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PROVEN QUALITY

Have confidence knowing our equipment is backed by over 113 years of product development and industry knowledge.

Hettich products are renowned all over the world for:

LONG SERVICE LIFE

Hettich products provide years of service – ten years on average or much longer.

Spread acquisition costs over many years.

RELIABILITY

Hettich products are manufactured with high-quality parts and materials to provide a long service life with minimal, low-cost maintenance.

Minimize downtime and save money on repair costs.

SUSTAINABILITY

By purchasing a Hettich product you are investing in a family business who takes pride and ownership in its products and services.

Invest in quality.

SAFETY

Hettich products are manufactured under strict quality assurance guidelines and tested and certified by international regulatory agencies to guarantee consistency in quality and safety across the entire product range.

Work with products that meet the requirements of legislation.

OUR STRENGTHS

- Flexible customer care, no complicated corporate structures
- All R&D and production located in Germany
- Quality products - Made in Germany
- Spare parts available for long service life
- Customized fabrications to meet customer requirements
- Socially responsible with localized labor and workforce development
- Continuous employee training and development programs
- Environmentally responsible company





Our global network of Hettich subsidiaries and authorized service providers ensure that customer challenges are addressed quickly and efficiently with real-time solutions.

In addition to our German headquarters our subsidiaries reside in many European Countries, in the USA and in Singapore for the Asian countries. You can find an overview of an authorized service provider for your country on our Website.

Why trust in Hettich products and services?

ALWAYS AVAILABLE

Our technical specialists are always available for one-to-one communication. No more waiting on a hotline or in a call-center, a technical support specialist will be assigned directly to you.

ALWAYS ON YOUR SIDE

Individual support provides you with a partner who understands your challenges and is available to you when you need them.

ALWAYS WELL ADVISED

Our manufacturer trained and certified support network ensures you have the most up to date and accurate information available.

ALWAYS QUICK ANSWERS

As always, our service network aims to satisfy your needs as fast as possible and to your complete satisfaction.

Certificates and registrations

Hettich products are distinguished by the highest quality and the most modern technology. Centrifuges and accessories are developed in collaboration with users from the fields of medicine, chemistry, research and industry, and they are always adapted to the latest requirements, in a continuous process.

Hettich centrifuges comply with all relevant EU standards in effect. All stages from design to end-product are continuously subjected to the strictest controls.

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. This is why Hettich centrifuges are known for safety and reliability all over the world.



Marks of conformity for the use of Hettich centrifuges in the US and Canada, on request.



We are an Authorised Economic Operator, which means you can expect expeditious customs clearance.



according to directive 98/79/EC



QUALITY & SAFETY

IvD stands for In-vitro Diagnostics. Hettich centrifuges conform to IvD standards, i.e. they comply with the European IvD guideline's requirements (98/79/EC) and guarantee a standardised level of quality and safety. Please see §15 "Data Storage" of our General Terms and Conditions regarding the traceability of Hettich products.

Under Rule 3 in the Classification section of Annex IX to the EU Directive 93/42/EEC, centrifuges used for the manufacture of blood products for transfusion purposes require approval as Class IIa medical products. Hettich holds this approval for the ROTO SILENTA 630 RS, ROTIXA 500 RS and ROTANTA 460 line of centrifuges, as shown by a declaration of conformity in accordance with Annex V to Directive 93/42/EEC.

General lab equipment

NON-POLLUTING WASTE DISPOSAL



Since 1.1.2006, Hettich has been registered in Germany under **WEEE Reg. No. DE 92954423** with the Elektro-Altgeräete Register¹⁾ - Foundation for the implementation of the 2002/96/EC directive (ElektroG²⁾), regarding the disposal of electrical and electronic equipment in the EU. With the symbol of the crossed-out bin, it is made clear that centrifuges may not be disposed of with household waste. The disposal regulations in the individual EU countries can vary. Please ask your supplier, if necessary. In this context, we refer to § 14 "Acceptance of returns / obligation to dispose of the goods" of the General Terms and Conditions.











¹⁾ Register of old electronic equipment



²⁾ Electrical and Electronic Equipment Act

| | metal housing | plastic housing | metal lid | viewing port in the lid | lid locking and holding | one-hand lid lock | twist lock | powered lid-locking | lid dropping protection | emergency lid lock release | stainless steel chamber |
|-------------------------|--|-----------------|-----------|-------------------------|-------------------------|-------------------|------------|---------------------|-------------------------|----------------------------|-------------------------|
| EBA 200 / 200 S | | • | • | • | • | • | | | • | • | |
| EBA 270 | | • | • | • | • | • | | | • | • | • |
| EBA 280 / 280 S | | • | • | • | • | • | | | • | • | • |
| HAEMATOKRIT 200 | | • | • | • | • | • | | | • | • | |
| MIKRO 185 | | • | • | • | • | • | | | • | • | |
| MIKRO 200 | • | | • | • | • | • | | • | • | • | • |
| MIKRO 200 R | • | | • | • | • | • | | • | • | • | • |
| MIKRO 220 | • | | • | • | • | • | | • | • | • | • |
| MIKRO 220 R | • | | • | • | • | • | | • | • | • | • |
| ROTOFIX 32 A | • | | • | • | • | • | | | • | • | • |
| UNIVERSAL 320 | • | | • | • | • | • | | • | • | • | • |
| UNIVERSAL 320 R | • | | • | • | • | • | | • | • | • | • |
| ROTINA 380 | • | | • | • | • | • | | • | • | • | • |
| ROTINA 380 R | • | | • | • | • | • | | • | • | • | • |
| ROTINA 420 | • | | • | • | • | • | | • | • | • | • |
| ROTINA 420 R | • | | • | • | • | • | | • | • | • | • |
| ROTANTA 460 / 460 R | • | | • | • | • | • | | • | • | • | • |
| ROTANTA 460 RC / 460 RF | • | | • | • | • | • | | • | • | • | • |
| ROTOFIX 46 | • | | • | • | • | | • | | • | • | • |
| ROTOFIX 46 H | • | | • | • | • | | • | | • | • | • |
| ROTIKA 500 RS | • | | • | • | • | • | | • | • | • | • |
| ROTO SILENTA 630 RS | • | | • | • | • | • | | • | • | • | • |
| Robotic centrifuges | Details on our models MIKRO 220 Robotic, ROTINA 380, 380 R, 380 RC Robotic and | | | | | | | | | | |
| ROTOLAVIT II | • | | • | • | • | • | | | • | • | |

| light alloy chamber | air cooling | cooling (-20 °C to +40 °C) | heating (to +90 °C) | automatic rotor recognition | rapid rotor change system | brushless drive | control panel | error display | imbalance detection | data report system (option) | also available in 115 V / 60 Hz | |
|--|-------------|----------------------------|---------------------|-----------------------------|---------------------------|-----------------|---------------|---------------|---------------------|-----------------------------|---------------------------------|-------------------------|
| • | • | | | | | • | E plus | • | • | | • | EBA 200 / 200 S |
| | • | | | | | • | E | • | • | | • | EBA 270 |
| | • | | | • | • | • | M | • | • | | • | EBA 280 / 280 S |
| • | • | | | | | • | E plus | • | • | | • | HAEMATOKRIT 200 |
| • | • | | | | | • | E plus | • | • | | • | MIKRO 185 |
| | • | | | | | • | N plus | • | • | | • | MIKRO 200 |
| | | • ^{#)} | | | | • | N plus | • | • | | • | MIKRO 200 R |
| | • | | | • | | • | N plus | • | • | | • | MIKRO 220 |
| | | • | | • | | • | N plus | • | • | | • | MIKRO 220 R |
| | • | | | • | | • | E | • | • | | • | ROTOFIX 32 A |
| | • | | | • | | • | N plus | • | • | | • | UNIVERSAL 320 |
| | | • | | • | | • | N plus | • | • | | • | UNIVERSAL 320 R |
| | • | | | • | | • | C | • | • | | • | ROTINA 380 |
| | | • | | • | | • | C | • | • | | • | ROTINA 380 R |
| | • | | | • | | • | C | • | • | | • | ROTINA 420 |
| | | • | | • | | • | C | • | • | | • | ROTINA 420 R |
| | • 460 | • 460 R | | • | | • | C | • | • | | • | ROTANTA 460 / 460 R |
| | | • | | • | | • | C | • | • | | • | ROTANTA 460 RC / 460 RF |
| | • | | | • | | • | N plus | • | • | | • | ROTOFIX 46 |
| | | | • | • | | • | N plus | • | • | | • | ROTOFIX 46 H |
| | | • | | • | | • | S | • | • | • | | ROTIKA 500 RS |
| | | • | | • | | • | S | • | • | • | | ROTO SILENTA 630 RS |
| ROTANTA 460 Robotic are given on pages 177 to 181. | | | | | | | | | | | | Robotic centrifuges |
| | • | | | | | • | Touch | • | • | | • | ROTOLAVIT II |

^{#)} Adjustable temperature range MIKRO 200 R: -10 °C to +40 °C

| Important tubes at a glance |  |  |  |  |  |  |  |  |  |  | |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|--|
| Volume in ml | 0.2 - 2 | 8x0.2 | 0.5 | 15 | 50 | 100 | 250 | 1.6 - 7 | 4 - 10 | 15 | |
| H x W x D in mm | | | | | | | | | | | |
| Ø x L in mm | 6-11x38 | - | 11x36 | 17x100 | 34x100 | 40x115 | 65x115 | 13x 75/100 | 16x 75/100 | 17x120 | |

| CENTRIFUGE MODELS | Maximum number of tubes per centrifuge | | | | | | | | | | |
|--|--|------|----|---------|----|-------------------|---|-------|---------|------------|--|
| HANDZENTRIFUGE | - | - | - | 4 | - | - | - | 4 | 4 | 4 | |
| EBA 200 / EBA 200 S | - | - | 8 | 8 | - | - | - | 8 | - / 8 | 4 | |
| EBA 270 | - | - | 6 | 6 | - | - | - | 6 | 6 | - | |
| EBA 280 / EBA 280 S | - | - | 12 | 12 | 6 | - | - | 12 | 8 / 12 | 6 | |
| MIKRO 185 | 24 | - | 12 | - | - | - | - | - | - | - | |
| MIKRO 200 / 200 R | 30 | 4x8 | 15 | - | - | - | - | - | - | - | |
| MIKRO 220 / 220 R | 48 (60) | 6x8 | 15 | 12 | 6 | - | - | 12 | 8* / 12 | 6 | |
| ROTOFIX 32 A | (36) | - | 24 | 32 | 6 | 4 (44x 100 mm) | - | 40/32 | 28/32 | 32 | |
| UNIVERSAL 320 / 320 R | 30 | 24x8 | 15 | 32 | 6 | 4 (44x 100 mm) | - | 40/32 | 28/32 | 32 | |
| ROTINA 380 / 380 R | 30 (60) | 24x8 | 15 | 52 | 12 | 4 (44x 100 mm) | 4 | 64/76 | 52 | 36 | |
| ROTINA 420 / 420 R | 30 (160) | 48x8 | 15 | 72 | 16 | 12 | 4 | 104 | 72 | 52 | |
| ROTANTA 460 / 460 R ROTANTA 460 RC / 460 RF | 30 (240) | 48x8 | 15 | 148 | 16 | 12 | 6 | 196 | 148 | 96 | |
| ROTOFIX 46 | - | - | - | 48 | 8 | 4 | 4 | - | - | 28 | |
| ROTIXA 500 RS | (336) | 48x8 | - | 168 | 24 | 16 | 6 | 200 | 168 | 112 | |
| ROTO SILENTA 630 RS | - | - | - | 180 | 36 | 24 | - | 180 | 180 | 138 | |
| MIKRO 220 Robotic |  /  24 / 12 | - | - | - | - | - | - | - | - | - | |
| ROTINA 380 / 380 R / 380 RC Robotic | on request | | | | | | | 48 | 48 | on request | |
| ROTANTA 460 Robotic | on request | | | | | | | 80 | 80 | on request | |
| ROTOLAVIT II | - | - | - | 24x5 ml | - | - | - | - | - | - | |

^{*)} Tubes are only accommodated by the MIKRO 220 R.

[illegible]

Model variants for special requirements

The following variants of the refrigerated models UNIVERSAL 320 R, ROTINA 380 R, ROTINA 420 R, ROTANTA 460 R/RC/RF, ROTIXA 500 RS and ROTO SILENTA 630 RS are available:

Variants with connection for nitrogen (N₂) flushing:

For centrifugation of reactive substances or substances which are unstable in aerial oxygen. If required, customers should install an oxygen concentration monitor.

Heating/cooling variants (H/C):

For applications demanding temperatures above 40 °C, such as mineral oil testing according to ASTM, material endurance tests, etc.

The heating/cooling variants of the UNIVERSAL 320 R feature no cooling unit and no built-in heater. An external refrigerated/heating circulator must be provided by the customer. Depending on the circulator performance, the centrifuge is able to heat/refrigerate in a range from 0 °C to +90 °C.

The floorstanding ROTO SILENTA 630 RS and ROTIXA 500 RS centrifuges are also available as variants with internal cooling unit or for connection to external cooling units, and as GMP versions.

| | Variant | Power supply* | Frequency | Cat. No. |
|----------------------------|--|---------------|-----------|----------|
| UNIVERSAL 320 R | N ₂ flushing | 200–240 V | 50 Hz | 1406-20 |
| | | 240 V | 60 Hz | |
| UNIVERSAL 320 R | N ₂ flushing | 115–127 V | 60 Hz | 1406-21 |
| UNIVERSAL 320 R** | H/C to +90 °C | 200–240 V | 50–60 Hz | 1406-50 |
| UNIVERSAL 320 R** | H/C to +90 °C | 100–127 V | 50–60 Hz | 1406-51 |
| UNIVERSAL 320 R** | H/C to +90 °C plus N ₂ flushing | 200–240 V | 50–60 Hz | 1406-70 |
| UNIVERSAL 320 R** | H/C to +90 °C plus N ₂ flushing | 100–127 V | 50–60 Hz | 1406-71 |
| ROTINA 380 R | H/C to +90 °C | 200–240 V | 50–60 Hz | 1706-50 |
| ROTINA 420 R | N ₂ flushing | 200–240 V | 50 Hz | 4706-20 |
| ROTINA 420 R | H/C to +90 °C | 200–240 V | 50 Hz | 4706-50 |
| ROTANTA 460 R | N ₂ flushing | 200–240 V | 50 Hz | 5660-20 |
| ROTANTA 460 R | H/C to +90 °C | 200–240 V | 50 Hz | 5660-50 |
| ROTANTA 460 R | H/C to +90 °C | 100–127 V | 60 Hz | 5660-51 |
| | | 100 V | 50 Hz | |
| ROTANTA 460 R | H/C to +90 °C plus N ₂ flushing | 200–240 V | 50 Hz | 5660-70 |
| ROTANTA 460 RC | H/C to +90 °C | 200–240 V | 50 Hz | 5670-50 |
| ROTANTA 460 RF | H/C to +90 °C | 200–240 V | 50 Hz | 5675-50 |
| ROTIXA 500 RS | H/C to +60 °C | 230–240 V | 50 Hz | 4950-50 |
| ROTIXA 500 RS | GMP, internal cooling unit with water-cooled condenser | 220–240 V | 50–60 Hz | 4950-80 |
| ROTO SILENTA 630 RS | N ₂ flushing | 400 V 3~ +N | 50–60 Hz | 5005-20 |
| ROTO SILENTA 630 RS | H/C to +90 °C | 400 V 3~ +N | 50–60 Hz | 5005-50 |
| ROTO SILENTA 630 RS | brine cooling | 400 V 3~ +N | 50–60 Hz | 5005-60 |
| ROTO SILENTA 630 RS | GMP, internal cooling unit with water-cooled condenser | 400 V 3~ +N | 50–60 Hz | 5005-80 |
| ROTO SILENTA 630 RS | GMP, external cooling unit | 400 V 3~ +N | 50–60 Hz | 5005-90 |

*) Other voltages on request.

**) An external refrigerated / heating circulator must be provided by the customer.

Centrifugation

Centrifuges generate centrifugal forces which are many times stronger than the pull of the earth's gravity. They separate suspended particles in liquids, or separate liquids of differing densities from each other. By centrifugation, sedimentation occurs much more rapidly than by the natural force of gravity.

A range of different rotors are available for the various applications. In laboratory centrifuges the principal rotors used are

- angle rotors and
- swing-out rotors.

Both rotor types have their specific advantages.



THE ANGLE ROTOR

Fixed-angle rotors are used primarily in the higher speed range. Their relatively low drag means high speeds are attained. The oblique angling of the tubes shortens the overall distance the particles have to travel, thereby additionally speeding up the sedimentation process.



THE SWING-OUT ROTOR

During centrifugation, the tubes are swung horizontal. In the process, the sediment is deposited at the bottom of the tube, phase limits are formed horizontally. If higher capacities are required in the mid speed range, swing-out rotors are used. The wide variety of accessories is a further feature of these rotors.

CALCULATING CENTRIFUGAL FORCE

The performance of a centrifuge is often specified as the maximum rotor speed. However, the speed provides only an approximation of the force actually acting on the centrifuged material and causing the mixtures to be separated. This force is termed the relative centrifugal force (RCF). The non-unit-specific numerical value indicates the multiple by which the centrifugal force exceeds the acceleration due to gravity 'g'. The formula for calculating RCF is:

$$\text{RCF} = (n/1000)^2 \times r \times 1,118$$

n = revolutions per minute (RPM)
r = radius in mm

This means that a doubling of the radius results in a doubling of the RCF; a doubling of the speed results in a quadrupling of the RCF. Centrifuge performance should therefore always be compared by way of the RCF value instead of rpm.

The state-of-the-art control panels from Hettich are easy to operate and specifically tailored to users' needs. Entry of the parameters is fast, precise and convenient

by way of an adjuster knob and / or selector keys on a foil keypad. The intuitive display shows the actual values in digital format while the centrifuge is running.

THE E CONTROL PANEL



EBA 270



ROTOFIX 32 A

The E(economy) control panel is fitted in the EBA 270 and ROTOFIX 32 A models. The required centrifugation parameters can be entered quickly and easily on the user-friendly keypad:

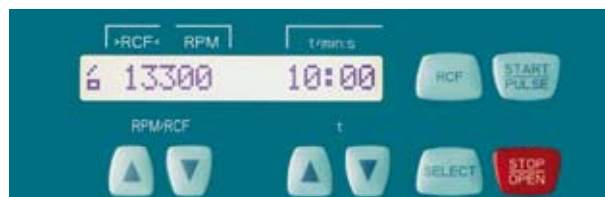
DISPLAY

| | |
|-----|---|
| RPM | Speed indication. Entry in increments of 100. |
| t | Time indication. Entry in minutes, max. 99 min. |

KEYPAD

| | |
|-------|--|
| ▲ | Increases the relevant value. |
| ▼ | Decreases the relevant value. |
| PULSE | For short centrifugation steps. |
| OPEN | Opens the lid (EBA 270). |
| START | Starts centrifugation. |
| STOP | Stops centrifugation manually |
| RCF | Switches from RPM to RCF display (ROTOFIX 32 A). |

THE E PLUS CONTROL PANEL



The models EBA 200, EBA 200 S, HAEMATOKRIT 200 and MIKRO 185 are operated with the E Plus control panel. In contrast to the E control panel this allows entry of the speed (RPM) **or** the relative centrifugal force (RCF).

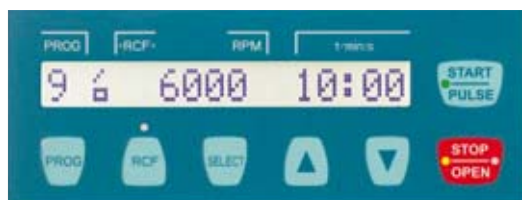
DISPLAY

| | |
|---------|--|
| >RCF< | Relative centrifugal force. |
| RPM | Speed indication. Entry in increments of 10. |
| t/min:s | Centrifugation time (max. 99 min : 59 sec). |

KEYPAD

| | |
|--------|---|
| ▲ | Increases the relevant value. |
| ▼ | Decreases the relevant value. |
| RCF | Switches from RPM to RCF display. Entry of the RCF in increments of 1. Input of rotor radius in mm in RCF mode. |
| SELECT | Guides the user through the menu options. |
| START | Starts centrifugation. |
| PULSE | For short centrifugation steps. |
| STOP | Stops centrifugation manually. |
| OPEN | Opens the lid at standstill. |

THE M CONTROL PANEL



Centrifuge models EBA 280 and EBA 280 S are equipped with the M control panel. The parameters are selected with the Select key and the desired values are set using arrow keys and stored by pressing the Start/Pulse key.

DISPLAY

- PROG** Program number.
Ten programmable memories are available.
- >RCF<** Relative centrifugal force.
- RPM** Speed indication. Entry in increments of 10.
- t/min:s** Centrifugation time (max. 99 min : 59 sec).

KEYPAD

- PROG** Selects the program menu to call up or store programs.
- RCF** Switches from RPM to RCF display. Entry of the RCF in increments of 1. Entry of the centrifuging radius in mm.

SELECT Guides the user through the menu options.

- ▲ Increases the relevant value.
- ▼ Decreases the relevant value.

START Starts centrifugation.
PULSE For short centrifugation steps.

STOP Stops centrifugation manually.
OPEN Opens the lid at standstill.

A LED in the keyboard lights up:

- when the RCF display is activated (RCF key)
- during centrifugation (Start/Pulse key)
- during the braking period (Start/Open key – LED at the right)
- if the lid can be opened (Start/Open key – LED at the left)

THE N PLUS CONTROL PANEL



The MIKRO 200 / 200 R, MIKRO 220 / 220 R, UNIVERSAL 320 / 320 R and ROTOFIX 46 / 46 H models are quick and easy to operate using this variant of the N control panel. The parameters are selected with the Select key. An adjuster knob is used to set the values, and the settings are stored by pressing the Start/Impulse key.

DISPLAY

- P** Program number. Four (MIKRO 200 / 200 R) or 10 (MIKRO 220 / 220 R, UNIVERSAL 320 / 320 R, ROTOFIX 46 / 46 H) programmable memories are available.
- T/°C** Temperature of refrigerated and heatable centrifuges. The temperature of the refrigerated models is infinitely variable between -20 °C and +40 °C (MIKRO 220 R, UNIVERSAL 320 R) or between -10 °C and +40 °C (MIKRO 200 R). Model ROTOFIX 46 H can be heated up to +90 °C.
- >RCF<** Relative centrifugal force.
- RPM** Speed indication. Entry in increments of 10.
- t/min** Centrifugation time (max. 99 min : 59 sec).
- ⎓ Entry of the acceleration ramp 1 – 9
⎓ Entry of the braking ramp 1 – 9

KEYPAD

❄ Pre-cools the rotor chamber (MIKRO 200 R, MIKRO 220 R and UNIVERSAL 320 R) to the required temperature.

☺ Heats the rotor chamber of the ROTOFIX 46 H to the required temperature.

RCF Switches from RPM to RCF display. Entry of the RCF in increments of 10. Input of rotor radius in mm in RCF mode.

SELECT Guides the user through the menu options.

START Starts centrifugation.
IMPULSE For short centrifugation steps.


STOP Stops centrifugation manually.
OPEN Opens the lid at standstill.

THE C CONTROL PANEL




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. The temperature in the refrigerated ROTINA 380 R, ROTINA 420 R, ROTANTA 460 R and ROTANTA 460 Robotic centrifuges can be set in either Celsius (°C) or Fahrenheit (°F) degrees.

DISPLAY

- PROG** Entry and recall of the program number. 98 programs can be stored.
- T/°C** Entry of the temperature from -20 °C to +40 °C or -4 °F to +104 °F in increments of 1 with refrigerated models.
-  Entry of the run-up time in ramps 1 – 9 or in min : sec. Entry of the run-down time in ramps R 1 – 9 and B 1 – 9 or in min : sec. Also unbraked run-down or a brake force cut-off speed can be selected.
- RCF** Entry of the relative centrifugal force in increments of 1. Entry of the centrifuging radius (RAD) in mm.
- RPM** Entry of the speed in increments of 10.
- TIME** Entry of the centrifugation time (max. 99 h : 59 min : 59 sec) or continuous operation.

KEYPAD

- START** Starts centrifugation.
Starts short centrifugation.
Stores entries and changes.
-  Starts pre-cooling program **PREC**.
- STOP** Stops centrifugation manually.
- OPEN** Opens the lid at standstill.

Centrifuges with C control panel permit the centrifugation time to be switched from „at start“ (commencing upon start) to „at speed“ (start when the set speed has been reached).

OPTIONS

PROGRAM INTERLOCKING:
to combine several centrifugation runs.

THE S CONTROL PANEL






This special-class control panel is standard with the ROTIXA 500 RS and ROTO SILENTA 630 RS floorstanding centrifuges.

DISPLAY

- PROG-Nr** Program number.
89 programmable memories are available.
- T/°C** Temperature.
- PROFIL** Run-up and run-down profile.
- n/min-1** Speed indication.
- t/min:sec** Centrifugation time (max. 999 min : 59 sec).

KEYPAD

- STO** Stores the program.
- RCL** Calls up the selected program.
- PROG** Selects the program menu.
-  Entry of the temperature from -20 °C to +40 °C in increments of 1 °C. Entry of the rotor radius in mm in RCF mode
- RCF** Switches from RPM to RCF display. Entry of the RCF in increments of 1.
-  Entry of the run-up time in ramps 1 – 9 or in min : sec.
-  Entry of the run-down time in ramps R 1 – 9 and B 1 – 9 or in min : sec. Also unbraked run-down or a brake force cut-off speed can be selected.
- ∫ RCF** The integral over the RCF indicates the overall RCF acting on the centrifuged material during the running time so far.
- n** Entry of the speed in increments of 10.
- t** Entry of the centrifugation time (max. 999 min : 59 sec) or continuous operation.
- START** Starts centrifugation.
- STOP** Stops centrifugation manually.

OPTIONS

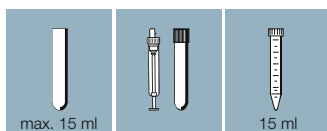
PROGRAM INTERLOCKING:
to combine several centrifugation runs.

DATA REPORT SYSTEM:
For detailed information on this subject, please refer to the HettInfo section on pages 172-173



Benchtop performance in a compact footprint

SMALL



HANDZENTRIFUGE

The manually operated centrifuge is maintenance-free and independent of an external power supply

This convenient centrifuge can be easily clamped to a bench or table, and operated without electricity. Its self-lubricating gear makes it virtually maintenance-free.

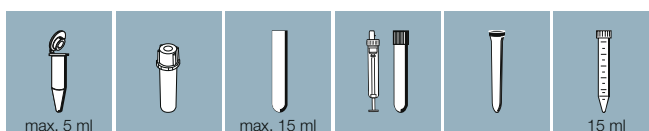
It can be operated with two different rotors.

With rotor No.1014, conical 15 ml tubes (Cat. No. 0515, non-graduated or No. 0516, graduated) can be accelerated to 1,298 RCF.

Rotor No. 1025 also accommodates a variety of other commercial tubes (also with round bottom) up to 15 ml. The tubes may have a max. length of 125 mm and a max. diameter of 17 mm.



| | HANDZENTRIFUGE | Rotor 1014 | Rotor 1025 |
|------------------------|-----------------------|--------------------------|-------------------------|
| | without rotor | 4-place | 4-place |
| Max. swing-out angle | - | 90° | 50° |
| Max. capacity | - | 4 x 15 ml (conical only) | 4 x 15 ml |
| Max. RPM (speed) | - | 3,000 min ⁻¹ | 3,000 min ⁻¹ |
| Max. RCF | - | 1,298 | 1,077 |
| Dimensions (H x W x D) | 285 x 140 x 175 mm | - | - |
| Weight | approx. 0.9 kg | - | - |
| Cat. No. | 1011 | 1014 | 1025 |



EBA 200 / 200 S


Small and practical centrifuges for small sample volumes

The EBA 200 and EBA 200S are fitted as standard with an angle rotor for 8 tubes up to a volume of 15 ml. The EBA 200 attains a max. RCF of 3,461 and is the ideal choice for a medical practice.

