# eppendorf



# More Capacity

Centrifuge 5920 R



#### Extraordinary capacity in a compact design

Centrifuge 5920 R is outfitted with a powerful state-of-the-art refrigeration system that allows a very compact centrifuge design. Centrifuge 5920 R has similar dimensions as competing refrigerated 3 liter models and yet features a superior capacity of up to  $4 \times 1,000$  mL or  $52 \times 50$  mL conical tubes.

# The New Benchmark in Capacity and Performance

Eppendorf is introducing the new Centrifuge 5920 R, featuring extraordinary high capacity and performance. Its high capacity of up to  $4 \times 1,000$  mL makes it the ideal instrument for high-throughput applications.



#### Compatible with 1 liter bottles

- > Centrifuge 5920 R is the first benchtop centrifuge to accommodate standard 1 liter Nalgene® bottles
- > Ideal for large volume applications



#### Advanced operating system and temperature management

- > Multilingual operation menu
- > FastTemp pro® function allows for automatic precooling based on pre-programmable time and date; combined with ECO shutoff function this reduces power consumption considerably
- > Dynamic compressor control (DCC) technology for precise cooling performance



#### **Ergonomic fixed-angle rotors**

- > Easy handling through aerosoltight Eppendorf QuickLock® lids, allows fast and ergonomic lid locking with only 1/4 of a turn
- > Eppendorf's fixed-angle rotors are among the lightest in the market to improve handling and operational safety
- > Aluminum, with its superior thermal conductivity, allows for fast pre-cooling and accurate temperature control

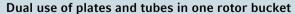
Extraordinary Capacity and Versatility

#### 4 liter capacity

Centrifuge 5920 R accommodates standard 1 liter Nalgene bottles setting a new standard in the table top centrifuge segment. Compared to other custom-made 1 liter bottles the Nalgene bottle is narrow and allows for a better pellet compared to wider bottles.

The higher capacity enables you to process a higher volume in fewer runs. Your benefit: Energy and time saving.





Not only do the new swing-bucket rotors S-4xUniversal-Large and S-4x1000 with high capacity and plate/tube buckets provide an exceptional high capacity, they also allow for both tubes and plates to be used in the same bucket.



#### **Benefits:**

- > Cost saving: No need for separate plate buckets
- > Space saving: No need to store different buckets
- > Time saving: No need to exchange buckets

Selected rotor options are optionally available with aerosol-tight QuickLock caps.

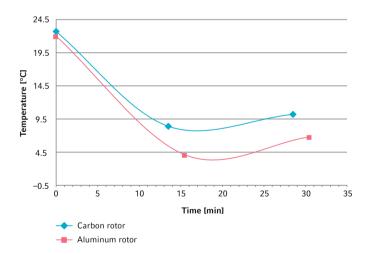
# Excellent Temperature Management

Eppendorf uses its own developed dynamic compressor control in all its refrigerated centrifuge models incl.

Centrifuge 5920 R. Unlike other compressors which switch back and forth between 0 % and 100 % performance output (e.g. common refrigerators in private households), Eppendorf's compressor control allows for a constant and smooth temperature regulation. The benefit is that the set temperature is kept stable. A more precise temperature accuracy is guaranteed.

Centrifuge 5920 R's powerful refrigeration system becomes especially apparent in combination with large fixed-angle rotors. Samples with room temperature inserted into a precooled centrifuge are quickly cooled down in an aluminum rotor. Carbon rotors, on the other hand, have a poor thermal conductivity with the result that low temperatures (e.g. 4 °C) take longer to reach.

## Aluminum fixed-angle rotors offer maximum safety for temperature-sensitive samples



Measured temperature in boreholes of fixed-angle  $6 \times 50$  mL aluminum rotor (Centrifuge 5920 R, pre-series, n=1) and  $8 \times 50$  mL carbon rotor (Competitor A, n=1) at  $20.000 \times g$ . Centrifuges were pre-cooled before run. Temperature set to  $4 \, {}^{\circ}{}$ 

#### Main features

- > Dynamic compressor control (DCC) technology for precise cooling performance
- > FastTemp function for quick pre-cooling; temperature setting is based on the calculated temperature of the adapter and thus ensures maximum temperature accuracy when the sample is inserted.
- > FastTemp pro® function allows for automatic precooling based on pre-programmable time and date; combined with ECO shut-off function this reduces power consumption considerably.

# Advanced Operating System

#### Perfect combination of ease-of-use and high accuracy

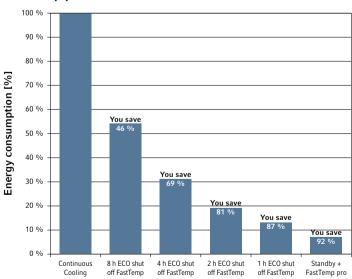
Centrifuge 5920 R features an advanced operation system that comes with an easy to use interface to make the operation intuitive and more enjoyable. At the same time, the operating system was developed to allow for most accurate and reproducible results.



## Easy pre-cooling with FastTemp pro®

In addition to the standard FastTemp pre-cooling program Centrifuge 5920 R features a unique software option called FastTemp pro. This program allows for automated pre-cooling based on pre-programmable time and date. FastTemp pro can be set to a specific date or as a repetitive event for several days every week. Simply turn the centrifuge into standby mode when you leave your lab and let FastTemp pro take care of pre-cooling in the morning. This not only makes operation super easy, it also saves you more than 90 % of energy over night.

