



ROTINA 420/420 R
Benchtop Centrifuges
classic/cooled

ROTINA 420/420 R

Developed for large volumes, yet not overly large in size. High performance when it counts, yet cost-effective and fair to your budget. The ROTINA 420 centrifuges offer these benefits and more.

The new, compact benchtop centrifuges are conceived for high sample throughput as well as for high sample volumes. With a maximum capacity of 4 x 600 ml, 140 blood collection tubes or 16 microtitre plates they are ideal for applications in clinical chemistry, in biotechnology and in life science research facilities.



ROTINA 420 classic

Cat. No. 4701

PERFORMANCE

- High capacity
 - max. 4 x 600 ml
- High RCF
 - up to 16,504 for 94 ml tubes
 - up to 12,007 for 250 ml bottles
 - up to 24,400 for reaction tubes

DESIGN

- Metal housing
- Stainless steel centrifuging chamber
- Viewing port in the lid

USER-FRIENDLINESS

- Automatic lid locking
- Ergonomic control and information panel
- 99 program storage spaces

COOLING (ROTINA 420 R)

- Infinitely variable adjustment
 - from -20 °C to +40 °C (or -4 °F to +104 °F)
- Stand-by cooling

SAFETY

- Lid locking and holding
- Emergency lid lock release
- Lid dropping protection
- Automatic rotor recognition
- Imbalance switch-off
- Motor overheating protection
- Chamber overheating protection (ROTINA 420 R)

OPTIONS

The following are available as options, the ROTINA 420 R

- with connection for nitrogen flushing
 - Cat. No. **4706-20**
 - for centrifugation of reactive substances or substances which are unstable in aerial oxygen. As required, a monitoring control system should be available to measure oxygen concentration.
- as heating/cooling version up to +90 °C (or +194 °F)
 - Cat. No. **4706-50**
 - for applications calling for temperatures over +40 °C.

OPERATION AND CONTROL

The advanced C control panel significantly facilitates the daily laboratory routine.

Parameter selection is done via the use of symbol keys. Values are set with the control knob, and recorded by pressing the Start key.


9 braking and acceleration ramps, unbraked run-down, or a cut-off speed can be selected. Ramp 9 represents the shortest braking and acceleration time.

98 program memory positions are available. Additional program position "PREC" (PRECOOLING) is reserved for the pre-cooling program.


The temperature in the ROTINA 420 R refrigerated centrifuge can be set in either Celsius (°C) or Fahrenheit (°F) degrees.

DIGITAL DISPLAY AND CONTROL PANEL

KEYBOARD

| | |
|---|---|
| START | Start centrifugation run / short centrifuging runs / save entries and changes |
|  | Start pre-cooling program PREC |
| STOP OPEN | Manually end centrifugation run / Open lid |

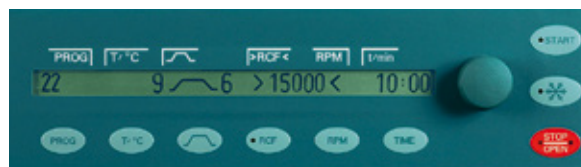
PARAMETER INPUT

| | |
|---|--|
| PROG | Input / recall program number 98 programs can be stored |
| T/°C | Input temperature in increments of 1 from - 20 °C to + 40 °C or - 4 °F to + 104 °F (ROTINA 420 R) |
|  | Input of acceleration levels 1 – 9 or in min : sec Input of braking levels 1 – 9 or in min : sec Input brake force cut-off speed |
| RCF | Input relative centrifugal force (RCF) in increments of 1 Enter rotor radius in mm |
| RPM | Input speed in increments of 10 |
| t/min | Input length of centrifugation (max. 99 h : 59 min : 59 sec) or continuous operation |



ROTINA 420 R cooled

Cat. No. 4706



ROTINA 420 R keypad (C control panel)

ROTORS AND ACCESSORIES

Swing-out rotor 4-place
 $\angle 90^\circ$
 $n = 4,800 \text{ min}^{-1}$
 max. RCF 4,740
Cat. No. 4784-A

Some accessories with bio-containment⁴⁾

max. 5 ml PCR strips 3-250 ml 1.6-10 ml 1.1-10 ml 15-50 ml 12-50 ml 10-94 ml 175-600 ml plates

→ P.5-7

Swing-out rotor 4-place
 $\angle 90^\circ$
 $n = 4,000 \text{ min}^{-1}$
 max. RCF 3,095
Cat. No. 4753

Some accessories with bio-containment⁴⁾

1.5/2 ml 3-250 ml 1.6-10 ml 1.1-10 ml 15-50 ml 12-50 ml 10 ml 250/290 ml cyto

→ P.8-10

Swing-out rotor 8-place
 $\angle 90^\circ$
 $n = 3,800 \text{ min}^{-1}$
 max. RCF 2,906
Cat. No. 4758

1.5/2 ml 5-50 ml 1.6-10 ml 1.1-4,9 ml 15/50 ml 30 ml cyto

→ P.11-12

Swing-out rotor 2-place
 $\angle 90^\circ$
 $n = 5,100 \text{ min}^{-1}$
 max. RCF 3,926
Cat. No. 4728

accessories with bio-containment⁴⁾

MTP CP DWP MS QP
 microtitre plate culture plate deep well plate Micronic system filter plate Microtest plate (Terasaki) PCR plate, 96 wells PCR strips

