TOP SPIN



Centrifuges Product Catalogue

Hettich
ZENTRIFUGEN



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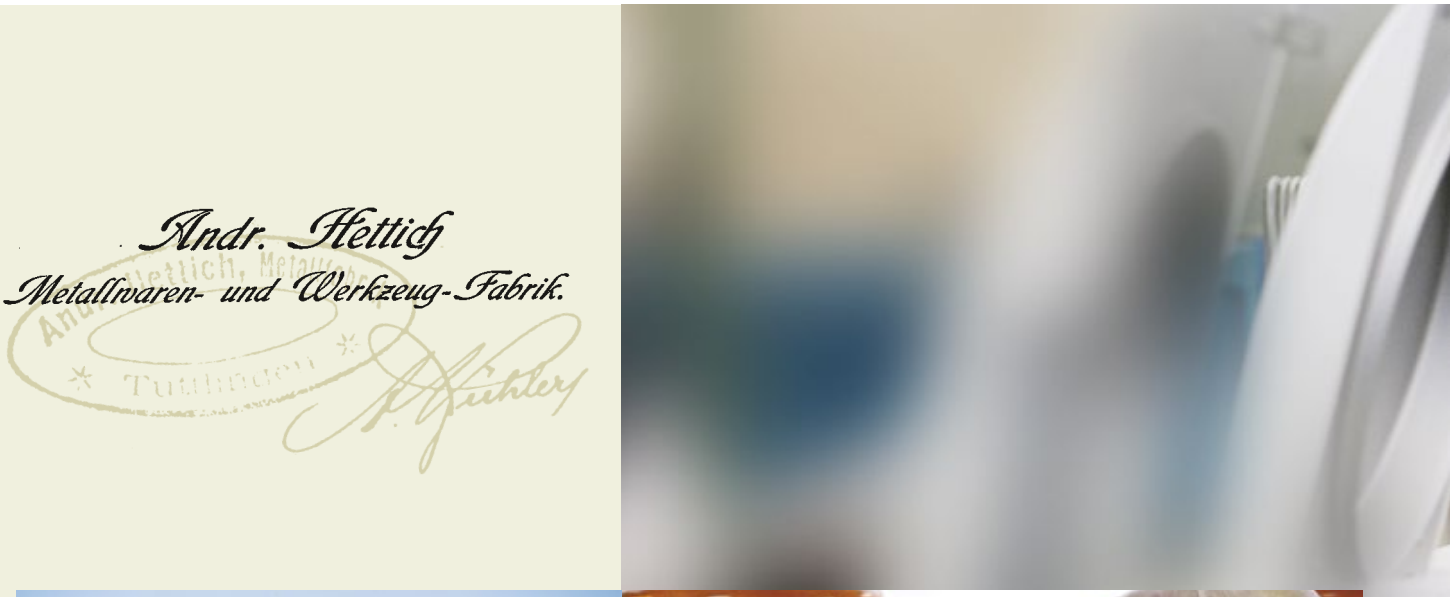
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Company









Yesterday, today and tomorrow

The Andreas Hettich company's success story began in 1904 with the manufacturing of medical instruments. Under challenging conditions, with a well developed sense of market need and a bold spirit, Andreas Hettich set the company on course.

The first centrifuges were developed and received with breakthrough success. The company then dedicated its efforts exclusively to the manufacturing and development of centrifuges finely tuned to user needs.

Patented accessories
for centrifuging directly
on slides



MORE THAN
100
YEARS
TOP SPIN





Over a span of close to 50 years, between 1956 and 2005, Günter Eberle led the company's development. With his entrepreneurial vision, he was able to bridge technological advancement and user needs – again and again. The more than 200 patents received speak for themselves.

Today, the company is one of the leading manufacturers of laboratory centrifuges worldwide.
With pioneering and innovative business management and consistent quality assurance, Horst and Klaus-Günter Eberle look after consolidation and continuous expansion of their market position.





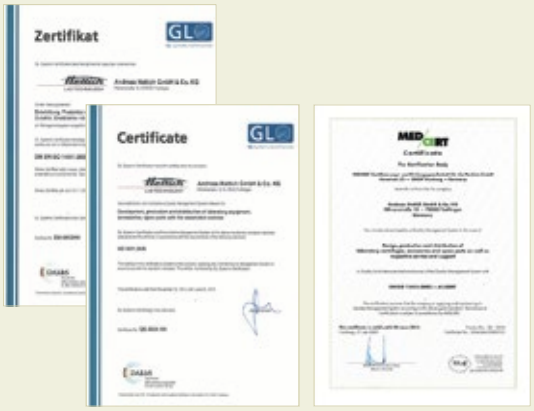
Finely tuned precision and customer-oriented innovation

Hettich centrifuges are known for their reliable functionality, and for their fast and easy operation. At Hettich, all departments are involved in new product development from day one onwards. The open exchange of ideas and suggestions not only supports team spirit, it is also very productive. It promotes high-level motivation and commitment on the part of the whole team. Motivation that is clearly reflected in trend-setting product quality.

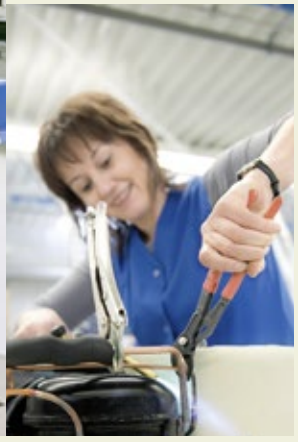
Impressive examples of this include the presentation of the first microprocessor-controlled centrifuges at ACHEMA 1976, and the development of the first robot-operated centrifuges with PC-control and rotor positioning in the nineties. A Hettich centrifuge is even employed in the International Space Station ISS.















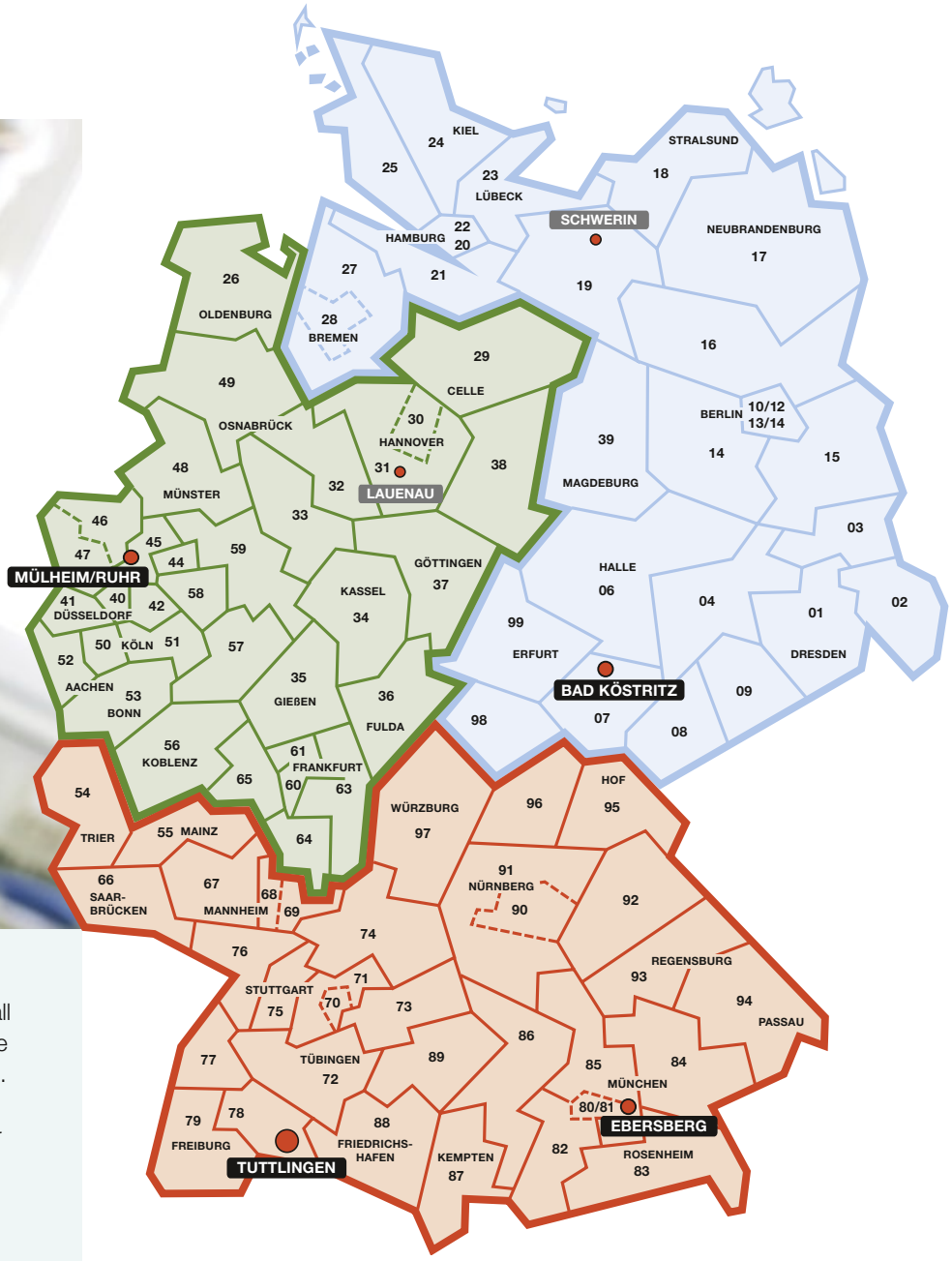
Responsive, attentive and dynamic

Real customer benefits are always in the foreground of product development. Individual customer needs which are not directly covered by the current product range are addressed with customised solutions.