The more powerful EBA 200S generates a max. RCF of 6,153 and is suitable for emergency laboratories where every minute counts. Its higher speeds reduce centrifugation time such that plasma with a low platelet content is available for analysis after just a few minutes.

21
20



| TECHNOLOGY | | EBA 200 | | EBA 200 S | |
|---|---------------|--|---------------|-------------------------|---------------|
| Small centrifuge, with rotor | | | | | |
| Power supply ¹⁾ | | 200–240 V 1 ~ | 100–127 V 1 ~ | 200–240 V 1 ~ | 100–127 V 1 ~ |
| Frequency | | 50–60 Hz | | | |
| Consumption | | 100 VA | 100 VA | 160 VA | 160 VA |
| Emission, Immunity | | EN/IEC 61326-1, class B | FCC class B | EN/IEC 61326-1, class B | FCC class B |
|  | Max. capacity | 8x15 ml | | | |
| | Max. RPM | 6,000 min ⁻¹ | | 8,000 min ⁻¹ | |
| | Max. RCF | 3,461 | | 6,153 | |
| Running time | | 1 – 99 min, ∞ continuous run, short cycle mode (impulse key) | | | |
| Dimensions (H x W x D) | | 228x261x353 mm | | | |
| Weight | | approx. 9 kg | | approx. 11 kg | |
| Cat. No. | | 1800 | 1800-01 | 1802 | 1802-01 |

^{*)} Other voltages on request.


















ROTOR















Angle rotor EBA 200 / EBA 200 S, 8-place, for commercial tubes up to 15 ml

Angle rotor illustrated with different blood collection tubes



✂ 33° n = 6,000 min⁻¹ / 8,000 min⁻¹ max. RCF 3,461 / 6,153

| | | | | | | | | | | | | |
|---|---|---|---|---|--|---|---|--|---|---|---|---|
| capacity in ml | 0.5 | 1.5 | 2.0 | 4 | 5 | 6 | 15 | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 4.5–5 | 4.9 |
| Ø x L in mm | 10.7x36 | 11 x 38 | 11 x 38 | 10x88 | 12x75 | 12x82 | 17x100 | 8x66 | 13x65 | 11x66 | 11x92 | 13x90 |
| Cat. No. | Pediatric | 2078 | 0536 | - | 0553 ²⁾ | 0501 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  | | |  |  ¹⁴⁾ | | |  ¹⁴⁾ | | | | |
| rotor incl. | | | | | | | | | | | | |
| Cat. No. | 1063-8 (8 pcs.) | | | 6305 | 1054-A | | - | 1054-A | | | - | |
| boring Ø x L in mm | 11 x35 | | | 11.5x67.5 | 13.5x60 | | 17.7x88 | 13.5x60 | | | 17.7x88 | |
| tubes per rotor | 8 | | | | | | | | | | | |
| max. RCF ²⁾ EBA 200 | 2,214 | 2,173 | 2,817 | 2,697 | 3,461 | 2,697 | 3,461 | 2,697 | 3,461 | 2,697 | 3,461 | 3,461 |
| max. RCF ²⁾ EBA 200S | 3,935 | 3,864 | 5,009 | 4,794 | 6,153 | 4,794 | 6,153 | 4,794 | 6,153 | 4,794 | 6,153 | 6,153 |
| radius in mm | 55 | 54 | 70 | 67 | 86 | 67 | 86 | 67 | 86 | 67 | 86 | 86 |
| run-up in sec | 17 (EBA 200) / 12 (EBA 200S) | | | | | | | | | | | |
| run-down in sec, braked | 37 (EBA 200) / 17 (EBA 200S) | | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|--|---|---|---|--|---|---|
| capacity in ml | 7.5–8.5 | 9–10 | 10 | 1.6–5 | 4–7 | 8 | 8.5–10 | 12 | 5 | 15 |
| Ø x L in mm | 15x92 | 16x92 | 15x102 | 13x75 | 13x100 | 16x125 | 16x100 | 17x102 | 17x59 | 17x120 |
| Cat. No. | blood collection / urine tubes | | | | | | | | | 0509 |
|  |  |  |  |  |  |  |  |  |  |  |
| | | | |  ¹⁴⁾ |  | | | |  | |
| rotor incl. | | | | | | | | | | |
| Cat. No. | - | | 1054-A | 1058 | - | | | 1064 | - | |
| boring Ø x L in mm | 17.7 x 88 | | 13.5 x 60 | 13.5 x 79 | 17.7 x 88 | | | 17 x 25 | 17.7 x 88 | |
| tubes per rotor | 8 | | | | 4 | | 8 | 4 | 12 | 4 |
| max. RCF ²⁾ EBA 200 | 3,461 | | 2,697 | 3,461 | | | 2,576 | 3,461 | | |
| max. RCF ²⁾ EBA 200S | 6,153 | | 4,794 | 6,153 | | | 4,579 | 6,153 | | |
| radius in mm | 86 | | 67 | 86 | | | 64 | 86 | | |
| run-up in sec | 17 (EBA 200) / 12 (EBA 200S) | | | | | | | | | |
| run-down in sec, braked | 37 (EBA 200) / 17 (EBA 200S) | | | | | | | | | |

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.

¹⁴⁾ For the EBA 200 only! Model EBA 200 S is supplied as standard with an adapter for these tubes.



EBA 270

Optimal sample preparation starts in the medical practice

The EBA 270 is a small centrifuge with a swing-out rotor especially designed for use in medical practices. It accepts common blood or urine tubes up to a volume of 15 ml and accelerates them to a maximum speed of 4,000 min⁻¹.

This corresponds to a RCF of 2,254. It delivers optimal separation results and a horizontal layer of the separating gel that is identical to that achieved with a large centrifuge. Samples are therefore optimally prepared for analysis.

23
22



| TECHNOLOGY | | EBA 270 | |
|------------------------------|---------------|--|---------------|
| Small centrifuge, with rotor | | | |
| Power supply ^{*)} | | 200–240 V 1 ~ | 100–127 V 1 ~ |
| Frequency | | 50–60 Hz | |
| Consumption | | 130 VA | 125 VA |
| Emission, Immunity | | EN/IEC 61326-1, class B | FCC class B |
| | Max. capacity | 6x15 ml | |
| | Max. RPM | 4,000 min ⁻¹ | |
| | Max. RCF | 2,254 | |
| Running time | | 1 – 99 min, ∞ continuous run, short cycle mode (impulse key) | |
| Dimensions (H x W x D) | | 239x326x389 mm | |
| Weight | | approx. 14 kg | |
| Cat. No. | | 2300 | 2300-01 |

^{*)} Other voltages on request.

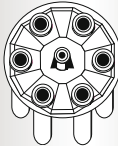

















ROTOR

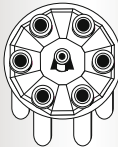














Swing-out rotor, 6-place, with carriers (included)

illustrated with blood collection tubes

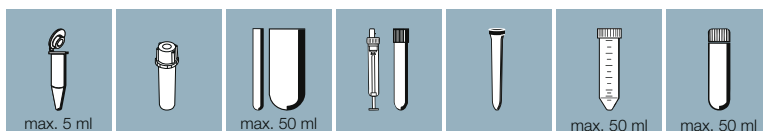


↗ 90° n = 4,000 min⁻¹ max. RCF 2,254

| | | | | | | | | | | | | | | | | | | |
|---|---|--|---|--|---|--|---|--|---|--|--|--|---|--|---|--|---|--|
| capacity in ml | 0.5 | | 1.5 | | 2 | | 4 | | 5 | | 6 | | 15 | | 1.1-1.4 | | 2.6-3.4 | |
| Ø x L in mm | 10.7x36 | | 11x38 | | 11x38 | | 10x88 | | 12x75 | | 12x82 | | 17x100 | | 8x66 | | 13x65 | |
| Cat. No. | Pediatric | | 2078 | | 0536 | | - | | 0553 ²⁾ | | 0501 ²⁾ | | 0518 ²⁾ | | Blood collection | | | |
|  |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| | +1063-6 | | +1063-6 | | +1063-6 | | +1063-6 | | | | | | | | | | | |
| |  | |  | |  | |  | |  | |  | |  | |  | | | |
| rotor and carriers incl. | | | | | | | | | | | | | | | | | | |
| Cat. No. | 2331 | | 2333 | | 2331 | | 2333 | | 2331 | | 2333 | | 2331 | | 2333 | | | |
| boring Ø x L in mm | 11x35 | | 11x35 | | | | | | 17.5x80 | | 17.5x55 | | 17.5x80 | | 17.5x55 | | | |
| tubes per rotor | 6 | | | | | | | | | | | | | | | | | |
| max. RCF ²⁾ | 1,359 | | 1,377 | | | | | | 2,254 | | 1,807 | | 2,254 | | 1,807 | | | |
| radius in mm | 76 | | 77 | | | | | | 126 | | 101 | | 126 | | 101 | | | |
| run-up in sec | 10 | | | | | | | | | | | | | | | | | |
| run-down in sec, braked | 22 | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|--|---|--|---|--|---|--|--|--|---|--|---|--|---|--|---|--|---|--|
| capacity in ml | 2.7-3 | | 4-5.5 | | 4.5-5 | | 4.9 | | 7.5-10 | | 10 | | 1.6-7 | | 4-7 | | 8.5-10 | | 12 | |
| Ø x L in mm | 11x66 | | 15x75 | | 11x92 | | 13x90 | | 15/16x92 | | 15x102 | | 13/16x75 | | 13x100 | | 16x100 | | 17x102 | |
| Cat. No. | blood collection / urine tubes | | | | | | | | | | | | | | | | | | | |
|  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| |  | |  | | | | | |  | | | |  | | | | | | | |
| | rotor and carriers incl. | | | | | | | | | | | | | | | | | | | |
| Cat. No. | 2333 | | 2331 | | | | | | | | | | 2333 | | 2331 | | | | | |
| boring Ø x L in mm | 17.5x55 | | 17.5x80 | | | | | | | | | | 17.5x55 | | 17.5x80 | | | | | |
| tubes per rotor | 6 | | | | | | | | | | | | | | | | | | | |
| max. RCF ²⁾ | 1,807 | | 2,254 | | | | | | | | | | 1,807 | | 2,254 | | | | | |
| radius in mm | 101 | | 126 | | | | | | | | | | 101 | | 126 | | | | | |
| run-up in sec | 10 | | | | | | | | | | | | | | | | | | | |
| run-down in sec, braked | 22 | | | | | | | | | | | | | | | | | | | |

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.



EBA 280 / 280 S




Versatile small centrifuges which are highly ergonomic for use in medical practices and small laboratories.

The rotors can be quickly and easily changed – without the use of tools and with just one hand thanks to the rapid change system.

The EBA 280 and EBA 280 S offer exceptional user comfort for a small centrifuge.

25
24



| TECHNOLOGY | | EBA 280 | | EBA 280 S | |
|---|---------------|---|---------------|-------------------------|---------------|
| Small centrifuge, without rotor | | | | | |
| Power supply ¹⁾ | | 200–240 V 1 ~ | 100–127 V 1 ~ | 200–240 V 1 ~ | 100–127 V 1 ~ |
| Frequency | | 50–60 Hz | | | |
| Consumption | | 185 VA | 185 VA | 330 VA | 330 VA |
| Emission, Immunity | | EN/IEC 61326-1, class B | FCC class B | EN/IEC 61326-1, class B | FCC class B |
|  | Max. capacity | 6x50 ml | | | |
| | Max. RPM | 6,000 min ⁻¹ | | | |
|  /  | Max. RCF | 4,146 | | 5,071 | |
| Running time | | 1 – 99 min : 59 s, ∞ continuous run, short cycle mode (impulse key) | | | |
| Dimensions (H x W x D) | | 242x326x400 mm | | | |
| Weight | | approx. 12 kg | | approx. 12 kg | |
| Cat. No. | | 1101 | 1101-01 | 1102 | 1102-01 |

¹⁾ Other voltages on request.















ROTORS















Swing-out rotor, 6-place



↗ 90° n = 4,700 min⁻¹ / 6,000 min⁻¹ max. RCF 3,112 / 5,071

Cat. No. (without carriers) 1146

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 0.5 | 1.5 | 2.0 | 4 | 5 | 6 | 15 | 1.1–1.4 | 2.6–3.4 |
| Ø x L in mm | 10.7x36 | 11 x 38 | 11 x 38 | 10x88 | 12x75 | 12x82 | 17x100 | 8x66 | 13x65 |
| Cat. No. | Pediatric | 2078 | 0536 | - | 0553²⁾ | 0501²⁾ | 0518²⁾ | blood / urine tubes | |
| Carriers Cat. No. 1147-6 (6 pcs.) |  |  |  |  |  |  |  |  |  |
|  rotor Cat. No. 1146 |  | | | |  |  | |  | |
| Cat. No. | 1063-6 (6 pcs.) | | | - | 1053-6 (6 pcs.) | 0767-6 (6 pcs.) | - | 1053-6 (6 pcs.) | |
| boring Ø x L in mm | 11x35 | | | 17.5x80 | 13.5x59 | 17.5x80 | 17.5x80 | 13.5x59 | |
| tubes per rotor | 6 | | | | | | | | |
| max. RCF ²⁾ EBA 280 | 1,877 | 1,902 | 3,112 | 2,618 | 2,865 | 3,112 | 2,618 | | |
| max. RCF ²⁾ EBA 280S | 3,059 | 3,099 | 5,071 | 4,266 | 4,669 | 5,071 | 4,266 | | |
| radius in mm | 76 | 77 | 126 | 106 | 116 | 126 | 106 | | |
| run-up in sec | 9 (EBA 280) / 11 (EBA 280S) | | | | | | | | |
| run-down in sec, braked | 11 (EBA 280) / 13 (EBA 280S) | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 2.7–3 | 4–5.5 | 4.5–5 | 4.9 | 7.5–10 | 1.6–5 | 4–7 | 4–7 | 8.5–10 | 12 |
| Ø x L in mm | 11 x 66 | 15x75 | 11x92 | 13x90 | 15/16x92 | 13x75 | 16x75 | 13x100 | 16x100 | 17x102 |
| Cat. No. | | blood collection / urine tubes | | | | | | | | |
| Carriers Cat. No. 1147-6 (6 pcs.) |  |  |  |  |  |  |  |  |  |  |
|  rotor Cat. No. 1146 |  | | | | |  |  | | | |
| Cat. No. | 1053-6 (6 pcs.) | - | | | | 1053-6 (6 pcs.) | 0767-6 (6 pcs.) | - | | |
| boring Ø x L in mm | 13.5 x 59 | 17.5x80 | | | | 13.5x59 | 17.5x80 | 17.5x80 | | |
| tubes per rotor | 6 | | | | | | | | | |
| max. RCF ²⁾ EBA 280 | 2,618 | 3,112 | | | | 2,618 | 2,865 | 3,112 | | |
| max. RCF ²⁾ EBA 280S | 4,266 | 5,071 | | | | 4,266 | 4,669 | 5,071 | | |
| radius in mm | 106 | 126 | | | | 106 | 116 | 126 | | |
| run-up in sec | 9 (EBA 280) / 11 (EBA 280S) | | | | | | | | | |
| run-down in sec. braked | 11 (EBA 280) / 13 (EBA 280S) | | | | | | | | | |

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.

Swing-out rotor, 8-place






















∠ 90° n = 5,000 min⁻¹ max. RCF 2,991
Cat. No. (without carriers) 1148

Swing-out rotor, 12-place



∠ 60° n = 4,000 min⁻¹ max. RCF 2,963
Cat. No. (without carriers) 1142

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| capacity in ml | 5 | 6 | 2.6–3.4 | 2.7–3 | 4–5.5 | 1.6–5 | 4–7 |
| Ø x L in mm | 12x75 | 12x82 | 13x65 | 11x66 | 15x75 | 13x75 | 16x75 |
| Cat. No. | 0553 ²⁾ | 0501 ²⁾ | blood collection / urine tubes | | | | |
|  rotor Cat. No. 1148 |  |  |  |  |  |  |  |
| |  | |  | |  |  |  |
| Cat. No. | 1131-A | | 1131-A | | 1132-A | 1131-A | 1132-A |
| boring Ø x L in mm | 13x53 | | 13x53 | | 17.5x53 | 13x53 | 17.5x53 |
| tubes per rotor | 8 | | | | | | |
| max. RCF ²⁾ | 2,991 | | | | | | |
| radius in mm | 107 | | | | | | |
| run-up in sec | 8 | | | | | | |
| run-down in sec, braked | 10 | | | | | | |

| | | | | |
|---|---|---|---|---|
| capacity in ml | 5 | 2.6–3.4 | 2.7–3 | 1.6–5 |
| Ø x L in mm | 12x75 | 13x65 | 11x66 | 13x75 |
| Cat. No. | 0553²⁾ | blood / urine tubes | | |
|  rotor Cat. No. 1142 |  |  |  |  |
| |  | | | |
| Cat. No. | 1127-A | | | |
| boring Ø x L in mm | 13.2x53 | | | |
| tubes per rotor | 12 | | | |
| max. RCF ²⁾ | 2,963 | | | |
| radius in mm | 106 | | | |
| run-up in sec | 10 | | | |
| run-down in sec, braked | 12 | | | |

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.

ROTORS

Angle rotor, 12-place, for decanting







$\angle 35^\circ$ $n = 5,000 \text{ min}^{-1}$ max. RCF 2,879
Cat. No. 1133
























Angle rotor, 6-place



✱ 35° n = 6,000 min⁻¹ max. RCF 4,025
Cat. No. 1137

| | | | |
|---|---|---|---|
| capacity in ml | 5 | 6 | 7 |
| Ø x L in mm | 12x75 | 12x82 | 12x100 |
| Cat. No. | 0553²⁾ | 0501²⁾ | 0578²⁾ |
|  |  |  |  |
| rotor Cat. No. 1133 | | | |
| Cat. No. | - | | |
| boring Ø x L in mm | 12.5x66 | | |
| tubes per rotor | 12 | | |
| max. RCF ²⁾ | 2,879 | | |
| radius in mm | 103 | | |
| run-up in sec | 8 | | |
| run-down in sec, braked | 10 | | |

What makes the 1133 rotor special is its adapters with a decanting aid. The decanting aid firmly holds the tube and keeps it from falling out when the supernatant is decanted. The 1133 rotor is often used in blood group serology.















| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 7 | 15 | 25 | 50 | 9-10 | 10 | 1.6-5 | 4-7 | 15 | 50 | 30 | 50 |
| Ø x L in mm | 12x100 | 17x100 | 24x100 | 34x100 | 16x92 | 15x102 | 13x75 | 13x100 | 17x120 | 29x115 | 26x95 | 29x107 |
| Cat. No. | 0578²⁾ | 0518²⁾ | 0519²⁾ | 0521²⁾ | blood collection / urine tubes | | | | 0509 | 0513 | 0545 | 0546 |
|  rotor Cat. No. 1137 |  |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  | |  | + 1054-A  | |  |  |  |  |  |
| Cat. No. | 1632 | 1635 | 1633 | - | 1635 | | | | 1631 | 1641 | 1633 | 1634 |
| boring Ø x L in mm | 13x92 | 17.5x95 | 26x88 | 35x96 | 17.5x95 | | | | 17x98 | 30x98 | 26x88 | 29x95 |
| tubes per rotor | 18 | 6 | | | | | | | 3 | 6 | | |
| max. RCF ²⁾ | 3,944 | 3,783 | 3,703 | 4,025 | 3,783 | | 2,978 | 3,783 | 3,824 | 3,824 | 3,703 | 3,904 |
| radius in mm | 98 | 94 | 92 | 100 | 94 | | 74 | 94 | 95 | 95 | 92 | 97 |
| run-up in sec | 20 | | | | | | | | | | | |
| run-down in sec. braked | 17 | | | | | | | | | | | |















Angle rotor, 12-place



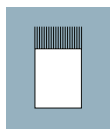
✂ 35° n = 6.000 min⁻¹ max. RCF 4.146

Cat. No. (without carriers) 1139

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|--|
| capacity in ml | 0.5 | 1.5 | 2.0 | 5 | 6 | 15 | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 4.5–5 | |
| Ø x L in mm | 10.7x36 | 11 x 38 | 11 x 38 | 12x75 | 12 x 82 | 17x100 | 8x66 | 13x65 | 11x66 | 11x92 | |
| Cat. No. | Pädiatrie | 2078 | 0536 | 0553 ²⁾ | 0501 ¹⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | |
|  rotor Cat. No. 1139 |  |  |  |  |  |  |  |  |  |  | |
| |  | | |  | | |  | | | | |
| Cat. No. | 1063-6 (6 pcs.) | | | 1054-A | | - | 1054-A | | | - | |
| boring Ø x L in mm | 11x35 | | | 13.5x60 | | 17.7x88 | 13.5x60 | | | 17.7x88 | |
| tubes per rotor | 12 | | | | | | | | | | |
| max. RCF ²⁾ | 2,777 | 2,737 | | 3,300 | | 4,146 | 3,300 | | | 4,146 | |
| radius in mm | 69 | 68 | | 82 | | 103 | 82 | | | 103 | |
| run-up in sec | 16 | | | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 4.9 | 7.5–10 | 10 | 1.6–5 | 4–7 | 8 | 8.5–10 | 12 | 5 | 15 |
| Ø x L in mm | 13x90 | 15/16x92 | 15x102 | 13x75 | 13x100 | 16x125 | 16x100 | 17x102 | 17 x 59 | 17x120 |
| Cat. No. | | | | blood collection / urine tubes | | | | | | 0509 |
|  rotor Cat. No. 1139 |  |  |  |  |  |  |  |  |  |  |
| | | | |  |  | | | |  | |
| Cat. No. | - | | | 1054-A | 1058 | - | | | 1064 | - |
| boring Ø x L in mm | 17.7x88 | | | 13.5x60 | 13.5x79 | 17.7x88 | | | 17 x 25 | 17.7x88 |
| tubes per rotor | 12 | | | 12 | | 6 | 12 | 6 | 12 | 6 |
| max. RCF ²⁾ | 4,146 | | | 3,300 | 4,146 | | | | 3,180 | 4,146 |
| radius in mm | 103 | | | 82 | 103 | | | | 79 | 103 |
| run-up in sec | 16 | | | 16 | | | | | | |
| run-down in sec, braked | 16 | | | 16 | | | | | | |

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.



HAEMATOKRIT 200

Fast and reliable haematocrit determination

Hematocrit determination with standard capillaries is carried out with 24-place rotor No. 2076. Each capillary is secured within its own chamber and supported by a holding tray. This holding tray serves to contain glass shards and any leakage should a tube break. It is easy to clean and disposable in the case of glass breakage.

The rotor 2076's lid is cover and evaluation disk in one.

Capillaries, to be used for quantitative buffy coat analysis are centrifuged in 20-place rotor No. 2056 prior to further analysis.



| TECHNOLOGY | | HAEMATOKRIT 200 | |
|---|------------------|--|-----------------|
| Hematocrit centrifuge, without rotor | | | |
| Power supply ¹⁾ | | 200–240 V 1 ~ | 100 – 127 V 1 ~ |
| Frequency | | 50–60 Hz | |
| Consumption | | 270 VA | |
| Emission, Immunity | | EN/IEC 61326-1, class B | FCC class B |
| | Max. capacity | 20 / 24 capillaries | |
| | Max. RPM (speed) | 13,000 min ⁻¹ | |
| | Max. RCF | 16,060 | |
| Running time | | 1–99 min, ∞ continuous run, short cycle mode (impulse key) | |
| Dimensions (H x W x D) | | 228x261x353 mm | |
| Weight | | approx. 10 kg | |
| Cat. No. | | 1801 | 1801-1 |

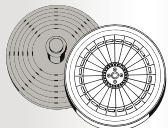

¹⁾ Other voltages on request.

ROTORS

Hematocrit rotor, 24-place



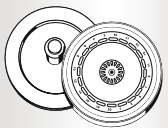

$n = 13,000 \text{ min}^{-1}$ max. RCF 16,060
Cat. No. 2076

| | |
|---|---|
| standard capillaries | - |
| Cat. No. | - |
| lid as evaluation disk incl. | |
|  |  |
| rotor Cat. No. 2076 | |
| Cat. No. | - |
| boring $\varnothing \times L$ in mm | - |
| capillaries per rotor | 24 |
| max. RCF | 16.060 |
| radius in mm | 85 |
| run-up in sec | 9 |
| run-down in sec, braked | 16 |

Disk rotor, 20-place, for quantitative buffy coat analysis



$n = 13,000 \text{ min}^{-1}$ max. RCF 16,060
Cat. No. 2056 ¹²⁾

| | |
|---|---|
| capillaries | for quantitative buffy coat analysis |
| Cat. No. | - |
| lid incl. | |
|  |  |
| rotor Cat. No. 2056 ¹²⁾ | |
| Cat. No. | - |
| boring $\varnothing \times L$ in mm | - |
| capillaries per rotor | 20 |
| max. RCF | 16.060 |
| radius in mm | 85 |
| run-up in sec | 9 |
| run-down in sec, braked | 16 |



The holding trays in rotor 2076 are easy to clean and disposable in the case of glass breakage.

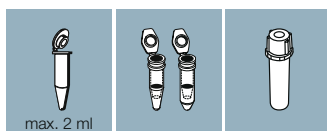
Cat. No. E1400 (24 trays)

¹²⁾ Not suited for standard capillaries



Powerful results at the micro level

MICRO




MIKRO 185

High-performance centrifuge with a small footprint.

The MIKRO 185 is a highly versatile centrifuge with a maximum RCF of 17,008 and a choice of four rotors. All separation steps that are necessary for sample preparation for molecular

biology applications and that do not require cooling can be performed rapidly and reliably. Spin column kits (minipreps) can also be used.



| TECHNOLOGY | | MIKRO 185 | |
|---|------------------|--|----------------|
| Microlitre centrifuge, without rotor | | | |
| Power supply*) | | 200–240 V 1 ~ | 100–127 V 1 ~ |
| Frequency | | 50–60 Hz | |
| Consumption | | 330 VA | |
| Emission, Immunity | | EN/IEC 61326-1, class B | FCC class B |
|  | Max. capacity | 24 x 1.5 / 2.0 ml | |
| | Max. RPM (speed) | 13,300 min ⁻¹ | |
| | Max. RCF | 17,008 | |
| Running time | | 1–99 min, ∞ continuous run, short cycle mode (impulse key) | |
| Dimensions (H x W x D) | | 228 x 261 x 353 mm | |
| Weight | | approx. 11 kg | |
| Cat. No. | | 1203 | 1203-01 |

*) Other voltages on request.