→ P.12

Angle rotor 6-place
 $\angle 45^\circ$
 $n = 11,000 \text{ min}^{-1}$
 max. RCF 16,504
Cat. No. 4794

auto-clavable with bio-containment⁴⁾

max. 5 ml 3-94 ml 8.5-10 ml 7.5-10 ml 15/50 ml 10-94 ml

→ P.13

Angle rotor 4-place
 $\angle 25^\circ$
 $n = 9,500 \text{ min}^{-1}$
 max. RCF 12,007
Cat. No. 4795

15-94 ml 15/50 ml 10-94 ml 250 ml

→ P.14

Angle rotor 30-place
 $\angle 45^\circ$
 $n = 15,000 \text{ min}^{-1}$
 max. RCF 24,400
Cat. No. 4790-A

auto-clavable with bio-containment⁴⁾

0.2-2 ml

→ P.14

Angle rotor 6-place
 $\angle 45^\circ$
 $n = 14,000 \text{ min}^{-1}$
 max. RCF 18,845
Cat. No. 4760

0.2 ml PCR strips

→ P.14

Accessories for accommodating additional tubes e.g. stool tubes or spin columns on request.

ROTORS AND ACCESSORIES

Swing-out rotor, 4-place



±90°

n = 4,800 min⁻¹
max. RCF 4,740

illustrated with carriers 4780
with single-hand clamp lock
and lids 4783
with bio-containment ⁴⁾

Cat. No. (without carriers) **4784-A**

| | | | | | | | | | | | | | | | | |
|---|-------------|-------------|-------------|---------|---------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--|
| capacity in ml | 1.5 | 2.0 | 3 | 4 | 4 | 5 | 6 | 7 | 15 | 25 | 50 | 94 | 100 | 100 | 250 | |
| Ø x L in mm | 11 x 38 | | 10 x 60 | 10 x 88 | 12 x 60 | 12 x 75 | 12 x 82 | 12 x 100 | 17 x 100 | 24 x 100 | 34 x 100 | 38 x 102 | 40 x 115 | 44 x 100 | 65 x 115 | |
| Cat. No. | 2078 | 0536 | - | | | 0553²⁾ | 0501²⁾ | 0578²⁾ | 0518²⁾ | 0519²⁾ | 0521²⁾ | 0549 | 0523²⁾ | 0526²⁾ | 0530²⁾ | |
| lid with bio-containment ⁴⁾ Cat. No. 4783 | | | | | | | | | | | | | | | | |
| carrier Cat. No. 4780 | | | | | | | | | | | | | | | | |
| Cat. No. | 4773 | 4761 | 4762 | | | 4763 | 4764 | 4765 | 4766 | 4767 | 4768 | | | | | |
| boring Ø x L in mm | 11.2 x 38 | | 11.2 x 54 | | | 13.4 x 55 | | | 17.5 x 62 | 26.5 x 69 | 36 x 77 | 42 x 76.5 | | 46 x 76.5 | 66 x 103 | |
| tubes per rotor | 96 | | 140 | | | 104 | | | 72 | 28 | 16 | 12 | | 8 | 4 | |
| max. RCF ²⁾ | 4,585 | | | | | | | | 4,559 | | | 4,534 | | | | |
| radius in mm | 178 | | | | | | | | 177 | | | 176 | | | | |
| run-up in sec | 54 | | | | | | | | | | | | | | | |
| run-down in sec, braked | 38 | | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| capacity in ml | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 4–5.5 | 4.5–5 | 4.9 | 7.5–8.5 | 9–10 | 1.6–7 | 4–7 | 8 | 8.5–10 | 5 | 15 | 50 | 12 |
| Ø x L in mm | 8 x 66 | 13 x 65 | 11 x 66 | 15 x 75 | 11 x 92 | 13 x 90 | 15 x 92 | 16 x 92 | 13 x 75/100 | 16 x 75 | 16 x 125 | 16 x 100 | 17 x 59 | 17 x 120 | 29 x 115 | 17 x 100 |
| Cat. No. | blood collection / urine tubes | | | | | | | | | | | | - | 0509 | 0513 | - |
| lid with bio-containment ⁴⁾ Cat. No. 4783 | | | | | | | | | | | | | | | | |
| carrier Cat. No. 4780 | | | | | | | | | | | | | | | | |
| Cat. No. | 4761 | 4762 | 4761 | 4763 | 4761 | 4762 | 4763 | 4762 | 4775 | 4763 | 4763 | 4763 | 4778 | 4769 | 4770 | 4774 |
| boring Ø x L in mm | 11.2 x 54 | 13.4 x 55 | 11.2 x 54 | 17.5 x 62 | 11.2 x 54 | 13.4 x 55 | 17.5 x 62 | 13.4 x 55 | 13.7 x 55 | 17.5 x 62 | | 17 x 52 | 17 x 84 | 30 x 82.5 | 17.2 x 82.5 | |
| tubes per rotor | 140 | 104 | 140 | 72 | 140 | 104 | 72 | 104 | 84 | 72 | 24 | 72 | 48 | 52 | 20 | 56 |
| max. RCF ²⁾ | 4,585 | | | | | | | | | | | | 4,740 | | 4,688 | |
| radius in mm | 178 | | | | | | | | | | | | 184 | | 182 | |
| run-up in sec | 54 | | | | | | | | | | | | | | | |
| run-down in sec, braked | 38 | | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | | | | | | | | | |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the 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. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.
 3) When using these tubes, carrier 4780 cannot be closed with lid 4783.
 4) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
 5) Carrier must be loaded as illustrated.
 6) For blood collection tubes with a cap of a diameter greater than 17 mm.