## Energy savings overnight with ECO shut-off and FastTemp pro





#### Main features of operating system and user interface

#### Ease of use

- > Menu-driven, multilingual operation menu (English, German, French, Spanish) with large backlit display
- > Saves up to 99 user-defined programs
- > 5 program keys for easy access to routine programs
- > USB port allows for easy software upgrades

#### Safety

- > Automatic rotor recognition and imbalance detection for maximum operational safety
- > Key lock to prevent unintentional adjustments

#### **Accuracy**

- > Settings in 10 rpm increments for a high accuracy
- > »At set RPM« function starts the timer when the selected rotational speed is reached for reproducible centrifugation runs
- > FastTemp function precools rotor and adapters to the set target temperature to ensure sample safety
- > Choice of 10 acceleration ramps and 10 deceleration ramps for adjusting to sensitive sample runs
- > Radius correction for each adapter can optionally be set for most accurate RCF setting
- > Display can optionally show both set and current settings for time, temperature and speed

#### Power saving

- > Standby LED button for easy activation of standby function
- > ECO shut-off engages after 8 hours (adjustable) of non-use to reduce energy consumption and extend compressor life

# Feature Overview





> Watch video clips of Centrifuge 5920 R on our optimized webpage for mobile devices or www.eppendorf.com/centrifugation

#### **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 reach of lid

#### Extraordinary high capacity

> Max. 4 × 1,000 mL/52 × 50 mL conical/ 108 × 15 mL conical/196 × 5/7 mL blood collection tubes/8 × DWP

#### **Outstanding cooling performance**

- > Dynamic compressor control for precise temperature performance
- > FastTemp pro® function for easy pre-cooling

#### Menu-operated display

- > Multilingual operation menu with language support for English, German, French and Spanish
- > 5 program keys for easy access to routine programs

#### **Quiet operation**

> Designed to operate at low noise levels for a relaxing work environment

#### Outstanding versatility for all your applications

- > Broad rotor and adapter selection to spin all commonly used tubes, bottles, and plates
- > High centrifugation speed up to 25,062  $\times$  g (13,700 rpm) for molecular applications in tubes from 0.2 to 1,000 mL and plates
- > Aerosol-tight rotors (e.g. for potentially hazardous materials)
- > Automatic rotor recognition and imbalance detection for maximum operational safety

#### **Ergonomic operation**

- > Low sound level to benefit your work environment
- > Centrifuge lid with soft-touch lid closure
- > Compact footprint saves valuable bench space
- > Eppendorf QuickLock® caps and lids allow fast and ergonomic lid locking

## Advanced temperature management for maximum sample protection and energy efficiency

- > Temperature range from -11 °C to 40 °C
- > Maintains constant 4°C, even at maximum speed\*1
- > FastTemp function for quick pre-cooling
- > FastTemp pro® function allows for automatic precooling based on pre-programmable time and date
- > Standby cooling function holds temperature when centrifuge is not in use
- > ECO shut-off engages after 8 hours (adjustable) of non-use to reduce energy consumption and extend compressor life

 $<sup>^{\</sup>star1}$  to maintain 4  $^{\circ}\text{C}$  with fixed-angle rotors FA-6x50 and FA-6x50-hs the max speed is 11,000 rpm

# The Eppendorf PhysioCare Concept®

The mission of Eppendorf has always been to improve the living conditions of their customers.

Nowadays where people spend a lot of their time at work the ergonomics of their tools and the whole work environment is becoming more important for their well-being. Thus the development of each Eppendorf instrument is based on three spheres that support the health of their customers.

Each of these spheres offers stringent ergonomic criteria which are directly involved in the users work process:



- Sphere 1—The User
- Sphere 2—The Lab
- Sphere 3—The Laboratory Workflow





#### Sphere 1—The User:

The PhysioCare Concept quarantees an ergonomic design and an optimized product performance according to the needs of the individual.

#### Centrifuge 5920 R:

- > Centrifuge lid with soft-touch lid closure
- > Light-weight fixed-angle rotors for easy handling
- > Eppendorf QuickLock caps for easy one-hand operation
- > Eppendorf QuickLock lids for ergonomic lid locking





#### Sphere 2—The Lab:

The PhysioCare Concept allows the uncomplicated integration of instruments in the lab as well as adhering to its specific requirements.

#### Centrifuge 5920 R:

- > Compact design saves valuable bench space
- > Low centrifuge lid opening height for use under shelves
- > Low noise level to benefit your work environment
- > Aerosol-tight rotors for sample and user safety
- > Color coded adapters to quickly identify a certain tube format
- > Rotor buckets and adapters are autoclavable to keep your lab and hands free of contamination





Sphere 3—The Laboratory Workflow: The PhysioCare Concept ensures general support to enhance processes around the lab and improve the results of the whole organization.

#### Centrifuge 5920 R:

- > Complete workflow in disposable conical tubes. Learn more about Eppendorf's new 15/50 mL conical tubes on page 30
- > Eppendorf offers many forms of consultancy to enhance the processes around your lab and improve your results

For more information visit www.eppendorf.com/epServices



or watch the Physiocare video: www.eppendorf.com/physiocare



# Advanced Rotor Design

Eppendorf has made tremendous improvements to its swing-bucket and fixed-angle rotors in recent years elevating your centrifuge performance to a new level. Enjoy unique product features that improve handling and performance.