ROTORS

Angle rotor, 24-place



with bio-containment ⁶⁾
autoclavable,
phenol-resistant

↘ 45° n = 13,300 min⁻¹ max. RCF 17,008
Cat. No. 1226

Angle rotor, 12-place



↘ 45° n = 13,300 min⁻¹ max. RCF 14,041
Cat. No. 1252

| | | | | | | | |
|---|-------------|-------------|---------------------------|---------|-------------|-------------|------------------|
| 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 | 11x38 | 10.7x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | Pediatric |
| lid with bio-containment ⁶⁾ incl. | | | | | | | |
| rotor Cat. No. 1226 | | | | | | | |
| Cat. No. | 2024 | 2023 | 2031 ⁷⁾ | - | 0788 | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.2x39 | 11.2x39 | | |
| tubes per rotor | 24 | | | | | 12 | |
| max. RCF | 17,008 | | | | | 16,019 | |
| radius in mm | 86 | | | | | 81 | |
| run-up in sec | 14 | | | | | | |
| run-down in sec, braked | 16 | | | | | | |

| | | | | | | | |
|--------------------------------------|-------------|-------------|---------------------------|---------|-------------|-------------|------------------|
| 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 | 11x38 | 10.7x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | Pediatric |
| lid incl. | | | | | | | |
| rotor Cat. No. 1252 | | | | | | | |
| Cat. No. | 2024 | 2023 | 2031 ⁷⁾ | - | 0788 | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.2x39 | 11.2x39 | | |
| tubes per rotor | 12 | | | | | | |
| max. RCF | 14,041 | | | | | 13,052 | |
| radius in mm | 71 | | | | | 66 | |
| run-up in sec | 14 | | | | | | |
| run-down in sec, braked | 16 | | | | | | |

⁶⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

ROTORS

Angle rotor, 18-place










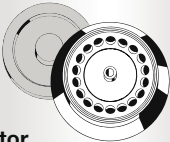



✂ 45° n = 13,300 min⁻¹ max. RCF 15,030
Cat. No. 1258












Angle rotor, 18-place, for spin column kits



lid Cat. No. 1246 with
 bio-containment⁵⁾ autoclavable,
 phenol-resistant (optional)

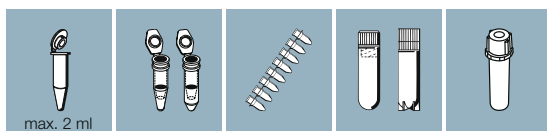
✂ 45° n = 13,300 min⁻¹ max. RCF 15,030
Cat. No. (without lid) 1213

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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 | 11x38 | 10.7x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | Pediatric |
| lid incl. |  |  |  |  |  |  |  |
|  rotor Cat. No. 1258 |  | |  | | | |  |
| Cat. No. | 2024 | | 2023 | | 2031 ⁷⁾ | - | 0788 |
| boring Ø x L in mm | 6x40 | | 8x40 | | 10.2x19 | 11.2x39 | 11.2x39 |
| tubes per rotor | 18 | | | | | | 9 |
| max. RCF | 15,030 | | | | | | 14,041 |
| radius in mm | 76 | | | | | | 71 |
| run-up in sec | 14 | | | | | | |
| run-down in sec, braked | 16 | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 | 1.5 | 2.0 |
| Ø x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | 11x38 | 11x38 | |
| Cat. No. | - | - | - | - | 2078 | 0536 | micro spin columns | |
| lid with bio-containment ⁵⁾ Cat. No. 1246 |  |  |  |  |  |  |  |  |
|  rotor Cat. No. 1213 |  | |  | | | | | |
| Cat. No. | 2024 | | 2023 | | 2031 ⁷⁾ | - | 2031 ⁷⁾ | - |
| boring Ø x L in mm | 6x40 | | 8x40 | | 10.2x19 | 11.2x39 | 10.2x19 | 11.2x39 |
| tubes per rotor | 18 | | | | | | | |
| max. RCF | 15,030 | | | | | | | |
| radius in mm | 76 | | | | | | | |
| run-up in sec | 14 | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.



MIKRO 200 / 200 R


These microlitre centrifuges rank among the fastest in their class

Highly reliable refrigeration ensures that even thermosensitive samples are centrifuged gently.

Not only are they fast, the MIKRO 200 R also refrigerates quickly: down to +4 °C in 10 to 15 minutes with the Fast Cool function.



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36

| 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 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 | | | |
| | Max. RPM (speed) | 15,000 min ⁻¹ | | | |
| | Max. RCF | 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 281 x 553 mm | |
| Weight | | approx. 11.5 kg | | approx. 28 kg | |
| Refrigeration | | | | | |
| Temperature control, infinitely variable | | - | | from -10 to +40 °C | |
| Cat. No. | | 2400 | 2400-01 | 2405 | 2405-01 |

¹⁾ Other voltages on request.

ROTORS

Angle rotor, 24-place





















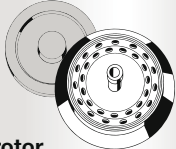



✂ 40° n = 15,000 min⁻¹ max. RCF 21,382
Cat. No. 2424-B

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 |
| Ø x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | 11x38 | 10.7 x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | Pediatric |
| lid E3243 incl. |  |  |  |  |  |  |  |
|  rotor Cat. No. 2424-B |  | |  | | | |  |
| Cat. No. | 2024 | | 2023 | | 2031 7) | - | 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 | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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 | 11x38 | 10.7 x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | Pediatric |
| lid E3243 incl. |  |  |  |  |  |  |  |
|  rotor Cat. No. 2427-A |  | |  | | | |  |
| Cat. No. | 2024 | | 2023 | | 2031 7) | - | 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.

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

Angle rotor, 24-place, for spin column kits












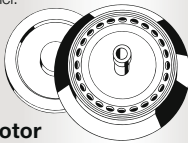



with bio-containment⁵⁾
autoclavable,
phenol-resistant


↘ 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 | 11x38 | 11x38 | | 10.7x36 |
| Cat. No. | - | - | - | - | 2078 | 0536 | micro spin columns | | Pediatric |
| lid with bio-containment ⁵ incl. |  |  |  |  |  |  |  |  |  |
|  rotor Cat. No. 2428 |  | |  | | | | | |  |
| Cat. No. | 2024 | | 2023 | | 2031 ⁷⁾ | - | 2031 ⁷⁾ | - | 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 | | | | | | | | |

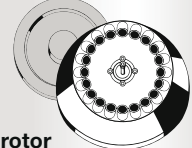

| | |
|--|---|
| capacity in ml | 0.5 |
| Ø x L in mm | 8x30 |
| Cat. No. | - |
| lid E3243 incl. |  |
| rotor Cat. No. 2430-B | |
| Cat. No. | - |
| boring Ø x L in mm | 8.1 x 30.3 |
| tubes per rotor | 30 |
| max. RCF | 20,376 |
| radius in mm | 81 |
| run-up in sec | 19 |
| run-down in sec, braked | 28 |
| temperature in °C ¹⁾ | +4 |

ROTORS

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 | 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 | |

Optional for rotor 2424-B, 2426-B, 2427-A and 2430-B



lid **Cat. No. 2425**
 with bio-containment⁵⁾,
 autoclavable



lid **Cat. No. 2423**
 with bio-containment⁵⁾,
 autoclavable,
 phenol-resistant

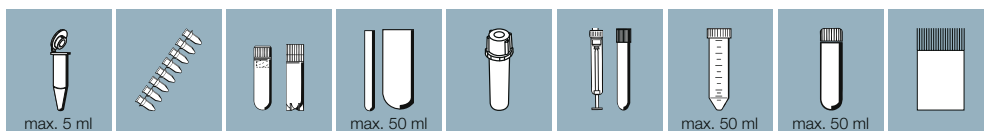
Optional for rotor 2418-A



lid **Cat. No. E3243**

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

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.



MIKRO 220 / 220 R



Powerful microlitre specialists

MIKRO 220 and 220 R are powerful, compact benchtop centrifuges for processing microlitre tubes of 0.2 ml to 2.0 ml. The refrigerated MIKRO 220 R also accepts standard tubes

up to a volume of 50 ml. The MIKRO 220 and 220 R centrifuges are used in clinical laboratories as well as in genetic research, virology and bacteriology.



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| TECHNOLOGY | | MIKRO 220 | | MIKRO 220 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 Hz | 60 Hz |
| Consumption | | 510 VA | | 850 VA | 950 VA |
| Emission, Immunity | | EN/IEC 61326-1, class B | FCC class B | EN/IEC 61326-1, class B | FCC class B |
|  | Max. capacity | 60 x 1.5 / 2.0 ml | | | |
|  | Max. capacity | 48 x 1.5 / 2.0 ml, 6 x 50 ml | | | |
| | Max. RPM (speed) | 18,000 min ⁻¹ | | | |
| | Max. RCF | 31,514 | | | |
| Running time | | 1 sec–99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key) | | | |
| Dimensions (H x W x D) | | 313 x 330 x 420 mm | | 313 x 330 x 650 mm | |
| Weight | | approx. 21 kg | | approx. 42 kg | |
| Refrigeration | | | | | |
| Temperature control, infinitely variable | | - | | from -20 to +40 °C | |
| Cat. No. | | 2200 | 2200-01 | 2205 | 2205-01 |

¹⁾ Other voltages on request.

ROTORS

Angle rotor, 12-place



✶ 45° n = 18,000 min⁻¹
max. RCF 25,718

Cat. No. 2218-A

Angle rotor, 24-place



with bio-containment⁵⁾,
phenol-resistant

✶ 45° n = 18,000 min⁻¹
max. RCF 31,514

Cat. No. 1195-A








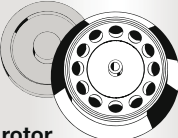



Angle rotor, 30-place














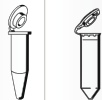



with bio-containment⁵⁾,
phenol-resistant

✶ 45° n = 14,000 min⁻¹
max. RCF 21,255

Cat. No. 1189-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 | 11 x38 | | 10.7 x36 |
| Cat. No. | - | | | | 2078 | 0536 | Pediatric |
| lid incl. |  |  |  |  |  |  |  |
|  rotor Cat. No. 2218-A |  | |  | | | |  |
| Cat. No. | 2024 | 2023 | 2031⁷⁾ | - | 0788 | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.2x41 | 11.2x39 | | |
| tubes per rotor | 12 | | | | | | |
| max. RCF | 25,718 | | | | | 24,270 | |
| radius in mm | 71 | | | | | 67 | |
| run-up in sec | 11 | | | | | | |
| run-down in sec, braked | 10 | | | | | | |
| temperature in °C ¹⁾ | -5 | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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 | 11 x38 | | 10.7 x36 |
| Cat. No. | - | | | | 2078 | 0536 | Pediatric |
| lid with bio-containment ⁵⁾ incl. |  |  |  |  |  |  |  |
| rotor Cat. No. 1195-A |  | |  | | | |  |
| Cat. No. | 2024 | 2023 | 2031⁷⁾ | - | 0788 | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.2x40.8 | 11.2x39 | | |
| tubes per rotor | 24 | | | | | 12 | |
| max. RCF | 31,514 | | | | | 30,065 | |
| radius in mm | 87 | | | | | 83 | |
| run-up in sec | 26 | | | | | | |
| run-down in sec, braked | 23 | | | | | | |
| temperature in °C ¹⁾ | +3 | | | | | | |

| | | | | | | | |
|---|---|-------------|------|--------------------------|---|-------------|---|
| 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 | 11 x38 | | 10.7 x36 |
| Cat. No. | - | | | | 2078 | 0536 | Pediatric |
| lid with bio-containment ⁹⁾ incl. |  | | | |  | |  |
| rotor Cat. No. 1189-A |  | | | |  | | |
| Cat. No. | 2024 | 2023 | | 2031⁷⁾ | - | 0788 | |
| boring Ø x L in mm | 6x40 | 8x40 | | 10.2x19 | 11.2x40.9 | 11.2x39 | |
| tubes per rotor | 30 | | | | | 15 | |
| max. RCF | 21,255 | | | | | 20,379 | |
| radius in mm | 97 | | | | | 93 | |
| run-up in sec | 20 | | | | | | |
| run-down in sec, braked | 22 | | | | | | |
| temperature in °C ¹⁾ | +3 | | | | | | |

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

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031. The capacity of rotor 1158-L is reduced to 40 tubes when these adapters will be used.

Angle rotor, 48-place, 2-row



with bio-containment[®],
phenol-resistant

∠ 45° n = 14,000 min⁻¹
max. RCF outer 21,255 / inner 18,845

Cat. No. 1158-L

| | | | | | | |
|--|-----------------|-------------|--------------------------|----------|-------------|-------------|
| capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 |
| Ø x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | |
| Cat. No. | - | | | | 2078 | 0536 |
| lid with bio-containment [®] incl. | | | | | | |
| rotor Cat. No. 1158-L | | | | | | |
| Cat. No. | 2024 | 2023 | 2031⁷⁾ | - | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.4x39 | | |
| tubes per rotor | 48 | | | | | |
| max. RCF outer/inner | 21,255 / 18,845 | | | | | |
| radius in mm outer/inner | 97 / 86 | | | | | |
| run-up in sec | 21 | | | | | |
| run-down in sec, braked | 22 | | | | | |
| temperature in °C ¹⁾ | -4 | | | | | |

Angle rotor, 20-place, for cryo tubes



∠ 40° n = 14,000 min⁻¹
max. RCF 18,407

Cat. No. 2219-A

| | |
|--|-------------------|
| capacity in ml | 1.8 |
| Ø x L in mm | - |
| Cat. No. | cryo tubes |
| lid E3243 incl. | |
| rotor Cat. No. 2219-A | |
| Cat. No. | - |
| boring Ø x L in mm | 12.5 x 36 |
| tubes per rotor | 20 |
| max. RCF | 18,407 |
| radius in mm | 84 |
| run-up in sec | 21 |
| run-down in sec, braked | 21 |
| temperature in °C ¹⁾ | -9 |

Optional for rotor 2219-A



lid **Cat. No. 2425**
with bio-containment[®],
autoclavable



lid **Cat. No. 2423**
with bio-containment[®],
autoclavable,
phenol-resistant

ROTORS

Swing-out rotor, 24-place



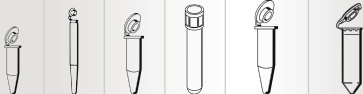


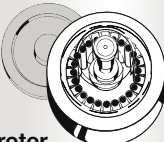


with bio-containment ⁵⁾







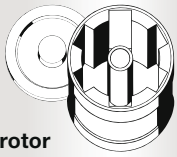



∠ 90° n = 13,000 min⁻¹ max. RCF 18,516
Cat. No. 1154-L

Drum rotor 6-place



n = 13,000 min⁻¹ max. RCF 14,171
Cat. No. 1161

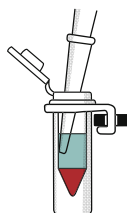
| | | | | | | |
|---|---|-------------|---|-----------|---|---|
| capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 |
| Ø x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | |
| Cat. No. | - | | | | 2078 | 0536 |
| lid 2425 ⁵⁾ incl. |  | | | |  |  |
|  rotor Cat. No. 1154-L |  | |  | | | |
| Cat. No. | 2024 | 2023 | 2031 ⁷⁾ | - | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.5x38.5 | | |
| tubes per rotor | 24 | | | | | |
| max. RCF | 18,516 | | | | | |
| radius in mm | 98 | | | | | |
| run-up in sec | 25 | | | | | |
| run-down in sec, braked | 26 | | | | | |
| temperature in °C ¹⁾ | +1 | | | | | |

| | | | | | | |
|---|--|---|---|---|---|---|
| capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 |
| Ø x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | |
| Cat. No. | - | | | | 2078 | 0536 |
| lid incl. |  |  |  |  |  |  |
|  rotor Cat. No. 1161 |  | |  | |  | |
| Cat. No. | 1378 | | 1379 | | 1377 | |
| boring Ø x L in mm | 6x40 | | 8.4 x 43 | | 10.8 x 37 | |
| tubes per rotor | 192 | | 126 | | 60 | |
| max. RCF | 14,171 | | | | | |
| radius in mm | 75 | | | | | |
| run-up in sec | 17 | | | | | |
| run-down in sec, braked | 18 | | | | | |
| temperature in °C ¹⁾ | -3 | | | | | |

Optional for rotor 1154-L



lid **Cat. No. 2423**
with bio-containment ⁵⁾,
autoclavable,
phenol-resistant



Centrifugation in the swing-out rotor makes the pellet collect exactly in the tip of the tubes. This facilitates analysis and further processing.

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

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

Angle rotor, 6-place, for PCR strips






lid (optional)
Cat. No. 1162

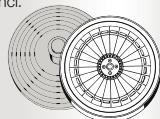

∠ 45° $n = 14,000 \text{ min}^{-1}$ max. RCF 18,845
Cat. No. (without lid) 1160

Hematocrit rotor 24-place



$n = 15,000 \text{ min}^{-1}$ max. RCF 21,382
Cat. No. 1023

| | | |
|---|---|---|
| capacity in ml | 0.2 | 0.2 |
| Ø x L in mm | 6x18 | - |
| Cat. No. | - | PCR strips |
|  |  |  |
| rotor Cat. No. 1160 | | |
| Cat. No. | - | |
| boring Ø x L in mm | 6.5 x 15.5 | |
| tubes per rotor | 48 | 6 x 8 |
| max. RCF | 18,845 | |
| radius in mm | 86 | |
| run-up in sec | 20 | |
| run-down in sec, braked | 22 | |
| temperature in °C ¹⁾ | -4 | |

| | |
|--------------------------------------|---|
| standard capillaries, Ø x L in mm | - |
| Cat. No. | - |
| lid as evaluation disk incl. |  |
| rotor Cat. No. 1023 |  |
| Cat. No. | - |
| boring Ø x L in mm | - |
| capillaries per rotor | 24 |
| max. RCF | 21,382 |
| radius in mm | 85 |
| run-up in sec | 11 |
| run-down in sec, braked | 12 |
| temperature in °C ¹⁾ | -11 |

Whether hematocrit determination or the preparation of samples for bilirubin analysis, the MIKRO 220 / 220 R centrifuges perform strongly.

As a special feature, the hematocrit rotor is segmented into 24 chambers, each chamber containing one capillary only. In case a capillary breaks or leaks, fragments and leaked blood stay in the chamber and will not affect other capillaries. The lid of the rotor is evaluation disk and cover in one. Its advantage: The hematocrit value can be determined fast and conveniently right after centrifugation.

ROTORS

Angle rotor, 6-place













































$\angle 35^\circ$ $n = 6,000 \text{ min}^{-1}$ max. RCF 4,025
Cat. No. 1016

Angle rotor, 12-place



$\angle 35^\circ$ $n = 6,000 \text{ min}^{-1}$ max. RCF 4,146
Cat. No. 1015

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 7 | 15 | 25 | 50 | 9–10 | 10 | 5 | 15 | 50 | 30 | 50 |
| Ø x L in mm | 12x100 | 17x100 | 24x100 | 34x100 | 16x92 | 15x102 | 17x59 | 17x120 | 29x115 | 26x95 | 29x107 |
| Cat. No. | 0578 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | blood collection / urine tubes | | - | 0509 | 0513 | 0545 | 0546 |
|  rotor Cat. No. 1016 |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  | | |  |  |  |  |  |  |
| Cat. No. | 1632 | 1635 | 1633 | - | 1635 | | 1649 | 1631 | 1641 | 1633 | 1634 |
| boring Ø x L in mm | 13x92 | 17.5x95 | 26x88 | 35x96 | 17.5x95 | | 17x51 | 17x98 | 30x98 | 26x88 | 29x95 |
| tubes per rotor | 18 | 6 | | | | | | 3 | | 6 | |
| max. RCF ²⁾ | 3,944 | 3,783 | 3,703 | 4,025 | 3,783 | | 3,622 | 3,824 | 3,824 | 3,703 | 3,904 |
| radius in mm | 98 | 94 | 92 | 100 | 94 | | 90 | 95 | 95 | 92 | 97 |
| run-up in sec | 14 | | | | | | | | | | |
| run-down in sec, braked | 17 | | | | | | | | | | |
| temperature in °C ¹⁾ | -20 | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 5 | 15 | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 4.5–5 | 4.9 | 7.5–8.5 | 9–10 | 10 | 1.6–5 | 4–7 | 8.5–10 | 5 | 15 |
| Ø x L in mm | 12x75 | 17x100 | 8x66 | 13x65 | 11x66 | 11x92 | 13x90 | 15x92 | 16x92 | 15x102 | 13x75 | 13x100 | 16x100 | 17x59 | 17x120 |
| Cat. No. | 0553 ²⁾ | 0518 ²⁾ | Blutabnahmegefäße / Urinröhrchen | | | | | | | | | | | - | 0509 |
|  rotor Cat. No. 1015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  | |  | | | | | | | |  |  | |  | |
| Cat. No. | 1054-A | - | 1054-A | | | - | | | | | 1054-A | 1058 | - | 1064 | - |
| boring Ø x L in mm | 13.5x60 | 17.7x88 | 13.5x60 | | | 17.7x88 | | | | | 13.5x60 | 13.5x79 | 17.7x88 | 17x25 | 17.7x88 |
| tubes per rotor | 12 | | | | | | | | | | | | | | 6 |
| max. RCF ²⁾ | 3,300 | 4,146 | 3,300 | | | 4,146 | | | | | 3,300 | 4,146 | 3,180 | 4,146 | |
| radius in mm | 82 | 103 | 82 | | | 103 | | | | | 82 | 103 | 79 | 103 | |
| run-up in sec | 14 | | | | | | | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -20 | | | | | | | | | | | | | | |

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

Swing-out rotor, 12-place



∠ 60° n = 5,000 min⁻¹ max. RCF 2,963
Cat. No. (without carriers) 2226

Swing-out rotor, 8-place



∠ 90° n = 5,000 min⁻¹ max. RCF 2,879
Cat. No. (without carriers) 1020

Rotors for MIKRO 220 R centrifuges only:

The following rotors can only be operated in the refrigerated MIKRO 220 R.

| | | | | |
|--|---------------------------|-------------------------------|-------|-------|
| capacity in ml | 5 | 2.6–3.4 | 2.7–3 | 1.6–5 |
| Ø x L in mm | 12x75 | 13x65 | 11x66 | 13x75 |
| Cat. No. | 0553 ²⁾ | blood collection tubes | | |
| rotor Cat. No. 2226 | | | | |
| | | | | |
| Cat. No. | 1127-A | | | |
| boring Ø x L in mm | 13.2x53 | | | |
| tubes per rotor | 12 | | | |
| max. RCF ²⁾ | 2,963 | | | |
| radius in mm | 106 | | | |
| run-up in sec | 10 | | | |
| run-down in sec, braked | 10 | | | |
| temperature in °C ¹⁾ | -20 | | | |

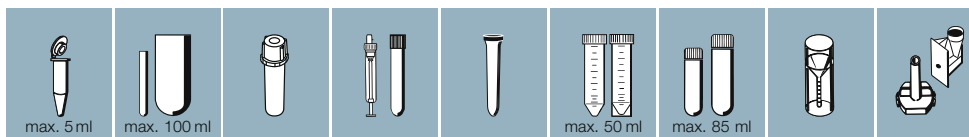
| | | | | | | | |
|--|---------------------------|---------------------------|-------------------------------|---------------|---------------|---------------|---------------|
| capacity in ml | 5 | 6 | 2.6–3.4 | 2.7–3 | 4–5.5 | 1.6–5 | 4–7 |
| Ø x L in mm | 12x75 | 12x82 | 13x65 | 11x66 | 15x75 | 13x75 | 16x75 |
| Cat. No. | 0553 ²⁾ | 0501 ²⁾ | blood collection tubes | | | | |
| rotor Cat. No. 1020 | | | | | | | |
| | | | | | | | |
| Cat. No. | 1131-A | 1131-A | 1132-A | 1131-A | 1132-A | 1131-A | 1132-A |
| boring Ø x L in mm | 13x53 | 13x53 | 17.5x53 | 13x53 | 17.5x53 | 13x53 | 17.5x53 |
| tubes per rotor | 8 | | | | | | |
| max. RCF ²⁾ | 2,879 | | | | | | |
| radius in mm | 103 | | | | | | |
| run-up in sec | 10 | | | | | | |
| run-down in sec, braked | 10 | | | | | | |
| temperature in °C ¹⁾ | -20 | | | | | | |

Hettich



Specialists in diversity

BENCH



ROTOFIX 32 A

Rugged, versatile and indispensable for routine laboratory tasks in doctors' practices and small hospitals

Not only is the ROTOFIX 32 A ideally equipped for tasks in clinical chemistry, it can also play a vital role in cytology. This versatile centrifuge can handle a lot more than medical applications. With its wide variety of accessories, the ROTOFIX 32 A

can be also used for the preparation of samples in industrial and research laboratories. Tubes that are suitable for chrome bath testing are also available.



| TECHNOLOGY | ROTOFIX 32 A | |
|---|--|----------------|
| Benchtop centrifuge, without rotor | | |
| Power supply ^{*)} | 208–240 V 1 ~ | 100–127 V 1 ~ |
| Frequency | 50–60 Hz | |
| Consumption | 300 VA | |
| Emission, Immunity | EN/IEC 61326-1, class B | FCC class B |
| Max. capacity | 4 x 100 ml / 6 x 94 ml | |
| Max. RPM (speed) | 6,000 min ⁻¹ | |
| Max. RCF | 4,226 | |
| Running time | 1 – 99 min, ∞ continuous run, short cycle mode (impulse key) | |
| Dimensions (H x W x D) | 257 x 366 x 430 mm | |
| Weight | approx. 23 kg | |
| Cat. No. | 1206 | 1206-01 |

^{*)} Other voltages on request.

ROTORS

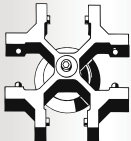




















Swing-out rotor, 4-place



illustrated with
carriers 1369

✂ 90° n = 4,000 min⁻¹ max. RCF 2,665

Cat. No. (without carriers) 1624

| | | | | | | | | | | | | |
|---|--|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 5 | | 6 | 7 | 9 | 15 | | 20 | 25 | 45 | 50 | |
| Ø x L in mm | 12 x 75 | | 12 x 82 | 12 x 100 | 14 x 100 | 17 x 100 | | 21 x 100 | 24 x 100 | 31 x 100 | 34 x 100 | |
| Cat. No. | 0553 ²⁾ | | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | | 0518 ²⁾ | - | 0519 ²⁾ | - | 0521 ²⁾ | |
|  rotor Cat. No. 1624 |  | |  |  |  | |  |  |  |  |  | |
| |  with decanting aid |  |  with decanting aid | |  |  + 0701 |  |  |  |  |  |  |
| Cat. No. | 1369-91 | 1372 | 1369-92 | | 1370 | 1741 | 1369 | 1742 | 1346 | 1745 | 1345 | 1746 |
| boring Ø x L in mm | 12.5 x 64.4 | 13.5 x 65 | 12.5 x 71.5 | | 14.6 x 74 | 14.6 x 78 | 17.6 x 74 | 17.6 x 78 | 21.5 x 74 | 26 x 78 | 32 x 74 | 35 x 78 |
| tubes per rotor | 16 | 68 | 16 | | 20 | 40 | 16 | 28 | 8 | | 4 | |
| max. RCF ²⁾ | 2,057 | 2,164 | 2,308 | | | 2,415 | 2,308 | 2,451 | 2,361 | 2,451 | 2,361 | 2,451 |
| radius in mm | 115 | 121 | 129 | | | 135 | 129 | 137 | 132 | 137 | 132 | 137 |
| run-up in sec | 22 | | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | | |

| | | | | | | | | | | | | |
|--|---------------------------------------|-------------|-------------|-------------------------|---------------------------|-------------|---------------------------|---------------------------|-------------|---------------------------|-------------|------------------------------------|
| capacity in ml | 1.1–1.4 | 2.6–3.4 | 4–5.5 | 4.9 | 1.6–5 | 4–7 | 1.6–5 | 4–7 | 4–7 | 8.5–10 | 30 | suspension for cyto accessories |
| Ø x L in mm | 8 x 66 | 13 x 65 | 15 x 75 | 13 x 90 | 13 x 75 | 16 x 75 | 13 x 75 | 16 x 75 | 13 x 100 | 16 x 100 | 26 x 95 | |
| Cat. No. | blood collection / urine tubes | | | | | | | | | | 0545 | cyto chambers |
| rotor Cat. No. 1624 | | | | | | | | | | | | |
| | + 0701 | + 0716 | | 4 x 0768 ¹⁹⁾ | | + 0716 | + 1058 | | | | | |
| Cat. No. | 1741 | 1742 | 1741 | 1741 | 1369 ⁴⁾ | 1742 | 1369 ⁴⁾ | 1370 ⁴⁾ | 1739 | 1369 ⁴⁾ | 1745 | 1660 |
| boring Ø x L in mm | 14.6 x 78 | 17.6 x 78 | 14.6 x 78 | 14.6 x 78 | 17.6 x 74 | 17.6 x 78 | 17.6 x 74 | 14.6 x 74 | 13.5 x 78 | 17.6 x 74 | 26 x 78 | - |
| tubes per rotor | 40 | 28 | 40 | 40 | 16 | 28 | 16 | 20 | 28 | 16 | 8 | 4 |
| max. RCF ²⁾ | 2,415 | 2,325 | 2,451 | 2,129 | 2,361 | 2,325 | 2,361 | | | 2,451 | | 1,646 |
| radius in mm | 135 | 130 | 137 | 119 | 132 | 130 | 132 | | | 137 | | 92 |
| run-up in sec | 22 | | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | | |

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⁾ Please remove the inserts.

¹⁹⁾ Packed in units of 10 pieces.











²³⁾ This combination permits no Vacutainers made of glass.





