ROTORS AND ACCESSORIES



Carrier 4785

The 4780 carrier is also available without a lid and clamp lock. The catalogue number is 4785.#)



illustrated with carriers 4782

Swing-out rotor Cat. No. (without carriers) **4784-A**

| capacity in ml | 25 | 30 | 50 | 10 | 30 | 50 | 85 | 94 | 175 | 175 | 200 | 225 | 250 | 290 | 400 | 400 | 600 |
|--|-------------|--------------------------|-------------|-------------|--------------------------|-------------|-------------|--------------------------|----------------|-----------------|--------------|----------------|---------------------------|------------------------|------------------------|------------------------|---------------------------|
| Ø x L in mm | 25x90 | 25x110 | 29x115 | 16x80 | 26x95 | 29x107 | 38x106 | 38x102 | 61x118 | 62x144 | 60x130 | 61x137 | 61x122 | 62x137 | 81x136 | 84x134 | 93x134 |
| Cat. No. | - | | | | 0545 | 0546 | 0547 | 0538⁵⁾ | Falcon® | Nalgene® | Nunc® | Falcon® | 5127¹¹⁾ | -¹¹⁾ | -¹¹⁾ | -¹¹⁾ | 0551¹¹⁾ |
| lid with bio-containment ⁴⁾ Cat. No. 4783 | | | | | | | | | | | | | | | | | |
| carrier Cat. No. 4780 | | | | | | | | | | | | | | | | | |
| Cat. No. | 4764 | 4770⁵⁾ | 4763 | 4764 | 4770⁵⁾ | 4766 | 4776 | 4777 | 4776 | 4771 | 4772 | - | | | | | |
| boring Ø x L in mm | 26.5x69 | 30x82.5 | 17.5x62 | 26.5x69 | 30x82.5 | 42x76.5 | 61x105 | 61.5x110 | 61x105 | 62x100 | 85x100 | 94x99 | | | | | |
| tubes per rotor | 28 | 20 | 72 | 28 | 20 | 12 | 4 | | | | | | | | | | |
| max. RCF ²⁾ | 4,585 | 4,688 | 4,585 | 4,688 | 4,534 | 4,740 | | | | | | | | | | | |
| radius in mm | 178 | 182 | 178 | 182 | 176 | 184 | | | | | | | | | | | |
| run-up in sec | 54 | | | | | | | | | | | | | | | | |
| run-down in sec, braked | 38 | | | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | | | | | | | | | | |

| D x W x H in mm | 86x128x15 | 86x128x17.5 | 86x128x22 | 86x128x44.5 | 86x128x46 | 59x84x11 | 82x124x20 | - |
|---------------------------------|------------|-------------|-----------|-------------|-----------|-----------------------------------|----------------------------|-------------------|
| capacity in ml | - | | | | | | | 0.2 |
| Cat. No. | MTP | | CP | DWP | MS | Microtest plate (Terasaki) | PCR plate, 96-place | PCR strips |
| carrier Cat. No. 4782 | | | | | | | | |
| Cat. No. | - | | | | | | | 1485 |
| boring Ø x L in mm | - | | | | | | | |
| plates/strips per rotor | 16 | 16 | 12 | 4 | 4 | 8 | 4 | 48x8 |
| max. RCF ²⁾ | 4,096 | | | | | | | |
| radius in mm | 159 | | | | | | | |
| run-up in sec | 54 | | | | | | | |
| run-down in sec, braked | 38 | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the 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. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 4780 resp. 5051 cannot be closed with lid 4783 resp. 5053.

CARRIERS WITH SINGLE-HAND CLAMP LOCK



Carrier 4780 with lid 4783 (ROTINA 420/420R)



Carrier 4880 with lid 4883 (ROTANTA 460/460R)

OPENING AND CLOSING OF THE CARRIER WITH ONE HAND



- 1 With the clamp in the “open” position the lid can be easily fitted and removed.
- 2 With the clamp in the central position the carrier is sealed to prevent aerosol formation and can be safely carried to the centrifuge, workbench or another working space.
- 3 With the clamp in the “close” position the carrier can be centrifuged without aerosol formation. The absence of aerosols has been verified by the TÜV in accordance with DIN EN 61010, Part 2-020.

SAFE AND CONVENIENT SAMPLE PROCESSING

- Easy operation of the clamp lock with a single hand
- Safe transport of the carriers with the clamp
- No generation of aerosols upon centrifugation of closed carriers
- TÜV certification in accordance with DIN EN 61010, Part 2-020

⁴⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

⁵⁾ Please remove the inserts.

⁸⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

¹¹⁾ At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

^{#)} With the E3905 add-on kit and the 4783 lid, the 4785 carrier can be converted at a later time to a 4780 carrier with single-hand clamp lock.