#### **Swing-bucket rotors**

#### Eppendorf QuickLock® caps for one-hand operation

- > Significantly improved handling, easy operation with
- > 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

#### Fixed-angle rotors

#### Eppendorf QuickLock® lids for ergonomic lid locking

Our aerosol-tight QuickLock rotors close with only 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 thermal conductivity, allows fast pre-cooling and accurate temperature control in refrigerated centrifuges.



#### Weight comparison carbon vs. aluminum

Eppendorf's fixed-angle rotors are among the lightest in the industry to improve handling and operational safety.

Competitor (carbon) Eppendorf (aluminum) Weight in kg 3.0 1.0 0.0 Fixed-angle rotor 6 × 85 mL

#### Light-weight rotors cause less wear and tear on the motor and allow for faster acceleration and braking times. This reduces run times and saves time overall.

#### Additional rotor features

- > 34° and 45° borehole angles minimize pellet smear along the tube wall and thus lead to be better results
- > 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

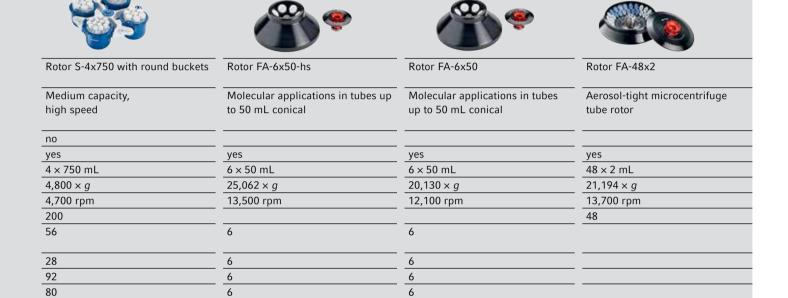
# Overview of Main Rotors for 5920 R

Model	Rotor S-4xUniversal-Large	Rotor S-4x1000 with High-Capacity Buckets	Rotor S-4x1000 with Plate/Tube Bucket	Rotor S-4x1000 with Round Bucket
Positioning	Extra high capacity, tubes and plates in the same bucket	Extra high capacity, tubes and plates in the same bucket	High capacity, tubes and plates in the same bucket	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	4,402 × g	3,153 × g	$3,076 \times g$	3,428 × <i>g</i>
Max. speed	4,250 rpm	3,700 rpm	3,700 rpm	3,700 rpm
1.5/2.0 mL micro tube	368			200
Eppendorf Tube® 5.0 mL and 15 mL conical tube	96	108	88	56
50 mL conical tube	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

Eppendorf recognizes its responsibility as a global citizen. Protecting the environment is critical to the conservation of precious natural resources. The Eppendorf epGreen initiative is another example of our commitment to social responsibility. Our goal is to constantly reduce the environmental impact of our business operations and the products that we produce.

#### Centrifuges in general

- > Use of brushless induction motors to provide maintenance-free operation, eliminating carbon particle emissions
- > Rotors are mostly made of recyclable aluminum
- > Optimized sound design for low noise levels to benefit your work environment
- > 100 % recyclable packaging material



#### Refrigerated models additionally feature

4

16/4

- > Dynamic compressor control for precise cooling performance
- > CFC-free refrigerant with an ozone depletion potential (ODP) of zero
- > ECO shut-off deactivates the compressor after 8 hours of inactivity to reduce energy consumption and extend compressor life

#### **Energy saving of** ■ **Centrifuge 5920 R compared** to ■ Centrifuge 5810 R\* 100 Power consumption [%] 90 80 70 60 50 30 20 10 Rotor S-4-104 Rotor S-4x750 Rotor F-34-6-38 Rotor F-6x85

(4 × 750 mL)

<sup>\*</sup> Based on internal testing (5920 R: pre-series unit; 230 V, 60 min, 4 °C)

## NEW-

Rotor S-4xUniversal-Large

#### **Product features**

- > Extra High capacity swing-bucket rotor with max. speed  $4,402 \times g$ (4,250 rpm)
- > Broad range of adapters enables high versatility for tubes and bottles from 0.2 mL to 750 mL and plates
- > Universal bucket design accommodates both plates and tubes
- > Aerosol-tight QuickLock caps for safe centrifugation of hazardous samples optionally available \*1
- > Buckets, adapters and caps are autoclavable



<sup>\*1</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

Tube Volume	1.5/2.0 mL	5 mL FACS	2.6-8 mL	5.5-12 mL	9 mL
Max. tube diameter	12 mm	12 mm	13 mm	16 mm	17.5 mm
Max. vessel height	11 mm	113 mm	110 mm	110 mm	136 mm
Max. vessel height for use with cap/lid	39 mm	82 mm	107 mm	106 mm	130 mm
Adapter		oorse ens			some con
Number of vessels per adapter/rotor	92/368	51/204	49/196	37/148	28/112
Bottom shape	flat	round	round	round	round
Centrifugation radius	205 mm	205 mm	205 mm	204 mm	209 mm
Max. RCF	4,139 × <i>g</i>	4,140 × g	4,140 × g	4,120 × g	4,200 × g
					set of 2 pcs.
Packing	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.

<sup>&</sup>lt;sup>1)</sup> Please note that these conical bottles need to be used together with a conical form insert provided by the manufacturer. Technical specifications subject to change.