ROTORS

Swing-out rotor 1624



illustrated with carriers 1481 and
lids 1492 with bio-containment ⁵⁾

| | | | | | |
|---|---|---|---|---|---|
| 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 | 36 | | 120 | 48 | |
| max. RCF ²⁾ | 1,968 | | 1,950 | 1,932 | |
| radius in mm | 110 | | 109 | 108 | |
| run-up in sec | 22 | | | | |
| run-down in sec, braked | 25 | | | | |

| | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 0.5 | 1.5 | 2.0 | 1 | 3 | 5 / 6 / 7 | 9 | 15 | 25 | 50 | 94 |
| Ø x L in mm | 10.7 x 36 | 11 x 38 | | 6 x 45 | 10 x 60 | 12 x 75 / 82 / 100 | 14 x 100 | 17 x 100 | 24 x 100 | 34 x 100 | 38 x 102 |
| Cat. No. | Pediatric | 2078 | 0536 | Rhesus | - | 0553 ²⁾ /0501 ²⁾ /0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0549 |
| lid with bio-containment ⁵⁾ Cat. No. 1492  |  |  |  |  |  |  |  |  |  |  |  |
| |  | | |  |  |  |  | |  |  |  |
| carrier Cat. No. 1481 | | | | | | | | | | | |
| Cat. No. | 1351 | | | 1339 | 1343 | 1383 | 1329 | 1330 | 1331 | 1396 | |
| boring Ø x L in mm | 11.2 x 38 | | | 6.5 x 34 | 10.5 x 43 | 13.4 x 48 | 17.6 x 91 | 25.2 x 87 | 35.2 x 87 | 38.5 x 92 | |
| tubes per rotor | 20 | | | 108 | 36 | 20 | 16 | 4 | | | |
| max. RCF ²⁾ | 2,379 | 2,451 | | 2,594 | 2,630 | 2,558 | 2,540 | 2,433 | 2,415 | 2,612 | |
| radius in mm | 133 | 137 | | 145 | 147 | 143 | 142 | 136 | 135 | 146 | |
| run-up in sec | 22 | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | |












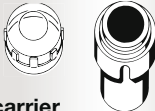










²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000






















⁴⁾ Please remove the inserts.

Swing-out rotor 1624



illustrated with carriers 1481 and
lids 1492 with bio-containment ⁵⁾

| | | | | | | | | | | | |
|---|--|---|---|---|---|--|---|---|---|---|---|
| capacity in ml | 100 | 1.1 – 1.4 | 2.7 – 5 | 2.6 – 4.9 | 4 – 8.5 | 9 – 10 | 10 | 1.6 – 7 | 4 – 10 | 5 | 15 |
| Ø x L in mm | 44 x 100 | 8 x 66 | 11 x 66 / 92 | 13 x 65 / 90 | 15 x 75 / 92 | 16 x 92 | 15 x 102 | 13 x 75 / 100 | 16 x 75 / 100 | 17 x 59 | 17 x 120 |
| Cat. No. | 0526 ²⁾ | blood collection / urine tubes | | | | | | | | - | 0509 |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 1481 |  rubber insert |  |  |  |  |  |  |  |  |  | |
| Cat. No. | 0761 | 1457 | 1383 | 1459 | 1329 | 1329 ⁴⁾ | 1383 | 1348 | 6341 | 1347 | |
| boring Ø x L in mm | 45.9 x 98 | 9 x 47 | 13.4 x 48 | 15.6 x 47 | 17.6 x 91 | | 13.4 x 48 | 16.5 x 56 | 17 x 45 | 17 x 90 | |
| tubes per rotor | 4 | 28 | 20 | 16 | 16 | | 20 | 16 | 12 | 4 | |
| max. RCF ²⁾ | 2,558 | 2,576 | 2,558 | 2,576 | 2,540 | 2,665 | 2,558 | 2,522 | 2,665 | | |
| radius in mm | 143 | 144 | 143 | 144 | 142 | 149 | 143 | 141 | 149 | | |
| run-up in sec | 22 | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|--|---|---|---|
| capacity in ml | 50 | 12 | 25 | 30 | 50 | 10 | 30 | 50 | 85 | 30 |
| Ø x L in mm | 29 x 115 | 17 x 100 | 25 x 90 | 25 x 110 | 29 x 115 | 16 x 80 | 26 x 95 | 29 x 107 | 38 x 106 | 44 x 105 |
| Cat. No. | 0513 | - | - | - | - | - | 0545 | 0546 | 0547 | 0534 ⁶⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  chrome bath tube |
|  carrier Cat. No. 1481 |  |  |  |  |  |  |  |  |  |  rubber insert |
| Cat. No. | 1384 | 6311 | 1363 | 1365 | 6318 | 1348 | 4417 | 4416 | 1396 | 0765 |
| boring Ø x L in mm | 30 x 90 | 17 x 80 | 26 x 72 | 26 x 80 | 29.5 x 80 | 16.5 x 56 | 26 x 83 | 29 x 93 | 38.5 x 92 | 45.9 x 98 |
| tubes per rotor | 4 | | | | | 16 | 4 | | | |
| max. RCF ²⁾ | 2,665 | | 2,343 | 2,665 | | 2,522 | 2,451 | 2,630 | 2,612 | 2,540 |
| radius in mm | 149 | | 131 | 149 | | 141 | 137 | 147 | 146 | 142 |
| run-up in sec | 22 | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁶⁾ A rubber stopper for closing the tube is available under Cat. No. 0535. The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

ROTORS













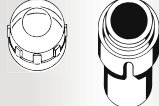








Swing-out rotor, 4-place























illustrated with carriers 1490 and
lids 1492 with bio-containment ⁵⁾

↗ 90° n = 4,000 min⁻¹ max. RCF 2,630

Cat. No. (without carriers) 1324

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 0.5 | 1.5 | 2.0 | 1 | 3 | 4 | 5 | 6 | 7 | 9 | 15 | 25 |
| Ø x L in mm | 10.7 x 36 | 11 x 38 | | 6 x 45 | 10 x 60 | 10 x 88 | 12 x 75 | 12 x 82 | 12 x 100 | 14 x 100 | 17 x 100 | 24 x 100 |
| Cat. No. | Pediatric | 2078 | 0536 | Rhesus | - | - | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | 0519 ²⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |  |
| carrier Cat. No. 1490 |  | |  |  |  |  |  | |  | |  |  |
| Cat. No. | 1351 | | | 1339 | 1343 | 1383 | | | 1329 | | 1330 | |
| boring Ø x L in mm | 11.2 x 38 | | | 6.5 x 34 | 10.5 x 43 | 13.4 x 48 | | | 17.6 x 91 | | 25.2 x 87 | |
| tubes per rotor | 20 | | | 108 | 36 | 20 | | | 16 | | 4 | |
| max. RCF ²⁾ | 2,343 | 2,415 | | 2,558 | 2,594 | 2,522 | | | 2,504 | | 2,397 | |
| radius in mm | 131 | 135 | | 143 | 145 | 141 | | | 140 | | 134 | |
| run-up in sec | 27 | | | | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|--|---|---|---|---|---|---|---|---|---|
| capacity in ml | 50 | 94 | 100 | 1.1 – 1.4 | 2.6 – 3.4 | 4.9 | 2.7 – 3 | 4.5 – 5 | 4 – 5.5 | 7.5 – 8.5 | 9 – 10 | 10 |
| Ø x L in mm | 34 x 100 | 38 x 102 | 44 x 100 | 8 x 66 | 13 x 65 | 13 x 90 | 11 x 66 | 11 x 92 | 15 x 75 | 15 x 92 | 16 x 92 | 15 x 102 |
| Cat. No. | 0521 ²⁾ | 0549 | 0526 ²⁾ | blood collection / urine tubes | | | | | | | | |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 1490 |  |  |  rubber insert |  |  | | |  | |  | | |
| Cat. No. | 1331 | 1396 | 0761 | 1457 | 1383 | | | 1459 | | 1329 | 1329 ⁴⁾ | |
| boring Ø x L in mm | 35.2 x 87 | 38.5 x 92 | 45.9 x 100.5 | 9 x 47 | 13.4 x 48 | | | 15.6 x 47 | | 17.6 x 91 | | |
| tubes per rotor | 4 | | | 28 | 20 | | | 16 | | | | |
| max. RCF ²⁾ | 2,379 | 2,576 | 2,522 | 2,540 | 2,522 | | | 2,540 | | 2,504 | 2,630 | |
| radius in mm | 133 | 144 | 141 | 142 | 141 | | | 142 | | 140 | 147 | |
| run-up in sec | 27 | | | | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | | | | |













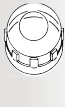










²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 1490 cannot be closed with lid 1492.

⁴⁾ Please remove the inserts.

Swing-out rotor 1324



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 1.6 – 5 | 4 – 7 | 4 – 7 | 8.5 – 10 | 5 | 15 | 30 | 50 | 12 | 25 | 30 | |
| Ø x L in mm | 13 x 75 | 13 x 100 | 16 x 75 | 16 x 100 | 17 x 59 | 17 x 120 | 25 x 110 | 29 x 115 | 17 x 100 | 25 x 90 | 25 x 110 | |
| Cat. No. | blood / urine tubes | | | | - | 0509 | | - | 0513 | - | - | - |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 1490 |  | |  | |  |  |  |  |  |  |  |  |
| Cat. No. | 1383 | | 1348 | | 6341 | 1347 | 1356 | 1365 | 1384 | 6311 | 1363 | 1365 |
| boring Ø x L in mm | 13.4 x 48 | | 16.5 x 56 | | 17 x 45 | 17 x 90 | 17 x 107 | 26 x 80 | 30 x 90 | 17 x 80 | 26 x 72 | 26 x 80 |
| tubes per rotor | 20 | | 16 | | 12 | 4 | 12 | 4 | | | | |
| max. RCF ²⁾ | 2,522 | | 2,486 | | 2,630 | | | | | | 2,308 | 2,630 |
| radius in mm | 141 | | 139 | | 147 | | | | | | 129 | 147 |
| run-up in sec | 27 | | | | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | | | | |

| | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|---------------------------|
| capacity in ml | 50 | 10 | 30 | 50 | 85 | 30 |
| Ø x L in mm | 29 x 115 | 16 x 80 | 26 x 95 | 29 x 107 | 38 x 106 | 44 x 105 |
| Cat. No. | - | - | 0545 | 0546 | 0547 | 0534 ⁶⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 1492 | | | | | | |
| carrier Cat. No. 1490 | | | | | | |
| Cat. No. | 6318 | 1348 | 4417 | 4416 | 1396 | 0765 |
| boring Ø x L in mm | 29.5 x 80 | 16.5 x 56 | 26 x 83 | 29 x 93 | 38.5 x 92 | 45.9 x 100.5 |
| tubes per rotor | 4 | 16 | 4 | | | |
| max. RCF ²⁾ | 2,630 | 2,486 | 2,415 | 2,594 | 2,576 | 2,504 |
| radius in mm | 147 | 139 | 135 | 145 | 144 | 140 |
| run-up in sec | 27 | | | | | |
| run-down in sec, braked | 30 | | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁶⁾ A rubber stopper for closing the tube is available under Cat. No. 0535. The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

ROTORS

Swing-out rotor **1324**






















illustrated with
carriers 1398

Swing-out rotor, 6-place



✂ 90° n = 4,000 min⁻¹ max. RCF 2,701

Cat. No. (with carriers) 1619

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 5 | 6 | 7 | 9 | 15 | 2.6 – 3.4 | 2.7 – 3 | 4 – 5.5 | 4.5 – 5 | 4.9 | 9 – 10 | 10 |
| Ø x L in mm | 12 x 75 | 12 x 82 | 12 x 100 | 14 x 100 | 17 x 100 | 13 x 65 | 11 x 66 | 15 x 75 | 11 x 92 | 13 x 90 | 16 x 92 | 15 x 102 |
| Cat. No. | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | | |
|  carrier Cat. No. 1398 |  |  |  |  |  |  |  |  |  |  |  |  |
| |  | | |  | |  | | + 2 x 0716  | |  | |  |
| Cat. No. | 1486 | | | 1482A | | 1486 | | 1482A | 1486 | | 1482A | |
| boring Ø x L in mm | 13.4 x 57.5 | | | 17.5 x 81 | | 13.4 x 57.5 | | 17.5 x 81 | 13.4 x 57.5 | | 17.5 x 81 | |
| tubes per rotor | 20 | | | 16 | | 20 | | 16 | 20 | | 16 | |
| max. RCF ²⁾ | 2,486 | | | 2,522 | | 2,486 | | 2,272 | 2,486 | | 2,522 | |
| radius in mm | 139 | | | 141 | | 139 | | 127 | 139 | | 141 | |
| run-up in sec | 27 | | | | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | | | | |

| | | | | | | | | | |
|--|----------------------------|--------------|-------------|--------------|-------------|--------------|---------------------------|----------|----------|
| capacity in ml | 1.6 – 5 | 4 – 7 | 4 – 7 | 8.5 – 10 | 12 | 15 | 50 | 12 | 50 |
| Ø x L in mm | 13 x 75 | 13 x 100 | 16 x 75 | 16 x 100 | 17 x 102 | 17 x 120 | 29 x 115 | 17 x 100 | 29 x 115 |
| Cat. No. | blood / urine tubes | | | | 0509 | 0513 | - | - | - |
| carrier Cat. No. 1398 | | | | | | | | | |
| | | | | | | | | | |
| Cat. No. | 1486 | 1482A | 1487 | 1483A | 1484 | 1482A | 1484 ⁴⁾ | | |
| boring Ø x L in mm | 13.4 x 57.5 | 17.5 x 81 | 17.5 x 74 | 17 x 100 | 30 x 98 | 17.5 x 81 | 30 x 98 | | |
| tubes per rotor | 20 | 16 | 12 | 16 | 4 | 16 | 4 | | |
| max. RCF ²⁾ | 2,486 | 2,397 | 2,451 | 2,612 | 2,576 | 2,522 | 2,576 | | |
| radius in mm | 139 | 134 | 137 | 146 | 144 | 141 | 144 | | |
| run-up in sec | 27 | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | |

| | | |
|--|---------------|-------------|
| capacity in ml | 15 | 50 |
| Ø x L in mm | 17 x 120 | 29 x 115 |
| Cat. No. | 0509 | 0513 |
| rotor Cat. No. 1619 | | |
| | | |
| Cat. No. | 1462-A | - |
| boring Ø x L in mm | 17 x 84 | 30 x 87.5 |
| tubes per rotor | 6 | |
| max. RCF ²⁾ | 2,701 | |
| radius in mm | 151 | |
| run-up in sec | 22 | |
| run-down in sec, braked | 25 | |

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⁾ Please remove the inserts.

Swing-out rotor, 8-place




































↘ 90° n = 4,000 min⁻¹ max. RCF 2,415
Cat. No. (without carriers) 1611

Swing-out rotor, 8-place



↘ 45° n = 4,000 min⁻¹ max. RCF 2,469
Cat. No. (with carriers) 1617

| | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 5 | 6 | 7 | 10 | 15 | 2.6 – 3.4 | 2.7 – 3 | 4 – 5.5 | 4.5 – 5 | 7.5 – 8.5 | 1.6 – 5 | 4 – 7 | 4 – 7 | 8.5 – 10 |
| Ø x L in mm | 12 x 75 | 12 x 82 | 12 x 100 | 13 x 100 | 17 x 100 | 13 x 65 | 11 x 66 | 15 x 75 | 11 x 92 | 15 x 92 | 13 x 75 | 13 x 100 | 16 x 75 | 16 x 100 |
| Cat. No. | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | - | 0518 ²⁾ | blood collection / urine tubes | | | | | | | | |
|  rotor Cat. No. 1611 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 1131-A | | 1643 | 1643 | 1644 | 1131-A | | 1132-A | 1643 | 1644 | 1131-A | 1643 | 1132-A | 1644 |
| boring Ø x L in mm | 13 x 53 | | 13.2 x 81 | | 17.5 x 81 | 13 x 53 | | 17.5 x 53 | 13.2 x 81 | 17.5 x 81 | 13 x 53 | 13.2 x 81 | 17.5 x 53 | 17.5 x 81 |
| tubes per rotor | 8 | | | | | | | | | | | | | |
| max. RCF ²⁾ | 1,914 | | 2,415 | | | 1,914 | | 2,415 | | | 1,914 | 2,415 | 1,914 | 2,415 |
| radius in mm | 107 | | 135 | | | 107 | | 135 | | | 107 | 135 | 107 | 135 |
| run-up in sec | 22 | | | | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | | | | |

| capacity in ml | 15 | 50 |
|--|---|---|
| Ø x L in mm | 17 x 120 | 29 x 115 |
| Cat. No. | 0509 | 0513 |
|  rotor Cat. No. 1617 |  |  |
| |  | |
| Cat. No. | 1462-A | - |
| boring Ø x L in mm | 17 x 84 | 30 x 94.5 |
| tubes per rotor | 8 | |
| max. RCF ²⁾ | 2,469 | |
| radius in mm | 138 | |
| run-up in sec | 22 | |
| run-down in sec, braked | 25 | |

ROTORS

Swing-out rotor, 12-place



✂ 55°
(with carriers 1127-A)

✂ 60°
(with carriers 1122)

✂ 80°
(with carriers 1621)

n = 4,000 min⁻¹ max. RCF 2,683

Cat. No. (without carriers) 1628





























Angle rotor, 8-place



✂ 45° n = 4,000 min⁻¹ max. RCF 2,612

Cat. No. (without adapters) 1418

| | | | | | | | | | |
|--|---------------------------|---------------------------|---------------------------------------|-------------|-------------|---------------|-------------|-------------|----------|
| capacity in ml | 5 | 15 | 2.6 – 3.4 | 2.7 – 3 | 4 – 5.5 | 7.5 – 8.5 | 1.6 – 5 | 4 – 7 | 8.5 – 10 |
| Ø x L in mm | 12 x 75 | 17 x 100 | 13 x 65 | 11 x 66 | 15 x 75 | 15 x 92 | 13 x 75 | 16 x 75 | 16 x 100 |
| Cat. No. | 0553 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | | |
| rotor Cat. No. 1628 | | | | | | | | | |
| | | | | | | | | | |
| Cat. No. | 1127-A | 1621 | 1127-A | 1122 | 1621 | 1127-A | 1122 | 1621 | |
| boring Ø x L in mm | 13.2 x 53 | 17.5 x 79 | 13.2 x 53 | 17.5 x 53 | 17.5 x 79 | 13.2 x 53 | 17.5 x 53 | 17.5 x 79 | |
| tubes per rotor | 12 | | | | | | | | |
| max. RCF ²⁾ | 2,236 | 2,683 | 2,236 | 2,254 | 2,683 | 2,236 | 2,254 | 2,683 | |
| radius in mm | 125 | 150 | 125 | 126 | 150 | 125 | 126 | 150 | |
| run-up in sec | 22 | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|--|
| capacity in ml | 5 | 15 | 1.1 – 1.4 | 2.6 – 3.4 | 2.7 – 3 | 9 – 10 | 1.6–5 | 4–7 | 8.5 – 10 | 12 | 15 | 50 | 12 | 50 | 50 | |
| Ø x L in mm | 12 x 75 | 17x100 | 8 x 66 | 13 x 65 | 11 x 66 | 16 x 92 | 13 x 75 | 13x100 | 16 x 100 | 17 x 102 | 17 x 120 | 29 x 115 | 17 x 100 | 29 x 115 | 29 x 107 | |
| Cat. No. | 0553 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | | | | 0509 | 0513 | - | - | 0546 | |
|  rotor Cat. No. 1418 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| |  |  |  | | |  |  |  |  |  |  |  |  |  | | |
| Cat. No. | 1467 | 1467 | 1467 | | | 1467 | | | | | 1468 | 1467 | 1468 | | | |
| boring Ø x L in mm | 17.4 x 91 | | | | | | | | | | | | 30.2 x 92 | 17.4 x 91 | 30.2 x 92 | |
| tubes per rotor | 32 | | | | | | | | | | | | 8 | 32 | 8 | |
| max. RCF ²⁾ | 2,182 | 2,540 | 2,182 | | | 2,540 | 2,182 | 2,612 | 2,540 | | 2,594 | 2,486 | 2,540 | 2,486 | | |
| radius in mm | 122 | 142 | 122 | | | 142 | 122 | 146 | 142 | | 145 | 139 | 142 | 139 | | |
| run-up in sec | 36 | | | | | | | | | | | | | | | |
| run-down in sec, braked | 43 | | | | | | | | | | | | | | | |

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⁾ 6-place adapter set for conical 50 ml tubes with screw cap.

















Angle rotor, 6-place



illustrated with 6-place
adapter set 1646

✂ 35° n = 6,000 min⁻¹ max. RCF 4,226
Cat. No. 1620A

| | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 0.5 | 1.5 | 2.0 | 3 | 15 | 50 | 94 | 7.5 – 8.5 | 9 – 10 | 10 | 8.5 – 10 |
| Ø x L in mm | 10.7x36 | 11 x 38 | | 10 x 60 | 17 x 100 | 34 x 100 | 38 x 102 | 15 x 92 | 16 x 92 | 15 x 102 | 16 x 100 |
| Cat. No. | Pediatric | 2078 | 0536 | - | 0518 ²⁾ | 0521 ²⁾ | 0549 | blood / urine tubes | | | |
|  rotor Cat. No. 1620A |  |  |  |  |  |  |  |  |  |  |  |
| |  | | | |  |  | |  | | | |
| Cat. No. | 1449 | | | | 1451 | 1463 | - | 1451 | | | |
| boring Ø x L in mm | 11.4 x 39 | | | | 17.5 x 92 | 35 x 89 | 38.6 x 90.2 | 17.5 x 92 | | | |
| tubes per rotor | 24 | | | | 6 | | | | | | |
| max. RCF ²⁾ | 4,105 | | | | 3,904 | 4,146 | 4,226 | 3,904 | | | |
| radius in mm | 102 | | | | 97 | 103 | 105 | 97 | | | |
| run-up in sec | 19 | | | | | | | | | | |
| run-down in sec, braked | 22 | | | | | | | | | | |

| | | | | | | | | |
|--|---|---|---|---|---|---|---|---|
| capacity in ml | 5 | 15 | 50 | | 10 | 30 | 50 | 85 |
| Ø x L in mm | 17 x 59 | 17 x 120 | 29 x 115 | | 16 x 80 | 26 x 95 | 29 x 107 | 38 x 106 |
| Cat. No. | - | 0509 | 0513 | | - | 0545 | 0546 | 0547 |
|  rotor Cat. No. 1620A |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  | |
| Cat. No. | 1476 | 1466 | 1454 | 1646 ⁸⁾ | 1448 | 1447 | 1446 | - |
| boring Ø x L in mm | 17 x 51 | 17 x 106 | 29.8 x 97 | - | 16.5 x 74 | 26 x 85 | 29 x 92 | 38.6 x 90.2 |
| tubes per rotor | 6 | | 3 | 6 | 12 | 6 | | |
| max. RCF ²⁾ | 3,824 | 3,985 | | | 3,904 | 3,824 | 4,025 | 4,226 |
| radius in mm | 95 | 99 | | | 97 | 95 | 100 | 105 |
| run-up in sec | 19 | | | | | | | |
| run-down in sec, braked | 22 | | | | | | | |

ROTORS

Angle rotor, 12-place



✂ 35° n = 6,000 min⁻¹ max. RCF 4,146
Cat. No. 1613


















Cyto rotor, 6-place














n = 4,000 min⁻¹ max. RCF 2,039
Cat. No. (without carriers) 1626

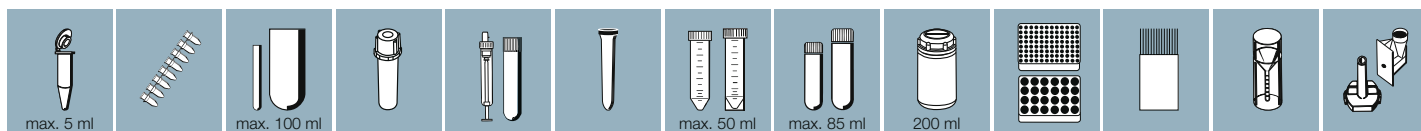
illustrated with carriers 1660 and
lids 1661 for cyto chambers

For detailed information on
the comprehensive Hettich
cyto system please turn to the
pages 138-143.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|--|--|---|---|---|---|---|
| capacity in ml | 0.5 | 4 | 5 | 6 | 15 | 1.1 – 1.4 | 2.6 – 3.4 | 2.7 – 3 | 4.5 – 5 | 4.9 | 7.5 – 8.5 | 9 – 10 |
| Ø x L in mm | 10.7 x 36 | 10 x 88 | 12 x 75 | 12 x 82 | 17 x 100 | 8 x 66 | 13 x 65 | 11 x 66 | 11 x 92 | 13 x 90 | 15 x 92 | 16 x 92 |
| Cat. No. | Pediatric | - | 0553 ²⁾ | 0501 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | | |
|  rotor Cat. No. 1613 |  |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  | | |  | | | | | | |
| Cat. No. | 2 x 1063-6 (6 St.) | 6305 | 1054-A | | - | 1054-A | | | - | | | |
| boring Ø x L in mm | 11 x 35 | 11.5 x 67.5 | 13.5 x 60 | | 17.7 x 88 | 13.5 x 60 | | | 17.7 x 88 | | | |
| tubes per rotor | 12 | | | | | | | | | | | |
| max. RCF ²⁾ | 2,777 | 3,502 | 3,300 | | 4,146 | 3,300 | | | 4,146 | | | |
| radius in mm | 69 | 87 | 82 | | 103 | 82 | | | 103 | | | |
| run-up in sec | 13 | | | | | | | | | | | |
| run-down in sec, braked | 15 | | | | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|--|---|
| capacity in ml | 10 | 1.6 – 5 | 4 – 7 | 8 | 8.5 – 10 | 5 | 15 |
| Ø x L in mm | 15 x 102 | 13 x 75 | 13 x 100 | 16 x 125 | 16 x 100 | 17 x 59 | 17 x 120 |
| Cat. No. | blood collection / urine tubes | | | | | - | 0509 |
|  rotor Cat. No. 1613 |  |  |  |  |  |  |  |
| | |  |  | | |  | |
| Cat. No. | - | 1054-A | 1058 | - | | 1064 | - |
| boring Ø x L in mm | 17.7 x 88 | 13.5 x 60 | 13.5 x 79 | 17.7 x 88 | | 17 x 25 | 17.7 x 88 |
| tubes per rotor | 12 | | | 6 | 12 | | 6 |
| max. RCF ²⁾ | 4,146 | 3,300 | 4,146 | | | 3,180 | 4,146 |
| radius in mm | 103 | 82 | 103 | | | 79 | 103 |
| run-up in sec | 13 | | | | | | |
| run-down in sec, braked | 15 | | | | | | |

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.



UNIVERSAL 320 / 320 R





Our multitasking centrifuges save space and costs

There are many good reasons for calling these centrifuges UNIVERSAL. Their excellent performance and comprehensive range of accessories enable them to carry out virtually any centrifuging task.

And, since the UNIVERSAL 320 / 320 R can be used for both standard and special applications, they are not only cost-effective, they also save valuable space in the laboratory.



61
60

| TECHNOLOGY | UNIVERSAL 320 | | UNIVERSAL 320 R ^{>)} | | |
|---|---|---------------|----------------------------------|-----------|---------------|
| Benchtop centrifuge, without rotor | classic | | cooled | | |
| Power supply ¹⁾ | 200–240 V 1 ~ | 100–127 V 1 ~ | 200–240 V 1 ~ | 240 V 1 ~ | 115–127 V 1 ~ |
| Frequency | 50–60 Hz | | 50 Hz | 60 Hz | 60 Hz |
| Consumption | 400 VA | | 800 VA | | 950 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 200 ml / 6 x 94 ml | | | | |
|  Max. RPM (speed) | 15,000 min ⁻¹ | | | | |
|  Max. RCF | 21,382 | | | | |
| Running time | 1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key) | | | | |
| Dimensions (H x W x D) | 346 x 401 x 529 mm | | 346 x 407 x 698 mm | | |
| Weight | approx. 31 kg | | approx. 52 kg | | |
| Refrigeration | | | | | |
| Temperature control, infinitely variable | - | | from -20 to +40 °C | | |
| Cat. No. | 1401 | 1401-01 | 1406 | 1406-01 | |

^{*)} Other voltages on request.

^{>)} For a list of further versions of this model, please refer to page 12.

