eppendorf

Rotor FA-6x250

Instructions for use

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1 Operating instructions

This document complements the operating manual Centrifuge 5910 R / 5910 Ri / 5920 R and does not replace it. Therefore, please also read the operating manual before starting up the rotors for the first time. The current version of the operating manual for all available languages can be found on our webpage www.eppendorf.com/manuals.

2 Safety

WARNING! Damage to health due to rotor lids and caps which are not aerosol-tight.
The aerosol tightness of rotor lids and caps is affected by autoclaving, mechanical strain and contamination by chemicals.

- Check the integrity of the seals of the aerosol-tight caps before each use.
- Only work with undamaged and clean seals.
- Do not store aerosol-tight rotors and buckets when closed.

3 Product description

The FA-6x250 rotor is an aerosol-tight fixed-angle rotor (see *Aerosol-tight centrifugation on p. 7)* with a capacity of 6 × 250 mL. A broad range of adapters enables the centrifugation of tubes and flasks from 2.6 mL to 250 mL.

4 Service life

WARNING! Risk of injury from chemically or mechanically damaged accessories.
Even minor scratches and cracks can lead to severe internal material damage.

- Protect all accessory parts from mechanical damage.
- Inspect the accessories for damage before each use. Replace any damaged accessories.
- Do not use any accessories which have exceeded their maximum service life.

Eppendorf states the maximum service life of rotors and accessories in cycles and years. The number of cycles is decisive. If determination of the number of cycles is not possible, the service life in years applies.

Each centrifugation run during which the rotor is accelerated and braked is counted as a cycle, independent of the speed and the duration of the centrifugation run.

Rotor	Centrifuge	Maximum service life after initial setup	
FA-6x250	Centrifuge 5910 R / 5910 Ri / 5920 R	50000 cycles	7 years

5 Required software version

Rotor	Software version required for operating the rotor
FA-6x250	Software version 1.1 (5910 Ri) and higher Software version 1.5 (5910 R, 5920 R) and higher

The installed software version is displayed shortly after switching on the device.

- Update the software of older centrifuges before using the rotor.
  Software updates must be carried out by an authorized service technician. Please contact your dealer or the authorized service of necessary.

6 Inserting and removing the rotor

NOTICE! Risk of material damage due to improper rotor insertion.
The motor shaft or bearing may become damaged if the rotor falls into the motor shaft guides in an uncontrolled manner when it is inserted.

- Hold the rotor with both hands.
- Guide the rotor onto the motor shaft.

NOTICE! Risk of material damage due to loose rotors.
The centrifuge can become damaged if the rotor is not fastened correctly with the screws.

- Tighten the rotor nut.

6.1 Inserting the rotor

1. Place the rotor vertically onto the motor shaft from the top.
2. Insert the supplied rotor key into the rotor nut.
3. Turn the rotor key **clockwise** until the rotor nut is firmly tightened.

6.2 Removing the rotor

1. Turn the rotor nut **counterclockwise** using the supplied rotor key.
2. Remove the rotor by lifting it out vertically.

7 Aerosol-tight centrifugation

WARNING! Risk of contamination and infection due to escaping liquids
Sample liquids may escape during the centrifugation of open tubes if these are filled to the maximum fill level.

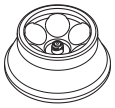
- Use only closed tubes or tubes filled to a maximum of 80 % of the permissible filling volume for aerosol-tight centrifugation.
- Observe the maximum filling volume indicated by the manufacturer.
- Ensure that the tubes are closed tightly.

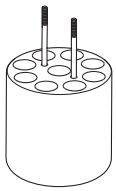
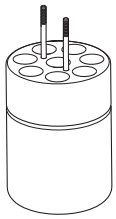
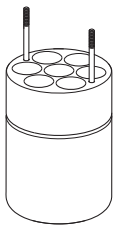
1. Read the additional information on "Aerosol-tight centrifugation" given in the instructions for use (5425 737.963).

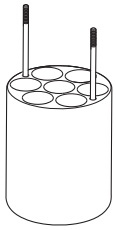
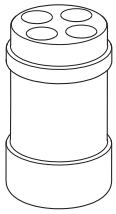
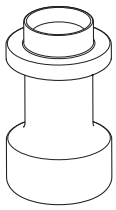
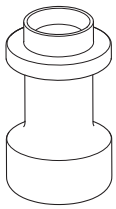
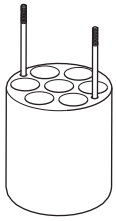
8 Technical data

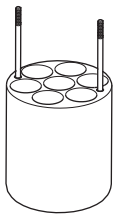
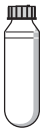
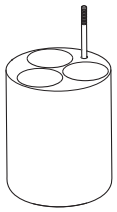
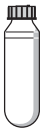
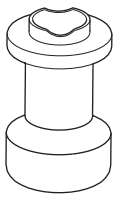
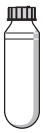
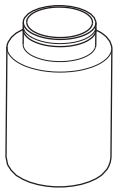
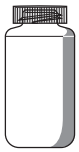
8.1 Rotor FA-6x250

Required software version 1.5

	Max. *g-force*:	15050 x *g*
	Max. rotational speed:	10100 rpm
FA-6x250	Max. load per bucket (adapter, tube and contents):	6 x 365 g