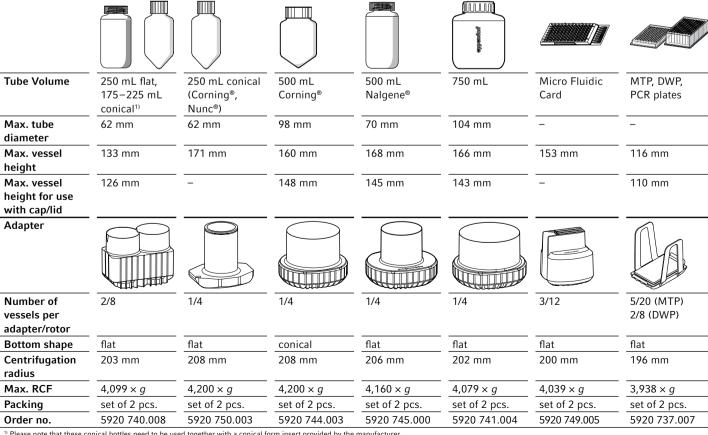


Ordering information

Description	Order no.
Rotor S-4xUniversal-Large	5895 190.006
Aerosol-tight caps, for Rotor S-4xUniversal-Large, set of 2	5920 752.006

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14 mL	Eppendorf Tube <sup>®</sup> 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
Deposition of the second of th					
24/96	24/96	12/48	10/40	7/28	12/48
round	conical	flat	conical	flat	round
210 mm	218 mm	194 mm	213 mm	197 mm	206 mm
4,240 × g	4,402 × g	3,918 × g	4,301 × g	3,978 × g	4,160 × 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.
5920 751.000	5920 736.000	5920 743.007	5920 735.004	5920 748.009	5920 753.002

# NEW-Rotor S-4xUniversal-Large



<sup>&</sup>lt;sup>1)</sup> Please note that these conical bottles need to be used together with a conical form insert provided by the manufacturer.

Technical specifications subject to change.

# Get +Together

A perfect match for your lab work: The Centrifuge 5920 R and the Rotor S-4xUniversal-Large go well together with the Eppendorf Consumables. Learn more about the products. For easiest access, just scan the QR code. Alternatively, visit www.eppendorf.com/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**

Rotor S-4x1000 with **High-Capacity Buckets** 

#### **Product features**

- > Extra High capacity swing-bucket rotor with max. speed  $3,153 \times g$ (3,700 rpm)
- > Bucket accommodates both plates and tubes
- > Buckets and adapters are autoclavable



Tube Volume	2.6 – 8 mL	5.5 – 12 mL
Max. tube diameter	13 mm	16 mm
Max. vessel height	112 mm	113 mm
Max. vessel height for use with cap/lid		<u> </u>
Adapter		
Number of vessels per adapter/rotor	49/196	36/144
Bottom shape	round	round
Centrifugation radius	204 mm	199 mm
Max. RCF	$3,122 \times g$	3,046 × <i>g</i>
Packing	set of 2 pcs.	set of 2 pcs.
Order no.	5920 718.002	5920 720.007

<sup>&</sup>lt;sup>1)</sup> Please note that these conical bottles need to be used together with a conical form insert provided by the manufacturer. Technical specifications subject to change.



#### Ordering information

Description	Order no.
Rotor S-4x1000	· ·
Rotor S-4x1000, incl. high-capacity buckets	5895 118.003
Rotor S-4x1000, without buckets	5895 101.003
Buckets for Rotor S-4x1000	
High-Capacity bucket for Rotor S-4x1000, set of 2	5895 107.001
High-Capacity bucket for Rotor S-4x1000, set of 4	5895 106.005
Accessories	
Plate carrier for high-capacity bucket, for MTP, DWP, PCR plates, set of 2	5920 729.004

9 mL	Eppendorf Tubes® 5.0 mL and 15 mL conical	50 mL conical	250 mL flat, 175 – 225 mL conical, 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 × <i>g</i>	3,163 × g	3,061 × g	2,832 × g
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
5920 722.000	5920 716.000	5920 715.003	5920 717.006	5920 729.004

Rotor S-4x1000 with Plate/Tube Buckets

#### **Product features**

- > High capacity swing-bucket rotor with max. speed  $3,076 \times g$ (3,700 rpm)
- > Bucket accommodates both plates and tubes
- > Aerosol-tight QuickLock caps for safe centrifugation of hazardous samples optionally available\*1
- > Buckets, caps and adapters are autoclavable



\*1 Aerosol-tightness tested by Public Health England, Porton Down, UK.

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 × g	3,061 × <i>g</i>	3,061 × <i>g</i>	3,076 × g
Packing	set of 2 pcs.			
Order no.	5920 706.004	5920 707.000	5920 708.007	5920 710.001

<sup>&</sup>lt;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. Technical specifications subject to change.