ROTORS

Swing-out rotor, 4-place

Carrier **1565**



illustrated with carriers 1560 with single-hand clamp lock and lids 1561 with bio-containment ⁵⁾



The 1565 carrier is also available without a lid and clamp lock. ¹⁷⁾

↗ 90° n = 4,500 min⁻¹ max. RCF 3,328

Cat. No. (without carriers) 1554

| | | | | | | | | | | | | |
|--|-------------|-------------|----------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------|---------------------------|---------------------------|-------------|
| Capacity in ml | 1.5 | 2.0 | 5 | 5 | 6 | 7 | 9 | 15 | 15 | 25 | 50 | 94 |
| Ø x L in mm | 11x38 | | 17x59 | 12x75 | 12x82 | 12x100 | 14x100 | 17x100 | 18x102 | 24x100 | 34x100 | 38x102 |
| Cat. No. | 2078 | 0536 | - | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | Corex® | 0519 ²⁾ | 0521 ²⁾ | 0549 |
| lid with bio-containment ⁵⁾ Cat. No. 1561 | | | | | | | | | | | | |
| carrier Cat. No. 1560 | | | | | | | | | | | | |
| Cat. No. | 1571 | 1593 | - | 1589 | - | 1588 | 1572 | 1573 | 1574 | 1575 | - | - |
| boring Ø x L in mm | 11.5x39 | 17x52 | - | 13.5x60 | - | 17.5x60 | 18.5x74 | 25.2x66 | 35.2x69 | 38.5x74 | - | - |
| tubes per rotor | 56 | 16 | - | 28 | - | 20 | 16 | 4 | - | - | - | - |
| max. RCF ²⁾ upper/lower | 3,328/2,332 | 3,328 | - | 3,215 | - | 3,215 | 3,260 | 3,056 | 3,147 | 3,260 | - | - |
| radius in mm upper/lower | 147/103 | 147 | - | 142 | - | 142 | 144 | 135 | 139 | 144 | - | - |
| run-up in sec | 28 | | | | | | | | | | | |
| run-down in sec, braked | 31 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | | | | | | |

| | | | | | | | | | | | | |
|--|---------------------------|-------------|----------|-------------|---------------------------------------|-------------|----------|----------|----------|----------|----------|----------|
| Capacity in ml | 100 | 125 | 150 | 200 | 1.1-1.4 | 2.6-3.4 | 4.9 | 2.7-3 | 4.5-5 | 4-5.5 | 7.5-8.5 | 9-10 |
| Ø x L in mm | 44x100 | 51x100 | 51x116 | 56x112 | 8x66 | 13x65 | 13x90 | 11x66 | 11x92 | 15x75 | 15x92 | 16x92 |
| Cat. No. | 0526 ²⁾ | - | - | 0555 | blood collection / urine tubes | | | | | | | |
| lid with bio-containment ⁵⁾ Cat. No. 1561 | | | | | | | | | | | | |
| carrier Cat. No. 1560 | | | | | | | | | | | | |
| Cat. No. | 1576 | 1594 | - | 1589 | - | 1588 | - | - | - | - | - | - |
| boring Ø x L in mm | 45.5x69 | 52x77 | 57x77 | 13.5x60 | - | 17.5x60 | - | - | - | - | - | - |
| tubes per rotor | 4 | 4 | 4 | 28 | - | 20 | - | - | - | - | - | - |
| max. RCF ²⁾ | 3,147 | 3,328 | 3,328 | 3,215 | - | 3,215 | - | - | - | - | - | - |
| radius in mm | 139 | 147 | 147 | 142 | - | 142 | - | - | - | - | - | - |
| run-up in sec | 28 | | | | | | | | | | | |
| run-down in sec, braked | 31 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 1560 cannot be closed with lid 1561.

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

Swing-out rotor, 4-place
























illustrated with carriers 1560
with single-hand clamp lock
and lids 1561 with bio-contain-
ment ⁵⁾



illustrated with
carriers 1560

Cat. No. (without carriers) 1554

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Capacity in ml | 10 | 1.6-5 | 4–7 | 4–7 | 8.5–10 | 12 | 11 | 15 | 30 | 50 | 12 | |
| Ø x L in mm | 15x102 | 13x75 | 13x100 | 16x75 | 16x100 | 17x102 | 16x110 | 17x120 | 25x110 | 29x115 | 17x100 | |
| Cat. No. | blood collection / urine tubes | | | | | | IVF (Nunc®) | 0509 | - | 0513 | - | |
| lid with bio-containment ⁵⁾ Cat. No. 1561 |  |  |  |  |  |  |  |  |  |  |  | |
|  carrier Cat. No. 1560 |  |  | |  | |  |  + E 2109 |  |  |  |  | |
| Cat. No. | 1588 | 1589 | 1588 | | 1591 | 1581 | 1577 | 1595 | 1578 | 1579 | 1581 | |
| boring Ø x L in mm | 17.5x60 | 13.5x60 | 17.5x60 | | 17.5x74 | 17.5x74 | 17x77 | 17x77 | 26x77 | 30x77 | 17.5x74 | |
| tubes per rotor | 20 | 28 | 20 | | 12 | 16 | 8 | 12 | 4 | | 16 | |
| max. RCF ²⁾ | 3,215 | | | | | | 3,260 | 3,328 | | | 3,260 | |
| radius in mm | 142 | | | | | | 144 | 147 | | | 144 | |
| run-up in sec | | | | | | | 28 | | | | | |
| run-down in sec, braked | | | | | | | 31 | | | | | |
| temperature in °C ¹⁾ | | | | | | | -8 | | | | | |

63
62

| | | | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------|---------------------------|
| Capacity in ml | 25 | 30 | 50 | 10 | 30 | 50 | 85 | 94 | 30 |
| Ø x L in mm | 25x90 | 25x110 | 29x115 | 16x80 | 26x95 | 29x107 | 38x106 | 38x102 | 44x105 |
| Cat. No. | - | - | - | - | 0545 | 0546 | 0547 | 0538 ¹³⁾ | 0534 ⁶⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 1561 | | | | | | | | | |
| carrier Cat. No. 1560 | | | | | | | | | |
| Cat. No. | 1582 | 1583 | 1584 | 1585 | 1586 | 1575 | 1587 | | |
| boring Ø x L in mm | 26x65 | 30x77 | 16.5x60 | 26x74 | 29x74 | 38.5x74 | 45x71 | | |
| tubes per rotor | 4 | 20 | 4 | | | | | | |
| max. RCF ²⁾ | 3,328 | 3,215 | 3,260 | | | | 3,192 | | |
| radius in mm | 147 | 142 | 144 | | | | 141 | | |
| run-up in sec | 28 | | | | | | | | |
| run-down in sec, braked | 31 | | | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | | | |

⁶⁾ A rubber stopper for closing the tube is available under Cat. No. 0535.

The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

¹³⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

¹⁷⁾ With the E3922 add-on kit and the 1561 lid, the 1565 carrier can be converted at a later time to a 1560 carrier with single-hand clamp lock.

ROTORS

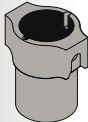






















Swing-out rotor 1554

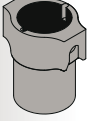
















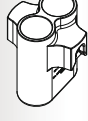








illustrated with
carriers 1559



illustrated with
carriers 1563

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 5 | 6 | 7 | 9 | 15 | 2.6-3.4 | 2.7-3 | 4-5.5 | 4.5-5 | 4.9 | 9-10 | 10 | 1.6-5 | 4-7 | 4-7 |
| Ø x L in mm | 12 x 75 | 12 x 82 | 12 x 100 | 14 x 100 | 17 x 100 | 13 x 65 | 11 x 66 | 15 x 75 | 11 x 92 | 13 x 90 | 16 x 92 | 10 x 102 | 13 x 75 | 13 x 100 | 16 x 75 |
| Cat. No. | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | | | | | |
|  carrier Cat. No. 1559 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  | | |  | |  | |  | |  | |  | |  | |
| Cat. No. | 1486 | | | 1482A | | 1486 | | 1482A | | 1486 | | 1482A | | 1486 | |
| boring Ø x L in mm | 13.4 x 57.5 | | | 17.5 x 81 | | 13.4 x 57.5 | | 17.5 x 81 | | 1.4 x 57.5 | | 17.5 x 81 | | 13.4 x 57.5 | |
| tubes per rotor | 20 | | | 16 | | 20 | | 16 | | 20 | | 16 | | 20 | |
| max. RCF ²⁾ | 3,192 | | | 3,260 | | 3,192 | | 3,124 | | 3,192 | | 3,260 | | 3,192 | |
| radius in mm | 141 | | | 144 | | 141 | | 138 | | 141 | | 144 | | 141 | |
| run-up in sec | 28 | | | | | | | | | | | | | | |
| run-down in sec, braked | 31 | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|--|
| Capacity in ml | 8.5 – 10 | 8 | 12 | 15 | 50 | 12 | 50 |
| Ø x L in mm | 16 x 100 | 16 x 125 | 17 x 102 | 17 x 120 | 29 x 115 | 17 x 100 | 29 x 115 |
| Cat. No. | blood- / urine tubes | | 0509 | 0513 | - | - | - |
|  carrier Cat. No. 1559 |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  |
| Cat. No. | 1482A | 1482A⁴⁾ | 1487 | 1483A | 1484 | 1482A | 1484⁴⁾ |
| boring Ø x L in mm | 17.5 x 81 | | 17.5 x 74 | 17 x 100 | 30 x 98 | 17.5 x 81 | 30 x 98 |
| tubes per rotor | 16 | | 12 | 16 | 4 | 16 | 4 |
| max. RCF ²⁾ | 3,260 | 3,328 | 3,147 | 3,351 | 3,305 | 3,260 | 3,305 |
| radius in mm | 144 | 147 | 139 | 148 | 146 | 144 | 146 |
| run-up in sec | 28 | | | | | | |
| run-down in sec, braked | 31 | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | |

| | | | | |
|--|---|---|---|---|
| Capacity in ml | 12 | 15 | 50 | 50 |
| Ø x L in mm | 17 x 100 | 17 x 120 | 29 x 115 | 29 x 115 |
| Cat. No. | - | 0509 | 0513 | - |
|  carrier Cat. No. 1563 |  |  |  |  |
| |  |  |  |  |
| Cat. No. | 1592 | | - | - |
| boring Ø x L in mm | 17 x 87 | 17.5 x 74 | 30 x 87 | 30 x 87 |
| tubes per rotor | 8 | | | |
| max. RCF ²⁾ | 3,260 | | | |
| radius in mm | 144 | | | |
| run-up in sec | 28 | | | |
| run-down in sec, braked | 31 | | | |
| temperature in °C ¹⁾ | -8 | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 ³⁾ is 4,000.















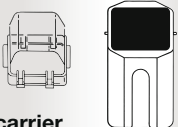













⁴⁾ Please remove the inserts.






























ROTORS

Swing-out rotor 1494



illustrated with
carriers 1427

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 1.5 | 2.0 | 1 | 3 | 5 | 6 | 7 | 9 | 15 | 25 | 50 | 1.1–1.4 | 2.6–3.4 | 2.7–3 |
| Ø x L in mm | 11x38 | 11x38 | 6x45 | 10x60 | 12x75 | 12x82 | 12x100 | 14x100 | 17x100 | 24x100 | 34x100 | 8x66 | 13x65 | 11x66 |
| Cat. No. | 2078 | 0536 | Rhesus | - | 0553²⁾ | 0501²⁾ | 0578²⁾ | 0500²⁾ | 0518²⁾ | 0519²⁾ | 0521²⁾ | blood / urine tubes | | |
| lid Cat. No. 1421 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 1427 |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 5277 | 1357 | 1327 | 1732 | 5229 | 5230 | 5237 | 5231 | 5232 | 5233 | 5278 | 1732 | 5229 | |
| boring Ø x L in mm | 11.5x38 | 6.5x23 | 10.5x23 | 13.4x58 | 12.5x44 | 12.4x87 | 15x73 | 17.8x87 | 25.5x87 | 35.5x87 | 9x41 | 13.4x58 | 12.5x44 | |
| tubes per rotor | 36 | 120 | 48 | 32 | 48 | 48 | 24 | | 8 | 4 | 48 | 32 | 48 | |
| max. RCF ²⁾ | 4,109 | 4,081 | 4,053 | 4,025 | 4,053 | 3,941 | | | | | 4,109 | 4,025 | 4,053 | |
| radius in mm | 147 | 146 | 145 | 144 | 145 | 141 | | | | | 147 | 144 | 145 | |
| run-up in sec | 30 | | | | | | | | | | | | | |
| run-down in sec, braked | 32 | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -7 | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 4–5.5 | 4.5–5 | 4.9 | 7.5–8.5 | 9–10 | 1.6–5 | 4–7 | | 8.5–10 | 15 | 50 | 25 | 30 | 50 |
| Ø x L in mm | 15x75 | 11x92 | 13x90 | 15x92 | 16x92 | 13x75 | 13x100 | 16x75 | 16x100 | 17x120 | 29x115 | 25x90 | 25x110 | 29x115 |
| Cat. No. | blood collection / urine tubes | | | | | | | | | 0509 | 0513 | - | - | - |
| lid Cat. No. 1421 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 1427 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 5279 | 5230 | 1732 | 5279 | 5271⁴⁾ | 1732 | 5271 | 5231 | 5275 | 5276 | 1731 | 5272 | 5233⁴⁾ | |
| boring Ø x L in mm | 15.6x41 | 12.4x87 | 13.4x58 | 15.6x41 | 17x66 | 13.4x58 | 17x66 | 17.8x87 | 17x90 | 30x90 | 25.5x72 | 25.5x85 | 35.5x87 | |
| tubes per rotor | 20 | 48 | 32 | 20 | | 32 | 20 | 24 | 4 | | 8 | 4 | 4 | |
| max. RCF ²⁾ | 4,109 | 3,941 | 4,025 | 4,109 | 3,969 | 4,025 | 3,969 | 3,941 | 4,165 | 4,053 | 3,969 | 4,025 | 4,053 | |
| radius in mm | 147 | 141 | 144 | 147 | 142 | 144 | 142 | 141 | 149 | 145 | 142 | 144 | 145 | |
| run-up in sec | 30 | | | | | | | | | | | | | |
| run-down in sec, braked | 32 | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -7 | | | | | | | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 ³⁾ is 4,000.





























³⁾ When using these tubes, carrier 1427 cannot be closed with lid 1421.

































⁴⁾ Please remove the inserts.

Swing-out rotor 1494



illustrated with carriers 1481 and
lids 1492 with bio-containment ⁵⁾

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 0.5 | 1.5 | 2.0 | 1 | 3 | 5/6/7 | 9 | 15 | 25 | 50 | 94 | 100 | 1.1–1.4 | 2.7–5 | 2.6–4.9 | |
| Ø x L in mm | 10.7 x 36 | 11 x38 | | 6x45 | 10x60 | 12x75/82/100 | | 14x100 | 17x100 | 24x100 | 34x100 | 38x102 | 44x100 | 8x66 | 11x66/92 | 13x65/90 |
| Cat. No. | Pediatric | 2078 | 0536 | Rhesus | - | 0553 ²⁾ /0501 ²⁾ /0578 ²⁾ | | 0500 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0549 | 0526 ²⁾ | blood / urine tubes | | |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| carrier Cat. No. 1495 |  | |  | |  |  | |  | |  |  |  |  |  |  |  |
| Cat. No. | 1351 | | 1339 | 1343 | 1383 | | 1329 | | 1330 | 1331 | 1396 | 0761 | 1457 | 1383 | | |
| boring Ø x L in mm | 11.2x38 | | 6.5x34 | 10.5x43 | 13.4x48 | | 17.6x91 | | 25.2x87 | 35.2x87 | 38.5x92 | 45.6x98 | 9x47 | 13.4x48 | | |
| tubes per rotor | 20 | | 108 | 36 | 20 | | 16 | | 4 | | | | 28 | 20 | | |
| max. RCF ²⁾ | 3,745 | 3,857 | 4,081 | 4,137 | 4,025 | | 3,997 | | 3,829 | 3,801 | 4,109 | 4,025 | 4,053 | 4,025 | | |
| radius in mm | 134 | 138 | 146 | 148 | 144 | | 143 | | 137 | 136 | 147 | 144 | 145 | 144 | | |
| run-up in sec | 30 | | | | | | | | | | | | | | | |
| run-down in sec, braked | 32 | | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -10 | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 4 – 8.5 | 9–10 | 10 | 1.6–7 | 4–10 | 15 | 30 | 50 | 12 | 25 | 50 | 10 | 30 | 50 | 85 | 30 |
| Ø x L in mm | 15 x 75 / 92 | 16x92 | 15x102 | 13x75/100 | 16x75/100 | 17x120 | 25x110 | 29x115 | 17x100 | 25x90 | 29x115 | 16x80 | 26x95 | 29x107 | 38x106 | 44x105 |
| Cat. No. | blood / urine tubes | | | | | 0509 | - | 0513 | - | - | - | - | 0545 | 0546 | 0547 | 0534 ⁶⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| carrier Cat. No. 1495 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 1459 | 1329 | 1329 ⁴⁾ | 1383 | 1348 | 1347 | 1365 | 1384 | 6311 | 1363 | 6318 | 1348 | 4417 | 4416 | 1396 | 0765 |
| boring Ø x L in mm | 15.6 x 47 | 17.6x91 | | 13.4x48 | 16.5x56 | 17x90 | 26x80 | 30x90 | 17x80 | 26x72 | 29.5x80 | 16.5x56 | 26x83 | 29x93 | 38.5x92 | 45.9x98 |
| tubes per rotor | 16 | | | 20 | 16 | 4 | | | | | | 16 | 4 | | | |
| max. RCF ²⁾ | 4,053 | 3,997 | 4,193 | 4,025 | | | 4,193 | | | 3,689 | 4,193 | 4,025 | 3,857 | 4,137 | 4,109 | 3,997 |
| radius in mm | 145 | 143 | 150 | 144 | | | 150 | | | 132 | 150 | 144 | 138 | 148 | 147 | 143 |
| run-up in sec | 30 | | | | | | | | | | | | | | | |
| run-down in sec, braked | 32 | | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -10 | | | | | | | | | | | | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁶⁾ A rubber stopper for closing the tube is available under Cat. No. 0535.

The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

ROTORS

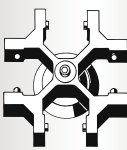













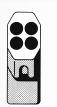





Swing-out rotor, 4-place

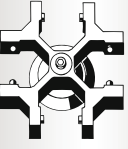












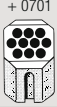


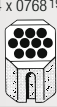










illustrated with
carriers 1369

✂ 90° n = 4,000 min⁻¹ max. RCF 2,665

Cat. No. (without carriers) 1624

| | | | | | | | | | | | | |
|---|---|---------|---|---|---|---|---|--|---|---|---|---|
| Capacity in ml | 5 | | 6 | 7 | 9 | 15 | | 20 | 25 | 45 | 50 | |
| Ø x L in mm | 12x75 | | 12x82 | 12x100 | 14x100 | 17x100 | | 21x100 | 24x100 | 31x100 | 34x100 | |
| Cat. No. | 0553 ²⁾ | | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | | 0518 ²⁾ | | - | 0519 ²⁾ | - | 0521 ²⁾ |
|  rotor Cat. No. 1624 |  | |  |  |  | |  | |  |  |  |  |
| |  with decanting aid | |  with decanting aid | |  | + 0701  |  |  |  |  |  |  |
| Cat. No. | 1369-91 | 1372 | 1369-92 | | 1370 | 1741 | 1369 | 1742 | 1346 | 1745 | 1345 | 1746 |
| boring Ø x L in mm | 12.5x64.4 | 13.5x65 | 12.5x71.5 | | 14.6x74 | 14.6x78 | 17.6x74 | 17.6x78 | 21.5x74 | 26x78 | 32x74 | 35x78 |
| tubes per rotor | 16 | 68 | 16 | | 20 | 40 | 16 | 28 | 8 | | 4 | |
| max. RCF ²⁾ | 2,057 | 2,164 | 2,308 | | | 2,415 | 2,308 | 2,451 | 2,361 | 2,451 | 2,361 | 2,451 |
| radius in mm | 115 | 121 | 129 | | | 135 | 129 | 137 | 132 | 137 | 132 | 137 |
| run-up in sec | 20 | | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -17 | | | | -15 | | -17 | -15 | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 1.1–1.4 | 2.6–3.4 | 4–5.5 | 4.9 | 1.6–5 | 4–7 | 1.6–5 | 4–7 | 4–7 | 8.5–10 | 30 | suspension for cyto accessories |
| Ø x L in mm | 8x66 | 13x65 | 15x75 | 13x90 | 13x75 | 16x75 | 13x75 | 16x75 | 13x100 | 16x100 | 26x95 | |
| Cat. No. | blood collection / urine tubes | | | | | | | | | | 0545 | cyto chambers |
|  rotor Cat. No. 1624 |  |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 1741 | 1742 | 1741 | 1741 | 1369⁴⁾ | 1742 | 1369⁴⁾ | 1370⁴⁾ | 1739 | 1369⁴⁾ | 1745 | 1660 |
| boring Ø x L in mm | 14.6x78 | 17.6x78 | 14.6x78 | 14.6x78 | 17.6 x 74 | 17.6x78 | 17.6 x 74 | 14.6 x 74 | 13.5 x 78 | 17.6x74 | 26x78 | - |
| tubes per rotor | 40 | 28 | 40 | 40 | 16 | 28 | 16 | 20 | 28 | 16 | 8 | 4 |
| max. RCF ²⁾ | 2,415 | 2,325 | 2,451 | 2,129 | 2,361 | 2,325 | 2,361 | | 2,451 | 2,361 | 2,451 | 1,646 |
| radius in mm | 135 | 130 | 137 | 119 | 132 | 130 | 132 | | 137 | 132 | 137 | 92 |
| run-up in sec | 22 | | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -15 | | | | | | | | | -17 | -15 | -16 |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 ³⁾ is 4,000.











⁴⁾ Please remove the inserts.














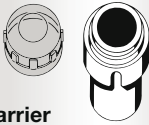









⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

Swing-out rotor 1624



illustrated with carriers 1481 and
lids 1492 with bio-containment⁹⁾

| | | | | | |
|---|---|---|---|---|---|
| Capacity in ml | 1.5 | 2.0 | 1 | 3 | 4 |
| Ø x L in mm | 11 x38 | | 6x45 | 10x60 | 12x60 |
| Cat. No. | 2078 | 0536 | Rhesus | - | - |
|  |  |  |  |  |  |
| |  | |  |  |  |
| carrier Cat. No. 1366 | | | | | |
| Cat. No. | 5277 | | 1357 | 1327 | 1326 |
| boring Ø x L in mm | 11.5x38 | | 6.5x23 | 10.5x23 | 12.5x44 |
| tubes per rotor | 36 | | 120 | 48 | |
| max. RCF ²⁾ | 1,968 | | 1,950 | 1,932 | |
| radius in mm | 110 | | 109 | 108 | |
| run-up in sec | 20 | | | | |
| run-down in sec, braked | 25 | | | | |
| temperature in °C ¹⁾ | -15 | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 0.5 | 1.5 | 2.0 | 1 | 3 | 5/6/7 | 9 | 15 | 25 | 50 | 94 |
| Ø x L in mm | 10.7x36 | 11x38 | | 6x45 | 10x60 | 12x75/82/100 | 14x100 | 17x100 | 24x100 | 34x100 | 38x102 |
| Cat. No. | Pediatric | 2078 | 0536 | Rhesus | - | 0553 ²⁾ /0501 ²⁾ /0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0549 |
| lid with bio-containment ⁹⁾ Cat. No. 1492 |  |  |  |  |  |    |  |  |  |  |  |
|  carrier Cat. No. 1481 |  | | |  |  |  |  |  |  |  |  |
| Cat. No. | 1351 | | | 1339 | 1343 | 1383 | 1329 | 1330 | 1331 | 1396 | |
| boring Ø x L in mm | 11.2x38 | | | 6.5x34 | 10.5x43 | 13.4x48 | 17.6x91 | 25.2x87 | 35.2x87 | 38.5x92 | |
| tubes per rotor | 20 | | | 108 | 36 | 20 | 16 | 4 | | | |
| max. RCF ²⁾ | 2,379 | 2,451 | | 2,594 | 2,630 | 2,558 | 2,540 | 2,433 | 2,415 | 2,612 | |
| radius in mm | 133 | 137 | | 145 | 147 | 143 | 142 | 136 | 135 | 146 | |
| run-up in sec | 20 | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | |
| temperature in °C ¹⁾ | -15 | | | | | | | | | | |

¹⁾ Packed in units of 10 pieces.












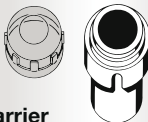










²⁾ This combination permits no Vacutainers made of glass.

ROTORS

Swing-out rotor 1624



illustrated with carriers 1481 and
lids 1492 with bio-containment⁵⁾

| | | | | | | | | | | | |
|---|--|---|---|---|---|--|---|---|---|---|---|
| Capacity in ml | 100 | 1.1–1.4 | 2.7–5 | 2.6–4.9 | 4–8.5 | 9–10 | 10 | 1.6–7 | 4–10 | 5 | 15 |
| Ø x L in mm | 44x100 | 8x66 | 11x66/92 | 13x65/90 | 15x75/92 | 16x92 | 15x102 | 13x75/100 | 16x75/100 | 17x59 | 17x120 |
| Cat. No. | 0526 ²⁾ | blood collection / urine tubes | | | | | | | | - | 0509 |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 1481 |  rubber insert |  |  |  |  |  |  |  |  |  | |
| Cat. No. | 0761 | 1457 | 1383 | 1459 | 1329 | 1329 ⁴⁾ | 1383 | 1348 | 6341 | 1347 | |
| boring Ø x L in mm | 45.9x98 | 9x47 | 13.4x48 | 15.6x47 | 17.6x91 | | 13.4x48 | 16.5x56 | 17x45 | 17x90 | |
| tubes per rotor | 4 | 28 | 20 | 16 | 16 | | 20 | 16 | 12 | 4 | |
| max. RCF ²⁾ | 2,558 | 2,576 | 2,558 | 2,576 | 2,540 | 2,665 | 2,558 | 2,522 | 2,665 | | |
| radius in mm | 143 | 144 | 143 | 144 | 142 | 149 | 143 | 141 | 149 | | |
| run-up in sec | 20 | | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | | |
| temperature in °C ¹⁾ | -15 | | | | | | | | | | |

| | | | | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|
| Capacity in ml | 50 | 12 | 25 | 30 | 50 | 10 | 30 | 50 | 85 | 30 |
| Ø x L in mm | 29x115 | 17x100 | 25x90 | 25x110 | 29x115 | 16x80 | 26x95 | 29x107 | 38x106 | 44x105 |
| Cat. No. | 0513 | - | - | - | - | - | 0545 | 0546 | 0547 | 0534⁶⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 1492 | | | | | | | | | | |
| carrier Cat. No. 1481 | | | | | | | | | | |
| | | | | | | | | | | chrome bath tube |
| | | | | | | | | | | rubber insert |
| Cat. No. | 1384 | 6311 | 1363 | 1365 | 6318 | 1348 | 4417 | 4416 | 1396 | 0765 |
| boring Ø x L in mm | 30x90 | 17x80 | 26x72 | 26x80 | 29.5x80 | 16.5x56 | 26x83 | 29x93 | 38.5x92 | 45.9x98 |
| tubes per rotor | 4 | | | | | 16 | 4 | | | |
| max. RCF ²⁾ | 2,665 | 2,343 | 2,665 | 2,665 | 2,522 | 2,451 | 2,630 | 2,612 | 2,540 | |
| radius in mm | 149 | 131 | 149 | 149 | 141 | 137 | 147 | 146 | 142 | |
| run-up in sec | 20 | | | | | | | | | |
| run-down in sec, braked | 25 | | | | | | | | | |
| temperature in °C ¹⁾ | -15 | | | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 ³⁾ is 4,000.

⁴⁾ Please remove the inserts.

⁵⁾ Please remove the inserts.

⁶⁾ Please remove the inserts.




















