

Microliter centrifuges

# MIKRO 2.0 | 2.0 R

Compact, precise, easy to control

The MIKRO 2.0 | 2.0 R combines performance and ease of use in a compact design. The combination of push-turn control and a high-resolution LCD display facilitates quick and easy operation. Thanks to new features such as the quick-change rotor system, the quick-release lid lock and near-field communication (NFC) technology, it speeds up work processes and ensures greater efficiency. With a maximum relative centrifugal force (RCF) of 25,212 and, in their cooled versions, a temperature range of -20 to +40 °C, the MIKRO 2.0 and MIKRO 2.0 R offer maximum performance combined with maximum flexibility.



## — Highlights

- max. RPM: 16,100 min<sup>-1</sup>
- max. RCF: 25,212
- max. capacity: 24 x 2.0 ml / 12 x 5 ml
- 5 rotors to choose from
- As General Purpose Device or compliant with the In Vitro Diagnostic Regulation (EU) 2017/746
- Easy to use thanks to 3.5 inch LCD display and push-turn control including display of all relevant parameters, program menu, error display
- Tool-free quick-change rotor system
- Bio-tight quick-release rotor lid lock with safety catch to prevent unintentional release of the lid when carrying the rotor
- Automatic rotor detection in standstill conditions
- Cycle count detection in the rotor using NFC technology, independent of the centrifuge
- 99 program memory locations
- 10 individual start and 11 stop levels
- Model 2.0 R adjustable from -20 to +40 °C with intelligent pre-cooling function lasting 6 minutes (at room temperature 22 °C)

## — Features

- Metal housing and cover
- Sight glass in the lid
- Motorized lid lock
- Lid drop protection
- Emergency release
- Stainless steel basket
- Extended voltage range power supply unit
- Durable synchronous motor
- Unbalance monitoring and shutdown
- "Quick Spin button" for short-duration centrifugation
- Display in °C and °F possible
- Natural refrigerant (R290)
- Display stand-by mode
- User interface available in 26 languages
- Shortest start-up and stopping times thanks to synchronous motor
- Automatic centrifugation start after lid closure or automatic lid opening after centrifugation run complete (adjustable)

## Technical data



**MIKRO 2.0**  
non-refrigerated



**MIKRO 2.0R**  
refrigerated

|                                          |                                                                           |                                                                           |
|------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|
| voltage *)                               | 100- 240 V 1 ~                                                            | 100- 240 V 1 ~                                                            |
| frequency                                | 50 – 60 Hz                                                                | 50 – 60 Hz                                                                |
| consumption                              | 270 VA                                                                    | 420 VA                                                                    |
| emission, immunity                       | EN/IEC 61326-1, Class B                                                   | EN/IEC 61326-1, Class B                                                   |
| max. capacity                            | 24 x 2,0 ml / 12 x 5 ml                                                   | 24 x 2,0 ml / 12 x 5 ml                                                   |
| max. RPM                                 | 16.100 min <sup>-1</sup>                                                  | 16.100 min <sup>-1</sup>                                                  |
| max. RCF                                 | 25.212                                                                    | 25.212                                                                    |
| running time                             | 99 h, 59 min, 59 se, continuous run,<br>short cycle mode (impulse button) | 99 h, 59 min, 59 se, continuous run,<br>short cycle mode (impulse button) |
| dimensions (WxDxH)                       | 240 x 389 x 225 mm                                                        | 240 x 538 x 250 mm                                                        |
| weight                                   | approx. 18 kg                                                             | approx. 30 kg                                                             |
| noise level                              | ≤ 57 dB (A) with rotor 2414                                               | ≤ 57 dB (A) with rotor 2414                                               |
| temperature control, infinitely variable | -                                                                         | from -20 to +40 °C                                                        |
| <b>Cat. No. – IVDR</b>                   | <b>2404</b>                                                               | <b>2406</b>                                                               |
| <b>Cat. No. – General Purpose (GP)</b>   | <b>2440</b>                                                               | <b>2460</b>                                                               |

