



# Sigma 1-16 Sigma 1-16K



Microcentrifuge

- ambient
- refrigerated



# Simply impressive, made-to-measure microcentrifuge



**Sigma is a leading international manufacturer of laboratory centrifuges for diverse sectors, including biotechnology, pharmaceutical, medical, and environment analysis. Laboratories, institutes and companies everywhere in the world have been relying on premium Sigma quality – Made in Germany – for more than 40 years. The company stands for innovative products and the development of durable, energy-efficient and especially user-friendly devices.**

Many users want a user-friendly, sturdy and reliable centrifuge, with a good performance profile for speed, RCF and capacity. Feedback from our customers confirms that the Sigma 1-16 meets their wishes. Designed for exacting work with microvials.

High quality, fast acceleration and braking, extremely quiet – simply impressive. With its two-row certified Biosafe rotor for 36 x 1.5–2.0 ml reaction vials, the new Sigma 1-16 microcentrifuge is ideal for a wide variety of products and applications in research, development, life sciences, biotechnology, pharmaceuticals, medicine and more.

Also available in a cooled version, the Sigma 1-16 is specifically designed to meet customer needs and market requirements. It has many top-notch features, including RCF of 20,000 x g for excellent sedimentation, corrosion-resistant stainless steel bowl, motorised lid lock, convenient Spincontrol E controller, low-noise drive, and even more. These advantages have made the Sigma 1-16 popular world-wide. The design is equally attractive.

# Clear application orientation

## User-friendly, high quality and rugged

Sigma sets standards in the development of smart centrifuges optimised for everyday life in laboratories, including small centrifuges. The Sigma 1-16 is a good example. This high-end device has high-quality finishing and user-oriented features. For instance, it has higher RCF (over 20,000 x g) than other devices in its class, resulting in significantly better sedimentation. The Biosafe rotor has ample capacity and is easy to fill. A unique feature is the popular and patented motorised lid lock for convenient, effortless closing. The easy-care, corrosion-resistant stainless steel bowl is also a popular feature.

The Spincontrol E controller is exactly what a good controller should be. With just a few buttons, it is brilliantly simple. The parameters

can even be modified during the run, with no need for a restart. The display is uncluttered and easy to read. All features and specifications confirm that Sigma 1-16 is at the top of its class. Along with top marks for RCF and capacity, the fast acceleration of the Sigma 1-16 and Sigma 1-16K (maximum 13 or 15 seconds, respectively) is impressive. The smart ventilation design of the Sigma 1-16 provides truly effective cooling with ambient air intake, even for extended run times longer than 20 minutes.

These microcentrifuges score top marks for ambition and quality in all areas. That includes quality of service, with spare parts available for many years.



### Sigma 1-16

- Simple and convenient Spincontrol E controller
- Clearly organised display
- Large buttons
- RCF exceeding 20,000 x g
- Short acceleration time
- Low temperature rise in continuous operation
- Motorised lid lock, automatic lid unlocking
- Two acceleration and deceleration curves, soft and fast
- Durable, easy-care stainless steel bowl
- Biosafe certified rotors
- Manufactured in compliance with EN 61010-2-020
- RoHS compliant
- IVD version compliant with Directive 98/79/EC for in-vitro diagnostic medical devices

### Sigma 1-16K

Refrigerated version of the Sigma 1-16.

#### Additional features:

- Rotor refrigerating also possible at standstill; CFC-free R134a refrigerant
- Clever, energy-efficient and low-noise fan control
- Assured +4 °C at maximum speed with all rotors





# Rotors and accessories

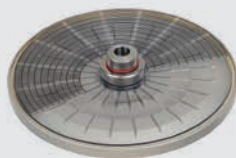
## Exactly the right components for every laboratory

The Sigma 1-16 and Sigma 1-16K are available with fixed-angle rotors for various reaction vials. The maximum capacity is 24 x 1.5–2 ml, 36 x 1.5–2 ml or 12 x 5 ml vials in a single batch with an RCF of more than 20,000 x g. Adapters for various rotors are available as accessories.

The microcentrifuges are suitable for a wide range of application areas, including blood diagnostics, medical research and cell culture laboratories, inorganic chemistry and production laboratories. Upon request, Sigma can produce custom adapters or rotors tailored to user requirements.

