MiniSpin and **MiniSpin plus** are bench-top "personal centrifuges" designed for workstations in training and research laboratories in the fields of bioscience, medicine and chemistry.

With a space-saving design and excellent operating comfort, **MiniSpin** is the ideal made-to-measure workstation.

Twelve Eppendorf micro test tubes can be centrifuged simultaneously in a 45° fixed-angle rotor using the following performance data:

	Relative centrifugal force rcf	Rotational speed rpm
MiniSpin	12,100	13,400
MiniSpin plus	14,000	14,500

Before starting up **MiniSpin** or **MiniSpin plus** for the first time, please read the rest of this operating manual.

This sign is found on your centrifuge and on several pages in the operating manual. Texts labeled with this sign contain safety notes. Read these safety precautions before using the centrifuge for the first time.

1.1 Delivery package

1 **MiniSpin** or **MiniSpin plus**
1 Rotor
1 Stainless steeel rotor lid
1 Rotor nut
1 Mains cable
1 Operating manual

1.2 Installing the device

Place the centrifuge onto a level, horizontal surface. Make sure that the ventilation slits are not blocked! In accordance with the safety regulations of IEC 1010-2-020 (equivalent to EN 61010-2-020), a safety distance of 30 cm should be observed around the centrifuge during operation. No objects which could cause additional damage in the event of a centrifuge crash should be positioned in this space.

Before plugging in the centrifuge, compare your power supply with the electrical requirements listed on the identification plate on the underside of the device.

The mains switch is located at the rear of the device. The centrifuge is ready to operate when the display becomes visible. Place the rotor onto the rotor axle and tighten using the rotor nut (round washer containing the instructions "Festziehen → Fasten well →").

Before starting up the centrifuge for the first time, make sure that the rotor nut is securely fastened.

6 Technical data

If the solutions suggested here prove to be unsuccessful, please contact Service.

Power supply:	230 V / 50 – 60 Hz 120 V / 50 – 60 Hz see identification plate on bottom of centrifuge
Power requirement:	
MiniSpin plus	85 W
MiniSpin	70 W
Max. speed:	
MiniSpin plus	14,500 rpm
MiniSpin	13,400 rpm
Max. centrifugal force:	
MiniSpin plus	14,000 rcf
MiniSpin	12,100 rcf
Max. load:	12 x 2.0 ml Safe-Lock tubes
Max. kinetic energy:	
MiniSpin plus	852 Nm
MiniSpin	728 Nm
Max. permitted density of material to be centrifuged:	1.2 g/ml
Ambient temperature:	2 – 40 °C
Max. relative humidity:	75 %, no condensing moisture
Degree of pollution:	2
Overvoltage category:	II
Acceleration time to max. speed:	13 seconds
Braking time from max. speed;	12 seconds
Dimensions:	Height: 120 mm Depth: 240 mm Width: 225 mm
Weight:	3.7 kg (without rotor)
Fuses (not accessible from outside; to be changed by Service only):	230 V: 1.6 A, slow-acting 120 V: 3.16 A, slow-acting (UL-approved)

Technical specifications subject to change!

Centrifuge MiniSpin, 230 V / 50 – 60 Hz	5452 000.018
Centrifuge MiniSpin, 120 V / 50 – 50 Hz	5452 000.131
Centrifuge MiniSpin plus, 230 V / 50 – 60 Hz	5453 000.011
Centrifuge MiniSpin plus, 120 V / 50 – 50 Hz	5453 000.135
Adapter for 0.5 ml microcentrifuge tubes and 0.6 ml Microtainers®; set of 6	5425 716.001
Adapter for 0.4 ml tubes; set of 6	5425 717.008
Adapter for 0.2 ml PCR tubes; set of 6	5425 715.005

Accessories

Rotor F-45-12-11 for MiniSpin plus (black)	5452 720.008
Rotor F-45-12-11 for MiniSpin (anodized)	5452 725.000
Lid for rotor F-45-12-11, stainless steel with fastening nut for rotor	5452 700.805

Important:
Please use the original accessories recommended by Eppendorf. Using spare parts or disposables which we have not recommended can reduce the precision, accuracy and life of the centrifuges. We do not honor any warranty or accept any responsibility for damage resulting from such action.