ROTORS AND ACCESSORIES

Swing-out rotor, 4-place

±90°

n = 4,000 min⁻¹
max. RCF 3,095



illustrated with carriers 5051
and lids 5053

Cat. No. (without carriers) **4753**

| | | | | | | | | | | | | | | |
|------------------------------------|-------------|-------------|-------------|-------------|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| capacity in ml | 1.5 | 2.0 | 1.5 | 2.0 | 3 | 5 | 6 | 7 | 9 | 15 | 25 | 50 | 100 | 100 |
| Ø x L in mm | 11x38 | | 11x38 | | 10x60 | 12x75 | 12x82 | 12x100 | 14x100 | 17x100 | 24x100 | 34x100 | 44x100 | 40x115 |
| Cat. No. | - | - | 2078 | 0536 | - | 0553²⁾ | 0501²⁾ | 0578²⁾ | 0500²⁾ | 0518²⁾ | 0519²⁾ | 0521²⁾ | 0526²⁾ | 0523²⁾ |
| lid Cat. No. 5053 | | | | | | | | | | | | | | |
| carrier Cat. No. 5051 | | | | | | | | | | | | | | |
| Cat. No. | 5257 | 5281 | 5267 | 5227 | 5247¹⁰⁾ | 5264 | 5248¹⁰⁾ | 5242 | 5243 | 5262 | 5249 | | | |
| boring Ø x L in mm | 12.5x42 | 11.5x50 | 11x44 | 12.5x42 | 12.5x86 | 16x50 | 17.5x86 | 26x86 | 36x86 | 45.5x86 | 42x86 | | | |
| tubes per rotor | 160 | 64 | 80 | 80 | 80 | 48 | 48 | 20 | 8 | 4 | | | | |
| max. RCF ²⁾ upper/lower | 1,950/2,826 | 2,826 | 2,737 | 2,773 | 2,755 | 2,773 | 2,755 | | | | | | | |
| radius in mm upper/lower | 109/158 | 158 | 153 | 155 | 154 | 155 | 154 | | | | | | | |
| run-up in sec | 18 | | | | | | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -1 | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---------------------------------|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|
| capacity in ml | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 4–5.5 | 4.5–5 | 4.9 | 7.5–8.5 | 9–10 | 10 | 1.6–5 | 4–7 | 4–7 | 8.5–10 |
| Ø x L in mm | 8x66 | 13x65 | 11x66 | 15x75 | 11x92 | 13x90 | 15x92 | 16x92 | 15x102 | 13x75 | 16x75 | 13x100 | 16x100 |
| Cat. No. | blood collection / urine tubes | | | | | | | | | | | | |
| lid Cat. No. 5053 | | | | | | | | | | | | | |
| carrier Cat. No. 5051 | | | | | | | | | | | | | |
| Cat. No. | 5267 | 5268 | 5227 | 5264 | 5227 | 5268 | 5264 | 5258 | 5268 | 5264 | 6301 | 5248 | |
| boring Ø x L in mm | 11x44 | 13.5x52 | 12.5x42 | 16x50 | 12.5x42 | 13.5x52 | 16x50 | 17.6x86 | 13.5x52 | 16x50 | 13.5x86 | 17.5x86 | |
| tubes per rotor | 80 | 48 | 80 | 48 | 80 | 48 | 48 | 44 | 48 | | | | |
| max. RCF ²⁾ | 2,737 | 2,808 | 2,773 | | 2,808 | 2,773 | 2,755 | 2,808 | 2,773 | 2,755 | 2,755 | 2,755 | |
| radius in mm | 153 | 157 | 155 | | 157 | 155 | 154 | 157 | 155 | 154 | 154 | 154 | |
| run-up in sec | 18 | | | | | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -1 | | | | | | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the 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. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.

⁴⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

ROTORS AND ACCESSORIES





































illustrated with carriers 5051



illustrated with carriers 5092

Swing-out rotor 4753

| | | | | | | |
|--|---|---|--|---|--|--|
| capacity in ml | 15 | 50 | 12 | 30 | 50 | two-tier frame for cyto accessories |
| Ø x L in mm | 17x120 | 29x115 | 17x100 | 25x110 | 29x115 | |
| Cat. No. | 0509 | 0513 | - | | | cyto chambers¹²⁾ |
| lid Cat. No. 5053  |  ³⁾ |  ³⁾ |  |  ³⁾ |  ³⁾ |  |
| carrier Cat. No. 5051  |  |  |  |  |  + 2 x 6316 |  |
| Cat. No. | 6306 | 5259 | 6306 | 5266 | 5243 | 5280 |
| boring Ø x L in mm | 17x90 | 30x86 | 17x90 | 26x86 | 36x86 | - |
| tubes per rotor | 28 | 8 | 28 | 20 | 8 | 8 |
| max. RCF ²⁾ upper/lower | 2,898 | 2,826 | 2,898 | 2,755 | | 1,735/2,737 |
| radius in mm upper/lower | 162 | 158 | 162 | 154 | | 97/153 |
| run-up in sec | 18 | | | | | |
| run-down in sec, braked | 16 | | | | | |
| temperature in °C ¹⁾ | -1 | | | | | |

| | | | | | | | | | |
|--|---|---|---|---|--|---|---|---|---|
| capacity in ml | 5 | 6 | 7 | 15 | 25 | 50 | 100 | 100 | 250 |
| Ø x L in mm | 12x75 | 12x82 | 12x100 | 17x100 | 24x100 | 34x100 | 44x100 | 40x115 | 65x115 |
| Cat. No. | 0553²⁾ | 0501²⁾ | 0578²⁾ | 0518²⁾ | 0519²⁾ | 0521²⁾ | 0526²⁾ | 0523²⁾ | 0530²⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 5093  |  |  |  |  |  |  |  |  |  |
| carrier Cat. No. 5051  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 5128 | 5120 | 5136 | 5122 | 5124 | 5125 | 5126 | 5126 | 1791 |
| boring Ø x L in mm | 12.8x45 | | 12.8x82 | 17.5x60.7 | 25.5x82 | 35.5x82.5 | 45.5x85 | 42x85 | 66x103 |
| tubes per rotor | 48 | | | 32 | 16 | 4 | | | |
| max. RCF ²⁾ | 3,005 | | | 2,952 | 2,898 | 2,952 | | 3,095 | |
| radius in mm | 168 | | | 165 | 162 | 165 | | 173 | |
| run-up in sec | 18 | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | |
| temperature in °C ¹⁾ | -1 | | | | | | | | |

¹⁰⁾ With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

¹²⁾ Please ask for our detailed cyto brochure.

