 9.5 in	15 × 22.8 × 10.2 in	15 × 22.8 × 10.2 in
Height (with open lid)	20.7 in	23.4 in	23.4 in
Weight w/o accessories	44 lb	78 lb	78 lb
Cooling	non-refrigerated	refrigerated	refrigerated/heated
Temperature control range	–	-9 °C to 40 °C	-9 °C to 42 °C



Ordering information	5702		5702 R		5702 RH	
	Catalog No.	List USD	Catalog No.	List USD	Catalog No.	List USD
<b>Application-driven packages</b>						
<b>Cell culture package</b> , 120 V	022628102	\$3,970.00	022628113	\$7,040.00	022628124	\$7,740.00
<b>Clinical package</b> , 120 V	022628001	3,970.00	022628012	7,040.00	022628023	7,740.00
<b>Centrifuge options</b>						
with 4 × 100 mL rotor (A-4-38), 120 V	022629883	3,050.00	022629905	6,340.00	022629921	7,050.00
with 4 × 100 mL rotor (A-4-38), 230 V	022629888	3,050.00	022629916	6,340.00	N/A	
without rotor, 120 V	022626001	2,375.00	022626205	5,860.00	022626213	6,900.00

**Cell Culture package** includes the centrifuge, an A-4-38 swing-bucket rotor with 4 × 100 mL round buckets, 4 adapters for 15 mL conical tubes (2 × 022639200) and 4 adapters for 50 mL conical tubes (2 × 022639226). Each adapter holds 2 × 15 mL conical tubes or one 50 mL tube for 8 or 4 tubes per run, respectively. Max speed of 3,000 × g (4,400 rpm).

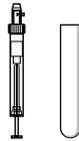
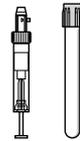
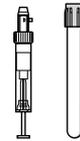
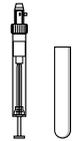
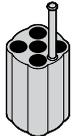
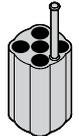
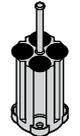
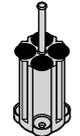
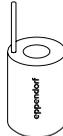
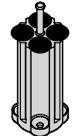
**Clinical package** includes the centrifuge, an A-4-38 swing-bucket rotor with 4 × 100 mL round buckets, 4 adapters for blood tubes with an outer diameter of 13 mm (2 × 022639242) and 4 adapters for 16 mm tubes (2 × 022639269). Each adapter holds 4 tubes for 16 tubes per run, max speed 2,850 × g (4,400 rpm).

# Rotors for Centrifuge 5702/5702 R/5702 RH



## 4 x 100 mL Swing-Bucket Rotor (A-4-38) with Round Buckets

- > Maximum speed:  $3,000 \times g$  (4,400 rpm)
- > Standard rotor for centrifugation of blood collection tubes or 15/50 mL conical tubes
- > Round buckets for vessels with 1.5 – 100 mL<sup>1)</sup>
- > Wide variety of adapters for all blood collection tubes and cell culture tube types
- > Aerosol-tight<sup>2)</sup> caps for safe centrifugation of hazardous samples optionally available
- > Rotor lifetime: 100,000 cycles

							
<b>Tube volume</b>	1.5 – 2.0 mL	1.1 – 1.4 mL	2 – 7 mL	2.6 – 7 mL	4 – 10 mL	Eppendorf Tubes® 5.0 mL	9 – 15 mL
<b>Max. tube diameter</b>	11 mm	8.5 mm	12.5 mm	13.5 mm	16 mm	17 mm	17.5 mm
<b>Max. vessel height</b>	43 mm	100 mm	100 mm	100 mm	100 mm	60 mm	100 mm
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>	43 mm	100 mm	100 mm	100 mm	100 mm	60 mm	100 mm
<b>Adapter</b>							
<b>Number of vessels per adapter/rotor</b>	4/16	5/20	5/20	4/16	4/16	1/4	4/16
<b>Bottom shape</b>	round	flat with rubber mat	conical	round			
<b>Centrifugation radius</b>	134 mm	132 mm	132 mm	132 mm	132 mm	136 mm	130 mm
<b>Max. RCF</b>	2,900 x g	2,850 x g	2,850 x g	2,850 x g	2,850 x g	2,943 x g	2,800 x g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.				
<b>Catalog No.</b>	022639277	022639285	022639102	022639242	022639269	5702733008	022639129
<b>List USD</b>	\$325.00	\$325.00	\$325.00	\$325.00	\$325.00	\$162.00	\$325.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.

<sup>2)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



### Ordering information

Description	Catalog No.	List USD
<b>Rotor 4 x 100 mL swing bucket, with round buckets</b>		
incl. 4 round buckets 100 mL	022639048	\$828.00
without buckets	022639064	335.00
<b>Round bucket 100 mL, for Rotor A-4-38, set of 4</b>	022639081	752.00
<b>Aerosol-tight caps for 100 mL round buckets, set of 2</b>	022639293	122.00

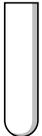
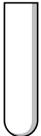
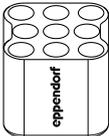
15 mL conical	15 mL conical	25 mL	20 – 30 mL	50 mL	50 mL conical	100 mL
17.2 mm	17.2 mm	25 mm	26 mm	29 mm	30 mm	38 mm
121 mm	121 mm	100 mm	123 mm	123 mm	115 mm	106 mm
120 mm	-	100 mm	116 mm	116 mm	115 mm	106 mm
1/4	2/8	1/4	1/6	1/6	1/4	1/4
conical	conical	round	round	round	conical	round
137 mm	137 mm	135 mm				
3,000 x g	3,000 x g	2,900 x g				
set of 2 pcs.						
022639188	022639200	022639145	022637240	022637258	022639226	022639161
\$179.00	\$325.00	\$179.00	\$166.00	\$166.00	\$179.00	\$179.00

# Rotors for Centrifuge 5702/5702 R/5702 RH



## 4 x 100 mL Swing-Bucket Rotor (A-4-38) with Rectangular Buckets

- > Maximum speed: 2,750 × g (4,400 rpm)
- > Rectangular buckets for vessels with 5 – 25 mL
- > Rotor lifetime: 100,000 cycles

						
<b>Adapters for Rotor A-4-38 with rectangular buckets</b>						
<b>Tube Volume</b>	round-bottom tubes	5 – 7 mL	9 mL	15 mL	25 mL	20 mL
<b>Max. tube diameter</b>	12 mm	13 mm	14.5 mm	17.5 mm	25 mm	22 mm
<b>Max. vessel height</b>	100 mm	100 mm	100 mm	100 mm	100 mm	100 mm
<b>Adapter</b>						
<b>Number of vessels per adapter/rotor</b>	9/36	10/40	8/32	6/24	2/8	4/16
<b>Bottom shape</b>	round	flat	flat	flat	flat	flat
<b>Centrifugation radius</b>	119 mm	127 mm	127 mm	127 mm	127 mm	127 mm
<b>Max. RCF</b>	2,577 × g	2,750 × g	2,750 × g	2,750 × g	2,750 × g	2,750 × g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.			
<b>Catalog No.</b>	5702763004	022639323	022639340	022639366	022639391	022639382
<b>List USD</b>	\$171.00	\$171.00	\$171.00	\$171.00	\$171.00	\$171.00

### Ordering information

Description	Catalog No.	List USD
Rotor 4 x 100 mL swing bucket, with rectangular buckets	022639304	\$1,070.00
Rectangular bucket 90 mL, for Rotor A-4-38, set of 4	022639307	579.00

**8 x 15 mL swing-bucket rotor (A-8-17) (Catalog No. 022639501)**

- > Maximum speed: 2,800 × g (4,400 rpm)
- > Low capacity rotor for centrifugation of 15 mL conical tubes or 15 mL glass tubes
- > Adapters for 15 mL conical tubes and rubber mat inserts for glass tubes optionally available
- > Rotor lifetime: 75,000 cycles

**24 x 1.5/2.0 mL Rotor (F-45-24-11) (Catalog No. 022639471)**

- > Maximum speed: 1,770 × g (4,400 rpm)
- > Fixed-angle rotor for 24 × 1.5/2.0 mL tubes
- > Quiet centrifugation even without rotor lid
- > Adapters optionally available for:
  - 0.2 mL PCR tubes (5425 715.005)
  - 0.4 mL centrifuge tubes (5425 717.008)
  - 0.5 mL micro test tubes and Microtainer® tubes (5425 716.001)
- > Rotor and adapters are autoclavable (121 °C, 20 min)
- > Rotor lifetime: unlimited cycles

**30 x 15 mL fixed-angle rotor (F-35-30-17) (Catalog No. 022639404)**

- > Maximum speed: 2,750 × g (4,400 rpm)
- > High capacity rotor for 20 × 15 mL conical tubes or 30 × 15 mL glass tubes
- > Inserts for 15 mL conical tubes and rubber mats for use with glass tubes are included
- > Also accommodates twenty 16 x 125 mm glass tubes
- > Rotor lifetime: 100,000 cycles

**18 x Cryotubes or HPLC vials (F-45-18-17-Cryo) (Catalog No. 022639480)**

- > Maximum speed: 1,840 × g (4,400 rpm)
- > Quiet centrifugation even without rotor lid
- > Centrifugation of 1 – 2 mL Cryotubes® (max. 13 mm Ø, use with adapter) and tubes with screw cap (max. 17 mm Ø, no adapter required)
- > Rotor and adapters are autoclavable (121 °C, 20 min)
- > Rotor lifetime: unlimited cycles

**Ordering information**

Description	Catalog No.	List USD
<b>Rotor 8 x 15 mL swing-bucket (A-8-17)</b> , without adapter, without rubber mats	022639501	\$330.00
Form inserts, for 15 mL conical tubes, set of 8	022639528	142.00
Rubber mats, for 15 mL round bottom or glass tubes, set of 8	022639510	37.50
<b>Rotor 30 x 15 mL fixed-angle (F-35-30-17)</b>		
incl. 30 steel sleeves for 15 mL vessels, with 20 adapters for conical tubes and 30 rubber mats for round-bottom tubes	022639404	878.00
incl. 10 steel sleeves for 15 mL vessels, with 10 adapters for conical tubes and 10 rubber mats for round-bottom tubes	022639421	538.00
Spare steel sleeves, for rotor F-35-30-17, set of 10	022639439	281.00
Form inserts, for 15 mL conical tubes, set of 10	022639447	179.00
Rubber mats, 17 mm, for 15 mL round bottom tubes, set of 10	022639455	45.50
<b>Rotor 24 x 1.5/2.0 mL (F-45-24-11)</b> , (F-45-24-11), without lid	022639471	579.00
Adapter, for 0.5 mL tubes and BD Microtainer® tubes, set of 6	022636227	35.50
Adapter, for 0.4 mL tubes, set of 6	022636243	35.50
Adapter, for 0.2 mL PCR tubes, set of 6	022636260	35.50
<b>Rotor 18 x Cryotubes (F-45-18-17-Cryo)</b> , without rotor lid, without adapters	022639480	670.00
Adapter, for 1-2 mL cryotubes, set of 6	022639498	91.50
Adapter, for 12 x 32 mm HPLC vials, set of 18	5427708006	248.00

## Centrifuge 5804/5804 R and 5810/5810 R



### Description

Eppendorf Centrifuge 5804/5804 R and 5810/5810 R with their renowned quality and reliability offer you cost efficient solutions for your medium- to high-throughput applications – now and in the future. Centrifuge 5804/5804 R is a high speed centrifuge for medium capacity needs. It allows for molecular applications in tubes up to 250 mL and offers additional swing-bucket and fixed-angle rotors as well as deepwell plate capacity for increased versatility. Centrifuge 5810/5810 R is a workhorse for medium to high-throughput laboratories. It combines extraordinary versatility and capacity for both tubes and plates with an extraordinary compact footprint.

**i** For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



#### Product features

- > Swing-bucket rotors and adapters accommodate tubes and bottles from 0.2 mL to 750 mL
- > Plate rotor for centrifugation of all types of MTP, PCR, cell culture, or Deepwell Plates
- > Fixed-angle rotors for high-speed applications in tubes from 0.2 mL to 85 mL
- > High centrifugation speed of up to  $20,913 \times g$  (14,000 rpm)
- > Aerosol-tight Eppendorf QuickLock® caps and lids for easy, one-hand operation
- > Centrifuge lid with soft-touch lid closure
- > Low access height of 29 cm for easy loading and unloading of samples
- > Quiet operation to improve your work environment
- > Compact footprint saves valuable bench space
- > Automatic rotor recognition and imbalance detection for maximum operational safety

#### Additional features of refrigerated Centrifuge 5804 R and 5810 R

- > Temperature range from  $-9^{\circ}\text{C}$  to  $40^{\circ}\text{C}$
- > FastTemp function for fast pre-cooling
- > Continuous cooling maintains a constant temperature after the run has been completed – your samples stay cool
- > ECO shut-off engages after 8 hours of non-use to reduce energy consumption and to extend compressor life
- > Dynamic compressor control (DCC) technology for precise cooling performance



## Centrifuge 5804/5804 R and 5810/5810 R

Technical specifications				
Model	5804	5804 R	5810	5810 R
Max. RCF with fixed-angle rotor	20,913 × g	20,913 × g	20,913 × g	20,913 × g
Max. RCF with swing-bucket rotor	4,500 × g	4,500 × g	4,500 × g	4,500 × g
Max. RCF with plate rotor	2,250 × g	2,250 × g	3,486 × g	3,486 × g
Speed	200 – 14,000 rpm (10 rpm steps)			
Max. capacity	4 × 250 mL/ 2 × 5 MTP	4 × 250 mL/ 2 × 5 MTP	4 × 750 mL/ 4 × 4 MTP	4 × 750 mL/ 4 × 4 MTP
Acceleration/braking ramps	10/10	10/10	10/10	10/10
Number of programs	35 user-defined programs	35 user-defined programs	35 user-defined programs	35 user-defined programs
Timer	1 min to 99 min, with continuous run function, short-spin	1 min to 99 min, with continuous run function, short-spin	1 min to 99 min, with continuous run function, short-spin	1 min to 99 min, with continuous run function, short-spin
Temperature control range	–	-9 °C to 40 °C	–	-9 °C to 40 °C
Noise level				
Rotor S-4-104 (4x750 mL)	–	–	<59 dB(A)	<56 dB(A)
Rotor S-4-72 (4x250 mL)	<62 dB(A)	<58 dB(A)	–	–
Rotor FA-45-6-30 (6x50 mL)	<55 dB(A)	<54 dB(A)	<56 dB(A)	<55 dB(A)
Max. power consumption	900 W	1,650 W	900 W	1,650 W
Dimensions (W × D × H)	18 x 20 x 13 in	25 x 20 x 13 in	21 x 21 x 13 in	28 x 21 x 13 in
Footprint (dimensions w/o front panel, WxD)	18.5 x 19.6 in	25.1 x 19.6 in	21.2 x 21.2 in	27.5 x 21.2 in
Height (with open lid)	29 in	29 in	31 in	31 in
Weight w/o accessories	121 lb	176 lb	150 lb	218 lb

**i** For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



# Rolling Cabinet



## Description

If space is a limited resource in your lab, Eppendorf's rolling cabinet can give you the freedom and flexibility to use your Centrifuge 5804/5804 R or 5810/5810 R wherever you need it. Use the rolling cabinet if there is not enough space on the regular lab bench or to transport and use the centrifuge in other labs. The included drawer provides extra storage space for your rotors and adapters.



## Product features

- > Rolling cabinet with closed centrifuge fits under standard 35 in lab benches
- > With 4 castors (2 lockable) for mobile yet secure standing during operation
- > With a drawer for storing and organizing adapters, rotor keys, and rotors
- > Dimensions (W x D x H): 27.5 x 24.4 x 17.7 in
- > Height with 5810 R (lid closed): 31.75 in



## Ordering information

Description	Catalog No.	List USD
Rolling Cabinet, for Centrifuge 5804/5804 R and 5810/5810 R	5821020010	\$2,550.00

# Centrifuge Packages



## Description

Whether you need a refrigerated or non-refrigerated centrifuge for low, medium or high-throughput applications, one of these packages will definitely suit your requirements.

### Cell Culture Centrifuge packages include

- > Centrifuge 5804/5804 R or 5810/5810 R
- > Swing-bucket rotor incl. buckets
- > Four adapters for 15 mL conical tubes (two sets of 2)
- > Four adapters for 50 mL conical tubes (two sets of 2)

### Centrifuge packages for round-bottom tubes include

- > Centrifuge 5810/ 5810 R
- > Swing-bucket rotor S-4-104 incl. buckets
- > Four adapters for 13 mm (5/7 mL) round bottom tubes (two sets of 2)
- > Four adapters for 16 mm (10 mL) round bottom tubes (two sets of 2)

### Eppendorf Conical Tubes 15 mL and 50 mL

The Eppendorf Conical Tubes 15 mL and 50 mL are the optimal solution for sample preparation protocols in microbiology and molecular biology laboratories. Safe design and easy handling ensure best sample processing.

### Premium USP class 6 raw material ensures

- > highest sample integrity
- > high g-Safe® centrifugation stability
- > optimal sample and pellet visibility

For more information go to chapter "Reaction tubes and plates" on pages 137-153.

**i** For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)

Centrifuge Packages	Number of vessels per adapter/rotor			
	15 mL conical	50 mL conical	13 mm tubes	16 mm tubes
5702/5702 R	2/8	1/4	4/16	4/16
5804/5804 R + Rotor A-4-44	4/16	1/4	9/36	7/28
5804/5804 R + Rotor S-4-72	8/32	4/16	14/56	13/52
5810/5810 R + Rotor A-4-62	9/36	4/16	15/60	12/48
5810/5810 R + Rotor A-4-81	12/48	5/20	25/100	16/64
5810/5810 R + Rotor S-4-104	14/56	7/28	23/92	20/80

Ordering information	5804			5804 R		
Model	Standard		Standard		20 A	
Description	Catalog No.	List USD	Catalog No.	List USD	Catalog No.	List USD
<b>Application-driven packages, (120 V; 50/60 Hz)</b>						
Cell culture package (4 x 250 mL)	022628149	\$7,880.00	022628153	\$10,450.00	N/A	
Cell culture package (4 x 100 mL)	022628135	7,160.00	022628146	9,930.00	N/A	
High-Speed 15/50 mL package (6 x 50 mL conical)	022628211	8,090.00	N/A		N/A	
13 and 16 mm BT package (4 x 250 mL)	022628048	7,880.00	022628051	10,450.00	N/A	
13 and 16 mm BT package (4 x 100 mL)	022628034	7,160.00	022628045	9,930.00	N/A	
Deepwell plate package (A-2-DWP)	022628203	7,080.00	022628225	10,650.00	N/A	
<b>Centrifuge options</b>						
with 4 x 250 mL swing-bucket rotor (S-4-72), 120 V	5804000579	7,380.00	5805000572	10,330.00	N/A	
with 4 x 100 mL swing-bucket rotor (A-4-44), 120 V	022629948	6,670.00	022629964	9,710.00	022629981	\$9,710.00
without rotor, 120 V	022622501	5,390.00	022623508	9,050.00	022625080	9,050.00

Ordering information	5810			5810 R		
Model	Standard		Standard		20 A	
Description	Catalog No.	List USD	Catalog No.	List USD	Catalog No.	List USD
<b>Application-driven packages, (120 V; 50/60 Hz)</b>						
Cell culture package (4 x 750 mL)	022628185	\$10,500.00	022628187	\$13,500.00	022628188	\$13,500.00
Cell culture package (4 x 500 mL)	022628179	9,800.00	022628180	13,050.00	022628181	13,050.00
Cell culture package (4 x 250 mL)	022628157	8,990.00	022628168	12,200.00	022628169	12,200.00
High-Speed 15/50 mL package (6 x 50 mL conical)	N/A		022628257	13,050.00	022628258	13,050.00
13 and 16 mm BT package (4 x 750 mL)	022628090	10,500.00	022628092	13,500.00	N/A	
13 and 16 mm BT package (4 x 500 mL)	022628078	9,800.00	022628089	13,050.00	N/A	
13 and 16 mm BT package (4 x 250 mL)	022628056	8,990.00	022628067	12,200.00	N/A	
<b>Centrifuge options</b>						
with 4 x 750 mL swing-bucket rotor (S-4-104), 120 V	022627110	10,035.00	022627122	13,200.00	022627133	13,200.00
with 4 x 500 mL swing-bucket rotor (A-4-81), 120 V	022627066	9,490.00	022627082	12,800.00	022627104	12,800.00
with 4 x 250 mL swing-bucket rotor (A-4-62), 120 V	022627007	8,630.00	022627023	11,900.00	022627040	11,900.00
without rotor, 120 V	022625004	6,840.00	022625501	10,550.00	022625101	10,550.00

Cell Culture package includes a centrifuge and swing-bucket rotor plus the following adapter (sets of 2) for 15 mL and 50 mL conical tubes: 5804/R with 4 x 100 mL rotor = 2 x 022637606, 2 x 022637665; 5804/R with 4 x 250 mL rotor = 2 x 5804783000, 2 x 5804784006; 5810/R with 4 x 250 mL rotor = 2 x 022638289, 2 x 022638351; 5810/R with 4 x 500 mL rotor = 2 x 022638742, 2 x 022638769; 5810/R with 4 x 750 mL rotor = 2 x 5825734009, 2 x 5825733002.

High-Speed 15/50 mL package includes the listed centrifuge and 6 x 50 mL conical fixed-angle rotor FA-45-6-30 plus 7 adapters for 15 mL conical tubes (1 x 5820718005)

13 and 16 mm BT package includes a centrifuge and swing-bucket rotor plus following adapter (sets of 2) for 13 mm and 16 mm tubes: 5804/R with 4 x 100 mL = 2 x 022637541, 2 x 022637568; 5804/R with 4 x 250 mL = 2 x 5804789008, 2 x 5804791002; 5810/R with 4 x 250 mL rotor = 2 x 022638246, 2 x 022638262; 5810/R with 4 x 500 mL rotor = 2 x 022638718, 2 x 022638721; 5810/R with 4 x 750 mL rotor = 2 x 5825738004, 2 x 5825736001.

Plate package includes the listed centrifuge and deepwell plate rotor A-2-DWP. Maximum loading height of A-2-DWP is 89 mm per bucket.

## Overview of Swing-Bucket Rotors 58xx Family



Model	Rotor S-4-104	Rotor A-4-81	Rotor A-4-62
Max. capacity	4 x 750 mL	4 x 500 mL	4 x 250 mL
5804/5804 R			
5810/5810 R			
Positioning	High-capacity swing-bucket rotor for blood, bacteria, cell culture and plate centrifugation	Medium to high capacity swing-bucket rotor for blood, bacteria, cell culture and plate centrifugation	Economic swing-bucket rotor for blood, bacteria, cell culture and plate centrifugation
Aerosol-tightness tubes/plates	yes/yes	yes/no	yes/no
Max. RCF	3,214 x g	3,220 x g	3,220 x g
Max. speed	3,900 rpm	4,000 rpm	4,000 rpm
Eppendorf Tubes® 5.0 mL and 15 mL conical	56	48	36
50 mL conical	28	20/28 <sup>1)</sup>	16
13 mm blood tube	92	100	60
16 mm blood tube	80	64	48
1.5/2.0 mL micro tube	200	96	64
MTP	16	16	16
DWP	4	4	4

<sup>1)</sup> Maximum capacity with dedicated 50 mL bucket.

## Advanced Rotor Design – Swing-Bucket Rotors



### Improved energy efficiency

The round buckets have been designed to be especially aerodynamic. The result is a more efficient design that reduces power consumption by up to 48 %.

### Longer rotor lifetime

The second rotor generation of both swing-bucket and fixed-angle rotors has been designed with a longer lifetime in mind.

### Product features

- > New Eppendorf QuickLock® caps for one-hand operation
- > Significantly improved handling, easy operation with one or two hands
- > Handle allows the closed bucket to be carried to the biosafety cabinet where it can be opened in a safe environment.
- > Aerosol-tightness has been tested and verified by Public Health England, Porton Down, UK



Rotor S-4-72 4 x 250 mL	Rotor A-4-44 4 x 100 mL	Rotor A-2-DWP-AT 2 x 6 MTP	Rotor A-2-DWP 2 x 5 MTP
■	■	■	■
Economic swing-bucket rotor for blood, bacteria, cell culture centrifugation	High-speed swing-bucket rotor for platelet poor plasma, blood, bacteria and cell culture	Aerosol-tight deepwell plate rotor for safe centrifugation of hazardous samples.	Economic deepwell plate rotor
no/no	yes/no	no/yes	no/no
3,234 × g	4,500 × g	3,486 × g	2,250 × g
4,200 rpm	5,000 rpm	4,500 rpm	3,700 rpm
32	16		
16	4/8 <sup>1)</sup>		
56	36		
52	28		
104	48	48	48
		12	10
		4	4



### Mixed bucket loading

Rotors S-4-104 and A-4-81 allow for mixed loading with 2 plate buckets and 2 round/rectangular buckets. This increases the versatility of the rotor. You can, for example, order the rotor with 4 rectangular/round buckets for tubes and, in addition, buy a set of 2 plate buckets. There is no need to buy a complete set of 4 plate buckets.

## Overview of the Main Fixed-Angle Rotors 58xx Family



Model	Rotor F-34-6-38	Rotor FA-45-6-30
Max. capacity	6 x 85 mL	6 x 50 mL
5804/5804 R	■	■
5810/5810 R	■	■
Positioning	High-speed rotor suitable for molecular applications in tubes up to 85 mL	Aerosol-tight high-speed rotor for safe centrifugation of hazardous samples
Aerosol-tightness	no	yes
Max. RCF	18,500 x g	20,130 x g
Max. speed	12,000 rpm	12,100 rpm
1.5/2.0 mL micro tube	24	
Eppendorf Tubes® 5.0 mL and 15 mL conical	6	6
50 mL conical	6	6
85 mL	6	

## Advanced Rotor Design – Fixed-Angle Rotors



### Low rotor weight

Eppendorf's fixed-angle rotors are among the lightest in the industry to improve handling and operational safety. Light-weight rotors cause less wear and tear on the motor and allow for faster acceleration and braking times.

### Eppendorf QuickLock® lids for ergonomic lid locking

Our aerosol-tight QuickLock rotors close with only ¼ of a turn. This not only saves you time during every day use, it also takes repetitive stress off your wrist.

### Superior temperature control

Aluminum, with its high heat conductivity, allows fast pre-cooling and accurate temperature control in refrigerated centrifuges.

### Product features

- > All rotors are anodized for high chemical resistance and to prevent corrosion
- > Optimized design of rotor boreholes and adapters provide optimal support for high-speed centrifugation of tubes
- > Aluminum rotors are recyclable



Rotor FA-45-20-17 20 x 5.0 mL <sup>1),2)</sup>	Rotor FA-45-48-11 48 x 1.5/2.0 mL <sup>1),2)</sup>	Rotor F-45-30-11/Rotor FA-45-30-11 30 x 1.5/2.0 mL
■	■	■
■	■	■
Applications in Eppendorf Tube 5.0 mL	Aerosol-tight microcentrifuge tube rotor for safe centrifugation of hazardous samples	Micro centrifuge tube rotor
yes	yes	no/yes
20,913 x g	19,083 x g	20,800 x g
13,100 rpm	13,000 rpm	14,000 rpm
20	48	30
20/-		

### Ordering information

Description	Catalog No.	List USD
<b>Rotor 20 x 5.0 mL (FA-45-20-17)</b> , incl. QuickLock aerosol-tight rotor lid, for 20 x Eppendorf Tubes® 5.0 mL <sup>1)</sup>	5820765003	\$1,800.00
<b>Rotor FA-45-20-17</b> , with software upgrade package <sup>2)</sup>	022639913	2,630.00
<b>Adapter</b> , for 1 vessel 1.5 – 2.0 mL, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820768002	45.00
<b>Adapter</b> , for 1 cryotube, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820769009	45.00
<b>Adapter</b> , for 1 HPLC tube, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820770007	45.00
<b>Rotor 48 x 1.5/2.0 mL (FA-45-48-11)</b> , incl. QuickLock aerosol-tight rotor lid, for 48 x 1.5/2.0 mL tubes <sup>1)</sup>	5820760001	1,800.00
<b>Rotor FA-45-48-11</b> , with software upgrade package <sup>2)</sup>	022639911	2,630.00
<b>Rotor 30 x 1.5/2.0 mL (F-45-30-11)</b> , incl. rotor lid, for 30 x 1.5/2.0 mL reaction vessels	022637002	1,210.00
<b>Rotor 30 x 1.5/2.0 mL (FA-45-30-11)</b> , incl. aerosol-tight rotor lid, for 30 x 1.5/2.0 mL reaction vessels	022637100	1,635.00

<sup>1)</sup> Please note that rotors FA-45-48-11 and FA-45-20-17 can be used for 120 V models starting with serial numbers: 5804 (≥62.247), 5804 R (≥63.063), 5810 (≥62.206), 5810 R (≥66.386). If you own a unit with an older serial number please contact Eppendorf Customer Support at 800-645-3050 to learn about your options.

<sup>2)</sup> Software upgrade package for 120 V centrifuges with serial numbers between: 5804 = 13,031–62,247, 5804 R = 33,350–63,063, 5810 = 12,949–62,206, 5810 R = 37,842–66,386. Package includes rotor, an on-site software upgrade for one 58xx centrifuge by an Eppendorf service technician plus free preventive maintenance inspection. Price includes software, travel and labor.



# Rotors for 58xx Family



Model	Rotor F-35-48-17 <sup>1)</sup>	Rotor T-60-11	Rotor F-45-48-PCR
Max. capacity		60 × 1.5/2.0 mL	6 × 5/8 PCR strips (48 × 0.2 mL)
5804/5804 R	■	■	■
5810/5810 R	■	■	■
Aerosol-tightness	no	no	no
Max. RCF	5,005 × g	16,400 × g	15,350 × g
Max. speed	5,500 rpm	14,000 rpm	12,000 rpm
1.5/2.0 mL micro tube			
Eppendorf Tubes® 5.0 mL and 15 mL conical	40 <sup>2)</sup> /40	60	

<sup>1)</sup> Please note that a software upgrade will be necessary for older centrifuges when using this rotor. Please contact your local Eppendorf organization or dealer for further information. <sup>2)</sup> Using 5 mL insert.

## Ordering information

Description	Catalog No.	List USD
<b>Rotor 48 × 15 mL (F-35-48-17)</b> , for 24 × 15 mL conical tubes, incl. 24 steel sleeves and adapters	5820771003	\$ 970.00
<b>Rotor 48 × 15 mL (F-35-48-17)</b> , for 40 × 15 mL conical tubes, incl. 48 steel sleeves and adapters	5820772000	1,545.00
<b>Rotor F-35-48-17</b> , with software upgrade package <sup>2)</sup>	022639909	1,910.00
<b>Rotor 60 × 1.5/2.0 mL (T-60-11)</b> , incl. rotor lid, for 1.5/2.0 mL tubes, without adapter	022638505	2,870.00
<b>Adapter, for 10 reaction vessels 1.5/2.0 mL</b> , for Rotor T-60-11, set of 6 pcs.	022638521	508.00
<b>Adapter, for 20 reaction vessels 0.4 mL</b> , for Rotor T-60-11, set of 6 pcs.	022638548	508.00
<b>Rotor 8 × PCR Strips (F-45-48-PCR)</b> , for 6 × 8, 6 × 5 PCR tube strips, 48 × 0.2 mL individual PCR tubes	022638581	2,130.00

<sup>1)</sup> Please note that rotors FA-45-48-11 and FA-45-20-17 can be used for 120 V models starting with serial numbers: 5804 (≥62.247), 5804 R (≥63.063), 5810 (≥62.206), 5810 R (≥66.386). If you own a unit with an older serial number please contact Eppendorf Customer Support at 800-645-3050 to learn about your options.

<sup>2)</sup> Software upgrade package for 120 V centrifuges with serial numbers between: 5804 = 13,031–62,247, 5804 R = 33,350–63,063, 5810 = 12,949–62,206, 5810 R = 37,842–66,386. Package includes rotor, an on-site software upgrade for one 58xx centrifuge by an Eppendorf service technician plus free preventive maintenance inspection. Price includes software, travel and labor.



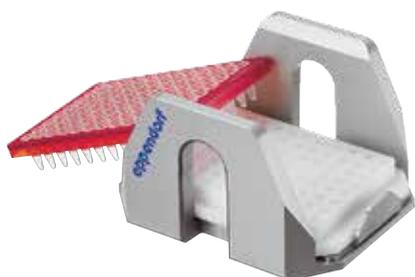
## 2 x Deepwell plate aerosol-tight rotor (A-2-DWP-AT) (Catalog No. 5820710004)

- > For use in Centrifuge 5810/5810 R only<sup>1)</sup>
- > Max. speed: 3,486 × g (4,500 rpm)
- > Rotor can handle up to 2 × 6 MTP, 2 × 2 DWP, 2 × 1 Filtration plate kits
- > Maximum loading height of 67 mm (89 mm without lid)
- > Rotor comes with aerosol-tight caps<sup>2)</sup> for safe centrifugation of hazardous samples
- > Rotor and buckets are autoclavable (121 °C, 20 min)

## Ordering information

Description	Catalog No.	List USD
<b>Rotor A-2-DWP-AT</b> , incl. 2 buckets, 2 aerosol-tight caps and 2 plate carriers	5820710004	\$2,860.00
<b>Rotor A-2-DWP-AT</b> , with software upgrade package <sup>3)</sup>	022639901	3,700.00
<b>Aerosol-tight lids</b> , for rotor A-2-DWP-AT, set of 2	5820713003	330.00
<b>Plate carrier</b> , set of 2	5820712007	288.00
<b>Spare buckets</b> , for A-2-DWP-AT, set of 2	5820711000	1,380.00
<b>Spare seals</b> , for aerosol-tight plate rotor lids, set of 2	5820705000	72.00

<sup>1)</sup> A software upgrade may be necessary for model between serial numbers 10,000 (5804/5804 R/5810) / 12,000 (5810 R) and 60,000. Please contact your local Eppendorf representative or Eppendorf Customer Support at 800-645-3050 for more information. <sup>2)</sup> Aerosol-tightness tested by the Centre for Applied Microbiology and Research, CAMR, Porton Down, Great Britain. <sup>3)</sup> Software upgrade package includes an on-site software upgrade for one 58xx centrifuge by an Eppendorf service technician plus free preventive maintenance inspection. Price includes software, travel and labor.



### PCR adapter

- > PCR plate adapters are designed to support thin-walled PCR plate wells during centrifugation
- > Available for 96-well and 384-well PCR plates
- > Adapters can be used in all Eppendorf plate rotors



### Cell culture flask adapter

- > Adapter to spin down cell cultures directly in a cell culture flask
- > Suitable for 25 cm<sup>2</sup> and selective 75 cm<sup>2</sup> flasks (please ask for details)
- > Adapters can be used in Eppendorf plate rotor A-4-81-MTP/Flex



### IsoRack adapter

- > IsoRack adapters to support 0.5 mL and 1.5/2.0 mL IsoRacks during centrifugation
- > Adapters can be used in Eppendorf plate rotors A-2-DWP and A-4-81-MTP/Flex

#### Ordering information

Description	Catalog No.	List USD
Adapter, for 1 cell culture flask, for Rotors A-4-81-MTP/Flex	5825719000	\$191.00
Adapter, for 1 PCR plate (96 wells) PCR plate 96 wells, for plate rotors, set of 2 pcs.	022638947	191.00
Adapter, for 1 PCR plate (384 wells) PCR plate 384 wells, for plate rotors, set of 2 pcs.	022638955	191.00
CombiSlide Adapter, for 12 slides, for plate rotors, set of 2 pcs.	022638963	275.00
Adapter, for 24 vessels in the IsoRack 0.5 mL, for Rotors S-4-104, A-4-81-MTP/Flex, A-2-DWP, set of 2 pcs.	022638980	191.00
Adapter, for 24 vessels in the IsoRack 1.5/2.0 mL, for Rotors S-4-104, A-4-81-MTP/Flex, A-2-DWP, set of 2 pcs.	022638998	191.00



### 2 x Deepwell plate rotor (A-2-DWP) (Catalog No. 022638564)

- > For use in Centrifuge 5804/5804 R and 5810/5810 R<sup>1)</sup>
- > Max. speed: 2,250 × g (3,700 rpm)
- > Rotor can handle up to, 2 × 5 MTP, 2 × 4 Cell culture plates, 2 × 2 DWP, 2 × 1 Filtration plate kits
- > Maximum loading height of 89 mm
- > Rotor and buckets are autoclavable (121 °C, 20 min)

#### Ordering information

Description	Catalog No.	List USD
Rotor A-2-DWP, deepwell plate rotor incl. 2 buckets	022638564	\$2,100.00
Spare buckets, for A-2-DWP, set of 2	022638556	787.00
Spare rubber base plate, for A-2-DWP buckets, set of 2	022638599	68.50

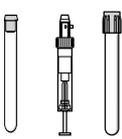
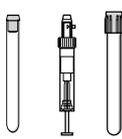
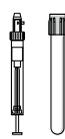
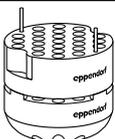
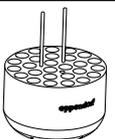
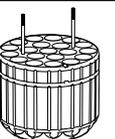
<sup>1)</sup> Rotor A-2-DWP can be used for all 120 V models starting with the following serial numbers: 5804 (≥1410), 5804R (≥1820), 5810 (≥990), 5810R (≥2949). If you own a unit with an older serial number please contact Eppendorf Customer Support at 800-645-3050 to learn about your options.

# Rotors for 58xx Family



## Rotor 4 x 750 mL (S-4-104)

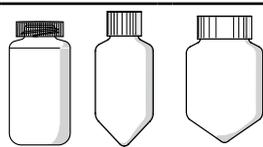
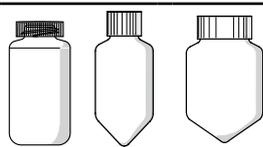
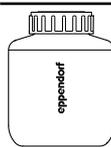
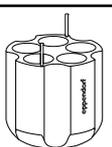
- > High capacity swing-bucket rotor with max. speed  $3,214 \times g$  (3,900 rpm)<sup>1)</sup>
- > Broad range of adapters enables high versatility for tubes and bottles from 0.2 mL to 750 mL and plates
- > Aerodynamic round bucket design for up to 36 % energy savings compared to Rotor A-4-81
- > Mixed loading with 2 plate buckets and 2 round tube buckets allows for increased versatility
- > Aerosol-tight QuickLock caps for safe centrifugation of hazardous samples optionally available<sup>2)</sup>
- > Buckets, lids and adapters are autoclavable (121 °C, 20 min)
- > Rotor lifetime: 100,000 cycle

						
<b>Adapters for Rotor S-4-104</b>						
<b>Tube Volume</b>	1.5/2.0 mL	12 x 75 mm, 5 mL FACS	2.6 – 8 mL	5.5 – 12 mL	9 mL	14 mL
<b>Max. tube diameter</b>	11 mm	12 mm	13 mm	16 mm	17.5 mm	17.5 mm
<b>Max. vessel height</b>	39 mm	111 mm	115 mm	119 mm (130 mm in 2 inner rows)	111 mm (130 mm in 2 inner rows)	117 mm
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>	39 mm	100 mm	108 mm	114 mm	106 mm	112 mm
<b>Adapter</b>						
<b>Number of vessels per adapter/ rotor</b>	50/200	27/108	23/92	20/80	20/80	14/56
<b>Bottom shape</b>	flat	round	round	round	round	round
<b>Centrifugation radius</b>	188 mm	175 mm	179 mm	180 mm	179 mm	185 mm
<b>Max. RCF</b>	3,197 x g	2,976 x g	3,044 x g	3,061 x g	3,044 x g	3,146 x g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.			
<b>Catalog No.</b>	5825740009	5825747003	5825738004	5825736001	5825743008	5825748000
<b>List USD</b>	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.  
<sup>2)</sup> Aerosol-tightness tested by Health Protection Agency, Porton Down, UK. <sup>3)</sup> Please note that these conical bottles need to be used together with a conical form insert provided by the manufacturer. <sup>4)</sup> Available as a set of 2 bottles (see ordering information). <sup>5)</sup> Please note that rotor S-4-104 can be used for 120 V models starting with serial numbers: 5810 (≥62.206), 5810 R (≥66.386). If you own a unit with an older serial number please contact Eppendorf Customer Support at 800-645-3050 to learn about your options. <sup>6)</sup> Software upgrade package for 120 V centrifuges with serial numbers between: 5810 = 12,949–62,206, 5810 R = 37,842–66,386. Package includes rotor 5820740000, an on-site software upgrade for one 58xx centrifuge by an Eppendorf service technician plus free preventive maintenance inspection. Price includes software, travel and labor. <sup>7)</sup> The following 250 mL conical bottle will fit in the rotor: Nunc 376814.

## Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4-104<sup>5)</sup></b>		
incl. 4 x 750 mL round buckets	5820740000	\$3,720.00
incl. 4 plate buckets (aerosol-tight, capable) without buckets	5820754001	3,770.00
	5820755008	2,050.00
with software upgrade package <sup>6)</sup>	022639905	4,620.00
<b>Plate bucket (aerosol-tight capable),</b> for Rotor S-4-104, incl. plate carrier, set of 2 pcs.	022638930	985.00
<b>Plate bucket (aerosol-tight capable),</b> for Rotor S-4-104, incl. plate carrier, set of 4 pcs.	022638935	1,910.00
<b>Spare plate carrier</b>	5820756004	311.00
<b>Round bucket 750 mL,</b> for Rotor S-4-104, set of 2 pcs.	5820742003	985.00
<b>Round bucket 750 mL,</b> for Rotor S-4-104, set of 4 pcs.	5820741007	1,910.00
<b>Aerosol-tight caps for plate buckets (aerosol-tight capable),</b> for Rotor S-4-104 and Rotor S-4x750, set of 2 pieces	022638937	302.00
<b>Aerosol-tight caps for 750 mL round buckets,</b> for Rotor S-4-104, Rotor S-4x750 and Rotor S-4x1000, set of 2 pieces	5820747005	268.00
<b>Wide-neck bottle, 750 mL,</b> set of 2 pieces	5820708000	291.00

							
Eppendorf Tubes® 5.0 mL and 15 mL conical	30 mL, 50 mL conical	50 mL conical	50 mL conical, skirted	250 mL flat, 175 – 225/ 250 mL conical <small>3) 7)</small>	500 mL Corning®	Eppendorf Bottle 750 mL <sup>4)</sup>	MTP, DWP, PCR plates
17 mm	25 mm	31 mm	31 mm	62 mm	98 mm	104 mm	–
125 mm	111 mm	122 mm	120 mm	145 mm	150 mm	140 mm	60 mm
120 mm	106 mm	116 mm	116 mm	125 mm	–	–	45 mm
							
14/56	8/32	7/28	5/20	1/4	1/4	1/4	4/16 (MTP) 1/4 (DWP)
conical	flat	conical	conical	flat	conical	flat	flat
188 mm	174 mm	187 mm	178 mm	183 mm	187 mm	185 mm	151 mm
3,197 x g	2,958 x g	3,180 x g	3,027 x g	3,112 x g	3,146 x g	3,146 x g	2,568 x g
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.					
5825734009	5825755006	5825733002	5825732006	5825741005	5825745000	5825744004	022638930
\$311.00	\$310.00	\$311.00	\$311.00	\$311.00	\$311.00	\$192.00	\$985.00

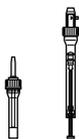
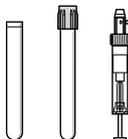
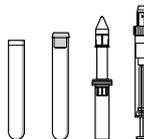
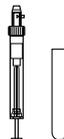
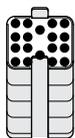
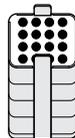
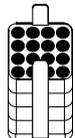


# Rotors for 58xx Family



## Rotor 4 x 500 mL (A-4-81)

- > Swing-bucket rotor with max. speed 3,220 x g (4,000 rpm)<sup>1)</sup>
- > Rotor A-4-81 accommodates tubes and bottles from 0.2 mL to 500 mL as well as plates
- > Aerosol-tight caps<sup>2)</sup> for safe centrifugation of hazardous samples optionally available
- > Mixed loading with 2 plate buckets and 2 rectangular tube buckets allows for increased versatility
- > Buckets, caps and adapters are autoclavable (121 °C, 20 min)
- > Rotor lifetime: 100,000 cycles

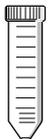
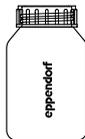
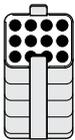
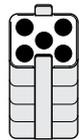
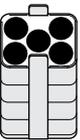
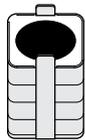
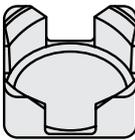
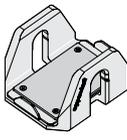
						
<b>Adapters for Rotor A-4-81</b>						
<b>Tube Volume</b>	1.5/2.0 mL	1.2 – 5 mL	2.5 – 5 mL	2.6 – 7 mL	3 – 15 mL	7 – 17 mL
<b>Max. tube diameter</b>	11 mm	11 mm	13 mm	13 mm	16 mm	17.5 mm
<b>Max. vessel height</b>	43 mm	118 mm	118 mm	118 mm	118 mm (130 mm in 2 inner rows)	118 mm (130 mm in 2 inner rows)
<b>Max. vessel height for use with cap/lid<sup>3)</sup></b>	43 mm	108 mm	107 mm	108 mm	108 mm	118 mm
<b>Adapter</b>						
<b>Number of vessels per adapter/ rotor</b>	20/80	20/80	25/100	18/72	16/64	16/64
<b>Bottom shape</b>	flat	flat	flat with rubber mat	flat with rubber mat	flat with rubber mat	flat with rubber mat
<b>Centrifugation radius</b>	165 mm	168 mm	168 mm	168 mm	168 mm	168 mm
<b>Max. RCF</b>	2,950 x g	3,000 x g	3,000 x g	3,000 x g	3,000 x g	3,000 x g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.			
<b>Catalog No.</b>	022638704	022638707	022638700	022638718	022638721	022638726
<b>List USD</b>	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.

<sup>2)</sup> Aerosol-tightness tested by Health Protection Agency, Porton Down, UK. <sup>3)</sup> Only Centrifrep® tube without locking lid. <sup>4)</sup> Please note that these conical flasks need to be used together with a conical form insert provided by the flask manufacturer. <sup>5)</sup> Available as a set of 2 flasks (see ordering information). <sup>6)</sup> Aerosol-tight caps can be used for BD Falcon® 225 mL and Nunc® 200 mL conical tubes if rubber mat, base plate and clamp are removed from the adapter. Remove rubber mat for aerosol-tight centrifugation of Nalgene® 175 mL conical tube. <sup>7)</sup> Insert 022654373 recommended for use with 50 mL conical-skirted tubes. Set of 8. <sup>8)</sup> Set of 4. <sup>9)</sup> Please note that rotor A-4-81 can be used for 120 V models starting with serial numbers: 5810 (≥2186), 5810 R (≥6203). If you own a unit with an older serial number please contact Eppendorf Customer Support at 800-645-3050 to learn about your options.

## Ordering information

Description	Catalog No.	List USD
<b>Rotor A-4-81<sup>9)</sup></b>		
incl. 4 x 500 mL rectangular bucket	022638602	\$3,280.00
incl. 7 x 50 mL conical buckets	022638607	3,330.00
incl. 4 MTP/Flex buckets	022638807	3,910.00
without buckets	022638611	1,820.00
<b>Bucket for 7 x 50 mL conical tubes</b> , for Rotor A-4-81, set of 4	022638614	1,500.00
<b>MTP/Flex bucket</b> , for Rotor A-4-81, set of 2	022638866	1,030.00
<b>MTP/Flex bucket</b> , for Rotor A-4-81, set of 4	022638840	2,060.00
<b>Bucket 500 mL rectangular</b> , for Rotor A-4-81, set of 4	022638629	1,500.00
<b>Aerosol-tight cap for 500 mL rectangular buckets</b> , for Rotor A-4-81, set of 2 pieces	022638661	268.00
<b>500 mL bottle</b> , wide-neck, for Rotor A-4-81, square, set of 2 pieces	022638657	291.00
<b>400 mL bottle</b> , wide-neck, for Rotor A-4-81, set of 2 pieces	022638653	291.00

							
Eppendorf Tubes <sup>®</sup> 5.0 mL and 15 mL conical tubes	50 mL conical	50 mL conical	conical tubes, skirted <sup>7)</sup> Centriprep Centrifugal Filter Units <sup>3)</sup>	180 – 250 mL flat/ 175 – 225 mL conical <sup>4)</sup>	400 mL <sup>5)</sup>	500 mL <sup>5)</sup>	MTP, DWP
17.5 mm 121 mm	31 mm 122 mm	31 mm 122 mm	31/29 mm 121 mm	62 mm 133 mm	81 mm –	83 mm 135 mm	– 60 mm
119 mm	116 mm	–	116 mm	130 mm <sup>6)</sup>	–	135 mm	–
							
12/48	5/20	7/28	5/20	1/4	1/4	–/4	4/16 (MTP) 1/4 (DWP)
conical	conical	conical	flat with rubber mat	flat with rubber mat	flat, rubber	flat	flat with rubber mat
173 mm 3,100 x g set of 2 pcs. 022638742 \$311.00	173 mm 3,100 x g set of 2 pcs. 022638769 \$311.00	180 mm 3,220 x g set of 4 pcs. 022638614 <sup>8)</sup> \$1,500.00	173 mm 3,100 x g set of 2 pcs. 022638904 \$311.00	173 mm 3,100 x g set of 2 pcs. 022638921 \$311.00	180 mm 3,220 x g set of 2 pcs. 022638785 \$311.00	180 mm 3,220 x g – –	163 mm 2,900 x g set of 2 pcs. 022638866 \$1,030.00

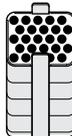
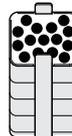
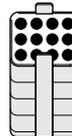
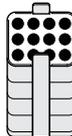
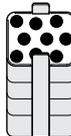
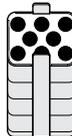


# Rotors for 58xx Family



## Rotor 4 x 250 mL (A-4-62)

- > Swing-bucket rotor with max. speed 3,220 × g (4,000 rpm)<sup>1)</sup>
- > Rotor A-4-62 accommodates tubes and bottles from 0.2 mL to 250 mL as well as plates
- > Aerosol-tight caps<sup>2)</sup> for safe centrifugation of hazardous samples optionally available
- > Rotor, buckets, caps and adapters are autoclavable (121 °C, 20 min)
- > Rotor lifetime: 40,000 cycles

							
<b>Adapters for Rotor A-4-62</b>							
<b>Tube Volume</b>	1.5 – 2.0 mL, 1.2 – 5 mL, 2.6 – 7 mL, 3 – 15 mL, 7 – 17 mL	1.2 – 5 mL	2.6 – 7 mL	3 – 15 mL	7 – 17 mL	Eppendorf Tubes® 5.0 mL and 15 mL conical	7 – 18 mL <sup>3)</sup>
<b>Max. tube diameter</b>	11 mm	11 mm	13 mm	16 mm	17.5 mm	17.5 mm	20 mm
<b>Max. vessel height</b>	43 mm	123 mm	121 mm	121 mm (130 in 2 inner rows)	118 mm (130 in 2 inner rows)	127 mm	126 mm
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>	43 mm	115 mm	118 mm	116 mm (130 in 2 inner rows)	114 mm (130 in 2 inner rows)	121 mm	119 mm
<b>Adapter</b>							
<b>Number of vessels per adapter/rotor</b>	16/64	25/100	15/60	12/48	12/48	9/36	8/32
<b>Bottom shape</b>	flat	flat with rubber mat	flat with rubber mat	flat with rubber mat	flat with rubber mat	conical	flat with rubber mat
<b>Centrifugation radius</b>	171 mm	173 mm	173 mm	173 mm	173 mm	178 mm	173 mm
<b>Max. RCF</b>	3,000 × g	3,050 × g	3,050 × g	3,050 × g	3,050 × g	3,150 × g	3,050 × g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.				
<b>Catalog No.</b>	022638220	022638203	022638246	022638262	022638301	022638289	022638327
<b>List USD</b>	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.

<sup>2)</sup> Aerosol-tightness tested by the Centre for Health Protection Agency, Porton Down, UK. <sup>3)</sup> For high g-forces we recommend using centrifuge tubes of Duran® glass. <sup>4)</sup> Please note that these conical flasks need to be used together with a conical form insert provided by the manufacturer. <sup>5)</sup> Aerosol-tight caps can be used for BD Falcon® 225 mL and Nunc® 200 mL conical tubes if rubber mat is removed from the adapter. Aerosol-tight centrifugation is not possible with Nalgene® 175 mL conical tube due to the size of the tube lid. <sup>6)</sup> Insert 022654373 recommended for use with 50 mL conical-skirted tubes. Set of 8. <sup>7)</sup> Form inserts for 50 mL conical tubes included in delivery. Reorder Catalog No. 022637479. Set of 8.



## Ordering information

Description	Catalog No.	List USD
<b>Rotor A-4-62</b>		
incl. 4 x 250 mL rectangular buckets	022638009	\$2,360.00
incl. 4 MTP buckets	022638041	2,840.00
<b>Rectangular bucket 250 mL</b> , for Rotor A-4-62, 4 pieces	022638084	1,550.00
<b>MTP bucket</b> , for Rotor A-4-62-MTP, for 4 MTP or 1 DWP, set of 4	022638068	1,460.00
<b>Aerosol-tight cap</b> , for rectangular bucket 250 mL, 2 pieces	022638033	175.00
<b>Spare rubber mat</b> , for 250 mL bucket adapter, set of 4	022638483	24.50
<b>Spare adapter clamp</b> , for 250 mL bucket adapter, set of 2	022638467	24.50
<b>Spare rubber base mat</b> , for MTP bucket, set of 2	022638106	66.80

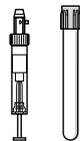
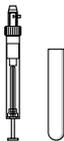
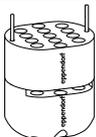
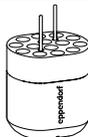
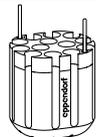
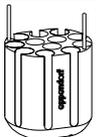
18 – 30 mL, 30 – 50 mL	30 – 50 mL round- bottom/50 mL conical, skirted <sup>6)</sup>	50 mL conical <sup>7)</sup>	50 mL conical	50 – 75 mL, 80 – 120 mL, 200 – 250 mL	80 – 120 mL	200 – 250 mL flat/175 – 225 mL conical <sup>4)</sup>	MTP, DWP, PCR plates
26 mm	–	31 mm	31 mm	35 mm	45 mm	62 mm	–
119 mm	115 mm	122 mm	122 mm	122 mm	138 mm	136 mm	53 mm
116 mm	113 mm	–	116 mm	118 mm	125 mm	127 mm <sup>5)</sup>	–
4/16	4/16	4/16	3/12	2/8	1/4	1/4	4/16 (MTP) 1/4 (DWP)
flat with rubber mat	flat with rubber mat	flat with conical inlay	conical	flat with rubber mat	flat with rubber mat	flat with rubber mat	flat with rubber mat
173 mm	173 mm	173 mm	178 mm	173 mm	173 mm	180 mm	154 mm
3,050 × g	3,050 × g	3,050 × g	3,150 × g	3,050 × g	3,050 × g	3,220 × g	2,750 × g
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 4 pcs.
022638360	022638386	022638351	022638343	022638408	022638424	022638441	022638068
\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$1,460.00

# Rotors for 58xx Family



## Rotor 4 x 250 mL (S-4-72)

- > Medium capacity swing-bucket rotor with speed up to  $3,234 \times g$  (4,200 rpm)<sup>1)</sup>
- > Broad range of adapters available to handle all common tube formats from 0.2 mL to 250 mL
- > Aerodynamic round bucket design for up to 48 % energy savings compared to Rotor A-4-62
- > Buckets and adapters are autoclavable (121 °C, 20 min)
- > Rotor lifetime: 60,000 cycles

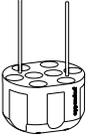
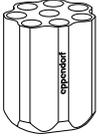
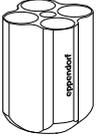
				
<b>Adapters for Rotor S-4-72</b>				
<b>Tube Volume</b>	1.5/2.0 mL	2.6 – 8 mL	5.5 – 12 mL	9 mL
<b>Max. tube diameter</b>	11 mm	13 mm	16 mm	17.5 mm
<b>Max. vessel height</b>	43 mm	115 mm	112 mm	113 mm
<b>Adapter</b>				
<b>Number of vessels per adapter/rotor</b>	26/104	14/56	13/52	12/48
<b>Bottom shape</b>	flat	round	round	round
<b>Centrifugation radius</b>	159 mm	159 mm	157 mm	158 mm
<b>Max. RCF</b>	$3,136 \times g$	$3,136 \times g$	$3,096 \times g$	$3,116 \times g$
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
<b>Catalog No.</b>	5804794001	5804789008	5804791002	5804792009
<b>List USD</b>	\$290.00	\$290.00	\$290.00	\$290.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. <sup>2)</sup> Please note that these conical flasks need to be used together with a conical form insert provided by the flask manufacturer. <sup>3)</sup> Please note that rotor S-4-72 can be used for 120 V models starting with serial numbers: 5804 (≥62.247), 5804 R (≥63.063), 5810 (≥62.206), 5810 R (≥66.386). If you own a unit with an older serial number please contact Eppendorf Customer Support at 800-645-3050 to learn about your options. <sup>4)</sup> Software upgrade package for 120 V centrifuges with serial numbers between: 5804 = 13,031–62,247, 5804 R = 33,350–63,063, 5810 = 12,949–62,206, 5810 R = 37,842–66,386. Package includes rotor 5804746007, an on-site software upgrade for one 58xx centrifuge by an Eppendorf service technician plus free preventive maintenance inspection. Price includes software, travel and labor. <sup>5)</sup> For Eppendorf Tubes® 5.0 mL with screw cap the capacity is limited to 6 tubes per adapter.



## Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4-72<sup>3)</sup></b> , incl. 4 × 250 mL round buckets	5804746007	\$2,350.00
<b>Rotor S-4-72</b> , with software upgrade package <sup>4)</sup>	022639907	3,210.00

				
Eppendorf Tubes® 5.0 mL	15 mL conical	50 mL conical	50 mL conical, skirted	250 mL flat/175 mL Falcon <sup>2)</sup>
17 mm	17 mm	31 mm	31 mm	62 mm
60 mm	120 mm	120 mm	120 mm	130 mm
				
8/32 <sup>5)</sup>	8/32	4/16	2/8	1/4
conical	conical	conical	conical	flat
163 mm	164 mm	164 mm	153 mm	160 mm
3,215 × g	3,234 × g	3,234 × g	3,017 × g	3,175 × g
set of 2 pcs.	set of 2 pcs.			
5804793005	5804783000	5804784006	5804785002	5804787005
\$290.00	\$290.00	\$290.00	\$290.00	\$290.00



# Rotors for 58xx Family



## Rotor 4 x 100 mL (A-4-44)

- > High-speed swing-bucket rotor for applications up to 4,500 × g (5,000 rpm)<sup>1)</sup>
- > Rotor A-4-44 accommodates tubes from 0.2 mL to 100 mL
- > Aerosol-tight caps<sup>2)</sup> for safe centrifugation of hazardous samples optionally available
- > Rotor, buckets, caps and adapters are autoclavable (121 °C, 20 min)
- > Rotor lifetime: 34,000 cycles

<b>Adapters for Rotor A-4-44</b>							
<b>Tube Volume</b>	1.5 – 2.0 mL	1.2 – 5 mL	2.6 – 7 mL	3 – 15 mL	7 – 17 mL	Eppendorf Tubes® 5.0 mL and 15 mL conical	15 mL conical
<b>Max. tube diameter</b>	11 mm	11 mm	13 mm	16 mm	17.5 mm	17.5 mm	17.5 mm
<b>Max. vessel height</b>	43 mm	105 mm	108 mm	108 mm	110 mm	121 mm	121 mm
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>	43 mm	102 mm	106 mm	106 mm	106 mm	–	121 mm
<b>Adapter</b>							
<b>Number of vessels per adapter/rotor</b>	12/48	14/56	9/36	7/28	6/24	4/16	2/8
<b>Bottom shape</b>	flat	flat with rubber mat	conical	conical			
<b>Centrifugation radius</b>	148 mm	150 mm	150 mm	150 mm	150 mm	155 mm	157 mm
<b>Max. RCF</b>	4,100 × g	4,200 × g	4,200 × g	4,200 × g	4,200 × g	4,300 × g	4,400 × g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
<b>Catalog No.</b>	0226375253	022637509	022637541	022637568	022637584	022637606	022637614
<b>List USD</b>	N/A	\$259.00	\$258.00	\$258.00	\$258.00	\$258.00	\$258.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.  
<sup>2)</sup> Aerosol-tightness tested by Health Protection Agency, Porton Down, UK. <sup>3)</sup> For high g-forces we recommend using centrifuge tubes of Duran® glass. <sup>4)</sup> Max. load per bucket: 140 grams. <sup>5)</sup> Reordering of 50 mL form inserts: 022637479. Set of 8. <sup>6)</sup> Form inserts for 50 mL conical tubes included in delivery. Reorder Catalog No. 022637479. Set of 8.



## Ordering information

Description	Catalog No.	List USD
<b>Rotor A-4-44</b>		
incl. 4 rectangular buckets 100 mL	022637401	\$1,720.00
incl. 4 buckets for 2 × 50 mL conical tubes	022637461	2,440.00
<b>Bucket for 2 × 50 mL conical tubes</b> , for Rotor A-4-44, set of 4	022637452	1,140.00
<b>Rectangular bucket 100 mL</b> , for Rotor A-4-44, set of 4	022637436	1,360.00
<b>Aerosol-tight cap</b> , for rectangular bucket 100 mL, 2 pieces	022637428	148.00
<b>Insert</b> , for 1 conical tube 50 mL, set of 8 pieces	022637479	80.00
<b>Spare rubber mat</b> , for 100 mL bucket adapter, set of 4	022662503	24.50
<b>Spare adapter clamp</b> , for 100 mL bucket adapter, set of 2	022662511	24.50

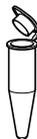
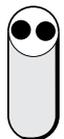
7 – 18 mL <sup>3)</sup>	18 – 30 mL <sup>3)</sup>	50 mL conical <sup>4) 5)</sup>	50 mL conical	50 mL conical, 30 – 50 mL	30 – 50 mL round- bottom <sup>3)</sup> /50 mL conical, skirted <sup>6)</sup>	50 – 75 mL <sup>3)</sup>	80 – 100 mL <sup>3)</sup>
20 mm	26 mm	-	31 mm	31 mm	31 mm	35 mm	45 mm
107 mm	110 mm	120 mm	122 mm	122 mm	122 mm	119 mm	114 mm
104 mm	100 mm	-	-	119 mm	108 mm	108 mm	100 mm
4/16	2/8	-/8	1/4	1/4	1/4	1/4	1/4
flat with rubber mat	flat with rubber mat	flat with conical inlay	conical	conical	flat with rubber mat	flat with rubber mat	flat with rubber mat
150 mm	150 mm	161 mm	155 mm	157 mm	150 mm	150 mm	150 mm
4,200 × g	4,200 × g	4,500 × g	4,300 × g	4,400 × g	4,200 × g	4,200 × g	4,200 × g
set of 2 pcs.	set of 2 pcs.	set of 4 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
022637622	022637649	022637452	022637665	022637673	022637681	022637703	022637720
\$258.00	\$258.00	\$1,140.00	\$258.00	\$258.00	\$258.00	\$258.00	\$258.00

# Rotors for 58xx Family



## Rotor 6 x 100 mL (F-34-6-38)

- > High-speed rotor for molecular applications in tubes from 0.2 mL to 100 mL
- > Max. speed: 18,500 × g (12,000 rpm) in Centrifuge 5810 R or 15,500 × g (11,000 rpm) in 5804/5804 R/5810<sup>1)</sup>
- > Low rotor weight (7.0 lb) for easy handling
- > 34° borehole angle reduces pellet smears along tube wall
- > Anodized aluminum for high chemical resistance
- > Rotor, lid and adapters are autoclavable (121 °C, 20 min)
- > Rotor lifetime: 75,000 cycles

					
<b>Adapters for Rotor F-34-6-38</b>					
<b>Tube Volume</b>	1.5 – 2.0 mL	2.6 – 7 mL	2.6 – 7 mL	7 – 15 mL	Eppendorf Tubes® 5.0 mL
<b>Max. tube diameter</b>	11 mm	13 mm	13 mm	16 mm	17 mm
<b>Max. vessel height for use with cap/lid</b>	110 mm	90 mm	110 mm	112 mm	104 mm
<b>Adapter</b>					
<b>Number of vessels per adapter/rotor</b>	4/24	3/18	3/18	2/12	1/6
<b>Bottom shape</b>	round	flat	flat	round	conical
<b>Centrifugation radius</b>	113 mm	106 mm	114 mm	112 mm	105 mm
<b>Max. RCF at 12,100 rpm (5810 R)</b>	18,200 × g	17,065 × g	18,353 × g	18,000 × g	16,824 × g
<b>Max. RCF at 11,000 rpm (5804, 5804 R, 5810)</b>	15,300 × g	14,339 × g	15,422 × g	15,150 × g	14,150 × g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.			
<b>Catalog No.</b>	022637215	022637279	022637282	022637223	5804777000
<b>List USD</b>	\$171.00	\$171.00	\$171.00	\$171.00	\$166.00

<sup>1)</sup> Rotors F-34-6-38 and FA-45-6-30 maintain 4 °C at 11,000 rpm. <sup>2)</sup> Nominal tube volume as published by the tube manufacturer.

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)

Product appearance, specifications, and/or prices are subject to change without notice.



## Ordering information

Description	Catalog No.	List USD
Rotor F-34-6-38, for 6 × 85–100 mL tubes, incl. rotor lid	022637207	\$2,580.00

					
15 mL conical	15 – 18 mL	20 – 30 mL	50 mL	50 mL conical	85 mL -100 mL <sup>2)</sup>
17 mm	18 mm	26 mm	29 mm	31 mm	38 mm
123 mm	123 mm	123 mm	123 mm	121 mm	121 mm
					
1/6	1/6	1/6	1/6	1/6	-/6
conical	round	round	round	conical	round
107 mm	109 mm	110 mm	112 mm	108 mm	115 mm
17,200 × g	17,550 × g	17,700 × g	18,000 × g	17,400 × g	18,500 × g
14,450 × g	14,750 × g	14,900 × g	15,150 × g	14,600 × g	15,500 × g
set of 2 pcs.					
022637274	022637231	022637240	022637258	022637266	-
\$171.00	\$171.00	\$171.00	\$171.00	\$171.00	-



# Rotors for 58xx Family



## Rotor 6 x 50 mL (FA-45-6-30)

- > High-speed rotor for applications in tubes from 5 – 50 mL
- > Max. speed 20,130 × g (12,100 rpm) in Centrifuge 5810 R or 16,639 × g (11,000 rpm) in 5804/5804 R/5810<sup>1) 2)</sup>
- > Eppendorf QuickLock rotor lid for fast lid locking
- > Aerosol-tight<sup>3)</sup> for safe centrifugation of hazardous samples
- > Low rotor weight (7.0 lb) for easy lifting
- > Anodized aluminum for high chemical resistance
- > 45° borehole angle minimizes pellets smear
- > Rotor, lid and adapters are autoclavable (121 °C, 20 min)

### Ordering information

Description	Catalog No.	List USD
Rotor FA-45-6-30 <sup>4)</sup> , incl. rotor lid, for 6 × 15/50 mL conical tubes	5820715006	\$2,640.00
Rotor FA-45-6-30, with software upgrade package <sup>5)</sup>	022639903	3,480.00
Rotor lid, for rotor FA-45-6-30	5820716002	288.00
Spare seals for rotor lid, pack of 5	022652109	149.00

<b>Adapters for Rotor FA-45-6-30</b>					
<b>Tube Volume</b>	2.6 – 5 mL	4 – 8 mL	5.5 – 10 mL	7.5 – 12 mL	Eppendorf Tubes® 5.0 mL
<b>Max. tube diameter</b>	13 mm	13 mm	16 mm	16 mm	17 mm
<b>Max. vessel height for use with cap/lid</b>	119 mm	119 mm	119 mm	119 mm	121 mm
<b>Adapter</b>					
<b>Number of vessels per adapter/rotor</b>	1/6	1/6	1/6	1/6	1/6 <sup>6)</sup>
<b>Bottom shape</b>	round	round	round	round	conical
<b>Centrifugation radius</b>	120 mm	120 mm	120 mm	120 mm	121 mm
<b>Max. RCF at 12,100 rpm (5810 R)</b>	19,246 × g	19,246 × g	19,246 × g	19,246 × g	19,806 × g
<b>Max. RCF at 11,000 rpm (5804, 5804 R, 5810)</b>	16,233 × g	16,233 × g	16,233 × g	16,233 × g	16,369 × g
<b>Packing</b>	set of 2 pcs.				
<b>Catalog No.</b>	5820726008	5820725001	5820728000	5820727004	5820730005
<b>List USD</b>	\$171.00	\$171.00	\$171.00	\$171.00	\$166.00

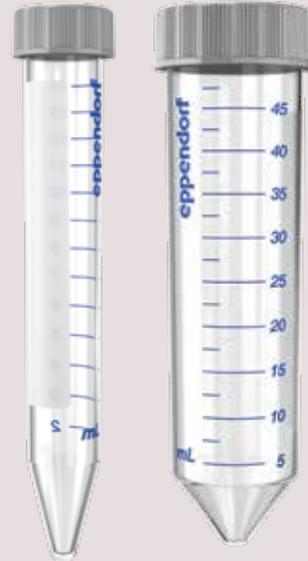
<sup>1)</sup> Rotors F-34-6-38 and FA-45-6-30 maintain 4 °C at 11,000 rpm. <sup>2)</sup> Max. speed in Centrifuge 5810 R, lower speed applies to Centrifuge 5804/5804 R/5810. <sup>3)</sup> Aerosol-tightness tested by Health Protection Agency, Porton Down, UK. <sup>4)</sup> Please note that rotor FA-45-6-30 can be used for 120 V models with serial numbers above 60,000. If you own a unit with an older serial numbers please contact Eppendorf Customer Support at 800-645-3050 to learn about your options. <sup>5)</sup> Software upgrade package for 120 V centrifuges with serial numbers between 10,000 (5804/5804 R/5810) / 12,000 (5810 R) and 60,000. Package includes rotor 5820715006, an on-site software upgrade for one 58xx centrifuge by an Eppendorf service technician plus free preventive maintenance inspection. Price includes software, travel and labor. <sup>6)</sup> Eppendorf Tubes® 5.0 mL with screw cap will not fit in this adapter.



# Eppendorf Conical Tubes

Whether centrifugation, mixing, or other applications – the Eppendorf Conical Tubes 15 mL and 50 mL will perfectly fit into your workflows. They represent the next step in Eppendorf's comprehensive system solutions in liquid, sample and cell handling.

More information: [www.eppendorf.com/conicals](http://www.eppendorf.com/conicals)



7 – 17 mL	15 mL	15 – 18 mL	20 – 30 mL	35 mL	50 mL conical
17.5 mm	17 mm	18 mm	26 mm	29 mm	31 mm
122 mm	125 mm	125 mm	125 mm	125 mm	121 mm
1/6	1/6	1/6	1/6	1/6	-/6
round	conical	round	round	conical	conical
120 mm	120 mm	120 mm	105 mm	112 mm	123 mm
19,246 × g	19,246 × g	19,246 × g	17,187 × g	18,333 × g	20,130 × g
16,233 × g	16,223 × g	16,223 × g	14,204 × g	16,161 × g	16,639 × g
set of 2 pcs.	-				
5820729007	5820717009	5820720000	5820721006	5820722002	-
\$171.00	\$171.00	\$171.00	\$171.00	\$171.00	-



There's no need to exert unnecessary high force when closing the centrifuge lid. The soft-touch lid closure allows closing the centrifuge with ease.