A 26-person sales and support team across Germany ensures service, maintenance, and specialised consulting and advice on location. Via its subsidiaries abroad, Andreas Hettich GmbH & Co.KG distributes its products in several European countries, the USA, and the Asia-Pacific region. Centrifuges from Hettich, however, are used all over the world. In many countries and on all continents, the company works closely with authorised distributors to ensure the highest quality of local service and support.

Service





A customer service network covers all of Germany, divided into three service territories, each with 2 service offices. Our product specialists can be reached either directly or through our head office in Tuttlingen. We do our best to guarantee 24-hour service in Germany on working days.

You can access technical support by calling **+49 (0)7461 705 - 1185** or **+49 (0)7461 705 - 1109**.

The service department can also be reached directly by e-mail at **service@hettichlab.com**

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

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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.

QUALITY & SAFETY

IvD stands for **I**n-**v**itro **D**iagnostics. 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 50 S / RS and ROTANTA 460 line of centrifuges, as shown by declaration of conformity No. 3654DE414090721 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-Altgeraete Register[1] - Foundation for the implementation of the 2002/96/EC directive (ElektroG[2]), 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

Features of the centrifuges

	metal housing	plastic housing	metal lid	plastic 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
EBA 20		●		●	●	●	●				●
EBA 20 S		●		●	●	●	●				●
EBA 270		●	●		●	●	●				●
EBA 21	●		●		●	●		●		●	●
HAEMATOKRIT 210	●		●		●	●		●		●	●
MIKRO 120		●		●	●	●	●				●
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	●		●		●	●	●		●	●	●
ROTANTA 460 Robotic	●		●		●	●			●	●	●
ROTIXA 50 S	●		●		●	●		●		●	●
ROTIXA 50 RS	●		●		●	●		●		●	●
ROTO SILENTA 630 RS	●		●		●	●	●		●	●	●
ROTOLAVIT	●		●		●	●	●			●	●
ROTOFIX 46	●		●		●	●		●		●	●
ROTOFIX 46 H	●		●		●	●		●		●	●

stainless steel chamber	air cooling	cooling (-20 °C to +40 °C)	heating	automatic rotor recognition	brushless drive	control panel	error display	imbalance detection	data report system (option)	automated	also available in 115 V / 60 Hz	
	●					E	●				●	**EBA 20**
	●				●	E	●	●			●	**EBA 20 S**
●	●				●	E	●	●			●	**EBA 270**
●	●			●	●	N	●	●			●	**EBA 21**
●	●				●	E	●	●			●	**HAEMATOKRIT 210**
	●				●	E	●	●			●	**MIKRO 120**
●	●				●	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 R		●	●	C	●	●			●	**ROTANTA 460 / 460 R**
●		●		●	●	C	●	●			●	**ROTANTA 460 RC / 460 RF**
●		●		●	●	C	●	●		●	●	**ROTANTA 460 Robotic**
●	●			●	●	S	●	●	●			**ROTIXA 50 S**
●		●		●	●	S	●	●	●			**ROTIXA 50 RS**
●		●		●	●	S	●	●	●			**ROTO SILENTA 630 RS**
	●				●	W	●	●			●	**ROTOLAVIT**
●	●			●	●	N plus	●	●			●	**ROTOFIX 46**
●			● **)	●	●	N plus	●	●			●	**ROTOFIX 46 H**

#) Adjustable temperature range MIKRO 200 R: -10 °C to +40 °C
**) Heating up to +90 °C

Model variants for special requirements

The following variants of the refrigerated models UNIVERSAL 320 R, ROTINA 380 R, ROTINA 420 R, ROTANTA 460 R, ROTIXA 50 RS and ROTO SILENTA 630 RS are available:

- **Variants with connection for nitrogen (N_2) 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 50 RS centrifuges are also available as variants with internal cooling unit or for connection to external cooling units, and as GMP versions.

Model	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 50 RS	N_2 flushing	220–240 V	50–60 Hz	4910-20	
ROTIXA 50 RS	H/C to +60 °C	220–240 V	50–60 Hz	4910-50	
ROTIXA 50 RS	GMP, external cooling unit	208–240 V	50–60 Hz	4910-90	
ROTIXA 50 RS	GMP, internal cooling unit with water-cooled condenser	220–240 V	50–60 Hz	4910-96	
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.

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 in the middle of the tube bottom, 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:

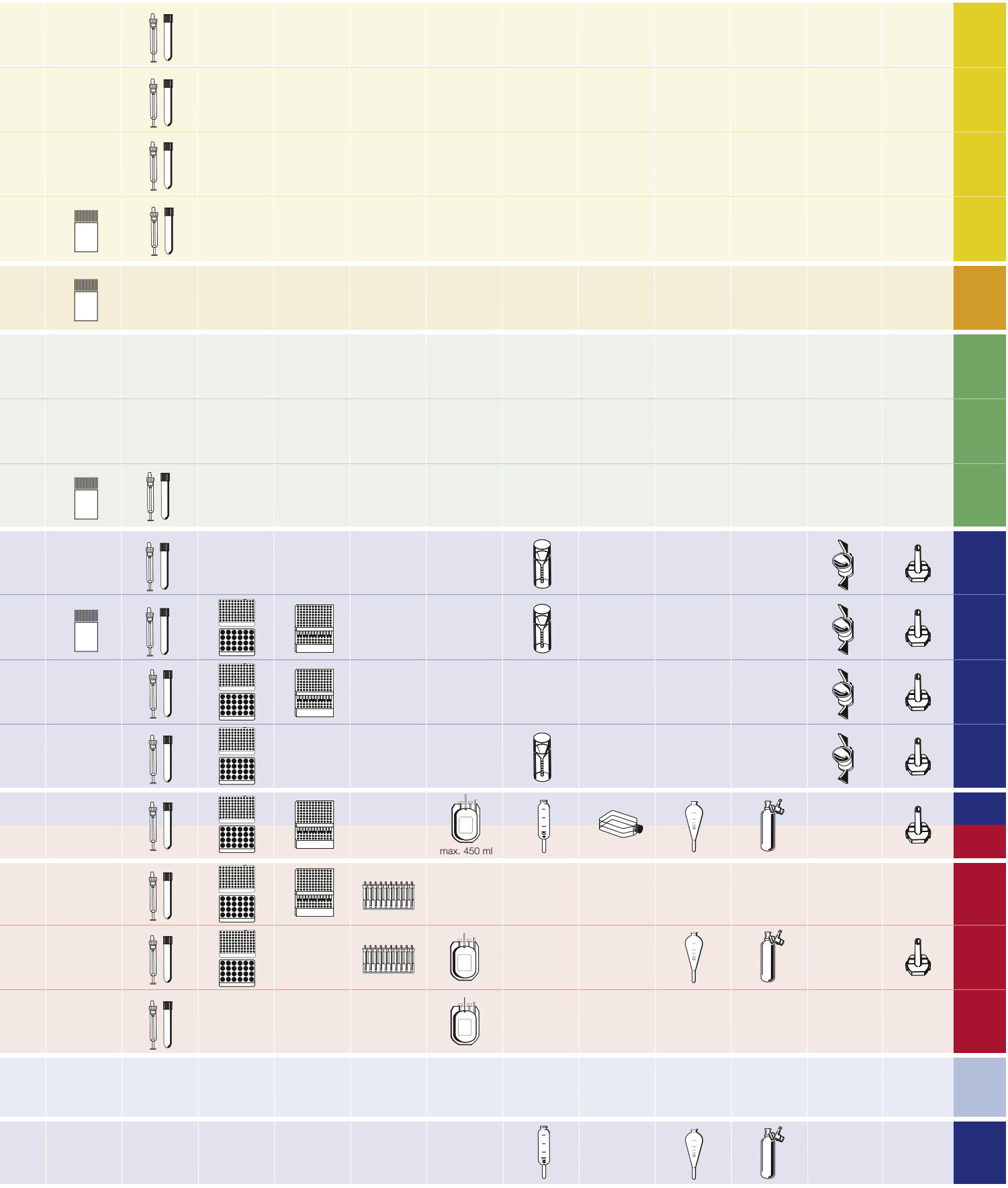
$$RCF = (n/1000)^2 \times r \times 11{,}18$$

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

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.