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Description	Order no.
Rotor S-4x1000	
Rotor S-4x1000, incl. plate/tube bucket	5895 117.007
Rotor S-4x1000, without buckets	5895 101.003
Buckets for Rotor S-4x1000	
Plate/tube bucket for Rotor S-4x1000, set of 2	5895 105.009
Plate/tube bucket for Rotor S-4x1000, set of 4	5895 104.002
Accessories	
Plate carrier for plate/tube bucket, for MTP, DWP, PCR plates, Rotor S-4x1000, set of 2	5920 705.008
Aerosol-tight caps, for S-4x1000 plate/tube bucket and S-4x750 plate bucket, set of 2	5895 111.009

Eppendorf Tubes® 5.0 mL and 15 mL	50 mL conical	50 mL conical	MTP, DWP, PCR plates
17 mm	31 mm	31 mm	
121 mm	122 mm	121 mm	104 mm
121 mm		121 mm	91 mm
16/64 	10/40 conical	7/28conical	7/28 (MTP) 2/8 (DWP)  ———————————————————————————————————
201 mm	201 mm	201 mm	198 mm
3,076 × g	3,076 × g	$3,076 \times g$	3,030 × g
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
5920 712.004	5920 709.003	5920 711.008	5920 705.008

## Rotor S-4x1000 with **Round Buckets**

#### **Product features**

- > Medium capacity swing-bucket rotor with max. speed  $3,428 \times g$ (3,700 rpm)
- > Broad range of adapters enables high versatility for tubes and bottles from 0.2 mL to 1,000 mL
- > 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 \*1
- > Buckets, adapters and caps are autoclavable



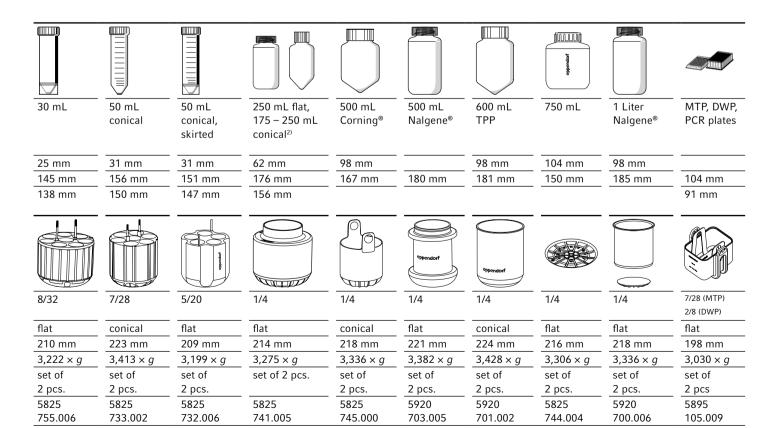
\*1 Aerosol-tightness tested by Public Health England, Porton Down, UK.

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Tube Volume	1.5/2.0 mL	12 mm 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 tubes
Max. tube diameter	11 mm	12 mm	13 mm	16 mm	17.5 mm	17.5 mm	17 mm
Max. vessel height	39 mm	115 mm	121 mm	140 mm	117 mm	117 mm	161 mm
Max. vessel height for use with cap/lid <sup>1)</sup>	39 mm	108 mm	113 mm	140 mm	112 mm	112 mm	150 mm
Adapter	opposeds opposeds				cppcoder		
Number of vessels per adapter/rotor	50/200	27/108	23/92	20/80	20/80	14/56	14/56
Bottom shape	flat	round	round	round	round	round	conical
Centrifugation radius	219 mm	211 mm	210 mm	211 mm	210 mm	210 mm	224 mm
Max. RCF	$3,352 \times g$	$3,229 \times g$	3,214 × <i>g</i>	3,229 × g	$3,214 \times g$	$3,214 \times g$	3,428 × <i>g</i>
Packing	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.
Order no.	5825 740.009	5825 747.003	5825 738.004	5825 736.001	5825 743.008	5825 748.000	5825 734.009

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>&</sup>lt;sup>2)</sup> Please note that these conical bottles need to be used together with a conical form insert provided by the manufacturer. Technical specifications subject to change.

Description	Order no.
Rotor S-4x1000	
Rotor S-4x1000, incl. 4 x 1000 mL round buckets	5895 100.007
Rotor S-4x1000, without buckets	5895 101.003
Buckets for Rotor S-4x1000	
Round bucket for Rotor S-4x1000, set of 2	5895 103.006
Round bucket for Rotor S-4x1000, set of 4	5895 102.000
Plate/tube bucket for Rotor S-4x1000, set of 2	5895 105.009
Plate/tube bucket for Rotor S-4x1000, set of 4	5895 104.002
Accessories	
Aerosol-tight caps for 750 mL round buckets, for Rotor S-4-104, Rotor S-4x750 and Rotor S-4x1000, set of 2	5820 747.005
Aerosol-tight caps, for S-4x1000 plate/tube bucket and S-4x750 plate bucket, set of 2	5895 111.009
Plate carrier for plate/tube bucket, for MTP, DWP, PCR plates, Rotor S-4x1000, set of 2	5920 705.008



## Rotor S-4x750

#### **Product features**

- > 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 bottles from 0.2 mL to 750 mL
- > 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 \*1
- > Buckets, adapters and caps are autoclavable



\*1 Aerosol-tightness tested by Public Health England, Porton Down, UK.