#### Ordering information

Description	Catalog No.	List USD
<b>Rotor keys</b>		
10 mm socket wrench, fits standard 24 x 1.5/2.0 mL or 36 x 0.5 mL rotor, for Models 5415D and 5415R	022667181	\$ 20.00
5 mm Allen key, fits all rotors for Models 5417R, 5418, 5424, 5430, 5702 series and 5415D/5415R aerosol-tight rotor	022634305	19.50
6 mm Allen key, fits all rotors for 5804, 5804 R, and 5810 R excepts 4 x 500 mL rotor (A-4-81) and 4 x 750 mL rotor (S-4-104)	022664166	19.50
7 mm Allen key, fits all rotors for 5920 R, 5910 R, and 4 x 500 mL rotor (A-4-81) and 4 x 750 mL rotor (S-4-104) for 5810 R	022664174	28.50
Torque wrench rotor key, fits 24-place high speed rotor FA-45-24-11-HS for 5430/ 5430 R	5427730001	72.00
<b>Rotor stand</b>		
Fits all rotors for Centrifuges 5804/5804 R, 5810/5810 R, 5910 R, and 5920 R	022639021	134.00



# Rotors and accessories for Centrifuges 5804/5804 R and 5810/5810 R

Technical specifications of rotors for Centrifuges 5804/5804 R and 5810/5810 R<sup>1</sup>

5804/ 5804 R	5810/ 5810 R	Rotor	Max. capacity	Max. rcf (x g)	Max. (rpm)	Max. radius (cm)	Lowest temp. at max. rpm <sup>2</sup>	Rotor weight (kg/lbs) <sup>3</sup>	Max. load per bucket/ bore <sup>4</sup>	Max. loading height for plate buckets	Aerosol-tight containment <sup>5</sup>
<b>Swing-bucket rotors</b>											
-	■	S-4-104	4 x 750 mL	3,214	3,900	18.9	<4 °C	8.8/19.4	1,000 g	60 mm	■
-	■	A-4-81 <sup>6</sup>	4 x 500 mL	3,250	4,000	18.0	<4 °C	7.5/16.6	780 g	-	■
-	■	A-4-81-MTP/Flex <sup>6</sup>	4 x 4 MTP	2,900	4,000	16.3	<0 °C	8.4/18.5	380 g	60 mm	-
-	■	A-4-62 <sup>7</sup>	4 x 250 mL	3,200	4,000	18.0	≤2 °C	4.9/10.8	630 g	-	■
-	■	A-4-62-MTP <sup>7</sup>	4 x 3 MTP	2,750	4,000	15.4	<0 °C	5.9/13.1	380 g	53 mm	-
■	■	S-4-72	4 x 250 mL	3,234	4,200	16.4	<4 °C	5/11	450 g	-	-
■	■	A-4-44	4 x 100 mL	4,500	5,000	16.1	≤4 °C	3.0/6.5	310 g	-	■
-	■	A-2-DWP-AT	2 x 6 MTP	3,486	4,500	15.4	<4 °C	7.4/16.3	500 g	89 <sup>8</sup> mm	■
■	■	A-2-DWP	2 x 5 MTP	2,250	3,700	14.7	<0 °C	3.1/7.1	380 g	89 mm	-
<b>Fixed-angle rotors</b>											
■	■	F-34-6-38	6 x 100 mL	18,500 (5810 R)	12,000 (5810 R)	11.5	9 °C <sup>9</sup>	3.2/7.0	125 g	-	-
				15,500	11,000		≤4 °C				
■	■	FA-45-6-30	6 x 50 mL	20,130 (5810 R)	12,100 (5810 R)	12.3	≤10 °C	3.2/7.0	500 g	-	■
				16,640	11,000		4 °C				
■	■	FA-45-20-17	20 x 5.0 mL	20,913	13,100	10.9	<4 °C	3.2/7.0	9.5 g	-	■
■	■	FA-45-48-11	48 x 1.5/2.0 mL	19,083	13,000	10.1	<4 °C	3/6.6	3.75 g	-	■

<sup>1)</sup> Additional information for rotors FA-45-30-11, F-45-30-11, F-45-48-PCR, F-35-48-17, and T-60-11 can be found at [www.eppendorf.com](http://www.eppendorf.com). <sup>2)</sup> Refrigerated centrifuges (230 V or 120 V (20 A)) at 23 °C room temperature, after 1 h run. <sup>3)</sup> Weight includes bucket for swing-bucket rotors and rotor lid for fixed-angle rotors. <sup>4)</sup> Adapter + tubes + contents. <sup>5)</sup> Aerosol-tightness has been tested and approved in accordance with the procedure of Bennett et al. from the Centre for Applied Microbiology & Research in Porton Down, CAMR, Great Britain, and according to annex AA of the IEC 1010-2-020 safety standard. <sup>6)</sup> The swing-bucket rotor can be delivered without buckets, equipped with rectangular buckets as an A-4-81 or with MTP/Flex buckets as an A-4-81-MTP/Flex, whereby the MTP/Flex buckets can be purchased separately in sets of 2 or 4. <sup>7)</sup> The swing-bucket rotor can be delivered as A-4-62 (loaded with buckets) or as A-4-62-MTP (loaded with plate buckets). Max. rpm to maintain 4 °C is 11,000 rpm. <sup>8)</sup> Without aerosol-tight lid. <sup>9)</sup> Max. rpm to maintain 4 °C is 11,000 rpm.

Approximate braking times for different rotors at levels 0 to 9 (in seconds) for 230 V<sup>10</sup> centrifuges<sup>11</sup>

5804/ 5804 R	5810/ 5810 R	Max. volume	Rotor	0	1	2	3	4	5	6	7	8	9
-	■	4 x 750 mL	S-4-104	690	196	173	152	133	114	70	49	38	32
-	■	4 x 500 mL	A-4-81	532	189	174	143	131	109	95	85	59	31
-	■	4 x 4 MTP	A-4-81-MTP/Flex	643	191	174	142	131	110	94	83	58	30
-	■	4 x 250 mL	A-4-62	740	190	170	140	130	110	95	85	55	26
-	■	4 x 3 MTP	A-4-62-MTP	620	190	170	140	130	110	95	85	55	26
■	■	4 x 250 mL	S-4-72	337	242	196	172	152	119	55	32	21	17
■	■	4 x 100 mL	A-4-44	470	300	270	220	200	140	100	75	45	23
■	■	2 x 5 MTP	A-2-DWP	304	174	130	118	100	75	51	44	32	14
-	■	2 x 6 MTP	A-2-DWP-AT	857	231	202	176	157	135	112	102	69	39
■	■	6 x 100 mL	F-34-6-38	880	370	280	190	170	150	125	95	75	54
■	■	6 x 50 mL	FA-45-6-30	759	423	322	231	205	178	148	113	93	58

The given times are to be considered guidelines. While level 9 means "strongest braking," level 0 means "free deceleration," whereby considerable fluctuations can occur with this uncontrolled deceleration, depending upon the condition of the device and the load. <sup>10)</sup> Deceleration times for 230 V and 120 V devices are almost identical. <sup>11)</sup> Additional braking information for rotors FA-45-30-11, F-45-30-11, F-45-48-PCR, F-35-48-17, and T-60-11 can be found in the operating manual for Centrifuge 5804/5804 R/5810/5810 R.

# Progress in Ease of Use and Cooling Performance

The new 59xx family is the successor generation of the 58xx family and provides a large range of improvements not only to the centrifuges themselves but also to the accessories (rotors, adapters).

Centrifuges 5910 R and 5920 R come with a modern operating system with outstanding functionality. Both models include a powerful state-of-the-art refrigeration system with advanced temperature management to keep your samples safe. Last but not least, noise levels have been reduced even further compared to 5810 R for a more pleasant work environment.

	5804/5804 R and 5810/5810 R	5910 R, 5920 R
<b>Display/operating system</b>		
<b>Menu-driven display</b>	no	yes
<b>Multilingual operation menu</b>	no	yes
<b>Programs</b>	35	99
<b>Program keys</b>	no	yes (5 program keys)
<b>Timer</b>	1 min to 99 min	10 s - 99 h 59 min
<b>USB port for easy software upgrades</b>	No	Yes
<b>Ergonomics</b>		
<b>Noise level (swing-bucket rotors)</b>	Low	Very low <sup>1)</sup>
<b>Cooling performance</b>		
<b>Performance</b>	Good	Very good <sup>2)</sup>
<b>FastTemp (pre-cooling function)</b>	Medium	Fast <sup>3)</sup>
<b>FastTemp pro (programmable precooling)</b>	no	yes
<b>ECO shut off</b>	8 hours (fixed)	8 hours (adjustable)

<sup>1)</sup> For swing-bucket rotors generally lower noise levels for comparable rotors, even at higher speed. Example: 5910 R and 5920 R spin the 4x750 mL swing-bucket rotor both faster and quieter than 5810 R.

<sup>2)</sup> 5910 R and 5920 R can reach lower temperatures than 5810 R with comparable rotors at same speed/similar temperatures at higher speed. Example: Fixed-angle rotor 6x50 mL maintains 4° C at 16,639 x g in 5810 R and 20,130 x g in 5910 R. <sup>3)</sup> Improved function estimated to be implemented in production ca. Q3/2018.



# Progress in Rotor Versatility

The new Centrifuges 5910 R and 5920 R provide significant improvements to those customers who need to spin both plates and conical tubes.



## Centrifuge 5804/5804 R

Two separate rotors needed.

### Advantage:

- > No need to buy a separate centrifuge to spin tubes and plates



## Centrifuge 5810/5810 R

Rotor A-4-62 with plate and tube buckets

### Advantage:

- > Only one rotor but two complete sets of buckets needed



## Centrifuge 5810/5810 R

Mixed loading capability:

Rotors S-4-104 and A-4-81 allow for mixed loading with 2 plate buckets and 2 round/rectangular buckets.

### Advantage:

- > No need to buy a complete set of 4 plate buckets.



## Centrifuge 5910 R and 5920 R

Rotors with universal buckets: Dual use of plates and tubes in one rotor bucket

### Advantages:

- > Time saving: No need to exchange buckets
- > Cost saving: No need for separate plate buckets



## Centrifuge 5910 R

Rotor S-4xUniversal with universal buckets + universal adapters: Three new innovative 'universal adapters' can spin selective conical tube and plate formats:

- > Eppendorf Tubes® 5.0 mL/15 mL conical/DWP
- > 50 mL conical/MTP
- > 50 mL conical/250 mL/MTP

### Advantages:

- > Time saving: No need to exchange buckets
- > Cost saving: No need for either separate plate buckets or adapters

# NEW - Centrifuge 5910 R

## Description

Centrifuge 5910 R combines a high-capacity of up to 4 x 750 mL with extraordinary versatility. Its main swing-bucket rotor holds both conical tubes and plates – no need to change rotor buckets or adapters. This improves handling and saves time. It features a powerful state-of-the-art refrigeration system with advanced temperature management to keep your samples safe.



### 1. Outstanding rotor versatility

Swing-bucket rotor with universal buckets for spinning tubes or plates. Universal adapters hold 15 or 50 mL conical tubes and plates. Benefit: No rotor, rotor bucket or adapter change needed.

### 2. High-capacity

- > Higher capacity than traditional 3 Liter multipurpose centrifuges
- > Max. 4 x 750 mL / 36 x 50 mL conical / 120 x 5/7 m blood collection / 20 x MTP

### 3. Backlit display

- > Multilingual operation menu with language support for English, German, French and Spanish
- > 5 program keys for easy access to routine programs

### 4. Super quiet operation

- > 5910 R sets a new standard. It's the most quiet multipurpose centrifuge within the Eppendorf product range

### 5. Outstanding cooling performance

- > Dynamic compressor control delivers precise performance to keep your samples safe with ECO shut-off function to save energy and extend compressor life

**Product features**

- > Swing-bucket rotors and adapters accommodate tubes and bottles from 0.2 mL to 750 mL
- > Plate rotor options for centrifugation of all types of MTP, PCR or Deepwell Plates
- > Fixed-angle rotors for high-speed molecular biology applications in tubes from 0.2 mL to 50 mL
- > High centrifugation speed of up to 22,132 × g (14,000 rpm)
- > Aerosol-tight Eppendorf QuickLock® caps and lids allow fast and ergonomic lid locking
- > Centrifuge lid with soft-touch lid closure
- > Quiet operation to improve your work environment
- > Compact footprint saves valuable bench space
- > Automatic rotor recognition and imbalance detection for maximum operational safety

**Additional features for Centrifuge 5910 R**

- > Temperature range from -11 °C to 40 °C
- > FastTemp function for quick pre-cooling
- > FastTemp pro® function allows for automatic precooling based on pre-programmable time and date
- > Continuous cooling maintains a constant temperature after the run has been completed – your samples stay cool
- > ECO shut-off engages after 1, 2, 4, or 8 hours of non-use to reduce energy consumption and to extend compressor life
- > Dynamic compressor control (DCC) technology for precise cooling performance

Technical specifications	
<b>Model</b>	<b>5910 R</b>
<b>Max. RCF</b>	22,132 × g
<b>Max. RCF with fixed-angle rotor</b>	22,132 × g
<b>Max. RCF with swing-bucket rotor</b>	5,234 × g
<b>Speed</b>	100 – 14,000 rpm (10 rpm steps)
<b>Max. capacity</b>	4 × 750 mL/4 × 5 MTP
<b>Acceleration/braking ramps</b>	10/10
<b>Number of programs</b>	99 (5 program keys)
<b>Timer</b>	10 s to 99 h 59 min, with continuous run function, short-spin
<b>Noise level</b>	
<b>Rotor FA-6x50</b>	<56 dB(A)
<b>Rotor S-4x750</b>	<54 dB(A)
<b>S-4xUniversal</b>	<53 dB(A)
<b>Power supply</b>	120 V, 50 – 60 Hz
<b>Max. power consumption</b>	1,650 W
<b>Dimensions (W × D × H)</b>	28.3 × 25.9 × 14.5 in
<b>Footprint (dimensions w/o front panel, WxD)</b>	28.3 × 24.4 in
<b>Height (with open lid)</b>	33.4 in
<b>Weight w/o accessories</b>	240 lb
<b>Cooling</b>	refrigerated
<b>Temperature control range</b>	-11 °C to 40 °C

# Centrifuge 5920 R



As awarded by The Chicago Athenaeum: Museum of Architecture and Design.

## 1. Ergonomic lid operation

- > Soft-touch lid closure and low opening height for stress-free lid locking
- > Two open lid positions
  - > Fully open for easy removal of rotor
  - > Half open for easy access to samples and easy reach of centrifuge lid

## 2. Extraordinary high-capacity

- > Max. 4 × 1,000 mL/52 × 50 mL conical/108 × 15 mL conical/196 × 5/7 mL blood collection/28 × MTP

## 3. Outstanding cooling performance

- > Dynamic compressor control delivers precise performance to keep your samples safe with ECO shut-off function to save energy and extend compressor life

## 4. Backlit display

- > Multilingual operation menu with language support for English, German, French and Spanish
- > 5 program keys for easy access to routine programs

## 5. Quiet operation

- > Designed to operate at low noise levels for a relaxing work environment



### Description

Centrifuge 5920 R delivers extraordinary high-capacity in a very compact and ergonomic product design. It has similar dimensions as competing refrigerated 3 Liter models and yet features a superior capacity of up to 4 × 1,000 mL; thus making it the ideal instrument for high-throughput applications. It features a powerful state-of-the-art refrigeration system with advanced temperature management to keep your samples safe.

### Product features

- > Swing-bucket rotors and adapters accommodate tubes and bottles from 0.2 mL to 1,000 mL
- > Plate rotor options for centrifugation of all types of MTP, PCR or Deepwell Plates
- > Fixed-angle rotors for high-speed molecular biology applications in tubes from 0.2 mL to 50 mL
- > High centrifugation speed of up to 21,194 × g (13,700 rpm)
- > Aerosol-tight Eppendorf QuickLock® caps and lids allow fast and ergonomic lid locking
- > Centrifuge lid with soft-touch lid closure
- > Quiet operation to improve your work environment
- > Compact footprint saves valuable bench space
- > Automatic rotor recognition and imbalance detection for maximum operational safety

### Additional features for Centrifuge 5920 R

- > Temperature range from -11 °C to 40 °C
- > FastTemp function for quick pre-cooling
- > FastTemp pro® function allows for automatic precooling based on pre-programmable time and date
- > Continuous cooling maintains a constant temperature after the run has been completed – your samples stay cool
- > ECO shut-off engages after 1, 2, 4, or 8 hours of non-use to reduce energy consumption and to extend compressor life
- > Dynamic compressor control (DCC) technology for precise cooling performance



# Centrifuge 5920 R



## 4 Liter capacity

- > Centrifuge 5920 R accommodates standard 1 Liter Nalgene bottles setting a new standard in the table top centrifuge segment

Your benefit: Process higher volume in fewer runs



## High-capacity buckets

Not only do the high-capacity buckets of Rotor S-4x1000 provide an exceptional high-capacity (52 x 50 mL conical, 108 x 15 mL conical), they also allow both tubes and plates to be used in the same rotor bucket.

### Advantages:

- > Time saving: No need to exchange buckets
- > Cost saving: No need for separate plate buckets
- > Space saving: No need to store different buckets



## Advanced operating system

Centrifuge 5920 R (and 5910 R) comes with a modern operating system with outstanding functionality

- > Menu-driven, multilingual operation menu with large backlit display
- > Saves up to 99 user-defined programs
- > 5 program keys for easy access to routine programs
- > FastTemp pro® function for automated pre-cooling based on pre-programmable time and date

**i** For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



Technical specifications	
<b>Model</b>	5920 R
<b>Max. RCF</b>	21,194 × g
<b>Max. RCF with fixed-angle rotor</b>	21,194 × g
<b>Max. RCF with swing-bucket rotor</b>	4,800 × g
<b>Speed</b>	100 – 13,700 rpm (10 rpm steps)
<b>Max. capacity</b>	4 × 1,000 mL/4 × 7 MTP
<b>Acceleration/braking ramps</b>	10/10
<b>Number of programs</b>	99 (5 program keys)
<b>Timer</b>	10 s to 99 h 59 min, with continuous run function, short-spin
<b>Noise level</b>	
<b>Rotor FA-6x50</b>	<60 dB(A)
<b>S-4xUniversal-Large</b>	<55 dB(A)
<b>Power supply</b>	120 V, 50 – 60 Hz
<b>Max. power consumption</b>	1,650 W
<b>Dimensions (W × D × H)</b>	29 x 28 x 15 in
<b>Footprint (dimensions w/o front panel, WxD)</b>	29.1 x 26.3 in
<b>Height (with open lid)</b>	37 in
<b>Weight w/o accessories</b>	306 lb
<b>Cooling</b>	refrigerated
<b>Temperature control range</b>	-11 °C to 40 °C

# Centrifuge Packages 5910 R/5920 R



## Description

Eppendorf provides a range of different centrifuge packages for Centrifuge 5920 R/5910 R.

### Cell Culture Centrifuge packages include

- > Centrifuge 5920 R/5910 R
- > Swing-bucket rotor incl. one bucket type (see next page)
- > Four adapters for 15 mL conical tubes (two sets of 2)
- > Four adapters for 50 mL conical tubes (two sets of 2)

### Centrifuge packages for blood collection tubes include

- > Centrifuge 5920 R/5910 R
- > Swing-bucket rotor incl. one bucket type (see adjacent)
- > Four adapters for 13 mm (5/7 mL) round bottom tubes (two sets of 2)
- > Four adapters for 16 mm (10 mL) round bottom tubes (two sets of 2)



### Eppendorf Conical Tubes 15 mL and 50 mL

The Eppendorf Conical Tubes 15 mL and 50 mL are the optimal solution for cell culture sample preparation protocols in microbiology and molecular biology laboratories. Safe design and easy handling ensure best sample processing.

### Premium USP class 6 raw material ensures

- > high sample integrity
- > high g-Safe® centrifugation stability
- > optimal sample and pellet visibility

For more information go to chapter "Reaction tubes and plates" on pages 137-153.

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



### Cell culture packages

- > Extra high-capacity for up to 108 x 15 mL or 52 x 50 mL conical tubes
- > Accommodates both tubes and plates; no need for separate buckets<sup>1)</sup>
- > Max. 4,402 x g (in S-4-Universal-Large rotor)



### Blood collection tube package

- > Extra high-capacity for up to 196 x 13 mm or 148 x 16 mm blood collection tubes
- > Includes aerosol-tight caps for safe centrifugation of hazardous samples<sup>5)</sup>
- > Max. 4,140 x g



### Cell harvesting package

- > Includes high-capacity buckets and adapters for 108 x 15 mL conical tubes, 52 x 50 mL conical tubes, 8 x 250 mL conical bottles, and 8 x deepwell plates
- > Includes round buckets and adapters for 4 x 1000 mL bottles
- > Max. 3,428 x g

### Ordering information

Description	Max. capacity of conical tubes per rotor	Catalog No.	List USD
Centrifuge 5920 R Cell culture package (Universal-Large) <sup>2)</sup>	96 x 15 mL/40 x 50 mL	5948000930	Inquire
Centrifuge 5920 R Cell culture package (S-4x1000) <sup>2)</sup>	108 x 15 mL/52 x 50 mL	5948000239	Inquire
Centrifuge 5920 R Blood tube package (Universal-Large) <sup>3)</sup>	196 x 13 mm/148 x 16 mm	5948000832	Inquire
Centrifuge 5920 R Cell harvesting package (S-4x1000) <sup>4)</sup>	4 x 1000 mL/8 x 250 mL/52 x 50 mL	2231010155	Inquire
Centrifuge 5920 R, refrigerated, without rotor, 120 V 50/60 Hz	108 x 15 mL/8 x DWP	5948000131	Inquire
Centrifuge 5910 R Cell culture package (Universal) <sup>2)</sup>	64 x 15 mL/36 x 50 mL	5942000342	Inquire
Centrifuge 5910 R Cell culture package (S-4x750) <sup>2)</sup>	56 x 15 mL/28 x 50 mL	5948000547	Inquire
Centrifuge 5910 R Cell culture package (S-4x400) <sup>2)</sup>	28 x 15 mL/16 x 50 mL	5942000741	Inquire
Centrifuge 5910 R Blood tube package (Universal) <sup>3)</sup>	120 x 13 mm/104 x 16 mm	5942000440	Inquire
Centrifuge 5910 R Cell harvesting package (Universal) <sup>4)</sup>	4 x 250 mL/36 x 50 mL/64 x 15 mL	5942000245	Inquire
Centrifuge 5910 R, refrigerated, without rotor, 120 V 50/60 Hz	64 x 15 mL/8 x DWP	5942000130	Inquire

<sup>1)</sup> Plate carrier to lift plates of universal bucket needs to be ordered separately. <sup>2)</sup> Cell culture package includes a centrifuge and swing-bucket rotor plus the following adapters (sets of 2) for 15 mL and 50 mL conical tubes: 5920 R with S-4x1000 rotor with high-capacity buckets = 2 x 5920716000, 2 x 5920715003; 5920 R with S-4xUniversal-Large rotor = 2 x 5920736000, 2 x 5920735004; 5910 R with S-4xUniversal rotor = 2 x 5910752008, 2 x 5910769008; 5910 R with S-4x750 rotor = 2 x 5825734009, 2 x 5825733002; 5910 R with S-4x400 rotor = 2 x 5910702000, 2 x 5910701004. <sup>3)</sup> Blood tube package includes a centrifuge and swing-bucket rotor plus the following adapters (sets of 2) for 13 mm and 16 mm blood tubes and aerosol-tight caps: 5920 R with S-4xUniversal-Large swing bucket rotor = 2 x 5920739000, 2 x 5920738003, 2 x 5920752006; 5910 R with S-4xUniversal rotor = 2 x 5910755007, 2 x 5910754000, 2 x 5910750005. <sup>4)</sup> Cell harvesting package includes a centrifuge and swing-bucket rotor plus the following adapters (set of 2): 5920 R and S-4x1000 swing bucket rotor with: high-capacity buckets, 2 x 5920717006, 2 x 5920716000, 2 x 5920715003, 2 x 5920729004 and round buckets plus 2 x 5920700006 (adapters for 1000 mL bottles); 5910 R with S-4xUniversal rotor = 2 x 5910752008, 2 x 5910769008, 2 x 5910751001, 2 x 5910753004. <sup>5)</sup> Aerosol-tightness tested by Health Protection Agency, Porton Down, UK.

## Overview of Swing-Buckets Rotors 59xx Family



Model	Rotor S-4xUniversal-Large	Rotor S-4x1000 high-capacity buckets	Rotor S-4x1000 medium-capacity buckets	Rotor S-4x1000 round buckets
5910 R				
5920 R	■	■	■	■
Positioning	Extra high-capacity	Extra high-capacity	High-capacity	Medium-capacity, compatible with 1 Liter bottle
Universal bucket	yes	yes	yes	no
Aerosol-tightness	yes	no	yes	yes
Max. capacity	4 × 750 mL	8 × 250 mL	40 × 50 mL	4 × 1,000 mL
Max. RCF	4,198 × g	3,153 × g	3,076 × g	3,413 × g
Max. speed	4,250 rpm	3,700 rpm	3,700 rpm	3,700 rpm
1.5/2.0 mL micro tube	368			200
Eppendorf Tubes® 5.0 mL and 15 mL conical	96	108	88	56
50 mL conical	40	52	40	28
13 mm blood tube	196	196	140	92
16 mm blood tube	148	144	132	80
750 mL bottle	4			4
1.000 mL bottle				4
MTP/DWP	20/8	24/8	28/8	28/8

## Advanced Rotor Design – Swing-Bucket Rotors



### Rotor buckets for tubes and plates (selected rotors only)

#### Advantages:

- > Time saving: No need to exchange buckets
- > Cost saving: No need for separate plate buckets
- > Space saving: No need to store different buckets

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)



Rotor S-4xUniversal	Rotor S-4x750	Rotor S-4x500	Rotor S-4x400
■	■	■	■
High-capacity and versatility	Medium-capacity, high speed	Medium-capacity	Medium-capacity, high speed
yes	no	no	no
yes	yes	yes	yes
4 x 750 mL	4 x 750 mL	4 x 500 mL	4 x 250 mL
4,347 x g	4,800 x g	3,220 x g	5,234 x g
4,500 rpm	4,700 rpm	4,000 rpm	5,100 rpm
64	56	48	28
36	28	20	16
120	92	100	60
104	80	64	44
4	4		
20/4	16/4	16/4	



#### Aerosol-tight QuickLock caps

- > Significantly improved handling, easy operation with one or two hands
- > Handle allows the closed bucket to be carried to the biosafety cabinet where it can be opened in a safe environment
- > Aerosol-tightness has been tested and verified by Public Health England, Porton Down, UK

## Overview of the Main Fixed-Angle Rotors 59xx Family



Model	Rotor FA-6x50	Rotor FA-20x5
Positioning	Molecular applications in tubes up to 50 mL conical	Applications in Eppendorf Tubes® 5.0 mL
5910 R	■	■
5920 R	■	■
Aerosol-tightness	yes	yes
Max. capacity	6 × 50 mL	20 × 5 mL
Max. RCF	20,130 × g	20,913 × g
Max. speed	12,100 rpm	13,100 rpm
1.5/2.0 mL micro tube	6	20
Eppendorf Tubes® 5.0 mL and 15 mL conical	6	20/0
50 mL conical	6	

## Advanced Rotor Design – Fixed-Angle Rotors



Cross section of Rotor FA-6x50 (6 × 50 mL conical) showing the light-weight design. All metal not needed for safety or performance is hollowed out to reduce weight and improve handling.

### Low rotor weight

Eppendorf's fixed-angle rotors are among the lightest in the industry to improve handling and operational safety. Light-weight rotors cause less wear and tear on the motor and allow for faster acceleration and braking times.

i For more information go to [www.eppendorf.com/centrifugation](http://www.eppendorf.com/centrifugation)

Product appearance, specifications, and/or prices are subject to change without notice.



Rotor FA-48x2	Rotor FA-30x2	Rotor F-48x15
Aerosol-tight microcentrifuge tube rotor	Aerosol-tight microcentrifuge tube rotor for safe centrifugation of hazardous samples	High-capacity fixed-angle rotor for 15 mL conical and glass tubes
■	■	■
■		
yes	yes	
48 × 2 mL	30 × 2 mL	40 × 15 mL
21,194 × g (5920 R)/22,132 × g (5910 R)	20,984 × g	
13,700 rpm (5920 R)/14,000 rpm (5910 R) rpm	13,700 rpm	5,500 rpm
48	30	
		0/40

#### Eppendorf QuickLock® lids for ergonomic lid locking

Our aerosol-tight QuickLock rotors close with only  $\frac{1}{4}$  of a turn. This not only saves you time during every day use, it also takes repetitive stress off your wrist.

#### Superior temperature control

Aluminum, with its high heat conductivity, allows fast pre-cooling and accurate temperature control in refrigerated centrifuges.



#### Perfect fit with Eppendorf Conical Tubes 15 mL and 50 mL

The Eppendorf Conical Tubes are characterized by an outstanding centrifugation stability of up to  $19,500 \times g$ <sup>1)</sup>. This makes them suited for a broad range of applications.

<sup>1)</sup> Test conditions: Rotor FA-45-6-30 in Eppendorf Centrifuge 5810 R (using a suitable centrifuge adapter for 15 mL tube), sample: Saline solution (density: 1.0 g/mL), controlled centrifugation temp.: 25 °C, centrifugation time: 90 min



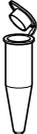
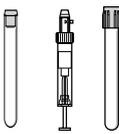
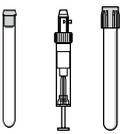
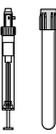
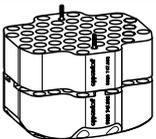
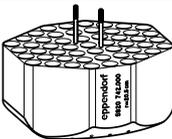
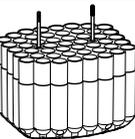
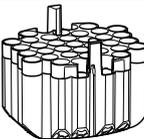
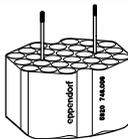
# Rotors for 5920 R



## Rotor S-4xUniversal-Large

- > Extra high-capacity swing-bucket rotor with max. speed 4,198 × g (4,250 rpm)
- > Broad range of adapters enables high versatility for tubes and flasks from 0.2 mL to 750 mL and plates
- > Universal bucket design accommodates both plates and tubes
- > Aerosol-tight Eppendorf QuickLock® caps for safe centrifugation of hazardous samples optionally available<sup>1)</sup>
- > Buckets, caps and adapters are autoclavable

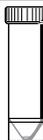
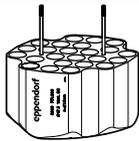
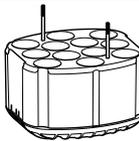
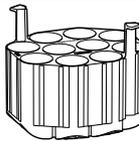
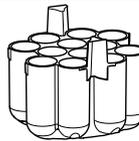
<sup>1)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

					
<b>Adapters for Rotor S-4xUniversal-Large</b>					
<b>Tube Volume</b>	1.5/2.0 mL	5 mL FACS	2.6 – 8 mL	5.5 – 12 mL	9 mL
<b>Max. tube diameter</b>	11 mm	12 mm	13 mm	16 mm	17.5 mm
<b>Max. vessel height</b>	39 mm	113 mm	110 mm	110 mm	136 mm
<b>Max. vessel height for use with cap/lid</b>	39 mm	82 mm	107 mm	106 mm	130 mm
<b>Adapter</b>					
<b>Number of vessels per adapter/rotor</b>	92/368	51/204	49/196	37/148	28/112
<b>Bottom shape</b>	flat	round	round	round	round
<b>Centrifugation radius</b>	205 mm	205 mm	205 mm	204 mm	209 mm
<b>Max. RCF</b>	3,947 × g	3,947 × g	3,947 × g	3,928 × g	4,024 × g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
<b>Catalog No.</b>	5920747002	5920742000	5920739000	5920738003	5920746006
<b>List USD</b>	\$305.00	\$305.00	\$305.00	\$305.00	\$305.00



### Ordering information

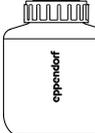
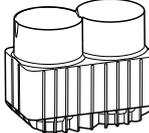
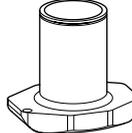
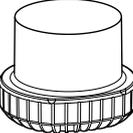
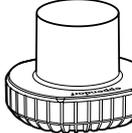
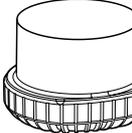
Description	Catalog No.	List USD
<b>Rotor S-4xUniversal-Large</b> , incl. buckets	5895190006	\$4,410.00
<b>Universal-Large buckets</b> , set of 4	5895192009	2,260.00
<b>Aerosol-tight caps</b> , for Rotor S-4xUniversal-Large, set of 2 pcs.	5920752006	297.00

					
14 mL	Eppendorf Tubes® 5.0 mL and 15 mL conical	30 mL	50 mL conical	50 mL conical, skirted	50 mL Nalgene® Oak Ridge
17.5 mm	17 mm	25 mm	31 mm	31 mm	29 mm
123 mm	131 mm	117 mm	131 mm	141 mm	132 mm
120 mm	123 mm	108 mm	125 mm	121 mm	121 mm
					
24/96	24/96	12/48	10/40	7/28	12/48
round	conical	flat	conical	conical	round
210 mm	218 mm	194 mm	213 mm	197 mm	206 mm
4,043 × g	4,198 × g	3,918 × g	4,101 × g	3,793 × g	3,966 × g
set of 2 pcs.	set of 2 pcs.				
5920751000	5920736000	5920743007	5920735004	5920748009	5920753002
\$305.00	\$305.00	\$305.00	\$305.00	\$305.00	\$305.00



# Rotors for 5920 R



								
<b>Adapters for Rotor S-4xUniversal-Large</b>								
<b>Tube Volume</b>	250 mL flat, 175 – 225 mL conical <sup>1)</sup>	250 mL conical (Corning®, Nunc®) <sup>1)</sup>	500 mL Corning®	500 mL Nalgene®	750 mL	Micro Fluidic Cards	MTP, DWP, PCR plates	
<b>Max. tube diameter</b>	62 mm	62 mm	98 mm	70 mm	104 mm	–	–	
<b>Max. vessel height</b>	133 mm	171 mm	160 mm	168 mm	166 mm	153 mm	116 mm	
<b>Max. vessel height for use with cap/lid</b>	126 mm	–	148 mm	145 mm	143 mm	–	110 mm	
<b>Adapter</b>								
<b>Number of vessels per adapter/rotor</b>	2/8	1/4	1/4	1/4	1/4	3/12	5/20 (MTP) 2/8 (DWP)	
<b>Bottom shape</b>	flat	flat	conical	flat	flat	flat	flat	
<b>Centrifugation radius</b>	203 mm	208 mm	208 mm	206 mm	202 mm	200 mm	196 mm	
<b>Max. RCF</b>	3,909 × g	4,005 × g	4,005 × g	3,966 × g	3,889 × g	3,851 × g	3,755 × g	
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.					
<b>Catalog No.</b>	5920740008	5920750003	5920744003	5920745000	5920741004	5920749005	5920737007	
<b>List USD</b>	\$305.00	\$305.00	\$305.00	\$305.00	\$305.00	\$305.00	\$305.00	

<sup>1)</sup> Please note that these conical bottles need to be used together with a conical form insert provided by the manufacturer.



# Get +Together



## A perfect match

Do you spin both conical tubes and plates? Eppendorf may have the perfect solution for you. Eppendorf offers a comprehensive range of high quality consumables and now introduces the new refrigerated Centrifuge 5920 R, featuring extraordinary high-capacity and performance. Its main swing-bucket rotor allows for spinning both plates and tubes in the same bucket.

## Your benefits:

- > Cost saving: No need for separate plate buckets
- > Space saving: No need to store different buckets
- > Time saving: No need to exchange buckets
- > Optimal complementarity and performance with Eppendorf Consumables

**Learn more about the products. For easiest access, just scan the QR code.**  
Alternatively, visit [www.eppendorf.com/together](http://www.eppendorf.com/together)



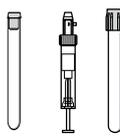
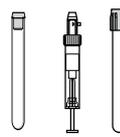
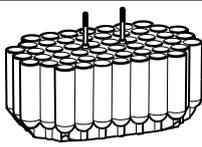
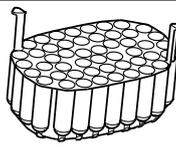
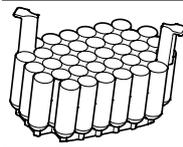
# Rotors for 5920 R



## Rotor S-4x1000 with high-capacity Buckets

- > Extra high-capacity swing-bucket rotor with max. speed 3,163 x g (3,700 rpm)<sup>1)</sup>
- > Bucket accommodates both plates and tubes
- > Mixed loading with 2 medium-capacity buckets or 2 round tube buckets allows for increased versatility
- > Buckets, caps and adapters are autoclavable
- > Saves money—no separate plate buckets needed<sup>1)</sup>
- > Rotor lifetime: max. 100,000 cycles

<sup>1)</sup> Plate carrier to lift plates out of plate/tube bucket needs to be ordered separately.

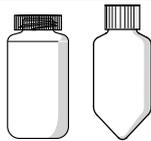
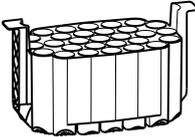
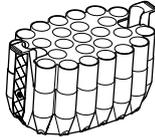
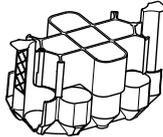
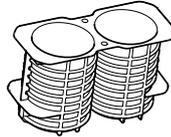
			
<b>Adapters for Rotor S-4x1000 high-capacity buckets</b>			
<b>Tube Volume</b>	5 mL FACS	2.6 – 8 mL	5.5 – 12 mL
<b>Max. tube diameter</b>	12 mm	13 mm	16 mm
<b>Max. vessel height</b>	106 mm	112 mm	113 mm
<b>Adapter</b>			
<b>Number of vessels per adapter/rotor</b>	52/204	49/196	36/144
<b>Bottom shape</b>	round	round	round
<b>Centrifugation radius</b>	204 mm	204 mm	199 mm
<b>Max. RCF</b>	3,122 x g	3,122 x g	3,046 x g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
<b>Catalog No.</b>	5920724002	5920718002	5920720007
<b>List USD</b>	\$305.00	\$310.00	\$310.00

<sup>1)</sup> Please note that these conical bottles need to be used together with a conical form insert provided by the manufacturer.



### Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4x1000</b> , incl. high-capacity buckets	5895118003	\$3,710.00
<b>Rotor S-4x1000</b> , without buckets	5895101003	2,020.00
<b>Buckets for Rotor S-4x1000</b> , high-capacity bucket for Rotor S-4x1000, set of 2 pcs.	5895107001	1,160.00
<b>Buckets for Rotor S-4x1000</b> , high-capacity bucket for Rotor S-4x1000, set of 4 pcs.	5895106005	2,300.00
<b>Plate carrier for high-capacity bucket</b> , set of 2 pcs.	5920729004	310.00

				
9 mL	Eppendorf Tubes® 5.0 mL and 15 mL conical	50 mL conical	250 mL flat, 175 – 225 mL conical and Nunc 250 mL conical <sup>1)</sup>	MTP, DWP, PCR plates
17.5 mm	17 mm	31 mm	62 mm	–
129 mm	120 mm	120 mm	145 mm	88 mm
				
29/116	27/108	13/52	2/8	6/24 (MTP) 2/8 (DWP)
round	conical	conical	flat	flat
204 mm	205 mm	206 mm	200 mm	185 mm
3,122 × g	3,138 × g	3,163 × g	3,061 × g	2,832 × g
set of 2 pcs.	set of 2 pcs.			
5920722000	5920716000	5920715003	5920717006	5920729004
\$310.00	\$310.00	\$310.00	\$310.00	\$310.00

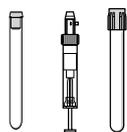
# Rotors for 5920 R



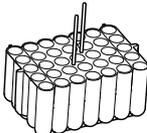
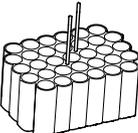
## Rotor S-4x1000 with Medium-Capacity Bucket

- > Medium-capacity swing-bucket rotor with max. speed 3,092 x g (3,700 rpm)
- > Bucket accommodates both plates and tubes
- > Aerosol-tight QuickLock caps for safe centrifugation of hazardous samples optionally available<sup>1)</sup>
- > Mixed loading with 2 high-capacity buckets or 2 round tube buckets allows for increased versatility
- > Buckets, caps and adapters are autoclavable
- > Rotor lifetime: max. 100,000 cycles

<sup>1)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.



### Adapters for Rotor S-4x1000 plate/tube buckets

Tube Volume	2.6 – 8 mL	5.5 – 12 mL	9 mL	Eppendorf Tubes® 5.0 mL and 15 mL conical
Max. tube diameter	13 mm	16 mm	17.5 mm	17 mm
Max. vessel height	109 mm	109 mm	109 mm	121 mm
Max. vessel height for use with cap/lid <sup>1)</sup>	108 <sup>2)</sup> mm	108 <sup>3)</sup> mm	109 <sup>4)</sup> mm	–
Adapter				
Number of vessels per adapter/ rotor	35/140	33/132	28/112	22/88
Bottom shape	round	round	round	conical
Centrifugation radius	201 mm	200 mm	200 mm	201 mm
Max. RCF	3,076 x g	3,061 x g	3,061 x g	3,076 x g
Packing	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
Catalog No.	5920706004	5920707000	5920708007	5920710001
List USD	\$310.00	\$310.00	\$310.00	\$310.00

<sup>1)</sup> Please perform a manual test to determine the actual loading capacity.<sup>2)</sup> in 25 center pos.<sup>3)</sup> in 23 center pos.<sup>4)</sup> in 22 center pos.



### Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4x1000, aerosol-tight, incl. medium-capacity buckets and plate carrier</b>	5895117007	\$3,420.00
<b>Rotor S-4x1000, aerosol-tight, without buckets</b>	5895101003	2,020.00
<b>Buckets for Rotor S-4x1000, medium-capacity bucket for Rotor S-4x1000, includes plate carrier, set of 2 pcs.</b>	5895105009	1,025.00
<b>Buckets for Rotor S-4x1000, medium-capacity bucket for Rotor S-4x1000, includes plate carrier, set of 4 pcs.</b>	5895104002	1,980.00
<b>Aerosol-tight caps, for S-4x1000 medium-capacity bucket and S-4x750 plate bucket, set of 2 pcs.</b>	5895111009	299.00
<b>Plate carrier for medium-capacity bucket, for Rotor S-4x1000 with medium-capacity buckets, Rotor S-4x1000, set of 2 pcs.</b>	5920705008	310.00



Eppendorf Tubes® 5 mL and 15 mL  
conical

17 mm

121 mm

121 mm



50 mL conical

31 mm

122 mm

-



50 mL conical

31 mm

121 mm

121 mm

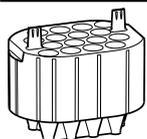


MTP, DWP, PCR plates

-

104 mm

91 mm



16/64

conical

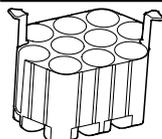
201 mm

3,076 × g

set of 2 pcs.

5920712004

\$310.00



10/40

conical

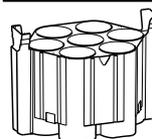
201 mm

3,076 × g

set of 2 pcs.

5920709003

\$310.00



7/28

conical

201 mm

3,076 × g

set of 2 pcs.

5920711008

\$310.00



7/28(MTP)

2/8(DWP)

flat

198 mm

3,030 × g

set of 2 pcs.

5920705008

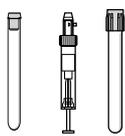
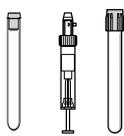
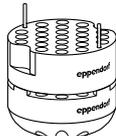
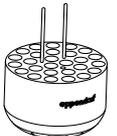
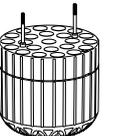
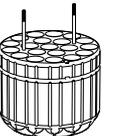
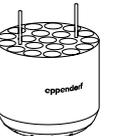
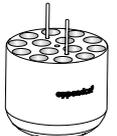
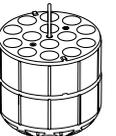
\$310.00

## Rotors for 5920 R

**Rotor S-4x1000 with Round Bucket**

- > Medium-capacity swing-bucket rotor with max. speed  $3,413 \times g$  (3,700 rpm)
- > Broad range of adapters enables high versatility for tubes and flasks from 0.2 mL to 1,000 mL and plates
- > Mixed loading with 2 plate high-capacity or 2 medium-capacity buckets allows for increased versatility
- > Aerosol-tight QuickLock caps for safe centrifugation of hazardous samples optionally available<sup>1)</sup>
- > Buckets, caps and adapters are autoclavable
- > Rotor lifetime: 100,000 cycles

<sup>1)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

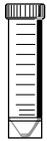
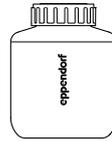
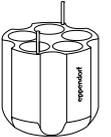
							
<b>Adapters for Rotor S-4x1000 round buckets</b>							
<b>Tube Volume</b>	1.5/2.0 mL	12 x 75 mm, 5 mL FACS	2.6 – 8 mL	5.5 – 12 mL	9 mL	14 mL	Eppendorf Tubes® 5.0 mL and 15 mL conical
<b>Max. tube diameter</b>	11 mm	12 mm	13 mm	16 mm	17.5 mm	17.5 mm	17 mm
<b>Max. vessel height</b>	39 mm	115 mm	121 mm	140 mm	117 mm	117 mm	161 mm
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>	39 mm	108 mm	113 mm	140 mm	112 mm	112 mm	150 mm
<b>Adapter</b>							
<b>Number of vessels per adapter/rotor</b>	50/200	27/108	23/92	20/80	20/80	14/56	14/56
<b>Bottom shape</b>	flat	round	round	round	round	round	conical
<b>Centrifugation radius</b>	219 mm	211 mm	210 mm	211 mm	210 mm	210 mm	224 mm
<b>Max. RCF</b>	$3,352 \times g$	$3,229 \times g$	$3,214 \times g$	$3,229 \times g$	$3,214 \times g$	$3,214 \times g$	$3,428 \times g$
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.			
<b>Catalog No.</b>	5825740009	5825747003	5825738004	5825736001	5825743008	5825748000	5825734009
<b>List USD</b>	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.

<sup>2)</sup> Please note that these conical bottles need to be used together with a conical form insert provided by the manufacturer. <sup>3)</sup> 225 mL conical for S-4-104 and S-4x750, 250 mL conical for S-4x1000 with round bucket.

## Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4x1000 round buckets, aerosol-tight, incl. 4 × 1,000 mL round buckets</b>	5895100007	\$3,420.00
<b>Rotor S-4x1000, aerosol-tight, without buckets</b>	5895101003	2,020.00
<b>Buckets for Rotor S-4x1000, Round bucket for Rotor S-4x1000, set of 2 pcs.</b>	5895103006	1,025.00
<b>Buckets for Rotor S-4x1000, Round bucket for Rotor S-4x1000, set of 4 pcs.</b>	5895102000	1,980.00
<b>Buckets for Rotor S-4x1000, medium-capacity bucket for Rotor S-4x1000, set of 2 pcs.</b>	5895105009	1,025.00
<b>Buckets for Rotor S-4x1000, medium-capacity bucket for Rotor S-4x1000, set of 4 pcs.</b>	5895104002	1,980.00
<b>Aerosol-tight caps, for S-4x1000 medium-capacity bucket and S-4x750 plate bucket, set of 2 pcs.</b>	5895111009	299.00
<b>Aerosol-tight caps for 750 mL round buckets, aerosol-tight, for Rotor S-4-104, Rotor S-4x750 and Rotor S-4x1000, set of 2 pcs.</b>	5820747005	268.00
<b>Plate carrier for medium-capacity bucket, for Rotor S-4x1000 with medium-capacity buckets, Rotor S-4x1000, set of 2 pcs.</b>	5920705008	310.00

										
30 mL	50 mL conical	50 mL conical, skirted	250 mL flat, 175 – 225/250 mL conical <sup>2) 3)</sup>	500 mL Corning® Nunc®	500 mL Nalgene	600 mL TPP	750 mL	1 Liter Nalgene	MTP, DWP, PCR plates	
25 mm	31 mm	31 mm	62 mm	98 mm	–	98 mm	104 mm	98 mm	–	
145 mm	156 mm	151 mm	176 mm	167 mm	180 mm	181 mm	150 mm	185 mm	104 mm	
138 mm	150 mm	147 mm	156 mm	–	–	–	–	–	91 mm	
										
8/32	7/28	5/20	1/4	1/4	1/4	1/4	1/4	1/4	7/28 (MTP) 2/8 (DWP)	
flat	conical	conical	flat	conical	flat	conical	flat	flat	flat	
210 mm	223 mm	209 mm	214 mm	218 mm	221 mm	224 mm	216 mm	218 mm	198 mm	
3,222 × g	3,413 × g	3,199 × g	3,275 × g	3,336 × g	3,382 × g	3,428 × g	3,306 × g	3,336 × g	3,030 × g	
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	
5825755006	5825733002	5825732006	5825741005	5825745000	5920703005	5920701002	5825744004	5920700006	5895105009	
\$310.00	\$311.00	\$311.00	\$311.00	\$311.00	\$310.00	\$310.00	\$192.00	\$310.00	\$1,025.00	

# Rotors for 5910 R



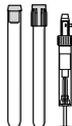
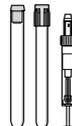
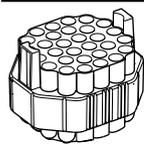
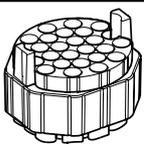
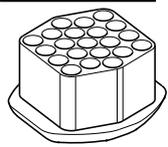
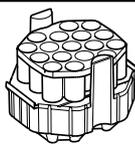
## Rotor S-4xUniversal

- > High-capacity swing-bucket rotor with max. speed 4,347 × g (4,500 rpm)
- > Broad range of adapters enables high versatility for tubes and flasks from 0.2 mL to 750 mL and plates
- > Universal bucket design accommodates both plates and tubes
- > Universal adapters accommodate selective plate formats and conical tubes
- > Aerosol-tight QuickLock caps for safe centrifugation of hazardous samples optionally available<sup>1)</sup>
- > Buckets, caps and adapters are autoclavable
- > Rotor lifetime: 50,000 cycles

<sup>1)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

### Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4xUniversal</b> , incl. universal buckets	5895200001	\$4,405.00
<b>Rotor S-4-Universal</b> , without buckets	5895201008	2,233.00
<b>Buckets for Rotor S-4-Universal</b> , set of 4	5895203000	2,259.00
<b>Buckets for Rotor S-4-Universal</b> , set of 2	5895202004	1,137.00
<b>Aerosol-tight caps</b> , for Rotor S-4xUniversal, set of 2 pcs.	5910750005	296.00
<b>Wide-neck bottle</b> , 750 mL, set of 2 pieces	5820708000	291.00

						
<b>Adapters for Rotor S-4xUniversal</b>						
<b>Tube Volume</b>	4 mL – 8 mL	7.5 mL – 12 mL	9 mL	Eppendorf Tubes® 5.0 mL	15 mL conical	MTP, DWP
<b>Max. tube diameter</b>	13 mm	16 mm	17.5 mm	17 mm	17 mm	–
<b>Max. vessel height</b>	119 mm	120 mm	120 mm	124 mm	124 mm	64 mm
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>	117 mm	118 mm	118 mm	122 mm	122 mm	64 mm <sup>2)</sup>
<b>Adapter</b>						
<b>Number of vessels per adapter/ rotor</b>	30/120	26/104	21/84	16/64	16/64	1/4
<b>Bottom shape</b>	round	round	round	conical		
<b>Centrifugation radius</b>	190 mm	195 mm	188 mm	191 mm		
<b>Max. RCF</b>	4,302 × g	4,302 × g	4,256 × g	4,324 × g		
<b>Packing</b>	set of 2 pcs.			set of 2 pcs.		
<b>Catalog No.</b>	5910755007	5910754000	5910762003	5910752008		
<b>List USD</b>	\$305.00	\$305.00	\$305.00	\$305.00		

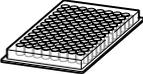
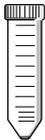
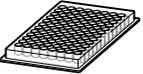
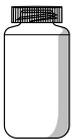
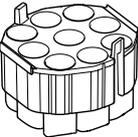
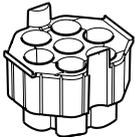
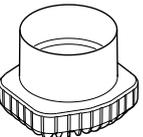
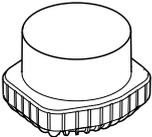
<sup>1)</sup> Please perform a manual test to determine the actual loading capacity. <sup>2)</sup> Aerosol-tight caps compatible with MTP, DWP 96 500 µl, DWP 384 200 µl. Aerosol-tight caps not compatible with DWP 96 1000 µl and 2000 µl. <sup>3)</sup> When used with aerosol-tight caps the max. capacity is reduced to 20 × 50 mL (5 × 50 mL per adapter).



**Rotor S-4xUniversal brings outstanding versatility to those customers who need to spin both tubes and plates. Three new innovative 'universal adapters' can spin selective conical tube and plate formats:**

- > Eppendorf Tubes® 5.0 mL/15 mL conical/DWP
- > 50 mL conical/MTP
- > 50 mL conical/250 mL flat/MTP

For customers who need either stacking capability, higher speed or aerosol-tight centrifugation of certain plate formats, a separate plate carrier is available.

							
50 mL conical	Microplate 96/384 wells	50 mL conical	Microplate 96/384 wells	250 mL flat, 175 - 225 mL conical	500 mL Corning®	750 mL	MTP, DWP, PCR plates
29 mm	–	62 mm	–	62 mm	96 mm	102 mm	–
116 <sup>3)</sup> mm	16 mm	124 mm	16 mm	146 mm	148 mm	139 mm	88 mm
116 mm	–	121 mm	–	139 mm	–	135 mm	60 mm
							
9/36	1/4	7/28	1/4	1/4	1/4	1/4	5/20
conical	flat	conical	flat	flat	conical	flat	flat
192 mm	115 mm	191 mm	115 mm	187 mm	187 mm	188 mm	170 mm
4,347 × g	2,604 × g	4,324 × g	2,604 × g	4,234 × g	4,234 × g	4,256 × g	3,849 × g
set of 2 pcs.	set of 2 pcs.		set of 2 pcs.		set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
5910759008			5910751001		5910760000	5910757000	5910753004
\$365.00			\$426.00		\$305.00	\$305.00	\$305.00

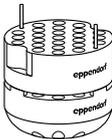
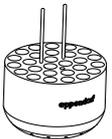
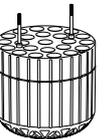
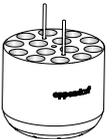
# Rotors for 5910 R/5920 R



## Rotor S-4x750

- > Medium-capacity swing-bucket rotor with max. speed  $4,800 \times g$  (4,700 rpm)
- > Broad range of adapters enables high versatility for tubes and flasks from 0.2 mL to 750 mL and plates
- > Mixed loading with 2 plate buckets and 2 round tube buckets allows for increased versatility
- > Aerosol-tight QuickLock caps for safe centrifugation of hazardous samples optionally available<sup>1)</sup>
- > Buckets, caps and adapters are autoclavable
- > Rotor lifetime: 100,000 cycles

<sup>1)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

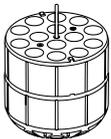
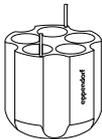
						
<b>Adapters for Rotor S-4x750</b>						
<b>Tube Volume</b>	1.5/2.0 mL	12 x 75 mm, 5 mL FACS	2.6 – 8 mL	5.5 – 12 mL	9 mL	14 mL
<b>Max. tube diameter</b>	11 mm	12 mm	13 mm	16 mm	17.5 mm	17.5 mm
<b>Max. vessel height</b>	39 mm	120 mm	121 mm	125 mm (130 mm in 2 inner rows)	117 mm (130 mm in 2 inner rows)	106 mm
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>	39 mm	113 mm	113 mm	120 mm	112 mm	106 mm
<b>Adapter</b>						
<b>Number of vessels per adapter/rotor</b>	50/200	27/108	23/92	20/80	20/80	14/56
<b>Bottom shape</b>	flat	round	round	round	round	round
<b>Centrifugation radius</b>	194 mm	186 mm	185 mm	186 mm	185 mm	185 mm
<b>Max. RCF</b>	$4,800 \times g$	$4,593 \times g$	$4,569 \times g$	$4,594 \times g$	$4,569 \times g$	$4,569 \times g$
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.			
<b>Catalog No.</b>	5825740009	5825747003	5825738004	5825736001	5825743008	5825748000
<b>List USD</b>	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.



## Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4x750</b> , aerosol-tight, without buckets	5895121004	\$2,020.00
<b>Rotor S-4x750</b> , aerosol-tight, incl. 4 × 750 mL round buckets	5895120008	3,650.00
<b>Buckets for Rotor S-4x750</b> , Round buckets for Rotor S-4x750, set of 2 pcs.	5895123007	1,025.00
<b>Buckets for Rotor S-4x750</b> , Round buckets for Rotor S-4x750, set of 4 pcs.	5895122000	1,980.00
<b>Buckets for Rotor S-4x750</b> , Plate bucket (aerosol-tight capable), incl. plate carrier, set of 4 pcs.	5895124003	1,980.00
<b>Buckets for Rotor S-4x750</b> , Plate bucket (aerosol-tight capable), incl. plate carrier, set of 2 pcs.	5895125000	1,025.00
<b>Aerosol-tight caps for plate buckets (aerosol-tight capable)</b> , aerosol-tight, for Rotor S-4-104 and Rotor S-4x750, set of 2 pcs.	022638937	302.00
<b>Aerosol-tight caps for 750 mL round buckets</b> , aerosol-tight, for Rotor S-4-104, Rotor S-4x750 and Rotor S-4x1000, set of 2 pcs.	5820747005	268.00
<b>Wide-neck bottle</b> , 750 mL, set of 2 pcs.	5820708000	291.00

							
Eppendorf Tubes® 5.0 mL and 15 mL conical	30 mL	50 mL conical	50 mL conical, skirted	250 mL flat, 175 – 225/250 mL conical <sup>2) 3)</sup>	500 mL Corning®	750 mL	MTP, DWP, PCR plates
17 mm	25 mm	31 mm	31 mm	62 mm	98 mm	104 mm	–
125 mm	117 mm	122 mm	122 mm	145 mm	150 mm	133 mm	60 mm
120 mm	112 mm	116 mm	116 mm	125 mm	–	133 mm	45 mm
							
14/56	8/32	7/28	5/20	1/4	1/4	1/4	4/16 (MTP) 1/4 (DWP)
conical	flat	conical	conical	flat	conical	flat	
188 mm	180 mm	187 mm	177 mm	183 mm	186 mm	185 mm	161 mm
4,643 × g	4,445 × g	4,618 × g	4,371 × g	4,519 × g	4,594 × g	4,569 × g	3,976 × g
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.					
5825734009	5825755006	5825733002	5825732006	5825741005	5825745000	5825744004	5895125000
\$311.00	\$310.00	\$311.00	\$311.00	\$311.00	\$311.00	\$192.00	\$1,025.00

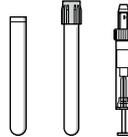
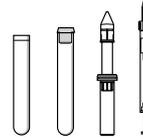
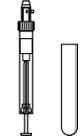
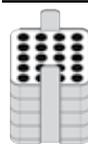
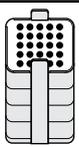
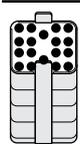
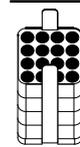


# Rotors for 5910 R



## Rotor S-4x500

- > Medium-capacity swing-bucket rotor with max. speed 3,220 × g (4,000 rpm)
- > Rotor S-4x500 accommodates tubes and bottles from 0.2 mL to 500 mL as well as plates<sup>1)</sup>
- > Aerosol-tight caps for safe centrifugation of hazardous samples optionally available<sup>2)</sup>
- > Mixed loading with 2 plate buckets and 2 rectangular tube buckets allows for increased versatility
- > Buckets, caps and adapters are autoclavable
- > Rotor lifetime: 100,000 cycles

						
<b>Adapters for Rotor S-4x500</b>						
<b>Tube Volume</b>	1.5/2.0 mL	1.2 – 5 mL	2.6 – 5 mL	2.6 – 7 mL	3 – 15 mL	7 – 17 mL
<b>Max. tube diameter</b>	11 mm	11 mm	13 mm	13 mm	16 mm	17.5 mm
<b>Max. vessel height</b>	43 mm	118 mm	118 mm	118 mm	118 mm (130 mm in 2 inner rows)	118 mm (130 mm in 2 inner rows)
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>	43 mm	108 mm	107 mm	108 mm	118 mm (130 mm in 2 inner rows)	118 mm (130 mm in 2 inner rows)
<b>Adapter</b>						
<b>Number of vessels per adapter/rotor</b>	20/80	20/80	25/100	18/72	16/64	16/64
<b>Bottom shape</b>	flat	flat	flat with rubber mat	flat with rubber mat	flat with rubber mat	flat with rubber mat
<b>Centrifugation radius</b>	165 mm	168 mm	168 mm	168 mm	168 mm	168 mm
<b>Max. RCF</b>	2,950 × g	3,000 × g	3,000 × g	3,000 × g	3,000 × g	3,000 × g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.			
<b>Catalog No.</b>	022638704	022638707	022638700	022638718	022638721	022638726
<b>List USD</b>	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	\$311.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.

<sup>2)</sup> Aerosol-tightness tested by Health Protection Agency, Porton Down, UK. <sup>3)</sup> Only Centriprep® tube without locking lid. <sup>4)</sup> Please note that these conical flasks need to be used together with a conical form insert provided by the flask manufacturer. <sup>5)</sup> Available as a set of 2 flasks (see ordering information). <sup>6)</sup> Aerosol-tight caps can be used for BD Falcon® 225 mL and Nunc® 200 mL conical tubes if rubber mat, base plate and clamp are removed from the adapter. Remove rubber mat for aerosol-tight centrifugation of Nalgene® 175 mL conical tube. <sup>7)</sup> Insert 022654373 recommended for use with 50 mL conical-skirted tubes. Set of 8.



### Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4x500</b> , for 500 mL rectangular buckets or MTP/Flex buckets		
incl. 4 x 500 mL rectangular buckets	5895170005	\$3,147.00
without buckets	5895175007	1,786.00
<b>Cap for 500 mL rectangular buckets</b> , aerosol-tight, for Rotor A-4-81, set of 2 pcs.	022638661	268.00
<b>MTP/Flex bucket</b> , for Rotor A-4-81, set of 2	022638866	1,030.00
<b>MTP/Flex bucket</b> , for Rotor A-4-81, set of 4	022638840	2,060.00
<b>Bucket 500 mL rectangular</b> , for Rotor A-4-81, set of 4	022638629	1,500.00
<b>Aerosol-tight cap for 500 mL rectangular buckets</b> , for Rotor A-4-81, set of 2 pieces	022638661	268.00
<b>500 mL bottle</b> , wide-neck, for Rotor A-4-81, square, set of 2 pieces	022638657	291.00
<b>400 mL bottle</b> , wide-neck, for Rotor A-4-81, set of 2 pieces	022638653	291.00

Eppendorf Tubes® 5.0 mL and 15 mL conical tubes	50 mL conical	Conical tubes, skirted <sup>7)</sup> /Centrifuge Filter Units 50 mL	180 – 250 mL flat/175 – 225 mL conical <sup>4)</sup>	400 mL <sup>5)</sup>	500 mL <sup>5)</sup>	MTP, DWP, PCR plates
17.5 mm	31 mm	31/29 mm	62 mm	81 mm	83 mm	–
121 mm	122 mm	121 mm	133 mm <sup>6)</sup>	–	135 mm	60 mm
119 mm	116 mm	–	–	–	135 mm	–
12/48	5/20	5/20	1/4	1/4	–/4	4/16 (MTP) 1/4 (DWP)
conical	conical	flat with rubber mat	flat with rubber mat	flat, rubber	flat	flat with rubber mat
173 mm	173 mm	173 mm	173 mm	180 mm	180 mm	163 mm
3,100 x g	3,100 x g	3,100 x g	3,100 x g	3,220 x g	3,220 x g	2,900 x g
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	–	set of 2 pcs.
022638742	022638769	022638904	022638921	022638785	–	022638866
\$311.00	\$311.00	\$311.00	\$311.00	\$311.00	–	\$1,030.00

# Rotors for 5910 R

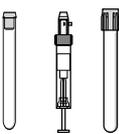
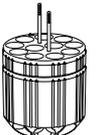


## Rotor S-4x400

- > High-speed medium-capacity swing-bucket rotor with max. speed 5,234 × g (5,100 rpm)
- > Broad range of adapters enables high versatility for tubes and bottles from 0.2 mL to 250 mL
- > Aerosol-tight QuickLock caps for safe centrifugation of hazardous samples optionally available<sup>2)</sup>
- > Buckets, caps and adapters are autoclavable
- > Rotor lifetime: 100,000 cycles

### Ordering information

Description	Catalog No.	List USD
<b>Rotor S-4x400</b> , incl. 400 mL round bucket	5895180000	\$3,035.00
<b>Rotor S-4x400</b> , without buckets	5895181007	1,786.00
<b>Round Buckets for Rotor S-4x400</b> , set of 4	5895182003	1,878.00
<b>Round Buckets for Rotor S-4x400</b> , set of 2	5895183000	990.00
<b>Aerosol-tight caps</b> , for Rotor S-4x400, set of 2 pcs.	5910700008	268.00

				
<b>Adapters for Rotor S-4x400</b>				
<b>Tube Volume</b>	1.5 mL/2.0 mL	12 mm × 75 mm	4 mL – 8 mL	7.5 mL – 12 mL
<b>Max. tube diameter</b>	11 mm	12 mm	13 mm	16 mm
<b>Max. vessel height</b>	39 mm	188 mm	119 mm	122 mm
<b>Max. vessel height for use with cap/lid<sup>1)</sup></b>		112 mm	105 mm	115 mm
<b>Adapter</b>				
<b>Number of vessels per adapter/rotor</b>	26/104	17/68	15/60	11/44
<b>Bottom shape</b>	open	round	round	round
<b>Centrifugation radius</b>		172 mm	171 mm	173 mm
<b>Max. RCF</b>		5,002 × g	4,818 × g	4,874 × g
<b>Packing</b>	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
<b>Catalog No.</b>	5910708009	5910711000	5910703007	5910704003
<b>List USD</b>	\$290.00	\$290.00	\$290.00	\$290.00

<sup>1)</sup> Exceeding the maximum tube length may reduce the loading capacity of the rotor. Please perform a manual swing-out test before starting the centrifuge run to make sure the tubes do not hit the rotor yoke.

<sup>2)</sup> Aerosol-tightness tested by Health Protection Agency, Porton Down, UK. <sup>3)</sup> Please note that these conical flasks need to be used together with a conical form insert provided by the flask manufacturer.

<sup>4)</sup> The following conical bottles are compatible with adapter 5910714009: Nalgene 3143-0175 (without aerosol-tight cap), Nalgene 3144-0175 (without aerosol-tight cap), Nalgene 3145-0175, Nunc 375813.

<sup>5)</sup> The following conical bottles are compatible with adapter 5910705000: BD 352076 and Nalgene 3145-0175 (without aerosol-tight cap).



9 mL	Eppendorf Tubes® 5.0 mL and 15 mL conical	50 mL conical	175 mL – 225 mL conical <sup>3)4)</sup>	175 mL – 250 mL flat/ conical <sup>3)5)</sup>
17.5 mm	17 mm	29 mm	62 mm	62 mm
122 mm	133 mm	125 mm	143 mm	138 mm
115 mm	126 mm	117 mm	137 mm	129 mm
8/32	7/28	4/16	1/4	1/4
round	conical	conical	conical	flat
173 mm	180 mm	179 mm	181 mm	174 mm
4,874 × g	5,071 × g	5,043 × g	5,263 × g	5,060 × g
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
5910709005	5910702000	5910701004	5910714009	5910705000
\$290.00	\$290.00	\$290.00	\$290.00	\$290.00



# Rotors for 5910 R/5920 R



## Rotor FA-6x50

- > High-speed rotor for applications in tubes from 5 – 50 mL
- > Max. speed 20,130 × g (12,100 rpm)
- > Eppendorf QuickLock rotor lid for fast lid locking
- > Aerosol-tight<sup>1)</sup> for safe centrifugation of hazardous samples
- > Low rotor weight (7.0 lb) for easy handling
- > Anodized aluminum for high chemical resistance
- > 45° borehole angle minimizes pellets smear
- > Rotor, lid and adapters are autoclavable
- > Rotor lifetime: 100,000 cycles

<sup>1)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

### Ordering information

Description	Catalog No.	List USD
Rotor FA-6x50, aerosol-tight, incl. QuickLock rotor lid	5895150004	\$2,680.00

<b>Adapters for Rotor FA-6x50</b>					
<b>Tube Volume</b>	2.6 – 5 mL	4 – 8 mL	5.5 – 10 mL	7.5 – 12 mL	Eppendorf Tubes® 5.0 mL
<b>Max. tube diameter</b>	13 mm	13 mm	16 mm	16 mm	17 mm
<b>Max. vessel height for use with cap/lid</b>	119 mm	119 mm	119 mm	119 mm	121 mm
<b>Adapter</b>					
<b>Number of vessels per adapter/rotor</b>	1/6	1/6	1/6	1/6	1/6 <sup>1)</sup>
<b>Bottom shape</b>	round	round	round	round	conical
<b>Centrifugation radius</b>	120 mm	120 mm	120 mm	120 mm	121 mm
<b>Max. RCF</b>	19,246 × g	19,246 × g	19,246 × g	19,246 × g	19,806 × g
<b>Packing</b>	set of 2 pcs.				
<b>Catalog No.</b>	5820726008	5820725001	5820728000	5820727004	5820730005
<b>List USD</b>	\$171.00	\$171.00	\$171.00	\$171.00	\$166.00

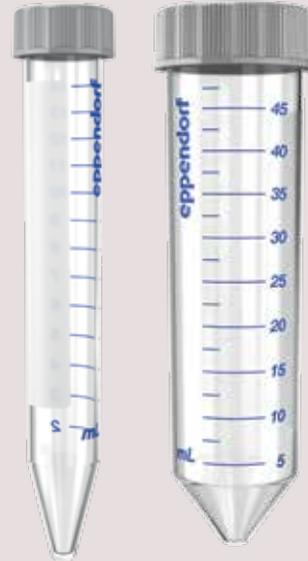
<sup>1)</sup> Eppendorf Tubes® 5.0 mL with screw cap will not fit in this adapter.



# Eppendorf Conical Tubes

Whether centrifugation, mixing, or other applications – the Eppendorf Conical Tubes 15 mL and 50 mL will perfectly fit into your workflows. They represent the next step in Eppendorf’s comprehensive system solutions in liquid, sample and cell handling.