### Microhaematocrit rotor (Part No. 11024)

- 24 x  $\varnothing$  1.5 x 75 mm capillary
- Max. 12,000 rpm (13,684 x g)
- With aluminium lid



### Aluminium rotor (Part No. 12118)

- 18 x 1.5–2.0 ml rotor with raised rim for reaction vials or reaction vials with filter
- Max. 15,000 rpm (20,124 x g)
- With hermetic aluminium lid



### Polypropylene rotor (Part No. 12134)

- 24 x 1.5–2.0 ml reaction vial
- Max. 15,000 rpm (20,627 x g)
- With hermetic plastic lid
- 45° angle



### Polypropylene rotor (Part No. 12135)

- 4 x 8 PCR 0.2 ml
- Max. 15,000 rpm (16,602 x g)
- With hermetic plastic lid
- 45° angle



### Aluminium rotor (Part No. 12024)

- 24 x 1.5–2.0 ml reaction vial
- Max. 15,000 rpm (20,627 x g)
- With hermetic plastic lid
- 45° angle



### Aluminium rotor (Part No. 12180)

- 12 x 5 ml Eppendorf vial
- Max. 15,000 rpm (20,124 x g)
- With hermetic aluminium lid
- 40° angle



### Biosafe aluminium rotor (Part No. 12136)



- 36 x 1.5–2.0 ml reaction vial
- Max. 15,000 rpm (20,124 x g)
- With biosafe aluminium lid
- 30°/50° angle
- Same RCF in both rows



# Premium quality

## Made in Germany

The Sigma 1-16 and Sigma 1-16K meet the highest technical requirements of laboratory standards. Developed and produced at our Osterode site in Germany, they are high-quality, high-performance, durable and energy-efficient devices made in Germany. The materials and finishing are high quality. The microcentrifuges comply with current standards for safety, emissions and environmental protection.

As a vendor with a large international customer base, we maintain a stock of original spare parts and wear parts for ten years or more. With Sigma, you also benefit from a full spectrum of worldwide customer service, including commissioning, training, maintenance, calibration and repair.

## Specifications

	Sigma 1-16	Sigma 1-16K
Power consumption [W] 220–240 V	170	420
120 V	160	460
100 V	170	550
Maximum capacity [ml]	36 x 2.0	36 x 2.0
Maximum speed [rpm]	15,000	15,000
Minimum speed [rpm]	200	200
RFI suppression	EN 61326	EN 61326
Height x width x depth [mm]	271 x 310 x 418	291 x 310 x 660
Height with open lid [mm]	527	547
Weight without rotor [kg]	13	32
Maximum kinetic energy [Nm]	5,176	5,176
Noise level at maximum speed (approximate) [dB(A)]	59	58
Maximum acceleration (rotor 12134) [s]	13	15
Maximum braking time (rotor 12134) [sec]	13	13
Temperature adjustment range [°C]*	–	-10 to +40
Rotor 12134 at 15,000 rpm [°C]	–	>4

\* Only Sigma 1-16K

### Sigma 1-16 centrifuge

220–240 V, 50/60 Hz (Part No. 10025)  
120 V, 60 Hz (Part No. 10026)  
100 V, 50/60 Hz (Part No. 10027)

### Sigma 1-16 centrifuge, IVD version

220–240 V, 50/60 Hz (Part No. 10035)  
120 V, 60 Hz (Part No. 10036)  
100 V, 50/60 Hz (Part No. 10037)

### Sigma 1-16K centrifuge

220–240 V, 50/60 Hz (Part No. 10030)  
120 V, 60 Hz (Part No. 10031)  
100 V, 50/60 Hz (Part No. 10032)

### Sigma 1-16K centrifuge, IVD version

220–240 V, 50/60 Hz (Part No. 10040)  
120 V, 60 Hz (Part No. 10041)  
100 V, 50/60 Hz (Part No. 10042)

### Device qualification

Sigma Laborzentrifugen GmbH offers various forms of device qualification. For more information, see Products > Qualification on our website: [www.sigma-zentrifugen.de](http://www.sigma-zentrifugen.de)



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