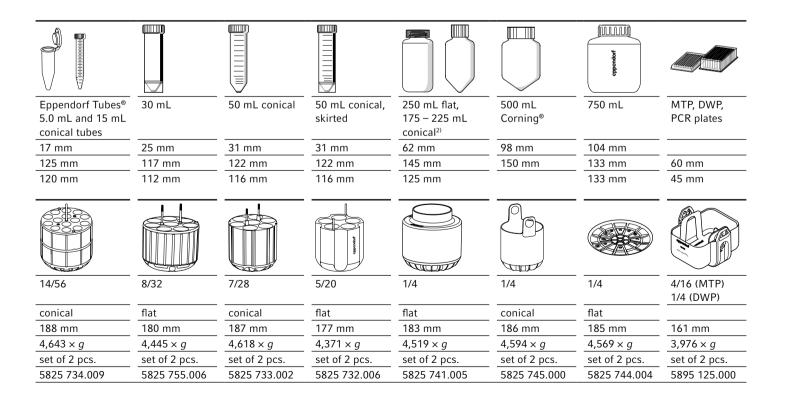
						(Attribution to the last of th
Tube Volume	1.5/2.0 mL	12 mm x 75 mm, 5 mL FACS	2.6 – 8 mL	5.5 – 12 mL	9 mL	14 mL
Max. tube diameter	11 mm	12 mm	13 mm	16 mm	17.5 mm	17.5 mm
Max. vessel height	39 mm	120 mm	121 mm	125 mm	117 mm	106 mm
Max. vessel height for use with cap/lid <sup>1)</sup>	39 mm	113 mm	113 mm	120 mm	112 mm	106 mm
Adapter	cponer cponer				eppenderl	
Number of vessels per	50/200	27/108	23/92	20/80	20/80	14/56
adapter/rotor		_				_
Bottom shape	flat	round	round	round	round	round
Centrifugation radius	194 mm	186 mm	185 mm	186 mm	185 mm	185 mm
Max. RCF	4,800 × g	4,593 × <i>g</i>	4,569 × <i>g</i>	4,594 × g	4,569 × g	4,569 × g
Packing	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
Order no.	5825 740.009	5825 747.003	5825 738.004	5825 736.001	5825 743.008	5825 748.000

<sup>&</sup>lt;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.

Technical specifications subject to change.

Ordering information
Description

Description	Order no.
Rotor S-4x750	
Rotor S-4x750, incl. 4 x 750 mL round buckets	5895 120.008
Rotor S-4x750, without buckets	5895 121.004
Buckets for Rotor S-4x750	
Round buckets for Rotor S-4x750, set of 2	5895 123.007
Round buckets for Rotor S-4x750, set of 4	5895 122.000
Plate bucket (aerosol-tight capable), incl. plate carrier, set of 2	5895 125.000
Plate bucket (aerosol-tight capable), incl. plate carrier, set of 4	5895 124.003
Accessories	
Aerosol-tight caps for plate buckets (aerosol-tight capable), for Rotor S-4-104 and Rotor S-4x750, set of 2	5820 748.001
Aerosol-tight caps for 750 mL round buckets, for Rotor S-4-104, Rotor S-4x750 and Rotor S-4x1000, set of 2	5820 747.005
Wide-neck bottle, 750 mL, set of 2	5820 708.000



## Rotor FA-6x50

#### **Product features**

- > High-speed rotor for applications in tubes from 5-50 mL
- > Max. speed 20,130  $\times$  g (12,100 rpm)
- > Eppendorf QuickLock rotor lid for fast lid locking
- > Aerosol-tight\*1 for safe centrifugation of hazardous samples
- > Low rotor weight (3.2 kg) for easy handling
- > Anodized aluminum for high chemical resistance
- > 45° borehole angle minimizes pellets smear
- > Rotor, lid and adapters are autoclavable



#### Ordering information

Description	Order no.
Rotor FA-6x50, incl.rotor lid	5895 150.004

<sup>\*1</sup> Aerosol-tightness tested by Public Health England, Porton Down, UK.

Tube Volume	2.6 – 5 mL	4 – 8 mL	5.5 – 10 mL	7.5 – 12 mL	Eppendorf Tubes® 5.0 mL
Max. tube diameter	13 mm	13 mm	16 mm	16 mm	17 mm
Max. vessel height for	119 mm	119 mm	119 mm	119 mm	121 mm
use with cap/lid					
Adapter	() proposeds	© bbenderf	) popuseddo	oppondorf opportunity	
Number of vessels per adapter/rotor	1/6	1/6	1/6	1/6	1/6 1)
Bottom shape	round	round	round	round	conical
Centrifugation radius	120 mm	120 mm	120 mm	120 mm	121 mm
Max. RCF	19,246 × <i>g</i>	19,246 × g	19,246 × g	19,246 × g	19,806 × <i>g</i>
Packing	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.
Order no.	5820 726.008	5820 725.001	5820 728.000	5820 727.004	5820 730.005

 $<sup>^{\</sup>prime\prime}$  Eppendorf Tubes® 5.0 mL with screw cap will not fit in this adapter Technical specifications subject to change.

# The New **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.

For more information see page 34.





	(Total and an analysis)				
7 – 17 mL	15 mL conical	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
obbended (		——————————————————————————————————————	O proposidio		
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 × <i>g</i>	19,246 × <i>g</i>	19,246 × g	17,187 × g	18,333 × g	20,130 × g
set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	set of 2 pcs.	
5820 729.007	5820 717.009	5820 720.000	5820 721.006	5820 722.002	-

## NEW -Rotor FA-6x50-hs

#### **Product features**

- > High-speed rotor for applications in tubes from 5-50 mL
- > Max. speed 25,062  $\times$  g (13,500 rpm)
- > Eppendorf QuickLock rotor lid for fast lid locking
- > Aerosol-tight\*1 for safe centrifugation of hazardous samples
- > Low rotor weight for easy handling
- > Anodized aluminum for high chemical resistance
- > 45° borehole angle minimizes pellets smear
- > Rotor, lid and adapters are autoclavable



\*1 Aerosol-tightness tested by Public Health England, Porton Down, UK.

