Hettich
ZENTRIFUGEN

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 200 R 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 200 R
Microlitre centrifuge with cooling

Cat. No. 2405

MIKRO 200 / 200 R

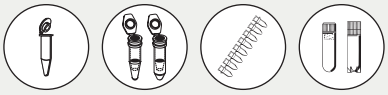
HIGH CAPACITY
The angle rotors of the MIKRO 200 and 200 R hold up to 30 reaction tubes of 1.5 ml / 2 ml capacity. There is a 30-place rotor for 0.5 ml tubes, a 20-place rotor for cryo tubes, a rotor for up to four PCR strips, as well as other kinds.

PRACTICAL FUNCTIONS
The MIKRO 200 and 200 R 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 200 R 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

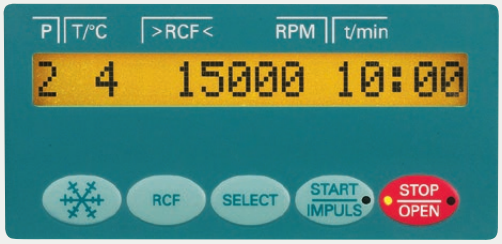
DESIGN
- User controls of ergonomic design
- Easy-to-view display
- Metal housing and metal lid
- Centrifuging chamber of stainless steel

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 200 R

The N Plus control panel in the MIKRO 200 and 200 R 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 200 R 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

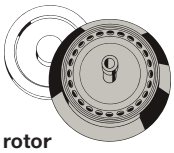
P	Entry of programme number, with a choice of 4 programmes
T/°C	Entry of temperature in increments of 1 °C from -10 °C to +40 °C (MIKRO 200 R)
RCF	Entry in increments of 10
RPM	Entry in increments of 10
RAD/mm	Entry of the rotor radius in mm
t/min	Entry of the centrifugation time (max. 99 min, 59 sec)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

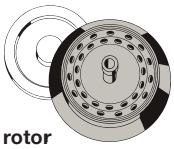
Cat. No. 2424-B

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø 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**		**2031** [2]	**-**	**0788**
boring Ø x L in mm	6x40		8x40		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						

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
Ø 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**		**2031** [2]	**-**	**0788**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x41.3	11.2x39
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-containment [3], autoclavable, phenol-resistant

∢45°
n = 15,000 min^{-1}
max. RCF 21,382

Cat. No. 2428

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**		**2031** [2]	**-**	**2031** [2]	**-**	**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								

Angle rotor, 30-place

∢45°
n = 15,000 min^{-1}
max. RCF 20,376

Cat. No. 2430-B

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

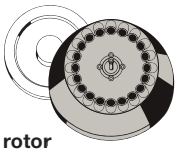
[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.
[2] For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.
[3] Tested by the TÜV in conformity with DIN EN 61010, 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

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

Angle rotor, 4-place, for PCR strips

∢45°
n = 15,000 min^{-1}
max. RCF 14,338

Cat. No. 2418-A

capacity in ml	0.2	
Ø x L in mm	6 x 18	-
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-containment [3], autoclavable

Cat. No. 2425

with bio-containment [3], 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 *)		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	30 x 1.5 / 2.0 ml	30 x 1.5 / 2.0 ml	30 x 1.5 / 2.0 ml	30 x 1.5 / 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 (H x W x D)		260 x 275 x 344 mm	260 x 275 x 344 mm	260 x 281 x 553 mm	260 x 281 x 553 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**

*) 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.

MADE IN GERMANY

www.hettichlab.com

LAB TECHNOLOGY