## Available rotors

### ANGLE ROTORS

|                                                                                     |                                               | angle | max. RPM                 | max. capacity        | Cat. No.    | page |
|-------------------------------------------------------------------------------------|-----------------------------------------------|-------|--------------------------|----------------------|-------------|------|
|  | angle rotor, 24-place                         | 45°   | 16,100 min <sup>-1</sup> | 24 x 2.0 ml          | <b>2414</b> | 3    |
|  | angle rotor, 24-place<br>for spin column kits | 45°   | 14,600 min <sup>-1</sup> | 24 x spin<br>columns | <b>2415</b> | 3    |
|  | angle rotor, 20-place<br>for cryo tubes       | 45°   | 14,600 min <sup>-1</sup> | 20 x cryo tubes      | <b>2419</b> | 4    |
|  | angle rotor, 12-place                         | 45°   | 14,900 min <sup>-1</sup> | 12 x 5 ml            | <b>2413</b> | 4    |
|  | angle rotor, 8-place<br>for PCR strips        | 45°   | 15,400 min <sup>-1</sup> | 8 x 8 PCR strips     | <b>1540</b> | 5    |

## Angle rotor, 24-place | 2414

|                                                                                   |                                   |
|-----------------------------------------------------------------------------------|-----------------------------------|
|  |                                   |
| <b>Rotor</b>                                                                      |                                   |
| max. RPM   max. RCF                                                               | 16,100 min <sup>-1</sup>   25,212 |
| max. capacity                                                                     | 24 x 2 ml                         |
| run up   run down, braked in sec                                                  | 11   11                           |
| angle   max. noise level                                                          | 45°   57 dB (A)                   |
| temperature in °C <sup>1)</sup>                                                   | +1.2                              |
| <b>Cat. No.</b>                                                                   | <b>2434</b>                       |

|   |                                                     |                                                                                                        |
|---|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| + | <b>Lid bioseal <sup>5)</sup></b><br><b>Cat. No.</b> | <br><b>INCLUSIVE</b> |
|---|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------|



|                        | microliter tubes                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Pediatric                                                                                       |
|------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|                        |  |  |  |  |  |  |  <sup>8)</sup> |
| <b>Vessels</b>         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                                 |
| capacity in ml         | 0.2                                                                               | 0.4                                                                               | 0.5                                                                               | 0.8                                                                               | 1.5                                                                               | 2.0                                                                               | 0.5                                                                                             |
| Ø x L in mm            | 6 x 18                                                                            | 6 x 45                                                                            | 8 x 30                                                                            | 8 x 45                                                                            | 11 x 38                                                                           | 11 x 38                                                                           | 10,7 x 46                                                                                       |
| max. RCF <sup>2)</sup> | 25,212                                                                            | 25,212                                                                            | 25,212                                                                            | 25,212                                                                            | 25,212                                                                            | 25,212                                                                            | 25,212                                                                                          |
| radius in mm           | 87                                                                                | 87                                                                                | 87                                                                                | 87                                                                                | 87                                                                                | 87                                                                                | 87                                                                                              |
| +                      |  |  |  |  |  |  |                |
| <b>Adapter</b>         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                                 |
| boring Ø x L in mm     | 6 x 40                                                                            | 6 x 40                                                                            | 8 x 40                                                                            | 8 x 40                                                                            | 10.2 x 19.3                                                                       | 11.2 x 42.6                                                                       | 11.2 x 39                                                                                       |
| vessels per rotor      | 24                                                                                | 24                                                                                | 24                                                                                | 24                                                                                | 24                                                                                | 24                                                                                | 12                                                                                              |
| <b>Cat. No.</b>        | <b>2024</b>                                                                       | <b>2024</b>                                                                       | <b>2023</b>                                                                       | <b>2023</b>                                                                       | <b>2031<sup>7)</sup></b>                                                          | <b>-</b>                                                                          | <b>0788</b>                                                                                     |

## Angle rotor, 24-place | 2415

|                                                                                     |                                   |
|-------------------------------------------------------------------------------------|-----------------------------------|
|  |                                   |
| <b>Rotor</b>                                                                        |                                   |
| max. RPM   max. RCF                                                                 | 14,600 min <sup>-1</sup>   20,733 |
| max. capacity                                                                       | 24 x 2 ml                         |
| run up   run down, braked in sec                                                    | 9   10                            |
| angle   max. noise level                                                            | 45°   57 dB (A)                   |
| temperature in °C <sup>1)</sup>                                                     | -2.6                              |
| <b>Cat. No.</b>                                                                     | <b>2415</b>                       |

|   |                                                     |                                                                                                          |
|---|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| + | <b>Lid bioseal <sup>5)</sup></b><br><b>Cat. No.</b> | <br><b>INCLUSIVE</b> |
|---|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------|