Swing-out rotor, 4-place























illustrated with carriers 1490 and
lids 1492 with bio-containment⁵⁾

✂ 90° n = 4,500 min⁻¹ max. RCF 3,328

Cat. No. (without carriers) 1324

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 0.5 | 1.5 | 2.0 | 1 | 3 | 4 | 5 | 6 | 7 | 9 | 15 | 25 |
| Ø x L in mm | 10.7x36 | 11x38 | | 6x45 | 10x60 | 10x88 | 12x75 | 12x82 | 12x100 | 14x100 | 17x100 | 24x100 |
| Cat. No. | Pediatric | 2078 | 0536 | Rhesus | - | - | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | 0519 ²⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 1490 |  | | |  |  | |  | |  | |  | |
| Cat. No. | 1351 | | | 1339 | 1343 | | 1383 | | | 1329 | | 1330 |
| boring Ø x L in mm | 11.2x38 | | | 6.5x34 | 10.5x43 | | 13.4x48 | | | 17.6x91 | | 25.2x87 |
| tubes per rotor | 20 | | | 108 | 36 | | 20 | | | 16 | | 4 |
| max. RCF ²⁾ | 2,966 | 3,056 | | 3,237 | 3,283 | | 3,192 | | | 3,170 | | 3,034 |
| radius in mm | 131 | 135 | | 143 | 145 | | 141 | | | 140 | | 134 |
| run-up in sec | 27 | | | | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|--|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 50 | 94 | 100 | 1.1–1.4 | 2.6–3.4 | 4.9 | 2.7–3 | 4.5–5 | 4–5.5 | 7.5–8.5 | 9–10 | 10 |
| Ø x L in mm | 34x100 | 38x102 | 44x100 | 8x66 | 13x65 | 13x90 | 11x66 | 11x92 | 15x75 | 15x92 | 16x92 | 15x102 |
| Cat. No. | 0521 ²⁾ | 0549 | 0526 ²⁾ | blood collection / urine tubes | | | | | | | | |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 1490 |  |  |  rubber insert |  |  | | |  | | |  | |
| Cat. No. | 1331 | 1396 | 0761 | 1457 | 1383 | | | | 1459 | | 1329 | 1329 ⁴⁾ |
| boring Ø x L in mm | 35.2x87 | 38.5x92 | 45.9x100.5 | 9x47 | 13.4x48 | | | | 15.6x47 | | 17.6x91 | |
| tubes per rotor | 4 | | | 28 | 20 | | | | 16 | | | |
| max. RCF ²⁾ | 3,011 | 3,260 | 3,192 | 3,215 | 3,192 | | | | 3,215 | | 3,170 | 3,328 |
| radius in mm | 133 | 144 | 141 | 142 | 141 | | | | 142 | | 140 | 147 |
| run-up in sec | | | | | | 27 | | | | | | |
| run-down in sec, braked | | | | | | 30 | | | | | | |
| temperature in °C ¹⁾ | | | | | | -6 | | | | | | |






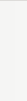





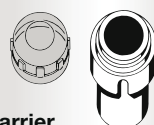









⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.













⁶⁾ A rubber stopper for closing the tube is available under Cat. No. 0535.

The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

ROTORS

Swing-out rotor 1324

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 1.6–5 | 4–7 | 4–7 | 8.5–10 | 5 | 15 | 30 | 50 | 12 | 25 | 30 |
| Ø x L in mm | 13x75 | 13x100 | 16x75 | 16x100 | 17x59 | 17x120 | 25x110 | 29x115 | 17x100 | 25x90 | 25x110 |
| Cat. No. | blood / urine tubes | | | | - | 0509 | | - | 0513 | - | - |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |  ³⁾ |  |  |  |  |
|  carrier Cat. No. 1490 |  | |  | |  |  |  |  |  |  |  |
| Cat. No. | 1383 | | 1348 | | 6341 | 1347 | 1356 | 1365 | 1384 | 6311 | 1363 |
| boring Ø x L in mm | 13.4x48 | | 16.5x56 | | 17x45 | 17x90 | 17x107 | 26x80 | 30x90 | 17x80 | 26x72 |
| tubes per rotor | 20 | | 16 | | 12 | 4 | 12 | 4 | | | |
| max. RCF ²⁾ | 3,192 | | 3,147 | | 3,328 | | | | | 2,920 | 3,328 |
| radius in mm | 141 | | 139 | | 147 | | | | | 129 | 147 |
| run-up in sec | 27 | | | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | | | | | | |

| | | | | | | |
|--|---|---|---|---|---|---|
| Capacity in ml | 50 | 10 | 30 | 50 | 85 | 30 |
| Ø x L in mm | 29x115 | 16x80 | 26x95 | 29x107 | 38x106 | 44x105 |
| Cat. No. | - | - | 0545 | 0546 | 0547 | 0534 ⁶⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 1492 |  |  |  |  |  |  |
| carrier Cat. No. 1490 |  |  |  |  |  |  |
| Cat. No. | 6318 | 1348 | 4417 | 4416 | 1396 | 0765 |
| boring Ø x L in mm | 29.5x80 | 16.5x56 | 26x83 | 29x93 | 38.5x92 | 45.9x100.5 |
| tubes per rotor | 4 | 16 | 4 | | | |
| max. RCF ²⁾ | 3,328 | 3,147 | 3,056 | 3,283 | 3,260 | 3,170 |
| radius in mm | 147 | 139 | 135 | 145 | 144 | 140 |
| run-up in sec | 27 | | | | | |
| run-down in sec, braked | 30 | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 ³⁾ is 4,000.




















³⁾ When using these tubes, carrier 1490 cannot be closed with lid 1492.


















⁴⁾ Please remove the inserts.

Swing-out rotor 1324



illustrated with
carriers 1398

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 5 | 6 | 7 | 9 | 15 | 2.6–3.4 | 2.7–3 | 4–5.5 | 4.5–5 | 4.9 | 9–10 | 10 |
| Ø x L in mm | 12x75 | 12x82 | 12x100 | 14x100 | 17x100 | 13x65 | 11x66 | 15x75 | 11x92 | 13x90 | 16x92 | 15x102 |
| Cat. No. | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  | | |  | |  | | + 2x0716  | |  | |  |
| carrier Cat. No. 1398 | | | | | | | | | | | | |
| Cat. No. | 1486 | | | 1482A | | 1486 | | 1482A | 1486 | | 1482A | |
| boring Ø x L in mm | 13.4x57.5 | | | 17.5x81 | | 13.4x57.5 | | 17.5x81 | 13.4x57.5 | | 17.5x81 | |
| tubes per rotor | 20 | | | 16 | | 20 | | 16 | 20 | | 16 | |
| max. RCF ²⁾ | 3,147 | | | 3,192 | | 3,147 | | 2,875 | 3,147 | | 3,192 | |
| radius in mm | 139 | | | 141 | | 139 | | 127 | 139 | | 141 | |
| run-up in sec | 27 | | | | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 1.6–5 | 4–7 | 4–7 | 8.5 - 10 | 12 | 15 | 50 | 12 | 50 |
| Ø x L in mm | 13x75 | 13x100 | 16x75 | 16 x 100 | 17x102 | 17x120 | 29x115 | 17x100 | 29x115 |
| Cat. No. | blood- / urine tubes | | | | | 0509 | 0513 | - | - |
|  |  |  |  |  |  |  |  |  |  |
| carrier Cat. No. 1398 |  | | + 0716  | |  |  |  |  |  |
| Cat. No. | 1486 | 1482A | 1487 | 1483A | 1484 | 1482A | 1484⁴⁾ | 1482A | 1484⁴⁾ |
| boring Ø x L in mm | 13.4x57.5 | 17.5x81 | 17.5x74 | 17x100 | 30x98 | 17.5x81 | 30x98 | 17.5x81 | 30x98 |
| tubes per rotor | 20 | 16 | 12 | 16 | 4 | 16 | 4 | 16 | 4 |
| max. RCF ²⁾ | 3,147 | 3,034 | 3,102 | 3,305 | 3,260 | 3,192 | 3,260 | 3,192 | 3,260 |
| radius in mm | 139 | 134 | 137 | 146 | 144 | 141 | 144 | 141 | 144 |
| run-up in sec | 27 | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁶⁾ A rubber stopper for closing the tube is available under Cat. No. 0535.

The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

ROTORS

Swing-out rotor, 6-place



↘ 90° n = 4,000 min⁻¹ max. RCF 2,701
Cat. No. (with carriers) 1619

Swing-out rotor, 8-place



↘ 90° n = 4,000 min⁻¹ max. RCF 2,415
Cat. No. (without carriers) 1611

| | | |
|--|---------------|-------------|
| Capacity in ml | 15 | 50 |
| Ø x L in mm | 17x120 | 29x115 |
| Cat. No. | 0509 | 0513 |
| rotor Cat. No. 1619 | | |
| | | |
| Cat. No. | 1462-A | - |
| boring Ø x L in mm | 17x84 | 30x87.5 |
| tubes per rotor | 6 | |
| max. RCF ²⁾ | 2,701 | |
| radius in mm | 151 | |
| run-up in sec | 20 | |
| run-down in sec, braked | 22 | |
| temperature in °C ¹⁾ | -15 | |

| | | | | | | | | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------|--------------------------|---------------------------------------|-------------|-------------|---------------|-------------|---------------|-------------|-------|--------|
| Capacity in ml | 5 | 6 | 7 | 10 | 15 | 2.6–3.4 | 2.7–3 | 4–5.5 | 4.5–5 | 7.5–8.5 | 1.6–5 | 4–7 | 4–7 | 8.5–10 |
| Ø x L in mm | 12x75 | 12x82 | 12x100 | 13x100 | 17x100 | 13x65 | 11x66 | 15x75 | 11x92 | 15x92 | 13x75 | 13x100 | 16x75 | 16x100 |
| Cat. No. | 0553²⁾ | 0501²⁾ | 0578²⁾ | - | 0518²⁾ | blood collection / urine tubes | | | | | | | | |
| rotor Cat. No. 1611 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Cat. No. | 1131-A | 1643 | 1643 | 1644 | 1131-A | 1132-A | 1643 | 1644 | 1131-A | 1643 | 1132-A | 1644 | | |
| boring Ø x L in mm | 13x53 | 13.2x81 | 13.2x81 | 17.5x81 | 13x53 | 17.5x53 | 13.2x81 | 17.5x81 | 13x53 | 13.2x81 | 17.5x53 | 17.5x81 | | |
| tubes per rotor | 8 | | | | | | | | | | | | | |
| max. RCF ²⁾ | 1,914 | 2,415 | 2,415 | | 1,914 | | 2,415 | | 1,914 | 2,415 | 1,914 | 2,415 | | |
| radius in mm | 107 | 135 | 135 | | 107 | | 135 | | 107 | 135 | 107 | 135 | | |
| run-up in sec | 20 | | | | | | | | | | | | | |
| run-down in sec, braked | 20 | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -16 | | | | | | | | | | | | | |

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

Swing-out rotor, 8-place


























✂ 45° n = 5,000 min⁻¹ max. RCF 3,857
Cat. No. (with carriers) 1617

Swing-out rotor, 12-place



✂ 55° (with carriers 1127-A)
 ✂ 60° (with carriers 1122)
 ✂ 80° (with carriers 1621)
 n = 5,000 min⁻¹ max. RCF 4,193
Cat. No. (without carriers) 1628

| | | |
|---|---|---|
| Capacity in ml | 15 | 50 |
| Ø x L in mm | 17x120 | 29x115 |
| Cat. No. | 0509 | 0513 |
|  rotor Cat. No. 1617 |  |  |
| |  | |
| Cat. No. | 1462-A | - |
| boring Ø x L in mm | 17x84 | 30x94.5 |
| tubes per rotor | 8 | |
| max. RCF ²⁾ | 3,857 | |
| radius in mm | 138 | |
| run-up in sec | 20 | |
| run-down in sec, braked | 19 | |
| temperature in °C ¹⁾ | -10 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|--|---|---|
| Capacity in ml | 5 | 15 | 2.6–3.4 | 2.7–3 | 4–5.5 | 7.5–8.5 | 1.6–5 | 4–7 | 8.5–10 |
| Ø x L in mm | 12x75 | 17x100 | 13x65 | 11x66 | 15x75 | 15x92 | 13x75 | 16x75 | 16x100 |
| Cat. No. | 0553²⁾ | 0518²⁾ | blood collection / urine tubes | | | | | | |
|  rotor Cat. No. 1628 |  |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  |  |  |
| Cat. No. | 1127-A | 1621 | 1127-A | 1122 | 1621 | 1127-A | 1122 | 1621 | |
| boring Ø x L in mm | 13.2x53 | 17.5x79 | 13.2x53 | 17.5x53 | 17.5x79 | 13.2x53 | 17.5x53 | 17.5x79 | |
| tubes per rotor | 12 | | | | | | | | |
| max. RCF ²⁾ | 3,494 | 4,193 | 3,494 | 3,522 | 4,193 | 3,494 | 3,522 | 4,193 | |
| radius in mm | 125 | 150 | 125 | 126 | 150 | 125 | 126 | 150 | |
| run-up in sec | 16 | | | | | | | | |
| run-down in sec, braked | 16 | | | | | | | | |
| temperature in °C ¹⁾ | -15 | -10 | -15 | -15 | -10 | -15 | -15 | -10 | |

ROTORS

Swing-out rotor, 4-place

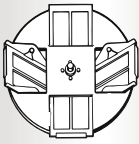

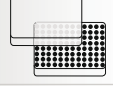




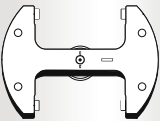

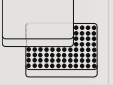










✂ 90° n = 4,000 min⁻¹ max. RCF 1,896
Cat. No. (without carriers) 1645

Swing-out rotor, 2-place



✂ 90° n = 4,000 min⁻¹ max. RCF 2,218
Cat. No. (without carriers) 1460

| T x B x H in mm | 86x128x15/17.5 | 86x128x22 |
|---|--|---|
| Cat. No. | MTP | CP |
|  |   |  |
| rotor Cat. No. 1645 |  | |
| Cat. No. | 4345 | |
| boring Ø x L in mm | - | |
| plates per rotor | 4 | |
| max. RCF ²⁾ | 1,896 | |
| radius in mm | 106 | |
| run-up in sec | 20 | |
| run-down in sec, braked | 19 | |
| temperature in °C ¹⁾ | -16 | |

| T x B x H in mm | 86x128x15/17.5 | 86x128x22 | 86x128x44.5 | 86x128x46 | 86x128x83 | 59x84x11 | 82x124x20 | - |
|---|--|---|---|---|--|---|---|---|
| Capacity in ml | - | | | | | | | 0.2 |
| Cat. No. | MTP | CP | DWP | MS | QP | Microtest plate (Terasaki) | PCR plate, 96 wells | PCR strips |
|  |   |  |  |  |  |  |  |  |
| rotor Cat. No. 1460 |  | | | | | |  |  |
| Cat. No. | 1453-A | | | | | | | 1453-A + 1485 |
| boring Ø x L in mm | - | | | | | | | - |
| plates / strips per rotor | 10 | 8 | 6 | 2 | 2 | 2 | 4 | 2 |
| max. RCF ²⁾ | 2,218 | | | | | | | 24x8 |
| radius in mm | 124 | | | | | | | |
| run-up in sec | 40 | | | | | | | |
| run-down in sec, braked | 45 | | | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 ³⁾ is 4,000.

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

Angle rotor, 12-place





✂ 45° n = 15,000 min⁻¹ max. RCF 16,602
Cat. No. 1612

Angle rotor, 24-place



✂ 40° n = 15,000 min⁻¹ max. RCF 21,382
Cat. No. 1420-B

| | | | | | | |
|--------------------------------------|---|------|-------------|------|--------------------------|-------------|
| Capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 |
| Ø x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | |
| Cat. No. | - | - | - | - | 2078 | 0536 |
| lid incl. |  | | | | | |
| rotor Cat. No. 1612 |  | | | | | |
| Cat. No. | 2024 | | 2023 | | 2031⁷⁾ | - |
| boring Ø x L in mm | 6x40 | | 8x40 | | 10.2x19 | 11.4x39 |
| tubes per rotor | 12 | | | | | |
| max. RCF ²⁾ | 16,602 | | | | | |
| radius in mm | 66 | | | | | |
| run-up in sec | 25 | | | | | |
| run-down in sec, braked | 23 | | | | | |
| temperature in °C ¹⁾ | -10 | | | | | |

| | | | | | | | |
|--|-------------|-------------|--------------------------|-----------|---------------------------|-------------|------------------|
| 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 incl. | | | | | | | |
| rotor Cat. No. 1420-B | | | | | | | |
| Cat. No. | 2024 | 2023 | 2031⁷⁾ | - | 0788²⁰⁾ | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.2x42.6 | 11.2x39 | | |
| tubes per rotor | 24 | | | | | | 12 |
| max. RCF ²⁾ | 21,382 | | | | | | 20,376 |
| radius in mm | 85 | | | | | | 81 |
| run-up in sec | 25 | | | | | | |
| run-down in sec, braked | 24 | | | | | | |
| temperature in °C ¹⁾ | -4 | | | | | | |

Optional for rotor 1420-B:



lid Cat. No. 2425
with bio-containment[®],
autoclavable



lid Cat. No. 2423
with bio-containment[®],
autoclavable, phenol-resistant

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.
²⁰⁾ Packed in units of 15 pieces.

ROTORS

Angle rotor, 30-place



with bio-containment ⁵⁾,
phenol-resistant






























∠ 45° n = 14,000 min⁻¹ max. RCF 21,255
Cat. No. 1689-A

Angle rotor, 8-place



∠ 45° n = 4,500 min⁻¹ max. RCF 3,305
Cat. No. (without adapters) 1418

| | | | | | | | |
|---|-------------|-------------|--------------------------|-----------|---------------------------|-------------|------------------|
| 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 with bio-containment ⁵⁾ incl. | | | | | | | |
| rotor Cat. No. 1689-A | | | | | | | |
| Cat. No. | 2024 | 2023 | 2031⁷⁾ | - | 0788²⁰⁾ | | |
| boring Ø x L in mm | 6x40 | 8x40 | 10.2x19 | 11.2x40.9 | 11.2x39 | | |
| tubes per rotor | 30 | | | | | | 15 |
| max. RCF ²⁾ | 21,255 | | | | | | 20,376 |
| radius in mm | 97 | | | | | | 93 |
| run-up in sec | 35 | | | | | | |
| run-down in sec, braked | 31 | | | | | | |
| temperature in °C ¹⁾ | 0 | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|--|---|---|--|--|---|---|------|
| Capacity in ml | 5 | 15 | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 9–10 | 1.6–5 | 4–7 | 8.5–10 | 12 | 15 | 50 | 12 | 50 | 50 | |
| Ø x L in mm | 12x75 | 17x100 | 8x66 | 13x65 | 11x66 | 16x92 | 13x75 | 13x100 | 16x100 | 17x102 | 17x120 | 29x115 | 17x100 | 29x115 | 29x107 | |
| Cat. No. | 0553 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | | | | | 0509 | 0513 | - | - | 0546 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| | + 1054-A  | + 0716  | + 1054-A  | | | + 0716  | + 1054-A  |  | + 0716  | + 0716  | + 0716  | + E2109  | + E2110-A  | + 0716  |  | |
| Cat. No. | 1467 | 1467 | 1467 | | | 1467 | 1467 | 1467 | 1467 | 1467 | 1467 | 1468 | 1467 | 1468 | | |
| boring Ø x L in mm | 17.4x91 | | | | | | | | | | | 30.2x92 | 17.4x91 | 30.2x92 | | |
| tubes per rotor | 32 | | | | | | | | | | | 8 | 32 | 8 | | |
| max. RCF ²⁾ | 2,762 | 3,215 | 2,762 | | | 3,215 | 2,762 | 3,305 | 3,215 | 3,215 | 3,283 | 3,147 | 3,215 | 3,147 | | |
| radius in mm | 122 | 142 | 122 | | | 142 | 122 | 146 | 142 | | 145 | 139 | 142 | 139 | | |
| run-up in sec | 30 | | | | | | | | | | | | | | | |
| run-down in sec, braked | 31 | | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -11 | | | | | | | | | | | | | | | |

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

















Angle rotor, 6-place



















illustrated with 6-place
adapter set 1646

✶ 35° n = 9,000 min⁻¹
Cat. No. 1620A

max. RCF 9,509

| | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|
| Capacity in ml | 0.5 | 1.5 | 2.0 | 3 | 15 | 50 | 94 | 7.5–8.5 | 9–10 | 10 | 8.5–10 |
| Ø x L in mm | 10.7x36 | 11x38 | | 10x60 | 17x100 | 34x100 | 38x102 | 15x92 | 16x92 | 15x102 | 16x100 |
| Cat. No. | Pediatric | 2078 | 0536 | - | 0518 ²⁾ | 0521 ²⁾ | 0549 | blood- / urine tubes | | | |
|  rotor Cat. No. 1620A |  |  |  |  |  |  |  |  |  |  |  |
| |  | | | |  |  | |  | | | |
| Cat. No. | 1449 | | | | 1451 | 1463 | - | 1451 | | | |
| boring Ø x L in mm | 11.4x39 | | | | 17.5x92 | 35x89 | 38.6x90.2 | 17.5x92 | | | |
| tubes per rotor | 24 | | | | 6 | 6 | 6 | 6 | | | |
| max. RCF ²⁾ | 9,237 | | | | 8,784 | 9,327 | 9,509 | 8,784 | | | |
| radius in mm | 102 | | | | 97 | 103 | 105 | 97 | | | |
| run-up in sec | 30 | | | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | | | |
| temperature in °C ¹⁾ | -11 | | | | | | | | | | |

| | | | | | | | | |
|--|---|---|---|---|---|---|---|---|
| Capacity in ml | 5 | 15 | 50 | | 10 | 30 | 50 | 85 |
| Ø x L in mm | 17x59 | 17x120 | 29x115 | | 16x80 | 26x95 | 29x107 | 38x106 |
| Cat. No. | - | 0509 | 0513 | | - | 0545 | 0546 | 0547 |
|  rotor Cat. No. 1620A |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  | |
| Cat. No. | 1476 | 1466 | 1454 | 1646 ⁸⁾ | 1448 | 1447 | 1446 | - |
| boring Ø x L in mm | 17x51 | 17x106 | 29.8x97 | - | 16.5x74 | 26x85 | 29x92 | 38.6x90.2 |
| tubes per rotor | 6 | | 3 | 6 | 12 | 6 | | |
| max. RCF ²⁾ | 8,603 | 8,965 | | | 8,784 | 8,603 | 9,056 | 9,509 |
| radius in mm | 95 | 99 | | | 97 | 95 | 100 | 105 |
| run-up in sec | | | | | 30 | | | |
| run-down in sec, braked | | | | | 30 | | | |
| temperature in °C ¹⁾ | | | | | -11 | | | |

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

⁸⁾ 6-place adapter set for conical 50 ml tubes with screw cap.

















²⁰⁾ Packed in units of 15 pieces.















ROTORS

Angle rotor, 12-place



✶ 35° $n = 6,000 \text{ min}^{-1}$ max. RCF 4,146
Cat. No. 1613

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|--|---|---|---|---|
| Capacity in ml | 0.5 | 1.5 | 2.0 | 4 | 5 | 6 | 15 | 1.1 - 1.4 | 2.6 - 3.4 | 2.7 - 3 | 4.5 - 5 |
| Ø x L in mm | 10.7 x 36 | 11 x 38 | | 10 x 88 | 12 x 75 | 12 x 82 | 17 x 100 | 8 x 66 | 13 x 65 | 11 x 66 | 11 x 92 |
| Cat. No. | Pediatric | 2078 | 0536 | - | 0553 ²⁾ | 0501 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | |
|  rotor Cat. No. 1613 |  |  |  |  |  |  |  |  |  |  |  |
| | |  | |  |  | | |  | | | |
| Cat. No. | 2 x 1063-6 (6 pcs.) | | | 6305 | 1054-A | | - | 1054-A | | - | |
| boring Ø x L in mm | 11 x 35 | | | 11.5 x 67.5 | 13.5 x 60 | | 17.7 x 88 | 13.5 x 60 | | 17.7 x 88 | |
| tubes per rotor | 12 | | | | | | | | | | |
| max. RCF ²⁾ | 2,777 | 2,737 | | 3,502 | 3,300 | | 4,146 | 3,300 | | 4,146 | |
| radius in mm | 69 | 68 | | 87 | 82 | | 103 | 82 | | 103 | |
| run-up in sec | 15 | | | | | | | | | | |
| run-down in sec, braked | 15 | | | | | | | | | | |
| temperature in °C ¹⁾ | -16 | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|--|---|---|---|
| Capacity in ml | 4.9 | 7.5 – 8.5 | 9 – 10 | 10 | 1.6 – 5 | 4 – 7 | 8 | 8.5 – 10 | 5 | 15 |
| Ø x L in mm | 13 x 90 | 15 x 92 | 16 x 92 | 15 x 102 | 13 x 75 | 13 x 100 | 16 x 125 | 16 x 100 | 17 x 59 | 17 x 120 |
| Cat. No. | blood collection / urine tubes | | | | | | | - | 0509 | |
|  rotor Cat. No. 1613 |  |  |  |  |  |  |  |  |  |  |
| | | | | |  |  | | |  | |
| Cat. No. | - | | | | 1054-A | 1058 | - | | 1064 | - |
| boring Ø x L in mm | 17.7 x 88 | | | | 13.5 x 60 | 13.5 x 79 | 17.7 x 88 | | 17 x 25 | 17.7 x 88 |
| tubes per rotor | 12 | | | | | | 6 | 12 | | 6 |
| max. RCF ²⁾ | 4,146 | | | | 3,300 | 4,146 | | | 3,180 | 4,146 |
| radius in mm | 103 | | | | 82 | 103 | | | 79 | 103 |
| run-up in sec | 15 | | | | | | | | | |
| run-down in sec, braked | 15 | | | | | | | | | |
| temperature in °C ¹⁾ | -16 | | | | | | | | | |

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

²⁹⁾ Set of 6 carriers. For accommodating conical 15 ml tubes with screw cap, remove 6 opposite carriers from rotor No. 1615 and replace them with adapters No. 1647.

Angle rotor, 12-place
































✂ 35° n = 12,000 min⁻¹ max. RCF 16,582
Cat. No. 1615

Hematocrit rotor, 24-place



n = 14,150 min⁻¹ max. RCF 19,027
Cat. No. 1650-A

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|--|---|---|---|---|---|
| Capacity in ml | 0.5 | 1.5 | 2.0 | 4 | 5 | 6 | 15 | 1.1 - 1.4 | 2.6 - 3.4 | 2.7 - 3 | 4.5 - 5 | 4.9 | 7.5 - 10 |
| Ø x L in mm | 10.7 x 36 | 11 x 38 | | 10 x 88 | 12 x 75 | 12 x 82 | 17 x 100 | 8 x 66 | 13 x 65 | 11 x 66 | 11 x 92 | 13 x 90 | 15/16 x 92 |
| Cat. No. | Pediatric | 2078 | 0536 | - | 0553 ²⁾ | 0501 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | |
|  rotor Cat. No. 1615 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  | | |  |  | |  | | | | | | |
| Cat. No. | 2 x 1063-6 (6 pcs.) | | | 6305 | 1054-A | | - | 1054-A | | - | | | |
| boring Ø x L in mm | 11 x 35 | | | 11.5 x 67.5 | 13.5 x 60 | | 17.7 x 88 | 13.5 x 60 | | 17.7 x 88 | | | |
| tubes per rotor | 12 | | | | | | | | | | | | |
| max. RCF ²⁾ | 11,108 | 10,947 | | 14,006 | 13,201 | | 16,582 | 13,201 | | 16,582 | | | |
| radius in mm | 69 | 68 | | 87 | 82 | | 103 | 82 | | 103 | | | |
| run-up in sec | | | | | | | 40 | | | | | | |
| run-down in sec, braked | | | | | | | 40 | | | | | | |
| temperature in °C ¹⁾ | | | | | | | -2 | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Capacity in ml | 10 | 1.6 – 5 | 4 – 7 | 8 – 10 | 5 | 15 |
| Ø x L in mm | 15 x 102 | 13 x 75 | 13 x 100 | 16 x 100/125 | 17 x 59 | 17 x 120 |
| Cat. No. | blood-/urin tubes | | | | - | 0509 |
|  rotor Cat. No. 1615 |  |  |  |  |  |  |
| | |  |  | |  |  |
| Cat. No. | - | 1054-A | 1058 | - | 1064 | 1647²⁹⁾ |
| boring Ø x L in mm | 17.7 x 88 | 13.5 x 60 | 13.5 x 79 | 17.7 x 88 | 17 x 25 | 17 x 104 |
| tubes per rotor | 12 | | | 12 | 6 | 6 |
| max. RCF ²⁾ | 16,582 | 13,201 | 16,582 | | 12,718 | 15,455 |
| radius in mm | 103 | 82 | 103 | | 79 | 96 |
| run-up in sec | 40 | | | | | |
| run-down in sec, braked | 40 | | | | | |
| temperature in °C ¹⁾ | -2 | | | | | |

| | |
|--|----------|
| standard capillaries | - |
| Cat. No. | - |
| lid as evaluation disk incl. | |
| rotor Cat. No. 1650-A | |
| Cat. No. | - |
| boring Ø x L in mm | - |
| capillaries per rotor | 24 |
| max. RCF ²⁾ | 19,027 |
| radius in mm | 85 |
| run-up in sec | 13 |
| run-down in sec, braked | 9 |
| temperature in °C ¹⁾ | -1 |

Suitable for ROTOFIX 32 A and UNIVERSAL 320 / 320 R centrifuges

The 1624 (4-place) and 1626 (6-place) rotors allow preparation of top-quality cytological specimens using the proven Hettich method. See Hettich's application notes for cytology, which you can order free of charge.

