

Extended Field of Applications: New High-Capacity 6 x 250 mL Fixed-Angle Rotor for Eppendorf's Large Benchtop Centrifuges!

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Executive Summary

The Eppendorf Centrifuges 5920 R and 5910 Ri offer a great variety of rotors, serving countless applications in vessels from 0.5 mL up to 1,000 mL.

However, the usage of 250 mL flat bottom bottles was limited to swing-bucket rotors with a maximum speed of $5,263 \times g$.^{*} The aerosol-tight fixed-angle rotor FA-6x250 now offers a speed of up to $15,054 \times g$ (10,100 rpm), completing the range of applications in medium sized bottles performed in benchtop centrifuges.

The lightweight rotor allows various applications like harvesting of bacteria, mammalian cells, algae and yeast, but also Plasmid DNA extractions (e.g. Qiagen® Plasmid Maxi Kit) or lysate clearance after cell lysis.

^{*}Rotor S-4x400 in Centrifuge 5910 Ri

A broad range of adapters minimizes the need of a rotor exchange during the workflow, since numerous vessel types with various volumes can be used with just a switch of adapters.



Introduction

Nowadays, spinning 250 mL bottles is a quite common step in the workflow of microbiology, cell- and molecular biology labs. Swing-bucket rotors with a capacity of up to 4 x 250 mL bottles can be found in almost every benchtop centrifuge on the market. Due to their construction, swing-bucket rotors are limited to maximum speeds of $\sim 5,000 \times g$, but for several applications higher speeds are mandatory to gain the best clearance of the supernatant, or a tight pellet in the bottle corner instead of a pellet that is spread all over the bottom

of the vessel. Some user might simply want to increase the capacity for 250 mL bottles. Either way, the need for a fixed-angle rotor that can spin 250 mL bottles at 2- or 3-times the speed of a swing-bucket rotor is increasing. Commonly, rotors of that size are available for floor standing centrifuges, leading to the need of a centrifuge change for certain applications, not to mention the way to the centrifuge room or the waiting time for a floor standing centrifuge that is shared by several labs.

Solutions and benefits

With the broad range of 12 different rotors, the Eppendorf 59xx centrifuges cover a wide spectrum of applications, ranging from low speed swing-bucket to high speed fixed-angle rotors, capable of holding very small tubes up to large bottles.

Due to the intelligent rotor construction, where all material which is not necessary for performance or safety reasons is hollowed out, this rotor is among the lightest 250 mL fixed-angle rotors in the market, making the rotor exchange convenient and easy.



Figure 1: Rotor FA-6x250 is now extending the rotor range of the 59xx centrifuge family, offering a great flexibility in terms of vessels (e.g. 5/15/50 mL conical tubes, 10 – 85 mL Nalgene® oak ridge tubes, 13/16/17.5 mm blood collection vessels, FACS® tubes, ...) at a maximum speed of 15,054 x *g*. The patented and improved Dynamic Compressor Control technology in the 59xx centrifuges secures the best cooling performance for temperature sensitive applications like plasmid- or protein purification protocols.



Ordering information

Rotor	Number of vessels per rotor	Order no.
Rotor FA-6x250 with lid	6 x 250 mL flat bottom bottles ¹⁾ or 6 x 175 mL conical bottles ²⁾	5895 175 007
Adapter	Number of vessels per adapter/rotor	
FACS® round tubes, 5 mL (D=12 mm, L=75)	9/54	5920 765 000
Blood collection round tubes D13, 2.6 – 8.0 mL (D=13 mm L=75 mm /L=100 mm)	8/48	5920 763 008
Blood collection round tubes D16, 5.5 – 12.0 mL (D=16 mm L=75 mm/ L=100 mm)	7/42	5920 762 001
Blood collection round tubes D17.5, 9 mL (D=17,5 mm L=100 mm)	7/42	5920 764 004
Eppendorf Tubes® 5.0 mL ³⁾ and 15 mL conical tubes	4/24	5920 761 005
50 mL conical tubes	1/6	5920 760 009
50 ml skirted tubes	1/6	5920 766 007
10 mL Oak Ridge round centrifuge tubes	7/42	5920 769 006
16 mL Oak Ridge round centrifuge tubes	7/42	5920 770 004
30 mL Oak Ridge round centrifuge tubes	3/18	5920 767 003
50 mL Oak Ridge round centrifuge tubes	1/6	5920 771 000
85 mL Oak Ridge round centrifuge tubes	1/6	5920 768 000

¹⁾ 250 mL flat bottom bottles from Nalgene® (3127-0250, 3122-0250, 3120-0250) and Corning® (431841, 431842).

When used with wide lid 250 mL flat bottom bottle from Nalgene (3140-0250) max. capacity is reduced to 4 x 250 mL.

²⁾ 175 mL conical bottles from BD/Corning (352076).

Please note that these conical bottles need to be used together with a conical form insert provided by the bottle manufacturer.

³⁾ Universal adapters for Eppendorf Tubes® 5.0 mL are required in addition (5820 732.008).

About Eppendorf

Since 1945, the Eppendorf brand has been synonymous with customer-oriented processes and innovative products, such as laboratory devices and consumables for liquid handling, cell handling and sample handling. Today, Eppendorf and its more than 3,000 employees serve as experts and advisors, using their unique knowledge and experience to support laboratories and research institutions around the world. The foundation of the company's expertise is its focus on its customers. Eppendorf's exchange of ideas with its customers results in comprehensive solutions that in turn become industry standards. Eppendorf will continue on this path in the future, true to the standard set by the company's founders: that of sustainably improving people's living conditions.

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