|                        | microliter tubes                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     | micro spin columns                                                                                | Pediatric                                                                                          |
|------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                        |  |  |  |  |  |  |  <sup>8)</sup> |  <sup>8)</sup>  |
| <b>Vessels</b>         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                                   |                                                                                                    |
| capacity in ml         | 0.2                                                                                 | 0.4                                                                                 | 0.5                                                                                 | 0.8                                                                                 | 1.5                                                                                 | 2.0                                                                                 | 0.6                                                                                               | 0.8                                                                                                |
| Ø x L in mm            | 6 x 18                                                                              | 6 x 45                                                                              | 8 x 30                                                                              | 8 x 45                                                                              | 11 x 38                                                                             | 11 x 38                                                                             | 11 x 50                                                                                           | 11 x 38                                                                                            |
| max. RCF <sup>2)</sup> | 20,733                                                                              | 20,733                                                                              | 20,733                                                                              | 20,733                                                                              | 20,733                                                                              | 20,733                                                                              | 20,733                                                                                            | 20,733                                                                                             |
| radius in mm           | 85                                                                                  | 85                                                                                  | 85                                                                                  | 85                                                                                  | 85                                                                                  | 85                                                                                  | 85                                                                                                | 85                                                                                                 |
| +                      |  |  |  |  |  |  | -                                                                                                 |  <sup>8)</sup> |
| <b>Adapter</b>         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                                   |                                                                                                    |
| boring Ø x L in mm     | 6 x 40                                                                              | 6 x 40                                                                              | 8 x 40                                                                              | 8 x 40                                                                              | 10.2 x 19.3                                                                         | 11.2 x 42.6                                                                         | -                                                                                                 | 11.2 x 39                                                                                          |
| vessels per rotor      | 24                                                                                  | 24                                                                                  | 24                                                                                  | 24                                                                                  | 24                                                                                  | 24                                                                                  | 12                                                                                                | 24                                                                                                 |
| <b>Cat. No.</b>        | <b>2024</b>                                                                         | <b>2024</b>                                                                         | <b>2023</b>                                                                         | <b>2023</b>                                                                         | <b>2031<sup>7)</sup></b>                                                            | <b>-</b>                                                                            | <b>-</b>                                                                                          | <b>0788</b>                                                                                        |

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters. Cat. No. 2031.
- 8) Only every second place can be occupied.

## Angle rotor, 20-place | 2419

|                                                                                   |                                   |
|-----------------------------------------------------------------------------------|-----------------------------------|
|  |                                   |
| <b>Rotor</b>                                                                      |                                   |
| max. RPM   max. RCF                                                               | 14,600 min <sup>-1</sup>   20,018 |
| max. capacity                                                                     | 20 x 1.8 ml                       |
| run up   run down, braked in sec                                                  | 9   10                            |
| angle   max. noise level                                                          | 45°   57 dB (A)                   |
| temperature in °C <sup>1)</sup>                                                   | -3.4                              |
| <b>Cat. No.</b>                                                                   | <b>2419</b>                       |

Lid bioseal <sup>5)</sup>

Cat. No.



INCLUSIVE



cryo tubes

|                                                                                   |                        |
|-----------------------------------------------------------------------------------|------------------------|
|  |                        |
| <b>Vessels</b>                                                                    |                        |
| capacity in ml                                                                    | 1.0    1.8             |
| Ø x L in mm                                                                       | 12.5 x 41    12.5 x 48 |
| max. RCF <sup>2)</sup>                                                            | 20,018    20,018       |
| radius in mm                                                                      | 84    84               |



|                    |    |    |
|--------------------|----|----|
| <b>Adapter</b>     |    |    |
| boring Ø x L in mm | -  | -  |
| vessels per rotor  | 20 | 20 |
| <b>Cat. No.</b>    | -  | -  |

## Angle rotor, 8-place | 2418-A

|                                                                                     |                                   |
|-------------------------------------------------------------------------------------|-----------------------------------|
|  |                                   |
| <b>Rotor</b>                                                                        |                                   |
| max. RPM   max. RCF                                                                 | 15,400 min <sup>-1</sup>   20,151 |
| max. capacity                                                                       | 8 x 8 PCR strips                  |
| run up   run down, braked in sec                                                    | 9   10                            |
| angle   max. noise level                                                            | 45°   57 dB (A)                   |
| temperature in °C <sup>1)</sup>                                                     | -2.1                              |
| <b>Cat. No.</b>                                                                     | <b>2418-A</b>                     |

Lid bioseal <sup>5)</sup>

Cat. No.