Tube Volume	2.6 – 5 mL	4 – 8 mL	5.5 – 10 mL	7.5 – 12 mL	Eppendorf Tubes® 5.0 mL
Max. tube diameter	13 mm	13 mm	16 mm	16 mm	17 mm
Max. vessel height for	119 mm	119 mm	119 mm	119 mm	121 mm
use with cap/lid	_				
Adapter	() populade	(i) bepudet	() papusada	Oppendorf (	
Number of vessels per adapter/rotor	1/6	1/6	1/6	1/6	1/6
Bottom shape	round	round	round	round	conical
Centrifugation radius	120 mm	120 mm	120 mm	120 mm	121 mm
Max. RCF	24,451 × g	24,451 × g	24,451 × g	24,451 × <i>g</i>	24,654 × g
Packing	set of 2 pcs.	set of 2 pcs.			
Order no.	5820 726.008	5820 725.001	5820 728.000	5820 727.004	5820 730.005

Technical specifications subject to change.

#### Ordering information

Description	Order no.
Rotor FA-6x50-hs, incl. rotor lid	5895 165.001

7 – 17 mL	15 mL conical	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
Obbusedet (		priposedde	<b>Disposação</b>		
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
24,451 × g	24,451 × g	24,451 × g	21,394 × g	22,821 × g	25,062 × g
set of 2 pcs.	set of 2 pcs.				
5820 729.007	5820 717.009	5820 720.000	5820 721.006	5820 722.002	-

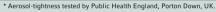
## Rotor FA-20x5

#### **Product features**

- > 20 places for Eppendorf Tube 5.0 mL
- > Max. speed: 20,913  $\times$  g (13,100 rpm)
- > Aerosol-tight Eppendorf QuickLock rotor lid\*
- > Rotor, lid and adapters are autoclavable (121 °C, 20 min)
- > Anodized aluminum for high chemical resistance



Description	Order no.
Fixed-angle rotor FA-20x5, 20 × 5.0 mL, incl. aerosol-tight Eppendorf QuickLock® rotor lid	5895 130.003
Adapter for 1.5/2.0 mL tubes, set of 4	5820 768.002
Adapter for cryogenic vials, set of 4	5820 769.009
Adapter for HPLC tubes, set of 4	5820 770.007







Your centrifuge in safe hands with **Eppendorf Centrifuge & Rotor Service** Quality Management Systems increasingly ask for regular inspection of centrifuges and rotors in an operational or disassembled state to ensure a safe working environment. For the instrument's peak performance and years of productive operation, an annual inspection of centrifuges and rotors by an Eppendorf certified service technician is highly recommended.

### Rotor FA-48x2

#### **Product features**

- > 48 places for 1.5/2.0 mL tubes
- > Max. speed: 21,194  $\times$  q (13,700 rpm)
- > Eppendorf QuickLock rotor lid for fast lid locking
- > Aerosol-tight\*1 for safe centrifugation of hazardous samples
- > Anodized aluminum for high chemical resistance
- > Rotor and lid are autoclavable



#### Ordering information

Description	Order no.
Rotor FA-48x2, incl. aerosol-tight Eppendorf QuickLock® rotor lid	5895 135.005
Adapter for 0.2 mL PCR tubes (for 1.5/2 mL rotors), set of 6	5425 715.005
Adapter for 0.4 mL tubes (for 1.5/2 mL rotors), set of 6	5425 717.008
Adapter for 0.5 mL tubes (for 1.5/2 mL rotors), set of 6	5425 716.001
Adapter for BD Microtainer® (for 1.5/2 mL rotors), set of 6	5425 716.001
* Aerosol-tightness tested by Public Health England, Porton Down, LIK	

With Eppendorf's Centrifuge Performance Plans we make sure that temperature accuracy, rotational speed verification and operating time meet all technical specifications.

Operational Qualification (OQ) is designed to safeguard your results as well as satisfy legal, governmental and internal laboratory requirements with the necessary certification documents.

Over the years, all rotor structures will eventually suffer from fatigue due to stress of high numbers of cycles. If not maintained correctly, surface scratches can lead to microscopic and then to critical cracks. Qualified inspection will detect damages early in order to prevent further equipment failure.

Eppendorf's Rotor Assurance Plans includes cleaning, instructions for proper care and visual examination of rotors and adapters determining if the rotor is safe for further operation.