Which tubes are suitable to which centrifuges?

HANDZENTRIFUGE	max. 15 ml	15 ml							
EBA 20 / EBA 20 S	max. 15 ml	15 ml							
EBA 270	max. 15 ml								
EBA 21	max. 50 ml	max. 50 ml		max. 50 ml					
HAEMATOKRIT 210									
MIKRO 120									
MIKRO 200 / 200 R									
MIKRO 220 / 220 R	max. 50 ml	max. 50 ml		max. 50 ml					
ROTOFIX 32 A	max. 100 ml	max. 50 ml	max. 50 ml	max. 85 ml					
UNIVERSAL 320 / 320 R	max. 100 ml	max. 50 ml	max. 50 ml	max. 85 ml					
ROTINA 380 / 380 R	max. 250 ml	max. 50 ml	max. 50 ml	max. 94 ml	max. 290 ml		max. 225 ml		
ROTINA 420 / 420 R	max. 250 ml	max. 50 ml	max. 50 ml	max. 94 ml	max. 600 ml		max. 225 ml		
ROTANTA 460 / 460 R	max. 250 ml	max. 50 ml	max. 50 ml	max. 94 ml	max. 750 ml		max. 500 ml		
ROTANTA 460 RC / 460 RF									
ROTANTA 460 Robotic	max. 250 ml	max. 50 ml	max. 50 ml	max. 94 ml	max. 250 ml				
ROTIXA 50 S / 50 RS	max. 250 ml	max. 50 ml	max. 50 ml	max. 94 ml	max. 1,000 ml		max. 500 ml		
ROTO SILENTA 630 RS	max. 100 ml	max. 50 ml	max. 50 ml	10 ml	max. 1,000 ml	2,000 ml	max. 500 ml		
ROTOLAVIT	5 ml								
ROTOFIX 46 / 46 H	max. 250 ml	max. 50 ml	max. 50 ml	10 ml	max. 290 ml				



Additional tubes e.g. stool tubes or spin columns on request.

Control panels

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 key-pad. The intuitive display shows the actual values in digital format while the centrifuge is running.



EBA 20, EBA 20 S, EBA 270, MIKRO 120 and HAEMATOKRIT 210



ROTOFIX 32 A

THE E CONTROL PANEL

The E(conomy) control panel is fitted in the EBA 20, EBA 20 S, EBA 270, MIKRO 120, HAEMATOKRIT 210 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.
▲▲ IMPULS	For short centrifugation steps.
	Opens the lid (EBA 20, EBA 20 S, EBA 270 and MIKRO 120 only).
START	Starts centrifugation.
STOP	Stops centrifugation manually.
RCF	Switches from RPM to RCF display (ROTOFIX 32 A only).



THE N CONTROL PANEL

The EBA 21 centrifuge model features the N(ormal) control panel. The N control panel has more functions than the E control panel.

DISPLAY

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

KEYPAD

◀	Guides the user through the menu options.
▲	Increases the relevant value.
▼	Decreases the relevant value.
IMPULS	For short centrifugation steps.
START	Starts centrifugation.
STOP	Stops centrifugation manually.
PROG	Stores the program.
RCF	Switches from RPM to RCF display. Entry of the RCF in increments of 10. Entry of the centrifuging radius in mm.
	Entry of the run-up time in ramps 1 – 9
	Entry of the run-down time in ramps 1 – 9
	An LED lights up:
	· in the event of imbalance,
	· as long as the rotor is rotating,
	· when the lid can be opened on completion of the program.



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 IMPULS	Starts centrifugation. For short centrifugation steps.
STOP OPEN	Stops centrifugation manually. Opens the lid at standstill.



THE W CONTROL PANEL

The W control panel is used to program the special functions of the cell washer ROTOLAVIT.

DISPLAY

PROG	Program number. Five programmable memories are available.
CYC	Washing cycles. A maximum of nine washing cycles can be entered.
ml	Volume of saline solution per tube (max. 5 ml).
RPM	Speed indication. Entry in increments of 10.
t/min:s	Centrifugation time (max. 9 min : 59 sec).

KEYPAD

◀	Guides the user through the menu options.
▲	Increases the relevant value.
▼	Decreases the relevant value.
START WASH	Starts washing, the production of a suspension or the cleaning program, adopts the selected parameters.
SPIN	Starts additional centrifugations, e.g. Coombs centrifugation.
STOP	Stops centrifugation or washing manually.
SALINE	· Activates the fill volume calibrator. · Charges the system with washing liquid during the cleaning program.
CHECK	Stops the process at any desired point to enable visual inspection of the particular process.
	An LED lights up:
	· in the event of imbalance,
	· as long as the rotor is rotating,
	· when the lid can be opened on completion of the program.





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 AND PARAMETER INPUT

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 50 S / 50 RS and ROTO SILENTA 630 RS floorstanding centrifuges.

DISPLAY

PROG-Nr	Program number. 89 programmable memories are available.
T/°C	Temperature of refrigerated centrifuges.
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 with refrigerated centrifuges. 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 154 – 155.

Small Centrifuges



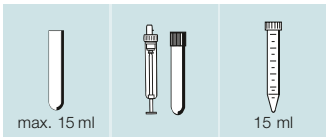
HANDZENTRIFUGE

EBA 20 / EBA 20 S

EBA 270

EBA 21

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.



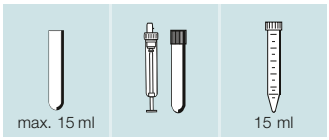


Rotor, 4-place	**Rotor, 4-place**
∢90°	∢50°
max. capacity 4 x 15 ml (conical only) max. RPM (speed) 3,000 min^{-1} max. RCF 1,298	max. capacity 4 x 15 ml max. RPM (speed) 3,000 min^{-1} max. RCF 1,077
Cat. No. 1014	**Cat. No. 1025**

	HANDZENTRIFUGE
Manual centrifuge, without rotor	
Dimensions (H x W x D)	285 x 140 x 175 mm
Weight	approx. 0.9 kg
Cat. No.	**1011**

EBA 20 / EBA 20 S

IVD conform
according to directive 98/79/EC





Small and practical centrifuges for small sample volumes

The EBA 20 and EBA 20 S are fitted as standard with an angle rotor for 8 tubes up to a volume of 15 ml. The EBA 20 attains a max. RCF of 3,461 and is the ideal choice for a medical practice. The more powerful EBA 20 S 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.

TECHNOLOGY

	EBA 20		EBA 20 S	
Small centrifuge, with rotor				
Power supply*)	208–240 V 1 ~	100–127 V 1 ~	200–240 V 1 ~	100–127 V 1 ~
Frequency	50–60 Hz			
Consumption	65 VA	70 VA	130 VA	180 VA
Emission, Immunity	EN / IEC 61326-1, class B	FCC class B	EN / IEC 61326-1, class B	FCC class B

Max. capacity	8 x 15 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)	216 x 231 x 292 mm			
Weight	approx. 4 kg		approx. 6 kg	
Cat. No.	**2002**	**2002-01**	**2080**	**2080-01**

*) Other voltages on request.

Angle rotor EBA 20 / EBA 20 S, 8-place, for commercial tubes up to 15 ml:



8 x 15 ml tubes



4 x 15 ml tubes with screw cap



4 x 8 ml blood collection tubes



8 x 9–10 ml blood collection tubes

∢ 33°

n = 6,000 min^{-1} / 8,000 min^{-1}
max. RCF 3,461 / 6,153

capacity in ml	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	10
Ø x L in mm	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	15 x 102
Cat. No.	**-**	**0553**[2)]	**0501**[2)]	**0518**[2)]	**blood collection/urine tubes**							
rotor incl.												
		 [14)]			 [14)]							
Cat. No.	**6305**	**1054-A**		**-**	**1054-A**			**-**				
boring Ø x L in mm	11.5 x 67.5	13.5 x 60		17.7 x 88	13.5 x 60			17.7 x 88				
tubes per rotor	8											
max. RCF[2)] EBA 20	2,817	2,697		3,461	2,697			3,461				
max. RCF[2)] EBA 20 S	5,009	4,794		6,153	4,794			6,153				
radius in mm	70	67		86	67			86				
run-up in sec	26/23											
run-down in sec, braked	37/40											

capacity in ml	1.6–5	4–7	8	8.5–10	15
Ø x L in mm	13 x 75	13 x 100	16 x 125	16 x 100	17 x 120
Cat. No.	**blood collection/urine tubes**				**0509**
rotor incl.					
	 [14)]				
Cat. No.	**1054-A**	**1058**	**-**		
boring Ø x L in mm	13.5 x 60	13.5 x 79	17.7 x 88		
tubes per rotor	8	8	4	8	4
max. RCF[2)] EBA 20	2,697	3,461			
max. RCF[2)] EBA 20 S	4,794	6,153			
radius in mm	67	86			
run-up in sec	26/23				
run-down in sec, braked	37/40				

[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 20 only! Model EBA 20 S is supplied as standard with an adapter for these tubes.