Tube	**Tube** **Capacity** **Number per adapter/rotor**	**Adapter** **Order no. (international)**	**Bottom shape** **Tube diameter** **Max. tube length**	**Max. *g-force*** **Max. rotational speed** **Radius**
	Round-bottom tube Ø 12 mm × 75 mm 9/54	 5920 765 000	Round Ø 12 mm 114 mm	14370 × *g* 10100 rpm 12.6 cm
	Round-bottom tube 4 mL – 8 mL (Ø 13 × 75 mm – 100 mm) 8/48	 5920 763 008	Round Ø 13 mm 114 mm	14256 × *g* 10100 rpm 12.5 cm
	Round-bottom tube 7.5 mL – 12 mL (Ø 16 × 75 mm – 100 mm) 7/42	 5920 762 001	Round Ø 16 mm 115 mm	14256 × *g* 10100 rpm 12.5 cm

Tube	Tube Capacity Number per adapter/rotor	Adapter Order no. (international)	Bottom shape Tube diameter Max. tube length	Max. *g-force* Max. rotational speed Radius
	Tube 9 mL (Ø 17.5 mm × 100 mm) 7/42	 5920 764 004	Round Ø 17.5 mm 112 mm	14370 × *g* 10100 rpm 12.6 cm
	Conical tube 15 mL 4/24	 5920 761 005	Conical Ø 17 mm 122 mm	13686 × *g* 10100 rpm 12 cm
	Conical tube 50 mL 1/6	 5920 760 009	Conical Ø 30 mm 125 mm	12545 × *g* 10100 rpm 11 cm
	Conical tube (skirted) 50 mL 1/6	 5920 766 007	Conical, skirted Ø 30 mm 125 mm	12317 × *g* 10100 rpm 10.8 cm
	Round-bottom tube 10 mL 7/42	 5920 769 006	Round Ø 17 mm 115 mm	14370 × *g* 10100 rpm 12.6 cm

Tube	Tube Capacity Number per adapter/rotor	Adapter Order no. (international)	Bottom shape Tube diameter Max. tube length	Max. *g-force* Max. rotational speed Radius
	Round-bottom tube 16 mL 7/42	 5920 770 004	Round Ø 18 mm 115 mm	14370 × *g* 10100 rpm 12.6 cm
	Round-bottom tube 30 mL 3/18	 5920 767 003	Round Ø 26 mm 116 mm	14256 × *g* 10100 rpm 12.5 cm
	Round-bottom tube 50 mL 1/6	 5920 771 000	Round Ø 29 mm 125 mm	12659 × *g* 10100 rpm 11.1 cm
	Round-bottom tube 85 mL 1/6	 5920 768 000	Round Ø 38 mm 118 mm	12887 × *g* 10100 rpm 11.3 cm
	Wide-neck bottle 250 mL flat 6		Flat Ø 62 mm 135 mm	15054 × *g* 10100 rpm 13.2 cm

8.2 Acceleration and deceleration times

The following table shows the approximate acceleration and deceleration times according to DIN 58970 for the rotor FA-6x250. The data was determined at maximum load of the rotor. Fluctuations may occur depending on the condition of the device and the load.

Level 9: highest acceleration or strongest brake respectively

Level 0: little acceleration or unbraked deceleration respectively

Rotor FA-6x250		**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Centrifuge 5910 R / 5910 Ri, 100 V	Acceleration time		1142 s				270 s				114 s
	Deceleration time		506 s				110 s				46 s
	Tolerance	±5 %*									
Centrifuge 5910 R / 5910 Ri / 5920 R, 120 V	Acceleration time		552 s				144 s				64 s
	Deceleration time		514 s				110 s				46 s
	Tolerance	±5 %*									
Centrifuge 5910 R / 5910 Ri / 5920 R, 230 V	Acceleration time		551 s				143 s				61 s
	Deceleration time		509 s				104 s				44 s
	Tolerance	±5 %*									

* 5 s minimum

9 Ordering information

Order no. (International)	Description
5895 175.007	**FA-6x250 rotor** for 6 x 250 mL tubes, incl. QuickLock rotor cover, aerosol-tight, Centrifuge 5910 R/ 5910 Ri/5920 R
5895 176.003	**QuickLock rotor cover** aerosol-tight, replacement part for FA-6x250 rotor
5920 760.009	**Adapter for 50 mL conical tubes** for FA-6x250 rotor, 2 pcs. per set
5920 761.005	**Adapter for 4 x 15 mL conical tubes** for FA-6x250 rotor, 2 pcs. per set
5920 762.001	**Adapter for 7 x Ø16 mm dish-bottomed vessels** for FA-6x250 rotor, 2 pcs. per set
5920 763.008	**Adapter for 8 x Ø13 mm dish-bottomed vessels** for FA-6x250 rotor, 2 pcs. per set
5920 764.004	**Adapter for 7 x Ø17.5 mm dish-bottomed vessels** for FA-6x250 rotor, 2 pcs. per set
5920 765.000	**Adapter for 9 x Ø12 mm dish-bottomed vessels** for FA-6x250 rotor, 2 pcs. per set
5920 766.007	**Adapter for 50 mL conical skirt-bottom- and Oak Ridge tubes** for FA-6x250 rotor, 2 pcs. per set
5920 767.003	**Adapter for 3 x 30 mL Oak Ridge tubes** for FA-6x250 rotor, 2 pcs. per set
5920 768.000	**Adapter for 1 x 85 mL Oak Ridge tubes** for FA-6x250 rotor, 2 pcs. per set
5920 769.006	**Adapter for 7 x 10 mL Oak Ridge tubes** for FA-6x250 rotor, 2 pcs. per set
5995 177.000	**Gaskets** Replacement part, for FA-6x250 rotor, 2 pcs. per set

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