ROTORS AND ACCESSORIES



illustrated with carriers 5092

Swing-out rotor 4753

| | | | | | | | | | | | |
|---|-------------------------------------|---------|-------------|-------------|-------------|-------------|---------|-------|-------------|-------------|--------|
| capacity in ml | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 4–5.5 | 4.5–5 | 4.9 | 7.5–8.5 | 9–10 | 10 | 1.6–5 | 4–7 |
| Ø x L in mm | 8x66 | 13x65 | 11x66 | 15x75 | 11x92 | 13x90 | 15x92 | 16x92 | 15x102 | 13x75 | 13x100 |
| Cat. No. | blood collection/urine tubes | | | | | | | | | | |
| lid with bio-containment ⁴⁾ Cat. No. 5093 | | | | | | | | | | | |
| carrier Cat. No. 5092 | | | | | | | | | | | |
| Cat. No. | 5138 | | 5136 | 5120 | 5137 | 5136 | | | 5138 | 5120 | |
| boring Ø x L in mm | 12.8x54.5 | | 17.5x60.7 | 12.8x82 | 13.5x60.7 | 17.5x60.7 | | | 12.8x54.5 | 12.8x82 | |
| tubes per rotor | 48 | | 32 | 48 | 32 | | | 48 | 48 | | |
| max. RCF ²⁾ | 2,540 | | 2,952 | 3,005 | 2,952 | | | 2,540 | 3,005 | | |
| radius in mm | 142 | | 165 | 168 | 165 | | | 142 | 168 | | |
| run-up in sec | 18 | | | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | | | |
| temperature in °C ¹⁾ | -1 | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|--------------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|-----------------------|
| capacity in ml | 4–7 | 8.5–10 | 8 | 15 | 50 | 12 | 25 | 30 | 50 | 10 | 250 | 290 |
| Ø x L in mm | 16x75 | 16x100 | 16x125 | 17x120 | 29x115 | 17x100 | 25x90 | 25x110 | 29x115 | 16x80 | 61x122 | 62x137 |
| Cat. No. | blood/urine tubes | | | 0509 | 0513 | - | | | | | 5127¹⁾ | -¹⁾ |
| lid with bio-containment ⁴⁾ Cat. No. 5093 | | | | | | | | | | | | |
| carrier Cat. No. 5092 | | | | | | | | | | | | |
| Cat. No. | 5136 | 5121⁵⁾ | 5129 | 5123 | 5121 | 5134 | 5122 | 5135 | 5136 | 6319 | | |
| boring Ø x L in mm | 17.5x60.7 | 17.5x82 | 17x85 | 30x85 | 17.5x82 | 26x73 | 25.5x82 | 30x99 | 17.5x60.7 | 66x103 | | |
| tubes per rotor | 32 | 28 | 28 | 8 | 28 | 12 | 16 | 8 | 32 | 4 | | |
| max. RCF ²⁾ | 2,952 | 3,059 | 3,095 | | 3,005 | 2,826 | 2,898 | 3,023 | 2,952 | 3,095 | | |
| radius in mm | 165 | 171 | 173 | | 168 | 158 | 162 | 169 | 165 | 173 | | |
| run-up in sec | 18 | | | | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -1 | | | | | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the 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. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.

⁴⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

ROTORS AND ACCESSORIES

Swing-out rotor, 8-place

















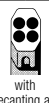


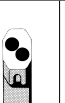
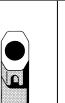
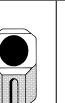
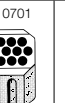


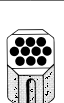

±90°


























n = 3,800 min⁻¹
max. RCF 2,906



illustrated with carriers 1746

Cat. No. (without carriers) **4758**

| capacity in ml | 5 | 6 | 7 | 9 | 15 | 20 | 45 | 50 | 1.1–1.4 | 2.6–3.4 | 4–5.5 | 4.5–5 | 4.9 |
|---|--|--|--|--|--|--|---|--|--|--|--|--|--|
| Ø x L in mm | 12x75 | 12x82 | 12x100 | 14x100 | 17x100 | 21x100 | 31x100 | 34x100 | 8x66 | 13x65 | 15x75 | 11x92 | 13x90 |
| Cat. No. | 0553²⁾ | 0501²⁾ | 0578²⁾ | 0500²⁾ | 0518²⁾ | - | - | 0521²⁾ | blood collection/urine tubes | | | | |
|  rotor Cat. No. 4758 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 1369-91 | 1372 | 1369-92 | 1741 | 1742 | 1346 | 1345 | 1746 | 1741 | 1742 | 1741 | | |
| boring Ø x L in mm | 12.5x64.4 | 13.5x65 | 12.5x71.5 | 14.6x78 | 17.6x78 | 21.5x74 | 32x74 | 35x78 | 14.6x78 | 17.6x78 | 14.6x78 | | |
| tubes per rotor | 32 | 136 | 32 | 80 | 56 | 16 | 8 | 8 | 80 | 56 | 80 | | |
| max. RCF ²⁾ | 2,551 | 2,648 | 2,777 | 2,874 | 2,906 | 2,825 | 2,825 | 2,906 | 2,874 | 2,793 | 2,906 | | |
| radius in mm | 158 | 164 | 172 | 178 | 180 | 175 | 175 | 180 | 178 | 173 | 180 | | |
| run-up in sec | 19 | | | | | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | | | | | |
| temperature in °C ¹⁾ | 0 | | | | | | | | | | | | |