More for the lab
We have applied our many years of experience in the field of lab technology to other quality products. For example:

FREEZER

FREEZER
Ultra-low temperature chest and upright models

Constant: Safe and secure storage in an optimal environment



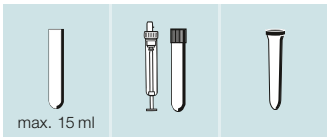


Secure, energy-saving, flexible:
You require safe, secure storage for your valuable samples. Tissue specimens, DNA, RNA, protein preparations and similar substances need to be stored in such a way as to ensure they are well preserved. With a constant temperature of **up to – 86 °C**, Hettich freezers offer the optimal environment for your sensitive samples.

Please ask for our detailed brochure.

EBA 270

IVD conform
according to directive 98/79/EC



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.



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	6 x 15 ml	
Max. RPM (speed)	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)	239 x 326 x 389 mm	
Weight	approx. 14 kg	
Cat. No.	**2300**	**2300-01**

*) Other voltages on request.

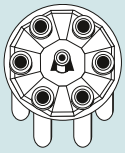
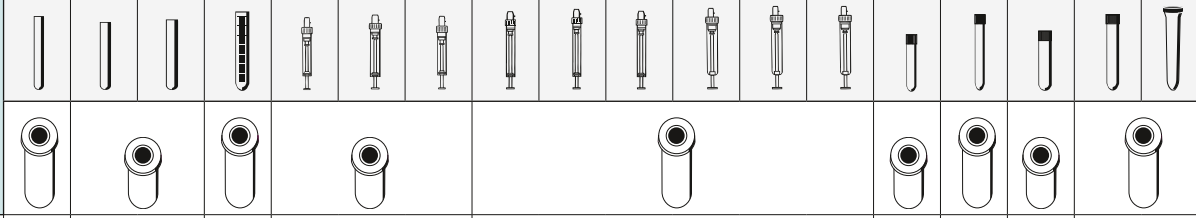
Swing-out rotor, 6-place (incl.)



illustrated with blood collection tubes

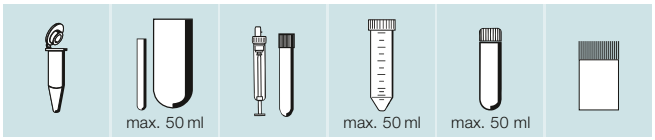
∢90°

n = 4,000 min^{-1}
max. RCF 2,254

capacity in ml	4	5	6	15	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	12
Ø x L in mm	10x88	12x75	12x82	17x100	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x75	16x100	17x102
Cat. No.	**-**	**0553**[2)]	**0501**[2)]	**0518**[2)]	**blood collection / urine tubes**													
 rotor and carriers incl.																		
Cat. No.	**2331**	**2333**		**2331**	**2333**			**2331**						**2333**	**2331**	**2333**	**2331**	
boring Ø x L in mm	17.5x80	17.5x55		17.5x80	17.5x55			17.5x80						17.5x55	17.5x80	17.5x55	17.5x80	
tubes per rotor	6																	
max. RCF[2)]	2,254	1,807		2,254	1,807			2,254						1,807	2,254	1,807	2,254	
radius in mm	126	101		126	101			126						101	126	101	126	
run-up in sec	10																	
run-down in sec	21																	

[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 21





Maximum performance in microlitre centrifugation coupled with reliability for routine laboratory tasks

The EBA 21 is powerful and versatile not only in microlitre centrifugation. Equipped with a variable, maintenance-free frequency drive, this centrifuge generates a max. RCF of 25,718 at a speed of 18,000 min^{-1}.
With its wide range of rotors, the EBA 21 can easily meet all demands placed on a small, high-performance centrifuge.

TECHNOLOGY

	EBA 21	
Small centrifuge, without rotor		
Power supply*)	220–240 V 1 ~	110–127 V 1 ~
Frequency	50–60 Hz	
Consumption	500 VA	550 VA
Emission, Immunity	EN / IEC 61326-1, class B	FCC class B
Max. capacity	6x50 ml	
Max. RPM (speed)	18,000 min^{-1}	
Max. RCF	25,718	
Running time	1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key)	
Dimensions (HxWxD)	247x275x330 mm	
Weight	approx. 11 kg	
Cat. No.	**1004**	**1004-01**

*) Other voltages on request.

Angle rotor, 6-place



∢35°

n = 6,000 min^{-1}
max. RCF 4,025

Cat. No. 1116

Angle rotor, 12-place



∢35°

n = 6,000 min^{-1}
max. RCF 4,146

Cat. No. 1416

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	13 x 75	13 x 100	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. **1116**							+ 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			6				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	23											
run-down in sec, braked	27											

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	8.5–10	15
Ø x L in mm	12x75	17x100	8x66	13x65	11x66	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x125	16x100	17x120
Cat. No.	**0553**[2)]	**0518**[2)]	**blood collection/urine tubes**												**0509**
rotor Cat. No. **1416**															
Cat. No.	**1054-A**	**-**	**1054-A**			**-**					**1054-A**	**1058**	**-**		
boring Ø x L in mm	13.5x60	17.7x88	13.5x60			17.7x88					13.5x60	13.5x79	17.7x88		
tubes per rotor	12	12	12			12					12	12	6	12	6
max. RCF[2)]	3,300	4,146	3,300			4,146					3,300	4,146			
radius in mm	82	103	82			103					82	103			
run-up in sec	18														
run-down in sec, braked	23														

[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, 12-place



∢45°

n = 18,000 min^{-1}
max. RCF 25,718

Cat. No. 1022-A

Angle rotor, 24-place



∢40°

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

Cat. No. 1024-A

Angle rotor, 30-place

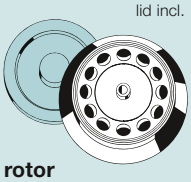
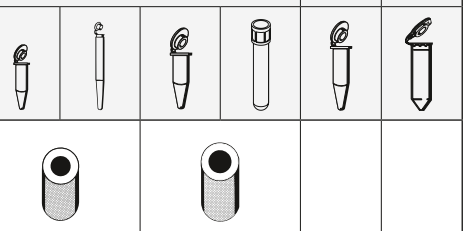


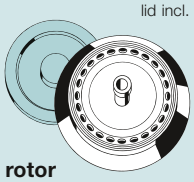
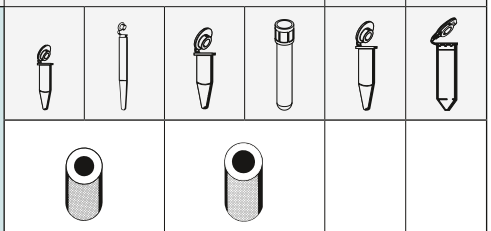
∢45°

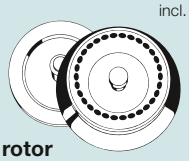
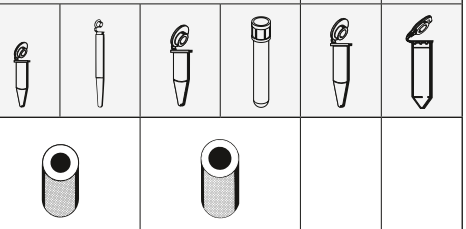
n = 14,000 min^{-1}
max. RCF 21,255

with bio-containment[5]

Cat. No. 1089-A

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. **1022-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x39.5
tubes per rotor	12					
max. RCF[2]	25,718					
radius in mm	71					
run-up in sec	16					
run-down in sec, braked	19					

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. **1024-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x41.1
tubes per rotor	24					
max. RCF[2]	21,382					
radius in mm	85					
run-up in sec	30					
run-down in sec, braked	31					

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[5] incl.  **rotor** Cat. No. **1089-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.9
tubes per rotor	30					
max. RCF[2]	21,255					
radius in mm	97					
run-up in sec	40					
run-down in sec, braked	40					