More information: [www.eppendorf.com/conicals](http://www.eppendorf.com/conicals)



7 – 17 mL	15 mL	15 – 18 mL	20 – 30 mL	35 mL	50 mL conical
17.5 mm	17 mm	18 mm	26 mm	29 mm	31 mm
122 mm	125 mm	125 mm	125 mm	125 mm	121 mm
1/6	1/6	1/6	1/6	1/6	-/6
round	conical	round	round	conical	conical
120 mm	120 mm	120 mm	105 mm	112 mm	123 mm
19,246 x g	19,246 x g	19,246 x g	17,187 x g	18,333 x g	20,130 x g
set of 2 pcs.	-				
5820729007	5820717009	5820720000	5820721006	5820722002	-
\$171.00	\$171.00	\$171.00	\$171.00	\$171.00	-

# Rotors for 5910 R/5920 R



## Rotor FA-20x5

- > 20 places for Eppendorf Tubes® 5.0 mL<sup>1)</sup>
- > Max. speed: 20,913 × g (13,100 rpm)
- > Aerosol-tight<sup>2)</sup> Eppendorf QuickLock rotor lid
- > Rotor, lid and adapters are autoclavable (121 °C, 20 min)
- > Anodized aluminum for high chemical resistance
- > Rotor lifetime: 100,000 cycles

<sup>1)</sup> For Eppendorf Tubes® 5.0 mL with screw cap the capacity is limited to 10 tubes. <sup>2)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

### Ordering information

Description	Catalog No.	List USD
<b>Rotor FA-20x5</b> , for 20 Eppendorf Tubes® 5.0 mL, incl. aerosol-tight Eppendorf QuickLock® rotor lid	5895130003	\$1,790.00
<b>Adapter</b> , for 1 vessel 1.5 – 2.0 mL, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820768002	45.00
<b>Adapter</b> , for 1 cryotube, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820769009	45.00
<b>Adapter</b> , for 1 HPLC tube, for Rotors FA-45-12-17, FA-45-16-17 and FA-45-20-17, set of 4 pcs.	5820770007	45.00



## Rotor FA-48x2

- > 48 places for 1.5/2.0 mL tubes
- > Max. speed: 21,194 × g/13,700 rpm (5920 R)/22,132 × g/14,000 rpm (5910 R)
- > Eppendorf QuickLock rotor lid for fast lid locking
- > Aerosol-tight<sup>1)</sup> for safe centrifugation of hazardous samples
- > Anodized aluminum for high chemical resistance
- > Rotor and lid are autoclavable (121 °C, 20 min)
- > Rotor lifetime: 100,000 cycles

<sup>1)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

### Ordering information

Description	Catalog No.	List USD
<b>Rotor FA-48x2</b> , incl. aerosol-tight Eppendorf QuickLock® rotor lid	5895135005	\$1,790.00
<b>Adapter</b> , for 1 tube 0.5 mL, max. Ø 8 mm or microtainer 0.6 mL, max. Ø 8 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636227	35.50
<b>Adapter</b> , for 1 tube 0.4 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636243	35.50
<b>Adapter</b> , for 1 PCR tube 0.2 mL, max. Ø 6 mm, for all 1.5/2.0 mL rotors, set of 6 pcs.	022636260	35.50



## Rotors for 5910 R



### Rotor F-48x15

- > High-capacity fixed-angle rotor for 15 mL conical and glass tubes
- > Maximum speed: 5,005 × g (5,500 rpm)
- > Form inserts for 15 mL conical tubes
- > Rotor lifetime: 100,000 cycles

#### Ordering information

Description	Catalog No.	List USD
Rotor F-48x15, includes 24 steel sleeves and adapters	5895160000	\$1,573.00



### Rotor FA-30x2

- > 30 places for 1.5/2.0 mL tubes
- > Max. speed: 20,984 × g (max. 13,700 rpm)
- > Eppendorf QuickLock® rotor lid for fast lid locking
- > Aerosol-tight for safe centrifugation of hazardous samples<sup>1)</sup>
- > Anodized aluminum for high chemical resistance
- > Rotor and lid are autoclavable (121 °C, 20 min)
- > Rotor lifetime: 100,000 cycles

<sup>1)</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

#### Ordering information

Description	Catalog No.	List USD
Rotor FA-30x2, incl. aerosol-tight Eppendorf QuickLock® rotor lid	5895155006	\$1,614.00

# Sample Handling



Model	Eppendorf BioPhotometer® D30	Eppendorf BioSpectrometer® basic
Page(s)	250	251
Wavelength range absorption	230, 260, 280, 320, 340, 405, 490, 562, 595, 600 nm	Scan (nm): 200 – 830 at 1 nm increments
Wavelength Selection Increment	–	1 nm
Scanning	–	yes
Spectral bandwidth	≤4 nm	≤4 nm
Systematic error wavelength	≤0.5 nm	≤0.5 nm
Random error wavelength	±1 nm	±1 nm
Absorption measuring range	0 A – 3.0 A (260 nm)	0 A – 3.0 A (260 nm)
Systematic error absorption	±1 % (A = 1)	±1 % (A = 1)
Random error absorption	≤0.002 at A = 0 ≤0.005 (0.5 %) at A = 1	≤0.002 at A = 0 ≤0.005 (0.5 %) at A = 1
Light source absorption	Xenon flash lamp	Xenon flash lamp
Detector Type	CMOS photodiodes	CMOS photodiode array, 1024 pixel
Measuring principle absorption	Single-beam absorption photometer with reference beam	Single-beam absorption spectrophotometer with reference beam
Light path height	8.5 mm	8.5 mm
Light source fluorescence	–	–
Beam receiver fluorescence	–	–
Measuring principle fluorescence	–	–
Fluorescence measuring range	–	–
dsDNA concentration range	2.5 ng/μL – 1,500 ng/μL	2.5 ng/μL – 1,500 ng/μL
BSA concentration range	7.5 ng/μL – 45.45 μg/μL	7.5 ng/μL – 45.45 μg/μL
Operator guidance language	Spanish, Italian, French, English, German, Japanese	Spanish, Italian, French, English, German, Japanese
Method memory	>100 method programs	>100 method programs
Dimensions (W x D x H)	295 x 400 x 150 mm / 11.6 x 15.7 x 6 in	295 x 400 x 150 mm / 11.6 x 15.7 x 6 in
Weight w/o accessories	5.4 kg	5.4 kg
Cuvette shaft	12.5 mm x 12.5 mm	12.5 mm x 12.5 mm
Power supply	100 – 240 V, 50 – 60 Hz	100 – 240 V, 50 – 60 Hz
Power consumption	Approx. 15 W during operating step Approx. 5 W with dimmed display	Approx. 15 W during operating step Approx. 5 W with dimmed display
Interfaces	<ul style="list-style-type: none"> <li>&gt; USB master: for USB stick and thermal printer DPU-S445</li> <li>&gt; USB slave for connecting to a PC (All functions available without PC)</li> <li>&gt; Serial interface RS-232: for thermal printer DPU-414</li> <li>&gt; Ethernet interface RJ45: For connecting to a network printer or emailing data outputs directly off instrument</li> </ul>	<ul style="list-style-type: none"> <li>&gt; USB master: for USB stick and thermal printer DPU-S445</li> <li>&gt; USB slave for connecting to a PC (All functions available without PC)</li> <li>&gt; Serial interface RS-232: for thermal printer DPU-414</li> <li>&gt; Ethernet interface RJ45: For connecting to a network printer or emailing data outputs directly off instrument</li> </ul>

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



### Eppendorf BioSpectrometer® kinetic

**252**

Scan (nm): 200 – 830 at 1 nm increments

1 nm

yes

≤4 nm

≤0.5 nm

±1 nm

0 A – 3.0 A (260 nm)

±1 % (A = 1)

≤0.002 at A = 0

≤0.005 (0.5 %) at A = 1

Xenon flash lamp

CMOS photodiode array, 1024 pixel

Single-beam absorption spectrophotometer with reference beam

8.5 mm

–

–

–

–

2.5 ng/μL – 1,500 ng/μL

7.5 ng/μL – 45.45 μg/μL

Spanish, Italian, French, English, German, Japanese

>100 method programs

295 × 400 × 150 mm / 11.6 × 15.7 × 6 in

5.5 kg

12.5 mm × 12.5 mm, tempered 20 °C – 42 °C

100 – 240 V, 50 – 60 Hz

Approx. 30 W during operating step

Approx. 5 W with dimmed display and temperature control switched off

- > USB master: for USB stick and thermal printer DPU-S445
- > USB slave for connecting to a PC (All functions available without PC)
- > Serial interface RS-232: for thermal printer DPU-414
- > Ethernet interface RJ45: For connecting to a network printer or emailing data outputs directly off instrument

### Eppendorf BioSpectrometer® fluorescence

**253**

Scan (nm): 200 – 830 at 1 nm increments

1 nm

yes

≤4 nm

≤0.5 nm

±1 nm

0 A – 3.0 A (260 nm)

–

≤0.002 at A = 0

≤0.005 (0.5 %) at A = 1

Xenon flash lamp

CMOS photodiode array, 1024 pixel

Single-beam absorption spectrophotometer with reference beam

8.5 mm

LED

Photodiodes

Confocal filter fluorometer with reference beam

0.5 nM – 2,000 nM fluorescein (emission wavelength 520 nm)

1.0 pg/μL – 1,500 ng/μL

0.01 ng/μL – 45.45 μg/μL

Spanish, Italian, French, English, German, Japanese

>100 method programs

295 × 400 × 150 mm / 11.6 × 15.7 × 6 in

5.4 kg

12.5 mm × 12.5 mm

100 – 240 V, 50 – 60 Hz

Approx. 15 W during operating step

Approx. 5 W with dimmed display

- > USB master: for USB stick and thermal printer DPU-S445
- > USB slave for connecting to a PC (All functions available without PC)
- > Serial interface RS-232: for thermal printer DPU-414
- > Ethernet interface RJ45: For connecting to a network printer or emailing data outputs directly off instrument

# Eppendorf BioPhotometer® D30

## Description

The Eppendorf BioPhotometer D30 is the 3rd generation of Eppendorf spectrophotometers to become an established standard in the life sciences. Routine pre-defined wavelengths are easily selectable, allowing for quick and simple programming. Users are guided through every step of the assay with short, simple on-screen instructions. The ultra-stable Xenon flash lamp doesn't require any warm up time and a measurement typically takes 5 seconds. Raw and processed data are clearly presented on the large color screen and can be exported directly from the instrument in a variety of common formats. Eppendorf disposable UVettes enable measurements with as little as 50 µL of sample and the Eppendorf µCuvette G1.0 reduces this further to 1.5 µL of sample.



## Product features

- > Absorption measurements for one or more fixed wavelengths
- > Scan for specific UV applications with automatically determined purity ratios
- > Preprogrammed applications for quick start and applications with evaluation via factor, standard or standard series
- > Integrated application and results memory
- > Data transfer via USB interface, Ethernet or via e-mail and direct printout of results
- > Data output via JPEG screenshots, Microsoft Excel® or secure PDF files to a standard USB flash drive or via email
- > Guided software process to minimize errors
- > Compatible with semi-micro and micro-volume measuring cells as well as standard cuvettes
- > Utilizes fixed wavelengths, irrelevant of path length
- > Integrated self-test and calibration history

## Applications

- > Nucleic acid quantification
- > Direct protein quantification (UV 280 nm)
- > Microvolume measurement via µCuvette G1.0 for highly concentrated samples
- > Bacteria growth measurement (OD 600)
- > Colorimetric assays for protein quantification, e.g., BCA, Bradford, Lowry
- > 340 nm: assays using NADPH or NAPH
- > 405 nm: assays using para-nitrophenol
- > 490 nm: cytotoxicity assay

## Ordering information

Description	Catalog No.	List USD
Eppendorf BioPhotometer® D30, 100 – 120 V/50 – 60 Hz	6133000010	\$6,669.00
Eppendorf µCuvette® G1.0 and Eppendorf BioPhotometer® D30, 100 – 120 V/50 – 60 Hz	6133000908	8,344.00
Eppendorf BioPhotometer® D30 Reference Filter Set, filter set for verifying photometric accuracy and wavelength systematic error (according to NIST®)	6133928004	2,487.00
Thermal Printer DPU-S445	6135010004	914.00

i For more information go to [www.eppendorf.com/photometry](http://www.eppendorf.com/photometry)



# Eppendorf BioSpectrometer® basic

## Description

Building on the legacy of the Eppendorf BioPhotometer D30, the Eppendorf BioSpectrometer basic shares its simplicity, flexibility and reliability. In addition to the Biophotometer D30, the BioSpectrometer basic has freely selectable wavelengths from 200 – 830 nm (selectable in 1nm increments). This allows the user to define the parameters of each assay, whether it be a scan, a single-wavelength measurement or a multi-wavelength measurement. The Eppendorf BioSpectrometer basic caters to more disciplines as the wavelengths are not pre-defined and allows for non-routine assays or new assays to be easily programmed (in addition to the preprogrammed routine methods). The Eppendorf BioSpectrometer basic is a robust yet flexible 'workhorse'.



## Product features

- > Absorbance measurement for one or more wavelengths, recording of wavelength scans from 200 nm to 830 nm (increment: 1 nm)
- > Automatic evaluation and storage of measurement data with clear presentation of results
- > Spectral graph to display sample purity with automatic ratio calculation
- > Freely programmable applications with evaluation via factor, standard or standard series and freely programmable parameters
- > Two-wavelength method with subtraction or division evaluation
- > Integrated application and results memory
- > Data transfer via USB interface, Ethernet or via e-mail and direct printout of results
- > Guided software process to minimize errors
- > Integrated self-test and calibration history

## Applications

- > Nucleic acid quantification
- > Direct protein quantification (UV 280 nm)
- > Microvolume measurement via  $\mu$ Cuvette G1.0 for highly concentrated samples
- > Bacteria growth measurement (OD 600)
- > Colorimetric assays for protein quantification, e.g., BCA, Bradford, Lowry
- > Evaluation of FOI for dye-labeled biomolecules (nucleic acid or proteins)
- > Free selectable wavelengths, e.g., 340 nm: assays using NADPH or NAPH, 405 nm: assays using para-nitrophenol, 420 nm: assays using ortho-nitrophenol, 490 nm: colorimetric fructose determination, 490 nm: cytotoxicity assay

## Ordering information

Description	Catalog No.	List USD
Eppendorf BioSpectrometer® basic	613500017	\$ 8,740.00
Eppendorf $\mu$ Cuvette® G1.0 and Eppendorf BioSpectrometer® basic	6135000923	10,211.00
Eppendorf BioSpectrometer® Reference Filter Set, filter set for verifying photometric accuracy and wavelength systematic error (according to NIST®)	6135928001	2,426.00
Thermal Printer DPU-S445	6135010004	914.00

# Eppendorf BioSpectrometer® kinetic

## Description

The Eppendorf BioSpectrometer kinetic is an expansion of the Eppendorf BioSpectrometer basic and offers preprogrammed and freely programmable timed and temperature controlled assays. It features an integrated heated cuvette shaft. Its integrated Peltier element guarantees high-precision for determining enzyme and substrate kinetics as well as other temperature-sensitive applications. Guided software is included; minimal effort is required to set up new assays. Retrospective modification of the time window for regression analysis can be made directly on the device. The Biospectrometer kinetic replaces the traditional large cumbersome setup required for temperature controlled timed assays.



## Product features

- > All Eppendorf BioSpectrometer basic options
- > Integrated temperature-controlled cuvette shaft (adjustment range +20 °C to +42 °C in 0.1 °C increments)
- > Integrated interval timer (minimum interval 5 s, maximum measuring time range 59 m 59 s)
- > Preprogrammed and freely programmable kinetic methods
- > Retrospective modification of the time window for regression analysis
- > Data output via JPEG screenshots, Microsoft Excel or secure PDF files to a standard USB flash drive or via email

## Applications

- > All Eppendorf BioSpectrometer basic applications
- > Additional kinetic applications, and enzyme activity testings at different temperatures e.g.: room temperature to 42 °C by increments of 0.1 °C
- > Activation of glucose via hexokinase (340 nm, 37 °C)
- > Substrate concentration of ATP (340 nm, 37 °C)
- > Enzymatic assay of  $\beta$ -galactosidase (420 nm, 30 °C)

## Ordering information

Description	Catalog No.	List USD
Eppendorf BioSpectrometer® kinetic, 100 – 120 V/50 – 60 Hz	613600010	\$10,658.00
Eppendorf $\mu$ Cuvette® G1.0 and Eppendorf BioSpectrometer® kinetic, 100 – 120 V/50 – 60 Hz	6136000851	11,876.00
Eppendorf BioSpectrometer® Reference Filter Set, filter set for verifying photometric accuracy and wavelength systematic error (according to NIST®)	6135928001	2,426.00
Thermal Printer DPU-S445	6135010004	914.00

i For more information go to [www.eppendorf.com/photometry](http://www.eppendorf.com/photometry)



# Eppendorf BioSpectrometer® fluorescence

## Description

The Eppendorf BioSpectrometer fluorescence is an expansion of the Eppendorf BioSpectrometer basic and features an integrated fluorescence module. UV/Vis assays, fluorescence assays and semi-micro/micro-volume measurements can all be carried out on a single instrument without the need for external control (PC/Laptop). Eppendorf BioSpectrometer fluorescence can be used to increase the measuring range for biomolecules (nucleic acids and proteins) by a factor of 1,000, compared to UV measurements. Preprogrammed (modified) methods for Qubit DNA quantification kits (SS, HS, BR) expand the flexibility and functionality of the instrument. Additionally, the use of the Eppendorf  $\mu$ Cuvette G1.0 for fluorescence assays (5  $\mu$ L loading volume) allows for a vast reduction in reagent usage.



## Product features

- > All Eppendorf BioSpectrometer basic options
- > Preprogrammed and freely programmable fluorescence methods
- > Preprogrammed (modified) methods for Qubit DNA quantification kits (SS, HS, BR)
- > Fluorescence measurement concentration of dsDNA down to 1  $\text{pg}/\mu\text{L}$ , using Pico Green®
- > Fluorescence measurement concentration of BSA down to 0.01  $\text{ng}/\mu\text{L}$
- > Fluorescence excitation wavelength 470 nm, emission wavelengths 520 nm and 560 nm
- > Fluorescence intensity across a range of 0.5 nM to 2,000 nM fluorescein
- > Single consumable (UVette) for UV/Vis and fluorescence assays

## Applications

- > Ideal for NGS applications (micro-volume UV/Vis and fluorescence assays in a single instrument)
- > dsDNA quantification down to 1  $\text{pg}/\mu\text{L}$  with common kits, e.g., Pico Green®
- > ssDNA quantification down to 10  $\text{pg}/\mu\text{L}$
- > RNA quantification down to 20  $\text{pg}/\mu\text{L}$
- > Oligo quantification down to 10  $\text{pg}/\mu\text{L}$
- > Protein (BSA) quantification down to 0.01  $\text{ng}/\mu\text{L}$
- > Quantification of GFP-binding proteins
- > Growth measurement of GFP-binding bacteria

## Ordering information

Description	Catalog No.	List USD
Eppendorf BioSpectrometer® fluorescence, 100 – 120 V/50 – 60 Hz	613700014	\$12,789.00
Eppendorf $\mu$ Cuvette® G1.0 and Eppendorf BioSpectrometer® fluorescence, 100 – 120 V/50 – 60 Hz	6137000902	14,210.00
Eppendorf BioSpectrometer® fluorescence Reference Filter Set, filter set for verifying photometric accuracy and wavelength systematic error (according to NIST®) and verifying fluorimetric precision (random error) and linearity	6137928009	4,101.00
Thermal Printer DPU-S445	6135010004	914.00



Technical specifications	Eppendorf BioPhotometer® D30	Eppendorf BioSpectrometer® basic
<b>Model</b>	<b>Eppendorf BioPhotometer® D30</b>	<b>Eppendorf BioSpectrometer® basic</b>
<b>Wavelength range absorption</b>	Fixed wavelength (nm): 230, 260, 280, 320, 340, 405, 490, 562, 595, 600	Scan (nm): 200 – 830 at 1 nm increments
<b>Absorption measuring range</b>	0 A – 3.0 A (260 nm)	0 A – 3.0 A (260 nm)
<b>Random error absorption</b>	≤0.002 at A = 0 ≤0.005 (0.5 %) at A = 1	≤0.002 at A = 0 ≤0.005 (0.5 %) at A = 1
<b>dsDNA concentration range (UV 260 nm) μCuvette G1.0</b>	25 ng/μL – 1,500 ng/μL ±1 ng/μL at A = 0 ±2.5 ng/μL at A = 1 (0.5 %)	25 ng/μL – 1,500 ng/μL ±1 ng/μL at A = 0 ±2.5 ng/μL at A = 1 (0.5 %)
<b>dsDNA concentration range (UV 260 nm) UVette 2 mm</b>	12.5 ng/μL – 750 ng/μL ±0.5 ng/μL at A = 0 ±1.25 ng/μL at A = 1 (0.5 %)	12.5 ng/μL – 750 ng/μL ±0.5 ng/μL at A = 0 ±1.25 ng/μL at A = 1 (0.5 %)
<b>dsDNA concentration range (UV 260 nm) UVette 10 mm</b>	2.5 ng/μL – 150 ng/μL ±0.1 ng/μL at A = 0 ±0.25 ng/μL at A = 1 (0.5 %)	2.5 ng/μL – 150 ng/μL ±0.1 ng/μL at A = 0 ±0.25 ng/μL at A = 1 (0.5 %)
<b>BSA concentration range (UV 280 nm) μCuvette G1.0</b>	75 ng/μL – 45.45 μg/μL ±0.03 μg/μL at A = 0 ±0.076 μg/μL at A = 1 (0.5 %)	75 ng/μL – 45.45 μg/μL ±0.03 μg/μL at A = 0 ±0.076 μg/μL at A = 1 (0.5 %)
<b>BSA concentration range (UV 280 nm) UVette 2 mm</b>	37.5 ng/μL – 22.5 μg/μL ±0.015 μg/μL at A = 0 ±0.038 μg/μL at A = 1 (0.5 %)	37.5 ng/μL – 22.5 μg/μL ±0.015 μg/μL at A = 0 ±0.038 μg/μL at A = 1 (0.5 %)
<b>BSA concentration range (UV 280 nm) UVette 10 mm</b>	7.5 ng/μL – 4.5 μg/μL ±0.003 μg/μL at A = 0 ±0.007 μg/μL at A = 1 (0.5 %)	7.5 ng/μL – 4.5 μg/μL ±0.003 μg/μL at A = 0 ±0.007 μg/μL at A = 1 (0.5 %)
<b>Adjustable temperature range</b>	–	–
<b>Systematic temperature error</b>	–	–
<b>Random temperature error</b>	–	–
<b>Measuring time range</b>	–	–
<b>Interval between two measuring points</b>	–	–
<b>BSA concentration range</b>	7.5 ng/μL – 45.45 μg/μL	7.5 ng/μL – 45.45 μg/μL
<b>Light source absorption</b>	Xenon flash lamp	Xenon flash lamp
<b>Light source fluorescence</b>	–	–
<b>Measuring principle fluorescence</b>	–	–
<b>Excitation wavelength fluorescence</b>	–	–
<b>Emission wavelength I fluorescence</b>	–	–
<b>Emission wavelength II fluorescence</b>	–	–
<b>Fluorescence measuring range</b>	–	–
<b>Random error fluorescence</b>	–	–

i For more information go to [www.eppendorf.com/photometry](http://www.eppendorf.com/photometry)



Technical specifications	Eppendorf BioSpectrometer® kinetic	Eppendorf BioSpectrometer® fluorescence
<b>Model</b>		
<b>Wavelength range absorption</b>	Scan (nm): 200 – 830 at 1 nm increments	Scan (nm): 200 – 830 at 1 nm increments
<b>Absorption measuring range</b>	0 A – 3.0 A (260 nm)	0 A – 3.0 A (260 nm)
<b>Random error absorption</b>	≤0.002 at A = 0 ≤0.005 (0.5 %) at A = 1	≤0.002 at A = 0 ≤0.005 (0.5 %) at A = 1
<b>dsDNA concentration range (UV 260 nm) μCuvette G1.0</b>	25 ng/μL – 1,500 ng/μL ±1 ng/μL at A = 0 ±2.5 ng/μL at A = 1 (0.5 %)	25 ng/μL – 1,500 ng/μL ±1 ng/μL at A = 0 ±2.5 ng/μL at A = 1 (0.5 %)
<b>dsDNA concentration range (UV 260 nm) UVette 2 mm</b>	12.5 ng/μL – 750 ng/μL ±0.5 ng/μL at A = 0 ±1.25 ng/μL at A = 1 (0.5 %)	12.5 ng/μL – 750 ng/μL ±0.5 ng/μL at A = 0 ±1.25 ng/μL at A = 1 (0.5 %)
<b>dsDNA concentration range (UV 260 nm) UVette 10 mm</b>	2.5 ng/μL – 150 ng/μL ±0.1 ng/μL at A = 0 ±0.25 ng/μL at A = 1 (0.5 %)	2.5 ng/μL – 150 ng/μL ±0.1 ng/μL at A = 0 ±0.25 ng/μL at A = 1 (0.5 %)
<b>BSA concentration range (UV 280 nm) μCuvette G1.0</b>	75 ng/μL – 45.45 μg/μL ±0.03 μg/μL at A = 0 ±0.076 μg/μL at A = 1 (0.5 %)	75 ng/μL – 45.45 μg/μL ±0.03 μg/μL at A = 0 ±0.076 μg/μL at A = 1 (0.5 %)
<b>BSA concentration range (UV 280 nm) UVette 2 mm</b>	37.5 ng/μL – 22.5 μg/μL ±0.015 μg/μL at A = 0 ±0.038 μg/μL at A = 1 (0.5 %)	37.5 ng/μL – 22.5 μg/μL ±0.015 μg/μL at A = 0 ±0.038 μg/μL at A = 1 (0.5 %)
<b>BSA concentration range (UV 280 nm) UVette 10 mm</b>	7.5 ng/μL – 4.5 μg/μL ±0.003 μg/μL at A = 0 ±0.007 μg/μL at A = 1 (0.5 %)	7.5 ng/μL – 4.5 μg/μL ±0.003 μg/μL at A = 0 ±0.007 μg/μL at A = 1 (0.5 %)
<b>Adjustable temperature range</b>	20 – 42 °C (smallest step size 0.1 °C)	–
<b>Systematic temperature error</b>	±0.2 °C at 25 – 37 °C	–
<b>Random temperature error</b>	±0.15 °C at 25 – 37 °C	–
<b>Measuring time range</b>	00:05 – 59:59 min:sec	–
<b>Interval between two measuring points</b>	00:05 – 10:00 min:sec	–
<b>BSA concentration range</b>	7.5 ng/μL – 45.45 μg/μL	0.01 ng/μL – 45.45 μg/μL
<b>Light source absorption</b>	Xenon flash lamp	Xenon flash lamp
<b>Light source fluorescence</b>	–	LED
<b>Measuring principle fluorescence</b>	–	Confocal filter fluorometer with reference beam
<b>Excitation wavelength fluorescence</b>	–	470 nm, bandwidth: 25 nm
<b>Emission wavelength I fluorescence</b>	–	520 nm, bandwidth: 15 nm
<b>Emission wavelength II fluorescence</b>	–	560 nm, bandwidth: 40 nm
<b>Fluorescence measuring range</b>	–	0.5 nM – 2,000 nM fluorescein (emission wavelength 520 nm)
<b>Random error fluorescence</b>	–	±2 % at 1 nM fluorescein

# Sample Handling



Model	Eppendorf $\mu$ Cuvette® G1.0	UVette®	Macro Vis Cuvette	Semi-micro Vis Cuvette
Page(s)	257	258	259	259
dsDNA concentration range	25 ng/ $\mu$ L – 1,500 ng/ $\mu$ L	2.5 ng/ $\mu$ L – 750 ng/ $\mu$ L	–	–
BSA concentration range	75 ng/ $\mu$ L – 45.45 ng/ $\mu$ L	7.5 ng/ $\mu$ L – 4.5 ng/ $\mu$ L	–	–
Colorimetric protein assays	yes	yes	yes	yes
OD 600 methods	no	yes	yes	yes
Fluorescence measurements	yes	yes	yes	yes
UV transparency	>180 nm	>220 nm	–	–
Light transmission	180 nm – 2,000 nm	220 nm – 1,600 nm	300 nm – 900 nm	300 nm – 900 nm
Material				
Dimensions (W × D × H)	12.5 × 12.5 × 48 mm	12.5 × 12.5 × 36 mm	12.5 × 12.5 × 45 mm	12.5 × 12.5 × 45 mm
Temperature control	no	no	yes	no
Minimum filling volume				
in Eppendorf photometers	1.5 $\mu$ L	50 $\mu$ L	1,000 $\mu$ L	400 $\mu$ L
in devices of other manufacturers	–	50 $\mu$ L	2,500 $\mu$ L	1,500 $\mu$ L
Maximum filling volume	10 $\mu$ L	2,000 $\mu$ L	4,500 $\mu$ L	3,000 $\mu$ L
Path length	1 mm	2 mm and 10 mm	10 mm	10 mm
Cuvette blank	$\leq 0.05$ A at 260 nm	$\leq 0.05$ A at 260 nm	–	–
Height of light source	8.5 mm	8.5 <sup>1)</sup> mm	8.5 mm – 15 mm	8.5 mm – 15 mm
Use in Eppendorf BioPhotometer	yes	yes	yes	yes
Use in Eppendorf BioSpectrometer	yes	yes	yes	yes
Use in devices of other manufacturers	no	yes (adapters available)	yes	yes

<sup>1)</sup> (adapters available for height adjustment)



# Eppendorf $\mu$ Cuvette<sup>®</sup> G1.0

## Description

The Eppendorf  $\mu$ Cuvette G1.0 microvolume measuring cell is a high-quality cuvette made of aluminum and quartz glass. It is the perfect tool for measuring high concentrations in small volumes. With a fixed optical path length of only 1 mm, the  $\mu$ Cuvette G1.0 features a light path that is ten times shorter than in standard cuvettes. This allows nucleic acid and protein concentrations to be measured with high reproducibility in a much higher concentration range without prior dilution. Due to the hydrophobic coating on the quartz glass only 1.5  $\mu$ L nucleic acid or 3  $\mu$ L protein sample are required for precise formation of the liquid column. Self-absorption of the  $\mu$ Cuvette G1.0 is very low, meaning that the entire measuring range of the photometer can be used. Furthermore, 5  $\mu$ L of sample solution can be used for specific fluorometric assays saving reagent.



## Product features

- > Microvolume measuring cell for measuring 1.5 – 10  $\mu$ L sample volumes
- > Concentration determination of nucleic acids and proteins, amongst other target analytes
- > Measurement of highly concentrated samples without prior dilution
- > Suitable for fluorescence assays
- > Low self-absorption ( $\leq 0.05$  A at 260 nm)
- > Hydrophobic surface coating on quartz glass for precise formation and positioning of the sample volume
- > Simple cleaning to minimize the risk of sample carry-over
- > A defined angle for folding the sides of the cuvette guarantees reproducible handling
- > One-component hinged design prevents the loss of individual parts
- > Exclusively available for use with Eppendorf BioPhotometer and Eppendorf BioSpectrometer

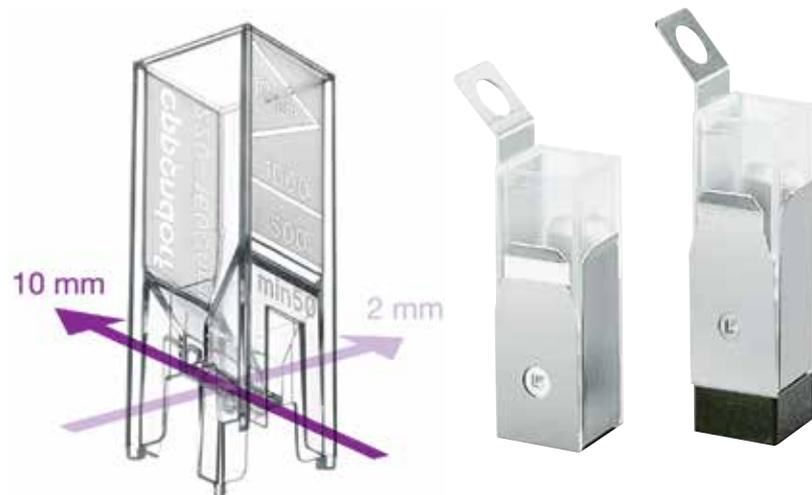
## Ordering information

Description	Catalog No.	List USD
Eppendorf $\mu$ Cuvette <sup>®</sup> G1.0, Microvolume measuring cell for Eppendorf BioPhotometer and BioSpectrometer	613800018	\$2,609.00

# UVette®

## Description

The Eppendorf UVette allows for measurements in the UV/Vis range with transparency from 220 nm to 1,600 nm and just a typical minimum volume of 50 µL. The UVette allows the user to choose between two optical path lengths (10 mm and 2 mm). The path length can be reduced by a factor of 5x without diluting or wasting any sample – simply by turning the UVette 90°. The UVette is suitable for fluorescence assays due to its low auto-fluorescence. The PCR-clean and protein-free individually sealed variant is ideal for accurate nucleic acid and protein quantification. The UVette is ideally matched for use with the Eppendorf BioPhotometer and Eppendorf BioSpectrometer families. The UVette can be used in other spectrophotometers with the aid of an adapter.



## Product features

- > Suitable for measuring small volumes (≥50 µL)
- > UV and Vis measurements from 220 nm to 1,600 nm
- > UV transparent plastic, free of fluoropolymers and other halogenated hydrocarbons
- > Two built-in optical path lengths in a single cuvette - just turn the UVette 90° to change from 10 mm and 2 mm
- > Volume markings for 500 µL and 1,000 µL
- > Individually packaged and certified PCR clean and protein-free quality for sensitive (e.g. RNA) and valuable samples
- > Deep-lying optical window prevents scratches
- > Tapered cuvette base for optimal filling, frosted grip for labeling
- > Ideal for use in the Eppendorf BioPhotometer and Eppendorf BioSpectrometer, adapters available for use with other common spectrophotometers
- > Routine pack for convenient access to each UVette and safe storage in a reclosable box

## Ordering information

Description	Catalog No.	List USD
UVette®, individually wrapped	952010051	\$131.50
UVette® starter set	952010077	144.00
UVette® Routine Pack	952010069	220.50
<b>Adapter for UVette®</b>		
8.5 mm	952010107	69.00
10 mm	952010123	69.00
15 mm	952010115	69.00
20 mm	4099005004	69.00
<b>Cuvette Rack</b> , 36 positions, for glass and plastic cuvettes, 2 pcs., polypropylene, numbered positions, autoclavable	0030119851	53.00

i For more information go to [www.eppendorf.com/photometry](http://www.eppendorf.com/photometry)



# Eppendorf Vis Cuvettes



## Description

The Eppendorf Vis Cuvettes are disposable cuvettes made of clear plastic with a light transmission of 300 nm to 900 nm. The Vis cuvettes are the perfect tool for applications outside of the UV range, for example, colorimetric protein assays (Bradford, Lowry, etc.), determining of the optical density of bacterial cultures (OD 600 methods), kinetic, and fluorescence measurements. Based on the volume you would like to measure, you can select semi-micro or macro cuvette.

## Product features

- > Two different cuvette sizes (semi-micro and macro) for a wide variety of volumes and applications
- > Disposable cuvettes made of clear plastic with a light transmission of 300 nm to 900 nm

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf macro Vis Cuvette</b> , max. filling volume 4,500 $\mu$ L		
Macro VIS Cuvette	0030079345	\$200.00
<b>Eppendorf semi-micro Vis Cuvette</b> , max. filling volume 3,000 $\mu$ L		
Semi-micro VIS Cuvette	0030079353	213.50
<b>Cuvette Rack</b>	0030119851	53.00

# Thermal Printer DPU-S445



## Description

The Thermal Printer DPU-S445 is a thermal line dot printer with high printing speed while producing a clear type face. This allows the Thermal Printer DPU-S445 to print out scanned images. As an alternative to using USB sticks, the automatic print-out function of the DPU-S445 printer can be used to quickly obtain the results.

## Product features

- > Automatic print-out of results
- > Easy and direct connection via USB
- > Compact and light-weight (approx. 0.5 kg)
- > Easy paper operation
- > Max. printing speed: 90 mm/sec.
- > Number of dots/line: 832
- > Resolution (dots/mm): 8

## Ordering information

Description	Catalog No.	List USD
<b>Thermal Printer DPU-S445</b>	6135010004	\$914.00
<b>Thermal paper</b>		
5 rolls	910003097	92.00



# Eppendorf BioPhotometer® D30 Reference Filter Set

## Description

The secondary UV/Vis Eppendorf BioPhotometer D30 Reference Filter Set: is used for verifying the photometric accuracy and wavelength systematic error on the Eppendorf BioPhotometer D30.

## Product features

- > Filter traceable to NIST®
- > Filter recertification via Eppendorf (contact: Eppendorf Service)
- > Inspection protocol preprogrammed in device
- > Verification of wavelength accuracy and precision at 260 nm and 280 nm
- > Verification of the photometric accuracy and precision for all Eppendorf BioPhotometer D30 wavelengths
- > Contains 6 filters (1 blank filter, 2 filters for checking UV/Vis wavelength systematic error and precision, 3 filters for photometric verification)



PHOTOMETERS AND SPECTROMETERS

## Ordering information

Description	Catalog No.	List USD
Eppendorf BioPhotometer® D30 Reference Filter Set, filter set for verifying photometric accuracy and wavelength systematic error (according to NIST®)	6133928004	\$2,487.00

i For more information go to [www.eppendorf.com/photometry](http://www.eppendorf.com/photometry)

Product appearance, specifications, and/or prices are subject to change without notice.



# Eppendorf BioSpectrometer® Reference Filter Sets

## Description

The secondary UV/vis Eppendorf BioSpectrometer Reference Filter Set: is used to verify photometric accuracy and wavelength systematic error. The reference filter can be used with the Eppendorf BioSpectrometer basic and the Eppendorf BioSpectrometer kinetic.



## Product features

- > Filter traceable to NIST®
- > Filter recertification via Eppendorf (contact: Eppendorf Service)
- > Inspection protocol preprogrammed in device
- > Verification of wavelength accuracy and precision at 260 nm, 280 nm and 800 nm
- > Verification of the photometric accuracy and precision in the 260 nm to 800 nm range
- > The variation coefficient is listed along with the average value of 15 measurements.
- > Contains 7 filters (1 blank filter, 3 filters for checking UV/vis wavelength systematic error and precision, 3 filters for photometric verification)

**The Eppendorf BioSpectrometer Fluorescence Reference Filter Set:** is used to verify photometric accuracy, wavelength systematic error, and fluorimetric precision (random error) and linearity on the Eppendorf BioSpectrometer fluorescence.

## Product features

- > All features of the Eppendorf BioSpectrometer UV/vis Reference Filter Set
- > Additional filter for verifying fluorimetric precision (random error) and linearity
- > Inspection protocol preprogrammed in device
- > 8 filters (1 blank filter, 3 filters for checking UV/vis wavelength systematic error and precision, 3 filters for UV/vis photometric verification, 1 filter for fluorometric verification)

## Ordering information

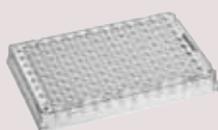
Description	Catalog No.	List USD
<b>Eppendorf BioSpectrometer® Reference Filter Set</b> , filter set for verifying photometric accuracy and wavelength systematic error (according to NIST®)	6135928001	\$2,426.00
<b>Eppendorf BioSpectrometer® fluorescence Reference Filter Set</b> , filter set for verifying photometric accuracy and wavelength systematic error (according to NIST®) and verifying fluorimetric precision (random error) and linearity	6137928009	4,101.00

# Sample Handling



Model	MC nexus GX2	MC nexus GX2e	MC nexus gradient	MC nexus gradient eco
Page(s)	266	266	266	266
Dimensions (W × D × H)	25 × 41.2 × 32.1 cm	25 × 41.2 × 32.1 cm	25 × 41.2 × 32.1 cm	25 × 41.2 × 32.1 cm
Gradient block	Over 8 columns	Over 8 columns	Over 12 columns	Over 12 columns
Heating rate <sup>1)</sup>	3 °C/s	3 °C/s	3 °C/s	3 °C/s
Cooling rate <sup>1)</sup>	2 °C/s	2 °C/s	2 °C/s	2 °C/s
Interfaces	CAN_in/CAN_out, ethernet, USB	CAN_in/CAN_out, ethernet, USB	CAN_in/CAN_out, ethernet, USB	CAN_in/CAN_out, ethernet, USB
Lid descent	flexlid® technology, with TSP	flexlid® technology, with TSP	flexlid® technology, with TSP	flexlid® technology, with TSP
Lid temperature range	37 – 110 °C	37 – 110 °C	37 – 110 °C	37 – 110 °C
Sample capacity	64/32 × 0.1/0.2 mL PCR tubes or 24/10 × 0.5 mL PCR tubes	64/32 × 0.1/0.2 mL PCR tubes or 24/10 × 0.5 mL PCR tubes	96 × 0.1/0.2 mL PCR tubes, 1 PCR plate, or 38 × 0.5 mL PCR tubes	96 × 0.1/0.2 mL PCR tubes, 1 PCR plate, or 38 × 0.5 mL PCR tubes
Gradient temperature range	30 – 99 °C	30 – 99 °C	30 – 99 °C	30 – 99 °C
Temperature control range of the block	4 – 99 °C	4 – 99 °C	4 – 99 °C	4 – 99 °C
Thermoblock	Aluminum	Aluminum	Aluminum	Aluminum
Additional Options	nexus X2 available without gradient	nexus X2e available without gradient	nexus available without gradient, silver block and flat block options available	nexus eco available without gradient, silver block and flat block options available

<sup>1)</sup> Measured at the block.



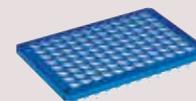
Eppendorf twin.tec® PCR Plates LoBind



Eppendorf twin.tec® PCR Plate 384 LoBind



Eppendorf twin.tec® PCR Plates



Eppendorf twin.tec® PCR Plate 96 semi-skirted

Model	Eppendorf twin.tec® PCR Plates 96 LoBind	Eppendorf twin.tec® PCR Plate 384 LoBind	Eppendorf twin.tec® PCR Plate 96 skirted	Eppendorf twin.tec® PCR Plate 96 semi-skirted
Page(s)	272	272	272	272
Number of wells	96 wells	384 wells	96 wells	96 wells
Total volume per well	150 or 250 µL	40 µL	150 µL	250 µL
OptiTrack® frame color	colorless	colorless	colorless yellow green blue red	colorless yellow green blue red

**MC X50s**

264

27.5 × 43 × 33 cm

2D gradient over 8 rows and 12 columns

10 °C/s

5 °C/s

Ethernet, USB

flexlid® technology, with TSP

37 – 110 °C

96-well, 0.1/0.2 mL PCR tubes, or 1 PCR plate

30 – 99 °C

4 – 99 °C

Silver

X50i variant available without touchscreen interface

**MC X50a**

264

27.5 × 43 × 33 cm

2D gradient over 8 rows and 12 columns

5 °C/s

2.3 °C/s

Ethernet, USB

flexlid® technology, with TSP

37 – 110 °C

96-well, 0.1/0.2 mL PCR tubes, or 1 PCR plate

30 – 99 °C

4 – 99 °C

Aluminum

X50l variant available without touchscreen interface

**MC X50p**

264

27.5 × 43 × 33 cm

2D gradient over 8 rows and 12 columns

5 °C/s

2.3 °C/s

Ethernet, USB

flexlid® technology, with TSP

37 – 110 °C

96-well, 1 PCR plate

30 – 99 °C

4 – 99 °C

Aluminum

X50r variant available without touchscreen interface

**MC X50h**

264

27.5 × 43 × 33 cm

2D gradient over 16 rows and 24 columns

5 °C/s

2.3 °C/s

Ethernet, USB

flexlid® technology, with TSP

37 – 110 °C

384-well, 1 PCR plate

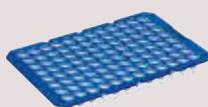
30 – 99 °C

4 – 99 °C

Aluminum

X50t variant available without touchscreen interface

- > Units without touchscreen interface available for each model type
- > Network up to 9 units without touchscreen interfaces to 1 unit with a touchscreen interface
- > Network up to 50 units to a PC

**Eppendorf twin.tec® PCR Plate 96 unskirted**

272

96 wells

150 or 250 µL

colorless

blue

**Eppendorf twin.tec® PCR Plate 96 unskirted, divisible**

272

96 wells

150 or 250 µL

colorless

blue

**Eppendorf twin.tec® microbiology PCR Plate 96**

272

96 wells

150 or 250 µL

colorless

blue

**Eppendorf twin.tec® PCR Plate 384**

272

384 wells

40 µL

colorless

yellow

green

blue

red

**Eppendorf twin.tec® real-time PCR Plates****Eppendorf twin.tec® 96 real-time PCR Plates**

272

96 wells

150 or 250 µL

white

blue



# NEW - Mastercycler® X50

## Description

Speed and enhanced PCR optimization functions, like the 2D-Gradient, make the Mastercycler X50 the ideal PCR cyclers for advanced research in molecular biology. The excellent block temperature regulation gives rise to the next stage of PCR reproducibility, whereas the adaptable user management and profound documentation capabilities give peace of mind to laboratories working to set standards.

A highly intuitive touch display, low noise levels, low power consumption, and the versatile flexlid® concept complete the product to be a powerful PCR cycler. Up to 10 PCR cyclers can be combined – ideal for high throughput applications or labs with a high number of users running different assays. Should you feel you need more flexibility or throughput, up to 50 PCR cyclers can be combined in a computer-controlled network.



## Product features

- > Innovative 2D-Gradient for advanced PCR optimization
- > Heating rate: up to 10 °C/s
- > Wide selection of blocks from a fast silver block to 384
- > Intuitive touch display
- > Connect up to 10 units to a network
- > flexlid® concept: automatic height adjustment of the lid allows you to use all types of consumables
- > Small footprint
- > 2-year warranty

## Ordering information

Description	Catalog No.	List USD
<b>Mastercycler® X50s</b> , 110 – 230 V/50 – 60 Hz, silver block, 96-well plate or 0.1/0.2 mL tubes	6311000010	\$9,900.00
<b>Mastercycler® X50a</b> , 110 – 230 V/50 – 60 Hz, aluminum block, 96-well plate or 0.1/0.2 mL tubes	6313000018	9,350.00
<b>Mastercycler® X50p</b> , 110 – 230 V/50 – 60 Hz, aluminum block, 96-well plate, high pressure lid	6315000015	9,900.00
<b>Mastercycler® X50h</b> , 110 – 230 V/50 – 60 Hz, aluminum block, 384-well plate, high pressure lid	6316000019	9,900.00
<b>Units without touchscreen interface. Any 9 units without a touchscreen interface can be networked to a single unit with a touchscreen interface.</b>		
<b>Mastercycler® X50i</b> , 110 – 230 V/50 – 60 Hz, silver block, 96-well plate or 0.1/0.2 mL tubes	6301000012	8,140.00
<b>Mastercycler® X50l</b> , 110 – 230 V/50 – 60 Hz, aluminum block, 96-well plate or 0.1/0.2 mL tubes	6303000010	7,590.00
<b>Mastercycler® X50r</b> , 110 – 230 V/50 – 60 Hz, aluminum block, 96-well plate, high pressure lid	6305000017	8,140.00
<b>Mastercycler® X50t</b> , 110 – 230 V/50 – 60 Hz, aluminum block, 384-well plate, high pressure lid	6306000010	8,690.00

**Applications**

- > Fast PCR
- > PCR optimization
- > Standard PCR
- > Incubation
- > Cycle sequencing



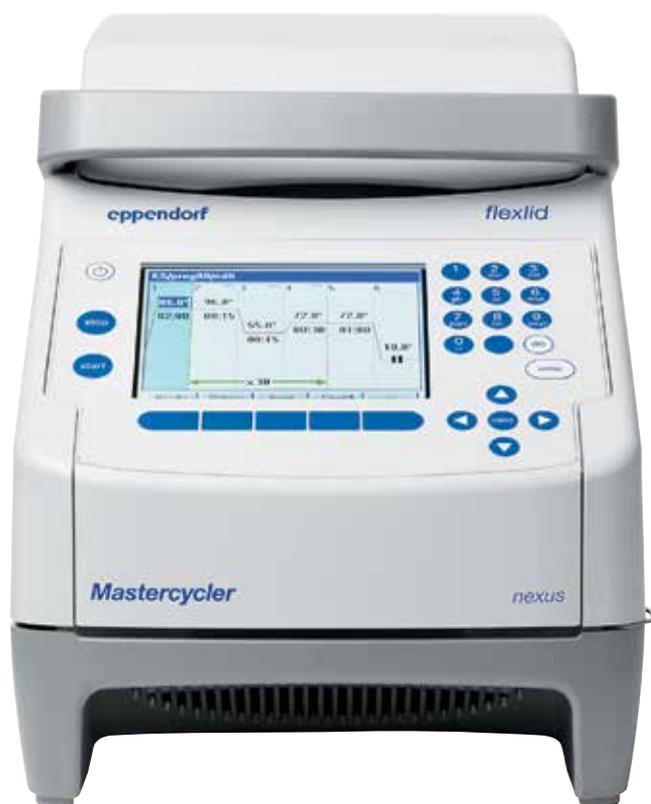
Technical specifications	MC X50s	MC X50a	MC X50p	MC X50h	MC X50i	MC X50I	MC X50r	MC X50t
<b>Model</b>	Silver	Aluminum	Aluminum	Aluminum	Silver	Aluminum	Aluminum	Aluminum
<b>Thermoblock</b>	Silver	Aluminum	Aluminum	Aluminum	Silver	Aluminum	Aluminum	Aluminum
<b>High pressure lid</b>	–	–	■	■	–	–	■	■
<b>96-well plate</b>	■	■	■	–	■	■	■	–
<b>384-well plate</b>	–	–	–	■	–	–	–	■
<b>0.1/0.2 mL tubes</b>	■	■	–	–	■	■	–	–
<b>Temperature control range of the block</b>	4 – 99 °C							
<b>Temperature control mode</b>	Fast, Intermediate, Standard, Safe							
<b>Heating technology</b>	Six peltier elements							
<b>2D-Gradient block</b>	over 12 columns/over 8 rows	over 12 columns/over 8 rows	over 12 columns/over 8 rows	over 24 columns/over 16 rows	over 12 columns/over 8 rows	over 12 columns/over 8 rows	over 12 columns/over 8 rows	over 24 columns/over 16 rows
<b>Gradient range</b>	1 – 30 °C							
<b>Gradient temperature range</b>	30 – 99 °C							
<b>Lid temperature range</b>	37 – 110 °C							
<b>Lid descent</b>	flexlid							
<b>Block homogeneity 20–72 °C</b>	≤±0.2 °C							
<b>Block homogeneity 95 °C</b>	≤±0.3 °C							
<b>Block temperature accuracy</b>	±0.15 °C							
<b>Heating rate</b>	10 °C/s	5 °C/s	5 °C/s	5 °C/s	10 °C/s	5 °C/s	5 °C/s	5 °C/s
<b>Cooling rate</b>	5 °C/s	2.3 °C/s	2.3 °C/s	2.3 °C/s	5 °C/s	2.3 °C/s	2.3 °C/s	2.3 °C/s
<b>Interfaces</b>	Ethernet, USB							
<b>Total weight</b>	11.5 kg	11.5 kg	11.5 kg	11.5 kg	10.7 kg	10.7 kg	10.7 kg	10.7 kg
<b>Power supply</b>	110 – 230 V, 50 – 60 Hz	110 – 230 V, 50 – 60 Hz	110 – 230 V, 50 – 60 Hz	110 – 230 V, 50 – 60 Hz	110 – 230 V, 50 – 60 Hz	110 – 230 V, 50 – 60 Hz	110 – 230 V, 50 – 60 Hz	110 – 230 V, 50 – 60 Hz
<b>Max. power consumption</b>	850 W							
<b>Dimensions (W x D x H)</b>	27.5 x 43 x 33 cm							



# Mastercycler® nexus

## Description

In the age of networking, the new Mastercycler nexus is your reliable companion when it comes to the daily routine of PCR. It is easy to use, does not need much space or energy and sends you an e-mail when it is done – what else do you need from a PCR cycler?



## Product features

- > Intuitive graphic programming
- > Small footprint
- > Universal block for ultimate flexibility
- > Connect up to 2 Mastercycler nexus eco to your existing unit
- > Available with gradient
- > E-mail notification
- > flexlid® concept allows use of all types of consumables with automatic height adjustment of the lid

## Applications

- > Standard PCR
- > Fast PCR
- > Optimizing a PCR
- > *In situ* PCR

## Ordering information

Description	Catalog No.	List USD
Mastercycler® nexus gradient, 110 V/50 – 60 Hz, aluminum block, 96-well plate or 0.1/0.2/0.5 mL tubes	6331000025	\$8,190.00
Mastercycler® nexus, 110 V/50 – 60 Hz, aluminum block, 96-well plate or 0.1/0.2/0.5 mL tubes	6333000022	7,280.00
Mastercycler® nexus GSX1, 110 V/50 – 60 Hz, silver block, 96-well plate or 0.1/0.2 mL tubes	6345000028	9,340.00
Mastercycler® nexus SX1, 110 V/50 – 60 Hz, silver block, 96-well plate or 0.1/0.2 mL tubes	6346000021	8,120.00
Mastercycler® nexus flat, 110 V/50 – 60 Hz	6335000020	7,480.00
<b>eco units without control panels. Any two nexus eco units can be networked to a single nexus Master unit</b>		
Mastercycler® nexus gradient eco, 110 V/50 – 60 Hz, aluminum block, 96-well plate or 0.1/0.2/0.5 mL tubes	6334000026	7,000.00
Mastercycler® nexus eco, 110 V/50 – 60 Hz, aluminum block, 96-well plate or 0.1/0.2/0.5 mL tubes	6332000029	5,510.00
Mastercycler® nexus GSX1e, 110 V/50 – 60 Hz, silver block, 96-well plate or 0.1/0.2 mL tubes	6347000025	7,670.00
Mastercycler® nexus SX1e, 110 V/50 – 60 Hz, silver block, 96-well plate or 0.1/0.2 mL tubes	6348000029	6,340.00
Mastercycler® nexus flat eco, 110 V/50 – 60 Hz	6330000021	6,230.00
<b>Networking Accessories</b>		
CAN bus connecting cable, 150 cm	950014016	55.00
CAN bus connecting cable, 50 cm	950014008	45.00

i For more information go to [www.eppendorf.com/Mastercycler](http://www.eppendorf.com/Mastercycler)



# Mastercycler® nexus X2

## Description

The Mastercycler nexus X2 gives you the ability to run two totally independent protocols at the same time. Smaller assays fit nicely on the 32-well-block – larger assays can exceed 48 samples and run on the 64-well-block. The larger block is available with a gradient function. As every member of the Mastercycler nexus family, the Mastercycler nexus X2 can be combined with all other family members in a network of up to 3 units. In combination with Eppendorf's PCR Tubes, PCR Strips or divisible plates, the Mastercycler nexus X2 will give you consistent and publishable results – every day!



## Product features

- > Large block for large assays – small block for small assays
- > Intuitive graphic programming
- > Universal block for strips, 0.1 mL, 0.2 mL and 0.5 mL PCR tubes
- > Small footprint
- > Optional gradient for PCR optimization
- > E-mail notification
- > flexlid® concept allows use of all types of consumables with automatic height adjustment of the lid

## Applications

- > Standard PCR
- > Optimizing a PCR

## Ordering information

Description	Catalog No.	List USD
<b>Master units with control panels</b>		
Mastercycler® nexus GX2, 110 V/50 – 60 Hz, aluminum block, 0.1/0.2 mL tubes and strips and 0.5 mL PCR tubes	6336000023	\$9,250.00
Mastercycler® nexus X2, 110 V/50 – 60 Hz, aluminum block, 0.1/0.2 mL tubes and strips and 0.5 mL PCR tubes	6337000027	8,400.00
<b>eco units without control panels. Any two nexus eco units can be networked to a single nexus Master unit</b>		
Mastercycler® nexus GX2e, 110 V/50 – 60 Hz, aluminum block, 0.1/0.2 mL tubes and strips and 0.5 mL PCR tubes	6338000020	7,500.00
Mastercycler® nexus X2e, 110 V/50 – 60 Hz, aluminum block, 0.1/0.2 mL tubes and strips and 0.5 mL PCR tubes	6339000024	6,500.00
<b>Networking Accessories</b>		
CAN bus connecting cable, 150 cm	950014016	55.00
CAN bus connecting cable, 50 cm	950014008	45.00

i For more information go to [www.eppendorf.com/pcr](http://www.eppendorf.com/pcr)



# Mastercycler® nexus

Technical specifications					
Model	MC nexus GSX1	MC nexus SX1	MC nexus GSX1e	MC nexus SX1e	MC nexus gradient
Thermoblock	Silver	Silver	Silver	Silver	Aluminum
Temperature control range of the block	4 – 99 °C				
Temperature control mode	Fast, standard, safe				
Heating technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology	Peltier elements, Triple Circuit Technology
Intuitive graphic programming	■	■			■
E-mail Notification	■	■	■	■	■
Sample capacity	96 × 0.1/0.2 mL PCR tubes or 1 PCR plate	96 × 0.1/0.2 mL PCR tubes or 1 PCR plate	96 × 0.1/0.2 mL PCR tubes or 1 PCR plate	96 × 0.1/0.2 mL PCR tubes or 1 PCR plate	96 × 0.1/0.2 mL PCR tubes, 1 PCR plate, or 38 × 0.5 mL PCR tubes
flexlid® concept	■	■	■	■	■
2 years warranty	■	■	■	■	■
Silver block	■	■	■	■	–
Gradient range	1 – 20 °C		1 – 20 °C		1 – 20 °C
Gradient block	■		■		■
Gradient temperature range	30 – 99 °C		30 – 99 °C		30 – 99 °C
Lid temperature range	37 – 110 °C				
Unit can control 2 other units in network	■	■			■
Unit can only be controlled <sup>1)</sup>			■	■	
Lid descent	flexlid® technology, with TSP				
USB port	■	■			■
Block homogeneity 20–72 °C	≤ ±0.3 °C	≤ ±0.3 °C	≤ ±0.3 °C	≤ ±0.3 °C	≤ ±0.3 °C
Block homogeneity 90 °C	≤ ±0.4 °C	≤ ±0.4 °C	≤ ±0.4 °C	≤ ±0.4 °C	≤ ±0.4 °C
Block temperature accuracy	±0.2 °C				
Heating rate	5 °C/s <sup>2)</sup>	5 °C/s <sup>2)</sup>	5 °C/s <sup>2)</sup>	5 °C/s <sup>2)</sup>	3 °C/s <sup>2)</sup>
Cooling rate	3.5 °C/s <sup>2)</sup>	3.5 °C/s <sup>2)</sup>	3.5 °C/s <sup>2)</sup>	3.5 °C/s <sup>2)</sup>	2 °C/s <sup>2)</sup>
Gradient block	Over 12 columns		Over 12 columns		Over 12 columns
Interfaces	CAN_in/CAN_out, Ethernet, USB	CAN_in/CAN_out, Ethernet, USB	CAN_in/CAN_out, Ethernet	CAN_in/CAN_out, Ethernet	CAN_in/CAN_out, Ethernet, USB
Total weight	10.9 kg	10.9 kg	10.4 kg	10.4 kg	10.9 kg
Power supply	110 V, 50 – 60 Hz				
Max. power consumption	540 W	540 W	540 W	540 W	700 W
Dimensions (W × D × H)	25 × 41.2 × 32.1 cm				
Number of programs on device	> 700	> 700	> 700	> 700	> 700

<sup>1)</sup> Control through a Mastercycler® nexus, Mastercycler® nexus gradient, Mastercycler® nexus GSX1, Mastercycler® nexus SX1, Mastercycler® nexus GX2, Mastercycler® nexus X2 or Mastercycler® nexus flat  
<sup>2)</sup> Measured at the block.



Technical specifications					
Model	MC nexus	MC nexus gradient eco	MC nexus eco	MC nexus flat	MC nexus flat eco
Thermblock	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Temperature control range of the block	4 – 99 °C	4 – 99 °C	4 – 99 °C	4 – 99 °C	4 – 99 °C
Temperature control mode	Fast, standard, safe	Fast, standard, safe	Fast, standard, safe	Fast, standard, safe	Fast, standard, safe
Heating technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology
Intuitive graphic programming	■			■	
E-mail Notification	■	■	■	■	■
Sample capacity	96 × 0.1/0.2 mL PCR tubes, 1 PCR plate, or 38 × 0.5 mL PCR tubes	96 × 0.1/0.2 mL PCR tubes, 1 PCR plate, or 38 × 0.5 mL PCR tubes	96 × 0.1/0.2 mL PCR tubes, 1 PCR plate, or 38 × 0.5 mL PCR tubes	4 slides or other matching consumables	4 slides or other matching consumables
flexlid® concept	■	■	■	■	■
2 years warranty	■	■	■	■	■
Silver block					
Gradient range		1 – 20 °C			
Gradient block		■		■	■
Gradient temperature range		30 – 99 °C			
Lid temperature range	37 – 110 °C	37 – 110 °C	37 – 110 °C	37 – 110 °C	37 – 110 °C
Unit can control 2 other units in network	■			■	
Unit can only be controlled <sup>1)</sup>		■	■		■
Lid descent	flexlid® technology, with TSP	flexlid® technology, with TSP	flexlid® technology, with TSP	flexlid® technology, with TSP	flexlid® technology, with TSP
USB port	■			■	
Block homogeneity 20–72 °C	≤ ±0.3 °C	≤ ±0.3 °C	≤ ±0.3 °C	≤ ±0.3 °C	≤ ±0.3 °C
Block homogeneity 90 °C	≤ ±0.4 °C	≤ ±0.4 °C	≤ ±0.4 °C	≤ ±0.4 °C	≤ ±0.4 °C
Block temperature accuracy	±0.2 °C	±0.2 °C	±0.2 °C	±0.2 °C	±0.2 °C
Heating rate	3 °C/s <sup>2)</sup>	3 °C/s <sup>2)</sup>	3 °C/s <sup>2)</sup>	3 °C/s <sup>2)</sup>	3 °C/s <sup>2)</sup>
Cooling rate	2 °C/s <sup>2)</sup>	2 °C/s <sup>2)</sup>	2 °C/s <sup>2)</sup>	2 °C/s <sup>2)</sup>	2 °C/s <sup>2)</sup>
Gradient block		Over 12 rows (0.2 mL)			
Interfaces	CAN_in/CAN_out, Ethernet, USB	CAN_in/CAN_out, Ethernet	CAN_in/CAN_out, Ethernet	CAN_in/CAN_out, Ethernet, USB	CAN_in/CAN_out, Ethernet
Total weight	10.9 kg	10.4 kg	10.9 kg	10.4 kg	10.4 kg
Power supply	110 V, 50 – 60 Hz	110 V, 50 – 60 Hz	110 V, 50 – 60 Hz	110 V, 50 – 60 Hz	110 V, 50 – 60 Hz
Max. power consumption	700 W	700 W	700 W	700 W	700 W
Dimensions (W × D × H)	25 × 41.2 × 32.1 cm	25 × 41.2 × 32.1 cm	25 × 41.2 × 32.1 cm	25 × 41.2 × 32.1 cm	25 × 41.2 × 32.1 cm
Number of programs on device	> 700	> 700	> 700	> 700	> 700

<sup>1)</sup> Control through a Mastercycler® nexus, Mastercycler® nexus gradient, Mastercycler® nexus GSX1, Mastercycler® nexus SX1, Mastercycler® nexus GX2, Mastercycler® nexus X2 or Mastercycler® nexus flat  
<sup>2)</sup> Measured at the block.



# Mastercycler® nexus X2

Technical specifications				
Model	MC nexus GX2	MC nexus GX2e	MC nexus X2	MC nexus X2e
Thermoblock	Aluminum	Aluminum	Aluminum	Aluminum
Temperature control range of the block	4 – 99 °C			
Temperature control mode	Fast, standard, safe	Fast, standard, safe	Fast, standard, safe	Fast, standard, safe
Heating technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology	Peltier elements, triple circuit technology
Intuitive graphic programming		■	■	■
E-mail Notification		■	■	■
Sample capacity	64/32 × 0.1/0.2 mL PCR tubes or 24/10 × 0.5 mL PCR tubes	64/32 × 0.1/0.2 mL PCR tubes or 24/10 × 0.5 mL PCR tubes	64/32 × 0.1/0.2 mL PCR tubes or 24/10 × 0.5 mL PCR tubes	64/32 × 0.1/0.2 mL PCR tubes or 24/10 × 0.5 mL PCR tubes
flexlid® concept	■	■	■	■
2 years warranty	■	■	■	■
Universal Block for 0.2 mL and 0.5 mL vessels	■	■	■	■
Gradient range	1 – 12 °C	1 – 12 °C		
Gradient block	■	■		
Gradient temperature range	30 – 99 °C	30 – 99 °C		
Lid temperature range	37 – 110 °C			
Unit can control 2 other units in network	■		■	
Unit can only be controlled <sup>1)</sup>		■	–	■
Lid descent	flexlid® technology, with TSP			
USB port	■	–	■	
Block homogeneity 20–72 °C	≤ ±0.3 °C	≤ ±0.3 °C	≤ ±0.3 °C	≤ ±0.3 °C
Block homogeneity 90 °C	≤ ±0.4 °C	≤ ±0.4 °C	≤ ±0.4 °C	≤ ±0.4 °C
Block temperature accuracy	±0.2 °C	±0.2 °C	±0.2 °C	±0.2 °C
Heating rate	3 °C/s <sup>2)</sup>	3 °C/s <sup>2)</sup>	3 °C/s <sup>2)</sup>	3 °C/s <sup>2)</sup>
Cooling rate	2 °C/s <sup>2)</sup>	2 °C/s <sup>2)</sup>	2 °C/s <sup>2)</sup>	2 °C/s <sup>2)</sup>
Gradient block	Over 8 columns	Over 8 columns		
Interfaces	CAN_in/CAN_out, Ethernet, USB	CAN_in/CAN_out, Ethernet	CAN_in/CAN_out, Ethernet, USB	CAN_in/CAN_out, Ethernet
Total weight	11 kg	11 kg	11 kg	11 kg
Max. power consumption	700 W	540 W	700 W	540 W
Dimensions (W × D × H)	25 × 41.2 × 32.1 cm			
Number of programs on device	> 700	> 700	> 700	> 700

<sup>1)</sup> Control through a Mastercycler® nexus, Mastercycler® nexus gradient, Mastercycler® nexus GSX1, Mastercycler® nexus SX1, Mastercycler® nexus GX2, Mastercycler® nexus X2 or Mastercycler® nexus flat

<sup>2)</sup> Measured at the block.