| capacity in ml | 7.5–8.5 | 9–10 | 10 | 1.6–5 | 1.6–5/4–7 | 4–7 | 8.5–10 | 15 | 50 | 30 | suspension for cyto accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø x L in mm | 15x92 | 16x92 | 15x102 | 13x75 | 13x75/16x75 | 13x100 | 16x100 | 17x120 | 29x115 | 26x95 | | |
| Cat. No. | blood collection/urine tubes | | | | | | | 0509 | 0513 | 0545 | cyto chambers¹²⁾ | |
|  rotor Cat. No. 4758 |  |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 1742 | 1742 | 1742¹⁴⁾ | 1741 | 1742 | 1739 | 1742 | 1742¹⁴⁾ | 1746 | 1746 | 1745 | 1660 |
| boring Ø x L in mm | 17.6x78 | 17.6x78 | 17.6x78 | 14.6x78 | 17.6x78 | 13.5x78 | 17.6x78 | 17.6x78 | 30x98 | 30x98 | 26x78 | - |
| tubes per rotor | 56 | 56 | 24 | 80 | 56 | 56 | 56 | 24 | 8 | 8 | 16 | 8 |
| max. RCF ²⁾ | 2,906 | | 2,615 | 2,793 | 2,906 | | | | | | | 2,179 |
| radius in mm | 180 | | 162 | 173 | 180 | | | | | | | 135 |
| run-up in sec | 19 | | | | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | | | | |
| temperature in °C ¹⁾ | 0 | | | | | | | | | | | |

⁵⁾ Please remove the inserts.

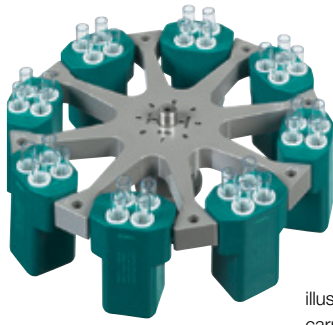
¹¹⁾ At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

¹²⁾ Please ask for our detailed cyto brochure.

¹⁴⁾ Please load only the middle row.

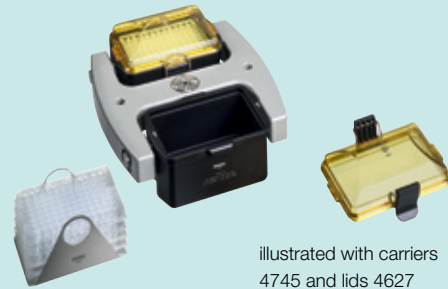
¹⁶⁾ Packed in units of 10 pieces.

ROTORS AND ACCESSORIES



illustrated with carriers 1369-92

Swing-out rotor, 2-place



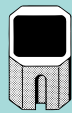








∠ 90°












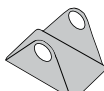
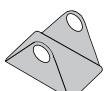

n = 5,100 min⁻¹
max. RCF 3,926

illustrated with carriers 4745 and lids 4627 with bio-containment⁴⁾ and removal frame 4626

Swing-out rotor 4758

Cat. No. (without carriers) **4728**

| capacity in ml | 1.5/2.0 | 1 | 3 | 4 |
|---|--|--|--|--|
| Ø x L in mm | 11 x 38 | 6 x 45 | 10 x 60 | 12 x 60 |
| Cat. No. | 2078/0536 | Rhesus | - | - |
|  carrier Cat. No. 1366 |  |  |  |  |
| |  |  |  |  |
| Cat. No. | 5277 | 1357 | 1327 | 1326 |
| boring Ø x L in mm | 11.5 x 38 | 6.5 x 23 | 10.5 x 23 | 12.5 x 44 |
| tubes per rotor | 72 | 240 | 96 | |
| max. RCF ²⁾ | 2,470 | 2,454 | 2,438 | |
| radius in mm | 153 | 152 | 151 | |
| run-up in sec | 19 | | | |
| run-down in sec, braked | 16 | | | |
| temperature in °C ¹⁾ | 0 | | | |

| D x W x H in mm | 86 x 128 x 15 | 86 x 128 x 17.5 | 86 x 128 x 22 | 86 x 128 x 44.5 | 86 x 128 x 46 | 86 x 128 x 83 | 59 x 84 x 11 | 82 x 124 x 20 | - |
|--|---|---|---|---|---|--|---|---|---|
| capacity in ml | - | | | | | | | | |
| Cat. No. | MTP | | CP | DWP | MS | QP | Microtest Plate (Terasaki) | PCR Plate, 96 wells | PCR strips |
| lid with bio-containment ⁴⁾ Cat. No. 4627  rotor 4728 carrier Cat. No. 4745  |  |  |  |  |  |  |  |  |  |
| |  | | | | | | |   | |
| Cat. No. | 4626 | | | | | | | 4626 + 1485 | |
| boring Ø x L in mm | - | | | | | | | | |
| plates/strips pro rotor | 12 | 10 | 8 | 2 | | 4 | 2 | 24 x 8 | |
| max. RCF ²⁾ | 3,926 | | | | | | | | |
| radius in mm | 135 | | | | | | | | |
| run-up in sec | 67 | | | | | | | | |
| run-down in sec, braked | 41 | | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the 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. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