For laboratories engaged in other areas besides cytology the 1624 rotor has the additional advantage that it can centrifuge tubes as well.

Hettich also offers two 12-place cyto rotors for higher sample throughputs and alternative methods.

The rotors 1515-A and 1520 are easy to insert and remove from the centrifuge without the need for any tools.



Rotor, 4-place

illustrated with carriers 1660
and lids 1661 for cyto chambers

$n = 4,000 \text{ min}^{-1}$
max. RCF 1,646

Cat. No. 1624 (without carriers)



Rotor, 6-place

illustrated with carriers 1660
and lids 1661 for cyto chambers

$n = 4,000 \text{ min}^{-1}$
max. RCF 2,039

Cat. No. 1626 (without carriers)



Rotor, 12-place

with a leaktight lid, illustrated with clips 1524
for different cyto chambers

$n = 2,000 \text{ min}^{-1}$
max. RCF 438

Cat. No. 1515-A (without clips)



Disk rotor, 12-place

illustrated with clips 1524
for different cyto chambers

$n = 2,000 \text{ min}^{-1}$
max. RCF 438

Cat. No. 1520 (without clips)

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



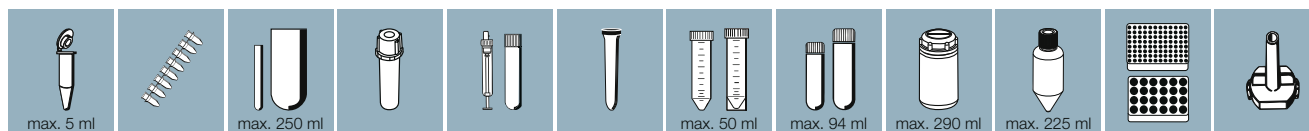
High and narrow,
with two drawers.
Depth 650 mm

Cat. No. 4613-A



High and wide,
with two drawers.
Depth 650 mm

Cat. No. 4615-A



ROTINA 380 / 380 R

High-performance centrifuges deliver separation technology to satisfy the highest standards

Efficiency and safety are key requisites in today's laboratories – whether for research or routine tasks. The ROTINA 380 and 380 R centrifuge models are ideally equipped to take on these challenges.

Samples with capacities of up to 4 x 290 ml can be processed with a max. RCF of 4,863. Should higher speeds be required, angle rotors with a max. RCF of 16,504 for 50 ml tubes or 24,400 for microtitre tubes are available.



| TECHNOLOGY | ROTINA 380 | | ROTINA 380 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 ~ |
| Frequency | 50–60 Hz | | 50–60 Hz | 60 Hz |
| Consumption | 650 VA | 700 VA | 1.300 VA | 1.400 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 290 ml | | | |
| Max. RPM (speed) | 15,000 min ⁻¹ | | | |
| Max. RCF | 24,400 | | | |
| Running time | 1 s – 99 h : 59 min : 59 s, ∞ continuous run, short cycle mode | | | |
| Dimensions (H x W x D) | 418 x 457 x 600 mm | | 418 x 457 x 750 mm | |
| Weight | approx. 51 kg | approx. 58.5 kg | approx. 81 kg | approx. 88.5 kg |
| Refrigeration | | | | |
| temperature control, infinitely variable | - | | from -20 to +40 °C | |
| Cat. No. | 1701 | 1701-01 | 1706 | 1706-01 |

^{*)} Other voltages on request.

^{>)} For a list of further versions of this model, please refer to page 12.























Swing-out rotor, 4-place






























illustrated with carriers 1752 and
lids 1751 with bio-containment ⁵⁾

✂ 90° n = 5,000 min⁻¹ max. RCF 4,863

Cat. No. (without carriers) 1754

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 1.5 | 2.0 | 3 | 4 | 5 | 6 | 7 | 9 | 15 | 20 | 25 | 45 | 50 | 94 | 100 | |
| Ø x L in mm | 11x38 | | 10x60 | 12x60 | 12x75 | 12x82 | 12x100 | 14x100 | 17x100 | 21x100 | 24x100 | 31x100 | 34x100 | 38x102 | 40x115 | |
| Cat. No. | 2078 | 0536 | - | | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | - | 0519 ²⁾ | - | 0521 ²⁾ | 0549 | 0523 ²⁾ | |
| lid with bio-containment ³⁾ Cat. No. 1751 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| Carriers Cat. No. 1752 |  | |  | | | |  | |  | |  | |  | |  | |
| Cat. No. | 1761 | | 1762-A | | | | 1763-A | | 1764 | | 1765 | | 1777 | | 1767 | |
| boring Ø x L in mm | 11.2x39.5 | | 12.5x56 | | | | 17.5x62 | | 25.5x81 | | 35.5x81 | | 38.5x80 | | 41x97 | |
| tubes per rotor | 144 | | 72 | | 96 | | | | 52 | | 24 | | 12 | | 8 | 4 |
| max. RCF ²⁾ upper/lower | 3,494/4,779 | | 4,779 | | 4,668 | | | | 4,668 | | 4,668 | | 4,807 | | 4,640 | |
| radius in mm upper/lower | 125/171 | | 171 | | 167 | | | | 167 | | 167 | | 172 | | 166 | |
| run-up in sec | 42 | | | | | | | | | | | | | | | |
| run-down in sec, braked | 27 | | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | 0 | | | | | | | | | | | | | | | |

85
84

| | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|
| capacity in ml | 100 | 250 | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 4–5.5 | 4.5–5 | 4.5–5 | 4.9 | 4.9 | 7.5–8.5 | 9–10 | 10 | 1.6 – 5 | 4 – 7 |
| Ø x L in mm | 44x100 | 65x115 | 8x66 | 13x65 | 11x66 | 15x75 | 11x92 | 11x92 | 13x90 | 13x90 | 15x92 | 16x92 | 15x102 | 13 x 75 | 13 x 100 |
| Cat. No. | 0526²⁾ | 0530²⁾ | blood collection / urine tubes | | | | | | | | | | | | |
| lid with bio-containment ³⁾ Cat. No. 1751 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Carriers Cat. No. 1752 |  |  |  |  |  |  |  |  |  |  |  | |  | | |
| Cat. No. | 1766 | 1768 | 1781 | 1783-A | 1762-A | 1763-A | 1762-A | 1787 | 1783-A | 1787 | 1763-A | | 1783-A | | |
| boring Ø x L in mm | 45x87 | 66x104.5 | 9x49 | 13.5x54 | 12.5x56 | 17.5x62 | 12.5x56 | 13.2x72 | 13.5x54 | 13.2x72 | 17.5x62 | | 13.5 x 54 | | |
| tubes per rotor | 4 | 4 | 96 | 64 | 96 | 52 | 96 | 76 | 64 | 76 | 52 | | 64 | | |
| max. RCF ²⁾ | 4,640 | | | | | | | | | | 4,668 | | | | |
| radius in mm | 166 | | | | | | | | | | 167 | | | | |
| run-up in sec | | | | | | | | | 42 | | | | | | |
| run-down in sec, braked | | | | | | | | | 27 | | | | | | |
| temperature in °C ¹⁾ | | | | | | | | | 0 | | | | | | |

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














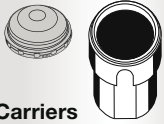












⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.























ROTORS

Swing-out rotor 1754



illustrated with carriers 1752 and lids
1751 with bio-containment ⁵⁾

| | | | | | | | | | | | | | |
|--|---|---|--|---|---|---|---|--|---|---|---|--|---|
| capacity in ml | 4–7 | 4–7 | 8 | 8.5–10 | 5 | 15 | 50 | 12 | 25 | 30 | 50 | 50 | 14 |
| Ø x L in mm | 13x100 | 16x75 | 16x125 | 16x100 | 17x59 | 17x120 | 29x115 | 17x100 | 25x90 | 25x110 | 29x115 | 29x115 | 16.5 x 106 |
| Cat. No. | blood collection / urine tubes | | | | - | 0509 | 0513 | - | | | | 0513 | - |
| lid with bio-containment ⁹⁾ Cat. No. 1751 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  Carriers Cat. No. 1752 |  |  |  24) |  |  |  |  |  |  | |  |  + E2110-A |  |
| Cat. No. | 1787 | 1763-A | | 1763-A | 1738 | 1771-A | 1772-A | 1773 | 1779 | | 1774-A | | 1763-A |
| boring Ø x L in mm | 13.2x72 | 17.5x62 | | 17.5x62 | 17x52 | 17x84 | 30x84 | 17x78 | 26.5x72 | | 30x80 | | 17.5x62 |
| tubes per rotor | 76 | 52 | 12 | 52 | 32 | 36 | 16 | 36 | 20 | | 16 | | 52 |
| max. RCF ²⁾ | 4,668 | | | | | 4,863 | | | 4,696 | 4,528 | | 4,752 | 4,668 |
| radius in mm | 167 | | | | | 174 | | | 168 | 162 | | 170 | 167 |
| run-up in sec | 42 | | | | | | | | | | | | |
| run-down in sec, braked | 27 | | | | | | | | | | | | |
| temperature in °C ¹⁾ | 0 | | | | | | | | | | | | |

| | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|--|---|---|
| capacity in ml | 10 | 30 | 50 | 85 | 94 | 175 | 175 | 200 | 225 | 250 | 290 |
| Ø x L in mm | 16x80 | 26x95 | 29x107 | 38x106 | 38x102 | 61x118 | 62x144 | 60x130 | 61x137 | 61x122 | 62x137 |
| Cat. No. | - | 0545 | 0546 | 0547 | 0538 ¹³⁾ | Falcon® | Nalgene® | Nunc® | Falcon® | 5127 ²⁸⁾ | - ²⁸⁾ |
| lid with bio-containment ⁹⁾ Cat. No. 1751 |  |  |  |  |  |  |  |  |  |  |  |
|  Carriers Cat. No. 1752 |  |  |  |  |  |  |  |  |  |  | |
| Cat. No. | 1763-A | 1775 | 1774-A | 1777 | 1777 | 1782 | 1778 | 1778 | 1782 | 1769 | |
| boring Ø x L in mm | 17.5x62 | 26.5x70 | 30x80 | 38.5x80 | 38.5x80 | 62x111 | 62x111 | 62x111 | 62x111 | 62x100 | |
| tubes per rotor | 52 | 24 | 16 | 8 | 8 | 4 | | | | | |
| max. RCF ²⁾ | 4,668 | 4,807 | 4,752 | 4,807 | 4,807 | 4,863 | | | | | |
| radius in mm | 167 | 172 | 170 | 172 | 172 | 174 | | | | | |
| run-up in sec | 42 | | | | | | | | | | |
| run-down in sec. braked | 27 | | | | | | | | | | |
| temperature in °C ¹⁾ | 0 | | | | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 1560 cannot be closed with lid 1561.

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.



























Swing-out rotor, 4-place

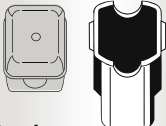


























illustrated with carriers 5051
and lids 5053

✂ 90° n = 4,000 min⁻¹ max. RCF 3,095

Cat. No. (without carriers) 1798

| | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---------|
| 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 | 40x115 | 44x100 | |
| Cat. No. | - | - | 2078 | 0536 | - | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0523 ²⁾ | 0526 ²⁾ | |
| lid Cat. No. 5053 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| <div></div> Carriers Cat. No. 5051 |  | |  | |  | |  | |  |  |  |  |  |  | |
| Cat. No. | 5257 | | 5281 | | 5267 | | 5227 | | 5247 ¹⁸⁾ | 5264 | 5248 ¹⁸⁾ | 5242 | 5243 | 5249 | 5262 |
| boring Ø x L in mm | 12.5x42 | | 11.5x50 | | 11x44 | | 12.5x42 | | 12.5x86 | 16x50 | 17.5x86 | 26x86 | 36x86 | 42x86 | 45.5x86 |
| tubes per rotor | 160 | | 64 | | 80 | | 80 | | 80 | 48 | 48 | 20 | 8 | 4 | |
| max. RCF ²⁾ | 1,950/2,826 | | 2,826 | | 2,737 | | 2,773 | | 2,755 | | 2,773 | | 2,755 | | |
| radius in mm | 109/158 | | 158 | | 153 | | 155 | | 154 | | 155 | | 154 | | |
| run-up in sec | 24 | | | | | | | | | | | | | | |
| run-down in sec, braked | 17 | | | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|--|---|---|---|---|
| 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 | 13x100 | 16x75 | 16x100 |
| Cat. No. | blood collection / urine tubes | | | | | | | | | | | | |
| lid Cat. No. 5053 | | | | | | | | | | | | | |
|  Carriers Cat. No. 5051 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  |  |  | |  |  | |
| Cat. No. | 5267 | 5268 | 5227 | 5264 | 5227 | 5268 | 5264 | 5258 | 5268 | | 5264 | 5248 | |
| boring Ø x L in mm | 11x44 | 13.5x52 | 12.5x42 | 16x50 | 12.5x42 | 13.5x52 | 16x50 | 17.6x86 | 13.5x52 | | 16x50 | 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 | |
| radius in mm | 153 | 157 | 155 | | 157 | | 155 | 154 | 157 | | 155 | 154 | |
| run-up in sec | 24 | | | | | | | | | | | | |
| run-down in sec, braked | 17 | | | | | | | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | | | | | | | |

¹³⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

¹⁸⁾ With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

²⁴⁾ Carrier must be loaded as illustrated.









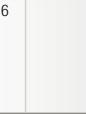


²⁸⁾ At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

ROTORS

Swing-out rotor 1798



illustrated with carriers 5051
and lids 5053

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| capacity in ml | 15 | 30 | 50 | 12 | 30 | 50 | two-tier frame for cyto accessories |
| Ø x L in mm | 17x120 | 25 x 110 | 29x115 | 17x100 | 25x110 | 29x115 | |
| Cat. No. | 0509 | - | 0513 | - | - | - | cyto chambers |
| lid Cat. No. 5053 |  |  |  |  |  |  |  |
| Carriers Cat. No. 5051 |  |  |  |  | | | |
| Cat. No. | 6306 | 5266 | 5259 | 6306 | 5266 | 5243 | 5280 |
| boring Ø x L in mm | 17x90 | 26 x 86 | 30x86 | 17x90 | 26x86 | 36x86 | - |
| tubes per rotor | 28 | 20 | 8 | 28 | 20 | 8 | 8 |
| max. RCF ²⁾ | 2,898 | 2,755 | 2,826 | 2,898 | 2,755 | | 1,735/2,737 |
| radius in mm | 162 | 154 | 158 | 162 | 154 | | 97/153 |
| run-up in sec | 24 | | | | | | |
| run-down in sec, braked | 17 | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 1560 cannot be closed with lid 1561.

Swing-out rotor 1798



illustrated with carriers 5092 and
lids 5093 with bio-containment ⁵⁾

| | | | | | | | | | |
|--|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| 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. | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0526 ²⁾ | 0523 ²⁾ | 0530 ²⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 5093 | | | | | | | | | |
| Carriers Cat. No. 5092 | | | | | | | | | |
| Cat. No. | 5128 | 5120 | 5136 | 5122 | 5124 | 5125 | 5126 | 1791 | |
| boring Ø x L in mm | 12.8x45 | 12.8x82 | 17.5x60.7 | 25.5x82 | 35.5x85 | 45.5x85 | 42x85 | 66x103 | |
| tubes per rotor | 48 | | 32 | 16 | 4 | | | 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 | | | | 24 | | | | | |
| run-down in sec, braked | | | | 17 | | | | | |
| temperature in °C ¹⁾ | | | | -8 | | | | | |

| | | | | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------|-------------------------|
| capacity in ml | 15 | 30 | 50 | 12 | 25 | 30 | 50 | 10 | 250 | 290 |
| Ø x L in mm | 17x120 | 25 x 110 | 29x115 | 17x100 | 25x90 | 25x110 | 29x115 | 16x80 | 61x122 | 62x137 |
| Cat. No. | 0509 | | 0513 | | | | | | 5127 ²⁸⁾ | - ²⁸⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 5093 | | | | | | | | | | |
| Carriers Cat. No. 5092 | | | | | | | | | | |
| Cat. No. | 5129 | 5122 | 5123 | 5121 | 5134 | 5122 | 5135 | 5136 | 6319 | |
| boring Ø x L in mm | 17x85 | 25.5 x 82 | 30x85 | 17.5x82 | 26x73 | 25.5x82 | 30x99 | 17.5x60.7 | 66x103 | |
| tubes per rotor | 28 | 16 | 8 | 28 | 12 | 16 | 8 | 32 | 4 | |
| max. RCF ²⁾ | 3,095 | 2,898 | 3,095 | 3,005 | 2,826 | 2,898 | 3,023 | 2,952 | 3,095 | |
| radius in mm | 173 | 162 | 173 | 168 | 158 | 162 | 169 | 165 | 173 | |
| run-up in sec | | | | | | 24 | | | | |
| run-down in sec, braked | | | | | | 17 | | | | |
| temperature in °C ¹⁾ | | | | | | -8 | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.






















²⁸⁾ At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

ROTORS

Swing-out rotor 1798



illustrated with carriers 5092 and
lids 5093 with bio-containment ⁵⁾

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| Ø x L in mm | 8x66 | 13x65 | 11x66 | 15x75 | 11x92 | 13x90 | 15x92 | 16x92 | 15x102 | 13x75 | 16x75 | 16x75 |
| Cat. No. | blood collection / urine tubes | | | | | | | | | | | |
| lid with bio-containment ⁵⁾ Cat. No. 5093 |  |  |  |  |  |  |  |  |  |  |  |  |
|  Carriers Cat. No. 5092 |  | | |  |  |  |  | | |  |  |  |
| Cat. No. | 5138 | | | 5136 | 5120 | 5137 | 5136 | | | 5138 | 5136 | 5121-93 |
| boring Ø x L in mm | 12.8x54.5 | | | 17.5x60.7 | 12.8x82 | 13.5x60.7 | 17.5x60.7 | | | 12.8x54.5 | 17.5x60.7 | 17.5x52 |
| tubes per rotor | 48 | | | 32 | 48 | 32 | 32 | | | 48 | 32 | 28 |
| max. RCF ²⁾ | 2,540 | | | 2,952 | 3,005 | 2,952 | 2,952 | | | 2,540 | 2,952 | 3,005 |
| radius in mm | 142 | | | 165 | 168 | 165 | 165 | | | 142 | 165 | 168 |
| run-up in sec | 24 | | | | | | | | | | | |
| run-down in sec, braked | 17 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -8 | | | | | | | | | | | |

| | | | |
|--|----------------------------|---------------------------|-------------|
| capacity in ml | 4–7 | 8 | 8.5–10 |
| Ø x L in mm | 13x100 | 16x125 | 16x100 |
| Cat. No. | blood / urine tubes | | |
| lid with bio-containment ⁵⁾ Cat. No. 5093 | | | |
| Carriers Cat. No. 5092 | | | |
| Cat. No. | 5120 | 5121 ⁴⁾ | 5136 |
| boring Ø x L in mm | 12.8x82 | 17.5x82 | 17.5x60.7 |
| tubes per rotor | 48 | 28 | 32 |
| max. RCF ²⁾ | 3,005 | 3,059 | 2,952 |
| radius in mm | 168 | 171 | 165 |
| run-up in sec | 24 | | |
| run-down in sec, braked | 17 | | |
| temperature in °C ¹⁾ | -8 | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.



















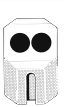




Swing-out rotor, 6-place






illustrated with
carriers 1742

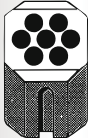














✂ 90° n = 4,000 min⁻¹ max. RCF 2,808

Cat. No. (without carriers) 1726

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|--|---|---|---|---|---|
| capacity in ml | 5 | | 6 | 7 | 9 | 15 | 20 | 25 | 45 | 50 | 8.5x10 | 30 |
| Ø x L in mm | 12x75 | | 12x82 | 12x100 | 14x100 | 17x100 | 21x100 | 24x100 | 31x100 | 34x100 | 16x100 | 26x95 |
| Cat. No. | 0553 ²⁾ | | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | - | 0519 ²⁾ | - | 0521 ²⁾ | blood coll. tube | 0545 |
|  rotor Cat. No. 1726 |  | |  |  |  |  |  |  |  |  |  |  |
| |  with decanting aid |  |  with decanting aid |  | |  |  |  |  |  |  |  |
| Cat. No. | 1369-91 | 1372 | 1369-92 | | 1370 | 1369 | 1346 | 1745 | 1345 | 1746 | 1369 | 1745 |
| boring Ø x L in mm | 12.5 x 64.4 | 13.5x65 | 12.5 x 71.5 | | 14.6x74 | 17.6x74 | 21.5x74 | 26x78 | 32x74 | 35x78 | 17.6x74 | 26x78 |
| tubes per rotor | 24 | 102 | 24 | | 30 | 24 | 12 | | 6 | | 24 | 12 |
| max. RCF ²⁾ | 2,576 | 2,522 | 2,665 | | | | 2,719 | 2,808 | 2,719 | 2,808 | 2,665 | 2,808 |
| radius in mm | 144 | 141 | 149 | | | | 152 | 157 | 152 | 157 | 149 | 157 |
| run-up in sec | 19 | | | | | | | | | | | |
| run-down in sec, braked | 18 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | | | | | | | |

91
90

| | |
|---|---|
| capacity in ml | suspension for cyto accessories |
| Ø x L in mm | |
| Cat. No. | cyto chambers |
|  rotor Cat. No. 1726 |  |
| |  |
| Cat. No. | 1660 |
| boring Ø x L in mm | - |
| tubes per rotor | 6 |
| max. RCF ²⁾ | 2,003 |
| radius in mm | 112 |
| run-up in sec | 19 |
| run-down in sec, braked | 18 |
| temperature in °C ¹⁾ | -6 |

| | | | | | | | | | | |
|--|---|---|---|--|---|--|--|---|---|--|
| capacity in ml | 15 | 2.6–3.4 | 4–5.5 | 7.5–8.5 | 9–10 | 10 | 1.6–5 | 4–7 | 8.5–10 | 15 |
| Ø x L in mm | 17x100 | 13x65 | 15x75 | 15x92 | 16x92 | 15x102 | 13x75 | 16x75 | 16x100 | 17x120 |
| Cat. No. | 0518²⁾ | blood collection / urine tubes | | | | | | | | 0509 |
|  Carriers Cat. No. 1742 |  |  |  |  |  |  |  |  |  |  |
| | |  | | | | 24)  | 24)  | | | 24)  |
| Cat. No. | - | 0716 | - | - | 0716 | - | 0716 | - | - | - |
| boring Ø x L in mm | 17.6x78 | | | | | | | | | |
| tubes per rotor | 42 | | | | | 18 | 42 | | | 18 |
| max. RCF ²⁾ | 2,808 | 2,683 | 2,808 | | | 2,683 | | 2,808 | | |
| radius in mm | 157 | 150 | 157 | | | 150 | | 157 | | |
| run-up in sec | 19 | | | | | | | | | |
| run-down in sec, braked | 18 | | | | | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

²⁴⁾ Carrier must be loaded as illustrated.

ROTORS

Swing-out rotor 1726













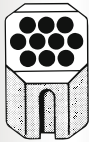









illustrated with
carriers 1742





Swing-out rotor, 10-place



✂ 45° n = 4,000 min⁻¹ max. RCF 2,916
Cat. No. (with carriers) 1717

| | | | | | |
|--|---|---|---|---|---|
| capacity in ml | 1.5 | 2.0 | 1 | 3 | 4 |
| Ø x L in mm | 11x38 | | 6x45 | 10x60 | 12x60 |
| Cat. No. | 2078 | 0536 | Rhesus | - | - |
|  Carriers Cat. No. 1366 |  |  |  |  |  |
| |  | |  |  |  |
| Cat. No. | 5277 | 1357 | 1327 | 1326 | |
| boring Ø x L in mm | 11.5x38 | | 6.5x23 | 10.5x23 | 12.5x44 |
| tubes per rotor | 54 | | 180 | 72 | |
| max. RCF ²⁾ | 2,325 | | 2,308 | 2,290 | |
| radius in mm | 130 | | 129 | 128 | |
| run-up in sec | 19 | | | | |
| run-down in sec, braked | 18 | | | | |
| temperature in °C ¹⁾ | -6 | | | | |

| | | | | | | |
|--|--|--|---|---|---|---|
| capacity in ml | 9 | 1.1–1.4 | 4.5–5 | 4.9 | 1.6–5 | 4–7 |
| Ø x L in mm | 14x100 | 8x66 | 11x92 | 13x90 | 13x75 | 13x100 |
| Cat. No. | 0500²⁾ | blood collection / urine tubes | | | | |
|  Carriers Cat. No. 1741 |  |  |  |  |  |  |
| |  rubber insert | 24)  | | |  | |
| Cat. No. | 0701 | - | - | 6x0768¹⁹⁾ | - | |
| boring Ø x L in mm | 14.6x78 | | | | | |
| tubes per rotor | 60 | 36 | 60 | | | |
| max. RCF ²⁾ | 2,773 | 2,808 | | 2,486 | 2,808 | |
| radius in mm | 155 | 157 | | 139 | 157 | |
| run-up in sec | 19 | | | | | |
| run-down in sec, braked | 18 | | | | | |
| temperature in °C ¹⁾ | -6 | | | | | |

| | | |
|---|---|---|
| capacity in ml | 15 | 50 |
| Ø x L in mm | 17x120 | 29x115 |
| Cat. No. | 0509 | 0513 |
|  rotor Cat. No. 1717 |  |  |
| |  | |
| Cat. No. | 1462-A | - |
| boring Ø x L in mm | 17x84 | 38.4 x 89 |
| tubes per rotor | 10 | |
| max. RCF ²⁾ | 2,916 | |
| radius in mm | 163 | |
| run-up in sec | 19 | |
| run-down in sec, braked | 14 | |
| temperature in °C ¹⁾ | -9 | |

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

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

Swing-out rotor, 2-place



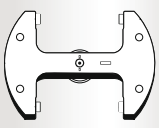

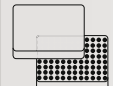










↘ 90° n = 4,000 min⁻¹ max. RCF 2,397
Cat. No. (without carriers) 1760

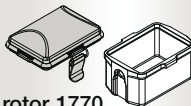
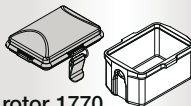

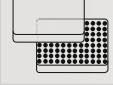







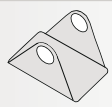
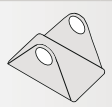

Swing-out rotor, 2-place



↘ 90° n = 5,100 min⁻¹ max. RCF 3,926
Cat. No. (without carriers) 1770

illustrated with carriers 4745 and lids 4627 with bio-containment⁵⁾ and removal frame 4626

| | | | | | | | | | |
|---|--|---|---|---|---|--|---|---|---|
| T x B x H in mm | 86x128x15/17.5 | | 86x128x22 | 86x128x44.5 | 86x128x46 | 86x128x83 | 59x84x11 | 82x124x20 | - |
| capacity in ml | - | | | | | | | | 0.2 |
| Cat. No. | MTP | | CP | DWP | MS | QP | Microtest plate (Terasaki) | PCR plate, 96 wells | PCR strips |
|  rotor Cat. No. 1760 |  |  |  |  |  |  |  |  |  |
| |  | | | | | | |   | |
| Cat. No. | 1753-A | | | | | | | 1753-A + 1485 | |
| boring Ø x L in mm | - | | | | | | | | |
| plates / strips per rotor | 10 | 8 | 6 | 2 | 2 | 2 | 4 | 2 | 24x8 |
| max. RCF ²⁾ | 2,397 | | | | | | | | |
| radius in mm | 134 | | | | | | | | |
| run-up in sec | 30 | | | | | | | | |
| run-down in sec, braked | 23 | | | | | | | | |
| temperature in °C ¹⁾ | - 8 | | | | | | | | |

| | | | | | | | | | |
|--|---|---|---|---|---|--|---|---|---|
| T x B x H in mm | 86x128x15/17.5 | | 86x128x22 | 86x128x44.5 | 86x128x46 | 86x128x83 | 59x84x11 | 82x124x20 | - |
| capacity in ml | - | | | | | | | | 0.2 |
| Cat. No. | MTP | | CP | DWP | MS | QP | Microtest plate (Terasaki) | PCR plate, 96 wells | PCR strips |
| lid with bio-containment ⁵⁾ Cat. No. 4627  rotor 1770 Carriers Cat. No. 4745  |  |  |  |  |  |  |  |  |  |
| |  | | | | | | |  |  |
| Cat. No. | 4626 | | | | | | | 4626 + 1485 | |
| boring Ø x L in mm | - | | | | | | | | |
| plates / strips per rotor | 12 | 10 | 8 | 2 | | 4 | 2 | 24x8 | |
| max. RCF ²⁾ | 3,926 | | | | | | | | |
| radius in mm | 135 | | | | | | | | |
| run-up in sec | 65 | | | | | | | | |
| run-down in sec, braked | 30 | | | | | | | | |
| temperature in °C ¹⁾ | -3 | | | | | | | | |

¹⁾ Packed in units of 10 pieces.