# Temperature Verification System – USB – Single Channel



## Temperature Verification System – USB – Single Channel

- > Measuring device without temperature sensor
- > Sensor for 96 well and 384 well blocks, sold separately
- > Simple, rapid verification and adjustment
- > Automatic adjustment with Mastercycler software, version 2.10 or higher
- > Can be third-party adjusted

### Ordering information

Description	Catalog No.	List USD
Temperature Verification System - USB - Single Channel	0056000003	\$3,700.00
Temperature sensor for 96 Well	0056001000	1,140.00
Temperature sensor for 384 Well	0056002006	1,020.00

# HeatSealer



## Product features

- > Hermetic sealing of multiwell plates
- > Fixed sealing temperature for reproducible results (S100)
- > Adjustable sealing temperatures for more flexibility (S200)
- > Eliminates evaporation in PCR, reducing cross contamination
- > Seals 96- and 384-well plates
- > Compact design, portable device
- > Integrated thermostats prevents overheating
- > Improved mechanics for even easier sealing
- > PCR Plate Adapter included

### Ordering information

Description	Catalog No.	List USD
HeatSealer S100, 100 – 230 V/50 – 60 Hz	5391000010	\$3,120.00
HeatSealer S200, 100 – 230 V/50 – 60 Hz	5392000013	4,470.00
<b>HeatSealer S100 Accessories</b>		
Plate Adapter low profile, for HeatSealer S100	5391070018	375.00
Plate Adapter high profile, for HeatSealer S100	5391070034	375.00
96-well-PCR Plate Adapter, for HeatSealer S100	5391070026	375.00
<b>HeatSealer S200 Accessories</b>		
Plate Adapter low profile, for HeatSealer S200	5392070020	375.00
Plate Adapter high profile, for HeatSealer S200	5392070011	375.00
96-well Plate Adapter, for HeatSealer S200	5392070038	375.00
<b>Heat Sealing Film and Foils</b>		
Eppendorf Heat Sealing Film, PCR clean, 100 pcs.	0030127838	216.50
Eppendorf Heat Sealing Foil, PCR clean, 100 pcs.	0030127854	142.00



# Eppendorf twin.tec<sup>®</sup> PCR Plates

## Product features

- > One-piece design: combining a polycarbonate frame and polypropylene wells for optimum performance
- > Extremely thin-walled polypropylene wells guarantee optimum heat transfer to the sample
- > Exceptionally solid and torque-resistant polycarbonate frame makes plates ideal for automation and prevents warping
- > Improved well-to-well tolerance
- > Cut-away corner and alphanumeric grid-referencing
- > Raised well rims reduce the risk of cross-contamination and improve sealing efficacy
- > Certified free of any detectable human DNA, DNase, RNase and PCR inhibitors<sup>1)</sup>
- > Ideal for quantitative real-time PCR as well

<sup>1)</sup> Download of certificates under [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)



## Eppendorf twin.tec<sup>®</sup> PCR Plate 96, skirted

- > Full skirt design makes it perfect for automated workflows
- > Perfect for standard PCR and qPCR applications
- > Clear wells enable easy sample visualization
- > Within SBS footprint recommendations (127.76 × 85.47 mm ± 0.25 mm)
- > 150 µL maximum well capacity (when used with cap strips)
- > Low profile (150 µL) design enables low volume PCR
- > Stackable while in use for space-saving during storage or automated workflows
- > Barcode options available. For more information please visit [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf twin.tec PCR plate 96, skirted, 150 µL</b>		
PCR Clean, 25 pcs., (5 bags x 5 plates), colorless	951020401	\$120.00
PCR Clean, 25 pcs., (5 bags x 5 plates), yellow	951020427	120.00
PCR Clean, 25 pcs., (5 bags x 5 plates), green	951020443	120.00
PCR Clean, 25 pcs., (5 bags x 5 plates), blue	951020460	120.00
PCR Clean, 25 pcs., (5 bags x 5 plates), red	951020486	120.00
Forensic DNA Grade, 10 pcs., individually wrapped, colorless	0030129601	54.00



## Eppendorf twin.tec<sup>®</sup> PCR Plate 96, semi-skirted

- > Semi-skirted design makes it ideal for automated workflows
- > Perfect for standard PCR and qPCR applications
- > Within SBS footprint recommendations (127.76 × 85.47 mm ± 0.25 mm)
- > 250 µL maximum well capacity (when used with cap strips)
- > Barcode options available. For more information please visit [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf twin.tec<sup>®</sup> PCR Plate 96, semi-skirted, 250 µL</b>		
PCR Clean, 25 pcs., (5 bags x 5 plates), colorless	951020303	\$120.00
PCR Clean, 25 pcs., (5 bags x 5 plates), yellow	951020320	120.00
PCR Clean, 25 pcs., (5 bags x 5 plates), green	951020346	120.00
PCR Clean, 25 pcs., (5 bags x 5 plates), blue	951020362	120.00
PCR Clean, 25 pcs., (5 bags x 5 plates), red	951020389	120.00
Forensic DNA Grade, 10 pcs., individually wrapped, colorless	0030129610	54.00

**i** For more Assay/Reader MTPs go to page 146.



# Eppendorf twin.tec® PCR Plates



## Eppendorf twin.tec® PCR Plate 96, unskirted

- > Fits most common standard and real-time/quantitative PCR thermal cyclers
- > Available in regular (250 µL) and low profile (150 µL) well capacity (when used with cap strips) for enhanced thermal cyclers compatibility and reaction volume flexibility
- > Low profile (150 µL) design enables low volume PCR
- > Perfect for standard PCR and qPCR applications

### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf twin.tec® PCR Plate 96, low profile, unskirted, 150 µL</b>		
PCR Clean, 20 pcs., (4 bags x 5 plates), colorless	0030133307	\$88.00
PCR Clean, 20 pcs., (4 bags x 5 plates), blue	0030133331	88.00
<b>Eppendorf twin.tec® PCR Plate 96, unskirted, 250 µL</b>		
PCR Clean, 20 pcs., (4 bags x 5 plates), colorless	0030133366	88.50
PCR Clean, 20 pcs., (4 bags x 5 plates), blue	0030133390	88.50



## Eppendorf twin.tec® PCR Plate 96, unskirted, divisible

- > Can be divided into 4 segments of 24 wells for convenience and reduction of wasted or unused wells
- > All the benefits of a twin.tec plate for smaller sample sizes
- > Fits most common standard and real-time/quantitative PCR thermal cyclers
- > Available in regular (250 µL) and low profile (150 µL) well capacity (when used with cap strips) for enhanced thermal cyclers compatibility and reaction volume flexibility
- > Low profile (150 µL) design enables low volume PCR
- > Perfect for standard PCR and qPCR applications

### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf twin.tec PCR plate 96, divisible, low profile, unskirted, 150 µL</b>		
PCR Clean, 20 pcs., (4 bags x 5 plates), colorless	0030133358	\$175.50
PCR Clean, 20 pcs., (4 bags x 5 plates), blue	0030133382	175.50
<b>Eppendorf twin.tec PCR plate 96, divisible, unskirted, 250 µL</b>		
PCR Clean, 20 pcs., (4 bags x 5 plates), colorless	0030133374	175.50
PCR Clean, 20 pcs., (4 bags x 5 plates), blue	0030133404	175.50



# Eppendorf twin.tec® PCR Plates

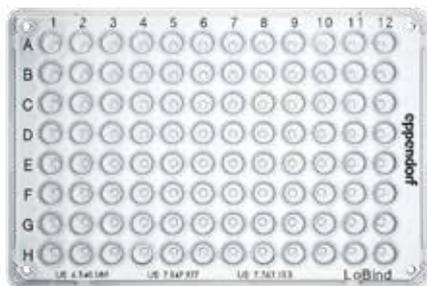


## Eppendorf twin.tec® *microbiology* PCR Plate

- > In addition to being certified PCR clean, these plates are also sterile, bacterial DNA-free and individually blistered for all applications that require utmost purity and certified absence of microbiological contaminations
- > Perfect for labs studying the microbiome and other microbiological applications
- > Within SBS footprint recommendations (127.76 × 85.47 mm ± 0.25 mm)
- > Available in both 96-well and 384-well options for easy scale-up
- > Barcode options available. For more information please visit [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf twin.tec® <i>microbiology</i> PCR Plate 96</b> , skirted, 150 µL		
PCR clean, 10 pcs., individually wrapped, colorless	0030129300	\$ 88.50
PCR clean, 10 pcs., individually wrapped, blue	0030129318	88.50
<b>Eppendorf twin.tec® <i>microbiology</i> PCR Plate 96</b> , semi-skirted, 250 µL		
PCR clean, 10 pcs., individually wrapped, colorless	0030129326	88.50
PCR clean, 10 pcs., individually wrapped, blue	0030129334	88.50
<b>Eppendorf twin.tec® <i>microbiology</i> PCR Plate 384</b> , skirted, 40 µL		
PCR clean, 10 pcs., individually wrapped, colorless	0030129342	130.50
PCR clean, 10 pcs., individually wrapped, blue	0030129350	130.50



## Eppendorf twin.tec® PCR Plate, LoBind

- > LoBind properties reduce adsorption of DNA and protein to the plate to maximize your amplification results
- > Full skirt or Semi-skirt makes this plate ideal for automated workflows
- > Perfect for standard PCR applications, qPCR applications, NGS workflows, and other applications involving precious samples
- > Within SBS footprint recommendations (127.76 × 85.47 mm ± 0.25 mm)
- > Barcode options available. For more information please visit [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf twin.tec PCR Plate 96 LoBind</b> , skirted, 150 µL		
PCR Clean, 25 pcs. (5 bags x 5 plates), colorless	0030129512	\$130.50
PCR Clean, 25 pcs. (5 bags x 5 plates), red	0030129598	150.00
PCR Clean, 25 pcs. (5 bags x 5 plates), blue	0030129580	150.00
PCR Clean, 25 pcs. (5 bags x 5 plates), yellow	0030129679	150.00
PCR Clean, 25 pcs. (5 bags x 5 plates), green	0030129660	150.00
<b>Eppendorf twin.tec PCR Plate 96 LoBind</b> , semi-skirted, 250 µL		
PCR clean, 25 pcs. (5 bags x 5 plates), colorless	0030129504	130.50
<b>Eppendorf twin.tec PCR Plate 384 LoBind</b> , skirted, 40 µL, 25 pcs. (5 bags x 5 plates), colorless	0030129547	253.00

i For more information go to [www.eppendorf.com/Twintec](http://www.eppendorf.com/Twintec)



## Eppendorf twin.tec PCR Plates



### Eppendorf twin.tec® PCR Plate 384

- > Ideal for most common 384-well thermal cyclers
- > 40 µL maximum well capacity
- > Within SBS footprint recommendations (127.76 × 85.47 mm ± 0.25 mm)
- > Ideal for high throughput PCR, low-volume PCR and qPCR applications
- > Barcode options available. For more information please visit [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf twin.tec® PCR Plate 384</b>		
PCR Clean, 25 pcs., (5 bags x 5 plates), colorless	951020702	\$233.50
PCR Clean, 25 pcs., (5 bags x 5 plates), yellow	951020711	233.50
PCR Clean, 25 pcs., (5 bags x 5 plates), green	951020729	233.50
PCR Clean, 25 pcs., (5 bags x 5 plates), blue	951020737	233.50
PCR Clean, 25 pcs., (5 bags x 5 plates), red	951020745	233.50
Forensic DNA Grade, 10 pcs., individually wrapped, colorless	0030129628	103.50

## Eppendorf twin.tec *real-time* PCR Plates



### Eppendorf twin.tec® *real-time* PCR Plates

- > General product features of the Eppendorf twin.tec plate hold true for the Eppendorf *real-time* PCR plates
- > White wells enhance the fluorescence signal while eliminating the risk of well-to-well cross-talk
- > Ideal for qPCR applications and melting curve analysis
- > Available 96-well skirted, semi-skirted, and unskirted twin.tec variants as well as 384-well for easy scale-up or higher throughput applications
- > Barcoding available with 96-well skirted, 96-well semi-skirted and 384 well plates. For more information please visit [www.eppendorf.com/barcode](http://www.eppendorf.com/barcode)

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf twin.tec <i>real-time</i> PCR Plate 96, skirted, 150 µL</b>		
PCR Clean, 25 pcs., (5 bags x 5 plates), blue	951022003	\$170.50
PCR Clean, 25 pcs., (5 bags x 5 plates), white	951022015	170.50
Forensic DNA Grade, 10 pcs., individually wrapped, white	0030129636	76.00
<b>Eppendorf twin.tec <i>real-time</i> PCR Plate 96, semi-skirted, 250 µL</b>		
PCR Clean, 25 pcs., (5 bags x 5 plates), blue	951022043	170.50
PCR Clean, 25 pcs., (5 bags x 5 plates), white	951022055	170.50
Forensic DNA Grade, 10 pcs., individually wrapped, white	0030129644	76.00
<b>Eppendorf twin.tec <i>real-time</i> PCR Plate 96, unskirted, 150 µL</b>		
PCR Clean, 20 pcs., (4 bags x 5 plates), blue	0030132718	104.50
PCR Clean, 20 pcs., (4 bags x 5 plates), white	0030132700	104.50



## Eppendorf PCR Tubes



### Eppendorf PCR Tubes

- > Tight lid seal to eliminate risk of evaporation during assay
- > Available in 0.2 mL and 0.5 mL formats
- > 0.2 mL tube has a hinged lid and contamination shield
- > For use with all thermal cyclers with a standard 0.2 mL (0.2 mL tube) or 0.5 mL (0.5 mL tube) block format
- > Extremely thin walls for optimal heat transfer
- > Certified PCR Clean – free from human DNA, DNase, RNase, and PCR inhibitors

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf PCR Tubes</b>		
PCR clean, 0.2 mL, 1000 pcs.	951010006	\$152.50
Forensic DNA Grade, 0.2 mL, 500 pcs (10 bags x 50 pcs.)	0030124707	85.00
PCR clean, 0.5 mL, 500 pcs.	0030124537	75.50

## Eppendorf PCR Tube Strips



### Eppendorf PCR Tube Strips, 0.2 mL

- > Contamination shield on the attached, hinged lid
- > Lid position is defined due to the hinge which enables easier handling and assay set-up
- > Extremely thin walls for optimal heat transfer
- > Tight lid seal to eliminate risk of evaporation during assay
- > For use with all thermal cyclers with a standard 0.2 mL block format
- > Certified PCR Clean - free from human DNA, DNase, RNase, and PCR inhibitors

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf PCR tube Strips, 0.2 mL</b>		
PCR clean, with attached domed lid, 120 pcs. (10 bags x 12 strips)	951010022	\$207.00

i For more information go to [www.eppendorf.com/pcr](http://www.eppendorf.com/pcr)



# Eppendorf PCR Tube Strips



## Eppendorf PCR Tube Strips, 0.1 mL

- > 8 reaction tubes in a strip format make these ideal for smaller sample volumes
- > Extremely thin walls for optimal heat transfer
- > Sealable using either flat or domed cap strips
- > Certified PCR clean - free from human DNA, DNase, RNase, and PCR inhibitors
- > Fits most standard PCR thermal cyclers

### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf PCR Tube Strips, 0.1 mL</b>		
PCR clean, without lids (10 bags x 12 strips)	0030124804	\$132.50
PCR clean, with Cap Strips, domed (10 bags x 12 strips)	0030124812	197.00
PCR clean, with Cap Strips, flat (10 bags x 12 strips)	0030124820	204.00
<b>Cap strips, 8 microcap strip</b>		
PCR clean, domed, 120 pcs. (10 bags x 12 cap strips)	0030124839	75.50
PCR clean, flat, 120 pcs. (10 bags x 12 cap strips)	0030124847	83.00

# Masterclear® Cap Strips and real-time PCR Tube Strips



## Masterclear® Cap Strips and real-time PCR Tube Strips, 0.1 mL

- > real-time PCR Tube Strips
- > White wells enhance the fluorescence signal while eliminating the risk of well-to-well cross-talk
- > High mechanical stability
- > Extremely thin walls for optimal heat transfer
- > Certified PCR Clean – free from human DNA, DNase, RNase, and PCR inhibitors

### Masterclear Cap Strips

- > Inverted dome to avoid scratching of the optic surface
- > Inverted dome reduces total volume of the tube, bringing the optical surface closer to your sample for more accurate signal transmission
- > Optimized for maximum light transmission
- > Certified PCR Clean – free from human DNA, DNase, RNase, and PCR inhibitors

### Ordering information

Description	Catalog No.	List USD
<b>real-time PCR Tube Strips, without caps</b>		
PCR clean, without caps, 120 pcs. (10 bags x 12 strips)	951022102	\$175.50
<b>Masterclear Cap Strips and real-time PCR Tube Strips</b>		
PCR clean, 120 pcs. (10 bags x 12 strips)	951022109	274.50
<b>Masterclear Cap Strips</b>		
PCR clean, 120 pcs. (10 bags x 12 strips)	951022089	102.50

## Cap Strips



### Cap Strips

- > Strips with 8 microcaps for 0.1 and 0.2 mL wells
- > Easy and rapid sealing of Eppendorf twin.tec PCR plates, PCR tube strips and other standard multiwell plates
- > Flat caps are suitable for qPCR applications
- > Fully autoclavable
- > Certified PCR Clean – free from human DNA, DNase, RNase, and PCR inhibitors

#### Ordering information

Description	Catalog No.	List USD
<b>Cap Strips, 8-strips</b>		
PCR clean, domed, 120 pcs. (10 bags x 12 cap strips)	0030124839	\$75.50
PCR clean, flat, 120 pcs. (10 bags x 12 cap strips)	0030124847	83.00

## Heat Sealing Film and Heat Sealing Foil



### Heat Sealing Film and Heat Sealing Foil

- > Hermetic sealing of multiwell plates, especially recommended for low reaction volumes
- > Best protection against evaporation during PCR
- > Heat Sealing film allows for visual monitoring of sample due to transparency and is ideal when plates are being stacked as it prevents accidental piercing
- > Heat Sealing foil is easily pierced and ideal for automated systems

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Heat Sealing Film</b> , PCR clean, 100 pcs.	0030127838	\$216.50
<b>Eppendorf Heat Sealing Foil</b> , PCR clean, 100 pcs.	0030127854	142.00

## PCR Film (self-adhesive) and PCR Foil (self-adhesive)



### PCR Film (self-adhesive) and PCR Foil (self-adhesive)

- > Effective adhesive sealing prevents evaporation loss during PCR
- > Removal from the plate with no residue
- > PCR Film: Sample can be visually monitored through the transparent film
- > PCR Foil: Easily pierced
- > PCR Foil: No sticking of the pipette tip (ideal for automated systems)

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf PCR Film</b> , self-adhesive, PCR clean, 100 pcs.	0030127781	\$209.00
<b>Eppendorf PCR Foil</b> , self-adhesive, PCR clean, 100 pcs.	0030127790	192.50



## Masterclear® *real-time* PCR Film



### Masterclear® *real-time* PCR Film

- > Optimized optical clarity for maximum signal transmission
- > Effective adhesive sealing prevents evaporation and sample loss during PCR
- > For use with multiwell plates during qPCR applications

#### Ordering information

Description	Catalog No.	List USD
Masterclear® <i>real-time</i> PCR Film, self-adhesive, PCR clean, 100 pcs.	0030132947	\$273.50

## PCR Rack



### PCR Rack

- > Rack for handling and storing tubes and plates
- > For 0.1 mL, 0.2 mL and 0.5 mL tubes, as well as 96-well plates
- > Stackable
- > Can be stored down to -90 °C
- > Autoclavable (121 °C, 20 min)

#### Ordering information

Description	Catalog No.	List USD
PCR Rack, 10 pcs.	0030124545	\$203.00

# Sample Handling



Eppendorf High-Efficiency ULT Freezers		
Model	HEF® U410	CryoCube® F570h
Page(s)	290	290
Insulation	Vacuum insulation paneling & polyurethane foam	Vacuum insulation paneling & polyurethane foam
Wall thickness	Type C	Type C
Capacity	14.5 ft <sup>3</sup> (410 L)	20.1 ft <sup>3</sup> (570 L)
Box capacity per freezer (2 in)	240	400
Number of internal doors	5	5
Number of shelves	5	5
Rack capacity	15	25
Box capacity per rack		
2 in tall boxes	16	16
3 in tall boxes	12	12
5 in tall boxes	8	N/A
External dimensions (W x D x H) <sup>1,2,3</sup>	31.5 x 33.5 x 76 in / 80 x 85.2 x 193.0 cm	40.4 x 33.5 x 76.4 in / 102.5 x 85.2 x 194 cm
Internal dimensions (W x D x H)	21.6 x 22.6 x 49.8 in / 55 x 57.5 x 126.5 cm	30.1 x 22.6 x 49.8 in / 76.5 x 57.5 x 126.5 cm
Weight (freezer only)	578 lbs / 262 kg	652.6 lbs / 296 kg
Shipping weight	666 lbs / 302 kg	751.8 lbs / 341 kg
Pull down time to -85 °C / -80 °C <sup>4</sup>	5 h 50 min	4 h 54 min
Noise level	57 dBA	58.8 dBA
Heat output	358 W	392 W
Plug type		
120 V	5-15P	5-20P
208-220 V	N/A	6-15P
Power consumption <sup>5</sup>	8.6 kWh/day	9.4 kWh/day
Interior	Stainless steel	Stainless steel
Extras		automatic vent port
Refrigerant	R404A / R508B	R404A / R508B

<sup>1</sup> Optional CO<sub>2</sub>/LN<sub>2</sub> backup systems add 8.65 cm/3.5 in to height.<sup>2</sup> To allow for handles and hinges, add 80 mm to width of upright freezers and 110 mm to the depth of chest freezers.<sup>3</sup> Door open adds up to 15 cm.<sup>4</sup> Empty freezer with shelves fitted, upright freezers only, pull down from 21 – 23 °C ambient conditions.<sup>5</sup> Empty freezer with shelves fitted, upright freezers only, set point -80 °C, 20 – 23 °C ambient conditions.


**CryoCube® FC660h**

290

Vacuum insulation paneling &amp; polyurethane foam

Type C

23.3 ft<sup>3</sup> (660 L)

520

N/A

N/A

40

13

9

6

42.9 x 81.5 x 33.5 in / 207 x 84 x 107.5 cm

29.9 x 57.9 x 23.2 in / 147 x 59 x 76 cm

617 lbs / 280 kg

776 lbs / 352 kg

4 h 41 min

60.1 dBA

396 W

N/A

6–15P

9.5 kWh/day

Stainless steel

30 mm thick inner lids for improved temperature uniformity

R404A / R508B

**CryoCube® F740i/F740iw, 3-shelf  
CryoCube® F740i/F740iw, 5-shelf**

290

Vacuum insulation paneling &amp; polyurethane foam

Type B

26.1 ft<sup>3</sup> (740 L)

576 (3-Shelf) / 528 (5-Shelf)

3

3 or 5

18 (3-Shelf) / 30 (5-Shelf)

32 (3-Shelf) / 16 (Shelves 1-4) &amp; 24 (Shelf 5)

20 (3-Shelf) / 8 (Shelves 1-4) &amp; 16 (Shelf 5)

12 (3-Shelf) / 8 (Shelf 5 only)

43.3 x 36.0 x 77.7 in / 109.9 x 98 x 197.3 cm

34.1 x 24.5 x 54.7 in / 86.5 x 62.1 x 139 cm

679 / 699 lbs (308 kg / 317 kg)

787 / 806 lbs (357 kg / 366 kg)

4 h 45 min

41.3 dBA

588 W (120 V) / 538 (208–220 V)

5–20P

6–15P

14.2 (120 V)–12.9 (208–220 V)

Stainless steel

automatic vent port, sealing inner doors, advanced interface, electronic lock, temperature and event logging, voltage stabilizer, 120–208 V switching

R404A / R508B

**CryoCube® F740hi/F740hiw, 3-shelf  
CryoCube® F740hi/F740hiw, 5-shelf**

290

Vacuum insulation paneling &amp; polyurethane foam

Type B

26.1 ft<sup>3</sup> (740 L)

576 (3-Shelf) / 528 (5-Shelf)

3

3 or 5

18 (3-Shelf) / 30 (5-Shelf)

32 (3-Shelf) / 16 (Shelves 1-4) &amp; 24 (Shelf 5)

20 (3-Shelf) / 8 (Shelves 1-4) &amp; 16 (Shelf 5)

12 (3-Shelf) / 8 (Shelf 5 only)

43.3 x 36.0 x 77.7 in / 109.9 x 98 x 197.3 cm

34.1 x 24.5 x 54.7 in / 86.5 x 62.1 x 139 cm

679 / 699 lbs (308 kg / 317 kg)

787 / 806 lbs (357 kg / 366 kg)

4 h 10 min

41.3 dBA

483 (120 V) / 438 W (208–220 V)

5–20P

6–15P

11.6 (120 V) / 10.5 (208–220 V)

Stainless steel

automatic vent port, sealing inner doors, advanced interface, electronic lock, temperature and event logging, voltage stabilizer, 120–208 V switching

R404A / R508B



## Eppendorf Innova® ULT Freezers

Model	Innova® U101	Innova® U360
Page(s)	290	290
Insulation	Vacuum insulation paneling & polyurethane foam	Vacuum insulation paneling & polyurethane foam
Wall thickness	Type B	Type B
Capacity	3.6 ft <sup>3</sup> (101 L)	12.7 ft <sup>3</sup> (360 L)
Box capacity per freezer (2 in)	60	252
Number of internal doors	2	3
Number of shelves	2	3
Rack capacity	6	9
Box capacity per rack		
2 in tall boxes	10	28
3 in tall boxes	6	20
5 in tall boxes	4	12
External dimensions (W x D x H) <sup>1,2,3</sup>	35.4 x 22.3 x 32.7 in / 90 x 56.6 x 83 cm	26.4 x 34.1 x 76.8 in / 67 x 86.7 x 195 cm
Internal dimensions (W x D x H)	18.9 x 13 x 25.2 in / 48 x 33 x 64 cm	17.3 x 24.2 x 53.7 in / 44 x 61.5 x 136.5 cm
Weight (freezer only)	256 lbs / 116 kg	507 lbs / 230 kg
Shipping weight	311 lbs / 141 kg	586 lbs / 266 kg
Pull down time to -85 °C / -80 °C <sup>4</sup>	3 h 30 min	5 h
Noise level	54 dBA	54 dBA
Heat output	344 W	623 W
Plug type		
120 V	5-15P	5-20P
208-220 V	N/A	N/A
Power consumption <sup>5</sup>	7.4 kWh/day	10.7 kWh/day
Interior	Stainless steel	Stainless steel
Extras	sealing inner doors, fits under a standard lab bench, stackable two high (stacking kit required)	door alarm, data logging, sealing inner doors, voltage stabilizer
Refrigerant	R404A / R508B	R404A / R508B

<sup>1)</sup> Optional CO<sub>2</sub>/LN<sub>2</sub> backup systems add 8.65 cm/3.5 in to height.<sup>2)</sup> To allow for handles and hinges, add 80 mm to width of upright freezers and 110 mm to the depth of chest freezers.<sup>3)</sup> Door open adds up to 15 cm.<sup>4)</sup> Empty freezer with shelves fitted, upright freezers only, pull down from 21 – 23 °C ambient conditions.<sup>5)</sup> Empty freezer with shelves fitted, upright freezers only, set point -80 °C, 20 – 23 °C ambient conditions.

**Innova® U535****290**

Vacuum insulation paneling &amp; polyurethane foam

Type B

18.9 ft<sup>3</sup> (535 L)

336

3

3

12

28

20

12

31.5 x 34.1 x 76.8 in / 80 x 86.7 x 195 cm

25.2 x 24.2 x 53.7 in / 64 x 61.5 x 136.5 cm

551 lbs / 250 kg

652 lbs / 296 kg

5 h 18 min

56 dBA

720 W

5–20P

6–15P

13.2 kWh/day

Stainless steel

sealing inner doors, voltage stabilizer

R404A / R508B

**Innova® C585****290**

Vacuum insulation paneling &amp; polyurethane foam

Type B

20.7 ft<sup>3</sup> (585 L)

416

N/A

N/A

32

28

20

12

66.5 x 30.9 x 43 in / 169 x 78.5 x 109.2 cm

47.2 x 24.6 x 30.7 in / 120 x 62.5 x 78 cm

528 lbs / 240 kg

683 lbs / 310 kg

4 h 18 min

56 dBA

700 W

5–20P

6–15P

13.6 kWh/day

Stainless steel

30 mm thick inner lids for improved temperature uniformity, voltage stabilizer

R404A / R508B

**Innova® C760****290**

Vacuum insulation paneling &amp; polyurethane foam

Type B

26.9 ft<sup>3</sup> (760 L)

572

N/A

N/A

44

28

20

12

80.7 x 30.9 x 43 in / 205 x 78.5 x 109.2 cm

61.4 x 24.6 x 30.7 in / 156 x 62.5 x 78 cm

627 lbs / 285 kg

789 lbs / 358 kg

5 h 48 min

58 dBA

750 W

N/A

6–15P

16 kWh/day

Stainless steel

30 mm thick inner lids for improved temperature uniformity, voltage stabilizer

R404A / R508B



## Eppendorf ULT Freezers

	Premium U410	CryoCube® F570
<b>Model</b>	Premium U410	CryoCube® F570
<b>Page(s)</b>	290	290
<b>Insulation</b>	Polyurethane foam	Polyurethane foam
<b>Wall thickness</b>	Type A	Type A
<b>Capacity</b>	14.5 ft <sup>3</sup> (410 L)	20.1 ft <sup>3</sup> (570 L)
<b>Box capacity per freezer (2 in)</b>	240	400
<b>Number of internal doors</b>	5	5
<b>Number of shelves</b>	5	5
<b>Rack capacity</b>	15	25
<b>Box capacity per rack</b>		
<b>2 in tall boxes</b>	16	16
<b>3 in tall boxes</b>	12	12
<b>5 in tall boxes</b>	N/A	N/A
<b>External dimensions (W x D x H)<sup>1,2,3</sup></b>	31.5 x 33.5 x 75.4 in / 80 x 85.2 x 193 cm	40.4 x 33.5 x 76.4 in / 102.5 x 85.2 x 194 cm
<b>Internal dimensions (W x D x H)</b>	21.6 x 22.6 x 49.8 in / 55 x 57.5 x 126.5 cm	30.1 x 22.6 x 49.8 in / 76.5 x 57.5 x 126.5 cm
<b>Weight (freezer only)</b>	518 lbs / 235 kg	507 lbs / 230 kg
<b>Shipping weight</b>	617 lbs / 280 kg	694.5 lbs / 315 kg
<b>Pull down time to -85 °C / -80 °C<sup>4</sup></b>	5 h 36 min	4 h 43 min
<b>Noise level</b>	58.8 dBA	58.8 dBA
<b>Heat output</b>	448 W	500 W (120 V) / 479 W (208–220 V)
<b>Plug type</b>		
<b>120 V</b>	5–15P	5–20P
<b>208–220 V</b>	6–15P	6–15P
<b>Power consumption<sup>5</sup></b>	13 kWh/day	12.0 kWh/day (120V) / 11.5 kWh/day (208–220V)
<b>Interior</b>	Stainless steel	Stainless steel
<b>Extras</b>		automatic vent port
<b>Refrigerant</b>	R404A / R508B	R404A / R508B

<sup>1)</sup> Optional CO<sub>2</sub>/LN<sub>2</sub> backup systems add 8.65 cm/3.5 in to height.<sup>2)</sup> To allow for handles and hinges, add 80 mm to width of upright freezers and 110 mm to the depth of chest freezers.<sup>3)</sup> Door open adds up to 15 cm.<sup>4)</sup> Empty freezer with shelves fitted, upright freezers only, pull down from 21 – 23 °C ambient conditions.<sup>5)</sup> Empty freezer with shelves fitted, upright freezers only, set point -80 °C, 20 – 23 °C ambient conditions.

For more information go to [www.eppendorf.com](http://www.eppendorf.com)

Product appearance, specifications, and/or prices are subject to change without notice.


**CryoCube® F740, 3-shelf / CryoCube® F740, 5-shelf**
**290**

Vacuum insulation paneling &amp; polyurethane foam

Type B

 26.1 ft<sup>3</sup> (740 L)

576 (3-Shelf) / 528 (5-Shelf)

3

3 or 5

18 (3-Shelf) / 30 (5-Shelf)

32 (3-Shelf) / 16 (Shelves 1-4) &amp; 24 (Shelf 5)

20 (3-Shelf) / 8 (Shelves 1-4) &amp; 16 (Shelf 5)

12 (3-Shelf) / 8 (Shelf 5 only)

43.3 x 36.0 x 77.7 in / 109.9 x 91.5 x 197.3 cm

34.1 x 22.6 x 54.7 in / 86.5 x 62.1 x 139 cm

679 / 699 lbs (308 kg / 317 kg)

787 / 806 lbs (357 kg / 366 kg)

5 h

47.8 dBA

592 (120 V)–538 (208–220 V)

5–20P

6–15P

14.2 (120 V)–12.9 (208–220 V)

Stainless steel

automatic vent port, sealing inner doors, voltage stabilizer, 120-208V switching

R404A / R508B

**CryoCube® FC660**
**290**

Polyurethane foam

Type A

 23.3 ft<sup>3</sup> (660 L)

520

N/A

N/A

40

13

9

6

42.9 x 81.5 x 33.5 in / 207 x 84 x 107.5 cm

29.9 x 57.9 x 23.2 in / 147 x 59 x 76 cm

617 lbs / 280 kg

723 lbs / 328 kg

4 h 24 min

58.9 dBA

440 W

N/A

6–15P

10.6 kWh/day

Stainless steel

30 mm thick inner lids for improved temperature uniformity

R404A / R508B

# Eppendorf High-Efficiency ULT Freezers

## Description

For Eppendorf, being efficient and green is not a trend – acting as a responsible global citizen is one of our founding principles. A core tenet of our philosophy is to reduce our ecological impact by designing and manufacturing high-quality, long-lasting products. Today, we continue to set new standards with our high efficiency freezers, offering an ideal intersection between reliable sample security and reduced power consumption, which minimizes operating costs while providing excellent protection for your critical samples. They can reduce energy consumption by up to 50 % when compared to other models.



## Product features

- > Broad range of capacity classes: 410 L (14.5 ft<sup>3</sup>) to 740 L (26.1 ft<sup>3</sup>), from 24,000 to 57,600 samples
- > Robust insulation, composed of traditional insulation, vacuum insulation panels, and Vacupor® NT technology conserve energy and improve security
- > Flat, frost-resistant door gaskets provide a tight seal to minimize ice buildup
- > Efficient compressor control system reduces cycle times to lower energy consumption and increases freezer longevity
- > New automatic vent port on front door of upright CryoCube models enables fast sample access
- > Lockable main switch to prevent switch-offs by accident
- > Location for chart recorder for data documentation
- > Ergonomic door handle of CryoCube models based on Eppendorf PhysioCare Concept requires less force and provides easier access
- > Some models are available as air-cooled as well as water-cooled for further energy saving
- > Full stainless steel interior for easy cleaning during maintenance and defrost cycles; powder-coated steel exterior





CryoCube® F740i and F740hi: Electronic, automatic door lock with unique user PINs and multiple levels of user access



Automatic vent port allows easy re-access to samples on upright CryoCube ULT freezers

#### Environmentally friendly and energy efficient

Ultra-low temperature freezers traditionally consume a large amount of energy in order to maintain extremely low temperatures 24/7. With today's high energy costs and focus on sustainability, energy conservation has become even more important in the lab. Eco-friendly Eppendorf ULT freezers are designed to conserve energy without compromising sample security.

- > A highly efficient compressor control system reduces cycling times to lower energy consumption and increase freezer longevity
- > Low noise levels and heat output to benefit your work environment
- > High-quality insulation materials and optimized energy efficiency and temperature stability while minimizing recovery time.
- > Environmentally safe, HCFC-free and CFC-free refrigerants minimize greenhouse gases (CryoCube F740hi)
- > Biodegradable and commercially-available, high-performance, synthetic compressor lubricants prevent "oil-logging" seen in older traditional compressor freezers
- > A single, quiet, condenser fan reduces energy consumption; compared to many freezers that require two
- > Built with 95 – 98 % recyclable materials (by weight)
- > As an industry leader in sustainable laboratories, the new ACT Label is available for the Eppendorf F740 series ULT freezers, providing a thorough breakdown of environmental impact through an independent audit of manufacturing, efficiency, and recycled content



Patented "balcony vent" design on rear of F740i and F740hi reduce sound output to only 41.3 db



All Eppendorf ULT freezers offer a locking panel over the breaker and power switches to avoid accidental or unauthorized power-off

# Eppendorf Innova® ULT Freezers

## Description

Eppendorf Innova ULT Freezers set the standard when it comes to maximizing sample storage capacity and security. They take advantage of efficient, ultra-compact vacuum insulation panels in combination with traditional insulation to slim down the freezer wall thickness from 130 mm to 80 mm while increasing their thermal resistance. These models are ideal for labs short on space that demand both capacity and performance. Five models of different sizes and form factors are offered: The Innova U101, U360, U535, C585, and C760, ranging from 3.6 to 26.9 ft<sup>3</sup>.



## Product features

- > Vacuum insulation panels allow for increased internal capacity with the same footprint as traditionally foamed freezers
- > Inner doors are gasketed as well as insulated, creating 3 separate compartments to minimize cold air loss during sample access
- > Special low-temperature, flat, frost-resistant outer door seals allow gaskets to remain flexible at -86 °C and prevent ice buildup for easy access to samples
- > Easy-to-read, eye level, flush mounted LED control panel with alarm status
- > Each shelf is adjustable in height for additional storage flexibility
- > Special vacuum vent with plunger ergonomically located at waist level to gain immediate access to your freezer
- > Inner doors can be quickly removed without tools for easier and faster defrosting
- > Full stainless steel interior for easy cleaning during maintenance and defrost cycles; powder-coated steel exterior
- > Password protection of alarm and temperature setpoints to prevent unauthorized setting changes

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



A wide variety of racking options, from standard 2" boxes to 5" racks for conical tubes or specialized racks for plates



Quick-release air filter cover for easy access during routine maintenance



Easy-access vacuum release vent port for fast and reliable re-entry



The Innova U101 is a personal-sized option that fits all the great quality and design of an Eppendorf freezer into a small undercounter design



Insulated inner lids are 30 mm thick and designed to help maintain temperature stability



Insulated inner doors with gaskets are easily removable for cleaning and maintenance

# Eppendorf ULT Freezers

## Description

Eppendorf ULT Freezers are known for their energy efficiency, reliability, and worry-free, long-term sample preservation. They provide many of the same features as our Innova ULT Freezers, but are conventionally insulated for a cost-effective alternative. Robust insulation combined with a highly efficient cooling system achieve ultra-low temperatures of  $-86\text{ }^{\circ}\text{C}$  with excellent uniformity and easy maintenance.



## Product features

- > Traditionally foamed polyurethane insulation enforced by vacuum insulation panels in freezer body provides efficient insulation protection\*
- > Quick pull-down and recovery times with reliable heavy-duty compressors for sample safety
- > Left or right-handed outer door as option for optimal space usage in the lab\*
- > Easy-to-read, eye level control panel with alarm status
- > Inner doors are insulated and sealed minimizing cold air loss while accessing your samples\*
- > 3 or 5 compartments as option, each accepts Eppendorf racks as well as other popular brands without adjustment\*
- > Each shelf has air slits for fast temperature adaptation and improved uniformity\*
- > Special low-temperature, flat, frost-resistant outer door seals allow gaskets to remain flexible at  $-86\text{ }^{\circ}\text{C}$
- > Full stainless steel interior for easy cleaning during maintenance and defrost cycles; powder-coated steel exterior

\*CryoCube F740 and F740i only

**F740: 3 compartment version stainless steel interior**

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Upright CryoCube freezers feature a new ergonomic door handle design based on award-winning Eppendorf PhysioCare® Concept to enable easy access – one-handed opening with minimal operating force



Automatic vent port on the front door ensures quick access to your samples by releasing vacuum build-up



Flat, flexible, frost-resistant gaskets optimize sealing at the outer door to form a tight, easy-to-maintain seal that keeps cold air inside the freezer and minimizes ice buildup



Two access ports allow CO<sub>2</sub>/LN<sub>2</sub> backup systems or independent temperature probes for remote monitoring to be added to ensure safety of critical samples



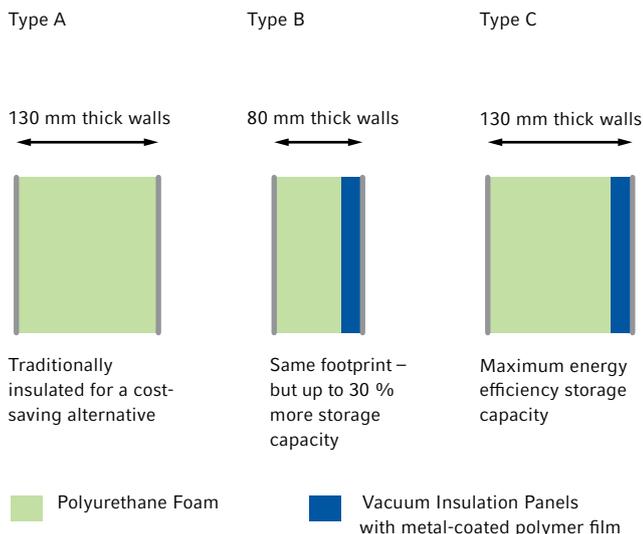
Insulated and gasketed inner doors on the CryoCube F740 series minimize cold air loss on door openings to improve temperature stability and recovery times



New air filter design on the F740 series is easy to open for maintenance and drastically reduces the noise output



# Eppendorf High-Efficiency ULT Freezers



**Ordering information**

Description	Catalog No.	List USD
<b>High-Efficiency ULT Freezers</b>		
CryoCube® FC660h Chest, 23.3 ft³ / 660 L, 208-220V/60 Hz	F660420005	\$17,995.00
Premium HEF® U410, 14.5 ft³ / 410 L, 5 shelves, 115 V/60 Hz	U9260-0007	14,545.00
CryoCube® F570h, 20 ft³ / 570 L, 5 shelves, 115V/60 Hz	F570220005	16,705.00
<b>The New CryoCube F740i and F740hi with Advanced Interface</b>		
Each high-efficiency 26.1 ft³ F740i and F740hi ULT can be used on 115 V or 208 V power. Select for shelf style, refrigerants, handle configuration, and included power cable.		
CryoCube® F740i, 26.1 ft³ / 740 L, left, 3 shelves, 115 V/60Hz cable included	F740210015	19,480.00
CryoCube® F740i, 26.1 ft³ / 740 L, left, 3 shelves, 208-220 V/60Hz cable included	F740410015	19,480.00
CryoCube® F740i, 26.1 ft³ / 740 L, left, 5 shelves, 115 V/60Hz cable included	F740210035	19,480.00
CryoCube® F740i, 26.1 ft³ / 740 L, left, 5 shelves, 208-220 V/60Hz cable included	F740410035	19,480.00
CryoCube® F740i, 26.1 ft³ / 740 L, right, 3 shelves, 115 V/60 Hz cable included	F740210025	20,400.00
CryoCube® F740i, 26.1 ft³ / 740 L, right, 3 shelves, 208-220 V/60Hz cable included	F740410025	20,400.00
CryoCube® F740i, 26.1 ft³ / 740 L, right, 5 shelves, 115 V/60 Hz cable included	F740210045	20,400.00
CryoCube® F740i, 26.1 ft³ / 740 L, right, 5 shelves, 208-220 V/60Hz cable included	F740410045	20,400.00
CryoCube® F740hi, 26.1 ft³ / 740 L, left, 3 shelves, 115 V/60 Hz cable included	F740220015	20,860.00
CryoCube® F740hi, 26.1 ft³ / 740 L, left, 3 shelves, 208-220 V/60Hz cable included	F740420015	20,860.00
CryoCube® F740hi, 26.1 ft³ / 740 L, left, 5 shelves, 115 V/60 Hz cable included	F740220035	20,860.00
CryoCube® F740hi, 26.1 ft³ / 740 L, left, 5 shelves, 208-220 V/60Hz cable included	F740420035	20,860.00
CryoCube® F740hi, 26.1 ft³ / 740 L, right, 3 shelves, 115 V/60 Hz cable included	F740220025	21,770.00
CryoCube® F740hi, 26.1 ft³ / 740 L, right, 3 shelves, 208-220 V/60Hz cable included	F740420025	21,770.00
CryoCube® F740hi, 26.1 ft³ / 740 L, right, 5 shelves, 115 V/60 Hz cable included	F740220045	21,770.00
CryoCube® F740hi, 26.1 ft³ / 740 L, right, 5 shelves, 208-220 V/60Hz cable included	F740420045	21,770.00
<b>Water-Cooled ULT Freezers</b>		
Minimize your building's HVAC load by connecting these to your non-potable chilled water system.		
CryoCube® F740iw, 26.1 ft³ / 740 L, left, 3 shelves, 115 V/60 Hz cable included	F740210115	20,180.00
CryoCube® F740iw, 26.1 ft³ / 740 L, left, 3 shelves, 208-220 V/60Hz cable included	F740410115	20,180.00
CryoCube® F740iw, 26.1 ft³ / 740 L, left, 5 shelves, 115 V/60 Hz cable included	F740210135	20,180.00
CryoCube® F740iw, 26.1 ft³ / 740 L, left, 5 shelves, 208-220 V/60Hz cable included	F740410135	20,180.00
CryoCube® F740hiw, 26.1 ft³ / 740 L, left, 3 shelves, 115 V/60 Hz cable included	F740220115	21,560.00
CryoCube® F740hiw, 26.1 ft³ / 740 L, left, 3 shelves, 208-220 V/60Hz cable included	F740420115	21,560.00
CryoCube® F740hiw, 26.1 ft³ / 740 L, left, 5 shelves, 115 V/60 Hz cable included	F740220135	21,560.00
CryoCube® F740hiw, 26.1 ft³ / 740 L, left, 5 shelves, 208-220 V/60Hz cable included	F740420135	21,560.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



# Eppendorf Innova® ULT Freezers

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Innova ULT Freezers</b>		
Innova® U101 Undercounter, 3.6 ft³ / 101 L, 2 shelves, 115 V/60 Hz	U9420-0000	\$11,495.00
Innova® U360, 12.7 ft³ / 360 L, 3 shelves, 115 V/60 Hz	U9425-0000	15,495.00
Innova® U535, 18.9 ft³ / 535 L, 3 shelves, 115 V/60 Hz	U9430-0000	16,200.00
Innova® U535, 18.9 ft³ / 535 L, 3 shelves, 208–220 V/60 Hz	U9430-0002	16,200.00
Innova® C585 Chest, 20.7 ft³ / 585 L, 115 V/60 Hz	U9400-0000	18,100.00
Innova® C585 Chest, 20.7 ft³ / 585 L, 208–220 V/60 Hz	U9400-0002	18,100.00
Innova® C760 Chest, 26.9 ft³ / 760 L, 208–220 V/60 Hz	U9410-0002	19,700.00

For racks please check page 296.

# Eppendorf ULT Freezers

## Ordering information

Description	Catalog No.	List USD
<b>The New CryoCube F740</b>		
Each unit can be used on 115 V or 208 V power. Select for shelf style, refrigerants, handle configuration, and included power cable.		
CryoCube® F740, 26.1 ft³ / 740 L, left, 3 shelves, 115 V/60Hz cable included	F740200015	18,030.00
CryoCube® F740, 26.1 ft³ / 740 L, left, 3 shelves, 208-220 V/60Hz cable included	F740400015	18,030.00
CryoCube® F740, 26.1 ft³ / 740 L, left, 5 shelves, 115 V/60Hz cable included	F740200035	18,030.00
CryoCube® F740, 26.1 ft³ / 740 L, left, 5 shelves, 208-220 V/60Hz cable included	F740400035	18,030.00
CryoCube® F740, 26.1 ft³ / 740 L, right, 3 shelves, 115 V/60 Hz cable included	F740200025	18,940.00
CryoCube® F740, 26.1 ft³ / 740 L, right, 3 shelves, 208-220 V/60Hz cable included	F740400025	18,940.00
CryoCube® F740, 26.1 ft³ / 740 L, right, 5 shelves, 115 V/60 Hz cable included	F740200045	18,940.00
CryoCube® F740, 26.1 ft³ / 740 L, right, 5 shelves, 208-220 V/60Hz cable included	F740400045	18,940.00
<b>Eppendorf ULT Freezers</b>		
CryoCube® FC660, 23.3 ft³ / 660 L, 208-220 V/60 Hz	F660400005	16,795.00
CryoCube® F570, 20.0 ft³ / 570 L, 5 shelves, 115 V/60 Hz	F570200005	15,645.00
CryoCube® F570, 20.0 ft³ / 570 L, 5 shelves, 208-220 V/60 Hz	F570400005	15,645.00
Premium U410, 14.5 ft³ / 410 L, 5 shelves, 115 V/60 Hz	U9260-000	13,595.00
Premium U410, 14.5 ft³ / 410 L, 5 shelves, 208-220 V/60 Hz	U9260-002	13,595.00

For racks please check page 296.



# Freezers Accessories and Replacement Parts



## Eppendorf TCA-3 Temperature Monitor

- > Receive email, voicemail, and text alarms if the temperature exceeds desired levels for higher sample safety
- > No subscription fees
- > Quick installation on any freezer regardless of manufacturer for flexible usage
- > View temperature data readings, graphs, and statistics from any web browser (including mobile devices and tablets) for flexible data access
- > Temperature range is from -100 °C to 100 °C

### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf TCA-3 Temperature Monitor</b>		
TCA-3 Temperature Monitoring System, 60 Hz	P0625-1630	\$1,923.00
Additional Thermocouple Probe for TCA-3	P0625-1915	421.00
Additional RTD Probe for TCA-3	P0625-1920	421.00



## Padlock adapter kit

- > Allows a user-supplied padlock to be added to the freezer's outer handle for extra security
- > Available for upright models only
- > Available for Innova®, Premium, CryoCube® F570 series, and HEF

### Ordering information

Description	Catalog No.	List USD
<b>Padlock Adapter Kit</b>		
Padlock Adapter Kit, for CryoCube® 570 series only	F651570003	\$492.00
Padlock Adapter Kit, for all upright Innova and Premium freezers (excludes CryoCube® models)	P0625-1170	174.00

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



### Chart Recorder

- > Includes chart recorder, RTD probe, keys, chart recorder paper, and chart recorder pens
- > Will continuously monitor and record freezer temperature for data documentation
- > Front mounted to your freezer for easy access and can be fitted to all freezer models
- > Type I: Battery powered, will provide a minimum of eighteen months of operation
- > Type II: ULT freezer powered with backup battery (CryoCube F740 series)
- > Can be factory installed with your freezer order at no additional charge or retrofitted on location
- > Selectable temperature range (0 to -50 °C and -50 to -100 °C) and rotation speed
- > User configurable built in high and low temperature alarms

#### Ordering information

Description	Catalog No.	List USD
<b>Chart Recorder</b>		
Talk to your sales representative about order numbers for factory installation of backup systems and chart recorders.		
Chart Recorder (Type I)	P0625-2100	\$ 66.00
Chart Recorder (Type II) (100 – 120 V)	F652999001	1,050.00
Chart Recorder (Type II) (208 – 230 V)	F652999002	1,050.00
Chart Recorder pens (Type I), 3 pk	K0660-0051	66.00
Chart Recorder pens (Type II), 3 pcs.	F652999004	71.30
Chart Recorder paper (Type I), 0 to -50 °C	P0625-2111	99.00
Chart Recorder paper (Type I), -50 to -100 °C	P0625-2110	99.00
Chart Recorder paper (Type II), 0 to -100 °C, 60 pcs.	F652999003	109.00



### CO<sub>2</sub> and LN<sub>2</sub> Back-up System

- > Equipped with a battery back-up to temporarily protect the contents of your freezer in case of power failure
- > Available in either liquid CO<sub>2</sub> and LN<sub>2</sub>. Liquid CO<sub>2</sub> can maintain temperatures between -50 °C and -70 °C, where as LN<sub>2</sub> can go down to -85 °C
- > Both systems can be factory installed with your freezer order or retrofitted on location
- > Info: CO<sub>2</sub> and LN<sub>2</sub> are not interchangeable systems

#### Ordering information

Description	Catalog No.	List USD
<b>Liquid Nitrogen and CO<sub>2</sub> Backup Systems</b>		
Talk to your sales representative about order numbers for factory installation of backup systems and chart recorders.		
CO <sub>2</sub> back-up system, 120-220 V/60 Hz, CryoCube® F570 series, Premium, and HEF® (Type A & C walls)	U9043-0006	\$1,756.00
LN <sub>2</sub> back-up system, 120-220 V/60 Hz, CryoCube® F570 series, Premium, and HEF® (Type A & C walls)	U9044-0006	1,756.00
CO <sub>2</sub> back-up system, 120-220 V/60 Hz, CryoCube® F740 series and Innova® (Type B walls)	U9043-0002	1,756.00
LN <sub>2</sub> back-up system, 120-220 V/60 Hz, CryoCube® F740 series and Innova® (Type B walls)	U9044-0002	1,756.00

# Freezer Racks

## Description

### Drawer or side access?

With drawer-style freezer racks, each drawer can be individually removed, leaving the rest in the freezer. In side-access racks each box fits into a distinct, individual compartment for easier inventory tracking. Locking rods are now available for chest freezer racks to provide additional sample security.



### Stainless steel or aluminum?

We offer freezer racks made from two different types of material:

#### Stainless steel:

- > These racks are heavy-duty and designed for higher capacity and durability
- > Fit freezer boxes up to a 136 mm x 136 mm for increased storage flexibility
- > Specially designed for optimized cooling conditions and improved sample safety

#### Aluminum:

- > Lighter in weight for easier use
- > Fits freezer boxes up to a 133 mm x 133 mm footprint
- > Non-corrosive anodized aluminum designed for long-term use



Stainless steel drawer rack



Stainless steel side access rack



Stainless steel rack for chest freezer



Stainless steel rack for chest freezer with locking rod

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)

**Ordering information**

Description	Catalog No.	List USD
<b>Freezer Rack: Innova® U101</b>		
2 in or 53 mm, drawer, stainless steel	6001062210	\$180.00
2.5 in or 64 mm, drawer, stainless steel	6001062910	180.00
3 in or 76 mm, drawer, stainless steel	6001062310	167.00
4 in or 102 mm, drawer, stainless steel	6001062410	154.00
5 in or 127 mm, drawer, stainless steel	6001062510	154.00
2 in or 53 mm, side access, stainless steel	6001061210	134.00
2.5 in or 64 mm, side access, stainless steel	6001061910	134.00
3 in or 76 mm, side access, stainless steel	6001061310	128.00
4 in or 102 mm, side access, stainless steel	6001061410	112.00
5 in or 127 mm, side access, stainless steel	6001061510	128.00
<b>Freezer Rack: Innova® U360, U535, and U725</b>		
2 in or 53 mm, drawer, stainless steel	6001012210	216.00
2.5 in or 64 mm, drawer, stainless steel	6001012910	199.00
3 in or 76 mm, drawer, stainless steel	6001012310	193.00
4 in or 102 mm, drawer, stainless steel	6001012410	180.00
5 in or 127 mm, drawer, stainless steel	6001012510	180.00
2 in or 53 mm, side access, stainless steel	6001011210	189.00
2.5 in or 64 mm, side access, stainless steel	6001011910	191.00
3 in or 76 mm, side access, stainless steel	6001011310	186.00
4 in or 102 mm, side access, stainless steel	6001011410	144.00
5 in or 127 mm, side access, stainless steel	6001011510	144.00
DWP (53 mm), side access, stainless steel	6001011110	220.00
<b>Freezer Rack: Premium® U410, U700, HEF® U410, CryoCube® F570 series, CryoCube F740 series (5-compartment, compartment 1-4)</b>		
2 in or 53 mm, drawer, stainless steel	6001022210	182.00
2.5 in or 64 mm, drawer, stainless steel	6001022910	180.00
3 in or 76 mm, drawer, stainless steel	6001022310	176.00
4 in or 102 mm, drawer, stainless steel	6001022410	176.00
2 in or 53 mm, side access, stainless steel	6001021210	146.00
2.5 in or 64 mm, side access, stainless steel	6001021910	144.00
3 in or 76 mm, side access, stainless steel	6001021310	134.00
4 in or 102 mm, side access, stainless steel	6001021410	135.00
DWP (53 mm), side access, stainless steel	6001021110	196.00
<b>Freezer Rack: Innova® C580, C760, and CryoCube® FC660 series Chest Freezers</b>		
2.5 in or 64 mm, side access, stainless steel	6001000910	102.00
3 in or 76 mm, side access, stainless steel	6001000310	97.40
4 in or 102 mm, side access, stainless steel	6001000410	110.00
5 in or 127 mm, side access, stainless steel	6001000510	121.00
locking rod, 2.5 in or 64 mm, side access, stainless steel	6001000911	116.00
locking rod, 3 in or 76 mm, side access, stainless steel	6001000311	117.00
locking rod, 4 in or 102 mm, side access, stainless steel	6001000411	122.00
<b>Freezer Rack: CryoCube® FC660 series Chest Freezers</b>		
2 in or 53 mm, side access, stainless steel	6001050210	107.00
DWP (53 mm), side access, stainless steel	6001050110	120.00
MTP, side access, stainless steel	6001050010	203.00
locking rod, 2 in or 53 mm, side access, stainless steel	6001050211	121.00
locking rod, 2.5 in or 64 mm, side access, stainless steel	6001000911	116.00
locking rod, 3 in or 76 mm, side access, stainless steel	6001000311	117.00
locking rod, 4 in or 102 mm, side access, stainless steel	6001000411	122.00
locking rod, DWP (53 mm), side access, stainless steel	6001050111	133.00
locking rod, MTP, side access, stainless steel	6001050011	215.00



# Freezer Racks

## Ordering information

Description	Catalog No.	List USD
<b>Freezer Rack: Innova® C580 and C760 Chest Freezers</b>		
2 in or 53 mm, side access, stainless steel	6001040210	\$121.00
2.5 in or 64 mm, side access, stainless steel	6001000910	102.00
3 in or 76 mm, side access, stainless steel	6001000310	97.40
4 in or 102 mm, side access, stainless steel	6001000410	110.00
5 in or 127 mm, side access, stainless steel	6001000510	121.00
DWP (53 mm), side access, stainless steel	6001040110	133.00
MTP, side access, stainless steel	6001040010	207.00
locking rod, 2 in or 53 mm, side access, stainless steel	6001040211	133.00
locking rod, DWP (53 mm), side access, stainless steel	6001040111	145.00
locking rod, MTP, side access, stainless steel	6001040011	219.00

## Ordering information

Description	Catalog No.	List USD
<b>Freezer Rack: CryoCube F740 series (3-compartment, MAX)</b>		
2 in or 53 mm, side access, stainless steel	6001072210	\$247.00
2.5 in or 64 mm, side access, stainless steel	6001072910	199.00
3 in or 76 mm, side access, stainless steel	6001072310	193.00
4 in or 102 mm, side access, stainless steel	6001072410	221.00
5 in or 127 mm, side access, stainless steel	6001072510	180.00
2 in or 53 mm, drawer, stainless steel	6001071210	218.00
2.5 in or 64 mm, drawer, stainless steel	6001071910	190.00
3 in or 76 mm, drawer, stainless steel	6001071310	186.00
4 in or 102 mm, drawer, stainless steel	6001071410	192.00
5 in or 127 mm, drawer, stainless steel	6001071510	144.00
DWP (53 mm), side access, stainless steel	6001071110	257.00

## Freezer Rack: CryoCube F740 series (3-compartment, Standard)

Although they will not maximize the capacity of the freezer, the Innova racks on page 296 are also compatible with the 3-shelf model of the F740.

**Ordering information**

Description	Catalog No.	List USD
<b>Freezer Rack: CryoCube F740 series (5-compartment, MAX for 5<sup>th</sup> comp.)</b>		
2 in or 53 mm, drawer, stainless steel	6001082210	\$247.00
2.5 in or 64 mm, drawer, stainless steel	6001082910	208.00
3 in or 76 mm, drawer, stainless steel	6001082310	213.00
4 in or 102 mm, drawer, stainless steel	6001082410	194.00
5 in or 127 mm, drawer, stainless steel	6001082510	187.00
2 in or 53 mm, side access, stainless steel	6001081210	206.00
2.5 in or 64 mm, side access, stainless steel	6001081910	192.00
3 in or 76 mm, side access, stainless steel	6001081310	180.00
4 in or 102 mm, side access, stainless steel	6001081410	167.00
5 in or 127 mm, side access, stainless steel	6001081510	154.00
DWP (53 mm), side access, stainless steel	6001081110	231.00

**Freezer Rack: CryoCube F740 series (5-compartment, Standard compartment 1 – 4)**

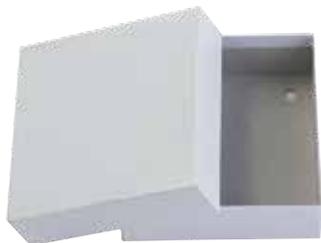
Premium and CryoCube F570 series racks are all compatible with the five-shelf model of the CryoCube F740 series. Be sure to use larger MAX racks on the larger 5th shelf to maximize the storage capacity.

**Ordering information**

Description	Catalog No.	List USD
<b>Upright freezer rack: Innova® U101</b>		
10 boxes per rack, 2 in or 53 mm, drawer, aluminum	K0641-3003	\$189.00
6 boxes per rack, 3 in or 76 mm, drawer, aluminum	K0641-3004	189.00
4 boxes per rack, 4 in or 102 mm, drawer, aluminum	K0641-3005	189.00
<b>Chest freezer rack: Innova® C585, C760, CryoCube® FC660 series</b>		
13 boxes per rack, 2 in or 53 mm, side access, aluminum	K0641-1690	168.00
9 boxes per rack, 3 in or 76 mm, side access, aluminum	K0641-1700	168.00
6 boxes per rack, 4 in or 102 mm, side access, aluminum	K0641-1750	168.00
<b>Upright freezer rack: Innova® U360, U535, U725, U725-G</b>		
28 boxes per rack, 2 in or 53 mm, drawer, aluminum	K0641-3000	215.00
20 boxes per rack, 3 in or 76 mm, drawer, aluminum	K0641-3001	215.00
12 boxes per rack, 4 in or 102 mm, drawer, aluminum	K0641-3002	215.00
<b>Upright freezer rack: U410, HEF U410, U700, CryoCube® F570 series</b>		
16 boxes per rack, 2 in or 53 mm, drawer, aluminum	K0641-1900	183.00
12 boxes per rack, 3 in or 76 mm, drawer, aluminum	K0641-1890	183.00
8 boxes per rack, 4 in or 102 mm, drawer, aluminum	K0641-1880	183.00



# Eppendorf Storage Boxes

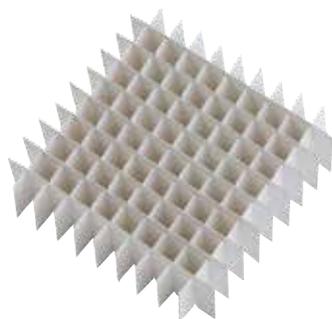


## Freezer Cardboard Storage Boxes

- > White cardboard box with water resistant coating, designed to withstand ultra-low temperature
- > Available in 53 mm (2 in), 76 mm (3 in), and 102 mm (4 in) tall boxes
- > Compatible with box dividers 7 × 7 to 10 × 10 (dividers sold separately)
- > Dimensions 133 mm

### Ordering information

Description	Catalog No.	List USD
<b>Freezer Cardboard Storage Boxes, white</b>		
53 mm tall (2 in)	B50-SQ	\$5.50
76 mm tall (3 in)	B75-SQ	5.50
102 mm tall (4 in)	B95-SQ	6.00



## Freezer Box Dividers

- > Available in 7 × 7, 8 × 8, 9 × 9 and 10 × 10 configurations
- > Compatible with freezer cardboard storage boxes (sold separately)

### Ordering information

Description	Catalog No.	List USD
<b>Freezer Box Dividers</b>		
7 × 7, 17.4 mm max. tube diameter, holds 49 tubes	D49	\$4.50
8 × 8, 15 mm max. tube diameter, holds 64 tubes	D64	4.50
9 × 9, 13 mm max. tube diameter, holds 81 tubes	D81	4.50
10 × 10, 11.8 mm max. tube diameter, holds 100 tubes	D100	4.50

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



### The Eppendorf Storage Boxes – a complete system solution for sample storage

The comprehensive modular concept allows selection of the optimal box combinations for individual storage demands. The outer footprint dimensions (133 mm) are compatible with common freezer rack systems and the different inner grid variants provide for a perfect fit to all typical tube formats: cryogenic tubes, microcentrifuge tubes, 15 and 50 mL conical tubes and other laboratory vessels. This space-saving approach together with the application benefits resulting from the listed product features help to optimize your storage and archiving of samples.



#### Ordering information

Description	Catalog No.	List USD
<b>Storage Box</b> for cryogenic tubes (with internal threading), 10 x 10, 3 pcs., 2 inch, for freezing to -86 °C	0030140508	\$32.00
<b>Storage Box</b> for cryogenic tubes 1-2 mL, 9 x 9, 2 pcs., 3 inch, for freezing to -86 °C	0030140516	32.50
<b>Storage Box</b> for cryogenic tubes 3 mL, 9 x 9, 2 pcs., 3 inch, for freezing to -86 °C	0030140540	22.50
<b>Storage Box</b> for cryogenic tubes 4-5 mL, 9 x 9, 2 pcs., 4 inch, for freezing to -86 °C	0030140567	23.00
<b>Storage Box</b> for tubes 1-2 mL, 8 x 8, 3 pcs., 2 inch, for freezing to -86 °C	0030140524	32.50
<b>Storage Box</b> for tubes 5.0 mL (snap-cap), 5 x 5, 4 pcs., 2.5 inch, for freezing to -86 °C	0030140532	47.50
<b>Storage Box</b> for tubes 5.0 mL screw cap, 5 x 5, 2 pcs., 3 inch, for freezing to -86 °C	0030140613	23.00
<b>Storage Box</b> for tubes 15 mL, 5 x 5, 2 pcs., 5 inch, for freezing to -86 °C	0030140583	24.00
<b>Storage Box</b> for 9 - 50 mL conical tubes and 4 - 15 mL conical tubes, 3 x 3, 2 pcs., 5 inch, for freezing to -86 °C	0030140591	24.00

# Cell Handling



Model	Galaxy® 48 R	Galaxy® 170 R
Page(s)	304	306
Capacity	48 L	170 L
Dimensions (W x D x H)	19 x 18.7 x 25.4 in / 48.3 x 47.5 x 64.5 cm	27.8 x 28 x 33.2 in / 70.8 x 71.1 x 84.5 cm
Dimensions internal (W x D x H)	15.8 x 12 x 15.8 in / 40.1 x 30.5 x 40.1 cm	21 x 17.5 x 27.2 in / 53.3 x 44.4 x 69.1 cm
Weight w/o accessories	70 lb / 31.8 kg	198 lb / 89.9 kg
Communication port	RS-232	RS-232
Display	LCD	LCD
Benchtop (B), Under Bench (U), Floor (F) or Stackable (S)	B, U, F, S (x2)	B, U, F, S (x2)
Temperature range	Ambient +4 °C to 50 °C	Ambient +4 °C to 50 °C
Temperature control	±0.1 °C	±0.1 °C
Temperature stability at 37 °C	±0.1 °C	±0.1 °C
Temperature uniformity	±0.3 °C	±0.3 °C
CO <sub>2</sub> range	0.2 – 20 %	0.2 – 20 %
CO <sub>2</sub> control	±0.1 %	±0.1 %
CO <sub>2</sub> stability at 5 % CO <sub>2</sub>	±0.2 %	±0.2 %
CO <sub>2</sub> uniformity	±0.1 %	±0.1 %
0.1 – 19 % O <sub>2</sub> control	optional	optional
1 – 19 % O <sub>2</sub> control	optional	optional
Access port, 25 mm	standard	standard
BMS relay	standard	standard
Copper chamber		optional
High temperature disinfection (4 hours at 120 °C)	optional	optional
Humidity alert and monitoring package	optional	optional
No. of shelves	3 (6 optional)	4 (8 optional)
Number of shelving racks	6	8
On-board data logging	standard	standard
Perforated shelves	standard	standard
Sealed inner glass doors		standard
2 split inner doors	optional	
4 split inner doors		optional
8 split inner doors		optional
Shaking		
Platform size		
Speed range		

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



### Galaxy® 170 S

**308**

170 L

27.8 x 28 x 33.2 in / 70.8 x 71.1 x 84.5 cm

21 x 17.5 x 27.2 in / 53.3 x 44.4 x 69.1 cm

198 lb / 89.9 kg

RS-232

LED

B, U, F, S (x2)

Ambient +4 °C to 50 °C

±0.1 °C

±0.1 °C

±0.3 °C

0.2 – 20 %

±0.1 %

±0.2 %

±0.1 %

standard

standard

optional

4 (8 optional)

4 (8 optional)

standard

standard

optional

optional

### New Brunswick™ S41i

**310**

170 L

32.8 x 28.7 x 33.4 in / 83.4 x 73 x 84.8 cm

27.2 x 17.5 x 21.2 in / 69.1 x 44.4 x 53.8 cm

335 lb / 152 kg

Ethernet

Touchscreen

U, F, S (x2)

Ambient +4 °C to 50 °C

±0.1 °C

±0.1 °C

±0.25 °C at 37 °C

0.2 – 20 %

±0.1 %

±0.2 %

±0.1 %

standard

standard

standard

1 (2nd optional)

2

standard

standard

standard

standard

14 x 24 in (36 x 61 cm)

25 – 400 rpm

# Galaxy<sup>®</sup> 48 R

## Description

The Galaxy 48 R CO<sub>2</sub> Incubator is a mid-sized, 48 liter incubator designed to optimize performance in applications that require a higher level of isolation and that can be used in small labs. The 48 R series of incubators feature a large backlit display with on screen help menu, control and data logging of temperature, CO<sub>2</sub>, door openings, alarms, and optional O<sub>2</sub> gas and humidity monitoring.



## Product features

- > 48 Liter (1.7 ft<sup>3</sup>) provides mid-sized capacity within a small footprint
- > Options: High Temp. Disinfection (overnight cycle with 4 hour hold at 120 °C), O<sub>2</sub> control (e.g. for hypoxic studies), 2-split inner door
- > Fanless design offers more usable space
- > Six-sided direct heating system provides a uniform incubated environment
- > Deep-drawn, easy-to-clean stainless steel chamber eliminates seams or welds, removing potential sources of contamination
- > Low gas consumption
- > Integrated alarm relay

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



### Ordering information

Description	Catalog No.	List USD
<b>Galaxy® 48 R, 48 L, Stock, 120 V/ 60 Hz</b>		
Standard	CO48200005	\$ 6,630.00
1–19 % O <sub>2</sub> Control	CO48220005	8,000.00
High-Temp Disinfection	CO48210005	7,130.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control	CO48230005	8,360.00
<b>Galaxy® 48 R, 48 L, Built to Order, 120 V/ 60 Hz</b>		
2-Split Inner Door	CO48212005	8,640.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control	CO48210045	9,160.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control, Humidity Package	CO48210065	10,820.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control, 2-Split Inner Door	CO48212045	10,060.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control, 2-Split Inner Door, Humidity Package	CO48212065	11,370.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 2-Split Inner Door	CO48232005	9,280.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 2-Split Inner Door, Humidity Package	CO48232015	10,760.00



One piece seamless chamber minimizes contamination risk and simplifies cleaning



Integrated, heated, viewing window in outer door allows observation without disturbing cultures

# Galaxy<sup>®</sup> 170 R

## Description

Galaxy 170 R CO<sub>2</sub> Incubators are high-capacity, 170 liter incubators that provide excellent quality, outstanding performance, and intuitive operation. These models can be conveniently placed on or under the bench or even double-stacked. Galaxy 170 R models provide a tremendous amount of usable space that can be optimized with options such as High Temperature Disinfection, O<sub>2</sub> control, and split inner doors. Galaxy 170 R incubators feature an integrated controller for simple on-screen programming and data logging.

## Product features

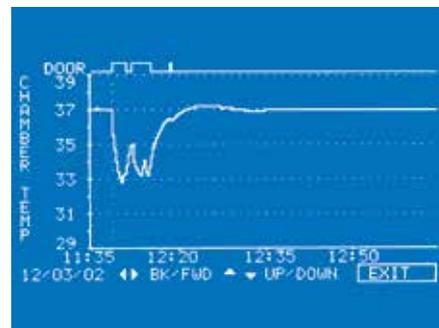
- > Standard features: Sealed inner glass door, reliable IR CO<sub>2</sub> sensor, RS-232 communication port, 25 mm access port
- > Two O<sub>2</sub> control options (0.1 – 19 %, 1 – 19 %) for hypoxic studies, also available with split inner doors
- > Further Options: High Temperature Disinfection (overnight cycle with 4 hour hold at 120 °C), copper chamber and interior for optimized protection against contamination, humidity alert package
- > Fanless design offers more usable space and eliminates the fan as a common, and often recurring source of contamination
- > Six-sided direct heating system provides a uniform incubated environment
- > Deep-drawn, easy-to-clean stainless steel chamber eliminates seams or welds, removing potential sources of contamination
- > Low gas consumption
- > Integrated alarm relay



All Galaxy incubators have six-sided direct heating with natural fanless convection circulation



Perforated shelves come standard on all Galaxy CO<sub>2</sub> Incubators



Galaxy R Series LCD interface, standard on Galaxy 170 R and Galaxy 48 R models

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



### Ordering information

Description	Catalog No.	List USD
<b>Galaxy® 170 R, 170 L, Stock, 120 V/ 60 Hz</b>		
Standard	CO17201005	\$ 9,640.00
1–19 % O <sub>2</sub> Control	CO17221005	11,120.00
High-Temp Disinfection	CO17211005	10,250.00
High-Temp Disinfection, 4-Split Inner Door	CO17214005	11,640.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control	CO17231005	11,640.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 4-Split Inner Door	CO17234005	13,080.00
<b>Galaxy® 170 R, 170 L, Built to Order, 120 V/ 60 Hz</b>		
4-Split Inner Door	CO17204005	11,020.00
8-Split Inner Door	CO17208005	11,540.00
1–19 % O <sub>2</sub> Control, 4-Split Inner Door	CO17224005	12,570.00
1–19 % O <sub>2</sub> Control, 8-Split Inner Door	CO17228005	13,080.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control	CO17211045	12,360.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control, 4-Split Inner Door	CO17214045	14,010.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control, 4-Split Inner Door, Copper Chamber	CO17214055	17,200.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control, 4-Split Inner Door, Humidity Package	CO17214065	15,240.00
High-Temp Disinfection, 0.1–19 % O <sub>2</sub> Control, 8-Split Inner Door	CO17218045	14,210.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, Humidity Package	CO17231015	13,290.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, Copper Chamber	CO17231025	15,140.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, Humidity Package, Copper Chamber	CO17231035	16,690.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 4-Split Inner Door, Humidity Package	CO17234015	14,630.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 4-Split Inner Door, Copper Chamber	CO17234025	16,580.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 4-Split Inner Door, Humidity Package, Copper Chamber	CO17234035	17,920.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 8-Split Inner Door	CO17238005	13,600.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 8-Split Inner Door, Humidity Package	CO17238015	15,140.00
High-Temp Disinfection, 1–19 % O <sub>2</sub> Control, 8-Split Inner Door, Humidity Package, Copper Chamber	CO17238035	18,540.00
High-Temp Disinfection, Humidity Package	CO17211015	11,850.00
High-Temp Disinfection, Copper Chamber	CO17211025	13,600.00
High-Temp Disinfection, Humidity Package, Copper Chamber	CO17211035	15,350.00
High-Temp Disinfection, 4-Split Inner Door, Humidity Package	CO17214015	13,290.00
High-Temp Disinfection, 4-Split Inner Door, Copper Chamber	CO17214025	15,140.00
High-Temp Disinfection, 4-Split Inner Door, Humidity Package, Copper Chamber	CO17214035	16,480.00
High-Temp Disinfection, 8-Split Inner Door	CO17218005	12,150.00
High-Temp Disinfection, 8-Split Inner Door, Humidity Package	CO17218015	13,800.00
High-Temp Disinfection, 8-Split Inner Door, Humidity Package, Copper Chamber	CO17218035	17,200.00

# Galaxy<sup>®</sup> 170 S

## Description

Galaxy 170 S CO<sub>2</sub> incubators are high-capacity, 170 liter incubators that provide excellent quality, outstanding performance, and intuitive operation. These models can be conveniently placed on or under the bench or even double-stacked. Galaxy 170 S models provide a tremendous amount of usable space that can be optimized with options such as High Temperature Disinfection and split inner doors.



## Product features

- > Standard features: Sealed inner glass door, reliable IR CO<sub>2</sub> sensor, RS-232 communication port, 25 mm access port
- > High Temperature Disinfection (overnight cycle with 4 hour hold at 120 °C) optional
- > Available with split inner doors
- > Fanless design offers more usable space and eliminates the fan as a common, and often recurring source of contamination
- > Six-sided direct heating system provides a uniform incubated environment
- > Deep-drawn, easy-to-clean stainless steel chamber eliminates seams or welds, removing potential sources of contamination
- > Low gas consumption



Accessory stacking stand available to expand chamber capacity in labs with limited space



Galaxy® S Series LED Display, standard on 170 S



Optional split-inner doors provide easy access to your samples without completely opening the chamber

#### Ordering information

Description	Catalog No.	List USD
<b>Galaxy® 170 S</b> , 170 L, Stock, 120 V/ 60 Hz		
Standard	CO17001005	\$7,130.00
High-Temp Disinfection	CO17011005	7,740.00
High-Temp Disinfection, 4-Split Inner Door	CO17014005	9,110.00
<b>Galaxy® 170 S</b> , 170 L, Built to Order, 120 V/ 60 Hz		
Standard, 4-Split Inner Door	CO17004005	8,510.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)

# New Brunswick™ S41i

## Description

The New Brunswick S41i is the only CO<sub>2</sub> incubator with an Eppendorf shaker inside. The S41i precisely controls temperature, shaking speed, and CO<sub>2</sub>, providing the ideal environment for growing mammalian and stem cells in culture. Accepts flasks up to 4 liters. A perforated shelf comes standard, allowing for static incubation at the same time as shaking, and a second shelf can be added as an option. The renowned triple eccentric drive provides stable, uniform and vibration-free motion. The drive mechanism is connected to the shaking platform by four encapsulated support rods and is located below ensuring that heat generated by the drive does not affect the critical environment within the chamber. The intuitive touch screen display and controls allows you to operate and monitor performance.