⁴⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

⁸⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

ROTORS AND ACCESSORIES

Angle rotor, 6-place



±45°

n = 11,000 min⁻¹
max. RCF 16,504




with bio-containment⁴⁾























Cat. No. 4794

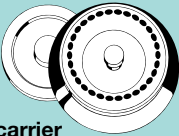










| capacity in ml | 1.5 | 2.0 | 3 | 15 | 25 | 50 | 94 | 7.5–8.5 | 9–10 | 10 | 8.5–10 |
|---|-------------|-------------|-------|--------------------------|--------------------------|--------------------------|-------------|-------------------------------------|-------|--------|--------|
| Ø x L in mm | 11x38 | | 10x60 | 17x100 | 24x100 | 34x100 | 38x102 | 15x92 | 16x92 | 15x102 | 16x100 |
| Cat. No. | 2078 | 0536 | - | 0518²⁾ | 0519²⁾ | 0521²⁾ | 0549 | blood collection/urine tubes | | | |
| lid with bio-containment ⁴⁾ incl. | | | | | | | | | | | |
| carrier Cat. No. 4794 | | | | | | | | | | | |
| Cat. No. | 1449 | | | 1451 | 1447 | 1463 | - | 1451 | | | |
| boring Ø x L in mm | 11.4x39 | | | 17.5x92 | 26x85 | 35x89 | 38.2x89,6 | 17.5x92 | | | |
| tubes per rotor | 24 | | | 6 | | | | | | | |
| max. RCF ²⁾ | 15,828 | | | 15,557 | 15,151 | 16,233 | 16,504 | 15,557 | | | |
| radius in mm | 117 | | | 115 | 112 | 120 | 122 | 115 | | | |
| run-up in sec | 40 | | | | | | | | | | |
| run-down in sec, braked | 63 | | | | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | | | | |

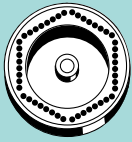


| capacity in ml | 5 | 15 | 50 | 10 | 30 | 50 | 85 | 94 | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|--|
| Ø x L in mm | 17x59 | 17x120 | 29x115 | 16x80 | 26x95 | 29x107 | 38x106 | 38x102 | |
| Cat. No. | - | 0509 | 0513 | - | 0545 | 0546 | 0547 | 0538⁸⁾ | |
| lid with bio-containment ⁴⁾ incl. | | | | | | | | | |
| carrier Cat. No. 4794 | | | | | | | | | |
| Cat. No. | 1476 | 1466 | 1454 | 1448 | 1447 | 1446 | - | | |
| boring Ø x L in mm | 17x51 | 17x106 | 29,8x97 | 16,5x74 | 26x85 | 29x92 | 38,2x89,6 | | |
| tubes per rotor | 6 | | | 12 | 6 | | | | |
| max. RCF ²⁾ | 15,422 | 15,828 | 16,098 | 15,557 | 15,151 | 15,828 | 16,504 | | |
| radius in mm | 114 | 117 | 119 | 115 | 112 | 117 | 122 | | |
| run-up in sec | 40 | | | | | | | | |
| run-down in sec, braked | 63 | | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | | |

ROTORS AND ACCESSORIES

| Angle rotor, 4-place | Angle rotor, 30-place | Angle rotor, 6-place, for PCR strips |
|---|---|---|
|  |  |  |
| ↘ 25° | ↘ 45° | ↘ 45° |
| n = 9,500 min ⁻¹ max. RCF 12,007 | n = 15,000 min ⁻¹ max. RCF 24,400 | n = 14,000 min ⁻¹ max. RCF 18,845 |
| Cat. No. 4795 | Cat. No. 4790-A <small>with bio-containment⁴⁾</small> | Cat. No. (without lid) 4760 <small>lid (optional) Cat. No. 1162</small> |

| capacity in ml | 15 | 25 | 94 | 15 | 50 | 10 | 30 | 50 | 85 | 94 | 250 |
|---|--|--|--|--|--|--|--|--|--|--|---|
| Ø x L in mm | 17x100 | 24x100 | 38x102 | 17x120 | 29x115 | 16x80 | 26x95 | 29x107 | 38x106 | 38x102 | 61x122 |
| Cat. No. | 0518²⁾ | 0519²⁾ | 0549 | 0509 | 0513 | - | 0545 | 0546 | 0547 | 0538⁸⁾ | 5127¹¹⁾ |
|  |  |  |  |  |  |  |  |  |  |  |  |
| rotor Cat. No. 4795 |  |  |  |  |  |  |  |  |  |  | |
| Cat. No. | 5646 | 5642 | 5644 | 5637 | 5638 | 5641 | 5642 | 5643 | 5644 | 5644 | - |
| boring Ø x L in mm | 17.6x83 | 26x80 | 38.6x88 | 17x106 | 30x100 | 16.6x70 | 26x80 | 29x90 | 38.6x88 | 38.6x88 | 61.5x109 |
| tubes per rotor | 28 | 12 | 4 | 20 | 4 | 32 | 12 | 4 | 4 | 4 | 4 |
| max. RCF ²⁾ | 11,301 | 10,897 | 10,292 | 10,998 | 10,090 | 11,402 | 10,897 | 10,090 | 10,292 | 10,292 | 12,007 |
| radius in mm | 112 | 108 | 102 | 109 | 100 | 113 | 108 | 100 | 102 | 102 | 119 |
| run-up in sec | 45 | | | | | | | | | | |
| run-down in sec, braked | 55 | | | | | | | | | | |
| temperature in °C ¹⁾ | +2 | | | | | | | | | | |