Optional for rotor 1024-A



lid **Cat. No. 2425**
with bio-containment[5],
autoclavable



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

[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, 12-place



∢35°

n = 5,000 min^{-1}
max. RCF 2,879

Cat. No. 1118

Swing-out rotor, 8-place



∢55°
(with carrier 1127)
∢60°
(with carrier 1122)

n = 5,000 min^{-1}
max. RCF 2,991

Cat. No. (without carriers) **1114**

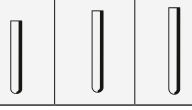
Swing-out rotor, 6-place

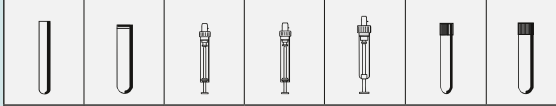


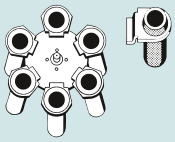
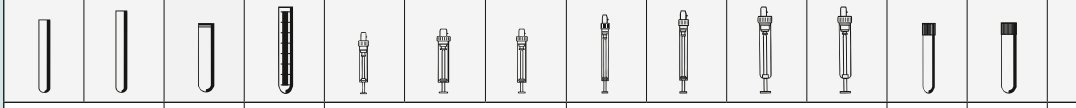
∢40°

n = 5,000 min^{-1}
max. RCF 2,711

Cat. No. (without carriers) **1115**

capacity in ml	5	6	7
Ø x L in mm	12x75	12 x 82	12x100
Cat. No.	**0553**[2]	**0501**[2]	**0578**[2]
 **rotor** Cat. No. **1118**			
Cat. No.	-		
boring Ø x L in mm	12x66		
tubes per rotor	12		
max. RCF[2]	2,879		
radius in mm	103		
run-up in sec	10		
run-down in sec, braked	13		

capacity in ml	5	10	2.6–3.4	2.7–3	4–5.5	1.6–5	4–7
Ø x L in mm	12x75	17x70	13x65	11x66	15x75	13x75	16x75
Cat. No.	**0553**[2]	**2079**	**blood collection tubes**				
 **rotor** Cat. No. **1114**							
Cat. No.	**1127**	**1122**	**1127**		**1122**	**1127**	**1122**
boring Ø x L in mm	13.2x53	17.5x53	13.2x53		17.5x53	13.2x53	17.5x53
tubes per rotor	8						
max. RCF[2]	2,963	2,991	2,963		2,991	2,963	2,991
radius in mm	106	107	106		107	106	107
run-up in sec	9						
run-down in sec, braked	14						

capacity in ml	5	6	10	15	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.9	7.5–8.5	9–10	1.6–5	4–7	8.5–10
Ø x L in mm	12x75	12 x 82	17x70	17x100	8x66	13x65	11x66	15x75	13x90	15x92	16x92	13x75	16x75	16x100
Cat. No.	**0553**[2]	**0501**[2]	**2079**	**0518**[2]	**blood collection/urine tubes**									
carrier Cat. No. **1123**  **rotor** Cat. No. **1115**														
Cat. No.	**1054-A**		2x**0716**	-	**1054-A**			-				**1054-A**	**0716**	-
boring Ø x L in mm	13.5x60		17.5x79		13.5x60			17.5x79				13.5x60	17.5x79	
tubes per rotor	6													
max. RCF[2]	2,068		2,376	2,711	2,068			2,711				2,068	2,543	2,711
radius in mm	74		85	97	74			97				74	91	97
run-up in sec	8													
run-down in sec, braked	12													

[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.

Swing-out rotor, 8-place



∢90°

n = 5,000 min^{-1}
max. RCF 2,879

Cat. No. (without carriers) **1120**

Swing-out rotor, 12-place

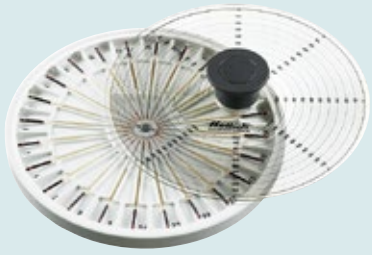


∢60°

n = 5,000 min^{-1}
max. RCF 2,963

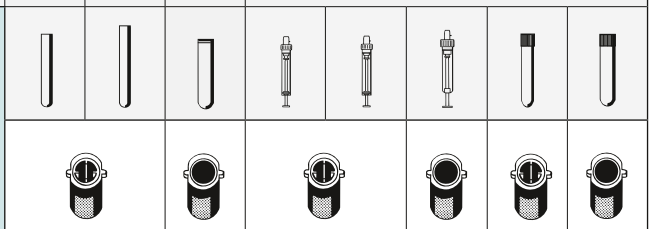
Cat. No. (without carriers) **1126**

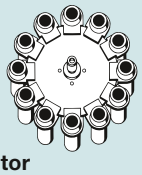
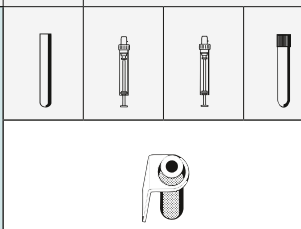
Hematocrit rotor, 24-place

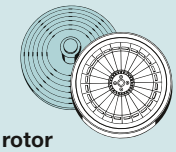


n = 15,000 min^{-1}
max. RCF 21,382

Cat. No. 1450

capacity in ml	5	6	10	2.6–3.4	2.7–3	4–5.5	1.6–5	4–7
Ø x L in mm	12x75	12x82	17x70	13x65	11x66	15x75	13x75	16x75
Cat. No.	**0553**[2]	**0501**[2]	**2079**	**blood collection tubes**				
 **rotor** Cat. No. **1120**								
Cat. No.	**1131**		**1132**	**1131**		**1132**	**1131**	**1132**
boring Ø x L in mm	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	8							
run-down in sec, braked	12							

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. **1126**				
Cat. No.	**1127**			
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	15			

standard capillaries, heparinised	basic	self-sealing and mylar-coated
Cat. No.	**2074**	**1071**
lid as evaluation disk incl.  **rotor** Cat. No. **1450**		
	sealing putty	
Cat. No.	**2077**	**-**
boring Ø x L in mm	-	
capillaries per rotor	24	
max. RCF[2]	21,382	
radius in mm	85	
run-up in sec	8	
run-down in sec, braked	12	

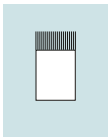
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.

Hematocrit Centrifuge



HAEMATOKRIT 210

HAEMATOKRIT 210



With this centrifuge, safety is top priority

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 210	
Hematocrit centrifuge, without rotor		
Power supply*)	208–240 V 1 ~	100–127 V 1 ~
Frequency	50–60 Hz	
Consumption	250 VA	220 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)	247 x 275 x 330 mm	
Weight	approx. 10 kg	
Cat. No.	**2104**	**2104-01**

*) Other voltages on request.

Hematocrit rotor, 24-place



n = 13,000 min^{-1}
max. RCF 16,060

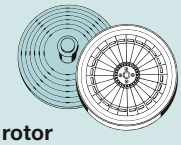
Cat. No. 2076

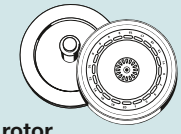
Disk rotor, 20-place, for buffy coat analysis



n = 13,000 min^{-1}
max. RCF 16,060

Cat. No. 2056[12)]

standard capillaries, heparinised	basic	self-sealing and mylar-coated
Cat. No.	**2074**	**1071**
lid as evaluation disk incl.  **rotor** Cat. No. **2076**		
	sealing putty	
Cat. No.	**2077**	**-**
boring Ø x 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	

capillaries	for quantitative buffy coat analysis
Cat. No.	**-**
lid incl.  **rotor** Cat. No. **2056**[12)]	
Cat. No.	**-**
boring Ø x 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

More for the lab
Rolling cabinets for Hettich centrifuges free up space on the laboratory bench and give you greater flexibility.

INFO

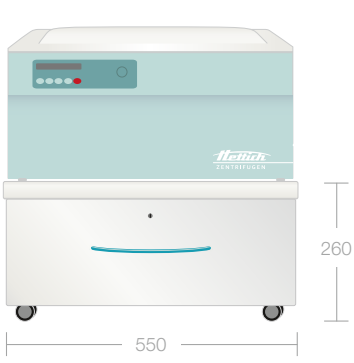
Rolling Cabinets

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-K and 4613-K are suited for the models:
- **ROTOFIX 32 A**
- **UNIVERSAL 320 / 320 R**
- **ROTINA 380 / 380 R**
- **ROTINA 420**
- **ROTANTA 460**
- **ROTOFIX 46 / 46 H**

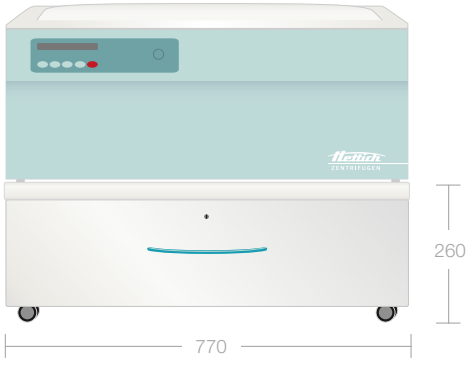
Rolling cabinets with Cat. No. 4614-K and 4615-A are suited for the models:
- **ROTINA 420 R**
- **ROTANTA 460 R**





Low and narrow,
with one drawer.
Depth 650 mm

Cat. No. 4612-K



Low and wide,
with one drawer.
Depth 650 mm

Cat. No. 4614-K



High and narrow,
with two drawers.
Depth 650 mm

Cat. No. 4613-K



High and wide,
with two drawers.
Depth 650 mm

Cat. No. 4615-A

Microlitre Centrifuges



MICROLITRE CENTRIFUGES

MIKRO 120

MIKRO 200/200 R

MIKRO 220/220 R

MIKRO 120





High-performance centrifuge with a small footprint.