²⁾ Carrier must be loaded as illustrated.















ROTORS

Angle rotor, 6-place



✂ 45° Rotina 380 R n = 11,000 min⁻¹, max. RCF 16,369
Rotina 380 n = 10,000 min⁻¹, max. RCF 13,528

Cat. No. 1720

| | | | | | | | | |
|--|---|---|---|---|--|---|---|---|
| capacity in ml | 1.5 | 2.0 | 15 | 25 | 50 | 94 | 7.5–8.5 | 9–10 |
| Ø x L in mm | 11 x 38 | | 17 x 100 | 24 x 100 | 34 x 100 | 38 x 102 | 15 x 92 | 16 x 92 |
| Cat. No. | 2078 | 0536 | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0549 | blood / urine tubes | |
|  rotor Cat. No. 1720 |  |  |  |  |  |  |  |  |
| |  | |  |  |  | |  | |
| Cat. No. | 1449 | | 1451 | 1447 | 1463 | - | 1451 | |
| boring Ø x L in mm | 11.4 x 39 | | 17.5 x 92 | 26 x 85 | 35 x 89 | 38.4 x 89 | 17.5 x 92 | |
| tubes per rotor | 24 | | 6 | | | | | |
| max. RCF ²⁾ classic/cooled | 12,969/15,692 | | 12,745/15,422 | 12,410/15,016 | 13,304/16,098 | 13,528/16,369 | 12,745/15,422 | |
| radius in mm | 116 | | 114 | 111 | 119 | 121 | 114 | |
| run-up in sec classic/cooled | 39/45 | | | | | | | |
| run-down in sec, braked classic/cooled | 36/44 | | | | | | | |
| temperature in °C ¹⁾ | +1 | | | | | | | |

| | | | | | | | | | |
|--|-------------------------|---------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|---------------------------|
| capacity in ml | 8.5 – 10 | 5 | 15 | 50 | 10 | 30 | 50 | 85 | 94 |
| Ø x L in mm | 16 x 100 | 17 x 59 | 17x120 | 29 x 115 | 16 x 80 | 26 x 95 | 29 x 107 | 38x106 | 38x102 |
| Cat. No. | blood/urine tube | - | 0509 | 0513 | - | 0545 | 0546 | 0547 | 0538¹³⁾ |
| rotor Cat. No. 1720 | | | | | | | | | |
| | | | | | | | | | |
| Cat. No. | 1451 | 1476 | 1466 | 1454 | 1448 | 1447 | 1446 | - | |
| boring Ø x L in mm | 17.5 x 92 | 17 x 51 | 17 x 106 | 29.8 x 97 | 16.5 x 74 | 26 x 85 | 29 x 92 | 38.4 x 89 | |
| tubes per rotor | 6 | | | | 12 | 6 | | | |
| max. RCF ²⁾ classic/cooled | 12,745/15,422 | 12,857/15,557 | 13,081/15,828 | 12,745/15,422 | 12,410 / 15,016 | 12,410 / 15,016 | 12,969 / 15,692 | 13,528 / 16,369 | |
| radius in mm | 114 | 115 | 117 | 114 | 111 | 111 | 116 | 121 | |
| run-up in sec classic/cooled | 39/45 | | | | | | | | |
| run-down in sec, braked classic/cooled | 36/44 | | | | | | | | |
| temperature in °C ¹⁾ | +1 | | | | | | | | |

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









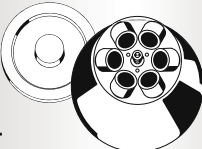





Angle rotor, 6-place











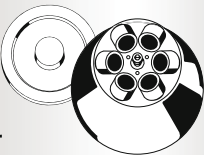









with bio-containment ⁵⁾

✂ 45° Rotina 380 R n = 11,000 min⁻¹, max. RCF 16,504
Rotina 380 n = 10,000 min⁻¹, max. RCF 13,640

Cat. No. 1792

| | | | | | | | | |
|---|---|---|---|---|--|---|---|---|
| capacity in ml | 1.5 | 2.0 | 15 | 25 | 50 | 94 | 7.5–8.5 | 9–10 |
| Ø x L in mm | 11x38 | | 17x100 | 24x100 | 34x100 | 38x102 | 15x92 | 16x92 |
| Cat. No. | 2078 | 0536 | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0549 | blood / urine tubes | |
| lid with bio-containment ⁵⁾ incl. |  |  |  |  |  |  |  |  |
|  rotor Cat. No. 1792 |  | |  |  |  | |  | |
| 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⁾ classic/ cooled | 13,081/ 15,828 | | 12,857 / 15,557 | 12,522 / 15,151 | 13,416 / 16,233 | 13,640 / 16,504 | 12,857 / 15,557 | |
| radius in mm | 117 | | 115 | 112 | 120 | 122 | 115 | |
| run-up in sec classic/ cooled | 40/48 | | | | | | | |
| run-down in sec, braked classic/ cooled | 37/44 | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|--|---|---|---|---|---|
| capacity in ml | 10 | 8.5 – 10 | 5 | 15 | 50 | 10 | 30 | 50 | 85 | 94 |
| Ø x L in mm | 15 x 102 | 16 x 100 | 17 x 59 | 17x120 | 29 x 115 | 16 x 80 | 26 x 95 | 29 x 107 | 38x106 | 38x102 |
| Cat. No. | blood / urine tubes | - | 0509 | 0513 | - | 0545 | 0546 | 0547 | 0538 ¹³⁾ | |
| lid with bio-containment ⁵⁾ incl. |  |  |  |  |  |  |  |  |  |  |
|  rotor Cat. No. 1792 |  |  |  |  |  |  |  | | | |
| Cat. No. | 1451 | 1476 | 1466 | 1454 | 1448 | 1447 | 1446 | - | | |
| boring Ø x L in mm | 17.5 x 92 | 17 x 51 | 17 x 106 | 29.8 x 97 | 16.5 x 74 | 26 x 85 | 29 x 92 | 38.2 x 89.6 | | |
| tubes per rotor | 6 | | | | | 12 | 6 | | | |
| max. RCF ²⁾ classic/ cooled | 12,857 / 15,557 | 12,745 / 15,422 | 13,081 / 15,828 | 13,304 / 16,098 | 12,857 / 15,557 | 12,522 / 15,151 | 13,081 / 15,828 | 13,640 / 16,504 | | |
| radius in mm | 115 | 114 | 117 | 119 | 115 | 112 | 117 | 122 | | |
| run-up in sec classic/ cooled | 40/48 | | | | | | | | | |
| run-down in sec, braked classic/ cooled | 37/44 | | | | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

¹³⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

ROTORS

Angle rotor, 30-place



with bio-containment ⁵⁾,
phenol-resistant












∠ 45° n = 15,000 min⁻¹ max. RCF 24,400
Cat. No. 1789-A







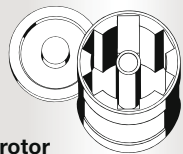



Drum rotor, 6-place



illustrated with
adapters 1377

n = 15,000 min⁻¹ max. RCF 18,866
Cat. No. (without adapters) 1711

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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 with bio-containment ⁹⁾ incl. |  |  |  |  |  |  |  |
|  rotor Cat. No. 1789-A |  | |  | | | |  |
| Cat. No. | 2024 | | 2023 | | 2031 ⁷⁾ | - | 0788 ²⁰⁾ |
| boring Ø x L in mm | 6x40 | | 8x40 | | 10.2x19 | 11.2x40.9 | |
| tubes per rotor | 30 | | | | | | 15 |
| max. RCF ²⁾ | 24,400 | | | | | | 23,394 |
| radius in mm | 97 | | | | | | 93 |
| run-up in sec | 24 | | | | | | |
| run-down in sec, braked | 24 | | | | | | |
| temperature in °C ¹⁾ | +4 | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| capacity in ml | 0.2 | 0.4 | 0.5 | 0.8 | 1.5 | 2.0 |
| Ø x L in mm | 6x18 | 6x45 | 8x30 | 8x45 | 11x38 | |
| Cat. No. | - | | | | 2078 | 0536 |
| lid incl. |  |  |  |  |  |  |
|  rotor Cat. No. 1711 |  | |  | |  | |
| Cat. No. | 1378 | | 1379 | | 1377 | |
| boring Ø x L in mm | 6x40 | | 8.4x43 | | 10.8x37 | |
| tubes per rotor | 192 | | 126 | | 60 | |
| max. RCF ²⁾ | 18,866 | | | | | |
| radius in mm | 75 | | | | | |
| run-up in sec | 25 | | | | | |
| run-down in sec, braked | 23 | | | | | |
| temperature in °C ¹⁾ | +2 | | | | | |

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

Angle rotor, 8-place


























✂ 45° n = 4,500 min⁻¹ max. RCF 3,305
Cat. No. (without adapters) 1721

Cyto rotor, 8-place









n = 4,000 min⁻¹ max. RCF 2,415
Cat. No. (without carriers) 1748

illustrated with carriers 1660
 and lids 1661 for cyto chambers.
 For detailed information on the
 comprehensive Hettich cyto system
 please turn to the pages 138-143.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|--|--|
| capacity in ml | 5 | 15 | 1.1–1.4 | 2.6–3.4 | 2.7–3 | 9–10 | 1.6–5 | 4–7 | 8.5–10 | 12 | 15 | 50 |
| Ø x L in mm | 12x75 | 17x100 | 8x66 | 13x65 | 11x66 | 16x92 | 13x75 | 13x100 | 16x100 | 17x102 | 17x120 | 29x115 |
| Cat. No. | 0553 ²⁾ | 0518 ²⁾ | blood collection / urine tubes | | | | | | | | 0509 | 0513 |
|  rotor Cat. No. 1721 |  |  |  |  |  |  |  |  |  |  |  |  |
| | + 1054-A  | + 0716  | + 1054-A  | | | + 0716  | + 1054-A  |  | + 0716  | + 0716  | + E2109  | + E2110-A  |
| Cat. No. | 1467 | | | | | | | | | | | 1468 |
| boring Ø x L in mm | 17.4x91 | | | | | | | | | | | 30.2x92 |
| tubes per rotor | 32 | | | | | | | | | | | 8 |
| max. RCF ²⁾ | 2,762 | 3,215 | 2,762 | | | 3,215 | 2,762 | 3,305 | 3,215 | | 3,283 | 3,147 |
| radius in mm | 122 | 142 | 122 | | | 142 | 122 | 146 | 142 | | 145 | 139 |
| run-up in sec | 17 | | | | | | | | | | | |
| run-down in sec, braked | 14 | | | | | | | | | | | |
| temperature in °C ¹⁾ | -11 | | | | | | | | | | | |

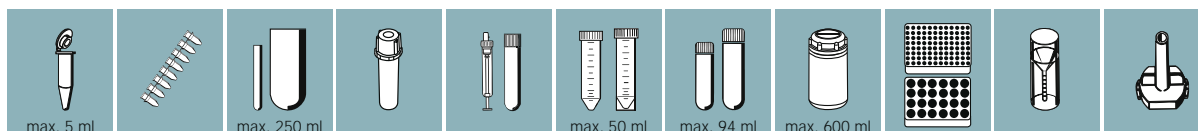
97
96

| | | | |
|---|---|---|---|
| capacity in ml | 12 | 50 | 50 |
| Ø x L in mm | 17 x 100 | 29 x 115 | 29 x 107 |
| Cat. No. | - | - | 0546 |
|  rotor Cat. No. 1721 |  |  |  |
| | + 0716  |  | |
| Cat. No. | 1467 | 1468 | |
| boring Ø x L in mm | 17.4 x 91 | 30.2 x 92 | |
| tubes per rotor | 32 | 8 | |
| max. RCF ²⁾ | 3,215 | 3,147 | |
| radius in mm | 142 | 139 | |
| run-up in sec | 17 | | |
| run-down in sec, braked | 14 | | |
| temperature in °C ¹⁾ | -11 | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

²⁰⁾ Packed in units of 15 pieces.





ROTINA 420 / 420 R

Well equipped for all centrifuging applications

The 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.



| TECHNOLOGY | ROTINA 420 | | ROTINA 420 R ^{>1} | |
|--|--|---------------|-------------------------------|----------------------|
| Benchtop centrifuge, without rotor | classic | | cooled | |
| Power supply ²⁾ | 200–240 V 1 ~ | 100–127 V 1 ~ | 200–240 V 1 ~ | 100–127 V 1 ~/100 V~ |
| 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 (H x W x D) | 423 x 506 x 650 mm | | 423 x 713 x 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 |

¹⁾ Other voltages on request.

^{>1)} For a list of further versions of this model, please refer to page 12.

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

Swing-out rotor, 4-place

















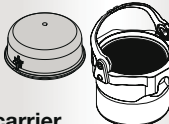


















illustrated with carriers 4780 with single-hand clamp lock and lids 4783 with bio-containment ⁵⁾

↗ 90° n = 4,800 min⁻¹ max. RCF 4,740

Cat. No. (ohne Carrier) 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 | 11x38 | | 10x60 | 10x88 | 12x60 | 12x75 | 12x82 | 12x100 | 17x100 | 24x100 | 34x100 | 38x102 | 40x115 | 44x100 | 65x115 | |
| Cat. No. | 2078 | 0536 | - | | | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0549 | 0523 ²⁾ | 0526 ²⁾ | 0530 ²⁾ | |
| lid with bio-containment ⁵⁾ Cat. No. 4783 | | | | | | | | | | | | | | | | |
| carrier Cat. No. 4780 | | | | | | | | | | | | | | | | |
| Cat. No. | 4773 | 4761 | 4762 | | | 4763 | 4764 | 4765 | 4766 | 4767 | 4768 | | | | | |
| boring Ø x L in mm | 11.2x38 | 11.2x54 | 13.4x55 | | | 17.5 x 62 | 26.5x69 | 36x77 | 42x76.5 | 46x76.5 | 66x103 | | | | | |
| 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 | 8x66 | 13x65 | 11x66 | 15x75 | 11x92 | 13x90 | 15x92 | 16x92 | 13x75/100 | 16x75 | 16x125 | 16x100 | 17x59 | 17x120 | 29x115 | 17x100 |
| Cat. No. | blood collection / urine tubes | | | | | | | | | | | | - | 0509 | 0513 | - |
| lid with bio-containment ⁵⁾ 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 | 11.2x54 | 13.4x55 | 11.2x54 | 17.5x62 | 11.2x54 | 13.4x55 | 17.5x62 | 13.4x55 | 13.7x55 | | 17.5x62 | | 17x52 | 17x84 | 30x82.5 | 17.2x82.5 |
| 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 | | | | | | | | | | | | | | | |

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

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

²⁴⁾ Carrier must be loaded as illustrated.

³³⁾ For blood collection tubes with a cap of a diameter greater than 17 mm.

ROTORS

Swing-out rotor 4784-A



Carrier 4785

The 4780 carrier is also available without a lid and clamp lock. The catalogue number is 4785.¹⁷⁾



illustrated with
carriers 4782

| | | | | | | | | | | | | | | | | | |
|---|-----------|--------------------|-----------|-------------|--------------------|----------------------------|---------------------|---------------------|---------|----------|--------|---------|---------------------|------------------|------------------|------------------|---------------------|
| 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 | 0538 ¹³⁾ | Falcon® | Nalgene® | Nunc® | Falcon® | 5127 ²⁸⁾ | - ²⁸⁾ | - ²⁸⁾ | - ²⁸⁾ | 0551 ²⁸⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 4783 | | | | | | | | | | | | | | | | | |
| carrier Cat. No. 4780 | | | | | | | | | | | | | | | | | |
| Cat. No. | 4764 | 4770 ⁴⁾ | 4763 | 4764 | 4770 ⁴⁾ | 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 | | | | | | | | | | | | | | | | |
| T x B 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 wells | 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 attained 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 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.















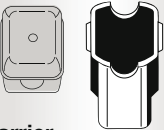











Swing-out rotor, 4-place

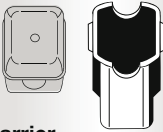
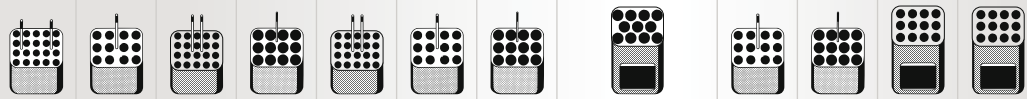


illustrated with carriers 5051
and lids 5053

± 90° n = 4.000 min⁻¹ max. RCF 3.095

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 | 11 x 38 | | 11 x 38 | | 10 x 60 | 12 x 75 | 12 x 82 | 12 x 100 | 14 x 100 | 17 x 100 | 24 x 100 | 34 x 100 | 44 x 100 | 40 x 115 |
| Cat. No. | - | - | 2078 | 0536 | - | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0500 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0526 ²⁾ | 0523 ²⁾ |
| lid Cat. No. 5053 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  carrier Cat. No. 5051 |  | |  | |  |  | |  |  |  |  |  |  |  |
| Cat. No. | 5257 | | 5281 | | 5267 | 5227 | | 5247 ¹⁸⁾ | 5264 | 5248 ¹⁸⁾ | 5242 | 5243 | 5262 | 5249 |
| boring Ø x L in mm | 12.5 x 42 | | 11.5 x 50 | | 11 x 44 | 12.5 x 42 | | 12.5 x 86 | 16 x 50 | 17.5 x 86 | 26 x 86 | 36 x 86 | 45.5 x 86 | 42 x 86 |
| 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 | 11 x 44 | 13.5 x 52 | 12.5 x 42 | 16 x 50 | 12.5 x 42 | 13.5 x 52 | 16 x 50 | 17.6 x 86 | | 13.5 x 52 | 16 x 50 | 13.5 x 86 | 17.5 x 86 | |
| 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 | |
| radius in mm | 153 | 157 | 155 | | 157 | | 155 | 154 | | 157 | 155 | 154 | 154 | |
| run-up in sec | | | | | | | | 18 | | | | | | |
| run-down in sec, braked | | | | | | | | 16 | | | | | | |
| temperature in °C ¹⁾ | | | | | | | | -1 | | | | | | |

¹³⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

¹⁷⁾ 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.

¹⁸⁾ With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

²⁸⁾ At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

ROTORS





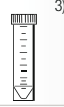

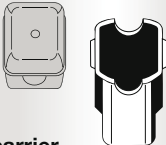






Swing-out rotor 4753



















illustrated with
carriers 5051



illustrated with
carriers 5092

| | | | | | | |
|---|---|---|---|---|---|---|
| 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 chambers |
| lid Cat. No. 5053 |  ³⁾ |  ³⁾ |  |  ³⁾ |  ³⁾ |  |
|  carrier Cat. No. 5051 |  |  |  |  |  + 2x6316 |  |
| 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⁾ | 2,898 | 2,826 | 2,898 | 2,755 | | 1,735/2,737 |
| radius in mm | 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 | 12 x 75 | 12 x 82 | 12 x 100 | 17 x 100 | 24 x 100 | 34 x 100 | 44 x 100 | 40 x 115 | 65 x 115 |
| Cat. No. | 0553 ²⁾ | 0501 ²⁾ | 0578 ²⁾ | 0518 ²⁾ | 0519 ²⁾ | 0521 ²⁾ | 0526 ²⁾ | 0523 ²⁾ | 0530 ²⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 5093 |  |  |  |  |  |  |  |  | |
|  carrier Cat. No. 5092 |  | |  |  |  |  |  |  | |
| Cat. No. | 5128 | | 5120 | 5136 | 5122 | 5124 | 5125 | 5126 | 1791 |
| boring Ø x L in mm | 12.8 x 45 | | 12.8 x 82 | 17.5 x 60.7 | 25.5 x 82 | 35.5 x 82.5 | 45.5 x 85 | 42 x 85 | 66 x 103 |
| 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 | | | | | | | | |

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained 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 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.

Swing-out rotor 4753



illustrated with
carriers 5092

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 ⁵⁾ 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 | - | | | | | | 5127 ²⁸⁾ | - ²⁸⁾ |
| lid with bio-containment ⁵⁾ Cat. No. 5093 | | | | | | | | | | | | | |
| carrier Cat. No. 5092 | | | | | | | | | | | | | |
| Cat. No. | 5136 | | 5121 ⁴⁾ | 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 | | | | | | | | | | | | |

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

²⁸⁾ At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

ROTORS




























Swing-out rotor, 8-place




























illustrated with
carriers 1746

✂ 90° n = 3,800 min⁻¹ max. RCF 2,906

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 | |
| Ø x L in mm | 15x92 | 16x92 | 15x102 | 13x75 | 13x75/16x75 | 13x100 | 16x100 | 17x120 | 29x115 | 26x95 | for cyto accessories | |
| Cat. No. | blood collection / urine tubes | | | | | | | 0509 | | 0513 | 0545 | cyto chambers |
|  rotor Cat. No. 4758 |  |  |  |  |  |  |  |  | + 1462-A  |  |  |  |
| |  |  |  25) + 8 x 0768 19) |  + 8 x 0768 19) |  + 0716 |  |  |  25) | + 1641  | + 1641  | + 1641  |  |
| Cat. No. | 1742 | 1742 | 1742 | 1741 | 1742 | 1739 | 1742 | 1742 | 1746 | 1746 | 1745 | 1660 |
| boring Ø x L in mm | 17.6x78 | 17.6x78 | 17.6x78 | 14.6x78 | 17.6x78 | 13.5 x 78 | 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 | | | | | | | | | | | |

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

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

Swing-out rotor 4758



illustrated with
carriers 1369-92











Swing-out rotor, 2-place










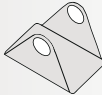
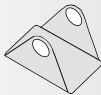



illustrated with carriers 4745
and lids 4627 with
bio-containment ⁵⁾ and
removal frame 4626

✂ 90° n = 5,100 min⁻¹ max. RCF 3,926

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 | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| T x B x H in mm | 86x128x15 | 86x128x17.5 | 86x128x22 | 86x128x44.5 | 86x128x46 | 86x128x83 | 59x84x11 | 82x124x20 | - |
| capacity in ml | - | | | | | | | | 0.2 |
| Cat. No. | MTP | | CP | DWP | MS | QP | Microtest plate (Terasaki) | PCR plate, 96 wells | PCR strips |
| lid with bio-containment ⁵⁾ Cat. No. 4627 |  |  |  |  |  |  |  |  |  |
| rotor 4728 carrier Cat. No. 4745 |  | | | | | | |  |  |
| Cat. No. | 4626 | | | | | | | 4626 + 1485 | |
| boring Ø x L in mm | - | | | | | | | - | |
| plates / strips per rotor | 12 | 10 | 8 | 2 | | 4 | | 2 | 24x8 |
| 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⁾ Packed in units of 10 pieces.

²⁾ Please load only the middle row.

ROTORS


















Angle rotor, 6-place


















with bio-containment ⁵⁾

✂ 45° n = 11,000 min⁻¹ max. RCF 16,504

Cat. No. (without carrier) 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 ⁵⁾ incl. |  |  |  |  |  |  |  |  |  |  |  |
|  rotor Cat. No. 4794 |  | | |  |  |  | |  | | | |
| | | | | | | | | | | | |
| Cat. No. | 1449 | | | 1451 | 1447 | 1463 | - | 1451 | | | |
| boring Ø x L in mm | 11.4 x 39 | | | 17.5 x 92 | 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 | 0538¹³⁾ |
| lid with bio-containment ⁵⁾ incl. |  |  |  |  |  |  |  |  |
|  rotor 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 | | | | | | | |

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

⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

Angle rotor, 4-place



✂ 25° n = 9,500 min⁻¹
max. RCF 12,007

Cat. No. 4795

Angle rotor, 30-place



with bio-containment ⁵⁾,
phenol-resistant

✂ 45° n = 15,000 min⁻¹
max. RCF 24,400

Cat. No. 4790-A















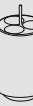






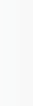

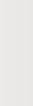
Angle rotor, 6-place, for PCR strips

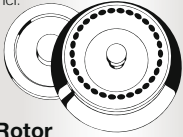














lid (optional),
Cat. No. 1162

✂ 45° n = 14,000 min⁻¹
max. RCF 18,845

Cat. No. (without lid) 4760

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml | 15 | 25 | 94 | 15 | 50 | 10 | 30 | 50 | 85 | 94 | 250 |
| Ø x L in mm | 17 x 100 | 24 x 100 | 38 x 102 | 17 x 20 | 29 x 115 | 16 x 80 | 26 x 95 | 29 x 107 | 38 x 106 | 38 x 102 | 61 x 122 |
| Cat. No. | 0518 ²⁾ | 0519 ²⁾ | 0549 | 0509 | 0513 | - | 0545 | 0546 | 0547 | 0538 ¹³⁾ | 5127 ²⁸⁾ |
|  Rotor Cat. No. 4795 |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No. | 5646 | 5642 | 5644 | 5637 | 5638 | 5641 | 5642 | 5643 | 5644 | - | - |
| boring Ø x L in mm | 17.6 x 83 | 26 x 80 | 38.6 x 88 | 17 x 106 | 30 x 100 | 16.6 x 70 | 26 x 80 | 29 x 90 | 38.6 x 88 | 38.6 x 88 | 61.5 x 109 |
| 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 | 11 x 38 | | 10.7x36 |
| Cat. No. | - | | | | 2078 | 0536 | Pediatric |
| lid with bio-containment ⁵⁾ incl. |  |  |  |  |  |  |  |
| Rotor Cat. No. 4790-A |  | |  | | | |  |
| Cat. No. | 2024 | | 2023 | | 2031 ⁷⁾ | - | 0788 |
| boring Ø x L in mm | 6 x 40 | | 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 | 6 x 18 | 6 x 18 |
| Cat. No. | - | PCR strips |
|  Rotor Cat. No. 4760 |  |  |
| Cat. No. | - | - |
| boring Ø x L in mm | 6.5 x 15.5 | |
| tubes per rotor | 48 | 6 x 8 |
| 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 | |

⁷⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

¹³⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

²⁸⁾ At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.