

MIKRO 200 / 200 R

Microlitre centrifuges

High performance: For a wide range of applications in molecular biology



MIKRO 200 / 200 R



View into the centrifuging chamber showing the 2428 rotor and reaction tubes with open lids

FOR MAXIMUM FLEXIBILITY: ROTORS WITH DIFFERENT CAPACITIES FOR A VARIETY OF APPLICATIONS

The MIKRO 200 and 200R rank among the fastest microlitre centrifuges in their class. They can hold up to 30 reaction tubes per run at an RCF of up to 21,382, thus ensuring a high sample throughput and optimal separation results. This makes them essential equipment in modern laboratories. They can be used to prepare samples in a wide variety of applications in molecular biology.

COMPREHENSIVE RANGE OF ACCESSORIES

A further benefit is the extensive range of rotors. The 2428 rotor was specially developed for the centrifugation of spin columns. Its raised rim permits centrifugation of reaction tubes with open lids. The lid is aerosol-tight, autoclavable and phenol-resistant for maximum safety.

STURDY DESIGN

The quiet-running, powerful motor has a maintenance-free frequency drive. The centrifuge housing and lid are made of metal, and the centrifuging chamber is made of stainless steel.



MIKRO 200
Microlitre centrifuge

Cat. No. 2400



MIKRO 200R
Microlitre centrifuge with cooling

Cat. No. 2405

MIKRO 200 / 200 R



HIGH CAPACITY

The angle rotors of the MIKRO 200 and 200R hold up to 30 reaction tubes of 1.5 ml/2 ml capacity. There is a 30-place rotor for 0.5 ml tubes, a 20-place rotor for cryo tubes, a rotor for up to four PCR strips, as well as other kinds.

PRACTICAL FUNCTIONS

The MIKRO 200 and 200R are microprocessor-controlled, which makes them very easy to operate. The practical rotary button allows quick selection and entry of parameters. All operating and display elements are ergonomically designed.

RELIABLE COOLING

The cooling of the MIKRO 200R is continuously variable from -10 to +40 degrees Celsius. This enables thermolabile samples to be centrifuged in a gentle manner. The Fast Cool pre-cooling function allows the chamber to be brought to the required temperature before centrifugation. This protects the samples against temperature fluctuations.

MAXIMUM SAFETY

The robust metal construction and solid design provide mechanical stability. The accessories with a bioseal (TÜV-tested as specified in DIN EN 61010, Part 2-02) offer protection against dangerous and aggressive aerosols.



AT A GLANCE



FIELDS OF APPLICATION

- **Research**
Sample preparation in microbiological applications
- **Medical diagnostics**
Sample preparation, e.g. for infection diagnostics
- **Education**
Molecular biology practicals

EASE OF OPERATION

- Motor-driven lid locking
- Quick, easy setting of parameters by means of a rotary button
- Pulse button for short centrifugation runs

SAFETY

- Lid locking and holding
- Lid dropping protection
- Imbalance switch-off
- Emergency lid lock release
- Motor overheating protection
- Chamber overheating protection

DESIGN

- User controls of ergonomic design
- Easy-to-view display
- Metal housing and metal lid
- Centrifuging chamber of stainless steel

MAX. RCF

- 21,382

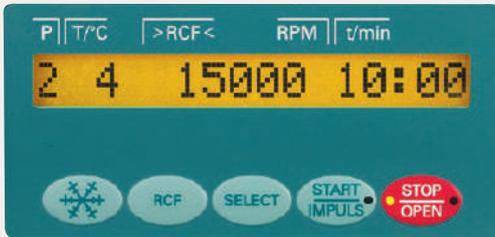
MAX. CAPACITY

- 30 x 1.5/2.0 ml

OUR SERVICE

You will find information on Hettich partners in your country at www.hettichlab.com

MIKRO 200 / 200 R



Operator panel of the cooled MIKRO 200R

The N Plus control panel in the MIKRO 200 and 200R ensures quick and easy operation. Parameters are selected using the “Select” key. The values are adjusted by turning the knob and saved by pressing the “Start/Impuls” button. The stored parameter combinations are retained after the centrifuge has been switched off.

The cooled MIKRO 200 R is equipped with a pre-cooling function (Fast Cool) and stand-by cooling. When the lid is closed, the stand-by cooling holds the set temperature. When the lid is opened, the cooling turns off automatically.