## Product features

- > Temperature range from 4 °C above ambient to 50 °C
- > Shaking speeds between 25 – 400 rpm, 25 – 300 rpm if stacked
- > Large 14 × 24 in (35.6 × 61 cm) platform accommodates flasks up to 4 liters providing flexibility with your cultures
- > Single or double stacked for increased capacity
- > Inner and outer door saves valuable gas while maintaining the perfect environment for your cells
- > Standard High Temperature Disinfection provides protection for your cells
- > Intuitive touch screen allows for precise control of the culture environment
- > Perforated shelf allows for static incubation at the same time as shaking

New Brunswick™ S41i	
Universal platform	M1334-9920
125 mL Erlenmeyer flasks	20
250 mL Erlenmeyer flasks	16
500 mL Erlenmeyer flasks	12
1 L Erlenmeyer flasks	10
2 L Erlenmeyer flasks	4
2 L Lauber Thompson	4
2.8 L Fernbach flasks	3
3 L Erlenmeyer flasks	3
4 L Erlenmeyer flasks	3
Test tube rack, small, 30.0 × 8.0 × 12.9 cm	6
Test tube rack, medium, 36 × 8 × 12.9 cm	3
Test tube rack, large, 45 × 8 × 12.9 cm	3
Platform size	14 x 24 in (36 x 61 cm)



### Applications

- > Culturing of suspension cells requiring gentle agitation
- > Incubating adherent cells on the shelf included with the unit: adding a 2nd static shelf and using the shaking platform as a 3rd shelf
- > Adherent cells such as stem cells that require both incubation and periodic gentle shaking

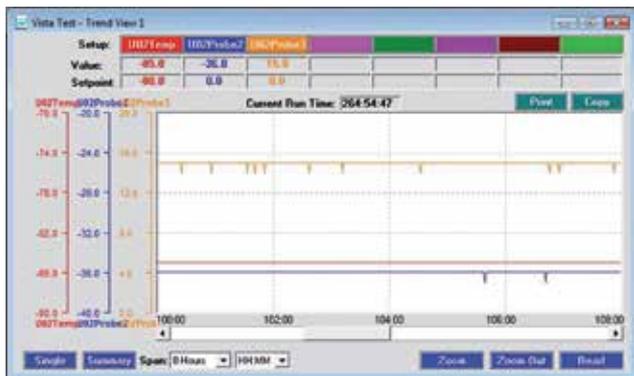
### Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ S41i</b> , 170 L, CO <sub>2</sub> incubator shaker with inner shelf and touch screen control, 1 shelf, 120 V/60 Hz, orbit diameter 1 in (2.5 cm)		
<b>Interchangeable platforms for New Brunswick™ S41i</b> , 14 × 24 in (35.6 × 61 cm)		
Universal platform	M1334-9920	\$ 950.00
125 mL Erlenmeyer flask dedicated platform, comes complete with 32 clamps installed	M1334-9921	1,095.00
250 mL Erlenmeyer flask dedicated platform, comes complete with 24 clamps installed	M1334-9922	1,025.00
500 mL Erlenmeyer flask dedicated platform, comes complete with 15 clamps installed	M1334-9923	1,005.00
1 L Erlenmeyer flask dedicated platform, comes complete with 11 clamps installed	M1334-9924	995.00
2 L Erlenmeyer flask dedicated platform, comes complete with 6 clamps installed	M1334-9925	995.00
2.8 L Erlenmeyer flask dedicated platform, comes complete with 3 clamps installed	M1334-9926	995.00
4 L Erlenmeyer flask dedicated platform, comes complete with 3 clamps installed	M1334-9927	995.00
<b>Stacking kit, allows up to 2 each New Brunswick™ S41i shakers to be stacked one on top of the other</b>	P0628-6502	1,700.00
<b>Additional shelf for New Brunswick™ S41i</b> , perforated, can easily be added to the New Brunswick S41i for static cell culture of adherent cells	P0628-6181	270.00
<b>Sticky Pad Adapter Kit</b> , 2 anodized aluminum sheets, each 6 × 18 in (15.2 × 45.7 cm)	M1250-9504	200.00
<b>Sticky Pad</b> , 8 × 8 in (20 × 20 cm)	M1250-9700	85.00

# BioCommand® SFI Automated Data Logging Software

## Description

The BioCommand SFI software package is designed specifically for standard laboratory equipment including shakers and CO<sub>2</sub> incubators. The software package allows you to track key operational information such as time, temperature, shaking speed, CO<sub>2</sub> concentrations and humidity.



Graphical representation of the output

## Product features

- > Track the operational parameters of your choice with the option to design and save templates
- > Monitor multiple units from the same PC
- > Trend and archive critical data including temperature, agitation speed and gas concentration for up to 32 units simultaneously
- > Provides indications of alarm conditions identified by the product
- > Ability to email or text message alarm events

## Ordering information

Description	Catalog No.	List USD
<b>BioCommand® SFI Automated Data Logging Software</b>		
CO <sub>2</sub> incubator package	M1291-1001	\$1,810.00
CO <sub>2</sub> incubator cable, 4.5 m	P0620-7012	216.00
RS-232 to USB converter, 4-port	P0460-7751	573.00
RS-232 to USB converter, 8-port	P0460-7750	933.00



# CO<sub>2</sub> Incubators Accessories

## CO<sub>2</sub> Incubators Accessories

Description	Catalog No.	List USD
O <sub>2</sub> Sensor, for Galaxy® CO2 Incubator	P0628-5790	\$ 315.00
CO <sub>2</sub> supply line filters (2)	P0628-5020	67.00
Autozero port filter	P0628-5060	53.00
CO <sub>2</sub> cylinder auto-changeover controller	P0628-5000	1,226.00
Galaxy® CO <sub>2</sub> gas analyzer	P0628-6150	2,250.00
Galaxy® CO <sub>2</sub> and O <sub>2</sub> gas analyzer	P0628-6831	2,860.00
Galaxy® CO <sub>2</sub> , O <sub>2</sub> , and RH gas analyzer	P0628-7890	3,040.00
Temperature probe, 5 mm tip for gas analyzer	P0628-7881	105.00
Temperature probe, 100 mm tip for gas analyzer	P0628-7880	240.00

## Galaxy® 48 R shelves, pans and stacking stand

Description	Catalog No.	List USD
Lower stacking frame, with casters	6705070103	\$540.00
Upper stacking frame	6705070111	280.00
Under bench stand	6705070120	460.00
2 split inner door	6705851040	780.00
Multi-position shelf rack	6705851016	495.00
Additional shelf, perforated	P0628-5080	168.00
Additional humidity tray, stainless steel	P0628-5940	324.00

## Galaxy® 170 R/170 S, shelves, pans and stacking stand

Description	Catalog No.	List USD
Lower stacking frame, with casters	6710070219	\$1,030.00
Mid/upper stacking frame	6710070200	340.00
Lower and upper stacking frame, with casters	170Stack	1,370.00
4 split inner doors, retrofittable	6710866005	1,770.00
8 split inner doors, retrofittable	6710868008	3,215.00
Additional shelves (2), perforated	6710859009	655.00
Multi-position shelf rack, 8 position, (standard on Galaxy® 170 R, optional on Galaxy® 170 S)	P0628-6390	283.00
Additional humidity tray, copper	P0628-6260	273.00
Additional humidity tray, stainless steel	P0628-6140	105.00

# Cell Handling



Model	Innova® 40/40R	Innova® 42/42R
Page(s)	320	321
Dimensions (W x D x H)	22 x 30 x 24 in / 56 x 76.2 x 61 cm	25 x 29.4 x 32.3 in / 63.5 x 74.7 x 82 cm
External height (with lid/door open)	40 in (101.6 cm)	
External depth (with lid/door open)		51 in (129.5 cm)
Weight w/o accessories	133 lb / 60 kg	216 lb / 98 kg
Audible and visual alarms	yes	yes
Available program modes	<ul style="list-style-type: none"> <li>&gt; Constant speed and temperature</li> <li>&gt; Programmable multi-steps</li> <li>&gt; RS-232 communication port</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Constant speed and temperature</li> <li>&gt; Programmable multi-steps</li> <li>&gt; RS-232 communication port</li> </ul>
Balanced drive mechanism	Triple-eccentric with permanently lubricated ball bearings	Triple-eccentric with permanently lubricated ball bearings
cETLus and CE marked	yes	yes
Benchtop (B), Under Bench (U), Floor (F) or Stackable (S)	B	B, U, S (x2)
Memory	Non volatile with automatic power failure restart	Non volatile with automatic power failure restart
Motor type	Solid state, DC brushless motor	Solid state, DC brushless motor
Platform size	18 x 18 in (46 x 46 cm)	18 x 18 in (46 x 46 cm)
Cat. No. Universal Platform	M1250-9902	M1250-9902
Slide out platform		
Space saving glide up doors		
Speed range	25 – 500 rpm	25 – 400 rpm; 25 – 300 rpm when stacked and using flasks larger than 500 mL
Steps per program	15	15
Stored programs	4	4
Temperature range	5 °C above ambient to 80 °C. (Innova 40R: 15 °C below ambient to 80 °C)	5 °C above ambient to 80 °C. (Innova 42R: 20 °C below ambient to 80 °C)
Temperature Uniformity	±0.25 °C at 37 °C	±0.25 °C at 37 °C
Timer	0.01 – 99.59 h, continuous	0.01 – 99.59 h, continuous
Orbit	0.75 in/1 in (1.9 cm/2.5 cm)	0.75 in/1 in (1.9 cm/2.5 cm)

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)

**Innova® 43/43R****322**45.5 × 32 × 40.6 in / 115.6 × 81.3 × 103.1 cm  
64.1 in (162.7 cm)

460 lb / 209 kg

yes

- > Constant speed and temperature
- > Programmable multi-steps
- > RS-232 communication port

Triple-eccentric with permanently lubricated ball bearings

yes

F

Non volatile with automatic power failure restart

Solid state, DC brushless motor

30 × 18 in (76 × 46 cm)

M1250-9920

yes

yes

25 – 500 rpm with 1 in orbit; 25 – 300 rpm with 2 in orbit

15

4

5 °C above ambient to 80 °C. (Innova 43R: 20 °C below ambient to 80 °C)

±0.25 °C at 37 °C

0.01 – 99.59 h, continuous

1 in/2 in (2.5 cm/5.1 cm)

**Innova® 44/44R****323**53.1 × 33.2 × 26 in / 135 × 84.3 × 66 cm  
47 in (119.4 cm)

525 lb / 238 kg

yes

- > Constant speed and temperature
- > Programmable multi-steps
- > RS-232 communication port

Triple-eccentric with permanently lubricated ball bearings

yes

F, S (x3)

Non volatile with automatic power failure restart

Solid state, DC brushless motor

30 × 18 in (76 × 46 cm)

M1282-9904

yes

yes

25 – 400 rpm with 1 in orbit; 25 – 300 rpm with 2 in orbit or 2 stacked units; 25 – 250 rpm with 3 stacked units

15

4

5 °C above ambient to 80 °C. (Innova 44R: 20 °C below ambient to 80 °C)

±0.25 °C at 37 °C

0.01 – 99.59 h, continuous

1 in/2 in (2.5 cm/5.1 cm)

**Innova® S44i****324**46.5 × 34.2 × 24.8 in / 118.2 × 86.9 × 63 cm  
45 in (114.3 cm)

411 lb / 186 kg

yes

- > Constant speed and temperature
- > Programmable multi-steps
- > Ethernet communication port

Five eccentric mounting points with adjustable counterbalance

yes

F, S (x3)

Non volatile with automatic power failure restart

Solid state, DC brushless motor

30 × 24 in (76 × 62 cm)

S44I040001

yes

yes

1 in orbit: 20 – 400 rpm adjustable at 1 rpm increment; 2 in orbit: 20 – 300 rpm at 1 rpm increment

unlimited

unlimited

5 °C above ambient to 80 °C. (Refrigerated model: 20 °C below ambient to 80 °C)

±0.25 °C at 37 °C and 250 rpm

0.01 – 99.59 h, continuous

1 in/2 in (2.5 cm/5.1 cm)



Model	I24/I24R	I26/I26R
Page(s)	326	327
Dimensions (W x D x H)	22 x 30 x 24 in / 56 x 76.2 x 61 cm	50.5 x 30.3 x 27.6 in / 128.2 x 77 x 70 cm
External height (with lid/door open)	40 in (101.6 cm)	
External depth (with lid/door open)		49.3 in (125 cm)
Weight w/o accessories	133 lb / 60 kg	370 lb / 168 kg
Audible and visual alarms	yes	yes
Available program modes	<ul style="list-style-type: none"> <li>&gt; Constant speed and temperature</li> <li>&gt; Timed shaking</li> <li>&gt; RS-232 communication port</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Constant speed and temperature</li> <li>&gt; Timed shaking</li> <li>&gt; RS-232 communication port</li> </ul>
Balanced drive mechanism	Triple-eccentric with permanently lubricated ball bearings	Triple-eccentric with permanently lubricated ball bearings
cETLus and CE marked	yes	yes
Benchtop (B), Under Bench (U), Floor (F) or Stackable (S)	B	F, S (x3)
Memory	Non volatile with automatic power failure restart	Non volatile with automatic power failure restart
Motor type	Solid state, DC brushless motor	Solid state, DC brushless motor
Platform size	18 x 18 in (46 x 46 cm)	30 x 18 in (76 x 46 cm)
Cat. No. Universal Platform	M1250-9902	M1324-9904
Slide out platform		yes
Space saving glide up doors		
Speed range	50–400 rpm	25–400 rpm; 25 – 300 rpm with 2 stacked units; 25 – 250 rpm with 3 stacked units
Steps per program		
Stored programs		
Temperature range	5°C above ambient to 60°C. (I24R: 15°C below ambient to 60°C)	5°C above ambient to 60°C. (I26R: 15°C below ambient to 60°C)
Temperature Uniformity	±0.5 °C at 37 °C	±0.25 °C at 37 °C
Timer	0.1–99.9 hrs, continuous	0.1–99.9 hrs, continuous
Orbit	0.75 in/1 in (1.9 cm/2.5 cm)	1 in (2.5 cm)

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)

Product appearance, specifications, and/or prices are subject to change without notice.

**Excella® E24/E24R****328**

22 x 30 x 24 in / 56 x 76.2 x 61 cm

40 in (101.6 cm)

133 lb / 60 kg

yes

- > Constant speed and temperature
- > Timed shaking
- > RS-232 communication port

Heavy-duty with permanently lubricated ball bearings

yes

B

Non volatile with automatic power failure restart

Solid state, DC brushless motor

18 x 18 in (46 x 46 cm)

M1250-9902

50 – 400 rpm

7 °C above ambient to 60 °C. (E24R: 15 °C below ambient to 60 °C)

±0.5 °C at 37 °C

0.1–99.9 hrs, continuous

0.75 in (1.9 cm)

**Excella® E25/E25R****329**

50 x 30.3 x 41.9 in/ 127 x 77 x 105.9 cm

65.25 in (165.7 cm)

450 lb / 204.5 kg

yes

- > Constant speed and temperature
- > Timed shaking
- > RS-232 communication port

Heavy-duty with permanently lubricated ball bearings

yes

F

Non volatile with automatic power failure restart

Solid state, DC brushless motor

30 x 18 in (76 x 46 cm)

M1250-9920

50 – 400 rpm

7 °C above ambient to 60 °C. (E25R: 15 °C below ambient to 60 °C)

±0.5 °C at 37 °C

0.1–99.9 hrs, continuous

1 in (2.5 cm)



<b>Model</b>	<b>Innova® 2000</b>
<b>Page(s)</b>	<b>331</b>
<b>Dimensions (W × D × H)</b>	14 × 14.5 × 5.8 in / 35.5 × 37 × 14.6 cm
<b>Weight w/o accessories</b>	33 lb / 15 kg
<b>Audible and visual alarms</b>	yes
<b>Balanced drive mechanism</b>	Triple-eccentric with permanently lubricated ball bearings
<b>cETLus and CE marked</b>	yes
<b>Benchtop (B), Under Bench (U), Floor (F) or Stackable (S)</b>	B
<b>Motor type</b>	Solid state, DC brushless motor
<b>Orbit</b>	0.75 in (1.9 cm)
<b>Platform size</b>	13 × 11 in (33 × 28 cm)
<b>Timer</b>	0.1–99.9 hrs, continuous



<b>Model</b>	<b>Innova® 2150</b>
<b>Page(s)</b>	<b>332</b>
<b>Dimensions (W × D × H)</b>	24 × 21.9 × 6.4 in / 60.1 × 55.5 × 16.3 cm
<b>Weight w/o accessories</b>	80 lb / 36 kg
<b>Audible and visual alarms</b>	yes
<b>Balanced drive mechanism</b>	Triple-eccentric with permanently lubricated ball bearings
<b>cETLus and CE marked</b>	yes
<b>Benchtop (B), Under Bench (U), Floor (F) or Stackable (S)</b>	B
<b>Motor type</b>	Solid state, DC brushless motor
<b>Orbit</b>	0.75 in (1.9 cm)
<b>Platform size</b>	24 × 18 in (61 × 46 cm)
<b>Timer</b>	0.1–99.9 hrs, continuous

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)

**Innova® 2050****331**

17 × 14.5 × 5.8 in / 43 × 37 × 14.6 cm

35 lb / 16 kg

yes

Triple-eccentric with permanently lubricated ball bearings

yes

B

Solid state, DC brushless motor

0.75 in (1.9 cm)

16 × 12 in (41 × 31 cm)

0.1–99.9 hrs, continuous

**Innova® 2100****332**

19 × 21.9 × 6.4 in / 48 × 55.5 × 16.3 cm

75 lb / 34 kg

yes

Triple-eccentric with permanently lubricated ball bearings

yes

B

Solid state, DC brushless motor

0.75 in (1.9 cm)

18 × 18 in (46 × 46 cm)

0.1–99.9 hrs, continuous

**Innova® 2300****333**

30 × 22.3 × 6.4 in / 76.2 × 56.6 × 16.3 cm

108 lb / 49 kg

yes

Triple-eccentric with permanently lubricated ball bearings

yes

B

Solid state, DC brushless motor

1 in/2 in (2.5 cm/5.1 cm)

30 × 18 in (76 × 46 cm)

0.1–99.9 hrs, continuous

**Innova® 2350****333**

36 × 24 × 6.4 in / 91.4 × 61 × 16.3 cm

115 lb / 52 kg

yes

Triple-eccentric with permanently lubricated ball bearings

yes

B

Solid state, DC brushless motor

1 in/2 in (2.5 cm/5.1 cm)

36 × 24 in (91 × 62 cm)

0.1–99.9 hrs, continuous

# New Brunswick™ Innova® 40/40R

## Description

The Innova 40 incubated and 40R incubated and refrigerated benchtop shakers provide years of dependable operation. The cast iron Eppendorf triple-eccentric counterbalanced drive is specifically designed to support high-speed applications and heavy workloads. Innova 40 incubated shakers provide very broad temperature capabilities for culturing a wide variety of organisms in flasks up to 3 L.



## Product features

- > Triple-eccentric counterbalanced drive in cast iron housing provides simple vibration-free operation for years
- > Compact benchtop model – fits easily on the bench and holds flasks up to 3 L
- > Clear cover allows easy viewing of the cultures and lifts easily to access all samples
- > Versatile accessory platform (sold separately) accommodates flasks up to 3 L as well as test tube racks and microplate holders
- > Certified. Meets cETL, UL, CSA and CE standards

## Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 40</b> , 120 V/60 Hz		
Orbit diameter 0.75 in (1.9 cm)	M1299-0080	\$ 8,840.00
Orbit diameter 1 in (2.5 cm)	M1299-0090	8,840.00
<b>New Brunswick™ Innova® 40R</b> , 120 V/60 Hz		
Orbit diameter 0.75 in (1.9 cm)	M1299-0084	10,400.00
Orbit diameter 1 in (2.5 cm)	M1299-0094	10,400.00
<b>Remote alarm</b>	M1320-8029	240.00
<b>Platforms for Innova® 2100/40/40R/42/42R, I-Series® I24/I24R, Excella® E24/E24R</b> , 18 × 18 in, phenolic resin		
Universal platform, aluminum	M1250-9902	885.00
50 mL Erlenmeyer flask dedicated platform	M1194-9903	1,105.00
125 mL Erlenmeyer flask dedicated platform	M1194-9904	940.00
250 mL Erlenmeyer flask dedicated platform	M1194-9905	970.00
500 mL Erlenmeyer flask dedicated platform	M1194-9906	940.00
1 L Erlenmeyer flask dedicated platform	M1194-9907	900.00
2 L Erlenmeyer flask dedicated platform	M1194-9908	900.00
<b>Sticky pad platform</b> , sticky pads sold separately	M1250-9903	630.00
<b>Quick-change platform kit</b> , enables platform attachment without tools	M1192-9901	520.00
<b>Utility carrier</b> , holds racks and vessels between rubber-cushioned cross bars	M1194-9909	790.00
<b>Utility tray</b> , with non-skid rubber surface	M1194-9910	725.00
<b>Rod kit</b> , for utility carrier (one additional rod)	M1194-9923	245.00
<b>Drip pan</b> , for universal platform M1250-9902	M1250-9906	230.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



# New Brunswick™ Innova® 42/42R

## Description

The Innova 42 incubated and 42R incubated and refrigerated shakers are our most versatile incubator shakers. The programmable Innova 42 and 42R provide exceptional convenience allowing for simultaneous shaking and static incubation of cultures under the same conditions.



## Product features

- > Cast iron triple-eccentric counterbalanced drive provides years of dependable operation
- > Programmable Innova controls – automatically change temperature, speed, and optional photosynthetic and UV germicidal lights at timed intervals
- > Large viewing window and internal light provide easy viewing of samples without the need to open the door
- > Multi-use reservoir can be used to humidify chamber, reducing sample evaporation while also protecting unit from spills. Includes a drain for easy cleaning
- > Versatile accessory platforms (sold separately) accommodate flasks up to 4 L as well as test tube racks and microplate holders

## Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 42, 120 V/60 Hz</b>		
Orbit diameter 0.75 in (1.9 cm)	M1335-0000	\$10,300.00
Orbit diameter 1 in (2.5 cm)	M1335-0010	10,300.00
<b>New Brunswick™ Innova® 42R, 120 V/60 Hz</b>		
Orbit diameter 0.75 in (1.9 cm)	M1335-0004	11,700.00
Orbit diameter 1 in (2.5 cm)	M1335-0014	11,700.00
<b>Photosynthetic light bank, programmable, Innova® 42R only</b>	M1335-0300	1,500.00
<b>UV germicidal light, in the airflow path outside the chamber reduces the bio-burden of circulated air, programmable, Innova® 42R only</b>	M1335-0400	1,500.00
<b>Humidity Monitor, for Innova® 42/42R</b>	M1335-0500	750.00
<b>12-port gassing manifold, permits direct gassing into flasks, for Innova® 42/42R</b>	M1335-0600	730.00
<b>Remote alarm</b>	M1320-8029	240.00
<b>Platforms for Innova® 2100/40/40R/42/42R, I-Series® I24/I24R, Excella® E24/E24R, 18 x 18 in, phenolic resin</b>		
Universal platform, Aluminum	M1250-9902	885.00
50 mL Erlenmeyer flask dedicated platform	M1194-9903	1,105.00
125 mL Erlenmeyer flask dedicated platform	M1194-9904	940.00
250 mL Erlenmeyer flask dedicated platform	M1194-9905	970.00
500 mL Erlenmeyer flask dedicated platform	M1194-9906	940.00
1 L Erlenmeyer flask dedicated platform	M1194-9907	900.00
2 L Erlenmeyer flask dedicated platform	M1194-9908	900.00
<b>Sticky pad platform, sticky pads sold separately</b>	M1250-9903	630.00
<b>Quick-change platform kit, enables platform attachment without tools</b>	M1192-9901	520.00
<b>Utility carrier, holds racks and vessels between rubber-cushioned cross bars</b>	M1194-9909	790.00
<b>Rod kit, for utility carrier (one additional rod)</b>	M1194-9923	245.00
<b>Utility tray, with non-skid rubber surface</b>	M1194-9910	725.00
<b>Drip pan, for universal platform M1250-9902</b>	M1250-9906	230.00
<b>Stacking kit, for stacking Innova® 42/42R units</b>	M1335-0800	375.00
<b>Stacking kit, for stacking Innova® 4200/4230 units on top of Innova® 42/42R shakers</b>	M1335-0810	500.00
<b>Additional perforated shelf and brackets, for Innova® 42/42R</b>	M1335-0080	245.00
<b>Culture drawer, prevents plates from drying</b>	M1335-0501	865.00

# New Brunswick™ Innova® 43/43R

## Description

The Innova 43 incubated and Innova 43R incubated and refrigerated shakers are the perfect choice for handling large quantities or large volumes of cultures with precision and ease. The cast iron triple-eccentric counterbalanced drive is specifically designed to support high-speed applications and heavy workloads.



## Product features

- > Console style shaker/incubator with triple-eccentric drive – provides large capacity shaking for flasks up to 6 L
- > Programmable Innova controls – automatically change temperature, speed, and optional photosynthetic and UV germicidal lights at timed intervals
- > Top mounted controls and display – for easy, ergonomic viewing and setting
- > Foot pedal release with easy opening lid – provides hands-free operation
- > RS-232 port for data logging
- > Multi-use reservoir can be used to humidify chamber, reducing sample evaporation while also protecting unit from spills. Includes a drain for easy cleaning

## Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 43, 120 V/60 Hz</b>		
Orbit diameter 1 in (2.5 cm)	M1320-0000	\$15,000.00
Orbit diameter 2 in (5.1 cm)	M1320-0010	15,000.00
<b>New Brunswick™ Innova® 43R, 120 V/60 Hz</b>		
Orbit diameter 1 in (2.5 cm)	M1320-0004	17,000.00
Orbit diameter 2 in (5.1 cm)	M1320-0014	17,000.00
<b>Photosynthetic light bank</b> , for Innova® 43R only, orbit diameter 2.5/5.1 cm (1/2 in)	M1320-0300	1,500.00
<b>UV germicidal light</b> , in the airflow path outside the chamber reduces the bio-burden of circulated air, Innova® 43R only, orbit diameter 2.5/5.1 cm (1/2 in)	M1320-0400	1,500.00
<b>12-port gassing manifold</b> , permits direct gassing into flasks, for Innova® 43/43R	M1320-0500	730.00
<b>Humidity Monitor</b> , for Innova® 43/43R	M1320-0600	750.00
<b>Remote alarm</b>	M1320-8029	240.00
<b>Platforms for Innova® 2300/43/43R, Excella® E10/E25/E25R, 30 × 18 in, aluminum</b>		
Universal platform	M1250-9920	1,220.00
50 mL Erlenmeyer flask dedicated platform	M1191-9908	1,615.00
125 mL Erlenmeyer flask dedicated platform	M1191-9909	1,575.00
250 mL Erlenmeyer flask dedicated platform	M1191-9910	1,450.00
500 mL Erlenmeyer flask dedicated platform	M1191-9911	1,370.00
1 L Erlenmeyer flask dedicated platform	AG-1	1,310.00
2 L Erlenmeyer flask dedicated platform	AG-2	1,220.00
6 L Erlenmeyer flask dedicated platform	AG-6	1,260.00
<b>Sticky pad platform</b> , sticky pads sold separately	M1250-9904	825.00
<b>Utility tray</b> , with non-skid rubber surface	AG-00	940.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)

Product appearance, specifications, and/or prices are subject to change without notice.

# New Brunswick™ Innova® 44/44R

## Description

The Innova 44 incubator shaker and 44R with added refrigeration are stackable shakers that provide very broad temperature capabilities for culturing a wide variety of organisms in flasks up to 5 L. The cast iron triple-eccentric counterbalanced drive is specifically designed to support high speed applications and heavy workloads. Refrigeration module is built into the Innova 44R, or can be easily added to Innova 44, at any time.



## Product features

- > Stackable – up to three units for maximum space savings
- > Programmable Innova controls – automatically change temperature, speed, and optional photosynthetic and UV germicidal lights at timed intervals
- > Versatile accessory platform (sold separately) accommodates flasks up to 5 L
- > Slide-out platform mechanism — provides easy and effortless access to flasks located in the front and back of the incubator shaker
- > Multi-use reservoir can be used to humidify chamber, reducing sample evaporation while also protecting unit from spills. Includes a drain for easy cleaning
- > Pull-out service module allows access to all electronic and heating/cooling components without having to unstack the units

## Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 44</b> , 120 V/60 Hz		
Orbit diameter 1 in (2.5 cm)	M1282-0000	\$15,800.00
Orbit diameter 2 in (5.1 cm)	M1282-0010	15,800.00
<b>New Brunswick™ Innova® 44R</b> , 120 V/60 Hz		
Orbit diameter 1 in (2.5 cm)	M1282-0004	18,000.00
Orbit diameter 2 in (5.1 cm)	M1282-0014	18,000.00
<b>Photosynthetic light bank</b> , for Innova® 44R only, orbit diameter 2.5/5.1 cm (1/2 in)	M1282-9922	1,500.00
<b>12-port gassing manifold</b> , permits direct gassing into flasks, for Innova® 44/44R	M1282-0291	730.00
<b>Humidity monitor</b> , for Innova® 44R, orbit diameter 2.5/5.1 cm (1/2 in)	M1282-5011	750.00
<b>UV germicidal light</b> , in the airflow path outside the chamber reduces the bio-burden of circulated air, programmable, Innova® 44R only	M1282-9921	1,500.00
<b>Remote alarm</b> , for Innova® 44/44R	M1282-8038	315.00
<b>Aluminum platforms for Innova® 44/44R</b> , 30 x 18 in, not interchangeable with other 30 x 18 in platforms		
Universal platform	M1282-9904	1,175.00
125 mL Erlenmeyer flask dedicated platform	M1282-9905	1,545.00
250 mL Erlenmeyer flask dedicated platform	M1282-9906	1,420.00
500 mL Erlenmeyer flask dedicated platform	M1282-9907	1,340.00
1 L Erlenmeyer flask dedicated platform	M1282-9908	1,260.00
2 L Erlenmeyer flask dedicated platform	M1282-9909	1,200.00
2.8 L Fernbach flask dedicated platform	M1282-9910	1,260.00
4 L Erlenmeyer flask dedicated platform	M1282-9911	1,200.00
<b>Sticky pad platform</b> , sticky pads sold separately	M1282-9913	825.00
<b>Heavy duty aluminum plate platforms for Innova® 44/44R only</b> , 30 x 18 in, not interchangeable with other 30 x 18 in platforms. Heavy-duty platforms are recommended for shaking full loads of flasks, 1 L and larger, containing more than 20 % volume or with baffles.		
Universal platform	M1282-9915	1,410.00
1 L Erlenmeyer flask dedicated platform	M1282-9925	1,520.00
2 L Erlenmeyer flask dedicated platform	M1282-9926	1,440.00
4 L Erlenmeyer flask dedicated platform	M1282-9928	
<b>Base riser</b> , increases the height of the shaker for easier access, for Innova® 44/44R		
4 in, short	M1282-0600	675.00
12 in, medium	M1282-0800	1,240.00
16 in, tall	M1282-0700	1,350.00
<b>Stacking kit</b> , for stacking one additional 44 or 44R	M1282-0500	375.00

# NEW - Innova® S44i

## Description

Innova S44i is a large capacity, stackable shaker designed to provide maximum flask and weight capacity at a compact footprint. Eppendorf X-Drive™ with software-guided counterbalance adjustment supports smooth shaking of uneven and heavy loads at high speeds. All Innova S44i in a triple stack can be operated at maximum speed. The Innova S44i supports the integration of the shaker in regulated labs through features such as the easy-to-use touchscreen user interface with user management capability, USB ports to download operational data, and Ethernet port for communication. Service products including installation and operation qualification allow seamless validation of the instrument.



1. High flask capacity in a smaller footprint to grow more cells in less space – 50 % more 500 mL flask capacity and 82 % more weight capacity than Innova 44
2. The new Eppendorf X-Drive with semi-automated counterbalance technology for smooth and vibration-free agitation
3. Double- or triple- stack the S44i for increased capacity
4. Intuitive touchscreen interface with unlimited programming and user management capability
5. New slide-out platform design with quick-release handle provides easy access to all samples—even those at the back of the platform
6. Glide-up door for convenient and effortless access into the chamber
7. Photosynthetic LED light bank option provides uniform light across the platform for cyanobacteria and algae culture

## Applications

- > Grow bacteria, yeast, fungus, cyanobacteria and algae
- > Plasmid DNA production and protein expression
- > Process and media development
- > Media screening and optimization
- > Seed cultures for bioprocess scale-up
- > Biofuel research
- > Food quality testing



## Ordering information

Description	Catalog No.	List USD
<b>Innova® S44i, incubated, 120 V/60 Hz</b>		
Orbit diameter 1 in (2.5 cm)	S44I200005	\$18,740.00
Orbit diameter 2 in (5.1 cm)	S44I220005	18,740.00
<b>Innova® S44i, refrigerated, 120 V/60 Hz</b>		
Orbit diameter 1 in (2.5 cm)	S44I210005	21,200.00
Orbit diameter 2 in (5.1 cm)	S44I230005	21,200.00
<b>Innova® S44i, refrigerated, photosynthetic LED light bank, 120 V/60 Hz</b>		
Orbit diameter 1 in (2.5 cm)	S44I211005	25,700.00
Orbit diameter 2 in (5.1 cm)	S44I231005	25,700.00



LED lamps with adjustable intensity provide uniform coverage over entire platform



Eppendorf X-Drive with five eccentric mounting points and adjustable counterbalance provides dependable operation

Technical specifications	
<b>Model</b>	Innova® S44i
<b>Agitation</b>	
<b>Orbit</b>	1 in/2 in (2.5 cm/5.1 cm)
<b>Drive mechanism</b>	Eppendorf X-Drive with semi-automated counterbalance
<b>Speed</b>	20 – 400 rpm with 1 in (2.5 cm) orbit; 20 – 300 rpm with 2 in (5.1 cm) orbit
<b>Maximum platform load</b>	78 lb (35.4 kg)
<b>Temperature range</b>	Incubated: 5 °C above ambient to 80 °C; Refrigerated: 20 °C below ambient (min. 4 °C) to 80 °C.
<b>Temperature accuracy</b>	±0.1 °C at 37 °C
<b>Temperature uniformity</b>	±0.25 °C at 37 °C and 250 rpm
<b>Available program modes</b>	> Constant speed and temperature > Timed mode up to 95:59 hours > Programming mode with multiple steps and cycling of program
<b>Communication port</b>	USB and Ethernet
<b>Dimensions (W x D x H)</b>	46.5 x 37.7 x 24 in / 118.2 x 95.8 x 63.1 cm
<b>Dimensions and weight</b>	
<b>Net weight</b>	Incubated: 411 lb (186 kg) Refrigerated: 437 lb (198 kg)
<b>Photosynthetic LED light bank</b>	
<b>Intensity range</b>	15 to 150 par adjustable increments of 10 %
<b>Main wavelength</b>	Wide band spectrum; 400 – 700 nm

#### Ordering information

Description	Catalog No.	List USD
<b>Platforms for Innova® S44i, 30 x 24 in, not interchangeable with other platforms</b>		
Universal platform	S44i040001	\$1,189.00
125 mL Erlenmeyer flask dedicated platform, 86 clamps	S44i040002	1,558.00
250 mL Erlenmeyer flask dedicated platform, 53 clamps	S44i040003	1,435.00
500 mL Erlenmeyer flask dedicated platform, 39 clamps	S44i040004	1,353.00
1 L Erlenmeyer flask dedicated platform, 23 clamps	S44i040005	1,271.00
2 L Erlenmeyer flask dedicated platform, 15 clamps	S44i040006	1,210.00
2.8 L Fernbach flask dedicated platform, 8 clamps	S44i040007	1,271.00
4 L Erlenmeyer flask dedicated platform, 8 clamps	S44i040008	1,210.00
<b>Positioning base, required (unless stacked on Innova® 44/44R)</b>		
<b>4.1 in (10.5 cm) positioning base</b>	S44i041001	682.00
<b>12.1 in (30.7 cm) positioning base</b>	S44i041002	1,251.00
<b>Stacking kit, double stack of Innova® S44i</b>	S44i041005	379.00
<b>Stacking kit, triple stack of Innova® S44i</b>	S44i041003	1,137.00
<b>Stacking kit, Innova® S44i to Innova® 44/44R<sup>1)</sup></b>	S44i041006	379.00
<b>Static incubation shelf</b>	S44i042001	375.00
<b>Darkening window shade</b>	S44i042002	285.00

# New Brunswick™ I-Series I24/I24R

## Description

Benchtop, incubated New Brunswick model I24 and incubated/ refrigerated model I24R shakers feature New Brunswick's triple-eccentric counterbalanced shaking mechanism for uniform motion, and years of quiet, dependable operation. The models I24 and I24R accommodate test tubes or flasks up to 2.8 liters in a tightly-sealed growth chamber featuring a clear acrylic lid for excellent visibility of all samples. A wide variety of platforms, clamps and test tube racks provide for unlimited flexibility.



## Product features

- > Heavy-duty triple-eccentric counterbalanced drive provides long life, vibration-free, quiet and dependable operation
- > Versatile 18 × 18 in / 46 × 46 cm accessory platform (sold separately) accommodates flasks up to 2.8 L as well as test tube racks and Microplate holders
- > User-friendly keypad with large LED display is clearly visible and easy to set
- > Wide temperature range: I24: 5 °C above ambient to 60 °C. (I24R: 15 °C below ambient to 60 °C)
- > Shaking speeds between 50–400 rpm ( $\pm 1$  rpm) provides versatility for culturing a wide range of cell types.
- > Clear large lid provides excellent visibility minimizing the need to open the lid
- > Open lid cut off switch immediately stops shaking when lid is open
- > Audible and visual alarms alert you to setpoint deviations or end of study
- > Unique acceleration/deceleration circuit prevents sudden starts and stops protecting your cells
- > Microprocessor controls precisely regulate temperature, speed and running time

## Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ I-Series® I24, 120 V/60 Hz</b>		
Orbit diameter 0.75 in (1.9 cm)	M1344-0000	\$8,380.00
Orbit diameter 1 in (2.5 cm)	M1344-0010	8,380.00
<b>New Brunswick™ I-Series® I24R, 120 V/60 Hz</b>		
Orbit diameter 0.75 in (1.9 cm)	M1344-0004	9,810.00
Orbit diameter 1 in (2.5 cm)	M1344-0014	9,810.00
<b>Platforms for Innova® 2100/40/40R/42/42R, I-Series® I24/I24R, Excella® E24/E24R, 18 × 18 in, phenolic resin</b>		
Universal platform, Aluminum	M1250-9902	885.00
50 mL Erlenmeyer flask dedicated platform	M1194-9903	1,105.00
125 mL Erlenmeyer flask dedicated platform	M1194-9904	940.00
250 mL Erlenmeyer flask dedicated platform	M1194-9905	970.00
500 mL Erlenmeyer flask dedicated platform	M1194-9906	940.00
1 L Erlenmeyer flask dedicated platform	M1194-9907	900.00
2 L Erlenmeyer flask dedicated platform	M1194-9908	900.00
<b>Sticky pad platform, sticky pads sold separately</b>	M1250-9903	630.00
<b>Quick-change platform kit, enables platform attachment without tools</b>	M1192-9901	520.00
<b>Utility carrier, holds racks and vessels between rubber-cushioned cross bars</b>	M1194-9909	790.00
<b>Rod kit, for utility carrier (one additional rod)</b>	M1194-9923	245.00
<b>Utility tray, with non-skid rubber surface</b>	M1194-9910	725.00
<b>Drip pan, for universal platform M1250-9902</b>	M1250-9906	230.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



# New Brunswick™ I-Series I26/I26R

## Description

Stackable, incubated New Brunswick model I26 and incubated/refrigerated model I26R shakers feature New Brunswick's triple-eccentric counterbalanced shaking mechanism for uniform motion, and years of quiet, dependable operation. Microprocessor controls with digital display enable easy operation and accurate setpoint regulation. A large assortment of platforms, clamps, test tube holders and other accessories allow configuration to meet your exact needs. Based on the design concepts of the Innova® shakers, the models I26 and I26R offer excellent performance at a value price.



## Product features

- > Wide temperature range: I26: 5 °C above ambient to 60 °C (I26R: 15 °C below ambient to 60 °C)
- > Slide out platform provides easy access to all samples, including ones located in the back
- > Stack up to 3 units for maximum capacity while taking up minimal space
- > Shaking speeds between 25–400 rpm ( $\pm 1$  rpm) provides versatility for culturing a wide range of cell types
- > User-friendly keypad with large LED display is clearly visible and easy to set
- > Triple-eccentric counterbalanced drive and cast iron housing provides vibration and trouble free operation for years
- > Microprocessor controls precisely regulate temperature, speed and running time
- > Versatile 30 x 18 in / 76 x 46 cm accessory platform (sold separately) accommodates flasks up to 2.8 L
- > Provides the ability to calibrate the speed and temperature directly through the keypad

## Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ I-Series® I26</b> , 120 V/60 Hz, orbit diameter 1 in (2.5 cm)	M1324-0000	\$14,200.00
<b>New Brunswick™ I-Series® I26R</b> , 120 V/60 Hz, orbit diameter 1 in (2.5 cm)	M1324-0004	16,300.00
<b>Aluminum platforms for I-Series® I26R</b> , 30 x 18 in, not interchangeable with other 30 x 18 in platforms		
Universal platform	M1324-9904	1,135.00
125 mL Erlenmeyer flask dedicated platform	M1324-9905	1,470.00
250 mL Erlenmeyer flask dedicated platform	M1324-9906	1,380.00
500 mL Erlenmeyer flask dedicated platform	M1324-9907	1,300.00
1 L Erlenmeyer flask dedicated platform	M1324-9908	1,220.00
2 L Erlenmeyer flask dedicated platform	M1324-9909	1,155.00
2.8 L Fernbach flask dedicated platform	M1324-9910	1,220.00
Sticky pad platform, (sticky pads sold separately)	M1324-9911	805.00
<b>Base riser</b> , increases the height of the shaker for easier access, for I-Series® I26/I26R		
4 in, short	M1324-0600	650.00
13 in, medium	M1324-0800	1,200.00
17 in, tall	M1324-0700	1,300.00
<b>Stacking kit</b> , for stacking one additional I26 or I26R	M1324-0500	365.00

# New Brunswick™ Excella® E24/E24R

## Description

The benchtop Excella E24 incubated and E24R incubated and refrigerated shakers accommodate test tubes or flasks up to 2.8 L in a tightly-sealed chamber featuring a clear acrylic lid for excellent visibility of all samples. A wide variety of platforms, clamps, and test tube racks provide unlimited flexibility. The Excella E24 and E24R offer field calibration of temperature and speed through the microprocessor-controlled touch pad.



## Product features

- > Heavy-duty counterbalanced drive provides vibration-free, quiet, and dependable operation
- > Versatile accessory platform (sold separately) accommodates flasks up to 2.8 L as well as test tube racks and microplate holders
- > User-friendly keypad with large LED display is clearly visible and easy to set
- > Clear large lid provides excellent visibility
- > Audible and visual alarms alert you to setpoint deviations or end of study
- > Acceleration/deceleration circuit prevents sudden starts and stops protecting your cells
- > Microprocessor controls precisely regulate temperature, speed and running time

## Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Excella® E24</b> , 120 V/60 Hz, orbit diameter 0.75 in (1.9 cm)	M1352-0000	\$6,920.00
<b>New Brunswick™ Excella® E24R</b> , 120 V/60 Hz, orbit diameter 0.75 in (1.9 cm)	M1352-0004	9,420.00
<b>Platforms for Innova® 2100/40/40R/42/42R, I-Series® I24/I24R, Excella® E24/E24R</b> , 18 × 18 in, phenolic resin		
Universal platform, aluminum	M1250-9902	885.00
50 mL Erlenmeyer flask dedicated platform	M1194-9903	1,105.00
125 mL Erlenmeyer flask dedicated platform	M1194-9904	940.00
250 mL Erlenmeyer flask dedicated platform	M1194-9905	970.00
500 mL Erlenmeyer flask dedicated platform	M1194-9906	940.00
1 L Erlenmeyer flask dedicated platform	M1194-9907	900.00
2 L Erlenmeyer flask dedicated platform	M1194-9908	900.00
2.8 L Fernbach flask dedicated platform	M1250-9903	630.00
<b>Sticky pad platform</b> , sticky pads sold separately	M1192-9901	520.00
<b>Quick-change platform kit</b> , enables platform attachment without tools	M1194-9909	790.00
<b>Utility carrier</b> , holds racks and vessels between rubber-cushioned cross bars	M1194-9923	245.00
<b>Utility tray</b> , with non-skid rubber surface	M1194-9910	725.00
<b>Drip pan</b> , for universal platform M1250-9902	M1250-9906	230.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)

Product appearance, specifications, and/or prices are subject to change without notice.



# New Brunswick™ Excella® E25/E25R

## Description

The large console Excella E25 incubated and Excella E25R incubated and refrigerated shakers accommodate test tubes or flasks up to 6 L in a tightly-sealed chamber featuring a large viewing window for easy viewing of samples. A wide variety of platforms, clamps and test tube racks provide for unlimited flexibility. The Excella models E25 and E25R offer field calibration of temperature and speed through the microprocessor-controlled touch pad.



## Product features

- > Heavy-duty counterbalanced drive provides vibration-free, quiet, and dependable operation
- > Large platform size provides increased flexibility with the number and size of cultures (sold separately)
- > Large viewing window and internal light – for easy viewing of samples without the need to open the door
- > Microprocessor controls precisely regulate temperature, speed and running time
- > Audible and visual alarms alert you to setpoint deviations or end of study
- > Powerful fan and heater provide rapid heat up and temperature recovery after door opening

## Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Excella® E25, 120 V/60 Hz, orbit diameter 1 in (2.5 cm)</b>	M1353-0000	\$12,000.00
<b>New Brunswick™ Excella® E25R, 120 V/60 Hz, orbit diameter 1 in (2.5 cm)</b>	M1353-0004	14,400.00
<b>Platforms for Innova® 2300/43/43R, Excella® E10/E25/E25R, 30 x 18 in, aluminum</b>		
Universal platform, aluminum	M1250-9920	1,220.00
50 mL Erlenmeyer flask dedicated platform	M1191-9908	1,615.00
125 mL Erlenmeyer flask dedicated platform	M1191-9909	1,575.00
250 mL Erlenmeyer flask dedicated platform	M1191-9910	1,450.00
500 mL Erlenmeyer flask dedicated platform	M1191-9911	1,370.00
1 L Erlenmeyer flask dedicated platform	AG-1	1,310.00
2 L Erlenmeyer flask dedicated platform	AG-2	1,220.00
6 L Erlenmeyer flask dedicated platform	AG-6	1,260.00
<b>Sticky pad platform, sticky pads sold separately</b>	M1250-9904	825.00
<b>Utility tray, with non-skid rubber surface</b>	AG-00	940.00

# Open Air Shakers

## Description

For shaking in ambient conditions, on the bench, or in a warm or cold room, Innova Open Air Shakers are the instrument of choice. Dependable operation is due in large part to the Eppendorf triple-eccentric counterbalanced drive. Eppendorf offers a broad-based cast-iron support mechanism properly sized to each shaker and specifically designed to support high-speed applications and heavy workloads. Innova Open Air shakers are offered in 6 different sizes offering reliable, continuous-duty shaking of test tubes and flasks up to 6 L.



## Product features

- > Triple-eccentric counterbalanced drive in cast iron housing provides vibration and trouble-free operation for years
- > Quiet operation provides a favorable work environment
- > Shaking speeds between 25 – 500 rpm ( $\pm 1$  rpm) provide versatility for culturing a wide range of cell types
- > Speed is controlled and displayed in increments of 1 rpm
- > Includes audible and visual alarms, timer (0 – 99.9 h) with continuous operation or automatic shut-off at the end of the study
- > Enclosed electronics and mechanical components prevent internal damage from accidental spills
- > Versatile accessory platforms accommodate a wide variety of flasks and other accessories
- > Low profile - less than 6" (15 cm) tall-enables use of multiple shakers in an incubator or environmental chamber

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)

Product appearance, specifications, and/or prices are subject to change without notice.



## New Brunswick™ Innova® 2000



### Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 2000</b> , platform sold separately, 120 V/60 Hz, orbit diameter 0.75 in (1.9 cm)	M1190-0000	\$2,860.00
<b>Platforms for Innova® 2000</b> , 13 × 11 in, stainless steel		
Universal platform	M1001-0240	475.00
10 mL Erlenmeyer flask dedicated platform	AG2-10	570.00
25 mL Erlenmeyer flask dedicated platform	M1190-9919	515.00
50 mL Erlenmeyer flask dedicated platform	M1190-9915	480.00
125 mL Erlenmeyer flask dedicated platform	M1190-9916	480.00
250 mL Erlenmeyer flask dedicated platform	M1190-9917	515.00
500 mL Erlenmeyer flask dedicated platform	M1190-9918	515.00
<b>Utility carrier</b> , holds glassware between rubber-cushioned cross bars	AG2-UT	685.00
<b>Utility tray</b> , with non-skid rubber surface	AG2-00	520.00
<b>Rod kit</b> , for utility carrier (one additional rod)	M1001-9920	210.00
<b>Capacity upgrade kit</b> , to convert a Model 2000 to a Model 2050	M1190-9910	555.00
<b>Temperature and speed monitoring kit</b> , for recording on an external chart recorder	M1190-9909	1,165.00

## New Brunswick™ Innova® 2050



### Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 2050</b> , platform sold separately, 120 V/60 Hz, orbit diameter 0.75 in (1.9 cm)	M1190-0010	\$3,040.00
<b>Platforms for Innova® 2050</b> , 16 × 12 in, stainless steel		
Universal platform	M1190-9900	595.00
10 mL Erlenmeyer flask dedicated platform	M1190-9901	975.00
25 mL Erlenmeyer flask dedicated platform	M1190-9902	775.00
50 mL Erlenmeyer flask dedicated platform	M1190-9903	750.00
125 mL Erlenmeyer flask dedicated platform	M1190-9904	775.00
250 mL Erlenmeyer flask dedicated platform	M1190-9905	700.00
500 mL Erlenmeyer flask dedicated platform	M1190-9906	610.00
1 L Erlenmeyer flask dedicated platform	M1190-9911	595.00
<b>Utility carrier</b> , holds glassware between rubber-cushioned cross bars	M1190-9907	720.00
<b>Utility tray</b> , with non-skid rubber surface	M1190-9908	635.00

## New Brunswick™ Innova® 2100



### Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 2100</b> , platform sold separately, 120 V/60 Hz, orbit diameter 0.75 in (1.9 cm)	M1194-0000	\$4,210.00
<b>Platforms for Innova® 2100/40/40R/42/42R, Excella® E24/E24R</b> , 18 x 18 in, phenolic resin		
Universal platform, aluminum	M1250-9902	885.00
50 mL Erlenmeyer flask dedicated platform	M1194-9903	1,105.00
125 mL Erlenmeyer flask dedicated platform	M1194-9904	940.00
250 mL Erlenmeyer flask dedicated platform	M1194-9905	970.00
500 mL Erlenmeyer flask dedicated platform	M1194-9906	940.00
1 L Erlenmeyer flask dedicated platform	M1194-9907	900.00
2 L Erlenmeyer flask dedicated platform	M1194-9908	900.00
Sticky pad platform, sticky pads sold separately	M1250-9903	630.00
<b>Quick-change platform kit</b> , enables platform attachment without tools	M1192-9901	520.00
<b>Utility carrier</b> , holds racks and vessels between rubber-cushioned cross bars	M1194-9909	790.00
<b>Utility tray</b> , with non-skid rubber surface	M1194-9910	725.00
<b>Rod kit</b> , for utility carrier (one additional rod)	M1194-9923	245.00
<b>Capacity upgrade kit</b> , to convert a Model 2100 to a Model 2150	M1194-9926	555.00
<b>Temperature and speed monitoring kit</b> , for recording on an external chart recorder		
for Innova® 2100/2150/2300/2350	M1194-9924	1,210.00
<b>Drip pan</b> , for universal platform M1250-9902	M1250-9906	230.00

## New Brunswick™ Innova® 2150



### Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 2150</b> , platform sold separately, 120 V/60 Hz, orbit diameter 0.75 in (1.9 cm)	M1194-0010	\$4,580.00
<b>Interchangeable platforms for Innova® 2150</b> , 24 x 18 in, phenolic resin		
Universal platform	M1194-9912	940.00
1 L Erlenmeyer flask dedicated platform	M1194-9919	1,085.00
2 L Erlenmeyer flask dedicated platform	M1194-9920	900.00
<b>Utility carrier</b> , holds glassware between rubber-cushioned cross bars	M1194-9921	900.00
<b>Utility tray</b> , with non-skid rubber surface	M1194-9922	835.00
<b>Rod kit</b> , for utility carrier (one additional rod)	M1194-9925	245.00
<b>Quick-change platform kit</b> , enables platform attachment without tools	M1194-9927	515.00
<b>Temperature and speed monitoring kit</b> , for recording on an external chart recorder		
for Innova® 2100/2150/2300/2350	M1194-9924	1,210.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



## New Brunswick™ Innova® 2300



### Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 2300</b> , platform sold separately		
120 V/60 Hz, orbit diameter 1 in (2.5 cm)	M1191-0000	\$6,980.00
120 V/60 Hz, orbit diameter 2 in (5.1 cm)	M1191-0020	7,360.00
<b>Platforms for Innova® 2300/43/43R, Excella® E10/E25/E25R</b> , 30 × 18 in, aluminum		
Universal platform, aluminum	M1250-9920	1,220.00
50 mL Erlenmeyer flask dedicated platform	M1191-9908	1,615.00
125 mL Erlenmeyer flask dedicated platform	M1191-9909	1,575.00
250 mL Erlenmeyer flask dedicated platform	M1191-9910	1,450.00
500 mL Erlenmeyer flask dedicated platform	M1191-9911	1,370.00
1 L Erlenmeyer flask dedicated platform	AG-1	1,310.00
2 L Erlenmeyer flask dedicated platform	AG-2	1,220.00
6 L Erlenmeyer flask dedicated platform	AG-6	1,260.00
Sticky pad platform, sticky pads sold separately	M1250-9904	825.00
<b>Utility tray</b> , with non-skid rubber surface	AG-00	940.00
<b>Quick-change platform kit</b> , enables platform attachment without tools	M1191-9904	545.00
<b>Capacity upgrade kit</b> , to convert a Model 2300 to a Model 2350	M1191-9905	570.00
<b>Temperature and speed monitoring kit</b> , for recording on an external chart recorder for Innova® 2100/2150/2300/2350		
	M1194-9924	1,210.00
<b>Drip pan</b> , to catch accidental spills, for use with universal platform M1250-9920	M1250-9921	285.00

## New Brunswick™ Innova® 2350



### Ordering information

Description	Catalog No.	List USD
<b>New Brunswick™ Innova® 2350</b> , platform sold separately		
120 V/60 Hz, orbit diameter 1 in (2.5 cm)	M1191-0010	\$7,600.00
120 V/60 Hz, orbit diameter 2 in (5.1 cm)	M1191-0030	7,970.00
<b>Interchangeable platforms for Innova® 2350</b> , 36 × 24 in, marine plywood unless otherwise noted		
Universal platform	PTL-386	1,220.00
Universal platform, aluminum	PTL-393	755.00
125 mL Erlenmeyer flask dedicated platform	M1191-9912	2,040.00
250 mL Erlenmeyer flask dedicated platform	M1191-9913	2,000.00
500 mL Erlenmeyer flask dedicated platform	M1191-9914	1,785.00
<b>Utility tray</b> , with non-skid rubber surface	AG-21-00	1,095.00
<b>Temperature and speed monitoring kit</b> , for recording on an external chart recorder for Innova® 2100/2150/2300/2350		
	M1194-9924	1,210.00

## New Brunswick™ Innova® 5050/5051 Racking Systems



### Description

Save space by stacking Innova 2300 open air shakers. Model 5050 consists of a sturdy, stainless-steel rack to hold up to 4 Innova 2300 shakers. Innova 5051 rack extension can be added to support an additional 4 shakers, bringing the total number to 8 Innova 2300 shakers.

### Product features

- > Includes electrical strip to power multiple shakers
- > Maximum speed 400 rpm for 1 in (2.5 cm) orbits and 300 rpm for 2 in (5.1 cm) orbits
- > Larger flasks can be accommodated by removing adjustable-height shelves
- > Comes pre-assembled

### Ordering information

Description	Catalog No.	List USD
New Brunswick™ Innova® 5050 Rack System, 120 V/60 Hz	M1232-0100	\$6,420.00
New Brunswick™ Innova® 5051 Rack Extension, 120 V/60 Hz	M1232-0110	4,150.00

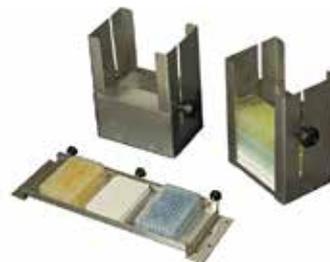
## Clamps and Accessories for Universal Platforms



Dedicated platforms come with clamps of one size pre-installed.



Flask clamps are made of one-piece stainless steel and are fitted with springs for stability at high speeds.



Microplate racks and carriers mount to any universal platform to secure microplates. Versions available for stacking or laying plates flat.



Small, medium and large test tube racks.



Utility carrier secures vessels between adjustable, cushioned rods.



Universal platform shown with accessory clamps, test tube racks and sticky tape.

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Utility trays provide a non-slip surface for low-speed applications.



Sticky pad (shown) and sticky tape replace clamps for speeds up to 250 rpm. Sticky pad requires an anodized aluminum surface.

### Accessories

Description	Catalog No.	List USD
<b>Test tube rack, small, 11.8 x 3.2 x 5 in</b>		
diameter 8 – 11 mm, 48 tubes	M1289-0001	\$350.00
diameter 12 – 15 mm, 34 tubes	M1289-0002	350.00
diameter 15 – 18 mm, 24 tubes	M1289-0003	350.00
diameter 18 – 21 mm, 18 tubes	M1289-0004	350.00
diameter 22 – 26 mm, 13 tubes	M1289-0005	350.00
diameter 26 – 30 mm, 12 tubes	M1289-0006	350.00
<b>Test tube rack, medium, 14.2 x 3.2 x 5 in</b>		
diameter 8 – 11 mm, 60 tubes	M1289-0010	350.00
diameter 12 – 15 mm, 44 tubes	M1289-0020	350.00
diameter 15 – 18 mm, 31 tubes	M1289-0030	350.00
diameter 18 – 21 mm, 23 tubes	M1289-0040	350.00
diameter 22 – 26 mm, 16 tubes	M1289-0050	350.00
diameter 26 – 30 mm, 16 tubes	M1289-0060	350.00
<b>Test tube rack, large, 17.7 x 3.2 x 5 in</b>		
diameter 8 – 11 mm, 80 tubes	M1289-0100	350.00
diameter 12 – 15 mm, 60 tubes	M1289-0200	350.00
diameter 15 – 18 mm, 42 tubes	M1289-0300	350.00
diameter 18 – 21 mm, 30 tubes	M1289-0400	350.00
diameter 22 – 26 mm, 22 tubes	M1289-0500	350.00
diameter 26 – 30 mm, 20 tubes	M1289-0600	350.00
<b>Clamp, for 1 L media bottles</b>	ACSB-1000S	106.00
<b>Clamp, for 500 mL media bottles</b>	ACSB-500S	106.00
<b>Angled test tube rack holder, for user-supplied test tube racks and microplates</b>	TTR-210	355.00
<b>Spacer bar for TTR-210</b>	TTR-215	110.00
<b>Microplate rack, single layer, for single layer of five plates</b>	TTR-221	355.00
<b>Microplate rack, stack, stack three deepwell or nine standard plates</b>	M1289-0700	350.00
<b>Sticky pad adaptor kit, 2 anodized aluminum sheets, each 6 x 18 in (15.2 x 45.7 cm)</b>	M1250-9504	200.00
<b>Sticky tape, 16.4 feet x 1.6 in (500 x 4.1 cm) roll</b>	M1250-9600	300.00
<b>Sticky pad, 8 x 8 in (20 x 20 cm)</b>	M1250-9700	85.00
<b>Drip pan, for universal platform M1250-9902</b>	M1250-9906	230.00
<b>Drip pan, to catch accidental spills, for use with universal platform M1250-9920</b>	M1250-9921	285.00

# Universal Platforms and Clamps for Incubated Shakers

Universal Platforms and Clamps for Incubated Shakers				
	Innova® 40/40R	Innova® 42/42R	Innova® 43/43R	Innova® 44/44R
	M1250-9902	M1250-9902	M1250-9920	M1282-9904
10 mL Erlenmeyer flasks	109	109	183	187
25 mL Erlenmeyer flasks	64	64	92	93
50 mL Erlenmeyer flasks	45	45	92	91
125 mL Erlenmeyer flasks	21	21	39	39
250 mL Erlenmeyer flasks	18	18	30	30
500 mL Erlenmeyer flasks	14	14	18	24
1 L Erlenmeyer flasks	8	8	12	14
2 L Erlenmeyer flasks	5	5	8	8
500 mL media bottle flask	9	9	19	18
1 L media bottle flask	8	8	13	13
2 L Lauber Thompson	5	5	8	8
2.8 L Fernbach flasks	4	4	6	6
3 L Erlenmeyer flasks	4	4	6	6
4 L Erlenmeyer flasks		4	6	6
5 L Erlenmeyer flasks			6	6
6 L Erlenmeyer flasks			4	
Microplate rack, single layer	5	2	4	4
Microplate rack, stack	8	8	16	16
Test tube rack, small, 30.0 x 8.0 x 12.9 cm	5	5	9	9
Test tube rack, medium, 36 x 8 x 12.9 cm	5	5	9	9
Test tube rack, large, 45 x 8 x 12.9 cm	4	4	7	7
Platform size	18 x 18 in (46 x 46 cm)	18 x 18 in (46 x 46 cm)	30 x 18 in (76 x 46 cm)	30 x 18 in (76 x 46 cm)

Dedicated Platforms and Clamps for Incubated Shakers						
	Innova® 40/40R		Innova® 42/42R		Innova® 43/43R	
	Clamps	Catalog No.	Clamps	Catalog No.	Clamps	Catalog No.
50 mL Erlenmeyer flasks	64	M1194-9903	64	M1194-9903	108	M1191-9908
125 mL Erlenmeyer flasks	34	M1194-9904	34	M1194-9904	60	M1191-9909
250 mL Erlenmeyer flasks	25	M1194-9905	25	M1194-9905	40	M1191-9910
500 mL Erlenmeyer flasks	16	M1194-9906	16	M1194-9906	24	M1191-9911
1 L Erlenmeyer flasks	9	M1194-9907	9	M1194-9907	15	AG-1
2 L Erlenmeyer flasks	5	M1194-9908	5	M1194-9908	12	AG-2
2.8 L Fernbach flasks	4	M1233-9932	4	M1233-9932	6	AG-28
4 L Erlenmeyer flasks			4	M1233-9930	6	AG-4
6 L Erlenmeyer flasks					4	AG-6
Sticky platform		M1250-9903		M1250-9903		M1250-9904
Platform size	18 x 18 in (46 x 46 cm)		18 x 18 in (46 x 46 cm)		30 x 18 in (76 x 46 cm)	

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



	Innova® S44i M1250-9920	Excella® E24/E24R M1250-9902	Excella® E25/E25R M1250-9920	Clamp Catalog No.	Clamp Dimensions (W x H)	List USD
10 mL Erlenmeyer flasks	238	109	183	ACE-10S	31 x 26 mm	\$ 20.00
25 mL Erlenmeyer flasks	238	64	92	M1190-9004	38 x 21 mm	21.00
50 mL Erlenmeyer flasks	130	45	92	M1190-9000	51 x 26 mm	22.00
125 mL Erlenmeyer flasks	81	21	39	M1190-9001	66 x 36 mm	23.00
250 mL Erlenmeyer flasks	49	18	30	M1190-9002	79 x 48 mm	34.00
500 mL Erlenmeyer flasks	36	14	18	M1190-9003	100 x 52 mm	40.00
1 L Erlenmeyer flasks	20	8	12	ACE-1000S	120 x 63 mm	50.00
2 L Erlenmeyer flasks	13	5	8	ACE-2000S	152 x 71 mm	74.00
500 mL media bottle flask	20	9	19	ACSB-500S	110 x 108 mm	106.00
1 L media bottle flask	20	8	13	ACSB-1000S	129 x 146 mm	106.00
2 L Lauber Thompson	13	5	8	M1190-9005	168 x 112 mm	97.00
2.8 L Fernbach flasks	8	4	6	ACFE-2800S	198 x 66 mm	99.00
3 L Erlenmeyer flasks	8	4	6	ACE-3000S	189 x 128 mm	87.00
4 L Erlenmeyer flasks	8		6	ACE-4000S	196 x 95 mm	86.00
5 L Erlenmeyer flasks	6		6	ACE-5000S	222 x 145 mm	96.00
6 L Erlenmeyer flasks			4	ACE-6000S	225 x 96 mm	108.00
Microplate rack, single layer	4	5	4	TTR-221		355.00
Microplate rack, stack	20	8	16	M1289-0700		350.00
Test tube rack, small, 30.0 x 8.0 x 12.9 cm	12	5	9	see page 335		
Test tube rack, medium, 36 x 8 x 12.9 cm	10	5	9	see page 335		
Test tube rack, large, 45 x 8 x 12.9 cm	8	4	7	see page 335		
Platform size	30 x 24 in (76 x 62 cm)	18 x 18 in (46 x 46 cm)	30 x 18 in (76 x 46 cm)			

Innova® 44/44R		Innova® S44i		Excella® E24/E24R		Excella® E25/E25R	
Clamps	Catalog No.						
				64	M1194-9903	108	M1191-9908
60	M1282-9905	86	S44I040002	34	M1194-9904	60	M1191-9909
40	M1282-9906	53	S44I040003	25	M1194-9905	40	M1191-9910
24	M1282-9907	39	S44I040004	16	M1194-9906	24	M1191-9911
15	M1282-9908	23	S44I040005	9	M1194-9907	15	AG-1
12	M1282-9909	15	S44I040006	5	M1194-9908	12	AG-2
6	M1282-9910	8	S44I040007	4	M1233-9932	6	AG-28
6	M1282-9911	8	S44I040008			6	AG-4
						4	AG-6
	M1282-9913				M1250-9903		M1250-9904
30 x 18 in (76 x 46 cm)		30 x 24 in (76 x 62 cm)		18 x 18 in (46 x 46 cm)		30 x 18 in (76 x 46 cm)	

# Universal Platforms and Clamps for Innova® Open Air Shakers

Universal Platforms and Clamps for Innova® Open Air Shakers				
	Innova® 2000	Innova® 2050	Innova® 2100	Innova® 2150
	M1001-0240	M1190-9900	M1250-9902	M1194-9912
10 mL Erlenmeyer flasks	60	86	109	
25 mL Erlenmeyer flasks	20	32	64	
50 mL Erlenmeyer flasks	15	32	45	63
125 mL Erlenmeyer flasks	11	16	21	35
250 mL Erlenmeyer flasks	6	10	18	24
500 mL Erlenmeyer flasks	4	8	14	20
1 L Erlenmeyer flasks			8	12
2 L Erlenmeyer flasks			5	6
500 mL media bottle flask	4	6	9	15
1 L media bottle flask	2	4	8	11
2 L Lauber Thompson			4	5
2.8 L Fernbach flasks			4	5
3 L Erlenmeyer flasks			4	5
4 L Erlenmeyer flasks			4	5
5 L Erlenmeyer flasks			4	4
6 L Erlenmeyer flasks			2	3
Microplate rack, stack	3	8	8	16
Microplate rack, single layer		2	2	4
Test tube rack, small, 30.0 x 8.0 x 12.9 cm	3	4	5	9
Test tube rack, medium, 36 x 8 x 12.9 cm		3	5	9
Test tube rack, large, 45 x 8 x 12.9 cm			4	7
Platform size	13 x 11 in (33 x 28 cm)	16 x 12 in (41 x 31 cm)	18 x 18 in (46 x 46 cm)	24 x 18 in (61 x 46 cm)

## Dedicated Platforms and Clamps for Innova Open Air Shakers

	Innova® 2000		Innova® 2050		Innova® 2100	
	Clamps	Catalog No.	Clamps	Catalog No.	Clamps	Catalog No.
10 mL Erlenmeyer flasks	60	AG2-10	86	M1190-9901		
25 mL Erlenmeyer flasks	32	M1190-9919	48	M1190-9902		
50 mL Erlenmeyer flasks	20	M1190-9915	35	M1190-9903	64	M1194-9903
125 mL Erlenmeyer flasks	12	M1190-9916	20	M1190-9904	34	M1194-9904
250 mL Erlenmeyer flasks	8	M1190-9917	12	M1190-9905	25	M1194-9905
500 mL Erlenmeyer flasks	6	M1190-9918	8	M1190-9906	16	M1194-9906
1 L Erlenmeyer flasks			6	M1190-9911	9	M1194-9907
2 L Erlenmeyer flasks					5	M1194-9908
2.8 L Fernbach flasks						M1233-9932
4 L Erlenmeyer flasks						
6 L Erlenmeyer flasks						
Sticky platform		M1190-0300				M1250-9903
Platform size		13 x 11 in (33 x 28 cm)		13 x 11 in (33 x 28 cm)		18 x 18 in (46 x 46 cm)

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



	Innova® 2300	Innova® 2350	Clamp	Clamp	
	M1250-9920	PTL-386	Catalog No.	Dimensions (W x H)	List USD
10 mL Erlenmeyer flasks	183		ACE-10S	31 x 26 mm	\$ 20.00
25 mL Erlenmeyer flasks	92		M1190-9004	38 x 21 mm	21.00
50 mL Erlenmeyer flasks	92		M1190-9000	51 x 26 mm	22.00
125 mL Erlenmeyer flasks	39	75	M1190-9001	66 x 36 mm	23.00
250 mL Erlenmeyer flasks	30	50	M1190-9002	79 x 48 mm	34.00
500 mL Erlenmeyer flasks	18	30	M1190-9003	100 x 52 mm	40.00
1 L Erlenmeyer flasks	12	24	ACE-1000S	120 x 63 mm	50.00
2 L Erlenmeyer flasks	8	15	ACE-2000S	152 x 71 mm	74.00
500 mL media bottle flask	19	35	ACSB-500S	110 x 108 mm	106.00
1 L media bottle flask	13	23	ACSB-1000S	129 x 146 mm	106.00
2 L Lauber Thompson	6	12	M1190-9005	168 x 112 mm	97.00
2.8 L Fernbach flasks	6	12	ACFE-2800S	198 x 66 mm	99.00
3 L Erlenmeyer flasks	6	11	ACE-3000S	189 x 128 mm	87.00
4 L Erlenmeyer flasks	6	11	ACE-4000S	196 x 95 mm	86.00
5 L Erlenmeyer flasks	6	8	ACE-5000S	222 x 145 mm	96.00
6 L Erlenmeyer flasks	4	7	ACE-6000S	225 x 96 mm	108.00
Microplate rack, stack	16	16	M1289-0700		350.00
Microplate rack, single layer	4	4	TTR-221		355.00
Test tube rack, small, 30.0 x 8.0 x 12.9 cm	9	18	see page 335		
Test tube rack, medium, 36 x 8 x 12.9 cm	9	13	see page 335		
Test tube rack, large, 45 x 8 x 12.9 cm	7	12	see page 335		
Platform size	30 x 18 in (76 x 46 cm)	36 x 24 in (91 x 62 cm)			

Innova® 2150		Innova® 2300		Innova® 2350	
Clamps	Catalog No.	Clamps	Catalog No.	Clamps	Catalog No.
80	M1194-9915	108	M1191-9908		
48	M1194-9916	60	M1191-9909	96	M1191-9912
35	M1194-9917	40	M1191-9910	70	M1191-9913
20	M1194-9918	24	M1191-9911	40	M1191-9914
12	M1194-9919	15	AG-1		
8	M1194-9920	12	AG-2		
		6	AG-28		
		6	AG-4		
		4	AG-6		
			M1250-9904		
	24 x 18 in (61 x 46 cm)		30 x 18 in (76 x 46 cm)		36 x 24 in (91 x 62 cm)

# Eppendorf Eporator®

## Description

The Eppendorf Eporator is a compact instrument designed for fast and controlled electroporation of bacteria, yeasts and other microorganisms. The instrument features an intuitive operation and user-friendly programming of standard methods. Experimental data can easily be exported and documented using its USB port.