INCLUSIVE



PCR tubes/strips

|                                                                                     |                                                                                                           |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|  |                                                                                                           |
| <b>Vessels</b>                                                                      |                                                                                                           |
| capacity in ml                                                                      | 0,2    0,2                                                                                                |
| Ø x L in mm                                                                         | 6,2 x 20    6,2 x 20 x 8                                                                                  |
| max. RCF <sup>2) 14)</sup>                                                          | <div> <div>top row</div> <div>bottom row</div> </div> <div> 18,295    20,151<br/> 16,439    18,560 </div> |
| radius in mm <sup>14)</sup>                                                         | <div> <div>top row</div> <div>bottom row</div> </div> <div> 69    76<br/> 62    70 </div>                 |



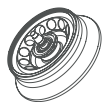
|                    |    |       |
|--------------------|----|-------|
| <b>Adapter</b>     |    |       |
| boring Ø x L in mm | -  | -     |
| vessels per rotor  | 64 | 8 x 8 |
| <b>Cat. No.</b>    | -  | -     |

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 14) Radius min. horizontal distance from the rotor axis to the bore tip, radius max. inclined distance from the rotor axis to the outer bore tip.

## Angle rotor, 12-place | 2413

### Rotor

|                                  |                                   |
|----------------------------------|-----------------------------------|
| max. RPM   max. RCF              | 14,900 min <sup>-1</sup>   21,098 |
| max. capacity                    | 12 x 5 ml                         |
| run up   run down, braked in sec | 12   13                           |
| angle   max. noise level         | 45°   57 dB (A)                   |
| temperature in °C <sup>1)</sup>  | -1.0                              |
| <b>Cat. No.</b>                  | <b>2413</b>                       |



### Lid bioseal<sup>5)</sup>

Cat. No.

**INCLUSIVE**



microliter-tubes



### Vessels

|                        |         |
|------------------------|---------|
| capacity in ml         | 5       |
| Ø x L in mm            | 17 x 59 |
| max. RCF <sup>2)</sup> | 21,098  |
| radius in mm           | 85      |



### Adapter

|                    |          |
|--------------------|----------|
| boring Ø x L in mm | -        |
| vessels per rotor  | 12       |
| <b>Cat. No.</b>    | <b>-</b> |

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

## Certifications / Registrations

Product certification:



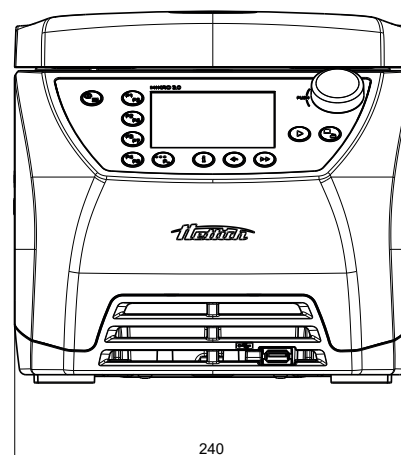
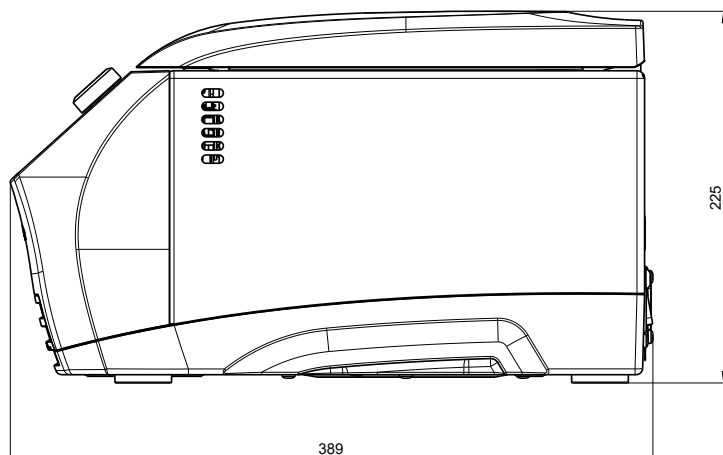
Product registration:



Company certifications:



## Dimensions – MIKRO 2.0



## ■ Dimensions – MIKRO 2.0 R