The MIKRO 120 separates microlitre samples quickly and reliably thanks to its 24-place rotor and its lid which is aerosol-proof, autoclavable and phenol-resistant.

TECHNOLOGY

	MIKRO 120	
Microlitre centrifuge, without rotor		
Power supply*)	208 – 240 V 1 ~	100 – 127 V 1 ~
Frequency	50 – 60 Hz	
Consumption	230 VA	
Emission, Immunity	EN / IEC 61326-1, class B	FCC class B
Max. capacity	24 x 1.5/2.0 ml	
Max. RPM (speed)	14,000 min^{-1}	
Max. RCF	18,626	
Running time	1 – 99 min, ∞ continuous run, short cycle mode (impulse key)	
Dimensions (H x W x D)	199 x 231 x 292 mm	
Weight	approx. 7 kg	
Cat. No.	**1204**	**1204-01**

*) Other voltages on request.

Angle rotor, 24-place

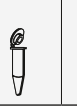


⊀ 40°

n = 14,000 min^{-1}
max. RCF 18,626

with bio-containment[5],
autoclavable, phenol-resistant

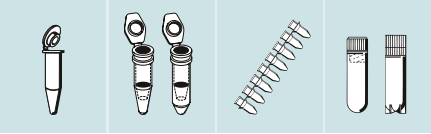
Cat. No. 1242

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38
Cat. No.	-	-	-	-	**2078**	**0536**
lid with bio-containment[5] incl. **rotor** Cat. No. **1242**						
						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6 x 40		8 x 40		10.2 x 19	11.2 x 41.1
tubes per rotor	24					
max. RCF	18,626					
radius in mm	85					
run-up in sec	21					
run-down in sec, braked	24					

[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

IVD conform
according to directive 98/79/EC



These microlitre centrifuges rank among the fastest in their class

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. Highly reliable refrigeration ensures that even thermo-sensitive samples are centrifuged gently.



TECHNOLOGY

	MIKRO 200		MIKRO 200 R	
Microlitre centrifuge, without rotor	**classic**		**cooled**	
Power supply*)	200 – 240 V 1 ~	100 – 127 V 1 ~	200 – 240 V 1 ~	100 – 127 V 1 ~
Frequency	50 – 60 Hz		50 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)

	MIKRO 200	MIKRO 200 R
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**

*) Other voltages on request.

Angle rotor, 24-place



∢40°

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

Cat. No. 2424-B

Angle rotor, 24-place



∢45°

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

with bio-containment[5], autoclavable, phenol-resistant

Cat. No. 2428

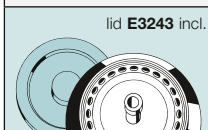
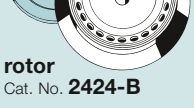
Angle rotor, 30-place

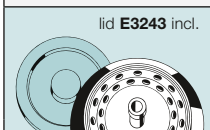


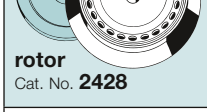
∢52,5° (inner row)
∢40° (outer row)

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
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	
Cat. No.	-	-	-	-	**2078**	**0536**
lid **E3243** incl.						
rotor Cat. No. **2424-B**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6 x 40		8 x 40		10.2 x 19	11.2 x 42.6
tubes per rotor	24					
max. RCF	21,382					
radius in mm	85					
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
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				**2078**	**0536**
lid **E3243** incl.						
rotor Cat. No. **2427-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2 x 19	11.2 x 41.3
tubes per rotor	30					
max. RCF	20,627					
radius in mm	82					
run-up in sec	22					
run-down in sec, braked	30					
temperature in °C[1]	+ 4					

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38		11 x 38	
Cat. No.	-	-	-	-	**2078**	**0536**	**micro spin columns**	
lid with bio-containment[5] incl.								
rotor Cat. No. **2428**								
Cat. No.	**2024**		**2023**		**2031**[7]	**-**	**2031**[7]	**-**
boring Ø x L in mm	6 x 40		8 x 40		10.2 x 19	11.2 x 42.6	10.2 x 19	11.2 x 42.6
tubes per rotor	24							
max. RCF	21.382							
radius in mm	85							
run-up in sec	20							
run-down in sec, braked	28							
temperature in °C[1]	+ 4							

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

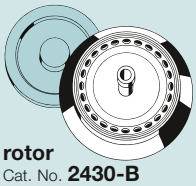
Angle rotor, 30-place



∢45°

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

Cat. No. 2430-B

capacity in ml	0.5
Ø x L in mm	8 x 30
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

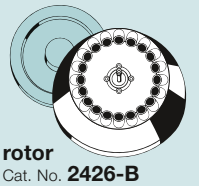
Angle rotor, 20-place, for cryo tubes



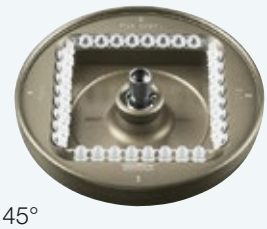
∢40°

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	6 x 18	-
Cat. No.	**-**	**PCR strips**
 **rotor** Cat. No. **2418-A**		
Cat. No.	**-**	
boring Ø x L in mm	6.5 x 15.5	
tubes per rotor	32	4 x 8
max. RCF	14,338	
radius in mm	57	
run-up in sec	19	
run-down in sec, braked	28	
temperature in °C[1)]	+4	

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



lid **Cat. No. 2425**
with bio-containment[5)],
autoclavable



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

Optional for rotor 2418-A

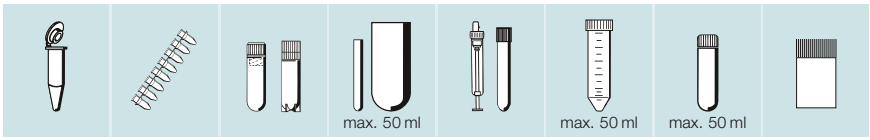


lid **Cat. No. E3243**

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

IVD conform
according to directive 98/79/EC





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. Thanks to its performance, capacity and efficient cooling, the MIKRO 220 R is ideally suited for DNA and RNA extraction.

TECHNOLOGY

	MIKRO 220		MIKRO 220 R	
Microlitre centrifuge, without rotor	**classic**		**cooled**	
Power supply*)	200 – 240 V 1 ~	100 – 127 V 1 ~	200 – 240 V 1 ~	100 – 127 V 1 ~
Frequency	50 – 60 Hz		50 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	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**

*) Other voltages on request.

Angle rotor, 12-place



∢45°

n = 18,000 min^{-1}
max. RCF 25,718

Cat. No. 2218-A

Angle rotor, 24-place



∢45°

n = 18,000 min^{-1}
max. RCF 31,514

with bio-containment[5]

Cat. No. 1195-A

Angle rotor, 30-place

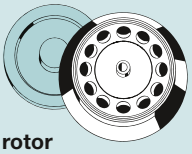
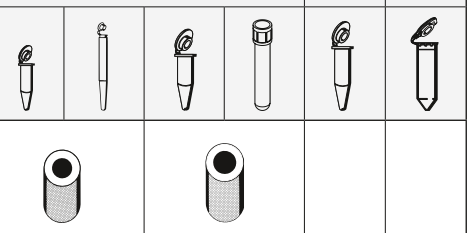


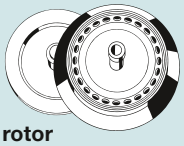
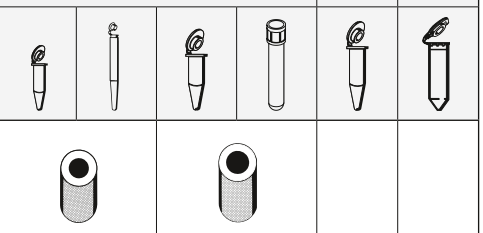
∢45°

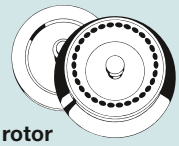
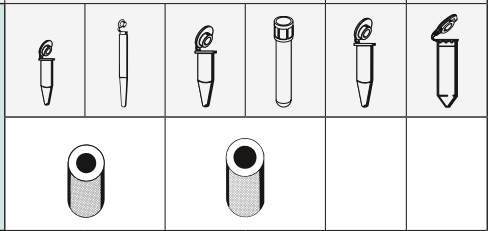
n = 14,000 min^{-1}
max. RCF 21,255

with bio-containment[5]