## Product features

- > Faster sample handling – simple one-button operation
- > Maximum safety via integrated cuvette holder
- > Self-explanatory operation guided by display indicators
- > Fast, freely programmable softkeys for saving and accessing the 2 most frequently used parameter settings
- > Compact, space-saving design
- > USB interface for data transfer and GLP supporting documentation

## Applications

- > Transformation of bacteria, yeast or microorganisms with an optimal transformation efficiency of approx. 5 ms time constant
- > Mainly for delivery of plasmid DNA, but also RNA, proteins and other small molecules

### Technical specifications

<b>Model</b>	<b>Eporator</b>
<b>Interfaces</b>	USB 2.0
<b>Dimensions (W × D × H)</b>	19 × 27.5 × 12.5 cm
<b>Weight w/o accessories</b>	3.2 kg
<b>Capacitor</b>	10 µF
<b>Pulse form</b>	Exponentially decreasing
<b>Pulse voltage</b>	200 – 2500 V
<b>Resistance</b>	600 Ohm
<b>Special features</b>	Electronic protective circuit to prevent arcs
<b>Time constant</b>	Nominal 5 ms

### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Eporator®</b> , for bacteria and yeasts, 120 V/50 – 60 Hz	4309000027	\$2,619.00
<b>Eppendorf Cuvette Rack</b> , 36 positions, for glass and plastic cuvettes, 2 pcs., polypropylene, numbered positions, autoclavable	0030119851	53.00



# Eppendorf TransferMan® 4r

## Description

The user-friendly TransferMan 4r possesses an ergonomic and innovative design to meet the most demanding micromanipulation requirements. Smart functions, such as improved automated home function and position storage, enable simple and fast execution of even the most complex micromanipulation techniques. The DualSpeed™ joystick allows for precise and intuitive movement in all three dimensions, and dynamic movement for covering longer distances. It is ideal for manipulation of oocytes and early embryos, transfer of stem cells and microparticles, and a wide range of applications in non human reproductive biology. Application-specific user profiles simplify the individual workflow process with four pre-defined application masks to choose from (e.g., for cell transfer, DNA injection, etc). The freely programmable “My app” mask can be optimized according to individual needs. The TransferMan 4r is for research use only.



## Applications

- > Micromanipulation of oocytes and early embryos
- > ES and iPS cell transfer
- > Nuclear transfer
- > Pronuclear and cytoplasmic injection (e.g., CRISPR/Cas, TALEN)
- > Selection of individual cells (e.g., biopsies, single cell picking)
- > Positioning and selection of microparticles
- > Microdissection of chromosomes, etc.
- > Microinjection into 3D organoids

## Product features

- > Unique DualSpeed joystick for precise and instantaneous movement control
- > Maximum stability ensures vibration-free work
- > One Joystick for all 3 axes (X, Y, Z) movements and in axial direction (X/Z)
- > Angle adjustment from 0° to 90°
- > One-hand operation for capillary and angle settings
- > Programmable Z-axis limit for preventing capillary breakage
- > Connection with Eppendorf PiezoXpert® and electronic microinjectors FemtoJet® 4i/4x
- > Can be adapted to all conventional microscopes
- > PC interface for remote control

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf TransferMan® 4r</b> , micromanipulator with DualSpeed™ joystick for direct and dynamic movement control, 100 – 240 V/50 – 60 Hz (US/JP), (for research use only)	5193000020	\$18,981.00
<b>Eppendorf TransferMan® 4m</b> , micromanipulator with DualSpeed™ joystick for direct and dynamic movement control, 100 – 240 V/50 – 60 Hz (US/JP), the TransferMan® 4m is classified in the United States as an assisted reproduction micromanipulator and microinjector medical device under 21 CFR 884.6150	5191000023	20,097.00

# Eppendorf InjectMan® 4

## Description

The InjectMan 4 is ideal for microinjection into adherent cells, smaller organisms and embryos in the early stages of development. In combination with the FemtoJet 4i or 4x, it enables fast semi-automatic injection. Furthermore, the InjectMan 4 is the ideal micromanipulator for all complex applications that require a dynamic movement mode and direct control of the injection process via the joystick button. The axial injection movement (X/Z direction) helps to minimize mechanical stress to the cells upon injection. The high penetration speed makes injection into rigid structures easier than ever. The new user interface with four pre-defined application masks facilitates the individual workflow process (e.g., for adherent cell injection, serial microinjection into fish larvae, etc.). The freely programmable „My app“ mask can be optimized for individual needs. Due to its exceptional precision and position stability, the InjectMan 4 is highly suited for applications such as patch clamp. The motor modules can be uncoupled electronically to prevent accidental movement of the micropipette. The InjectMan 4 is for research use only.



## Applications

- > Semi-automatic microinjection into adherent cells
- > Serial microinjection into fish larvae, frog eggs, insect embryos, etc.
- > Injection into living plant cells, *C. elegans* and other roundworms and flatworms
- > Automatic dispensing of cell suspensions or solutions
- > Stable, drift-free positioning, e.g. for electrophysiology techniques

## Product features

- > Maximum stability ensures drift-free work
- > Electronic coupling to FemtoJet microinjectors for fast serial semi-automatic injections with highest reproducibility
- > Selection and programming of advanced functions (e.g. axial movement, step injection)
- > Ergonomically shaped control panel for fatigue-free work
- > Easy and precise angle adjustment
- > Connection with Eppendorf PiezoXpert for piezo-assisted penetration over a pre-defined distance
- > Can be adapted to all conventional microscopes
- > PC interface for remote control

## Ordering information

Description	Catalog No.	List USD
Eppendorf InjectMan® 4, micromanipulator with dynamic movement control, 100 – 240 V/50 – 60 Hz (US/JP), (for research use only)	5192000027	\$18,372.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Technical specifications		
Model	InjectMan 4	TransferMan® 4r
<b>Motor module set</b>		
<b>Max. traveling distance</b>	≥20 mm in X, Y, Z and X/Z direction	≥20 mm in X, Y, Z and X/Z direction
<b>Weight (complete)</b>	2.15 kg	2.15 kg
<b>Stepper motor</b>	X-, Y-, Z-module	X-, Y-, Z-module
<b>Single module (X, Y, Z)</b>		
<b>Step size</b>	<20 nm (computational resolution)	<20 nm (computational resolution)
<b>Speed</b>	0 – 10,000 µm/s	0 – 10,000 µm/s
<b>Mechanical adjustability</b>	>80 mm	>80 mm
<b>Dimensions</b>	129 × 51 × 36 mm	129 × 51 × 36 mm
<b>Weight</b>	570 g	570 g
<b>Swivel joint</b>		
<b>Direction of rotation</b>	-45° to +90°	-45° to +90°
<b>Capillary exchange</b>	Direction of rotation: forward	Direction of rotation: forward
<b>Sample replacement</b>	Direction of rotation: backward	Direction of rotation: backward
<b>Angle head</b>		
<b>Operating angle</b>	0° – 90°	0° – 90°
<b>Control board</b>		
<b>Control</b>	Joystick (dynamic kinetics)	Joystick (proportional and dynamic kinetics)
<b>Speed modes</b>	coarse, fine, x-fine	coarse, fine, x-fine
<b>External Device/PC</b>	Serial interface SUBD9, male	Serial interface SUBD9, male
<b>Dimensions (W x H x D)</b>	205 × 288 × 152 mm	205 × 288 × 152 mm
<b>Weight</b>	1.8 kg	1.8 kg

#### Accessories

Description	Catalog No.	List USD
<b>Positioning aid, pack of 2</b> , for mounting and re-positioning universal capillary holder and the capillary holder 4 on TransferMan® 4r and InjectMan® 4	5192072001	\$121.00
<b>Spare parts kit</b>	5192071005	124.00
<b>Headstage holder</b>	5192073008	133.00
<b>Y-cable PX</b> , Y-cable for connecting Eppendorf PiezoXpert® or a PC with TransferMan® 4r or InjectMan® 4 and FemtoJet® 4i/4x	5192081000	160.00
<b>Connection cable</b> , for connecting TransferMan® 4r/InjectMan® 4 to FemtoJet® 4i/4x	5192082007	96.00
<b>Connection cable</b> , for connecting Eppendorf micromanipulators with PC or Eppendorf PiezoXpert®	5181150094	217.00
<b>Y-cable FJ4</b> , Y-cable for connecting FemtoJet® 4i/4x with a PC and TransferMan® 4r or InjectMan® 4	5192080004	160.00

# Microscope Adapters for Micromanipulation Systems



## Description

Eppendorf microscope adapters enable the simple installation of the TransferMan® 4r or InjectMan® 4 on all conventional inverted microscopes manufactured by Leica®, Nikon®, Olympus® and Zeiss®.



## Description

The Universal Stand can be used for mounting the TransferMan 4 and InjectMan 4 micromanipulators on upright microscopes and stereo microscopes independent of the microscope tripod used. With its magnetic foot the Universal stand can be firmly fixed to any ferromagnetic base (plate or table).



Compatible to all major microscope brands

## Ordering information

Description	Catalog No.	List USD
<b>Adapter Leica® 1</b> , for Eppendorf micromanipulation systems, for Leica® DMi8, DMi3000 B, 3000 M, 4000 B, 5B36:F46000 B, 5000 M, 6000 B, DM IRB E, HC and DM IRE 2 microscopes	5192301000	\$ 828.00
<b>Adapter Leica® 2</b> , for Eppendorf micromanipulation systems, for Leica® DM IL LED and HC microscopes	5192302007	828.00
<b>Adapter Nikon® 1</b> , for Eppendorf micromanipulation systems, for Nikon® Eclipse® Diaphot 200, 300 and Eclipse® Ti-E, Ti-U, Ti-S, TE200, TE300, TE2000 microscopes	5192316008	965.00
<b>Adapter Nikon® 2</b> , for Eppendorf micromanipulation systems, for Nikon® Eclipse® Ts2R microscope	5192317004	1,012.00
<b>Adapter Nikon® 3</b> , for Eppendorf micromanipulation systems, for Nikon® Eclipse Ti2-E/-A/-U microscopes	5192318000	828.00
<b>Adapter Olympus® 1</b> , for Eppendorf micromanipulation systems, for Olympus® IX50, IX51, IX70, IX71, IX80 and IX81 microscopes	5192306002	828.00
<b>Adapter Olympus® 2</b> , for Eppendorf micromanipulation systems, for microscopes of Olympus® IX3 series with illumination column IX3-ILL	5192307009	828.00
<b>Adapter Olympus® 3</b> , for Eppendorf micromanipulation systems, for microscopes of Olympus® IX3 series with illumination IX2-ILL30	5192308005	828.00
<b>Adapter Zeiss® 1</b> , for Eppendorf micromanipulation systems, for Zeiss® Axiovert® 200, Axio Observer A1, D1, Z1 and Axio Observer 3, 5 and 7 microscopes	5192311006	828.00
<b>Adapter Zeiss® 2</b> , for Eppendorf micromanipulation systems, for Zeiss® Axio Vert.A1 microscope	5192312002	965.00
<b>Universal stand</b> , for mounting Eppendorf micromanipulators on upright microscopes and stereo microscopes independent of the microscope tripod used	5192325007	1,005.00



# Antivibration Pad

## Description

The antivibration pads are specifically designed to effectively protect your micromanipulation system against external vibrations. The pads are simply positioned directly under the base points of your microscope. Five different formats are available, from XS to XL. The various pads are optimized for specific weight ranges to guarantee optimal results. A selection of pads specifically chosen for each microscope ensures effective protection for your sample.

## Product features

- > Effectively protects micromanipulation workstations from external vibrations
- > Five different formats available
- > Different formats can be combined for optimal adjustment



## Ordering information

Description	Catalog No.	List USD
Antivibration Pad XS, weight range 4.5 – 6.0 kg	920007945	\$599.00
Antivibration Pad S, weight range 6.0 – 8.0 kg	920007953	599.00
Antivibration Pad M, weight range 8.0 – 10.0 kg	920007961	599.00
Antivibration Pad L, weight range 10.0 – 12.5 kg	920007970	599.00
Antivibration Pad XL, weight range 12.5 – 16.5 kg	920007988	599.00

- i** It is important to take into account the total weight of your microscope, including the mounted accessories, and the load distribution of the individual contact points.



# Eppendorf PiezoXpert®

## Description

The Eppendorf PiezoXpert allows for piezo-assisted micromanipulation, enabling simple penetration of cells for microinjection or micromanipulation. Perforation of the cell membrane is supported by piezo impulses which are directly transferred to the capillary without any loss of intensity. Piezo-assisted micromanipulation improves the results of a variety of applications including transfer of embryonic or induced pluripotent stem cells into blastocysts and morulae, injection into mammalian oocytes and zygotes, and enucleation/nuclear transfer. The Eppendorf PiezoXpert forms the perfect system with Eppendorf micromanipulators, but it integrates just as easily into non-Eppendorf micromanipulation systems. The Eppendorf PiezoXpert is for research use only.



## Product features

- > Fast and simple sample processing due to intuitive operation
- > Reproducible parameter setting
- > Program keys to save your experimental parameters
- > Trigger impulses with an ergonomic foot control or rotary knobs right on the device
- > Optical feedback of triggered impulses
- > Additional „Clean“ function for simple removal of contamination on the outside of the capillary

## Applications

- > Transfer of embryonic or induced pluripotent stem cells into blastocysts or morulae
- > ICSI (Intracytoplasmic Sperm Injection) in mouse, equine, porcine etc.
- > Enucleation/nuclear transfer
- > Blastomere biopsy from mouse embryos
- > Biopsy of equine embryos for Preimplantation Genetic Diagnosis
- > RNA/DNA injection into fertilized oocytes of mammals

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)



Technical specifications	
<b>Model</b>	<b>PiezoXpert</b>
<b>Interfaces</b>	USB (for technical service), RS-232 (connection to foot control)
<b>Power supply</b>	100 – 240 V, 50 – 60 Hz
<b>Max. power consumption</b>	18 W
<b>Dimensions (W × D × H)</b>	17 × 23 × 11.5 cm
<b>Weight w/o accessories</b>	2.8 kg
<b>Piezo impulse</b>	
<b>Intensity (of piezo impulses)</b>	1 – 86 (1 – 22 adjustable in increments of 1, 22 – 86 adjustable in increments of 4)
<b>Number (number of piezo impulses)</b>	1 – 10, ∞ (1 – 10 adjustable in increments of 1)
<b>Speed (frequency of piezo impulses/sec)</b>	1 – 40 (1 – 40 adjustable in increments of 1, 1 – 10: 1 Hz per increment, 10 – 20: 2 Hz per increment, 20 – 34: 5 Hz per increment, 34 – 40: 25 Hz per increment)
<b>Clean function</b>	
<b>Intensity (of piezo impulses)</b>	1 – 86 (1 – 22 adjustable in increments of 1, 22 – 86 adjustable in increments of 4)
<b>Speed (frequency of piezo impulses/sec)</b>	1 – 40 (1 – 40 adjustable in increments of 1, 1 – 10: 1 Hz per increment, 10 – 20: 2 Hz per increment, 20 – 34: 5 Hz per increment, 34 – 40: 25 Hz per increment)

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf PiezoXpert®</b> , for piezo-assisted micromanipulation, incl. actuator 2, foot control and spacer plate and grip head 4 size 0, 100 – 240 V/50 – 60 Hz	5194000024	\$14,515.00
<b>Actuator 2</b> , for piezo-assisted micromanipulation, as accessory for the Eppendorf PiezoXpert	5194075156	2,518.00
<b>Grip head set 4 size 0</b> , for microcapillaries with outer diameter 1.0 to 1.1 mm	5196082001	55.42
<b>Grip head set 4 size 1</b> , for microcapillaries with outer diameter 1.2 to 1.3 mm	5196083008	55.42
<b>Grip head set 4 size 2</b> , for microcapillaries with outer diameter 1.4 to 1.5 mm	5196084004	55.42
<b>Grip head set 4 size 3</b> , for microcapillaries with outer diameter 0.7 to 0.9 mm	5196085000	55.42
<b>Tube adapter</b> , pack of 2, for connecting tubes with an outer diameter of 2 mm or 3 mm with the capillary holder and the capillary holder 4	5194075407	74.00
<b>Piezo Drill Tip Mouse ICSI</b> , for piezo-assisted mouse ICSI, 25° tip angle, 6 µm inner diameter, 6 mm flange, sterile, set of 25, For research use only.	930001091	533.00
<b>Piezo Drill Tip ES</b> , for piezo-assisted mouse ES cell transfer, 25° tip angle, 15 µm inner diameter, 6 mm flange, sterile, set of 25, For research use only.	930001104	533.00

## NEW - CellTram<sup>®</sup> 4r Air/Oil

### Description

The CellTram 4r Air and CellTram 4r Oil are manual microinjectors suitable for a broad range of life science applications. The CellTram 4r Air is a pneumatic injector for oil-free micromanipulation and gentle holding of cells in suspension. Due to its excellent performance, it is also highly suitable for uptake and injection of cells (e.g., of sperm or ES cells). For this application, its performance is comparable to that of oil-filled injectors. The CellTram 4r Oil is a hydraulic, oil-filled microinjector that provides more direct sample control and can generate higher pressures than an air system. It is optimized for leakage-free work and easy oil filling. Both models can be used with all common micromanipulation systems yet they develop their full potential with Eppendorf manipulators. The CellTram 4r Air/Oil injectors are for research use only.



1. Non-hydraulic system for oil-free manipulation and injection of cells (CellTram 4r Air)
2. Piston position scale enables setting of air volume and injection characteristics according to individual needs (CellTram 4r Air)
3. Improved oil-filling system for quick and clean re-filling (CellTram 4r Oil)
4. Coarse and fine drive for precise and intuitive sample control
5. Improved rotary knob design for better handling and easier cleaning
6. Capillary holder 4 with markings for easier positioning
7. New grip head 4 system for simple capillary change and higher user safety
8. Position indicators and marking for in/out to reduce risk of user errors
9. Stable, nonslip base plate
10. Highly reliable performance with minimal maintenance

**i** For more information go to [www.eppendorf.com](http://www.eppendorf.com)

Product appearance, specifications, and/or prices are subject to change without notice.



Piston position scale indicates instrument status and allows for setting pressure characteristics according to individual needs



The new oil-filling system helps avoid oil-spilling and facilitates the filling process

### Applications

- > Mouse ICSI
- > Large mammal ICSI (e.g., equine, porcine...)
- > Piezo-assisted micromanipulation in combination with the Eppendorf PiezoXpert®
- > Transfer of cells or organelles (e.g., ES cell or iPS cell transfer into blastocysts or morulae)
- > Enucleation/nuclear transfer
- > (Xeno)transplantations
- > Removal of cells (e.g., for polar body biopsy, blastomere biopsy or trophectoderm biopsy)
- > Manual microinjection and dispensing of aqueous solutions

Technical specifications		
Model	CellTram 4r Air	CellTram 4r Oil
Cylinder volume	10 mL	1,000 µL
Max. pressure	3,000 hPa	20,000 hPa
Min. adjustable volume	< 100 nL	< 1.5 nL
Pressure generation	Cylinder/piston system, air-filled	Cylinder/piston system, oil-filled
Volume change per revolution	60 µL/600 µL (fine/ coarse rotary knob)	1 µL/10 µL (fine/ coarse rotary knob)

### Ordering information

Description	Catalog No.	List USD
CellTram® 4r Air, manual pneumatic microinjector, with gears 1:1 and 1:10, for holding and injection	5196000013	\$2,264.00
CellTram® 4r Oil, manual hydraulic microinjector, with gears 1:1 and 1:10, for holding and injection	5196000030	3,247.00
Capillary holder 4, for mounting microcapillaries, Femtotips, Femtotip II or grip head 4 (incl. Grip head 4 size 0 and adapter for Femtotips)	5196081005	273.00
Capillary holder 4 slim shape, for flat angle injections, for microcapillaries with outer diameter 1.0 mm	5196062000	278.00
Filling and Cleaning set, incl. filling tube, Luer lock adapter, 2 syringes for CellTram 4	5196088000	91.00
Grip head set 4 size 0, for microcapillaries with outer diameter 1.0 to 1.1 mm	5196082001	56.00
Grip head set 4 size 1, for microcapillaries with outer diameter 1.2 to 1.3 mm	5196083008	56.00
Grip head set 4 size 2, for microcapillaries with outer diameter 1.4 to 1.5 mm	5196084004	56.00
Grip head set 4 size 3, for microcapillaries with outer diameter 0.7 to 0.9 mm	5196085000	56.00
Injection tube Air, white ring mark, I.D. 0.5 mm, length 1.3 mm	5196061004	84.00
Injection tube Oil, blue ring mark, I.D. 1.0 mm, length 1.3 mm	5196089006	84.00
O-ring set 4, incl. 10 o-rings large, 10 o-rings small, 2 distance sleeves, o-ring removal tool for grip head set 4	5196086007	56.00

# FemtoJet® 4i and FemtoJet® 4x

## Description

Eppendorf's electronic microinjectors FemtoJet® 4i and FemtoJet® 4x with their simple operation menu and a range of functionalities are perfectly suited for injecting small to intermediate volumes. With a built-in compressor, the FemtoJet 4i is the tool of choice for injecting aqueous solutions into adherent cells and suspension cells. If your research demands injecting volumes greater than 100 pL and/or longer series at higher pressures, FemtoJet 4x with its external pressure supply (not included) delivers the precise and continuous pressure required. Featuring the same quality design and compatibility features as the FemtoJet 4i, the FemtoJet 4x is the „heavy duty“ device for those more demanding applications. Both the FemtoJet 4i and FemtoJet 4x, form the perfect system with Eppendorf micromanipulators, yet they integrate just as easily with non-Eppendorf micromanipulation systems. The electronic connection between FemtoJet 4i or 4x and TransferMan® 4r or InjectMan® 4 guarantees simple, rapid and reproducible microinjections into cells, simplifying your daily work and speeding up your workflow. The FemtoJet 4i/ 4x injectors are for research use only.



## Product features

- > Very simple and clearly arranged operation for routine tasks
- > Injection volume ranges from femtoliters to microliters
- > Inject and Clean function can be triggered right on the device using the included mouse or optional foot control
- > Programmable injection guarantees high reproducibility
- > Connection to TransferMan® 4r, InjectMan® 4 or InjectMan® NI 2 enables semi-automatic microinjection
- > Small footprint
- > Can be combined with all conventional micromanipulation systems
- > Independent pressure supply via built-in compressor (only FemtoJet 4i)
- > External pressure supply guarantees the continuous availability of higher injection pressures - even with large volumes and very short intervals (only FemtoJet 4x)

## Gentle treatment for your cells

Minimizing mechanical trauma to your sample is critical for achieving optimal results. The new capillary holder 4 (slim shape) in combination with Eppendorf manipulators allows for injecting with straight capillaries at angles lower than 15°. This capillary holder 4 (slim shape) can be used in combination with the FemtoJet 4i and FemtoJet 4x as well as with the CellTram 4r. This helps to achieve highest survival rates for your developing embryos.



i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



## FemtoJet® 4i



### Description

The electronic microinjector, FemtoJet 4i, with its simple operation and wide range of functionality is ideally suited for injecting small to intermediate volumes of up to 100 pL into adherent cells and suspension cells for research purposes. The FemtoJet 4i with its built-in compressor forms a perfect team with Eppendorf micromanipulators, but it integrates just as easily with non-Eppendorf micromanipulator systems. The electronic connection between FemtoJet 4i and TransferMan® 4r and InjectMan® 4 guarantees simple, rapid and reproducible microinjections into cells.

### Applications

- > Reproducible and serial microinjection into adherent cells when combined with the InjectMan® 4 or InjectMan® NI 2 micromanipulator
- > Pronuclear or cytoplasmic injection of RNA/DNA solutions into fertilized oocytes of mammals, when combined with the TransferMan® 4r micromanipulator
- > Especially well suited for injection volumes from femtoliters to 100 pL

## FemtoJet® 4x



### Description

The FemtoJet 4x is the ideal solution if your research demands injection volumes greater than 100 pL and/or longer series at higher pressures – increasingly seen in functional genomics and developmental biology applications. The FemtoJet 4x with its external pressure supply (not included) delivers the precise and continuous pressure required. Featuring the same quality design and compatibility as the FemtoJet 4i, the 4x model is the “heavy duty” device for those more demanding applications.

### Applications

- > Microinjection into small organisms and embryos in the early stages of development (e.g., *Drosophila melanogaster*, Zebrafish, etc.)
- > Especially well suited for serial injection volumes from 100 pL to 1 µL or more

Typical Injection Volume	FemtoJet 4i		FemtoJet 4x	
Cell nucleus of adherent cells				
Cytoplasm of adherent cells				
Pronucleus of fertilized mouse oocytes				
<i>Caenorhabditis elegans</i>				
Fish embryos in early development phases				
<i>Xenopus laevis</i> oocytes				
Volume (liter, logarithm, measurement unit)	$10^{-15}$	$10^{-12}$	$10^{-9}$	$10^{-6}$
Unit	femtoliter	picoliter	nanoliter	microliter

FemtoJet 4i is suitable for applications that require lower volume ranges; FemtoJet 4x is better suited for applications that require higher volume ranges. Both feature the same injection time and pressure parameters.

# FemtoJet<sup>®</sup> 4i and FemtoJet<sup>®</sup> 4x



Both the FemtoJet 4i and FemtoJet 4x, can easily be combined for all types of micromanipulators, yet they form the perfect system with Eppendorf micromanipulators.

Technical specifications		
Model	FemtoJet 4i	FemtoJet 4x
Dimensions (W × D × H)	21.3 × 20.7 × 25 cm	21.3 × 20.7 × 25 cm
Weight w/o accessories	5 kg	3.5 kg
Clean function	Max. 6,000 hPa (87 psi)	Max. 6,000 hPa (87 psi)
Compensation pressure	5 – 6,000 hPa (87 psi); can be set in increments of 1 hPa	5 – 6,000 hPa (87 psi); can be set in increments of 1 hPa
Injection pressure	5 – 6,000 hPa (87 psi); can be set in increments of 1 hPa	5 – 6,000 hPa (87 psi); can be set in increments of 1 hPa
Pressure supply	Integrated compressor	External pressure supply (not included)

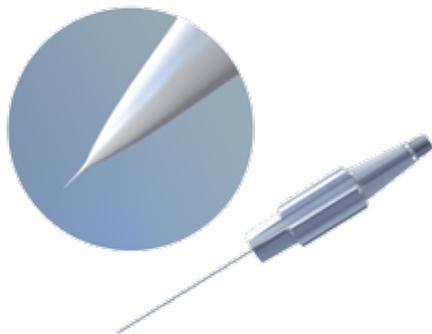
## Ordering information

Description	Catalog No.	List USD
<b>FemtoJet<sup>®</sup> 4i</b> , programmable microinjector with integrated pressure supply, including foot control	5252000021	\$10,090.00
<b>FemtoJet<sup>®</sup> 4x</b> , programmable microinjector with external pressure supply (not included), including foot control	5253000025	6,984.00
<b>Capillary holder 4</b> , for mounting microcapillaries, Femtotips, Femtotip II or grip head 4 (incl. Grip head 4 size 0 and adapter for Femtotips)	5196081005	273.00
<b>Capillary holder 4 slim shape</b> , for flat angle injections, for microcapillaries with outer diameter 1.0 mm	5196062000	278.00
<b>Injection tube Air</b> , white ring mark, I.D. 0.5 mm, length 1.3 m	5196061004	84.00
<b>O-ring set 4</b> , incl. 10 o-rings large, 10 o-rings small, 2 distance sleeves, o-ring removal tool for grip head set 4	920005870	58.20
<b>Y-cable PX</b> , Y-cable for connecting Eppendorf PiezoXpert <sup>®</sup> or a PC with TransferMan <sup>®</sup> 4r or InjectMan <sup>®</sup> 4 and FemtoJet <sup>®</sup> 4i/4x	5192080004	160.00
<b>Grip head set 4 size 0</b> , for microcapillaries with outer diameter 1.0 to 1.1 mm	5196082001	56.00
<b>Grip head set 4 size 1</b> , for microcapillaries with outer diameter 1.2 to 1.3 mm	5196083008	56.00
<b>Grip head set 4 size 2</b> , for microcapillaries with outer diameter 1.4 to 1.5 mm	5196084004	56.00
<b>Grip head set 4 size 3</b> , for microcapillaries with outer diameter 0.7 to 0.9 mm	5196085000	56.00
<b>Grip head set 4 (slim shape)</b> , for Capillary holder 4 slim shape, for capillaries with outer diameter 1.0 mm	5196063007	56.00
<b>Hand control</b> , for triggering inject function	5252070011	85.00
<b>Y-cable FJ4</b> , Y-cable for connecting FemtoJet <sup>®</sup> 4i/4x with a PC and TransferMan <sup>®</sup> 4r or InjectMan <sup>®</sup> 4	5192080004	160.00

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



# Eppendorf Microcapillaries

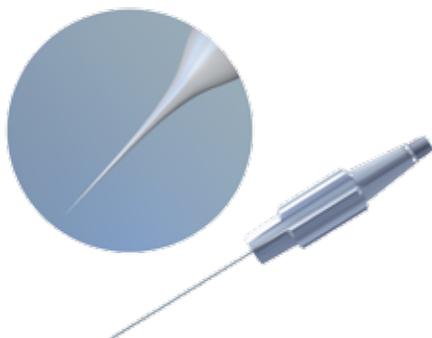


## Applications Fentotips®

- > Injection into adherent cells
- > Near-surface injection into suspension cells (e.g., into fish embryos), smaller organisms or embryos in the early stages of development

## Fentotips®

- > Defined opening with 0.5 µm inner diameter
- > Screw-in thread for quick assembly
- > Sterile
- > 100 % individual testing of every Fentotip using a flow parameter
- > Safe transport packaging



## Applications Fentotip II

- > Injection into adherent cells
- > Injection into suspension cells, smaller organisms or embryos in the early stages of development

## Fentotip II

- > Defined opening with 0.5 µm inner diameter
- > Screw-in thread for quick assembly
- > Sterile
- > 100 % individual testing of every Fentotip using a flow parameter
- > Safe transport packaging



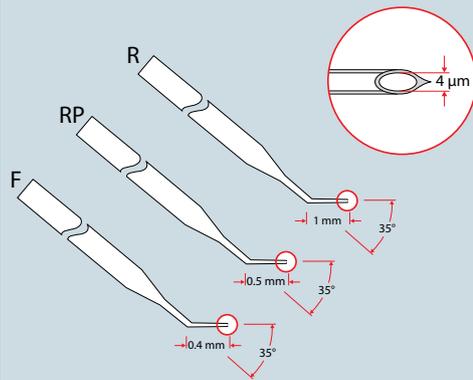
## Applications Eppendorf Microloader™

- > Filling of microcapillaries for microinjection
- > Recovery of excess solution from the capillary
- > Pipetting smallest volumes where additional reach is needed

## Eppendorf Microloader™

- > Extremely long, fine and flexible tip for filling of microcapillaries for microinjection and where additional reach is needed
- > Microloader tips and rack autoclavable
- > Highest precision and accuracy when used with Eppendorf pipettes for 0.5 to 10 µL (gray control button)

# Eppendorf Microcapillaries for Research

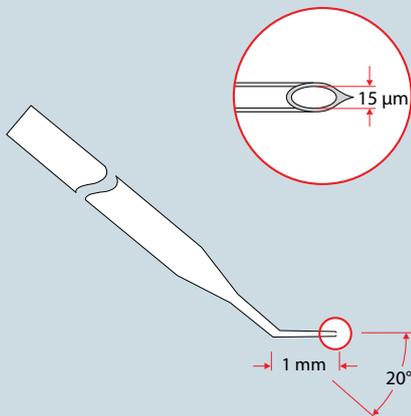


## Applications TransferTip® ICSI

- > Transfer of sperm to oocytes

## TransferTip® ICSI

- > 4 µm inner diameter
- > 35° tip angle
- > Heat-formed spike eases penetration
- > Sterilized via validated gamma irradiation
- > Non-cytotoxic (as proven by the mouse embryo development test)
- > Capillary safe for optimum protection
- > Three variants (F, RP, R) with different tip end characteristics

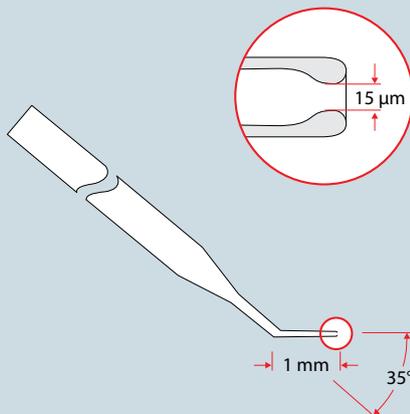


## Applications TransferTip® (ES)

- > Transfer of ES cells into mouse blastula or morula

## TransferTip® (ES)

- > 15 µm inner diameter
- > 20° tip angle
- > Rigid flange, 1 mm length
- > Heat-formed spike eases penetration
- > Sterilized via validated gamma irradiation
- > Capillary safe for optimum protection

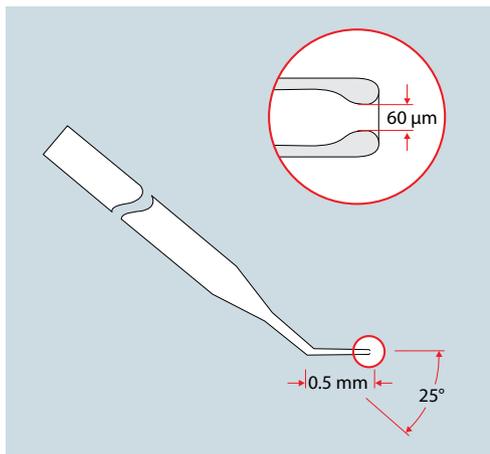


## Applications VacuTip I

- > Capillary for holding oocytes, blastocysts, etc.

## VacuTip I

- > 15 µm inner diameter
- > 35° tip angle
- > Flange length 1 mm
- > Sterilized via validated gamma irradiation
- > Non-cytotoxic (as proven by the mouse embryo development test)
- > Capillary safe for optimum protection

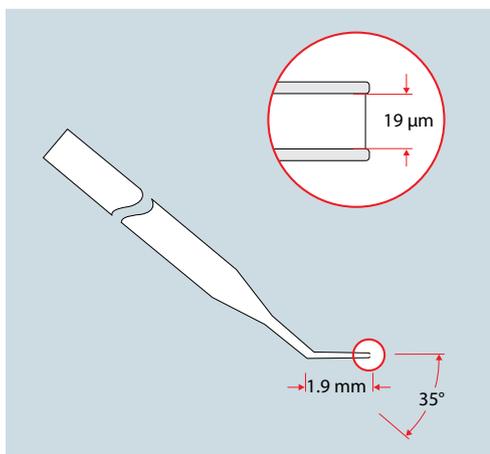


#### Applications VacuTip II

- > Capillary for holding oocytes, blastocysts, etc.

#### VacuTip II

- > 60 µm inner diameter
- > 25° tip angle
- > Flange length 0.5 mm
- > Sterilized via validated gamma irradiation
- > Non-cytotoxic (as proven by the mouse embryo development test)
- > Capillary safe for optimum protection

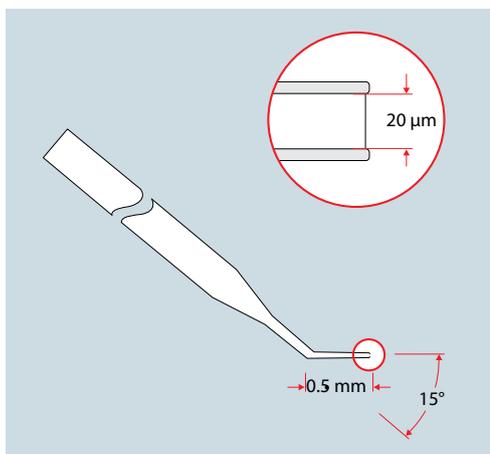


#### Applications Biopsy Tip I

- > Laser-assisted biopsy of cells and organelles

#### Biopsy Tip I

- > 19 µm inner diameter
- > 35° tip angle
- > Rigid flange, 1.9 mm length
- > Rounded tip end
- > Sterilized via validated gamma radiation
- > Non-cytotoxic (as proven by the mouse development test)
- > Capillary safe for optimum protection



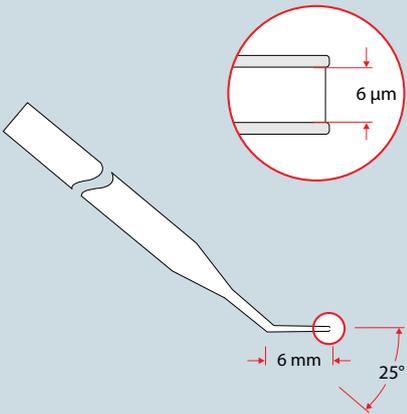
#### Applications Biopsy Tip II

- > Laser-assisted biopsy of cells and organelles

#### Biopsy Tip II

- > 20 µm inner diameter
- > 15° tip angle
- > Rigid 0.5 mm flange
- > Rounded tip end
- > Sterilized via validated gamma irradiation
- > Non-cytotoxic (as proven by the mouse development test)
- > Capillary safe for optimum protection

# Eppendorf Microcapillaries for Research

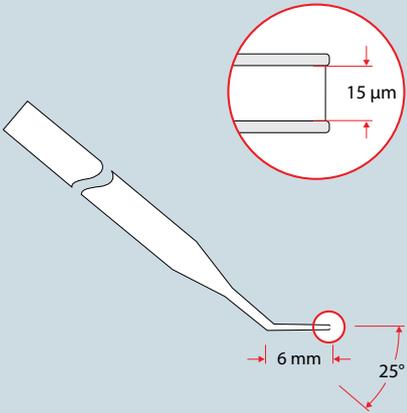


**Applications Piezo Drill Tip Mouse ICSI**

- > Transfer of mouse spermatocytes into the cytoplasm of unfertilized mouse oocytes

**Piezo Drill Tip Mouse ICSI**

- > 6 µm inner diameter
- > 25° tip angle
- > Rigid flange, 6 mm length
- > Jagged, non-polished
- > Sterilized via validated gamma irradiation
- > Capillary safe for optimum protection



**Applications Piezo Drill Tip ES**

- > Piezo-assisted transfer of embryonic stem cells into blastocysts

**Piezo Drill Tip ES**

- > 15 µm inner diameter
- > 25 ° tip angle
- > Rigid flange, 6 mm length
- > Jagged, non-polished
- > Sterilized via validated gamma irradiation
- > Capillary safe for optimum protection



### Ordering information

Description	Catalog No.	List USD
<b>Microloader™</b> , tip for filling Femtotips and other glass microcapillaries, 0.5 – 20 µL, 100 mm, light gray, 192 pcs. (2 racks × 96 pcs.), For research use only.	930001007	\$175.00
<b>Femtotips®</b> , injection capillary, sterile, set of 20, For research use only.	930000035	257.00
<b>Femtotip II</b> , injection capillary, sterile, set of 20, For research use only.	930000043	257.00
<b>VacuTip I, holding capillary</b> , 35° tip angle, 15 µm inner diameter, 1 mm flange, sterile, set of 25, For research use only.	5195000036	427.00
<b>VacuTip II FCH, holding capillary</b> , 25° tip angle, 60 µm inner diameter, 0.5 mm flange, sterile, set of 25, For research use only.	5195000044	437.00
<b>TransferTip® RP (ICSI)</b> , for sperm injection using the ICSI technique, 35° tip angle, 4 µm inner diameter, 0.5 mm flange, sterile, set of 25, For research use only.	5195000010	544.00
<b>TransferTip® F (ICSI)</b> , for sperm injection using the ICSI technique, 35° tip angle, 4 µm inner diameter, 0.4 mm flange, sterile, set of 25, For research use only.	5195000001	554.00
<b>TransferTip® R (ICSI)</b> , for sperm injection using the ICSI technique, 35° tip angle, 4 µm inner diameter, 1 mm flange, sterile, set of 25, For research use only.	5195000028	554.00
<b>Biopsy Tip I</b> , transfer capillary for laser-assisted polar body biopsy, 35° tip angle, 19 µm inner diameter, 1.9 mm flange, sterile, set of 25, For research use only.	5195000052	554.00
<b>Biopsy Tip II</b> , transfer capillary for laser-assisted polar body biopsy, 15° tip angle, 20 µm inner diameter, 0.5 mm flange, sterile, set of 25, For research use only.	5195000060	554.00
<b>TransferTip® (ES)</b> , for ES cell transfer, 20° tip angle, 15 µm inner diameter, 1 mm flange, sterile, set of 25, For research use only.	930001040	554.00
<b>Piezo Drill Tip Mouse ICSI</b> , for piezo-assisted mouse ICSI, 25° tip angle, 6 µm inner diameter, 6 mm flange, sterile, set of 25, For research use only.	930001091	533.00
<b>Piezo Drill Tip ES</b> , for piezo-assisted mouse ES cell transfer, 25° tip angle, 15 µm inner diameter, 6 mm flange, sterile, set of 25, For research use only.	930001104	533.00

# Workstations for Microinjection and Micromanipulation



## Workstation for cell transfer and injection and related techniques

Recommended setup:

- 2 × TransferMan® 4r
- 1 × Microscope adapter (to be specified at time of order)
- 1 × CellTram® 4r Air
- 1 × CellTram® 4r Oil
- 1 × set of 25 TransferTip® microcapillaries (to be specified at time of order)
- 1 × set of antivibration pads (number and format depending on setup)

## Optional for piezo-assisted micromanipulation:

- 1 × Eppendorf PiezoXpert®
- 1 × set of 25 Piezo Drill Tips (to be specified at time of order)



## Workstation for pronuclear and cytoplasmic injection of nucleic acid solutions

Recommended setup:

- 2 × TransferMan® 4r
- 1 × Microscope adapter (to be specified at time of order)
- 1 × CellTram® 4r Air
- 1 × FemtoJet® 4i or FemtoJet® 4x
- 1 × set of 20 Femtotip II
- 2 × racks of 96 Microloader
- 1 × set of Antivibration Pads (number and format depending on setup)

## Optional for piezo-assisted micromanipulation:

- 1 × Eppendorf PiezoXpert®
- 1 × Y cable PX

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



**Workstation for adherent cell injection or injection into *Drosophila*, *C.elegans*, plant cells etc.**

Recommended setup:

- 1 × InjectMan® 4
- 1 × Microscope adapter (to be specified at time of order)
- 1 × FemtoJet® 4i or FemtoJet® 4x
- 1 × set of 20 Femtotips® (to be specified at time of order)
- 2 × racks of 96 Microloader
- 1 × Eppendorf Cell Imaging Dishes
- 1 × set of antivibration pads (number and format depending on setup)



**Workstation for injection into fish embryos**

Recommended setup:

- 1 × InjectMan 4
- 1 × Universal stand
- 1 × FemtoJet® 4x
- 1 × set of 20 Femtotips® (to be specified at time of order)
- 2 × racks of 96 Microloader

**Optional for piezo-assisted injection:**

Recommended setup:

- 1 × Eppendorf PiezoXpert®
- 1 × Y cable PX

# Eppendorf Cell Culture Consumables

## Description

Experience a new dimension in cell culture with Eppendorf Cell Culture Consumables. These products meet your needs for excellent cell performance and reliability as well as for advanced protection against contamination.

Innovative technologies for surface activation deliver a tissue-culture-treated (TC treated) surface with outstanding homogeneity.

The planarity and transparency of all surfaces contribute to an optical performance that not only facilitates your routine analysis, but also saves time during automated read-out.

In all formats, we focused on advanced handling, secure stacking, and easy identification, readability and tracking.

The new packaging concept provides complete protection during transportation, tool-free opening, easy resealing for safe and clean storage, and fast identification of the desired product. The boxes and bags are very compact for space saving storage. Learn more about the truly comprehensive solutions for cell culture on the following pages.



## Applications

- > Expansion and culture of adherent and suspension cells on TC treated or on non-treated polystyrene
- > Performance of cell-based assays and microscopic analysis

### All Cell Culture Consumables

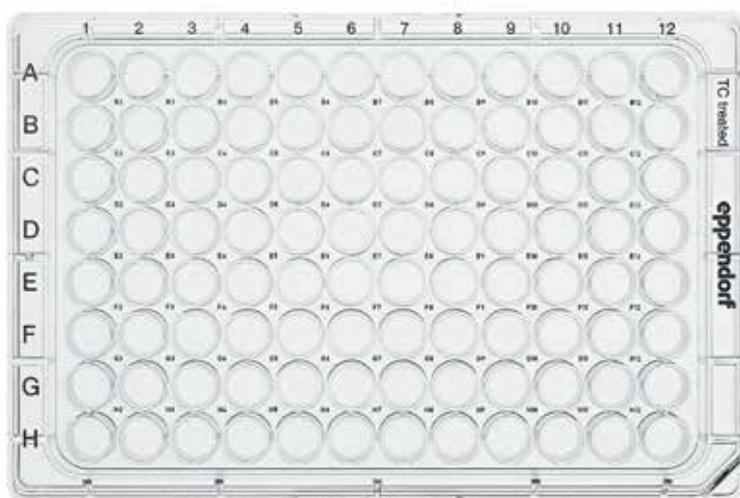
<b>Surface</b>	Tissue culture treated or non-treated
<b>Operating temperature</b>	-86 °C to 60 °C
<b>Storage before use</b>	Store dry and at RT. Protect from sunlight and UV rays
<b>Purity</b>	All products are sterile. Sterility is assured by irradiation according to DIN EN ISO 11137-2015 with sterility assurance level (SAL) of 10 <sup>-6</sup> . Sterility is tested according to USP, Ph. Eur. 2.6.12. All products are free of detectable pyrogens, RNase, DNase and DNA. All products are non-cytotoxic.
<b>Certificates</b>	Leachables, heavy metals, production conditions, cytotoxicity. The certificates can be downloaded at <a href="http://www.eppendorf.com">www.eppendorf.com</a>
<b>Lot-specific certificates</b>	Sterility Absence of: Pyrogens, RNase, DNase, DNA. TC treated surface: Testing for cell attachment and cell growth with an anchorage-dependent cell line Lot-specific certificates can be downloaded at <a href="http://www.eppendorf.com">www.eppendorf.com</a>



# Eppendorf Cell Culture Plates

## Description

Eppendorf Cell Culture Plates are tailored for the expansion of smaller cell numbers as well as for cell-based assays. Qualification of cell morphology and cell performance can be especially critical in those steps. We optimized the optical performance by enhancement of the planarity, material clarity, and reduction of the liquid meniscus to facilitate both manual and automated read-out. Contrast rich alphanumeric OptiTrack® labeling allows for easy orientation and fast identification of individual wells. The new chimney-well design avoids inhomogeneous growth of cells in the outer ring of wells which reduces costs and increases efficiency. If cells need to spend more time outside of the incubator, filling the inter-well spaces of the plate will keep the temperature stable and prevent unwanted temperature shifts. The lid and plate bottom can easily be differentiated providing extra safety in transportation and stacking.



## Product features

- > Easy and fast well identification by contrast rich OptiTrack alphanumeric labeling with individual well ID
- > Moat surrounding the outer wells to prevent the “edge effect” when filled with liquid
- > Chimney-well design enables filling of the inter-well spaces of the plate to level out well-to-well temperature shifts outside the incubator
- > Robust stacking performance by pronounced rims on plate lid and excellent fitting of lid and base when used in stacks
- > Lid taps under the plate for minimized surface contact and therefore reduced risk of contamination
- > Easy differentiation of lid and plate bottom due to prominent ridges on a wider sized base
- > Distinct ventilation gaps for optimized gas and temperature transfer when incubating in stacks
- > Optimized microscopical performance due to enhanced planarity, reduction of meniscus and clarity of the material

Plates	6-Well	12-Well	24-Well	48-Well	96-Well
<b>Theoretical total volume</b>	16.0 mL	6.8 mL	3.6 mL	1.5 mL	0.4 mL
<b>Working volume</b>	3 – 5 mL	1 – 2 mL	0.5 – 1 mL	0.3 – 0.5 mL	0.1 – 0.2 mL
<b>Growth area/well<sup>1)</sup></b>	940.3 mm <sup>2</sup>	391.1 mm <sup>2</sup>	208.9 mm <sup>2</sup>	85.6 mm <sup>2</sup>	37.0 mm <sup>2</sup>
<b>Well diameter</b>	34.6 mm	22.4 mm	16.2 mm	10.4 mm	6.8 mm
<b>L x W x H</b>	127.8 x 85.5 x 20.0 mm	127.8 x 85.5 x 20.0 mm	127.8 x 85.5 x 20.0 mm	127.8 x 85.5 x 20.0 mm	127.8 x 85.5 x 14.4 mm
<b>Height with lid</b>	23.2 mm	23.2 mm	23.2 mm	23.2 mm	17.6 mm
<b>Dimensions</b>	Conforms to ANSI/ SBS I	Conforms to ANSI/ SBS I	Conforms to ANSI/ SBS I	Conforms to ANSI/ SBS I	Conforms to ANSI/ SBS I to V
<b>Centrifugation</b>	Can be centrifuged up to 2,500 x g. When stacked (up to 5 for 96-Well plates and up to 4 for all other formats) can be centrifuged up to 300 x g.				

<sup>1)</sup> For the initial seeding of cells, take into account the growth area in order to support optimal cell growth.

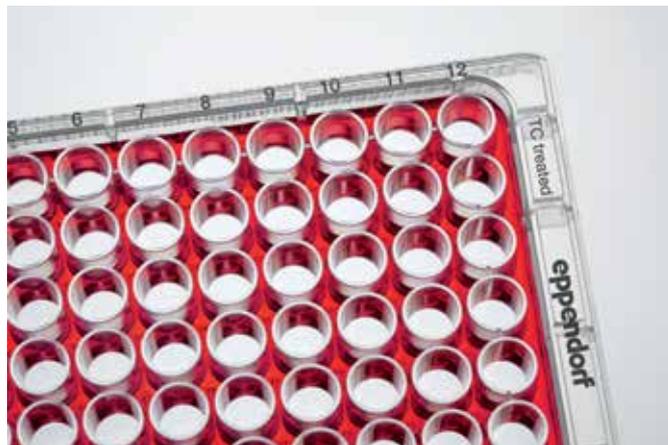
# Eppendorf Cell Culture Plates

## Minimizing the edge effect in 96-well plates

Evaporation of cell culture medium plays a critical role in multi-well based cellular assays because it can deteriorate assay performance. As evaporation mainly affects the peripheral wells of a plate this phenomenon is called the edge effect. With the Eppendorf 96-Well Cell Culture Plate evaporation from the wells can be reduced to a minimum. The plate offers two options for insulating the wells. A moat surrounds the edge wells and the chimney-well configuration eliminates connections between the inner wells and allows for the complete inter-well space to be filled with liquid. Together this results in a more homogeneous distribution of temperature and humidity throughout the plate and reduces the edge effect.

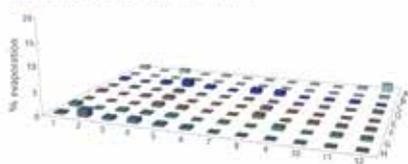


The filling of the surrounding moat prevents edge effect and yields up to 38 % more usable wells

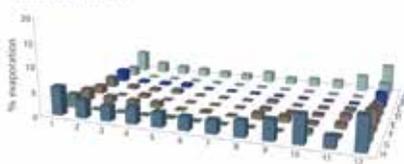


Filling the complete inter-well space enables for additional insulation of all 96 wells. This not only prevents the edge effect, it also prevents well-to-well temperature shifts outside the incubator

Eppendorf Cell Culture Plate



Competitor A



Competitor B



Competitor C

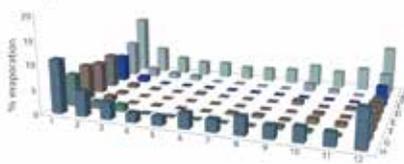


Figure 2: Comparison of evaporation in different 96-well plates. Liquid loss inside each well was determined after 5 days of incubation under standard cell culture conditions.

## Comparison of evaporation in different 96-well plates

A comparison of different 96-well cell culture plates shows that filling the outer moat of the Eppendorf Cell Culture Plate leads to a superior well-to-well consistency in cell growth in the Eppendorf Cell Culture Plate. By this, the phenomenon of the edge effect can be minimized leading to reproducible performance in cell-based assays. For this test the outer moat of the Eppendorf plate was filled with 1 × 5 mL of phosphate buffered saline (PBS). The inner inter-well space was filled with 1 × 8 mL of phosphate buffered saline (PBS). For more information see Application Notes 326 and 384.



# Eppendorf Cell Culture Dishes

## Description

Whenever you need direct access to your cells, dishes are the format of choice. Eppendorf cell culture dishes were designed with a focus on improved handling and stacking performance to ensure a new level of safe and carefree usage. It all starts with the packaging: the innovative design can be easily opened without tools and resealed without tape. The bags are shrinkable for space-saving, safe, and contamination-free storage of unused dishes. With the Eppendorf dishes, a ridged handling ring provides unsurpassed safety in handling during transportation and expansion of cells. A SplashProtect™ ring inside the dish lid prevents spillage and traps fluid if condensation occurs. Combined with the outstanding, sturdy stacking, our cell culture dishes are unparalleled in their ease of transport and handling, safety, and convenience.



## Product features

- > Unsurpassed safety in handling during transportation and while working due to ridged handling ring
- > SplashProtect™ ring inside of the dish lid traps liquid and prevents spills during transportation or incubation
- > Pronounced rim on dish lid and exact fitting of lid and bottom ensure sturdy, secure stacking
- > Easy differentiation of lid and dish bottom prevents unintended removal of the lid
- > Packaging combines tool-free opening, resealable top and side for tape-free closing, and an easy solution to shrink the package for space-conscious storage

Dishes	35 mm	60 mm	100 mm
Theoretical total volume	8.1 mL	26.6 mL	99.2 mL
Working volume	2.0 – 3.0 mL	3.0 – 5.0 mL	8.0 – 10.0 mL
Growth area	9.5 cm <sup>2</sup>	21.9 cm <sup>2</sup>	56.8 cm <sup>2</sup>
Diameter x height	36.7 x 10.8 mm	59.7 x 14.0 mm	93.8 x 19.4 mm
Height with lid	12.5 mm	15.7 mm	21.3 mm
Centrifugation	Cannot be centrifuged.		

# Eppendorf Cell Culture Flasks

## Description

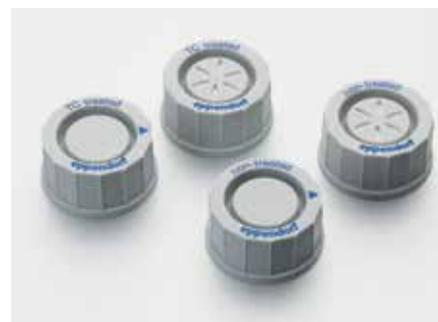
Flasks are the preferred vessel for long term cultivation or large-scale expansion of cells, providing the best protection against contamination. Unsurpassed protection of your cells from contaminants was one of the key requirements in developing the Eppendorf Cell Culture Flasks. A new, high efficiency air filter technology combines excellent protection with reliable gas exchange. In-line pressure testing for each flask guarantees leakage-free flasks for maximum workflow safety. The unique ConvexAccess™ shape of the neck facilitates the access to the growth area and makes cell seeding and media exchange much more convenient, safe, and reliable.



## Product features

- > ConvexAccess™ geometry for facilitated access to growth area and easier and safe cell treatment
- > Optimized gas exchange and protection against contamination through high efficiency air filter technology
- > Defined vent position on plug-seal caps to prevent undesired closing
- > Anti-rolling cap with corrugation facilitates cultivation steps when the cap needs to be set aside
- > 100 % in-line control for leakage-free flasks and maximum safety
- > Direct surface identification on flask and cap

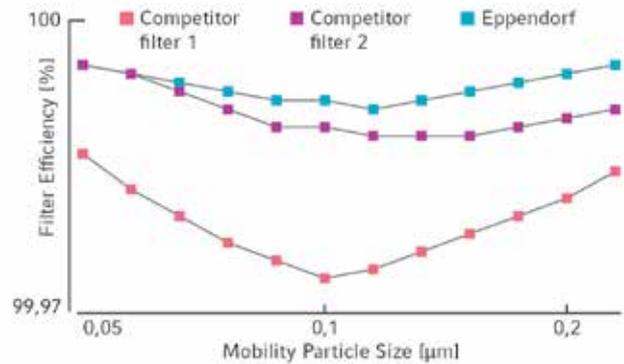
Flasks	T-25	T-75	T-175
<b>Theoretical total volume</b>	83.6 mL	279.8 mL	662.1 mL
<b>Work volume</b>	3.0 – 7.0 mL	8.0 – 20.0 mL	20.0 – 30.0 mL
<b>Growth area</b>	26.9 cm <sup>2</sup>	77.9 cm <sup>2</sup>	179.5 cm <sup>2</sup>
<b>L × W × H</b>	99.0 × 56.0 × 37.0 mm	163.0 × 82.0 × 46.6 mm	230.0 × 122.0 × 48.0 mm
<b>Centrifugation</b>	Can be centrifuged with the suitable adapters; refer to the manufacturer's instruction.		





### Reinvented Filter Technology for More Safety and Reliance

Flasks have always been the preferred vessel for long term cultivation or large-scale expansion of cells. Up until now, membrane filters were considered "state of the art" in guaranteeing protection against contamination and optimal gas exchange. Only Eppendorf challenged the status quo and reinvented the filter technology in Cell Culture Flasks for a higher safety standard.

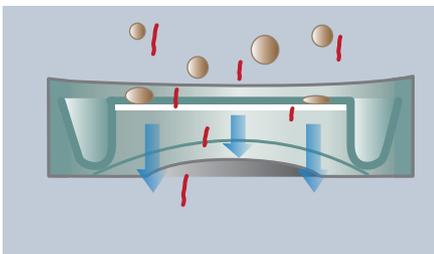


### Unmatched volume filter technology

Instead of utilizing thin membrane filters Eppendorf filter caps are equipped with a high efficiency volume filter providing reliable gas exchange and better protection against airborne particles

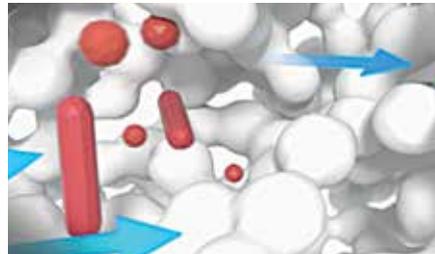
### Remarkable increase in filter efficiency

The hydrophobic volume filter pad is more efficient than standard filter membranes in protection against contamination. For more information have a look at our Whitepaper No. 024



### Standard membrane filter

Membrane filter with defined and constant pore size. Particles smaller than this size can pass through



### Unsurpassed Eppendorf volume filter technology

The labyrinth arrangement of filter pores in various sizes combined with greater filter thickness enables higher efficiency in holding back contaminants such as bacteria, virus, or mycoplasma

# Eppendorf Cell Culture Consumables

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Cell Culture Plates, 6-Well, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, 5 mL, 60 plates, individually wrapped	0030720113	\$174.00
non-treated, 5 mL, 60 plates, individually wrapped	0030720016	159.00
TC treated, 5 mL, 100 plates (10 bags × 10 plates)	0030720130	263.00
<b>Eppendorf Cell Culture Plates, 12-Well, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, 2 mL, 60 plates, individually wrapped	0030721110	204.00
non-treated, 2 mL, 60 plates, individually wrapped	0030721012	183.00
<b>Eppendorf Cell Culture Plates, 24-Well, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, 1 mL, 60 plates, individually wrapped	0030722116	222.00
non-treated, 1 mL, 60 plates, individually wrapped	0030722019	200.00
<b>Eppendorf Cell Culture Plates, 48-Well, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, 0.5 mL, 60 plates, individually wrapped	0030723112	262.00
non-treated, 0.5 mL, 60 plates, individually wrapped	0030723015	236.00
<b>Eppendorf Cell Culture Plates, 96-Well, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, 0.2 mL, 80 plates, individually wrapped	0030730119	411.00
non-treated, 0.2 mL, 80 plates, individually wrapped	0030730011	370.00
TC treated, 0.2 mL, 100 plates (10 bags × 10 plates)	0030730135	462.00

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Cell Culture Dishes, 35 mm, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, 3.0 mL, 300 dishes (30 bags × 10 dishes)	0030700112	\$223.00
non-treated, 3.0 mL, 300 dishes (30 bags × 10 dishes)	0030700015	201.00
<b>Eppendorf Cell Culture Dishes, 60 mm, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, 5.0 mL, 300 dishes (30 bags × 10 dishes)	0030701119	223.00
non-treated, 5.0 mL, 300 dishes (30 bags × 10 dishes)	0030701011	201.00
<b>Eppendorf Cell Culture Dishes, 100 mm, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, 10.0 mL, 300 dishes (30 bags × 10 dishes)	0030702115	482.00
non-treated, 10.0 mL, 300 dishes (30 bags × 10 dishes)	0030702018	436.00

## Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Cell Culture Flasks T-25, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, with filter cap, 7.0 mL, 192 flasks (24 bags × 8 flasks)	0030710126	\$411.00
TC treated, with plug-seal cap, 7.0 mL, 192 flasks (24 bags × 8 flasks)	0030710118	355.00
non-treated, with filter cap, 7.0 mL, 192 flasks (24 bags × 8 flasks)	0030710029	365.00
non-treated, with plug-seal cap, 7.0 mL, 192 flasks (24 bags × 8 flasks)	0030710010	320.00
<b>Eppendorf Cell Culture Flasks T-75, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, with filter cap, 20.0 mL, 80 flasks (16 bags × 5 flasks)	0030711122	310.00
TC treated, 20.0 mL, 80 flasks (16 bags × 5 flasks)	0030711114	277.00
non-treated, with filter cap, 20.0 mL, 80 flasks (16 bags × 5 flasks)	0030711025	278.00
non-treated, with plug-seal cap, 20.0 mL, 80 flasks (16 bags × 5 flasks)	0030711017	249.00
<b>Eppendorf Cell Culture Flasks T-175, Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic</b>		
TC treated, with filter cap, 30.0 mL, 48 flasks (12 bags × 4 flasks)	0030712129	325.00
TC treated, with plug-seal cap, 30.0 mL, 48 flasks (12 bags × 4 flasks)	0030712110	335.00
non-treated, with filter cap, 30.0 mL, 48 flasks (12 bags × 4 flasks)	0030712021	289.00
non-treated, with plug-seal cap, 30.0 mL, 48 flasks (12 bags × 4 flasks)	0030712013	296.00



# Eppendorf Cell Imaging Consumables

## Description

Eppendorf Cell Imaging Consumables facilitate sophisticated imaging and microscopy applications on an expert level. The products combine premium performance with innovative solutions for demanding optical analysis and fluorescent staining. Whether you perform inverse microscopy, live cell imaging, or fluorescence-based analysis you will find tailored solutions for single and parallel analysis as well as High Content Analysis (HCA) with Eppendorf Cell Imaging Consumables.



### Eppendorf Cell Imaging Plates

Eppendorf Cell Imaging Plates with film bottom have excellent light transmission rates, even for UV-A and UV-B light. The autofluorescence of the material is lower than a conventional polystyrene bottom with a significant reduction in background signaling. Furthermore, the film bottom enables high gas transfer: oxygen supply and equilibration with the atmosphere are achieved directly through the plate bottom. The glass bottom plates offer excellent planarity for sophisticated microscopic analysis.

### Eppendorf Cell Imaging Slides

Eppendorf Cell Imaging Slides and Coverglasses offer a high chemical resistance for reliable and reproducible results in fixation protocols. Tool-free and easy removal of the chambers from Cell Imaging Slides and Coverglasses makes working easy, convenient and reliable. Products are available with one to eight chambers to suit a variety of applications.

### Eppendorf Cell Imaging Dishes

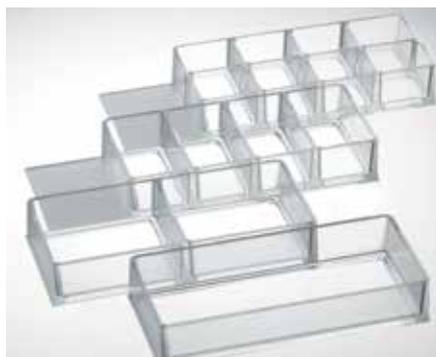
Eppendorf Cell Imaging Dishes ensure excellent results in high resolution microscopy of living and fixed cells. The bottom of the 35 mm dishes is made from cover glass. The central 18 mm cavity is lower than the level of the surrounding polystyrene dish, which enables the concentration of the cells during seeding and helps to reduce costs of antibodies and dyes. Handling and reference are easy, safe, and convenient due to a gripping zone and directional orientation marking.



# Eppendorf Cell Imaging Consumables

## Product features

- > Outstanding performance of glass and film surfaces for adherent cells due to innovative tissue culture treatment
- > Low intrinsic fluorescence and high light transmission for enhanced signal-to-noise ratio
- > Easy access to the complete imaging area with immersion lenses for improved handling and advanced compatibility with microscopes
- > Ergonomic and robust design
- > Precise planarity supports high resolution microscopes and autofocus systems



## Special Features Cell Imaging Plates

- > All plate types have a low skirt design perfectly suited for accessing all wells with immersion objectives
- > An excellent signal-to-noise ratio regardless of the plate bottom type
- > Excellent planarity of all plates ensures unsurpassed manual handling and reliable results in automated devices
- > Individually wrapped for reliable purity
- > The ultrathin film bottom allows for high gas permeability and UV-light transparency, ideal for phototoxicity and hypoxic studies

## Special Features Cell Imaging Slides and Coverglasses

- > Choose between a microscopic slide with 1 mm thickness or a 170  $\mu\text{m}$  coverglass, both providing excellent signal-to-noise ratios in fluorescent staining protocols
- > Chambers and lids have high chemical resistance for problem-free fixation, even with acetone
- > Benefit from easy and tool-free removal of the chambers with minimal glue residue

## Special Features Cell Imaging Dishes

- > An 18 mm central cavity provides a defined area for growth and staining of cells, reducing the costs of required antibodies and dyes
- > Polygonal gripping zone provides improved handling
- > Macroscopic orientation marks facilitate easy orientation
- > Low rim side walls allow easy access for microinjection/micromanipulation
- > Available thicknesses: 145  $\mu\text{m}$  and 170  $\mu\text{m}$

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Cell Imaging Plates</b> , with lid, black with clear flat bottom. TC treated		
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, 24-Well Cell Imaging Plate with 170 $\mu$ m coverglass bottom, individually wrapped, 20 pcs.	0030741021	\$594.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, 96-Well Cell Imaging Plate with 170 $\mu$ m coverglass bottom, individually wrapped, 20 pcs.	0030741030	655.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, 24-Well Cell Imaging Plate with 25 $\mu$ m film bottom, individually wrapped, 20 pcs.	0030741005	254.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, 96-Well Cell Imaging Plate with 25 $\mu$ m film bottom, individually wrapped, 20 pcs.	0030741013	320.00

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Cell Imaging Dishes</b> , with coverglass bottom, TC treated		
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, 35 x 10 mm Cell Imaging Dish 145 $\mu$ m (1), 2 dishes per bag, 30 pcs.	0030740009	\$191.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, 35 x 10 mm Cell Imaging Dish 170 $\mu$ m (1.5), 2 dishes per bag, 30 pcs.	0030740017	191.00

#### Ordering information

Description	Catalog No.	List USD
<b>Eppendorf Cell Imaging Slides</b> , TC treated		
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, Cell Imaging Slide with 1 chamber, individually wrapped, 16 pcs.	0030742044	\$166.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, Cell Imaging Slide with 2 chambers, individually wrapped, 16 pcs.	0030742052	179.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, Cell Imaging Slide with 4 chambers, individually wrapped, 16 pcs.	0030742060	190.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, Cell Imaging Slide with 8 chambers, individually wrapped, 16 pcs.	0030742079	201.00
<b>Eppendorf Cell Imaging Coverglasses</b> , TC treated		
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, Cell Imaging Coverglass with 1 chamber, individually wrapped, 16 pcs.	0030742001	214.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, Cell Imaging Coverglass with 2 chambers, individually wrapped, 16 pcs.	0030742010	225.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, Cell Imaging Coverglass with 4 chambers, individually wrapped, 16 pcs.	0030742028	238.00
Sterile, pyrogen-, DNase-, RNase-, human and bacterial DNA-free. Non-cytotoxic, Cell Imaging Coverglass with 8 chambers, individually wrapped, 16 pcs.	0030742036	249.00



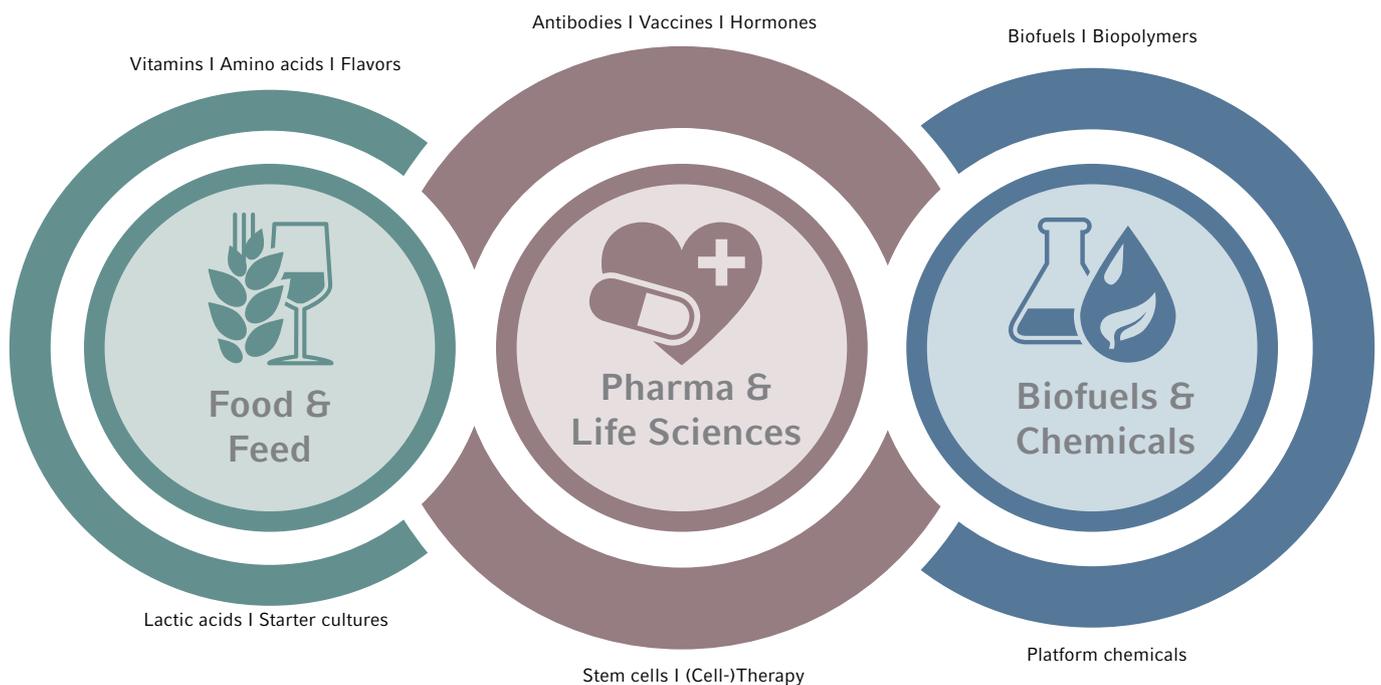


# »Heal, Fuel, and Feed the World.«

*Stephen Sherwin*

Bioprocess engineers develop and produce a multitude of products and ingredients available today. Their applications are diverse, and the products can be found in pharmaceutical, chemical, and nutrition industries. Stephen Sherwin, former chairman of BIO association put it aptly: "Heal, fuel, and feed the world".