STANDSTILL INDICATOR

- In the cooled MIKRO 200R an LED in the Open key lights up.
- In the MIKRO 200 the lid opens automatically when the rotor has come to a halt.

N PLUS CONTROL PANEL FOR EASY OPERATION

KEYPAD

| | |
|--------------|--|
| | cools the chamber to the required temperature. |
| RCF | switches to RCF mode. Entry of the RCF in increments of 10. Entry of the rotor radius in mm. |
| SELECT | takes the user through the menu. |
| START IMPULS | starts centrifugation/stores entries and changes for short centrifugation runs. |
| STOP OPEN | stops centrifugation manually. opens the lid when the centrifuge has stopped. |

ENTRY OF PARAMETERS

| | |
|--------|---|
| P | Entry of programme number, with a choice of 4 programmes |
| T/°C | Entry of temperature in increments of 1 °C from -10 °C to +40 °C (MIKRO 200R) |
| RCF | Entry in increments of 10 |
| RPM | Entry in increments of 10 |
| RAD/mm | Entry of the rotor radius in mm |
| t/min | Entry of the centrifugation time (max. 99 min, 59 sec) |
| | Entry of the acceleration ramp 1–9 |
| | Entry of the braking ramp 1–9 |

ACCESSORIES



Angle rotor, 24-place



∠40°
n = 15,000 min⁻¹
max. RCF 21,382

Cat. No. 2424-B

Angle rotor, 30-place



∠52.5° (inner row)
∠40° (outer row)
n = 15,000 min⁻¹
max. RCF 20,627

Cat. No. 2427-A

| capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 | 0.5 |
|--|-------------|------|-------------|------|--------------------------|-------------|------------------|
| ∅ x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | | 10.7x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | Pediatric |
| lid E3243 incl. | | | | | | | |
| rotor Cat. No. 2424-B | | | | | | | |
| Cat. No. | 2024 | | 2023 | | 2031²⁾ | | - |
| boring ∅ x L in mm | 6x40 | | 8x40 | | 10.2x19 | | 11.2x42.6 |
| tubes per rotor | 24 | | | | | | 12 |
| max. RCF | 21,382 | | | | | | 20,376 |
| radius in mm | 85 | | | | | | 81 |
| run-up in sec | 20 | | | | | | |
| run-down in sec, braked | 28 | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | |

| capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 | 0.5 |
|--|-------------|------|-------------|------|--------------------------|-------------|------------------|
| ∅ x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | | 10.7x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | Pediatric |
| lid E3243 incl. | | | | | | | |
| rotor Cat. No. 2427-A | | | | | | | |
| Cat. No. | 2024 | | 2023 | | 2031²⁾ | | - |
| boring ∅ x L in mm | 6x40 | | 8x40 | | 10.2x19 | | 11.2x41.3 |
| tubes per rotor | 30 | | | | | | 15 |
| max. RCF | 20,627 | | | | | | 20,124 |
| radius in mm | 82 | | | | | | 80 |
| run-up in sec | 22 | | | | | | |
| run-down in sec, braked | 30 | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

²⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

ACCESSORIES



Angle rotor, 24-place, for spin column kits



lid with bio-containment³⁾,
autoclavable, phenol-resistant

±45°
n = 15,000 min⁻¹
max. RCF 21,382

Cat. No. 2428

Angle rotor, 30-place



±45°
n = 15,000 min⁻¹
max. RCF 20,376

Cat. No. 2430-B

| | | | | | | | | | |
|--|-------------|-------------|--------------------------|-----------|--------------------------|-------------|---------------------------|-----|------------------|
| capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 | 1.5 | 2.0 | 0.5 |
| Ø x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | | | | 10.7x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | micro spin columns | | Pediatric |
| lid with bio-containment ³⁾ incl. | | | | | | | | | |
| rotor Cat. No. 2428 | | | | | | | | | |
| Cat. No. | 2024 | 2023 | 2031²⁾ | - | 2031²⁾ | - | 0788 | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.2x42.6 | 10.2x19 | 11.2x42.6 | 11.2x39 | | |
| tubes per rotor | 24 | | | | | | | | 12 |
| max. RCF | 21,382 | | | | | | | | 20,376 |
| radius in mm | 85 | | | | | | | | 81 |
| run-up in sec | 20 | | | | | | | | |
| run-down in sec, braked | 28 | | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | | |

| | |
|--|----------|
| capacity in ml | 0.5 |
| Ø x L in mm | 8x30 |
| Cat. No. | - |
| lid E3243 incl. | |
| rotor Cat. No. 2430-B | |
| Cat. No. | - |
| boring Ø x L in mm | 8.1x30.3 |
| tubes per rotor | 30 |
| max. RCF | 20,376 |
| radius in mm | 81 |
| run-up in sec | 19 |
| run-down in sec, braked | 28 |
| temperature in °C ¹⁾ | +4 |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

²⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

³⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

ACCESSORIES



Angle rotor, 20-place, for cryo tubes



±40°
n = 15,000 min⁻¹
max. RCF 21,130

Cat. No. 2426-B

Angle rotor, 4-place, for PCR strips



±45°
n = 15,000 min⁻¹
max. RCF 14,338

Cat. No. 2418-A

| | |
|--|---|
| capacity in ml | 1.8 |
| Ø x L in mm | - |
| Cat. No. | cryo tubes |
| lid E3243 incl. | |
|  |  |
| rotor Cat. No. 2426-B | |
| Cat. No. | - |
| boring Ø x L in mm | 12.5 x 36 |
| tubes per rotor | 20 |
| max. RCF | 21,130 |
| radius in mm | 84 |
| run-up in sec | 19 |
| run-down in sec, braked | 28 |
| temperature in °C ¹⁾ | +4 |

| | | |
|---|---|---|
| capacity in ml | 0.2 | |
| Ø x L in mm | 6x18 | - |
| Cat. No. | - | PCR strips |
|  |  |  |
| rotor Cat. No. 2418-A | | |
| Cat. No. | - | |
| boring Ø x L in mm | 6.5 x 15.5 | |
| tubes per rotor | 32 | 4 x 8 |
| max. RCF | 14,338 | |
| radius in mm | 57 | |
| run-up in sec | 19 | |
| run-down in sec, braked | 28 | |
| temperature in °C ¹⁾ | +4 | |

Lids optional for rotors 2424-B, 2426-B, 2427-A and 2430-B



with bio-containment³⁾,
autoclavable

Cat. No. 2425



with bio-containment³⁾,
autoclavable
and phenol-resistant

Cat. No. 2423

Lid optional for rotor 2418-A



Cat. No. E3243

TECHNICAL DATA



| TECHNOLOGY | MIKRO 200 | | MIKRO 200 R | |
|---|--|--------------------------|--------------------------|--------------------------|
| Microlitre centrifuge, without rotor | classic | | cooled | |
| Power supply ¹⁾ | 200–240 V 1 ~ | 100–127 V 1 ~ | 200–240 V 1 ~ | 100–127 V 1 ~ |
| Frequency | 50–60 Hz | 50–60 Hz | 50 Hz | 50–60 Hz |
| Consumption | 240 VA | 270 VA | 450 VA | 630 VA |
| Emission, Immunity | EN/IEC 61326-1, class B | FCC class B | EN/IEC 61326-1, class B | FCC class B |
| Max. capacity | 30x1.5/2.0 ml | 30x1.5/2.0 ml | 30x1.5/2.0 ml | 30x1.5/2.0 ml |
|  Max. RPM (speed) | 15,000 min ⁻¹ | 15,000 min ⁻¹ | 15,000 min ⁻¹ | 15,000 min ⁻¹ |
| Max. RCF | 21,382 | 21,382 | 21,382 | 21,382 |
| Running time | 1 sec–99 min :59 sec, ∞ continuous run, short cycle mode (impulse key) | | | |
| Dimensions (HxWxD) | 260x275x344 mm | 260x275x344 mm | 260x281x553 mm | 260x281x553 mm |
| Weight | approx. 11.5 kg | approx. 11.5 kg | approx. 28 kg | approx. 28 kg |
| Refrigeration | | | | |
| Temperature control, infinitely variable | - | - | from -10 to +40 °C | from -10 to +40 °C |
| Cat. No. | 2400 | 2400-01 | 2405 | 2405-01 |

¹⁾ Other voltages on request.



Hettich centrifuges comply with all relevant EU standards in effect and conform to the European level of quality and safety for medical devices. Evidence is provided by national and international test marks such as IEC 61010 or the CE conformity. The ISO 9001, ISO 13485 and ISO 14001 certificates accredited to the company bear witness to the extreme care and responsibility Hettich puts into the manufacturing of centrifuges and their accessories.



Our certification as an “Authorised Economic Operator” enables accelerated customs clearance.



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