Cat. No. 1189-A

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. **2218-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x41
tubes per rotor	12					
max. RCF	25,718					
radius in mm	71					
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
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	**-**				**2078**	**0536**
lid with bio-containment[5] incl.  **rotor** Cat. No. **1195-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.8
tubes per rotor	24					
max. RCF	31,514					
radius in mm	87					
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
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	**-**				**2078**	**0536**
lid with bio-containment[5] incl.  **rotor** Cat. No. **1189-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.9
tubes per rotor	30					
max. RCF	21,255					
radius in mm	97					
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



∢45°

n = 14,000 min^{-1} with bio-containment[5]
max. RCF outer 21,255 / inner 18,845

Cat. No. 1158-L

Angle rotor, 20-place, for cryo tubes



∢40°

n = 14,000 min^{-1}
max. RCF 18,407

Cat. No. 2219-A

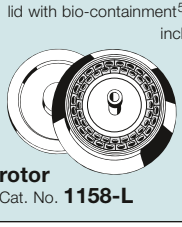
Swing-out rotor, 24-place

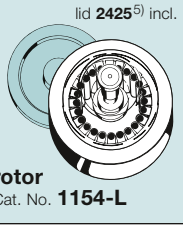


∢90°

n = 13,000 min^{-1} with bio-containment[5]
max. RCF 18,516

Cat. No. 1154-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[5] incl. **rotor** Cat. No. **1158-L**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
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					

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					

Optional for rotor 2219-A



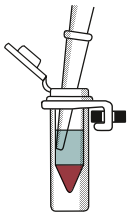
lid **Cat. No. 2425**
with bio-containment[5], autoclavable

Optional for rotor 2219-A and 1154-L



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

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



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

Drum rotor, 6-place



n = 13,000 min^{-1}
max. RCF 14,171

Cat. No. 1161

Angle rotor, 6-place, for PCR strips



∢45°

n = 14,000 min^{-1}
max. RCF 18,845

lid (optional)
Cat. No. **1162**

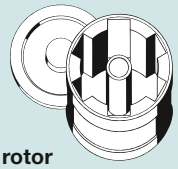
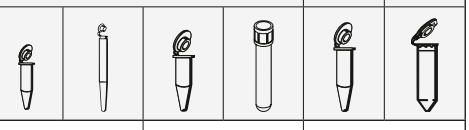
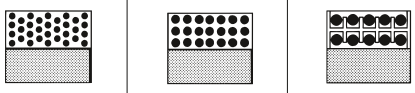
Cat. No. (without lid) **1160**

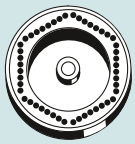
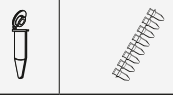
Hematocrit rotor, 24-place

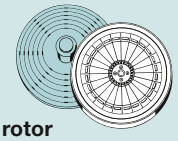


n = 15,000 min^{-1}
max. RCF 21,382

Cat. No. 1023

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		8.4x43		10.8x37	
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					

capacity in ml	0.2	0.2
Ø x L in mm	6 x 18	-
Cat. No.	-	**PCR strips**
 **rotor** Cat. No. **1160**		
Cat. No.	-	
boring Ø x L in mm	6.5x15.5	
tubes per rotor	48	6x8
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, heparinised	basic	self-sealing and mylar-coated
Cat. No.	**2074**	**1071**
lid as evaluation disk incl.  **rotor** Cat. No. **1023**		
	sealing putty	
Cat. No.	**2077**	**-**
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.

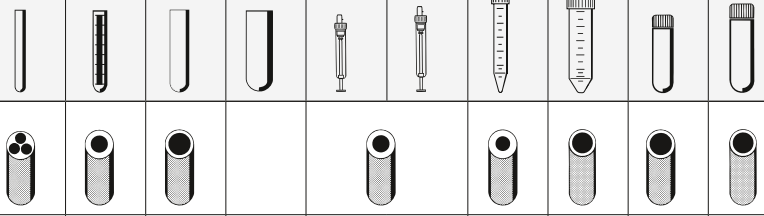
As a special feature, the hematocrit rotor is segmented into 24 chambers, each chamber containing one capillary only. In case a capillary breaks or leaks, fragments and leaked blood stay in the chamber and will not affect other capillaries. The lid of the rotor is evaluation disk and cover in one. Its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

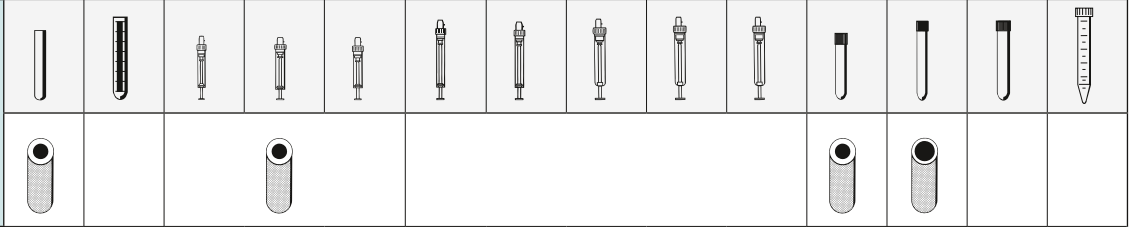
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

	Angle rotor, 6-place	Angle rotor, 12-place
Accessories for MIKRO 220 R only: **The following rotors can only be operated in the refrigerated MIKRO 220 R.**	 ∢35° n = 6,000 min^{-1} max. RCF 4,025	 ∢35° n = 6,000 min^{-1} max. RCF 4,146
	Cat. No. 1016	**Cat. No. 1015**

By also accepting rotors for tubes up to 50 ml, the refrigerated MIKRO 220 R enables an extended range of applications.

With the robust angle rotors even large volumes can be centrifuged at high speeds.

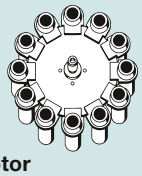
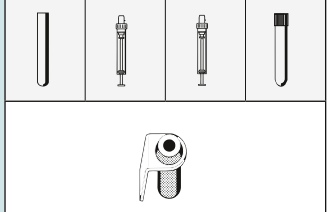
capacity in ml	7	15	25	50	9–10	10	15	50	30	50
Ø x L in mm	12x100	17x100	24x100	34x100	16x92	15x102	17x120	29x115	26x95	29x107
Cat. No.	**0578**[2]	**0518**[2]	**0519**[2]	**0521**[2]	blood collection/ urine tubes		**0509**	**0513**	**0545**	**0546**
 **rotor** Cat. No. **1016**										
Cat. No.	**1632**	**1635**	**1633**	**-**	**1635**		**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			6		6	3	6	
max. RCF[2]	3,944	3,783	3,703	4,025	3,783		3,824	3,824	3,703	3,904
radius in mm	98	94	92	100	94		95	95	92	97
run-up in sec	14									
run-down in sec, braked	17									
temperature in °C[1]	-20									

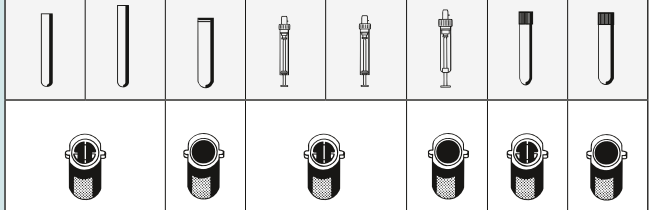
capacity in ml	5	15	1.1–1.4	2.6–3.4	2.7–3	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	8.5–10	15
Ø x L in mm	12x75	17x100	8x66	13x65	11x66	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x100	17x120
Cat. No.	**0553**[2]	**0518**[2]	blood collection/urine tubes											**0509**
 **rotor** Cat. No. **1015**			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

Accessories for MIKRO 220 R only:

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

	Swing-out rotor, 12-place	Swing-out rotor, 8-place
	 ∢60°	 ∢90°
	n = 5,000 min^{-1} max. RCF 2,963	n = 5,000 min^{-1} max. RCF 2,879
	Cat. No. (without carriers) **2226**	**Cat. No.** (without carriers) **1020**

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**			
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	10	2.6–3.4	2.7–3	4–5.5	1.6–5	4–7
Ø x L in mm	12x75	12x82	17x70	13x65	11x66	15x75	13x75	16x75
Cat. No.	**0553**[2]	**0501**[2]	**2079**	**blood collection tubes**				
 **rotor** Cat. No. **1020**								
Cat. No.	**1131**		**1132**	**1131**		**1132**	**1131**	**1132**
boring Ø x L in mm	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							

[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.

Benchtop Centrifuges



ROTOFIX 32 A

UNIVERSAL 320/320 R

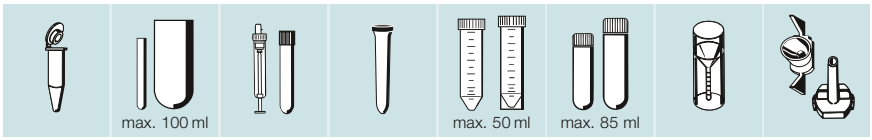
ROTINA 380/380 R

ROTINA 420/420 R

ROTANTA 460/460 R

ROTANTA 460 RC/460 RF

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 / 32 x 15 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.