#### The Performance Plans feature

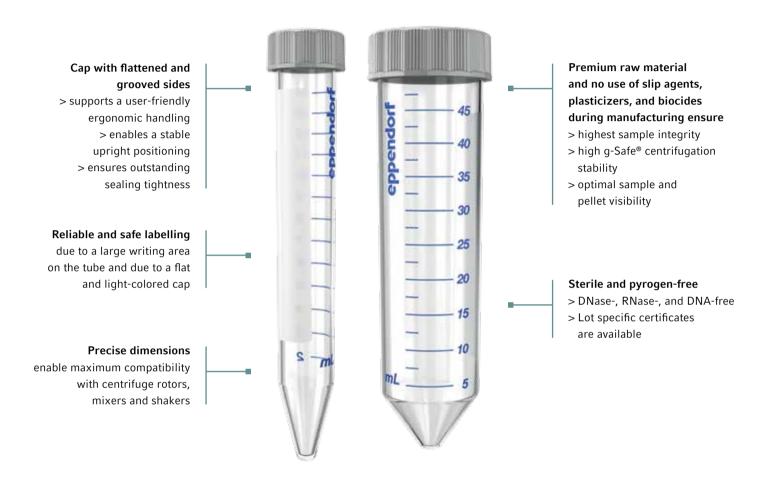
- > Manufacturer-specific test procedures
- > Certified service reports and dated service labels

#### Value of service

- > Highest degree of security in your lab
- > GLP-compliant, audited system
- > Longer service life of the system

> Further information and local offers in your country: www.eppendorf.com/epServices

# The New Eppendorf Conical Tubes 15 mL and 50 mL



The Eppendorf Conical Tubes 15 mL and 50 mL extend the volume range of Eppendorf's microcentrifuge tubes. They provide the same outstanding performance for which Eppendorf Tubes are globally recognized as a premium standard.

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

#### Ordering information

Description	Order no.
Eppendorf Conical Tubes 15 mL, sterile, pyrogen-, DNase-, RNase-, and DNA-free, 500 Tubes (10 bags of 50 ea.)	0030 122.151
Eppendorf Conical Tubes 50 mL, sterile, pyrogen-, DNase-, RNase-, and DNA-free, 500 Tubes (20 bags of 25 ea.)	0030 122.178

## Centrifuge Packages

#### Cell Culture Centrifuge packages include

- > Centrifuge 5920 R
- > Swing-bucket rotor incl. one bucket type
- > 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 5920 R
- > Swing-bucket rotor incl. one bucket type
- > Four adapters for 13 mm (5/7 mL) round bottom tubes
- > Four adapters for 16 mm (10 mL) round bottom tubes (two sets of 2)

#### Ordering information

	Max. capacity of conical	
Description	tubes per rotor	Order no.
Centrifuge 5920 R, refrigerated, with Rotor S-4x1000, incl. high-capacity buckets and adapters	108 × 15 mL/52 × 50 mL	5948 000.212
for 15 mL/50 mL conical tubes		
Centrifuge 5920 R, refrigerated, with Rotor S-4xUniversal-Large, incl. Universal buckets and	96 × 15 mL/40 × 50 mL	5948 000.913
adapters for 15 mL/50 mL conical tubes	<u> </u>	
Centrifuge 5920 R, refrigerated, with Rotor S-4x1000, incl. plate/tube buckets and adapters for	88 × 15 mL/40 × 50 mL	5948 000.417
15 mL/50 mL conical tubes <sup>1)</sup>		
Centrifuge 5920 R, refrigerated, with Rotor S-4x1000, incl. round buckets and adapters for	$56 \times 15 \text{ mL/}28 \times 50 \text{ mL}$	5948 000.310
15 mL/50 mL conical tubes	<u> </u>	
Centrifuge 5920 R, refrigerated, with Rotor S-4x750, incl. round buckets and adapters for	56 × 15 mL/28 × 50 mL	5948 000.514
15 mL/50 mL conical tubes		

<sup>&</sup>lt;sup>1)</sup> These 15/50 mL adapters are not compatible with AT caps. Please refer to pages 20/21 for dedicated 15/50 mL adapters for aerosol-tight use.

#### Ordering information

	Max. capacity of round-	
Description	bottom tubes per rotor	Order no.
<b>Centrifuge 5920 R</b> , refrigerated, with Rotor S-4xUniversal-Large, incl. Universal buckets and adapters for round-bottom tubes with diameter 13/16 mm	196 × 13 mm/148 × 16 mm	5948 000.816
<b>Centrifuge 5920 R</b> , refrigerated, with Rotor S-4x1000, incl. plate/tube buckets and adapters for round-bottom tubes with diameter 13/16 mm <sup>1)</sup>	140 × 13 mm/132 × 16 mm	5948 000.611

 $<sup>^{1)}</sup>$  Aerosol-tight caps reduce capacity to 100 x 13 mm / 92 x 16 mm per rotor



#### **Technical specification**

Description	Centrifuge 5920 R
Max. rcf	
> Fixed-angle rotor	$25,062 \times g$
> Swing-bucket rotor	$4,800 \times g$
Speed	200-13,700 rpm (in 10 rpm increments)
Max. capacity	4 × 1,000 mL/4 × 2 DWP
Accel./Braking ramps	10/10
Programs	99 (5 program keys)
Timer	10 s-99 h 59 min, infinite
Temperature control range	-11 °C to 40 °C
Noise level	
> Rotor S-4x750	< 55 dB(A)
> Rotor FA-6x50	< 60 dB(A)
Power supply	230 V/50–60 Hz
Max. power consumption	1,650 W
Dimensions (W × D × H, incl. front panel)	74 × 71 × 40 cm
Footprint (dimensions w/o front panel, $W \times D$ )	74 × 67 cm
Height with open lid	94 cm
Weight without rotor	139 kg

Technical specifications subject to change. Errors and omissions excepted.

#### Ordering information

Description	Order no.
Centrifuge 5920 R, refrigerated, 230 V/50-60 Hz	5948 000.018

#### Your local distributor: www.eppendorf.com/contact

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