Our Eppendorf bioprocess solutions are successfully used in these industries and in applied research for decades. By exploiting the strong synergies in bioreactor technology and polymer manufacturing, Eppendorf has emerged as a global player and valuable resource to its customers. With an integrated portfolio comprising software, instruments, consumables, and services, we can satisfy the demands of bioprocess development through production. In that way and in line with our corporate mission, we contribute to the efforts of Eppendorf customers worldwide to improve human living conditions.



# Addressing Our Customers' Challenges

Single-use equipment, automation, perfusion culture, and other techniques have the potential to increase efficiency and change the way scientists and engineers work. Along with process intensification comes the need to utilize resources wisely. Users have to cope with rising amounts of data in order to achieve their goals faster. They are being

appraised by process performance characteristics such as costs per run and turn-around times. Eppendorf is the right partner to meet these challenges. Satisfying professionals with full solutions to their tasks is what our bioprocess specialists are focussing on day-to-day. Expert teams take care of our customers worldwide.



## Process and Manufacturing

The biopharmaceutical landscape has long been dominated by the production of recombinant proteins and monoclonal antibodies (mABs). Nowadays, the industry is moving towards more diverse pipelines with a broader variety of biological active pharmaceutical ingredients (APIs), including biosimilars. Reacting to these rising demands, companies put flexible systems in place, optimized to balance costs and time-to-market.

Eppendorf offers flexible bioprocess solutions from a single source, supporting batch, fed-batch, continuous, and perfusion cultivation. From parallel small-scale bioreactor systems for early stage bioprocess development, benchtop bioreactors and fermentors for the laboratory scale to sterilize-in-place products for technology transfer and scale-up to production. They enable bioprocess professionals to establish robust and reproducible processes in all scales.



## Control and Analytics

Monitoring and control is key in bioprocess development and ensures the process environment for optimum cell growth and high-titer production. Applying Process Analytical Technology (PAT) concepts provides real-time insights improving product quality. Predictive models of cell and process performance enhance process understanding and optimize control through forecasting and estimating optimum parameter settings. Statistical tools like Multivariate Data Analysis (MVA) help scientists to get the most out of their data.

Software solutions from Eppendorf make use of these techniques by providing more than just bioprocess control. Comprehensive data- and information management supports scientists in enhancing their development efforts.



»Our bioprocess customers expect a special kind of support. Not only do our employees need to know their way around the technical devices; a knowledge of biological applications is also required. After all, we can only help if we understand exactly what our customers do and need. And in many cases, this close contact also results in new solutions.«

Dr. Karl Rix, Vice President Marketing, Portfolio and Support – Bioprocess, Eppendorf



### Quality and Regulatory Aspects

The FDA's Quality by Design approach aims to design product quality and process efficiency into the process as early as possible. It includes the identification of critical process parameters (CPPs) and critical quality attributes (CQAs). These have to be monitored, controlled, and documented early in biopharmaceutical development. Process automation opens up new possibilities in terms of quality control and validation, especially in GMP environments.

Eppendorf's parallel small-scale bioreactor systems support customers in implementing QbD principles in the development phase. Our advanced bioprocess control software is 21 CFR Part 11 compatible. Single-use bioreactor solutions from Eppendorf help make laboratories more efficient and safe.



### Integration and Services

Bioprocess equipment requires first-class service to achieve optimum results. Globalization, digital technologies, rising cost pressures, and the urge to be flexible in their operations make companies in the bioprocessing space face new challenges. They have to adapt their processes, facilities, and supply chains to these needs, establish global networks, and ensure high-quality training of all employees.

At Eppendorf, we offer broad expertise in automation and integration of third-party devices, making sure your systems run efficiently and are seamlessly integrated. Eppendorf customers can rely on high-quality technical and application support as well as comprehensive training and technical documentation.

# Cell Handling



Model	DASbox® Mini Bioreactor System	Small Scale Parallel Bioreactor Systems
Page(s)	378	378
Working volume range <sup>1)</sup>	60 – 250 mL	0.2 – 3.8 L
Single-use vessels available	■	■
Glass vessels, autoclavable	■	■
Stainless-steel vessels, SIP		
Interchangeable vessels	■	■
Bacteria/yeasts/fungi	■	■
Plant cells/algae	■	■
Mammalian/animal cells	■	■
Stem cells	■	■
Insect cells	■	■
Number of parallel units	Up to 24	Up to 16
Controller <sup>2)</sup>	DWC	DWC
Touchscreen controller		
BioCommand®		
DASware®	■	■
Gas mixing options	4 gas (air, N <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub> )	4 gas (air, N <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub> )
Gas flow control <sup>3)</sup>	TMFC	R <sup>4)</sup> or TMFC
Exhaust analysis	■	■
Optical density measurement	■	■
Validation		

<sup>1)</sup> Realized using multiple vessel sizes <sup>2)</sup> Controllers: DWC = DASware control, RPC = Reactor Process Controller, BCS = BioFlo Control Software, PLC = Programmable Logic Controller <sup>3)</sup> Gas Flow Controllers: R = Rotameter, TMFC = Thermal Mass Flow Controller <sup>4)</sup> Rotameter is for overlay only



**BioFlo® 120**

0  
0.25 – 40 L

- 
- 
- 
- 
- 
- 
- 
- 

BCS

- 
- 
- 

4 gas (air, N<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub>)

R<sup>4</sup>l or TMFC

- 
- 

**BioFlo 320**

0  
0.25 – 40 L

- 
- 
- 
- 
- 
- 
- 
- 

up to 8

BCS

- 
- 
- 

4 gas (air, N<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub>)

TMFC

- 
- 
-



Model	BioFlo 510	CelliGen 510
Page(s)	382	382
Working volume ranges <sup>1)</sup>	10.75 – 32 L	10.75 – 32 L
Single-use vessels available		
Glass vessels, autoclavable		
Stainless-steel vessels, SIP	■	■
Interchangeable vessels		
Bacteria/yeasts/fungi	■	
Plant cells/algae	■	■
Mammalian/animal cells		■
Stem cells		■
Insect cells	■	■
Number of parallel units		
Controller <sup>2)</sup>	RPC/PLC	RPC/PLC
Touchscreen controller	■	■
BioCommand®	■	■
DASware®		
Gas mixing options	4-gas (air, N <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub> )	4-gas (air, N <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub> )
Gas flow control <sup>3)</sup>	R or TMFC	R or TMFC
Exhaust analysis	■	■
Optical density measurement		
Validation	■	■

<sup>1)</sup> Realized using multiple vessel sizes <sup>2)</sup> Controllers: DWC = DASware control, RPC = Reactor Process Controller, BCS = BioFlo Control Software, PLC = Programmable Logic Controller <sup>3)</sup> Gas Flow Controllers: R = Rotameter, TMFC = Thermal Mass Flow Controller



**BioFlo 610**

**382**

13 – 100 L

■

■

■

■

RPC

■

■

2-gas (air, O<sub>2</sub>)

R or TMFC

■

■

**BioFlo Pro**

**383**

45 – 1,200 L

■

■

■

■

PLC

■

■

2-gas (air, O<sub>2</sub>)

R or TMFC

■

■

## Parallel Bioprocessing for Unparalleled Results – Small-Scale Systems



### DASbox Mini Bioreactor System 60 - 250 mL working volume

#### Product features

- > 4-fold parallel system extendable to up to 24 parallel operated glass or single-use bioreactors
- > Suitable for cell culture and microbial fermentation
- > Compact mini bioreactor system: requires only 7 cm (3 inches) bench space per bioreactor
- > Optimal tool for DoE and scale down approaches
- > Agitation control supporting overhead-driven Rushton, marine-type or pitched blade impellers
- > Innovative liquid-free temperature control system needs no coolant agent supply and supports independent temperature control for each bioreactor
- > Accurate monitoring and control of pH, DO and level
- > Variable speed pumps for accurate liquid addition and operation in batch, fed-batch, continuous and cyclic perfusion mode
- > 4 mass flow controllers per bioreactor allow for individual mixing of air, N<sub>2</sub>, O<sub>2</sub> and CO<sub>2</sub> to headspace and/or submerged
- > Novel liquid-free Peltier exhaust condenser with easy to handle slide in – slide out activation and deactivation
- > DASware control software for advanced process control
- > Compatible with DASware Software Suite for interconnectivity and bioprocess information management



### DASGIP Parallel Bioreactor Systems 0.2 - 3.8 L working volume

#### Product features

- > Parallel operation of up to 16 glass or single-use bioreactors
- > DASGIP Bioblock for advanced and user-friendly temperature control or temperature control via heat blankets and cooling fingers (benchtop bioreactors)
- > Suitable for cell culture, microbial fermentation and phototrophic cultivation
- > Modular design of control units allows for flexible system configurations that meet the demands of specific applications
- > Control of agitation, pH, level and DO (including customizable cascade modes) in each bioreactor
- > Variable speed pumps for accurate liquid addition and operation in batch, fed-batch, continuous and cyclic perfusion mode
- > Optical absorbance measurement for online calculation of e.g. OD<sub>600</sub> or cell dry weight
- > TMFC individual gas mixing of air, N<sub>2</sub>, O<sub>2</sub> and CO<sub>2</sub>
- > Online calculation of OTR, CTR and RQ
- > DASware control software for advanced process control
- > Compatible with DASware Software Suite for interconnectivity and bioprocess information management



BIOPROCESSING



On page 422 you will find detailed information on services for these products.

## Exceedingly Versatile – Bench Scale Fermentors and Bioreactors



**BioFlo 120**  
0.4 - 10.5 L working volume (autoclavable),  
0.25 - 40 L working volume (single-use)

### Product features

- > Updated flexible software platform for universal control of both microbial and cell culture applications
- > Easy-to-use, automated control for critical process parameters
- > Compatible with BioBLU Single-Use Vessels for fermentation and cell culture applications
- > Precise temperature control provided through interchangeable heat-blanketed or water-jacketed vessels
- > High precision thermal mass flow controller (TMFC) for automatic gas flow control
- > Automatic gas mix for four independent sparge gas supplies
- > Available analog input/output connection for direct integration of accessories (i.e. scales, variable-speed pumps, etc...)
- > Integrated 7 in touchscreen for local process control
- > Compatible with DASware Software Suite or BioCommand for bioprocess information management

**BioFlo 320**  
0.6 - 10.5 L working volume (autoclavable),  
0.25 - 40 L working volume (single-use)

### Product features

- > Interchangeable autoclavable and BioBLU Single-Use Vessels
- > Integrated Mettler Toledo® Intelligent Sensor Management (ISM) platform
- > Control up to eight systems from a single user interface
- > Universal control for both microbial and cell culture applications
- > Field-upgradable TMFC drawers for sparge and overlay gas
- > Enhanced software package with new cascade and time profile features
- > Built-in optical pH sensing technology for use with the BioBLU Single-Use Vessels
- > Ethernet communication for multi-unit control, Eppendorf SCADA software, and IP addressing
- > Up to six integrated pumps capable of operating in variable-speed mode
- > Eight independently controlled process gas supplies
- > Suitable for batch, fed-batch, and continuous processes
- > Validation packages available for GMP-regulated processes
- > Compatible with DASware Software Suite or BioCommand for bioprocess information management





Eppendorf offers a diverse range of standard impellers such as:

1. Pitched blade impeller
2. Marine impeller
- Rushton and Rushton-type impellers (not shown)

Eppendorf also offers special impellers which can facilitate continuous and perfusion processes:

3. Spin filter (shown with marine impeller)
4. Cell-lift impeller
5. Packed-bed basket impeller with draft tube for use with Fibra-Cel® disks (complete impeller assembly shown below)



**Impellers and Fibra-Cel disk options enhance growth and productivity**

Fibra-Cel disks are a solid support material used with packed-bed bioreactors for growth of adherent mammalian, animal and insect cells, when secreted proteins are desired. Key advantages:

- > Cell densities averaging 10 times higher than traditional microcarriers, due to protection from shear forces
- > Higher mass transfer of nutrients and oxygen
- > Low pressure drop across the bed for efficient scale-up
- > Higher surface-to-volume ratios

## Industry Standards Meet Flexibility - Sterilizable-in-Place Fermentors and Bioreactors



**BioFlo 510 and CelliGen 510**  
Bench- and pilot-scale SIP fermentor and bioreactor  
10.75 - 32 L working volume

### Product features

- > SIP bench and pilot scale reactors designed to meet the needs of R & D through production
- > Modular design allows for complete system flexibility
- > Add or remove components pre- or post-delivery
- > Multiple impeller and gas flow options
- > Features intuitive RPC control software and touchscreen interface
- > Optional Allen Bradley® PLC
- > Integrated load cell for online vessel volume monitoring
- > Fully automated SIP sequence for sterilization
- > Validation packages available
- > 7 additional analog input/output connections for local integration of ancillary equipment
- > ASME-rated pressure vessel



**BioFlo 610**  
Pilot-scale SIP fermentor  
13 - 100 L working volume

### Product features

- > Integrated mobile skid simplifies transport
- > Pilot production system without the traditional cost or footprint
- > Modular design allows for complete system flexibility
- > Features intuitive RPC control software and touchscreen interface
- > Fully integrated load cell for online vessel volume monitoring
- > Validation packages available
- > 7 additional analog input/output connections for local integration of ancillary equipment
- > ASME-rated pressure vessel

i For more information go to [www.eppendorf.com](http://www.eppendorf.com)



**BioFlo Pro**  
Large-scale SIP fermenter,  
45 - 1,200 L working volume

**Product features**

- > Large-scale industrial system supporting operation in accordance to cGMP and GAMP® guidelines
- > Modular design with over 100 options allows for high level of customization pre and post delivery
- > Multiple validation package offerings
- > Open piping skid allows for easy accessibility
- > NEMA-4 (IP65) rated control cabinet with industry-standard Allen Bradley PLC
- > Flush mounted vessel ports for enhanced vessel design and drainability
- > Multiple impeller and gas flow options
- > Optional validation packages available
- > ASME-rated pressure vessel



# BioBLU® Single-Use Vessels – Dependability through Proven Design

## Single-use simplicity

With renowned polymer expertise, Eppendorf is proud to offer the largest portfolio of rigid walled stirred-tank single-use vessels – in small and bench scale, to be operated with parallel DASbox Mini Bioreactor System, DASGIP Parallel Bioreactor Systems or BioFlo bench scale systems.



From 65 mL to 40 L, working volume, Eppendorf has a single-use solution to meet your needs

## Product features

- > Proven performance and scalability of stirred-tank design
- > User-friendly set-up for rapid turnaround, shorter development times and lower operating costs
- > Specifically adapted designs available for microbial applications
- > Packed-bed configuration with Fibra-Cel disks is ideal for perfusion/continuous processes
- > USP Class VI and animal component-free materials, making vessels appropriate for GMP production
- > Non-invasive or industry standard sensor technology



#### BioBLU c Single-Use Vessels for cell culture applications

Single-use solutions for small and bench scale cell culture applications. A full portfolio of vessels covers a working volume range of 100 mL - 40 L, offering unmatched scalability. The single-layer polymer design mitigates issues related to leachables and extractables.



#### BioBLU 5p Single-Use Vessel with packed bed

For the cultivation of adherent cells and for perfusion processes we offer the BioBLU 5p packed-bed vessel. It utilizes the proprietary Eppendorf packed-bed impeller design and is pre-loaded with Fibra-Cel disks. Providing a shear-free environment, it is a premium choice in a wide variety of applications, including the production of secreted products and stem cell culture.



#### BioBLU f Single-Use Vessels for microbial applications

Single-use solutions for small and bench scale fermentation applications, covering a working volume range of 65 mL - 3.75 L. Compared to cell culture applications, fermentation processes have much higher mass transfer and heat removal requirements. Proven stirred-tank design, powerful overhead drives featuring Rushton-type impellers, and innovative baffles for cooling make it possible for the BioBLU f vessels to achieve these demands, and make them a premium solution for microbiology.



#### BioBLU Single-Use Vessel Adaptor Kits

BioBLU vessels are designed for use with the Eppendorf DASbox and DASGIP systems, BioFlo 120, and BioFlo 320. A range of adaptor kits is offered as well, enabling your existing bioreactor system for single-use operation without the expense of replacing the whole system.

BioBLU Single-Use Vessel bundles provide you with highest flexibility. Capable of switching between single-use and reusable bioreactor systems.

# Eppendorf Bioprocess Software – Much More Than Just Bioprocess Control

Eppendorf offers BioCommand and DASware control Supervisory Control and Data Acquisition (SCADA) software packages for advanced bioprocess control. Next-generation bioprocess management is provided by the comprehensive DASware software suite.



Eppendorf bioprocess software solutions – advanced monitoring and control through comprehensive information management

## BioCommand software

Enhances your ability to monitor, control and log data from your fermentation and cell culture processes through your personal computer. Three distinct packages provide the tools needed for research, optimization, and if needed, the security and audit trails to support your regulatory requirements.

- > **Track and Trend:** Provides the ability to trend and control parameter setpoints, establish alarm settings, and produce batch records; and is ideal for basic process management
- > **Batch Control:** Additional enhanced control features including a sophisticated programming module, custom synoptic display window, and equipment lock-out feature
- > **Batch Control Plus:** Includes three levels of security, event logs, and audit-trail capabilities to be compatible with the FDA 21 CFR Part 11

Features	Track and Trend	Batch Control	Batch Control Plus	DASware control
Batch info	■	■	■	■
User-defined event log	■	■	■	■
Summary	■	■	■	■
Loop info	■	■	■	■
Alarms	■	■	■	■
Trend graphs	■	■	■	■
Data log	■	■	■	■
Reports	■	■	■	■
Graphical programming		■	■	
Script programming		■	■	■
Synoptic display		■	■	■
Equipment lock-out		■	■	■
Audit trail/security			■	■
21 CFR Part 11			■	■ <sup>1)</sup>
OPC compliance	■	■	■	■
Parallel calibration				■
DASware compatibility				■

<sup>1)</sup> 21 CFR Part 11 compatibility is available for DASware control as an optional package. Please contact us for further information.

### DASware control software

Is at the core of all DASbox and DASGIP systems and was designed for parallel cultivation with individual control of each bioreactor. Parallel calibration and cleaning procedures are supported as well as integrated batch functionality for process and recipe management. It features easy one-click start, configurable online charts, trending, logging rates and online configurable control parameters and profiles. Full controller scripting eases scale-up and scale-down. Automated data export, reporting and chart creation with Microsoft® Excel® add-in as well as professional database with managed access (Microsoft® SQL Server®) support advanced reporting and data processing. DASware analyze and DASware connect enable OPC client/server functionality.



### DASware software suite

Next-generation bioprocess management

A suite of smart and flexible software solutions to accelerate bioprocess development. It enables interconnectivity of bioreactors with external lab devices, comprehensive data- and information management, Design of Experiments (DoE) and remote control of bioprocesses. DASware can be used with any Eppendorf benchtop bioreactor solution.



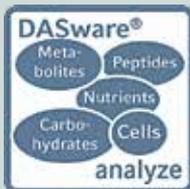
#### DASware access

- > Remote monitoring and control of bioprocesses via PC, Notebook and Netbook or with the DASGIP iApp via iPhone®, iPod touch® and iPad®



#### DASware design

- > Applies the Design of Experiments (DoE) concept via a full factorial DoE builder or by importing DoE designs from third-party DoE tools



#### DASware analyze

- > Seamless integration of external lab devices to the bioreactor allows for process automation and feedback control loops



#### DASware discover

- > A comprehensive and user-friendly information management solution for bioprocessing



#### DASware connect

- > Integration into process control systems and legacy corporate historians facilitating company-wide access to all relevant bioprocess data

# OEM/Customized Solutions

## Your Global Supplier for Products and Solutions



### OEM Products

- > Innovative Technology
- > Cutting-Edge Development
- > Highest Quality Standard
- > Eppendorf manufactured

### Description

Customized Solutions products are Eppendorf products that have been tailored to the individual requirements of major customers.

The Customized Eppendorf Automation Tips can be found offering solutions to requirements, such as:

- > Conductive
- > Non-conductive
- > Special tray colors
- > Dimensions
- > Materials
- > Packaging
- > Alternative labeling

For increased convenience printing your company name and identification of products on plates can be easily carried out.

Our OEM portfolio offers further options such as:  
Special purity degree: "customized clean".

**The flexibility of Eppendorf OEM/Customized Solutions options are designed to fit your highest demands. Examples of customized items:**

- > Modified packaging
- > Customized designs or logos

i For more information go to [www.eppendorf.com/OEM](http://www.eppendorf.com/OEM)

## Customized Liquid Handling Robots and Cyclers

We offer OEM PCR cyclers for a range of applications including diagnostic use:

- > Silver or aluminum block
- > With or without gradient function
- > Flexlid for a wide range of consumables

Customization according to your needs is our business!



### Description

A selection of Eppendorf instruments are available for OEM opportunities including the *epMotion*<sup>®</sup>, a liquid handling workstation developed and manufactured by the Eppendorf liquid handling experts.

The range of Eppendorf *epMotion* workstations provides an open OEM platform for many application workflows including:

- > PCR sample preparation
- > NGS
- > Solid phase extraction

**epServices**  
for premium performance



Application Support



Seminars  
and Trainings



Technical Service  
and Support



Maintenance  
and Certification

# epServices

Eppendorf is known as a market leader in providing outstanding quality and consistently reliable instruments and consumables. Above all, we are committed to providing sincere, reliable services and tools to help you maintain premium performance, and maximum safety of our instruments and your applications. These services are performed by our dedicated Application, Training, and Technical Service teams worldwide.

[www.eppendorf.com/epServices](http://www.eppendorf.com/epServices)

# For Premium Performance

## Premium services for your laboratory instruments

### Preventive Maintenance

Preventive maintenance is a schedule of planned service measures aimed at the prevention of unexpected downtimes and failures through routine maintenance and early detection of problems. Eppendorf offers service programs to meet your individual needs, and to keep your instruments in perfect working order.

### ESSENTIAL CHECK

Check of all fundamental functions of the product

### ADVANCED MAINTENANCE

Preventive maintenance service to meet manufacturer specifications

### PREMIUM SERVICE

Complete maintenance and repair service agreement solution for your peace of mind



### Calibration and Verification

Regular calibration and verification services ensure the precision and accuracy of your instrument and pipetting tool is maintained, and that your results are consistent and reliable. We offer a range of service options from quick calibration to custom designed calibration services (i.e. GLP). The resulting certificates support the documentation for your Quality Management System. We also provide pipette calibration services according to ISO 17025 in our major markets.

### IQ/OQ Services

Installation Qualification & Operational Qualification services assure that instrumentation is installed and running according to manufacturer specifications. IQ/OQ documentation is supplied to help you prepare for your quality and regulatory audits.



### Certification Support

Certification Support is designed to safeguard your results and to ensure compliance with your laboratory guidelines with the necessary certification documents.

All certificates and Material Safety Data Sheets (MSDS) are provided for download on [www.eppendorf.com/epServices](http://www.eppendorf.com/epServices)



### Application Support

Are you having trouble with a protocol or are not sure how to use a piece of Eppendorf equipment? We are happy to advise and assist you via phone or our website e-mail contact form at our worldwide Eppendorf Support Centers.

# More Than Reliable Products

**eppendorf**

Performance tested on

Model: \_\_\_\_\_

Serial no.: \_\_\_\_\_

Serviced by: \_\_\_\_\_

Service no.: \_\_\_\_\_

Next service: \_\_\_\_\_

Date: \_\_\_\_\_

**epServices**  
for premium performance



**Phone Support:**  
800-645-3050

**Hours of Operation:**  
8:30 a.m – 6:00 p.m. EST

**Customer Support:**  
custserv@eppendorf.com

Field Service available in corresponding local time.

- > **Application support**  
Our specialists are here to help
- > **Technical support**  
To address technical product inquiries
- > **Customer service**  
To support order and business needs
- > **Quality and regulatory support**  
To support Quality Management System (QMS)
- > **Training**  
Increase knowledge and abilities
- > **Installation and Operational Qualification (IQ/OQ)**  
Be prepared for audits
- > **Preventive Maintenance**  
Keep all instruments in top working order
- > **Calibration and validation**  
Ensure that all instruments are functioning precisely and accurately

#### Premium services for laboratories

Preventive Maintenance ensures system reliability by early detection and solving of problems. Our certification packages provide calibration, verification, Installation Qualification/Operational Qualification (IQ/OQ) services for instruments ensuring precision and accuracy according to manufacturer or customer requirements. Complete documentation is provided in compliance with legal guidelines and standards.

A comprehensive range of service programs including Preventive Maintenance and certification services build the basis for the premium support from Eppendorf worldwide. These services—from economical to worry-free packages—are available as Eppendorf Performance Plans for instruments and pipettes.

For further information please visit  
[www.eppendorf.com/epServices](http://www.eppendorf.com/epServices)

#### Sole Source Provider Statement

Eppendorf North America, Inc. is the sole provider authorized to service all Eppendorf products which include, New Brunswick™ and DASGIP® within the U.S. and Canada. Freezer service will be carried out by approved third party partners.

All test equipment used for preventive maintenance and calibrations by our trained and certified Eppendorf Engineers are traceable to NIST standards. Training records as well as NIST traceable certificates are kept on file at Eppendorf North America in Hauppauge, N.Y. and are available upon request.

# Shipping and Installation

## White Glove Delivery

To ensure long term satisfaction and safe set-up of the system we highly recommend this service. White glove delivery means delivery and unpacking of the instrument into the laboratory, it does not include installation, set-up, or stacking. Also known as Turnkey Service, below is the default flat fee delivery cost. Price may be adjusted depending on delivery logistics (for example: liftgate needed, no elevator, etc) contact customer support to get a closer to exact price for the order if necessary.

## Liftgate Service

LIFTGATE must be added to orders where the loading dock is not level with the truck bed. The liftgate is the device on the back of the delivery vehicle that operates by raising and lowering during loading and unloading of the instrument.

## Stacking Information

Stack charges are billed for ANY additional lifting. White glove delivery is typically using dollies, pallet jacks, etc. to move the instrument from the loading dock to the final lab location.

Placing items on top of another instrument or base/riser and/or table requires an additional fee. This also usually involves labor to secure brackets/mounting hardware.

STACK1 (stack one item-typically putting the instrument on a base/riser), STACK2 (double stacking on top of another instrument and/or base), STACK3 (triple stacking typically for a triple stack shaker) which usually requires a hydraulic lift/ additional equipment.

## Installation Guidance

Typical installation should include 1 x TECH-INSTL, 1 x SHIPPINGTURNKEY, STACK1, STACK2, and STACK3 depending on number of units.

Shipping Logistics <sup>1</sup>	Catalog No.	List USD
White Glove Shipping	SHIPPINGTURNKEY	\$1,300.00
Dock to Dock	SHIPPINGD2D	677.00
Inside Delivery	SHIPPINGINHOUSE	1,040.00
Liftgate	LIFTGATE	153.00
Stack 1	STACK1	510.00
Stack 2	STACK2	765.00
Stack 3	STACK3	1,785.00

<sup>1</sup> For product specific shipping logistics, see pages specific to product.

## Installation Logistics

An Eppendorf Field Service Engineer (FSE) will be on-site at the time of white glove delivery to assure proper installation of the system. The FSE will assure that the system is assembled and/or installed in a complete fashion, then follow up with an additional 2 hours of support for the customer. This will be dependent upon the instrument and/or customer's request. For CO<sub>2</sub> incubators, that could mean connecting the pressure regulator and gas lines and setting the pressures; for other equipment, a review of the instrument panel and how to use and/or maintain and clean the system or even install clamps onto the platforms. The warranty period for the instrument will begin once the installation is complete or 30 days after shipment, whichever is first.

Installation Logistics <sup>2</sup>	Catalog No.	List USD
Installation with FSE	TECH-INSTL	\$510.00

<sup>2</sup> For product specific installation logistics, see pages specific to product.

# Pipette Performance Plans

## Value of Service

A 3-year warranty comes with all Research plus, Reference® 2, and Repeater® M4 Liquid Handling instruments. A 2-year warranty comes with all Xplorer®, Xplorer plus, Repeater E3, Repeater E3x, Varispenser® 2, Varispenser 2x, TopBuret™, and Easypet® 3. Choose from various calibration, repair, and maintenance services to ensure optimal performance and keep the instrument running smoothly for years to come. Service provided for ALL brands and models of pipettes.

Get started today at: [epexpress.eppendorf.us](http://epexpress.eppendorf.us)

## Service Center

Our send in program is processed at our state of the art facility to ensure accuracy and traceability of the instruments. It's fast and easy to send us pipettes for calibration and repair. Visit our online epExpress Pipette Service Center at [epexpress.eppendorf.us](http://epexpress.eppendorf.us). Complete the online Service Authorization Form and get a real-time quotation based on specific calibration service requirements.



## On-site Service

Our on-site program provides all the benefits we provide with our send in program, but we process pipettes at the customer's facility. Our Eppendorf Field Pipette Calibration Specialists deliver the same thorough quality service in the environment in which the pipettes are used. Travel fees may be applied and minimum quantities are required.

Certification Services (IQ/OQ)*	Catalog No.	List USD
Xplorer IQ/OQ	901510176	\$1,096.00
Each add. IQ/OQ Single-channel	901513676	224.00
Each add. IQ/OQ 8-channel	901510178	548.00
Each add. IQ/OQ 12-channel	901510179	822.00

\* 901510176 provides service for 1 unit, additional charges shown will apply for additional units. Travel is included.

Extended Warranty	Catalog No.	List USD
Xplorer Single-channel	901510669	\$ 96.00
Xplorer Multichannel	901510659	178.00
Repeater E3/E3X	901510679	178.00

Additional Fees	Catalog No.	List USD
Pipette handling and shipping charge	901510240	\$20.50
Pipette Advantage cert. report	901510201	12.00
Pipette return without repair	901513368	12.00
Pipette discard	901513370	12.00

Additional readings at Service Center		
single-channel	901510193	2.00
multichannel	901513402	1.50

Additional readings on-site		
single-channel	901510183	2.00
multichannel	901513400	3.00

Procedures	Advantage Calibration	Advantage Certification	GLP/GMP Custom Calibration	ISO 17025 Accredited Service
Internal and external inspection of pipette	■	■	■	■ <sup>5</sup>
Internal and external cleaning of pipette	■	■	■	■ <sup>5</sup>
Replacement of worn or broken parts, if needed <sup>2</sup>	■	■	■	■ <sup>5</sup>
Calibration performed <sup>3</sup>	■	■	■	■
<b>Number of measuring points</b>	■			
single-channel, fixed-volume:	8	8	Based on customer requirements;	Based on customer requirements for
single-channel, adjustable-volume:	4 low/4 high	4 low/4 high	may include "as found" data	"as found" and "as returned"
multichannel:	2 readings per channel low/high	2 readings per channel low/high		
<b>Individual weighing results</b>				
measured:	■	■	■	■
recorded:	-	■	■	■
Calibration label applied to pipette	■	■	■	■
Data supplied via comprehensive individual unit report	-	■	■	■
Data supplied via comprehensive multi-unit report	-	-	-	-
<b>Service Center (manual or electronic pipette)</b>	<b>Catalog No.</b>	<b>Catalog No.</b>	<b>Catalog No.</b>	<b>Catalog No.</b>
Single-channel	901510194	901510190	901510203	901513334
<b>List USD</b>	\$30.00	\$41.00	\$41.00	\$54.00
8-channel	901510195	901510191	901510202	901513336
<b>List USD</b>	\$69.00	\$90.00	\$85.00	\$107.00
12-channel	901513516	901513522	901513528	901513338
<b>List USD</b>	\$74.00	\$95.00	\$90.00	\$117.00
Repeater	901510194	-	-	-
<b>List USD</b>	\$30.00	-	-	-
Bottletop dispensers	901510302	901510304	901510306	Inquire
<b>List USD</b>	\$69.00	\$85.00	\$85.00	Inquire
<b>On-site Service (manual or electronic pipette)</b>	<b>Catalog No.</b>	<b>Catalog No.</b>	<b>Catalog No.</b>	<b>Catalog No.</b>
Single-channel	901510184	901510180	901510198	901513396 <sup>6</sup>
<b>List USD</b>	\$33.00	\$44.00	\$44.00	\$63.00
8-channel	901510185	901510181	901510199	901513396 <sup>6</sup>
<b>List USD</b>	\$72.00	\$93.00	\$88.00	\$125.00
12-channel	901513514	901513520	901513526	901513396 <sup>6</sup>
<b>List USD</b>	\$79.00	\$100.00	\$95.00	\$135.00

<sup>1</sup> External inspection only. <sup>2</sup> Please inquire with our customer service department for on-site service. Spare parts at an additional cost if needed. Please note that there will be a \$12 fee for units returned without repair and/or discarded upon customer request. <sup>3</sup> Calibrations are performed to manufacturer's specifications using a NIST-traceable, semi-micro (0.00001 g) balance. ISO 8655 standards are used for QuickCheck Verify. <sup>4</sup> Inspection label. <sup>5</sup> ISO/IEC 17025 accreditation only pertains to calibration services, not to cleaning, inspection, or part replacement. <sup>6</sup> Please inquire, may not be available in all areas.

# epMotion Performance Plans

## Value of Service

A 1-year warranty comes with all epMotion Liquid Handling Workstations. All epMotion tools come with a 2-year warranty. Choose an Extended Warranty, Essential Check, Advanced Maintenance, Premium Service, or Certification Services to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

## Advantage OS<sup>1</sup>

Covers all parts and labor for 1 complete Advanced Maintenance visit, 1 repair visit and 4 dispensing tool calibrations. For systems with the CleanCap option, the HEPA filter will be replaced during an Advanced Maintenance visit.



## Field Service Only

Advantage OS <sup>1</sup>	Catalog No.	List USD
5070	901513580	\$3,610.00
5073	901513582	4,070.00
5075	901513584	6,180.00

Extended Warranty <sup>1</sup>	Catalog No.	List USD
5070	901513586	\$4,120.00
5073	901513588	5,360.00
5075	901513590	8,240.00

<sup>1</sup> If not purchased with the system or after the warranty period a qualifying Preventive Maintenance is required, additional exclusions apply.

epMotion Tool Calibration Service Summary	epMotion Tool Certification	epMotion Tool GLP/ GMP Custom
<b>Single-channel pipetting tool<sup>2</sup> Catalog No.</b>	<b>901510597</b>	<b>901510600</b>
List USD (shipping not included)	\$230.00 (includes 4/4/4 as returned only)	\$270.00 plus \$1 per extra reading (901510603)
<b>Multichannel pipetting tool<sup>2</sup> Catalog No.</b>	<b>901510599</b>	<b>901510602</b>
List USD (shipping not included)	\$390.00 (includes 4/4/4 as returned only)	\$460.00 plus \$1 per extra reading (901510603)
<b>Procedures</b>		
Internal/external inspection and cleaning of pipetting tool	Yes	Yes
Replacement of worn or broken parts <sup>2</sup>	Yes	Yes
Pipette calibration performed using NIST-traceable, semi-micro (0.00001 g) balance <sup>3</sup>	Yes	Yes
Number of measuring points:		As requested, based on customer requirements; may include "as found" data. Min 4/channel Max 10/channel
single-channel tool	4 low/mid/high	
multichannel tool	4 low/mid/high per channel	
Individual weighing results (measured/recorded):	Yes	Yes
Mean volume, inaccuracy and imprecision values measured and recorded	Yes	Yes
Calibration label applied to pipetting tool	Yes	Yes
Calibration report supplied	Yes	Yes

<sup>2</sup> Spare parts additional if needed.

<sup>3</sup> Calibrations are performed to ISO 8655 standards.

Performance Plans	■ ESSENTIAL CHECK	■ ADVANCED MAINTENANCE	■ PREMIUM SERVICE <sup>1</sup>	Installation Qualification (IQ)	Operational Qualification (OQ) <sup>2</sup>
<b>Group 1 – epMotion 5070</b>	0082030013	0082030014	0082030015	0082030017	0082030018
<b>Group 2 – epMotion 5073</b>	0082030033	0082030034	0082030035	0082030037	0082030038
<b>Group 3 – epMotion 5075</b>	0082030023	0082030024	0082030025	0082030027	0082030028
<b>Cleaning and Maintenance</b>					
Cleaning of housing/accessories	■	■	■		
Checking epMotion for external visible damages	■	■	■	■	■
Exchange of CAN bus cables/O-rings of dispensing tools		■	■		
Software update <sup>3</sup>	■	■	■		■
Tool Calibrations included	–	4	6	–	4
<b>Functional Check</b>					
Instrument set-up, initial operation, instruction of user				■	
Tip ejector, level sensor and carrier	■	■	■		■
Barcode Scanner with epBlue™ ID <sup>3</sup>	■	■	■		
Thermal modules <sup>3</sup> and vacuum chamber <sup>3</sup>	■	■	■	■	■
TMX module/TMX module with Magnetic Finger module <sup>3</sup>	■	■	■	■	■
UV light/CleanCap (HEPA Filter) <sup>3</sup>	■	■	■	■	■
<b>Memory</b>					
Evaluation of stored data		■	■		
<b>Verification</b>					
Calibration/adjustment of level sensor and carrier		■	■	■	■
Calibration/adjustment of vacuum chamber and modules <sup>3</sup>		■	■		
Verification of operating parameters acc. to specifications					■ <sup>4</sup>
<b>Documentation</b>					
Check List provided	■	■	■		
Dated service sticker to confirm Eppendorf service	■	■	■	■	■
IQ Report and Certificate				■	
OQ Report and Certificate					■
<b>Supporting Information</b>					
Technical Application Service	not included	not included	included	not included	not included
Travel	not included	not included	included	included	not included
Time/Labor	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included

**Additional catalog numbers for combined Installation and Operational Qualification (IQ/OQ) and GxP services are listed below. Travel, time, and labor are included. 4 tool calibrations are included. Additional parts are not included.**

> IQ/OQ for 5070: 0082030019

> IQ/OQ for 5073: 0082030039

> IQ/OQ for 5075: 0082030029

> Custom Service Contract: 5070005052

<sup>1</sup> epMotion Premium Service includes a single on-site Technical Application Service support visit if needed. <sup>2</sup> Non GxP, for GxP see table above. <sup>3</sup> Where feature is present. <sup>4</sup> The detailed certification service contents are listed in the OQ Report.

# epMotion Service and Support

## Application Support—Method Development

Intended for both new and existing instruments. Eppendorf will provide the on-site support to program the desired application methods for a single application as well as optimize all liquid classes needed for the application, to the best of the instrument's capability. Upon completion, the application will be presented for approval by the user.

Application Support <sup>1</sup>	Catalog No.	List USD
Application Implementation 1: epMotion	0082030160	Inquire
Application Implementation 2: epMotion	0082030161	Inquire
Application Implementation 3: epMotion	0082030162	Inquire

<sup>1</sup> Application Support is only available for systems currently under contract, prior authorization must be obtained before quoting.

## Application Service

This service provides for on-site support to address customer application issues to restore expected outcomes by our highly qualified and professional consultants. This support is designed for short term recovery and may include optimization aspects but it will be limited to single event and of duration no longer than a day and a half. There is no guarantee nor warranty implied by this service and it does not include reagents, service spares or consumables. The service does include all travel and labor fees associated with the visit.

Application Service <sup>2</sup>	Catalog No.	List USD
Technical application service	901513628	Inquire

<sup>2</sup> Application Service is only available for systems currently under contract, prior authorization must be obtained before quoting.

epMotion Shipping, Install, and Training	Catalog No.	List USD
epMotion shipping <sup>3</sup>	955989020	\$ 620.00
epMotion installation <sup>4</sup>	955989030	1,500.00
epMotion training	955989040	1,800.00
epMotion GxP training <sup>5</sup>	901510587	1,800.00

<sup>3</sup> Depends on weight and distance.

<sup>4</sup> Up to 2 systems.

<sup>5</sup> Compliance training, must be quoted with all installation charges for all GxP systems.

## Customer Responsibilities:

- > All liquids/reagents and consumables (tips, plates, tubes etc.) needed must be provided by the user
- > All equipment (epMotion and tools) must be calibrated and in good working condition prior to the initiation of the support agreement
- > This contract does not include or guarantee the generation of application relevant data

## Service for epMotion GxP Systems

During the installation and/or operational qualification, the epMotion is checked and results are documented for the system and applicable software to comply with U.S. Federal Law 21 CFR 11, the EU GMP Guideline Annex 11, and the GAMP 5 Guideline. Customers who purchase GxP IQ/OQ or OQ services, when they purchase additional service plans for these systems, will also be provided service according to customer's Quality System requirements under these GxP guidelines.

epMotion GxP Certification	Catalog No.	List USD
OQ for 5070	901513646	\$2,740.00
OQ for 5073	901513648	3,030.00
OQ for 5075	901513650	4,330.00
IQ/OQ for 5070	901510581	3,610.00
IQ/OQ for 5073	901513642	4,120.00
IQ/OQ for 5075	901513644	5,770.00

# epMotion 96 Performance Plans

## Value of Service

A 1-year warranty comes with the epMotion 96. Choose an Extended Warranty, Essential Check, Advanced Maintenance, Premium Service, or Certification Services to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

epMotion 96 service is currently available only at the Calibration Service Center in Shrewsbury, MA. On-site Field Service at the customer's location is not available. To assure the highest performance, specialized precision equipment and methods are required to validate the system after all services. This can only be appropriately done in house. Custom cases are available for the epMotion 96 and the new Ship Safe and Evaluation Plan make it easier than ever to support our customers.

Eppendorf recommends the unit be serviced once per year to ensure the dispensing values comply with the limit values defined in the ISO 8655 standard.



Installation and Training	Catalog No.	List USD
epMotion 96	901513692	\$1,995.00

Extended Warranty	Catalog No.	List USD
epMotion 96	901513512	\$2,115.00

## Service Center Only

Flat Fee Repair Service	Catalog No.	List USD
epMotion 96	901513530	\$2,540.00

Performance Plans	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)
<b>Catalog No.</b>	0082030003	0082030004	0082030005	0082030007	0082030008
<b>List USD</b>	\$425.00	\$2,010.00	\$3,065.00	\$1,005.00	\$2,220.00
<b>Checks and Maintenance</b>					
Cleaning		■	■		
Lubrication of dispensing head		■	■		
Checking of 96 O-rings from cones		■	■		
Software/firmware update if applicable		■	■		
<b>Verification (Calibration)<sup>1</sup></b>					
Leak Test (50 µL + 300 µL)	■	■	■	■	■
Gravimetric Test - systematic error (50 µL + 300 µL)		■	■		■
Photometric Test - random error (2 volumes)		■	■		■
<b>Documentation</b>					
Check List provided	■	■	■		
Dated service sticker to confirm Eppendorf service	■	■	■	■	■
Calibration Report		■	■		■
IQ Report				■	
OQ Report/Certificate					■
<b>Supporting Information</b>					■
Travel/Shipping	not included	not included	included	included	not included
Time/Labor	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included

Travel, time, and labor are included. Additional parts are not included.

> IQ/OQ for epMotion 96: 0082030009

<sup>1</sup> Calibrations are performed to ISO 8655 standards.

# Sample Preparation Instrument Performance Plans



## Value of Service

A 2-year warranty comes with all Sample Preparation instruments including, MixMate®, ThermoMixer®/Stat and Vacufuge® plus. Choose an Extended Warranty, Essential Check, Advanced Maintenance, Premium Service, Certification Services, or Flat Fee Repair to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

## Preventive Maintenance

The Sample Preparation Instrument Performance Plans offer a choice of Preventive Maintenance services for consistent instrument performance and confidence in results.

Preventive Maintenance	Catalog No.	List USD
Vacufuge (Any system)	901510664	\$380.00

## Certification Services (IQ/OQ)

Installation Qualification (IQ) and Operational Qualification (OQ) certification services ensure Quality Management requirements are fulfilled, providing the customer with qualified assurance that their instrument is functioning correctly, in accordance with manufacturer's specifications.

Certification Services <sup>1</sup>	Catalog No.	List USD
Vacufuge IQ (Any system)	0082020010	\$ 815.00
Vacufuge OQ (Any system)	0082020011	485.00
Vacufuge IQ/OQ (Any system)	0082020012	1,120.00

<sup>1</sup> Travel, time, and labor are included with IQ and IQ/OQ, but not OQ.



## Temperature Validation/Calibration

The performance of the system's heating block will be verified against manufacturer's specifications. A calibration, if required, and subsequent temperature validation will be performed. The report provides the instrument's temperature profile as per manufacturer's specifications. An initialed and dated service label will be affixed to the instrument upon completion of this service.

Temperature Validation	Catalog No.	List USD
ThermoMixer/Stat	901510668	\$280.00

Extended Warranty	Catalog No.	List USD
ThermoMixer/Stat/MixMate	901513556	\$360.00
Vacufuge (Any system)	901510672	960.00

## Service Center Only

Flat Fee Repair Service	Catalog No.	List USD
ThermoMixer/Stat/MixMate	901513558	\$ 930.00
Vacufuge (Any system)	901520042	2,055.00

Performance Plans	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)
<b>Catalog No. for ThermoMixer/ThermoStat/MixMate</b>	0082100003	0082100004	0082100005	0082100007	0082100008
<b>List USD</b>	\$90.00	\$180.00	\$1,030.00	\$725.00	\$310.00
<b>External Checks &amp; Maintenance</b>					
Cleaning of housing		■	■		
Visual check of housing	■	■	■		
Visual check of plate holder		■	■		
Cleaning of accessories		■	■		
Visual check of accessories	■	■	■		
<b>Internal Equipment &amp; Fittings</b>					
Cleaning of internal parts and assemblies		■	■		
Visual check of internal parts and assemblies		■	■		
Visual check of electrical connection		■	■		
<b>Functional check</b>					
Check of delivery				■	
Instrument set-up and initial operation				■	
Instruction of user				■	
LED, display, and keyboard check		■	■		
Check of vortex sensor		■	■		
Functional check with service functions		■	■		
Check of SmartBlock or exchangeable thermoblock detection	■	■	■		■
Check of mixing, heating, cooling, and vortexing <sup>1</sup>	■	■	■		
Check and measurement of mixing, heating, cooling, and vortexing <sup>2</sup>					■
Check of overload protection		■	■		
Check of fans		■	■		
Check of ThermoTop detection		■	■		
Check of timer					■
<b>Memory</b>					
Evaluation of stored data	■	■	■		
<b>Documentation</b>					
Check list provided	■	■	■		
Dated service sticker to confirm Eppendorf service	■	■	■	■	■
IQ Report and Certificate				■	
OQ Report and Certificate					■
<b>Supporting Information</b>					
Travel	not included	not included	included	included	not included
Time/Labor	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included

**Additional catalog number for combined Installation and Operational Qualification (IQ/OQ) services is listed below. Travel, time, and labor are included. Additional parts are not included. 0082100009, List USD \$825.00**

<sup>1</sup> Where feature is present.

<sup>2</sup> The detailed certification service contents are listed in the OQ Report.

# Centrifuge Performance Plans

Centrifuge groups	Includes
<b>Group 1—Non-refrigerated microcentrifuge</b>	MiniSpin/plus Centrifuge 5418 Centrifuge 5424 Centrifuge 5425 Centrifuge 5430
<b>Group 2—Refrigerated microcentrifuge</b>	Centrifuge 5415 R Centrifuge 5417 R Centrifuge 5418 R Centrifuge 5424 R Centrifuge 5427 R Centrifuge 5430 R
<b>Group 3—Non-refrigerated multipurpose centrifuge</b>	Centrifuge 5702 Centrifuge 5804 Centrifuge 5810
<b>Group 4—Refrigerated multipurpose centrifuge</b>	Centrifuge 5702 R Centrifuge 5702 RH Centrifuge 5804 R Centrifuge 5810 R Centrifuge 5910 R Centrifuge 5920 R



Extended Warranty	Catalog No.	List USD
Group 1	901513548	\$ 310.00
Group 2	901513550	670.00
Group 3	901513552	750.00
Group 4	901513554	1,265.00

## Field Service Only

Advantage OS	Catalog No.	List USD
Group 1	901513540	\$ 825.00
Group 2	901513542	1,030.00
Group 3	901513544	1,135.00
Group 4	901513546	1,495.00

## Service Center Only

Flat Fee Repair Service	Catalog No.	List USD
Group 1	901513536	\$ 620.00
Group 2	901513538	1,550.00
Group 3 <sup>1</sup>	901513652	1,802.00
Group 4 <sup>2</sup>	901513654	2,575.00

<sup>1</sup> 5702 Only.

<sup>2</sup> Refrigeration repairs only.

## 5920 R Complete Service Bundle

The 5920 R Complete Service Bundle is an all-inclusive package that will provide coverage from order placement through every day operation. It offers peace-of-mind that includes delivery, installation, the first Advanced Maintenance and 2 x Visual rotor checks<sup>3</sup> which are covered to keep the 5920 R in proper working order.

5920 R Complete Bundle	Catalog No.	List USD
Complete Bundle	901513630	\$2,450.00

<sup>3</sup> Rotor checks are to be completed at the time of Advanced Maintenance.



### Value of Service

A 2-year warranty comes with all Eppendorf Centrifuges. Choose an Extended Warranty, Essential Check, Advanced Maintenance, Premium Service, Certification Services, Advantage OS, or Flat Fee Repair to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

Performance Plans	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)
<b>Catalog No. for Group 1</b>	0082020003	0082020004	0082020005	5424860036	0082020008
<b>List USD</b>	\$130.00	\$165.00	\$930.00	\$720.00	\$260.00
<b>Catalog No. for Group 2</b>	0082020013	0082020014	0082020015	5424860044	0082020018
<b>List USD</b>	\$180.00	\$220.00	\$1,160.00	\$775.00	\$310.00
<b>Catalog No. for Group 3</b>	0082020023	0082020024	0082020025	5810860040	0082020028
<b>List USD</b>	\$200.00	\$245.00	\$1,290.00	\$825.00	\$955.00
<b>Catalog No. for Group 4</b>	0082020033	0082020034	0082020035	5810860059	0082020038
<b>List USD</b>	\$250.00	\$290.00	\$1,640.00	\$930.00	\$1,080.00
<b>Cleaning and Maintenance</b>					
Cleaning of housing/Checking condensation water tray <sup>1</sup>	■	■	■		
Cleaning and checking of rotor bowl and internal parts		■	■		
Checking of instrument for any damage	■	■			■
Checking of stability, housing, display and keypad		■	■		
Checking of display and keypad/Software update if required		■	■		
Checking of lid latch	■	■	■		■
<b>Functional check</b>					
Instrument set-up/Initial operation/Instruction of user				■	
Checking of rotor detection	■	■			
Checking of temperature sensors <sup>1</sup> and speed sensor		■	■		■
Checking of imbalance detection <sup>1</sup>		■	■		
Performing system test run	■	■	■	■	■
<b>Memory</b>					
Evaluation of stored data		■	■		
<b>Verification</b>					
Verification of operating parameters according to specifications					■ <sup>2</sup>
<b>Documentation</b>					
Check List provided	■	■	■		
Dated service sticker to confirm Eppendorf service	■	■	■	■	■
IQ Report and Certificate				■	
OQ Report and Certificate					■
<b>Supporting Information</b>					
Travel	not included	not included	included	included	not included
Time/Labor	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included

Additional catalog numbers for combined Installation and Operational Qualification (IQ/OQ) services are listed below.

Travel, time, and labor are included. Additional parts are not included.

- > Group 1 - for microcentrifuge w/o refrigeration: 0082020009, List USD \$930.00
- > Group 2 - for microcentrifuge with refrigeration: 0082020019, List USD \$1,030.00
- > Group 3 - for multipurpose w/o refrigeration: 0082020029, List USD \$1,135.00
- > Group 4 - for multipurpose with refrigeration: 0082020039, List USD \$1,290.00

<sup>1</sup> Where feature is present.

<sup>2</sup> The detailed certification service contents are listed in the OQ Report.

# Rotor Performance Plans

## Value of Service

All Eppendorf centrifuge rotors and accessories come with a 1-year warranty. Customers can choose one of our inspection services and keep their rotor in safe operation for its lifetime.

## Inspection Services

Rotors and buckets are subject to normal wear and tear during regular operation and may be damaged as a result. Surface scratches, among others, can affect the chemical resistance and accelerate the corrosion process. The stress of high number of cycles increases the likelihood of microscopic cracks. These microcracks can be detected early on during a qualified inspection, which will allow the rotor to be exchanged before serious damage has occurred.

Our certified, qualified service Eppendorf engineers use sophisticated boroscope devices to detect invisible, yet critical, cracks and scratches. If none or very few surface changes are identified, the rotor can be used according to instructions—or for an additional year if the inspection was performed at the end of the recommended service life.



Inspection service for rotors	Recommended service periods
Visual rotor check <sup>1</sup>	Annually
Advanced rotor check	From twice per service life to annually

<sup>1</sup> For all Eppendorf rotors and accessories.



Rotor with "blistering" on the edge



Rotor with internal "pitting corrosion"



**Visual rotor check**

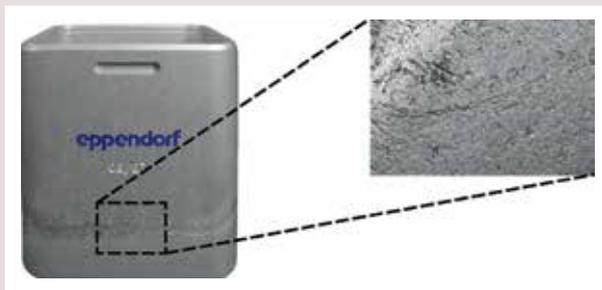
A complete and documented 25 step procedure from cleaning to operational testing is provided on each rotor. This visual protocol, depending on rotor, inspects all facets of the rotor including rotor, lids, seals, adapters, buckets, and all other components and surfaces. The process verifies correct rotor, components, loading conditions, other designations and period of use for compliance to safety and operational requirements.

**Advanced rotor check**

Using a state of the art fully commissioned boroscope, rotors are inspected on all surfaces, fixed angle bores or swing bucket pivot and mount points for signs of wear including cracks, corrosion or fatigue. Any areas of concern are documented by photography as a component to specific report which includes grading from Perfect to Defective with accompanying rotor sticker with rotor and scope components fully documented.



	<b>Group 1 Fixed-angle rotors</b>		<b>Group 2 Fixed-angle rotors</b>		<b>Group 3 Swing-bucket rotors and buckets</b>	
	All fixed-angle rotors for 1.5/2.0 mL tubes, PCR strips, 5.0 mL tubes, and 15 mL conical tubes.		All fixed-angle rotors for 50 mL conical tube and 85 mL round-bottom tubes		All swing-bucket rotors	
<b>Visual</b>	5424860109	\$105.00	5424860109	\$105.00	5810860113	\$130.00
<b>Advanced</b>	5424860206	180.00	5810860237	190.00	5810860245	200.00



Pay attention to surface damage, as chemicals can collect in these areas due to insufficient cleaning. Even light scratches and cracks can lead to serious, internal material damage. Rotors and buckets with signs of corrosion may no longer be used! Buckets for rotors A-4-44 and A-4-62 have visible surface structures as a result of the production process, which are not considered defects.

Pricing assumes rotors and lids are clean and dry according to operating manual and instructions for use. Additional charges apply at prevailing hourly rates for cleaning and drying time prior to inspection services. Pricing for rotor inspections alone do not include shipping to Service Centers or zone travel fees for field service.

**Rotor upgrade bundle**

58XX e-Prom software upgrade includes travel, parts, labor, and PM. Required for rotors S-4-104, S-4-72, A-2-DWP-AT, FA-45-6-30.

<b>Rotor upgrade bundle</b>	<b>Catalog No.</b>	<b>List USD</b>
Rotor upgrade	901520017	\$825.00

Rotors must be purchased separately.

# Photometry Performance Plans

## Value of Service

A 2-year warranty comes with all BioPhotometers and BioSpectrometers. Choose an Extended Warranty, Essential Check, Advanced Maintenance, Premium Service, Flat Fee Repair Service, or Certification Service to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.



Photometer groups	Includes
Group 1	BioPhotometer plus/ BioPhotometer D30
Group 2	BioSpectrometer basic/ BioSpectrometer kinetic/ BioSpectrometer fluorescence

Extended Warranty	Catalog No.	List USD
Group 1	901510650	\$ 785.00
Group 2	901510733	1,205.00

## Service Center Only

Flat Fee Repair Service	Catalog No.	List USD
Group 1	901520066	\$1,660.00
Group 2	901520076	2,560.00

## Filter Set Certification

Certification of the filter sets will provide the required documentation to meet the regulated laboratory needs for annual compliance requirements. The certification documents photometric precision and accuracy of the filter sets according to the manufacturer's specifications. Traceable Certificates are included with returned unit and are valid for 24 months.

Please allow 8–10 weeks for completion as the process is conducted exclusively at Eppendorf AG, Hamburg Germany. Once received in Enfield CT, price includes all international logistics and return shipment.

Filter Set Certification	Catalog No.	List USD
Group 1 Reference filter sets	6131928104	\$ 890.00
Group 2 Reference filter sets	6135928109	1,125.00

Performance Plans	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)
<b>Catalog No. for Group 1</b>	0082110003	0082110004	0082110005	0082110007	6132005018
<b>List USD</b>	\$210.00	\$390.00	\$1,855.00	\$930.00	\$570.00
<b>Catalog No. for Group 2</b>	0082110013	0082110014	0082110015	0082110017	6135005019
<b>List USD</b>	\$360.00	\$615.00	\$2,785.00	\$930.00	\$1,010.00
<b>Cleaning &amp; Maintenance</b>					
Cleaning of housing and cuvette shaft	■	■	■		
Cleaning and inspection of internal parts and light path		■	■		
Checking for damages	■	■	■	■	■
Inspection of housing/Testing of stability	■	■	■	■	
Software update		■	■		
<b>Functional Check</b>					
Instrument set-up, initial operation, instruction of user				■	
Checking of keyboard, and display	■	■	■		■
Testing of printer output and USB port (master/slave <sup>1</sup> )	■	■	■		■
Setting number of flashes		■	■		
dsDNA test-260 nm (BioPhotometer/plus)	■	■	■		
Self test (BioSpectrometer/BioPhotometer D30)	■	■	■	■	■
<b>Memory</b>					
Evaluation of stored data		■	■		■
<b>Verification</b>					
Photometer Test (wavelength systematic error/precision and photometric accuracy/fluorescence test <sup>1</sup> )		■	■		■
Temperature verification/adjustment <sup>1</sup>		■	■		■
Verification of operating parameters acc. to specifications					■ <sup>2</sup>
<b>Documentation</b>					
Check List provided	■	■	■		
Dated service sticker to confirm Eppendorf service	■	■	■	■	■
IQ Report and Certificate				■	
OQ Report and Certificate					■
<b>Supporting Information</b>					
Travel	not included	not included	included	included	not included
Time/Labor	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included

**Additional catalog numbers for combined Installation and Operational Qualification (IQ/OQ) services are listed below.**

**Travel, time, and labor are included. Additional parts are not included.**

> Group 1: 0082110009, List USD \$1,205.00

> Group 2: 0082110019, List USD \$1,130.00

<sup>1</sup> Where feature is present.

<sup>2</sup> The detailed certification service contents are listed in the OQ Report.

# Mastercycler® Performance Plans

## Value of Service

A 2-year warranty comes with all Mastercyclers. Choose an Extended Warranty, Essential Check, Advanced Maintenance, Premium Service, Flat Fee Repair Service, or Certification Services to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

### Field Service Only

Advantage OS	Catalog No.	List USD
Mastercycler systems <sup>1</sup>	901513616	\$1,855.00

<sup>1</sup> Advantage OS not available for *realplex* or classic model 533X.

### Service Center Only

Flat Fee Repair Service	Catalog No.	List USD
Mastercycler systems	901513429	\$2,885.00
Mastercycler ep <i>realplex</i> systems (must be shipped to our Service Center with laptop)	901520069	7,730.00

Extended Warranty	Catalog No.	List USD
Mastercycler systems	901510550	\$1,030.00
Mastercycler ep <i>realplex</i> systems	950020928	3,300.00
Temperature Verification systems	901513337	3,480.00

Additional Services	Catalog No.	List USD
<i>realplex</i> Color Calibration Service	901510524	\$2,580.00
Parts Only Service Plan Mastercycler	901510559	805.00

## Certification of Temperature Verification Systems

Temperature Verification Systems (TVS) require periodic calibration and recertification. All sensor plates must be calibrated with the base unit to be certified. During the process, customers will be notified for option and approval to replace a sensor plate or if other repairs are required. Traceable certificates are included with the returned unit, and are valid for 18 months.

Please allow at least 12 weeks for completion as the process is conducted exclusively at Eppendorf AG, Hamburg Germany. Once received in Enfield CT, price includes all international logistics and return shipment.

Certification of Temperature Verification System	Catalog No.	List USD
1 Plate	6328078005	\$2,990.00
2 Plates	6328079001	3,300.00
3 Plates	6328080000	3,600.00
4 Plates	6328081006	3,810.00



## Temperature Verification

Temperature Verification is part of the annually recommended and more comprehensive Advanced Maintenance and more thoroughly documented Operational Qualification (OQ) protocols. This service is also performed at the conclusion of repairs involving system temperature control. This specific stand-alone service is a pass/fail confirmation, recorded via service report of the heating block temperature accuracy and uniformity. The last successful validation is saved and retrievable within each system. The service includes calibration to correct temperatures that have drifted slightly out of range. The price is per unit and does not include parts (if required) to restore performance to manufacturer's specifications. Alternatively the service can be provided by Eppendorf Service Centers and shipping is not included.

Temperature Verification Service	Catalog No.	List USD
Temperature Verification <sup>2</sup>	901510697	\$280.00

<sup>2</sup> Zone travel charges will apply.

Performance Plans	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE <sup>1</sup>	Installation Qualification (IQ)	Operational Qualification (OQ)
<b>Catalog No. for Mastercycler gradient/personal</b>	0082040033	0082040034	0082040035	0082040037	0082040038
<b>List USD</b>	\$440.00	\$635.00	\$4,380.00	\$930.00	\$620.00
<b>Catalog No. for Mastercycler pro/nexus/X50</b>	0082040043	0082040044	0082040045	0082040047	0082040048
<b>List USD</b>	\$440.00	\$635.00	\$4,480.00	\$930.00	\$620.00
<b>Catalog No. for Mastercycler ep realplex systems</b>	6302000120	6302000138	6302000146	–	–
<b>List USD</b>	\$1,030.00	\$1,440.00	\$6,185.00	–	–
<b>External Checks &amp; Maintenance</b>					
Cleaning of MC module		■	■		
Visual check of housing	■	■	■		
Cleaning of heated lid/realplex module (if applicable)		■	■		
Visual check of accessories		■	■		
<b>Internal Equipment &amp; Fittings</b>					
Cleaning of internal parts and assemblies		■	■		
Visual check of internal parts and assemblies		■	■		
Visual check of electrical connection (incl. mains power)		■	■		
Software update		■	■		
<b>Functional Check</b>					
Check of delivery				■	
Instrument set-up and initial operation				■	
Instruction of the user				■	
LED, display and keyboard check	■	■	■	■	■
Check USB-interface		■	■	■	■
Check touchscreen		■	■	■	■
Check of thermoblock	■	■	■	■	■
Check of heated lid	■	■	■	■	■
Check of realplex module (if applicable)	■	■	■	■	■
Check of fan(s)	■	■	■	■	■
Temperature verification		■	■	■	■
Background calibration and color calibration of realplex module		■	■ <sup>3</sup>		
realplex module adjustment and verification with RCSW		■	■		
<b>Memory</b>					
Evaluation of stored data		■	■		
<b>Documentation</b>					
Check List provided	■	■	■		
Dated service sticker to confirm Eppendorf service	■	■	■	■	■
IQ Report and Certificate				■	
OQ Report and Certificate					■
<b>Supporting Information</b>					
Travel	not included	not included	included	included	not included
Time/Labor	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included

**Additional catalog number for combined Installation and Operational Qualification (IQ/OQ) services is listed below.**

Travel, time, and labor are included. Additional parts are not included.

> Mastercycler gradient/personal: 0082040039, List USD \$1,150.00

> Mastercycler pro/nexus/X50: 0082040049, List USD \$1,150.00

# ULT Freezer Performance Plans

## Value of Service

A 2-year labor and a 5-year parts warranty comes with Eppendorf ULT Freezers. All freezer accessories and factory install options come with a 1-year warranty. Choose an Extended Warranty, Advantage OS, Essential Check, Advanced Maintenance, Premium Service, or Certification Services to ensure optimal performance of the instrument and to keep the system running smoothly for years to come. Or choose to extend the labor warranty for 3-years by purchasing the additional labor only warranty.

## Product Recycling

A qualified third party partner will visit the location and remove the old freezer, incubator, or shaker at a convenient date and time, either before or after delivery of the new Eppendorf product. As part of our epGreen initiative, we have carefully selected environmentally conscious partners who ensure proper recycling of all components and responsible disposal of any chemicals.

Product Recycling	Catalog No.	List USD
ULT Freezer	PROD-RECYC	\$525.00

Performance Plans	ESSENTIAL CHECK
<b>Catalog No.</b>	0082070003
<b>List USD</b>	\$635.00
<b>External Checks and Maintenance</b>	
Check installation environment	■
Check electrical supply and fittings	
Check CO <sub>2</sub> /LN <sub>2</sub> backup system installation <sup>1</sup>	
Check independent temperature monitoring system <sup>1</sup>	
Operation of freezer lid gas strut (chest freezer only)	
Alignment of door handle	
Alignment and sealing of outer door (upright freezer only)	
Air filter inspection and cleaning	
<b>Internal Equipment and Fittings</b>	
Inspection and cleaning of heated vent	■
Condition and function of inner doors/lids	
Compressors: operating temperature check	
Cooling fan: condition of fan motor, bearings, fan blades	
Condition of insulation – accessible cooling circuit pipes	
Condition of accessible electrical wiring	
Display and function keys operation	■
Chamber temperature sensor function, alarms function	■
RS232 communications port functionality check	
<b>Validation and Metrology</b>	
Validation and adjustment of operating parameters to within Eppendorf specifications	■
<b>Documentation</b>	
Issue preventive maintenance Check List (signed document)	■
Dated service sticker fixed to ULT freezer to confirm Eppendorf service	■
Provide IQ Report and Certificate	
Provide OQ Report and Certificate	
<b>Supporting Information</b>	
Travel	not included
Time/Labor	included
Additional parts	not included
<b>Additional catalog number for combined Installation and Operational Qualification (IQ/OQ) services is listed below.</b>	
<b>Travel, time, and labor are included. Additional parts are not included.</b>	
<b>0082070009, List USD \$2,165.00</b>	

<sup>1</sup> Where this optional feature is present.

<sup>2</sup> The detailed certification service contents are listed in the OQ Report.



# ULT Freezer Performance Plans

## Unmatched service and support

Dedicated to providing the best service and support for our ULT Freezers and all accessories, Eppendorf provides a convenient and comprehensive manufacturer's warranty covering labor and parts.

- > Professional and qualified Eppendorf field service engineers, or qualified 3rd party technicians
- > Every freezer is equipped with unique S.M.A.R.T. Plus™ diagnostic software that allows system engineers to diagnose most issues over the phone at no cost—saving customer's time and money
- > Advanced Interface equipped freezers (such as the F740i and F740hi) can export detailed diagnostics via USB to allow our system engineers to provide additional diagnosis and even faster response time
- > Standard manufacturer warranty provides labor for 2 years and all parts for 5 years
- > Accessories have a comprehensive 1-year warranty



Extended Warranty	Catalog No.	List USD
ULT Freezers	901513576	\$1,805.00

## Complete 5/5 Warranty; Extra 3 years of Labor

Three years additional LABOR ONLY warranty coverage for New Brunswick ULT Freezers. This supplemental, labor only, warranty increases the new instruments warranty to provide a full 5/5 (parts and labor) coverage.

Additional Labor Warranty	Catalog No.	List USD
ULT Freezers	LABOR3-ULT	\$1,935.00

## Field Service Only

Advantage OS	Catalog No.	List USD
ULT Freezers	901513578	\$1,445.00

## Installation Logistics

### Installation Guidance

Typical full service installation should include 1 x TECH-INSTL, 1 x SHIPPINGTURNKEY, and, if necessary, LIFTGATE.

### Liftgate Service

LIFTGATE must be added to orders where the loading dock is not level with the truck bed. The liftgate is the device on the back of the delivery vehicle that operates by raising and lowering during loading and unloading of the instrument. This is to ensure the freight company is properly equipped for delivery and no additional costs are incurred by the customer for multiple delivery attempts.

### White Glove Delivery

White glove delivery is typically using dollies, pallet jacks, etc. to move the instrument from the loading dock to the final lab location. Placing items on top of another instrument or base/riser and/or table requires an additional fee. Any delivery beyond the first entry way requires SHIPPINGTURNKEY.

### Inside Delivery

Inside delivery includes bringing into the first entryway into the building. It does not include delivery to a specific room inside the building.

### Dock to Dock

Dock to Dock is delivery to the outside loading dock.

# Biological Shaker Performance Plans

## Value of Service

A 2-year labor and a 3-year parts warranty comes with Eppendorf Innova® Shakers. A 2-year labor and parts warranty comes with Eppendorf I-Series and Excella Series Shakers. Choose an Extended Warranty, Advantage OS, Essential Check, Advanced Maintenance, Premium Service, Certification Service or Flat Fee Repair to ensure optimal performance of the instrument and to keep the system running smoothly for years to come. Easily extend the labor warranty for the Innova shaker for 1-year by purchasing our additional labor only warranty.

Shaker groups	Includes
Group 1	Open air shakers <sup>1)</sup>
Group 2	Incubated shakers <sup>2)</sup>
Group 3	Incubated shakers with refrigeration <sup>3)</sup>
Group 4	Industrial shakers (Innova 5000)
Group 5	Innova S44i

<sup>1)</sup> Models: Innova 2000, 2050, 2100, 2150, 2300, 2350. <sup>2)</sup> Models: Innova 40, 42, 43, 44; I-series I24 and I26; Excella E24 and E25. <sup>3)</sup> Models: Innova 40R, 42R, 43R, 44R; I-series I24R and I26R; Excella E24R and E25R.



Extended Warranty	Catalog No.	List USD
Group 1	901513560	\$1,390.00
Group 2	901513562	2,580.00
Group 3	901513564	2,830.00
Group 4	901513566	2,990.00
Group 5	901513702	3,100.00

## Labor Only Warranty (Innova Only)

1-year additional LABOR ONLY coverage for Innova shakers. Provides a full, initial 3-year parts and 3-year labor warranty on new instruments (must be purchased at the same time as the shaker).

Labor Only Warranty	Catalog No.	List USD
Innova shakers	LABOR1-SHKR	\$430.00

## Deep Cleaning and Disinfection Service (Innova S44i only)

Provides full cleaning and disinfection of shaker, including chamber and area below the subplatform in the case of spills or as part of regular maintenance protocols.

Deep Cleaning and Disinfection Service	Catalog No.	List USD
Innova S44i	008208237	Inquire

## Service Center Only

Flat Fee Repair Service	Catalog No.	List USD
Group 1	901513568	\$1,030.00

## Field Service Only

Advantage OS	Catalog No.	List USD
Group 2	901513570	\$1,960.00
Group 3	901513572	2,075.00
Group 4	901513574	3,300.00
Group 5	ADSERV-S44i	2,500.00

Installation Logistics <sup>1)</sup>	Catalog No.	List USD
Installation with FSE	TECH-INSTL	\$ 510.00
Stack 1	STACK1	510.00
Stack 2	STACK2	765.00
Stack 3	STACK3	1,785.00
White glove shipping	SHIPPINGTURNKEY	1,300.00
Liftgate	LIFTGATE	153.00

<sup>1)</sup> For Installation Guidance see page 393.