| 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 |
|  |  |  |  |  |  |  |  |
| carrier Cat. No. 4790-A |  |  | | | | |  |
| Cat. No. | 2024 | 2023 | | | 2031¹⁵⁾ | - | 0788 |
| boring Ø x L in mm | 6x40 | 8x40 | | | 10.2x19 | 11.2x40.9 | 11.2x40.9 |
| tubes per rotor | | | 30 | | | | 15 |
| max. RCF ²⁾ | | | 24,400 | | | | 23,394 |
| radius in mm | | | 97 | | | | 93 |
| run-up in sec | | | 19 | | | | |
| run-down in sec, braked | | | 24 | | | | |
| temperature in °C ¹⁾ | | | +4 | | | | |

| capacity in ml | 0.2 | 0.2 |
|---|---|---|
| Ø x L in mm | 6x18 | - |
| Cat. No. | - | PCR strips |
|  |  |  |
| rotor Cat. No. 4760 | | |
| Cat. No. | - | - |
| boring Ø x L in mm | 6.5x15.5 | |
| tubes per rotor | 48 | 6x8 |
| max. RCF ²⁾ | 18,845 | |
| radius in mm | 86 | |
| run-up in sec | 15 | |
| run-down in sec, braked | 15 | |
| temperature in °C ¹⁾ | +1 | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the 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. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

⁴⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

⁸⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

ROLLING CABINETS

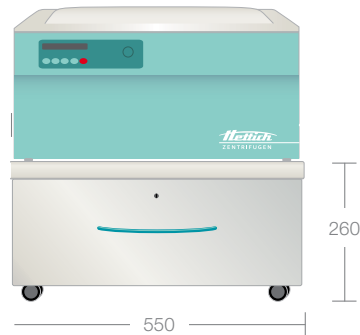
All rolling cabinets are of sturdy design and feature castors and two locks. Any vibrations of the centrifuge are safely compensated for.

Rolling cabinets with Cat. No. 4612-A and 4613-A are suited for the models:

- ROTOFIX 32 A
- UNIVERSAL 320/320 R
- ROTINA 380/380 R
- ROTINA 420
- ROTANTA 460
- ROTOFIX 46/46 H

Rolling cabinets with Cat. No. 4614-A and 4615-A are suited for the models:

- ROTINA 420 R
- ROTANTA 460 R



Low and narrow,
with one drawer.
Depth 650 mm

Cat. No. 4612-A



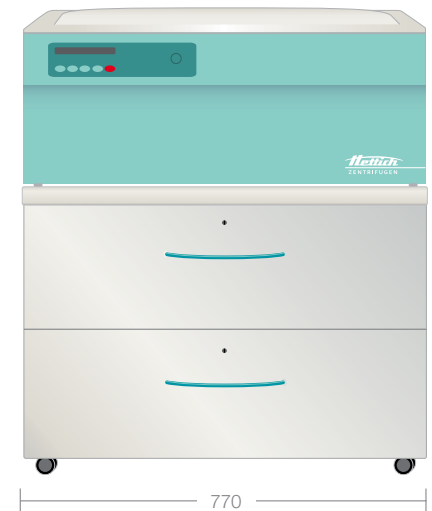
Low and wide,
with one drawer.
Depth 650 mm

Cat. No. 4614-A



High and narrow,
with two drawers.
Depth 650 mm

Cat. No. 4613-A





High and wide,
with two drawers.
Depth 650 mm

Cat. No. 4615-A

¹¹⁾ At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
¹⁵⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

ROTINA 420/420 R

| TECHNOLOGY | ROTINA 420 | | ROTINA 420 R | |
|--|--|-----------------|---------------------------|-----------------------------|
| Benchtop centrifuge, without rotor | classic | | cooled | |
| Power supply ^{*)} | 200 – 240 V 1 ~ | 100 – 127 V 1 ~ | 200 – 240 V 1 ~ | 100 – 127 V 1 ~ / 100 V 1 ~ |
| Frequency | 50 – 60 Hz | | 50 Hz | 60 Hz / 50 Hz |
| Consumption | 870 VA | 900 VA | 1,600 VA | 1,850 VA |
| Emission, Immunity | EN / IEC 61326-1, class B | FCC class B | EN / IEC 61326-1, class B | FCC class B |
|  Max. capacity | 4 x 600 ml | | | |
|  Max. RPM (speed) | 15,000 min ⁻¹ | | | |
| Max. RCF | 24,400 | | | |
| Running time | 1 sec – 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode | | | |
| Dimensions (HxWxD) | 423x 506x 650 mm | | 423x 713x 654 mm | |
| Weight | approx. 75 kg | approx. 84 kg | approx. 108 kg | approx. 117 kg |
| Refrigeration | | | | |
| Temperature control, infinitely variable | - | | from -20 to +40 °C | |
| Cat. No. | 4701 | 4701-01 | 4706 | 4706-01 |

^{*)} 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 “Authorized Economic Operator” enables accelerated customs clearance.



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