Installation Logistics for Innova S44i	Catalog No.	List USD
Installation with FSE	S44ITECHINSTL	\$ 750.00
White glove and stacking 1	S44ITURNKEY1	1,750.00
White glove and stacking 2	S44ITURNKEY2	2,500.00
White glove and stacking 3	S44ITURNKEY3	3,250.00

# Biological Shaker Performance Plans

## Biological Shaker Performance Plans

Biological shakers are essential to cell culture applications and are required to be in continuous use for years. Relatively small, short-term variations in shaker operation can significantly influence culturing outcomes, with negative effects on yields and/or cell expression. Eppendorf's Biological Shaker Performance Plans ensure consistent, reliable shaker performance to manufacturer specifications after years of wear and tear. Biological Shaker Performance Plans include a choice of Preventive Maintenance protocols which are designed to check and validate stable shaker performance.

These protocols review all control parameters of the shaker and ensure everything is working as good as new. Installation Qualification (IQ) and Operational Qualification (OQ) certification services ensure quality management requirements are fulfilled, providing assurance that the biological shaker is functioning correctly, in accordance with manufacturer specifications.

Performance Plans	ESSENTIAL CHECK
<b>Catalog No. for Group 1 – Open air shakers</b>	0082080013
List USD	\$515.00
<b>Catalog No. for Group 2 – Incubated shakers</b>	0082080023
List USD	\$600.00
<b>Catalog No. for Group 3 – Incubated shakers with refrigeration</b>	0082080003
List USD	\$645.00
<b>Catalog No. for Group 4 – Industrial shakers (Innova 5000)</b>	0082080033
List USD	\$1,545.00
<b>Catalog No. for Group 5 – Innova S44i</b>	0082080213
List USD	\$675.00
<b>External Checks and Maintenance</b>	
Check installation environment	■
Check electrical/gas <sup>2</sup> supply and fittings	
Check condition/operation of any door/ lid open sensors	
Check security of doors/lids, handles, door struts <sup>2</sup> and hinges	
<b>Internal Equipment and Fittings</b>	
Check security of shaker mechanism; lubricate non-sealed bearings, as appropriate <sup>2</sup>	
Check shaker drive motor, and circulation fan <sup>2</sup>	
Check condition of shaker drive belt; adjust belt tension as necessary	
Clean and check condenser <sup>2</sup>	
<b>Validation and Metrology</b>	
Validation and adjustment of operating parameters to within Eppendorf specifications	■
<b>Documentation</b>	
Issue preventive maintenance Check List (signed document)	■
Dated service sticker fixed to shaker to confirm Eppendorf service	■
Provide IQ Report and Certificate	
Provide OQ Report and Certificate	
<b>Supporting Information</b>	
Travel	not included
Time/Labor	included
Additional parts	not included
<b>Additional catalog numbers for combined Installation and Operational Qualification (IQ/OQ) services are listed below. Travel, time, and labor are included. Additional parts are not included.</b>	
> Group 3: 0082080009, List USD \$1,030.00	
> Group 1: 0082080019, List USD \$1,340.00	
> Group 2: 0082080029, List USD \$1,805.00	
> Group 4: 0082080039, List USD \$2,580.00	
> Group 5: 0082080219, List USD \$1,980.00	

<sup>1</sup> All Premium Service, unless technically impossible is performed on-site. <sup>2</sup> Where feature is present. <sup>3</sup> The detailed certification service contents are listed in the OQ report.



ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)
0082080014	0082080015 <sup>1)</sup>	0082080017	0082080018
\$620.00	\$1,545.00	\$930.00	\$260.00
0082080024	0082080025	0082080027	0082080028
\$1,100.00	\$2,785.00	\$930.00	\$1,030.00
0082080004	0082080005	0082080007	0082080008
\$1,200.00	\$2,960.00	\$930.00	\$1,135.00
0082080034	0082080035	0082080037	0082080038
\$2,060.00	\$4,740.00	\$1,877.00	\$2,270.00
0082080214	0082080215	0082080217	0082080218
\$1,440.00	\$3,600.00	\$930.00	\$1,350.00
■	■	■	
■	■	■	■
■	■	■	■
■	■	■	■
■	■		
■	■		
■	■		
■	■		
■	■		■ <sup>3</sup>
■	■		
■	■	■	■
		■	
			■
not included	included	included	not included
included	included	included	included
not included	included	not included	not included

# S41i Incubator Shaker Performance Plans

## Value of Service

A 2-year warranty comes with all S41i Incubator Shakers. Choose an Extended Warranty, Advantage OS, Essential Check, Advanced Maintenance, Premium Service, or Certification Services to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

## S41i Incubator Shaker Performance Plans

The unique versatility of the New Brunswick S41i Incubator Shaker supports simultaneous cultivation of adherent and suspension cultures. Even the smallest deviations in the culturing environment can result in undesirable outcomes due to the importance of consistency and reproducibility in cell culture applications. To ensure reproducible results and to protect precious cultures from undesirable variables, we offer a range of maintenance services.

## Preventive Maintenance

S41i Incubator Shaker Performance Plans include a choice of Preventive Maintenance protocols designed to check, validate and to promote continuous and stable performance, optimizing instrument conformity with programmed culturing parameters.

The Essential Check includes a check of all fundamental functions of the product. This includes a check of the installation environment as well as validation and adjustment of operating parameters to Eppendorf specifications.

The Advanced Maintenance is designed to provide a complete preventive maintenance service to safeguard the performance of the system. This includes maintenance of all internal and external equipment and fittings, a full functional test, and validation and adjustment of all operating parameters to Eppendorf specifications.

Performance Plans	ESSENTIAL CHECK
<b>Catalog No.</b>	0082050003
<b>List USD</b>	\$830.00
<b>External Checks and Maintenance</b>	
Check installation environment	■
Check electrical/gas supply and fittings	
Replace in-line CO <sub>2</sub> filter and auto-zero filter	
<b>Internal Equipment and Fittings</b>	
Check security of shaker platform(s) and flask holders	
Check security of incubator shelf/shelves and racking system	
Replace platform support post boot seals	
Check condition of humidity trays	
Check condition of shaker drive belt	
Check condition of chamber CO <sub>2</sub> and temperature sensors	■
<b>Validation and Metrology</b>	
Validation and adjustment of operating parameters to within Eppendorf specifications	■
<b>Documentation</b>	
Issue preventive maintenance Check List (signed document)	■
Dated service sticker fixed to S41i Incubator Shaker to confirm Eppendorf service	■
Provide IQ Report and Certificate	
Provide OQ Report and Certificate	
<b>Supporting Information</b>	
Travel	not included
Time/Labor	included
Additional parts	not included
<b>Additional catalog number for combined Installation and Operational Qualification (IQ/OQ) services is listed below.</b>	
<b>Travel, time, and labor are included. Additional parts are not included.</b>	
<b>0082050009, List USD \$2,640.00</b>	



**Field Service Only**

Advantage OS	Catalog No.	List USD
S41i	ADSERV-S41I	\$1,925.00

Extended Warranty (1-year)	Catalog No.	List USD
S41i	EW-S41I	\$2,300.00

Installation Logistics <sup>1</sup>	Catalog No.	List USD
Installation with FSE	TECH-INSTL	\$ 510.00
Stack 1	STACK1	510.00
Stack 2	STACK2	760.00
White glove shipping	SHIPPINGTURNKEY	1,300.00
Liftgate	LIFTGATE	153.00

<sup>1</sup> For Installation Guidance see page 393.



ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)
0082050004	0082050005	0082050007	0082050008
\$1,980.00	\$2,710.00	\$1,020.00	\$1,795.00
■	■	■	■
■	■	■	■
■	■		
■	■	■	■
■	■	■	■
■	■		
■	■		
■	■		■ <sup>2</sup>
■	■		
■	■	■	■
		■	
			■
not included	included	included	not included
included	included	included	included
not included	included	not included	not included

<sup>2</sup> The detailed certification service contents are listed in the OQ report.

# CO<sub>2</sub> Incubator Performance Plans

## Value of Service

A 2-year warranty comes with all Eppendorf CO<sub>2</sub> incubators. Choose an Extended Warranty, Advantage OS, Essential Check, Advanced Maintenance, Premium Service, or Certification Services to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

## Preventive Maintenance

CO<sub>2</sub> Incubator Performance Plans include a choice of Preventive Maintenance protocols designed to check, validate and to promote continuous and stable incubator performance, optimizing instrument conformity with programmed culturing parameters.

The Essential Check includes a check of all fundamental functions of the product. This includes a check of the installation environment as well as validation and adjustment of operating parameters to Eppendorf specifications.

The Advanced Maintenance is designed to provide a complete preventive maintenance service to safeguard the performance of the system. This includes maintenance of all internal and external equipment and fittings, a full functional test, and validation and adjustment of all operating parameters to Eppendorf specifications.

## Certification Services

Installation Qualification (IQ) and Operational Qualification (OQ) certification services ensure Quality Management requirements are fulfilled, providing qualified assurance that the CO<sub>2</sub> incubator is functioning correctly, in accordance with manufacturer's specifications.

Performance Plans	ESSENTIAL CHECK
<b>Catalog Number</b>	0082060003
<b>List USD</b>	\$410.00
<b>External Checks and Maintenance</b>	
Check installation environment	■
Check electrical / gas supply and fittings	
Replace in-line gas filter(s) and auto-zero filter	
Check door seals and door hinges	
<b>Internal Equipment and Fittings</b>	
Check condition of all chamber gas, temperature, humidity sensors	
Check security of incubator shelf / shelves and racking system	
Check sensor covers are present and undamaged	
Check condition of humidity trays	
Check condition of wiring system, PCB's, display & controller	
Check alarms functionality	
<b>Validation and Metrology</b>	
Validation and adjustment of operating parameters to within Eppendorf specifications	■
<b>Documentation</b>	
Issue preventive maintenance Check List (signed document)	■
Dated service sticker fixed to CO <sub>2</sub> Incubator to confirm Eppendorf service	■
Provide IQ Report and Certificate	
Provide OQ Report and Certificate	
<b>Supporting Information</b>	
Travel	not included
Time/Labor	included
Additional parts	not included
<b>Additional catalog number for combined Installation and Operational Qualification (IQ/OQ) services is listed below. Travel, time, and labor are included. Additional parts are not included.</b>	
<b>0082060009, List USD \$2,115.00</b>	



# Cell Manipulation Performance Plans



## Service Center Only

Flat Fee Repair Service	Catalog No.	List USD
Eporator	901513606	\$ 670.00
Multiporator	901513608	2,580.00
Micromanipulator (TransferMan 4r/m, NK2, NP2)	901513610	4,115.00
Micromanipulator (InjectMan 2, NI2)	901513612	3,660.00
Microinjector	901513614	1,650.00

Extended Warranty	Catalog No.	List USD
Electroporator/ Multiporator	901510656	\$ 470.00
Micromanipulator (TransferMan 4m/r, NK2, NP2)	901510739	2,400.00
Micromanipulator (InjectMan 4, NI2)	901510741	2,180.00
Microinjector	901513335	1,025.00

## Micromanipulation Training

This service provides on-site support to train end users and address customer application issues to restore expected outcomes by our highly qualified Cell Technology Specialists. This support is designed to sufficiently train on Eppendorf instrumentation and may include optimization aspects but it will be limited to a single event, either the duration of a half day or a full day. There is no guarantee nor warranty implied by this service and it does not include reagents, additional equipment, or consumables.

Micromanipulation Training	Catalog No.	List USD
Half day	920003401	\$1,289.00
Full day	920003311	2,577.00

### Value of Service

A 2-year warranty comes with our CellTram Air/Oil/Vario and Eppendorf Eporator®, FemtoJet® 4i/4x, Injectman® 4, PiezoXpert® and Transferman® 4r. All other Eppendorf Cell Technology products including, the FemtoJet/Express, Injectman NI2, and Transferman NK2 come with a 1-year warranty. Choose an Extended Warranty, Essential Check, Advanced Maintenance, Premium Service, Certification Services or Flat Fee Repair to ensure optimal performance of the

instrument and to keep the system running smoothly for years to come.

All service with the exception of IQ and IQ/OQ is performed at an Eppendorf Service Center.

Performance Plans	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)
<b>Catalog No. for Electroporators/Multiporators</b>	0082010003	0082010004	0082010005	0082010007	0082010008
<b>List USD</b>	\$160.00	\$325.00	\$775.00	\$930.00	\$265.00
<b>Catalog No. for Microinjectors/Micromanipulators</b>	0082010013	0082010014	0082010015	0082010017	0082010018
<b>List USD</b>	\$400.00	\$720.00	\$2,640.00	\$930.00	\$1,235.00
<b>External Checks &amp; Maintenance</b>					
Cleaning of housing	■	■	■		
Checking of keyboard		■	■		■
Visual inspection of display		■	■		■
Stability test	■	■	■		
<b>Internal Equipment &amp; Fittings</b>					
Cleaning of internal assemblies		■	■		
Leak-tightness test (CellTram/FemtoJet)	■	■	■		■
Oil exchange (CellTram Oil/vario)	■	■	■		
Inspection of contacts (Electroporator)		■	■		■
Software upgrade		■	■		
<b>Functional check</b>					
Check of delivery				■	
Instrument set-up and initial operation				■	
Instruction of user				■	
Motor module test (Micromanipulator)	■	■	■		■
System test	■	■	■		■
<b>Memory</b>					
Analysis of error statistics	■	■	■		■
<b>Documentation</b>					
Check List provided	■	■	■		
Dated service sticker to confirm Eppendorf service	■	■	■	■	■
IQ Report and Certificate				■	
OQ Report and Certificate					■
<b>Supporting Information</b>					
Shipping	not included	not included	included	included <sup>1</sup>	not included
Time/Labor	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included

**Additional catalog numbers for combined Installation and Operational Qualification (IQ/OQ) services are listed below.**

**Travel, time, and labor are included. Additional parts are not included.**

**> for Electroporators/Multiporators: 0082010009, List USD \$1,030.00**

**> for Microinjectors/Micromanipulators: 0082010019, List USD \$1,450.00**

<sup>1</sup> Performed on-site includes travel.

# Bioprocess Small Scale Performance Plans

## Value of Service

A 1-year warranty comes with all Eppendorf Bioprocess Instruments<sup>1</sup>. Choose Premium Service, Advantage OS, or an Annual Preventive Maintenance to ensure optimal performance of the instrument and to keep the system running smoothly for years to come.

## Premium Service<sup>2</sup>

Provides peace of mind full service including all parts, labor and travel used in maintaining the product as well as a Preventive Maintenance. Parts such as probes, filters and glassware are not covered, however a 20 % discount does apply to these items when replaced at the time of service.

Premium Service	Catalog No.
<b>Small Scale Product Line<sup>3</sup></b>	
DX/Small 4 Vessels	DASPREMSA-04
DX/Small 4 Vessels w/GA4 <sup>4</sup>	DASPREMSA-GA-04
DX/Small 8 Vessels	DASPREMSA-08
DX/Small 8 Vessels w/GA4 <sup>4</sup>	DASPREMSA-GA-08
DX/Small 12 Vessels	DASPREMSA-12
DX/Small 12 Vessels w/GA4 <sup>4</sup>	DASPREMSA-GA-12
DX/Small 16 Vessels	DASPREMSA-16
DX/Small 16 Vessels w/GA4 <sup>4</sup>	DASPREMSA-GA-16
DX 20 Vessels	DASPREMSADX-20
DX 20 Vessels w/GA4 <sup>4</sup>	DASPREMSADX-GA-20
DX 24 Vessels	DASPREMSADX-24
DX 24 Vessels w/GA4 <sup>4</sup>	DASPREMSADX-GA-24

<sup>1</sup> Does not apply to vessels. <sup>2</sup> These descriptions generally apply for all Bioprocess systems with variations noted for applicable Preventive Maintenance. <sup>3</sup> Includes Software Maintenance Plan. <sup>4</sup> Includes parts for the refurbishment of sensor trains for the GA4 module.

## Advantage OS<sup>2</sup>

This value added service provides 2 visits; an Annual Preventive Maintenance with PM parts (including bearing housing rebuild) and a single repair visit within the year. Labor, travel, and a 20 % discount on all repair parts (including sensor train refurbishment if applicable) are included. Should there be a need for one more repair visit over the course of a year the customer may opt to use both visits for repairs and may renew the agreement early if both visits are utilized prior to the 1-year term.

Advantage OS	Catalog No.
<b>Small Scale Product Line</b>	
DX/Small 4 Vessels	DASADVSA-04
DX/Small 4 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-04
DX/Small 8 Vessels	DASADVSA-08
DX/Small 8 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-08
DX/Small 12 Vessels	DASADVSA-12
DX/Small 12 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-12
DX/Small 16 Vessels	DASADVSA-16
DX/Small 16 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-16
DX 20 Vessels	DASADVSA-20
DX 20 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-20
DX 24 Vessels	DASADVSA-24
DX 24 Vessels w/GA4 <sup>5</sup>	DASADVSA-GA-24

<sup>5</sup> 20 % discount includes parts used for refurbishment of sensor trains on the GA4 module.

## Annual Preventive Maintenance (PM)

Bioprocess systems include several sophisticated technologies. Peak performance requires smooth interplay of the subsystems and fully functioning wear parts. Regular annual maintenance by qualified engineers helps to ensure reliable operation. This is a labor agreement to perform a PM on-site. The system will be inspected, tested and/or adjusted according to specific protocols. Gas modules are inspected and calibrated but maintenance service is not included. Results will be documented and available for review in an electronic maintenance report. Travel and additional wear parts beyond the included bearing assembly and service of additional customer installed items are not included.

## Annual Preventive Maintenance

Description	Catalog No.
<b>Small Scale Product Line</b>	
DX/Small 4 Vessels	DASPM-04
DX/Small 8 Vessels	DASPM-08
DX/Small 12 Vessels	DASPM-12
DX/Small 16 Vessels	DASPM-16
DX 20 Vessels	DASPM-20
DX 24 Vessels	DASPM-24

# Bioprocess Bench Scale Performance Plans

## BioFlo/CelliGen 115, 120, 320 and 415 Performance plans

Service Operation	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)	IQ/OQ
<b>Catalog Nos.</b>						
BioFlo 115	0082140003	0082140004	0082140005			
BioFlo 120	0082140043	0082140044	0082140045	0082140047	0082140048	0082140049
BioFlo 310	0082140083	0082140084	0082140085			
BioFlo 320	0082140123	0082140124	0082140125	0082140167	0082140168	0082140169
BioFlo 415		0082140164	0082140165	0082140167		
<b>External Inspection and Maintenance</b>						
Check installation environment	■	■	■	■		■
Verify utility connections	■	■	■	■		■
Inspect addition pump heads and motors	■	■	■	■		■
Inspect motor cables and sensor cables	■	■	■	■		■
Check vessel for damage and leaks	■	■	■	■		■
<b>Internal Equipment</b>						
Check motor and bearing housing for speed and operation*	■	■	■		■	■
Rebuild bearing housing		■	■			
Replace head plate/base plate O-ring		■	■			
Replace head plate penetration O-rings and washers		■	■			
Replace ferrules		■	■			
Inspect cooling valve	■	■	■			
Inspect gas sequencing valves	■	■	■			
<b>System Checks</b>						
Calibrate pH and DO sensors	■	■	■	■	■	■
Verify motor speed*	■	■	■	■	■	■
Perform test run*	■	■	■	■	■	■
<b>Validation and Metrology</b>						
Verify all PI values are set to factory default	■	■	■		■	■
Check for latest firmware revision	■	■	■	■	■	■
<b>Documentation</b>						
Check list provided	■	■	■			
Dated service sticker to confirm Eppendorf service	■	■	■	■	■	■
IQ report and signed documentation				■		■
OQ report and signed documentation					■	■
<b>Supporting Information</b>						
Travel	not included	not included	included	included	included	not included
Time/Labor	included	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included	not included

Note: For customers using BioBLU Single-Use Vessels please select the Essential Check only. Please contact your local RSC for other service contract options.

\*Customer using single-use vessels must provide a vessel for these tests.

## BioFlo/CelliGen 510, 610 and PRO Performance plans (RPC/AB)

Service Operation	ESSENTIAL CHECK	ADVANCED MAINTENANCE	PREMIUM SERVICE	Installation Qualification (IQ)	Operational Qualification (OQ)	IQ/OQ
<b>Catalog Nos.</b>						
BioFlo/CelliGen 510	0082140293	0082140294	0082140295	0082140297	0082140298	0082140299
BioFlo 610	0082140333	0082140334	0082140335	0082140337	0082140338	0082140339
BioFlo Pro 60L	0082140373	0082140374	0082140375	0082140377	0082140378	0082140379
BioFlo Pro 120L	0082140463	0082140464	0082140465	0082140377	0082140378	0082140379
BioFlo Pro 240L	0082140503	0082140504	0082140505	0082140377	0082140378	0082140379
BioFlo Pro 400L	0082140543	0082140544	0082140545	0082140377	0082140378	0082140379
BioFlo Pro 800-2400L	0082140593	0082140594	0082540595	0082140377	0082140378	0082140379
CelliGen Pro 60L	0082140413	0082140414	0082140415	0082140417	0082140418	0082140419
CelliGen Pro 120L	0082140693	0082140694	0082140695	0082140417	0082140418	0082140419
CelliGen Pro 240L	0082140743	0082140744	0082140745	0082140417	0082140418	0082140419
CelliGen Pro 520L	0082140643	0082140644	0082140645	0082140417	0082140418	0082140419
<b>External Inspection and Maintenance</b>						
Check Installation Environment	■	■	■	■		■
Verify Utility Connections	■	■	■	■		■
Inspect addition pump heads and motors	■	■	■	■		■
Inspect motor cables and sensor cables	■	■	■	■		■
Check vessel for damage and leaks	■	■	■	■		■
Verify loop PI settings	■	■	■	■		■
Check valve operation	■	■	■	■		■
Check hoses	■	■	■	■		■
<b>Internal Equipment</b>						
Check motor and bearing housing for speed and operation	■	■	■		■	■
Rebuild bearing housing		■	■			
Replace O-rings, gaskets, and ferrules	■	■	■			
Rebuild solenoid, pneumatic, hand-operated, addition, sample, and harvest valves	■	■	■			
Inspect angle seat valves, gas sequencing valves, and circulating pump	■	■	■			
Replace rupture disk	■	■	■			
Test TMFC for operation	■	■	■		■	■
<b>System Checks</b>	■	■				
Calibrate pH and DO loops with simulator			■	■	■	■
Verify motor speed	■	■	■	■	■	■
Verify temperature	■	■	■			
Perform pressure hold	■	■	■	■	■	■
Perform test run	■	■	■	■	■	■
Check for latest software revision	■	■	■	■	■	■
Verify valve sequence	■	■	■		■	■
<b>Documentation</b>	■	■				
Check list provided			■			
Dated service sticker to confirm Eppendorf service	■	■	■	■	■	■
IQ report and signed documentation	■	■		■		■
OQ report and signed documentation					■	■
<b>Supporting Information</b>						
Travel	not included	not included	included	included	included	not included
Time/Labor	included	included	included	included	included	included
Additional parts	not included	not included	included	not included	not included	not included

# Bioprocess Pilot/Production Support Services

## Installation Assistance—Pilot and Production Scale Only

This on-site assembly assistance for one system will ensure proper assembly of the fermentation vessel, control cabinet and piping skid from shipping crates to its final location utilizing designated lifting points. We will manage the appointed rigging company personnel, Electrical and Plumbing Contractors to assure the system is properly installed. Riggers, Electricians and Plumbers must be supplied by the end user. Installation Assistance and Installation Start-up Assistance are separate events.

### Installation Assistance

Description	Catalog No.
BioFlo/CelliGen 510	0082140309
BioFlo 610	0082140349
BioFlo Pro	0082140389
CelliGen Pro	0082140429

## Start-up Assistance—Available for Bench, Pilot and Production Scale systems

This set up verification service for one system is performed by our Field Service Engineer to ensure the system is operating as designed and to perform basic instructional training. For Pilot and Production systems, Start-up Assistance requires the fermentor/bioreactor system has been erected and connected to all required utilities. Similarly for Bench Systems, proper bench space with required services must be available to complete the Start-up. Documentation for Start-up Assistance is a check list and service report.

### Start-up Assistance

Description	Catalog No.
BioFlo 115	0082140021
BioFlo 120	0082140061
BioFlo 320	0082140141
BioFlo 415	0082140181
BioFlo/CelliGen 510	0082140311
BioFlo 610	0082140351
BioFlo Pro	0082140391
CelliGen Pro	0082140431

### Certification Services (IQ/OQ)

BioCommand Batch Control Plus	Catalog No.
IQ	0082140847
OQ	0082140848
IQ/OQ	0082140849

## Site Acceptance Testing – Pilot and Production Scale Only

Site Acceptance Testing/Training—One day per system (Anything done regarding validated systems) includes labor and travel to customer's location by an Eppendorf qualified expert to conduct an inspection and re-verification of the system which is consistent with the FIT. SAT requires the fermentor/bioreactor system has been erected and connected to all required utilities. SAT does not replace Installation Assistance and assembly guidance is not covered. SAT is designed for customers who wish a more rigorous review than Installation (Start-up), but do not require an IQ/OQ level of documentation of regulated customers.

### Site Acceptance Testing and Training

Description	Catalog No.
BioFlo/CelliGen 510	0082140310
BioFlo 610	0082140350
BioFlo Pro	0082140390
CelliGen Pro	0082140430

## Factory Inspection Test (FIT)—Pilot/Production Scale only

Factory Inspection Test: One day per system (1 additional day for validation package review) Factory Inspection Test will be conducted at the Eppendorf facility in Enfield, CT. Factory Inspection Test allows a customer's appointed designee/expert to be on-site and inspect the system prior to shipping. The Eppendorf standard FIT includes a visual inspection/verification of each option purchased as well as a full piping and instrumentation (P&ID) review of the system including valves, pumps, heat exchangers, etc. In addition, the customer will receive a basic training on the control software for either the Eppendorf RPC or the Allen Bradley whichever one is installed on the customer's system. Finally functional tests are included such as pressure hold testing, sterilization and cascading.

The Factory Inspection Test must be scheduled within 10 business days of the written notification that the system is ready for testing. After 10 business days, it will be concluded that the customer has declined the option to perform the Factory Inspection Test. The customer may choose to decline the Factory Inspection Test at any time by notifying Eppendorf's FIT scheduling representative or their Bioprocess Sales Engineer. The Factory Inspection Test must be completed within 30 days from the initial written notification, any exceptions to the above policy are subject to prior approval. Visitors will be responsible for all travel related expenses.

Factory Inspection Test	Catalog No.
Factory Inspection Test	M1364-FIT

# Bioprocess Support Services

## Small Scale Services<sup>1</sup>

Installation and Commissioning	Catalog No.
<b>DASbox (DX) Systems</b>	
4xDX	76DXCOMQ4US
8xDX	76DXCOMQ8US
12xDX	76DXCOMQ12US
16xDX	76DXCOMQ16US
20xDX	76DXCOMQ20US
24xDX	76DXCOMQ24US
<b>Modular (DG) Systems</b>	
4xDG	76DGCOMQ4US
8xDG	76DGCOMQ8US
12xDG	76DGCOMQ12US
16xDG	76DGCOMQ16US

<sup>1</sup> Travel is included.

## Bench Scale Controller Training

Participants will receive an introduction to their specific benchtop bioreactor/fermentor purchased (120, 320, or 415). Customers can choose from on-site at their company location or Eppendorf lab in Enfield, CT. Training will include User Interface overview, operational modes and a typical system setup workflow based on prokaryote or eukaryote application. Hands on training will include vessel setup and preparation for inoculation, calibration, sampling, interfacing auxiliary equipment and cascade training. BioCommand (optional software if purchased) training includes review of the main screens, creating/executing/initiating/terminating and saving recipes and batches, construct a Synoptic screen and review the reporting tools for papers and presentations. Training is 1 day (8:30 am–5 pm with an hour break for lunch) for up to 4 people. There will be a pre consultation discussion at the time of scheduling to incorporate the participants application into the training. A detailed agenda will be provided prior to the training. All travel related expenses for trainer on-site or visitor travel to Enfield, CT will be the responsibility of the customer.

Bench Scale Controller Training <sup>2</sup>	Catalog No.
On-site training	TRAIN_ONSITE

<sup>2</sup> Travel is not included.

## Small Scale

Off-Gas Analyzer Maintenance Options	Catalog No.
GA4 Refurbishment of Sensor Trains (4x) O <sub>2</sub> 50%/CO <sub>2</sub> <sup>3</sup>	77105002
GA Refurbishment of Sensor Train (1x) O <sub>2</sub> 50%/CO <sub>2</sub> /Flow <sup>3</sup>	77105001
<b>System Reconfiguration</b>	
Database modification for Small-scale Configuration <sup>4</sup>	77105018
<b>Validation Systems</b>	
Validation Package DG xFold System <sup>5</sup>	76DGVAL
Validation package DG 4 more units (add quantity 1 for each additional 4 units) <sup>5</sup>	76DGVAL+4

<sup>3</sup> Plus Demand Labor and Travel.

<sup>4</sup> Includes CTPC number of system.

<sup>5</sup> These part numbers reflect the actual documentation supplied by the factory—additional labor to perform IQ/OQ must be included as Demand Labor.

## Small Scale System Training

Small Scale System Training	Catalog No.
Training at Customer Site (1 Day) <sup>6</sup>	76DGTRAINUS

<sup>6</sup> Travel not included if not part of the Installation and Commissioning.

# Bioprocess Service and Support

## CEPA Continuous Flow Centrifuges

Performance Plans CEPA Continuous Flow Centrifuges	ADVANCED MAINTENANCE	PREMIUM SERVICE	Advantage OS	Installation and Commissioning
CEPA G/LE	PM-LE	PREMSERV-CEPA-LE	ADSERV-LE	901513620
CEPA Z41/G	PM-Z41	PREMSERV-CEPA-Z41	ADSERV-Z41	901513620
CEPA Z61/G	PM-Z61	PREMSERV-CEPA-Z61	ADSERV-Z61	901513620
CEPA Z81/G	PM-Z81	PREMSERV-CEPA-Z81	ADSERV-Z81	901513620
CEPA Z101/G	PM-Z101	PREM-CEPA-Z101G	ADSERV-Z101	901513620
<b>Plate Pourer</b>				
MP-1000	PM-MP1000	PREMSERV-MP1000	ADSERV-MP1000	

### Advantage OS

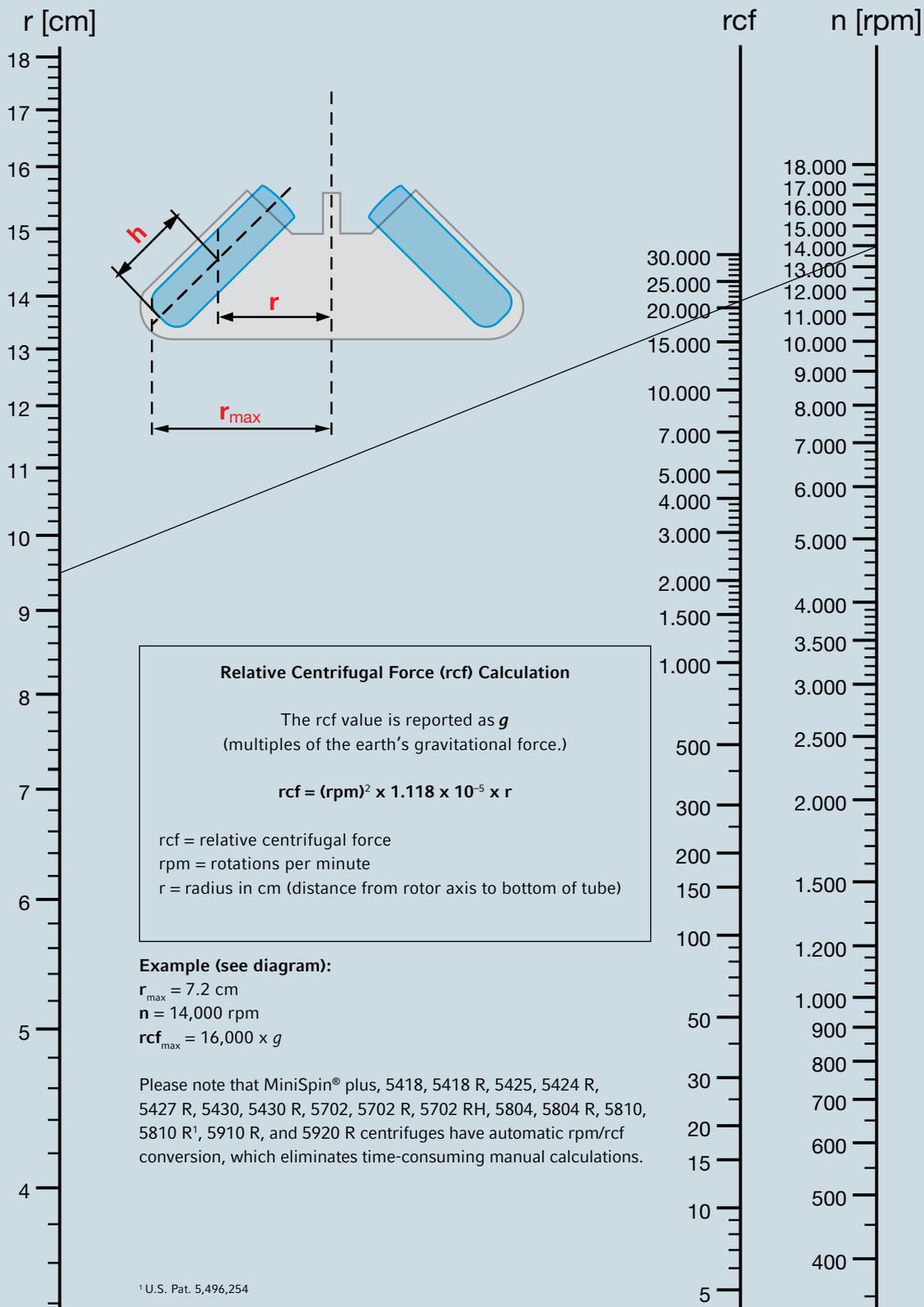
Description	Catalog No.
BioFlo 115	ADSERV-115
BioFlo 120	ADSERV-120
BioFlo 310	ADSERV-310
BioFlo 320	ADSERV-320
BioFlo 415	ADSERV-415
BioFlo/CelliGen 510	ADSERV-510
BioFlo 610	ADSERV-610
BioFlo Pro 60 L	ADSERV-PRO60
BioFlo Pro 120–400 L	ADSERV-PRO120
BioFlo Pro 800–2400 L	ADVPRO800-2400L
CelliGen Pro 60–240 L	ADSERV-PROCG60120L
CelliGen Pro 520 L	ADSERV-PROCG520

### Extended Warranty<sup>1</sup> Controller only

Description	Catalog No.
BioFlo 115	EXTW-115
BioFlo 120	EXTW-120
BioFlo 310	EXTW-310
BioFlo 320	EXTW-320
CelliGen BLU	EXTW-BLU

<sup>1</sup> Available only for systems utilizing a BioBLU single use vessel.

# Application Tips for Centrifugation



# Application Tips for Centrifugation

## k-factors and centrifugation times

The k-factor, a value that is primarily determined by the rotor, affects the sedimentation time necessary during centrifugation. It is a measure for the sedimentation distance in the test tube, i.e., for the difference between the longest and shortest distance between the sample and the rotor axis (see diagram). The duration of separation in the test tube increases in direct proportion to its distance. The k-factor clearly depends on the angle of the tubes in the rotor and on the type of tubes used. A small k-factor means more rapid separation. The k-factor is also affected by the rotational speed; the higher the rotational speed, the quicker the separation.

### The formula is

$$k = \frac{\ln\left(\frac{r_{\max}}{r_{\min}}\right)}{n^2} \times 2.533 \times 10^{11}$$

$n$  = rotational speed;  $r_{\min}$  and  $r_{\max}$ : see diagram

A direct comparison of two rotors is possible by calculating the relative speed of a separation in both centrifuge rotors.

### The formula for calculating the relative centrifugation time is

$$t_x = t \times \left(\frac{k_x}{k}\right)$$

$t$  = Centrifugation time in the comparative centrifuge, calculated from experiment

$t_x$  = Centrifugation time required in centrifuge X

$k$  = k-factor of the comparative centrifuge

$k_x$  = k-factor of centrifuge X

### Example:

The 30-position fixed-angle rotor in Centrifuges 5430 has a k-factor of 508 at a maximum speed of 14,000 rpm and a maximum rcf of 20,817 x g. With the same rotor angle (45°) and the same maximum speed (14,000 rpm), the 18-position fixed-angle rotor of Centrifuge 5415 C attains a maximum rcf of 16,873 x g and a k-factor of 719.

In the case of Models 5430 and 5418: a centrifugation time of only 7 minutes is required in the 5430 to attain the same separation performance for the selected separation example; in contrast, the 5418 requires 10 minutes.

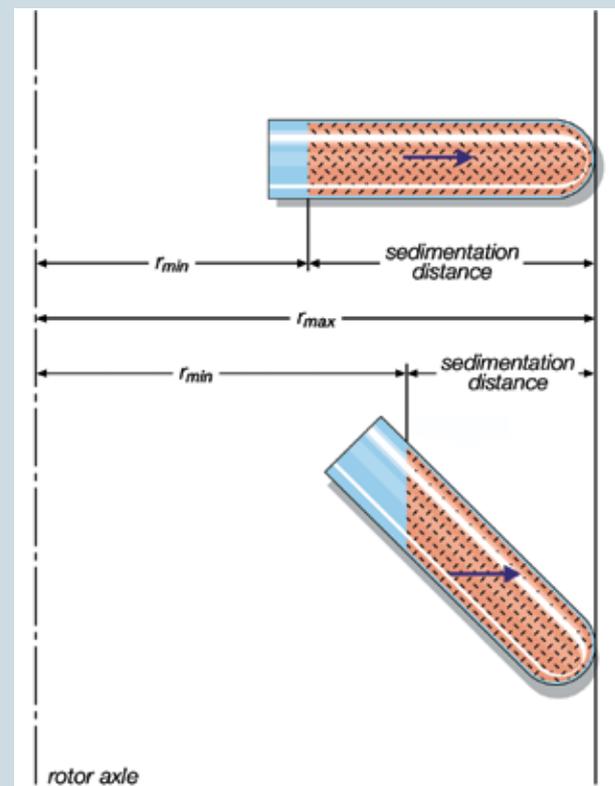
### Separation example:

$$t_{5430} = t_{5418} \times \left(\frac{k_{5430}}{k_{5418}}\right)$$

$$t_{5430} = 10 \text{ min} \times \left(\frac{508}{719}\right)$$

$$t_{5430} = 7.07 \text{ min} = 7'04''$$

When determining centrifugation times, it is therefore advisable to take into consideration the physical characteristics of the centrifuge used, particularly when using critical samples and small sample quantities.



# Microcentrifuge Tubes

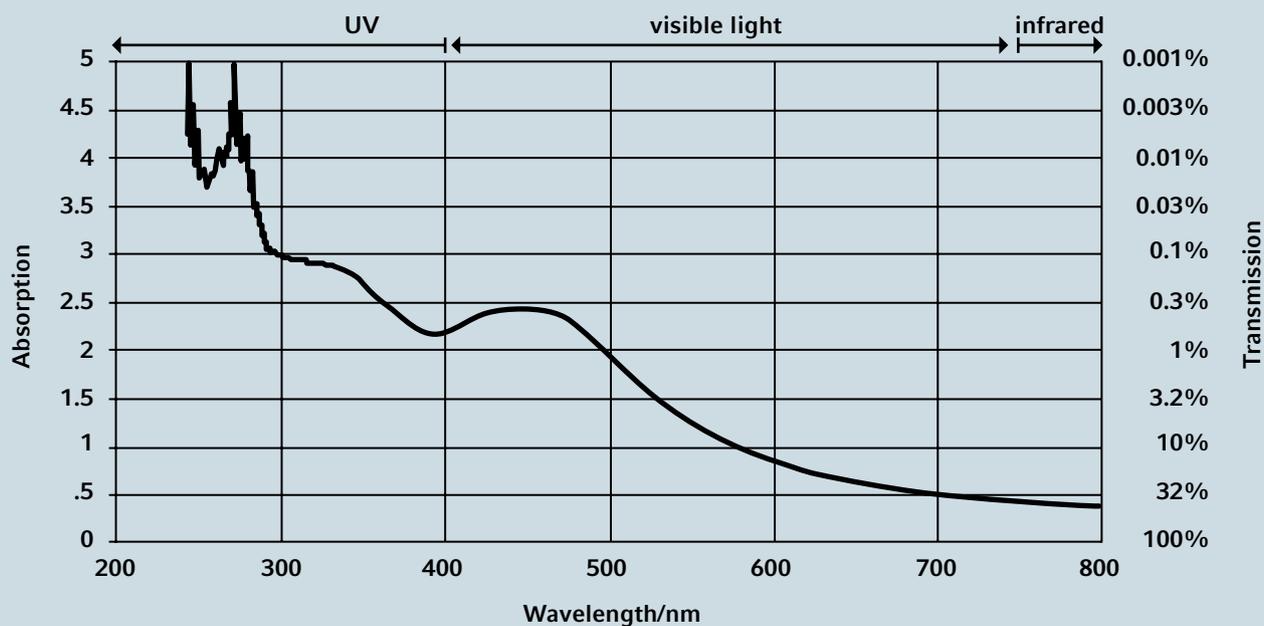
## Amber Safe-Lock Tube

- > Available in 0.5, 1.5 and 2.0 mL sizes for storage and protection of light sensitive samples
- > Polypropylene tube for high chemical resistance



- > Storage of light sensitive samples, such as,
  - SYBR green solutions
  - Ethidium bromide
  - Cy3 or Cy5 dyes

i See page 139 for ordering information.



$$\text{Absorption (A)} = -\log \frac{I}{I_0}$$

# Application Tips for PCR

## Using gradient PCR to optimize different reaction parameters

Gradient PCR is a technique that allows the empirical determination of optimal PCR conditions using the least number of steps. This optimization can often be achieved in just one experiment. Thermal cyclers from the Mastercycler® X50 system and from the nexus Mastercycler series provide a gradient function that, in a single run, evaluates different annealing, elongation and/or denaturation temperatures. During the same run, a number of other possible reaction variables can also be tested row by row. Problems with the amplification of a specific DNA fragment are an everyday occurrence in the lab. In many cases, nonspecific bands form during the PCR reaction, which hinder, or even prevent, downstream analyses or an unequivocal assessment of the PCR result. In such cases, PCR conditions must be optimized.

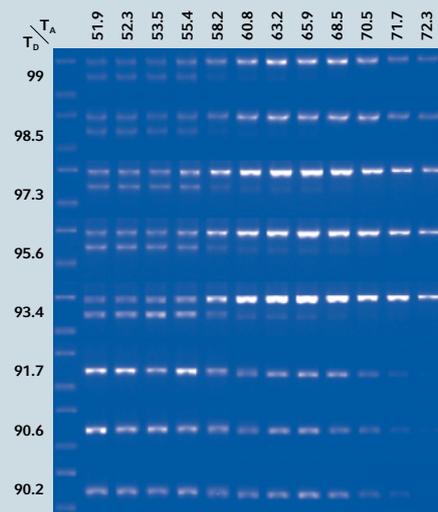


Fig. 1. Mastercycler X50 2D-Gradient Optimization

PCR optimization of  $\beta$ -actin Gene with 2D-Gradient technique. 2D-Gradient allows you to optimize both the denaturation temperature (bottom to top) and the annealing temperature (left to right) during the same run. Higher denaturation temperatures can have the advantage of increased specificity while lower denaturation temperatures reduce stress on biomolecules and can lead to increased yield. Assays that struggle to work reliably at a 95 °C denaturation temperature could benefit significantly from the optimization of the denaturation temperature.

## Annealing temperature

The selection of the annealing temperature is possibly the most critical component for optimizing the specificity of a PCR reaction. In most cases, this temperature must be empirically tested. The formation of nonspecific bands shows that the optimum temperature is often much higher than the calculated temperature (up to 12°C).

Eppendorf® gradient cyclers enable rapid testing of the optimum temperature conditions on one block and in one experiment. During the annealing step, a temperature gradient is built up consisting of 12 or 24 continuously increasing temperatures across the block. At the same time, each row with 8 or 16 wells shows perfect temperature homogeneity, allowing the possibility to simultaneously test additional reaction components, such as enzyme, primer and template DNA quantities.

## Denaturing temperature

More and more findings indicate that optimization of the denaturation temperature is worthwhile in addition to the annealing temperature. A high denaturation temperature will harm the enzyme and other biomolecules in your assay. A low denaturation temperature may result in inefficient splitting of the complementary DNA strands, as is often found with GC-rich templates or templates prone to form hairpin structures.

Eppendorf's new 2D-Gradient allows optimization of the annealing and the denaturation temperature in a single run – taking less time than ever before. This gives you the ideal set of temperatures for your PCR assay – quickly, conveniently, reliably.

## Elongation temperature

For most standard applications with Taq polymerase, optimization is seldom required. This is not the case for complex protocols, for example, the amplification of long fragments with a mixture of different polymerases. In this case, the optimization of the elongation temperature can play an important role because the ideal temperature for Taq polymerases and proofreading enzymes can vary considerably.

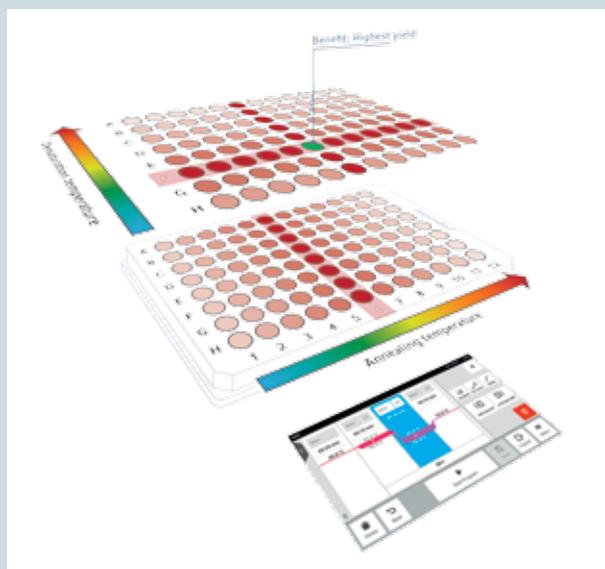


Fig. 2. Mastercycler X50 2D-Gradient

# Pure Quality

## Eppendorf purity grades for consumables

Eppendorf consumables stand for the highest quality and purity achieved by:

- > using pure raw materials
- > automatic production in clean room conditions
- > quality and functional checks of all lots
- > continuous quality assurance throughout the entire production process

With the strictest control criteria, internally and externally monitored, we guarantee consistently high quality of our products – lot by lot. Our consumables are available in different purity grades for individual application demands: “Eppendorf Quality™” as well as advanced purity grades like “sterile”, “protein-free”, “PCR clean”, “Forensic DNA Grade (acc. to ISO 18385)”, and “Biopur®”. In addition to our internal process controls, and general quality certificates, lot-specific certificates are provided by an external test laboratory for the advanced purity grades. This allows us to consistently meet our customer’s high demands when it comes to the high quality and purity of our products. As a special service, our lot-specific certificates are available on request and on our website ([www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)).

The basis: Top-quality material

All plastics used by Eppendorf to produce consumables comply with international purity criteria.

The dyes used to color consumables are free of organic substances and substances containing heavy metals.

Plastics, such as polypropylene, have a high chemical resistance to organic and inorganic acids/ bases and organic solvents commonly used in laboratories.

## Eppendorf Quality™:

Products with the purity grade “Eppendorf Quality” are ideal for many tasks in the lab. To meet consistently our customer’s high demands on quality further measurements are performed specifically for individual product groups:

Precise molding guarantees high precision and accuracy. Each lot of tips is subject to gravimetric measurement during final testing. Low wetting ensures reliable volume readings and minimal adhesion.

Eppendorf Tubes® have to be opened and closed by one hand only; without sample material being contaminated. They are highly stable, even when exposed to extreme mechanical or thermal strain. Therefore, on

a daily basis we check vapor tightness, lid-opening force, wall strength, force required to pierce the lid as well as resistance to centrifugation.

We check high resistance to centrifugation and sealability of deepwell plates and microplates.

All production tools are subject to frequent checks at regular intervals in order to guarantee consistent quality throughout the entire production period.

## Eppendorf Protein-free:

Eppendorf consumables with this purity grade are free of proteins and thus free of unspecific signals or reactions due to protein contamination.

A colorimetric assay which can detect down to 1ng/μL is used for testing and detecting protein contamination. Lot-specific certificates provided by an external accredited laboratory are available on request and on our website.

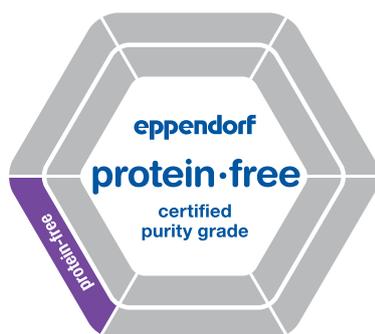
Furthermore, all Eppendorf protein-free products fulfill the quality standards defined for our purity grade “Eppendorf Quality”.

## Eppendorf Sterile:

Besides fulfilling the quality criteria of



The Eppendorf purity grade “Eppendorf Quality” fulfill everything expected of reliable, easy-to-handle consumables. With the aid of high-quality base material and permanent checks during production, Eppendorf consumables in Eppendorf Quality are ideal for many tasks in the lab.



Eppendorf consumables with this purity grade are free of proteins and thus free of unspecific signals or reactions due to protein contamination.



Eppendorf consumables with the purity grade “Sterile” are sterilized in accordance with ISO 11137 or ISO 11135 with a Sterility Assurance Level (SAL) of 10<sup>-6</sup>. Lot-specific certificates document sterility and the absence of endotoxins in accordance with Ph. Eur. 2.6.14.

“Eppendorf Quality” Eppendorf consumables with the purity grade “sterile” are sterilized and free of pyrogens. Each lot is certified by an external accredited laboratory. Eppendorf sterile consumables are sterilized in accordance with ISO 11137 or ISO 11135. A quality seal which assures customers of the suitability of their Eppendorf consumables for direct use in experiments and analysis without the need for further treatment. Lot-specific certificates are available on request and on our website.

#### Eppendorf PCR clean:

All Eppendorf consumables with the purity grade “PCR clean” ensure not to interfere with the PCR. Furthermore, all Eppendorf PCR clean products fulfill the quality criteria defined for our standard consumables (purity grade “Eppendorf Quality”). The purity grade “PCR clean” is essentially achieved in not even letting contamination develop. Therefore, the corresponding plastic items are manufactured comparable to clean-room conditions. The manufacturing areas are spatially separated and only personnel in special protective clothing are granted access. Lot-specific certificates provided by an external accredited laboratory confirm the

compliance with the criteria DNase-, RNase-, PCR inhibitor-, and human DNA-free. The certificates are available on request and on our website. “PCR clean” – a quality seal which assures customers of the suitability of their Eppendorf consumables for direct use in experiments and analysis.

#### Eppendorf Forensic DNA Grade (acc. to ISO 18385):

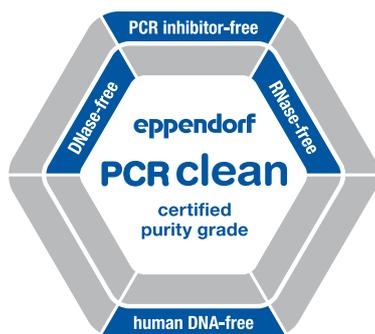
Human DNA contamination is one of the main concerns in forensic DNA analysis. The ISO 18385 has been implemented to further minimize the risk of DNA contamination. This standard specifies requirements for manufacturing products used in the collection, storage and analysis of biological material for forensic purposes. Highly automated production lines and stringent access controls are only two production conditions for “Eppendorf Forensic DNA Grade” consumables which contribute in fulfilling ISO 18385. Individually blistered packaging or “mini batches” in re-sealable bags provide effective protection against contamination. Lot-specific certificates provided by an external accredited laboratory confirm the compliance with the criteria DNase-, RNase-,

PCR inhibitor-, and human DNA-free. The certificates are available on request and on our website.

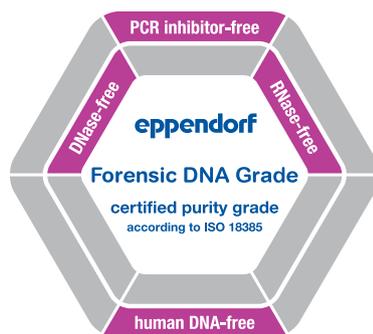
#### Eppendorf Biopur®:

To meet the highest demands of the clinical, pharmaceutical, cosmetic, food industries and others, the quality and purity grade “Biopur” was defined. This purity is ensured by an elaborate, automated manufacturing process which safeguards the product against contamination with biological substances. Furthermore, all “Biopur” products fulfill the quality standards defined for our standard consumables (Purity grade “Eppendorf Quality”). Lot-specific certificates provided by an external accredited laboratory confirm the compliance with the criteria sterile, DNase-, RNase-, PCR inhibitor, ATP-, Pyrogen-, human and bacterial DNA-free. The certificates are available on request and on our website. “Biopur” – a quality seal which assures customers of the suitability of their Eppendorf consumables for direct use in experiments and analysis.

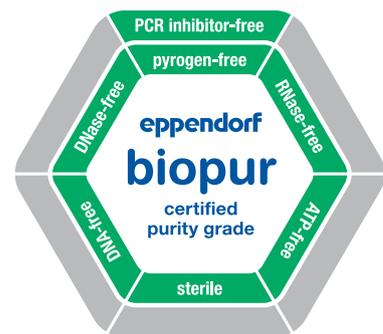
For further details please read pages 38-39 and 136.



All Eppendorf consumables with the purity grade “PCR clean” are DNase- and RNase-free, and free of PCR-inhibitors. It is also guaranteed that the consumables are free of contaminating human DNA.



The demanding requirements of the ISO 18385 are fulfilled by “Eppendorf Forensic DNA Grade” consumables. These products help to further minimize the risk of human DNA contamination in forensic DNA analysis. Individually blistered packaging or “mini batches” in re-sealable bags also help to protect against contamination.



Consumables available in this highest possible degree of Eppendorf purity grades are guaranteed to be sterile and free of pyrogens, RNases, DNases, DNA and ATP as well as PCR inhibitors. Individually blistered or “mini batches” in re-sealable boxes provide effective protection against soiling and contamination.

# Importance of Purity Factors

<p><b>Sterility</b></p> <p>In general, a product is defined as being sterile when no living organisms are present on its surface. However, a more accurate definition of sterility would be “the probability of one unsterile object being present among a number of sterile objects.”</p> <p>An adequate indicator for reliable sterilization is a probability value of one in a million that living microorganisms shall be present on an object following a sterilization procedure. This is equivalent to an SAL (Sterility Assurance Level) of <math>10^{-6}</math>, i.e., in a sample with <math>10^6</math> (1,000,000) microorganisms, one single microorganism survives, or alternatively, a mass of <math>10^6</math> (1,000,000) objects shall contain one nonsterile object following sterilization.</p> <p>For sterilization via irradiation, many directives stipulate a dose of 25 kGy to attain an SAL of <math>10^{-6}</math>. This also applies to medicinal products that come into direct contact with the human body.</p>	<p><b>Importance</b></p> <p>Sterile products are required whenever the presence of germs may have a negative effect; for example, in the prevention of infection of samples or incorrect test results for microbiological experiments that would be caused by unsterile lab equipment.</p>
<p><b>Pyrogen- (endotoxin) free</b></p> <p>Thermostable substances (glycoproteins) from the outer membrane of bacteria and other microorganisms can cause fever in humans and impair the growth of cell cultures.</p>	<p><b>Importance</b></p> <p>Absence of pyrogen prevents endotoxin-based contamination in drug manufacture, cell culture and medical laboratories.</p>
<p><b>DNA-free</b></p> <p>DNA is found in all cells of living entities, and it is the carrier of all genetic information. The highly sensitive PCR technique now enables the detection of individual molecules.</p>	<p><b>Importance</b></p> <p>The presence of DNA could lead to false-positive results for different applications involving DNA (e.g., additional bands, positive “negative controls”). Note: Autoclaving does not remove traces of DNA.</p>
<p><b>Free of human DNA</b></p> <p>To eliminate this potential source of contamination, the consumables are tested for the presence of human DNA. Even a single cell (e.g., skin particles) would be detected in the test. Manufacturing is virtually fully automated and monitored by staff wearing protective clothing.</p>	<p><b>Importance</b></p> <p>Tests for human DNA prevent consumables from containing DNA that could lead to false-positive results (e.g., genetic tests in forensics)</p>
<p><b>RNase-free</b></p> <p>RNases are enzymes that degrade RNA, the read copy of DNA. These enzymes are extremely resistant, even to autoclaving and irradiation.</p>	<p><b>Importance</b></p> <p>RNase-free products are an absolute must in the field of molecular biology because RNA is highly sensitive and can be destroyed very quickly by RNases.</p>
<p><b>ATP-free</b></p> <p>ATP is an energy-rich molecule that is part of all living cells; therefore, its presence can indicate biological contamination.</p>	<p><b>Importance</b></p> <p>The test procedure for the quantitative and qualitative detection of ATP is already an integral part of hygiene monitoring, e.g., in the pharmaceutical industry.</p>
<p><b>Free of PCR inhibitors</b></p> <p>PCR—the replication of DNA—has developed into one of the most important and commonplace molecular biology methods used in medical diagnostics, genetic counseling and all basic biological research. However, there are also substances that impair this reaction, so lab products must be free of these inhibitors.</p>	<p><b>Importance</b></p> <p>It is essential that consumables used contain no impurities that could adversely affect PCR. This is particularly crucial for the amplification of minute quantities of genetic substances and for quantitative PCRs.</p>

# Eppendorf Quality



## Description

Eppendorf® products with the Eppendorf Quality purity label fulfill everything expected of reliable, easy-to-handle consumables. With the aid of high-quality base material and permanent checks during production, our Eppendorf pipette tips, Eppendorf Tubes® and Eppendorf Combitips advanced® tips are ideal for many lab tasks. Also available: pipette tips in our newest "Sterile" purity level.

## Which requirements does Eppendorf Quality fulfill?

- > High precision and accuracy as well as defined flow properties, ensured by precise molding of pipette tips and Combitips advanced tips
- > Minimal water retention, ensuring reliable volume readings and minimal adhesion
- > Excellent running properties of Combitips advanced tips for reduced effort and smooth liquid handling (this is crucial for minute volumes)
- > Single-handed opening and closing of microcentrifuge tubes, without sample material being contaminated
- > Microcentrifuge tubes are highly stable, even when exposed to extreme thermal or mechanical strain
- > Good chemical stability of consumables for use in many different applications

**i** For more information on Eppendorf purity levels, visit [www.eppendorf.com/purity](http://www.eppendorf.com/purity)

**eppendorf**

## Eppendorf Certificate

Certificate of Quality Combitips advanced®

**Quality Assurance**  
Combitips advanced are manufactured in a controlled area and are subject to regular quality inspections within statistical process control.  
The Eppendorf Quality Management System is certified according to ISO 9001 and ISO 13485.

**Materials**  
Combitips advanced are made of virgin polypropylene and polyethylene of highest purity and quality. Our material suppliers do not use or intentionally incorporate the following agents into materials Eppendorf uses for the production of Combitips advanced:

- Slip agents (including oleamide, erucamide, stearamide)
- Biocides (including di(2-hydroxyethyl)methylododecylammonium salts (DIHEMDA))
- Plasticizers (softeners)

The used raw materials for Combitips advanced comply with FDA regulations 21CFR § 177.1520 "Olefin Polymers" and 21CFR § 178.2010 "Antioxidants and Stabilizers for Polymers" for food containers.  
During production of Combitips advanced no slip agents, biocides and plasticizers are used.  
Combitips advanced and all product components do not contain or come in contact with:

- Metallic dyes
- Latex
- Glucan
- Cellulose
- Melamine

May 2015

  
 Birgitte Klose  
Global Product Manager  
Liquid Handling Consumables/Instruments

  
 Dr. Ingrid Böhmer  
Vice President  
Quality Management & Regulatory Affairs

Your local distributor: [www.eppendorf.com/contact](http://www.eppendorf.com/contact)  
 Eppendorf AG, 22333 Hamburg, Germany  
 E-mail: [eppendorf@eppendorf.com](mailto:eppendorf@eppendorf.com)

ISO 9001  
Certified

ISO 13485  
Certified

ISO 17025  
Certified



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[www.eppendorf.com](http://www.eppendorf.com)

## Quality control measures

- > Tests for vapor tightness, lid-opening force, wall strength, force required to pierce the lid and centrifugal stability performed on microcentrifuge tubes on a daily basis
- > Gravimetric measurements are performed on tips and Combitips in order to ensure international specifications
- > All production tools are checked throughout the entire production process to ensure consistent quality
- > All production steps, from the completion of the goods to packaging, are fully automated; manual intervention has been eliminated, and all subsequent risks caused by contamination have been virtually ruled out

## A good basis: Start with top-quality material

- > All plastics used to produce consumables comply with international purity criteria
- > The dyes used for consumables are free of organic substances and heavy metals
- > Plastics are highly resistant to organic and inorganic acids/bases and organic solvents commonly used in laboratories

Pipette tips, microcentrifuge tubes, Deepwell plates and Combitips cylinders are made of PP (polypropylene), a relatively inert plastic characterized by minimum water retention as well as high dimensional and mechanical stability across a wide temperature range. Other plastics, such as PE (polyethylene), are also used, for example in the Combitips advanced pistons; the combination of PP and PE results in ideal running properties between these two parts.

# Eppendorf PCR clean



## Description

With the advent of PCR (polymerase chain reaction) and many other molecular biology methods in clinical and research labs, new purity criteria for consumables are necessary. Although there are no set directives in this field, we have analyzed the individual criteria and redefined our requirements governing PCR consumables.

### All production batches are tested at an independent laboratory for the following:

- > Absence of human DNA: This is monitored in a PCR test that can detect quantities smaller than a single human cell (< 2 pg DNA)
- > Absence of DNase and RNase: Reaction buffers with one DNA and one RNA conductor are incubated to 37°C in the consumables (or, following liquid handling, in the consumables for several hours); the intactness of the nucleic acids is then tested via electrophoresis
- > Absence of PCR inhibitors: The consumables are tested in a separate PCR experiment to detect contamination by any substances that may have an adverse effect on the amplification procedure

**i A batch-related PCR clean certificate is available upon request.**

## Eppendorf Certificate

### Certificate of Purity – PCR clean

This package contains a high quality consumable manufactured under the PCR clean Eppendorf Purity Standard.

The Eppendorf PCR clean consumables are produced in a class 6 (according to VDI 2083) and a class 100,000 (according to U.S. Fed. Stand. 209 D) clean room environment.

For this product Eppendorf certifies the following [\*]:

#### Free of detectable

- Human DNA
- DNase
- RNase
- PCR inhibitors



Quality control and subsequent certification is done by an independent laboratory (accredited by DAkkS). Lot-specific certificates are available on request or on the internet at [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates).

The certification comprises the following tests:

#### Human DNA Contamination Test

A PCR master mix is prepared using the QuantiTect® Sybr® Green PCR Kit (Qiagen®) and primer for the detection of human DNA. The primers amplify a 294 bp fragment present in more than 1x10<sup>5</sup> copies per human cell. The master mix (15 µl) is added to 5 positive control vessels containing known amounts of human DNA (32, 16, 8, 4 and 2 pg in 10 µl H<sub>2</sub>O) plus a negative control (10 µl DNA-free H<sub>2</sub>O).

15 samples are rinsed one after another with DNA-free water. 10 µl of this solution is added to 15 µl master mix. PCR is done for 30 cycles.

The emission of Sybr Green-induced fluorescence is detected in samples and controls. For the samples to pass certification, no fluorescence must be found corresponding to the negative control.

#### DNase Test

15 samples are rinsed one after another with DNA-free water. 17 µl of these solutions are mixed with 3 µl DNase-buffer containing 1 00 bp DNA-ladder in a DNase-free tube. A positive control is spiked with DNase, a negative control contains DNA-free water. All tubes are incubated for 24 h at 37 °C.

Page 1 of

[www.eppendorf.com](http://www.eppendorf.com)



### Which requirements does “PCR clean” fulfill?

- > The miniscule amounts of genetic substance used for experiments must be protected from degradation (e.g., from DNases and RNases), i.e., all tubes and tips must be free of such impurities
- > Consumables that come into contact with PCR reactions must be free of PCR inhibitors, which would interfere with the amplification process
- > These plastic goods must also be free of contaminating nucleic acids, normally human DNA, which could infiltrate the plastic goods during the production process (e.g., via skin particles) and thus may lead to false-positive results

### Clean production, clean packaging

Eppendorf® ensures that your lab receives clean, undamaged and fully functional consumables. Production and primary packaging of all products that are available in the PCR clean purity category are conducted under clean room conditions. The protective outer box is secured with a “PCR clean” seal to ensure that the product remains uncontaminated.

Only those consumables that have passed all of the necessary tests are given the “PCR clean” quality seal. The seal assures you that Eppendorf consumables are suited for direct use in experiments and analysis without the need for further treatment (such as autoclaving).

# Eppendorf Biopur®



## Description

The Eppendorf Biopur quality and purity standard meets the requirements of the medical, pharmaceutical and food industries. All consumables in this highest-level purity category—pipette tips, Combitips advanced® and Eppendorf® microcentrifuge tubes—are guaranteed to be sterile and free of pyrogen, RNase, DNA and ATP. This is achieved by a sophisticated, automated production process with different control protocols to rule out any danger of contamination caused by biological substances.

- > Purity is ensured, even for the most sophisticated applications
- > Reduced costs—inconclusive, usually expensive tests are no longer necessary
- > “Ready-to-use” products save time and labor
- > Individually wrapped consumables and resealable boxes provide effective protection against follow-up contamination

## Individually packaged—for your safety

End users demand that Eppendorf Biopur products arrive clean, undamaged and fully functional. All products in the Eppendorf Biopur purity category, such as pipette tips (including those in boxes/racks), Combitips advanced tips and Safe-Lock microcentrifuge tubes, are delivered in their own individually wrapped packaging, thereby ruling out any danger of contamination.

**i** A batch-related Biopur certificate is available at [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)

**i** For more information on Eppendorf purity levels, visit [www.eppendorf.com/purity](http://www.eppendorf.com/purity)

## What does Eppendorf Biopur offer?

All Eppendorf Biopur products are manufactured under one strict production process. They also meet our specific quality requirements regarding wetting behavior, liquid tightness, accuracy and chemical resistance, as well as the following criteria:

- > Sterile
- > Control and certification by an independent laboratory
- > Each individual batch is sterilized via beta irradiation
- > Certified sterility in accordance with USP XXII (United States Pharmacopoeia), DAB 10 (German Pharmacopoeia) and Ph.Eur. (European Pharmacopoeia)
- > Free of pyrogen, RNases, bacteria (E. coli), human DNA and ATP
- > Certified free of pyrogens in accordance with the kinetic-turbidimetric LAL test (FDA guidelines)
- > An Eppendorf Biopur batch-specific certificate is issued after all test criteria are met



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Product	Patent number
BioBLU® 5p, BioBLU® 5c, BioBLU® 14c, BioBLU® 50c	US 8,522,996
BioBLU® 1c, BioBLU® 3c, BioBLU® 5c, BioBLU® 5p, BioBLU® 14c, BioBLU® 50c	US 9,347,912
Impeller for BioFlo® 510, BioFlo® 610, BioFlo® PRO	US 8,292,591
Centrifuge 5418 R	US 6,866,621
Centrifuge 5418R, 5424R, 5430R, 5427R	US 8,845,967
Centrifuge 5424 R	US 6,866,621
Centrifuge 5424R, 5427 R	US 8,783,737
Centrifuge 5430 R	US 6,866,621
Centrifuge 5702 swing-bucket rotor	US 6,746,391
Centrifuge 5702 R, 5702 RH	US 6,866,621
Aerosol-tight fixed-angle rotor for Centrifuges 5920R, 5804, 5804R, 5810, 5810R, 5427R, 5430, 5430R, 5418, 5418R	US 9,149,815
Combitips advanced® 25ml / 50ml	US 8,839,685 US 8,813,584 US 9,291,529
Combitips advanced®	US 8,813,584 US 9,291,529
Easypet® 3	US 9,028,774

Electrofusion Buffers	US 7,157,257
Electroporation Buffer	US 7,157,257
ep Dualfilter T.I.P.S.® SealMax	US9,138,741
epMotion® 5073; epMotion® 5075	US 8,377,396
epMotion® 5075 VAC	US 6,666,978
Eppendorf BioSpectrometer® Family	US 8,464,171
Eppendorf Cell Culture Flasks (all)	US 9,708,576
Eppendorf Cell Culture Flasks (all Flasks with plug-seal cap)	US 9,776,771
Eppendorf Deepwell Plate	US 8,636,965
Eppendorf Injectman® 4	US 9,644,763
Eppendorf Microplates	US 8,636,965
Eppendorf PiezoXpert®	US 9,422,520
Eppendorf Reference® 2	US 7,674,432 US 8,297,134 US 9,044,749
Eppendorf Reference® 2 multi channel	US 7,673,532 US 9,339,811 US 9,393,561
Eppendorf Reference® 2 single channel ≤ 1000 µl Eppendorf Reference® 2 multi channel	US 7,434,484 US 9,027,419
Eppendorf Reference® 2 variable	US 9,295,986
Eppendorf Research® plus	US 7,674,432 US 8,133,453 US 8,297,134
Eppendorf Research® plus ≤ 1000 µl	US 7,434,484
Eppendorf Research® plus multi channel	US 7,673,532 US 9,393,561
Eppendorf ThermoMixer® C	US 8,827,540 US 9,016,929 US 9,352,323
Eppendorf ThermoMixer® F0.5, F1.5, F2.0	US 8,827,540 US 9,016,929
Eppendorf ThermoMixer® FP	US 8,827,540 US 9,352,323
Eppendorf ThermoStat™ C	US 9,352,323
Eppendorf TransferMan® 4r	US 9,644,763
Eppendorf TransferMan® 4m	US 9,644,763
Eppendorf Xplorer®/ Eppendorf Xplorer® plus	US 6,499,365 US 6,778,917 US 7,585,468 US 7,674,432 US 7,694,592 US 8,028,592 US 8,096,198 US 8,570,051 US 9,403,163 US 9,579,645
Eppendorf Xplorer®/Eppendorf Xplorer® plus multi channel	US 7,673,532 US 9,393,561
Eppendorf Xplorer®/Eppendorf Xplorer® plus single channel ≤ 1.000 µl	US 7,434,484
Eppendorf Xplorer®/Eppendorf Xplorer® plus multi channel <1.250 µl	
Eppendorf µCuvette®	US 9,677,994
gripping tool for epMotion® 5073; epMotion® 5075	US 7,462,327
Innova S44i	US 8,226,291
MagSep reagent kits	US 8,940,248

Mastercycler® pro Family	US 8,492,137 US 8,722,394
Mastercycler® pro Family; Mastercycler® nexus Family	US 8,322,918 US 8,722,394
MixMate®	US 7,575,363 US 8,550,696
Multipette®/Repeater family	US 8,114,361 US 9,011,799 US 9,579,645
Multipette®/Repeater M4	US 8,408,079 US 9,180,446 US 8,813,584 US 9,291,529 US 9,289,762 US 9,579,644
Multipette®/Repeater® stream/ Xstream, Multipette®/Repeater® E3/ E3x	US 6,499,365 US 6,778,917 US 7,585,468 US 7,731,908 US 8,813,584 US 9,291,529 US 9,289,762
Multiporator®	US 6,008,038
Optical sensor epMotion®; epMotion® 5070, 5057 - alle Typen	US 6,819,437
PCR Cooler	US 6,616,897
Pipetting tool for epMotion®	US 8,377,396
twin.tec PCR Plates	US 6,340,589 US 7,347,977 US 7,767,153 US 8,636,965
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epMotion® 96 Interface	US D771661
Eppendorf Centrifuge Rotor	US D760400
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Eppendorf Plates®	US D601713 US D601714
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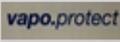
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