Swing-out rotor, 4-place



∢90°

n = 4,000 min^{-1}
max. RCF 2,665

illustrated with carriers 1369

Cat. No. (without carriers) **1624**

capacity in ml	5		6	7	9		15		20	25	45	50	1.1–1.4	2.6–3.4
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	8 x 66	13 x 65
Cat. No.	**0553**[2]		**0501**[2]	**0578**[2]	**0500**[2]		**0518**[2]		**-**	**0519**[2]	**-**	**0521**[2]	**blood/urine tubes**	
rotor Cat. No. **1624**														
	with decanting aid		with decanting aid			+ 0701							+ 0701	+ 0716
Cat. No.	**1369-91**	**1372**	**1369-92**		**1370**	**1741**	**1369**	**1742**	**1346**	**1745**	**1345**	**1746**	**1741**	**1742**
boring Ø x L in mm	11.5 x 64.4	13.5 x 65	11.5 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	14.6 x 78	17.6 x 78
tubes per rotor	16	68	16		20	40	16	28	8		4		40	28
max. RCF[2]	2,057	2,164	2,308			2,415	2,308	2,451	2,361	2,451	2,361	2,451	2,415	2,325
radius in mm	115	121	129			135	129	137	132	137	132	137	135	130
run-up in sec	22													
run-down in sec, braked	25													

capacity in ml	4–5.5	4.9	1.6–5	4–7	8.5–10	30	suspensions for cyto accessories	
Ø x L in mm	15 x 75	13 x 90	13 x 75	16 x 75	16 x 100	26 x 95		
Cat. No.	**blood collection/urine tubes**					**0545**	**cyto chambers**[23]	
rotor Cat. No. **1624**								
	+ 0716		+ 0716					
Cat. No.	**1742**	**1741**	**1742**		**1369**	**1745**	**1660**	**1680**
boring Ø x L in mm	17.6 x 78	14.6 x 78	17.6 x 78		17.6 x 74	26 x 78	-	
tubes per rotor	28	40	28		16	8	4	
max. RCF[2]	2,325	2,451	2,325		2,308	2,451	1,646	1,467
radius in mm	130	137	130		129	137	92	82
run-up in sec	22							
run-down in sec, braked	25							

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				

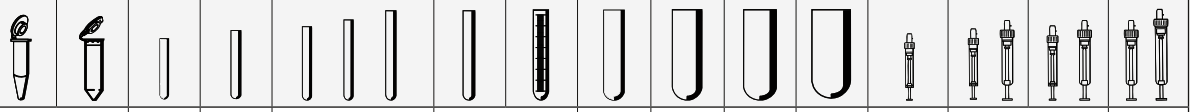
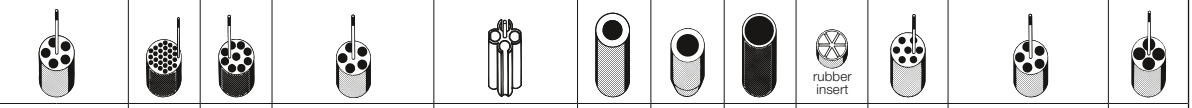
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.

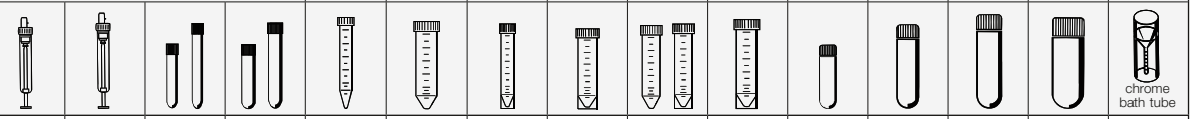
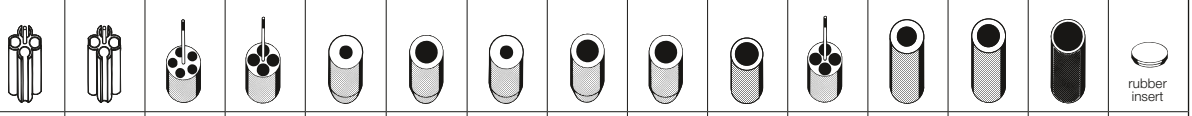
[23] Please ask for our detailed cyto brochure.



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

Swing-out rotor Cat. No. (without carriers) **1624**

capacity in ml	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	4–8.5
Ø x L in mm	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	44 x 100	8 x 66	11 x 66/92	13 x 65/90	15 x 75/92
Cat. No.	**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. **1481**											rubber insert				
Cat. No.	**1351**		**1339**	**1343**	**1383**	**1329**		**1330**	**1331**	**1396**	**0761**	**1457**	**1383**		**1459**
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	45.9 x 98	9 x 47	13.4 x 48		15.6 x 47
tubes per rotor	20		108	36	20	16		4				28	20		16
max. RCF[2)]	2,451		2,594	2,630	2,558	2,540		2,433	2,415	2,612	2,558	2,576	2,558		2,576
radius in mm	137		145	147	143	142		136	135	146	143	144	143		144
run-up in sec	22														
run-down in sec, braked	25														

capacity in ml	9–10	10	1.6–7	4–10	15	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	16 x 92	15 x 102	13 x 75/100	16 x 75/100	17 x 120	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.	**blood collection/urine tubes**				**0509**	**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.	**1329**	**1329**[4)]	**1383**	**1348**	**1347**	**1384**	**6311**	**1363**	**1365**	**6318**	**1348**	**4417**	**4416**	**1396**	**0765**
boring Ø x L in mm	17.6 x 91		13.4 x 48	16.5 x 56	17 x 90	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	16		20	16	4						16	4			
max. RCF[2)]	2,540	2,665	2,558	2,522	2,665			2,343	2,665		2,522	2,451	2,630	2,612	2,540
radius in mm	142	149	143	141	149			131	149		141	137	147	146	142
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, 4-place

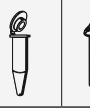


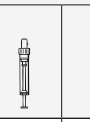
∢90°

n = 4,000 min^{-1}
max. RCF 2,630

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

Cat. No. (without carriers) **1324**

capacity in ml	1.5	2.0	1	3	4	5	6	7	9	15	25	50	94	100
Ø x L in mm	11x38		6x45	10x60	10x88	12x75	12x82	12x100	14x100	17x100	24x100	34x100	38x102	44x100
Cat. No.	**2078**	**0536**	**Rhesus**	**-**	**-**	**0553**[2)]	**0501**[2)]	**0578**[2)]	**0500**[2)]	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0549**	**0526**[2)]
lid with bio-containment[5)] Cat. No. **1492**														
carrier Cat. No. **1490**														 rubber insert
Cat. No.	**1351**		**1339**	**1343**		**1383**			**1329**		**1330**	**1331**	**1396**	**0761**
boring Ø x L in mm	11.2x38		6.5x34	10.5x43		13.4x48			17.6x91		25.2x87	35.2x87	38.5x92	45.9x100.5
tubes per rotor	20		108	36		20			16		4			
max. RCF[2)]	2,415		2,558	2,594		2,522			2,504		2,397	2,379	2,576	2,522
radius in mm	135		143	145		141			140		134	133	144	141
run-up in sec	27													
run-down in sec, braked	30													

capacity in ml	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	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	8x66	13x65	13x90	11x66	11x92	15x75	15x92	16x92	15x102	13x75	13x100	16x75	16x100
Cat. No.	**blood collection/urine tubes**												
lid with bio-containment[5)] Cat. No. **1492**														
carrier Cat. No. **1490**														
Cat. No.	**1457**	**1383**				**1459**		**1329**	**1329**[4)]	**1383**		**1348**	
boring Ø x L in mm	9x47	13.4x48				15.6x47		17.6x91		13.4x48		16.5x56	
tubes per rotor	28	20				16				20		16	
max. RCF[2)]	2,540	2,522				2,540		2,504	2,630	2,522		2,486	
radius in mm	142	141				142		140	147	141		139	
run-up in sec	27												
run-down in sec, braked	30												

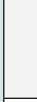
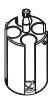
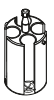
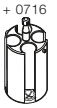
[5)] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
[6)] A rubber stopper for closing the tube is available under Cat. No. 0535.
The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.



illustrated with carriers 1398

Swing-out rotor 1324

capacity in ml	15		30	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	17 x 120		25 x 110	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.	**0509**		**-**	**0513**	**-**	**-**	**-**	**-**	**-**	**0545**	**0546**	**0547**	**0534** [6]
lid with bio-containment [5] Cat. No. **1492**		 [3]											 chrome bath tube
carrier Cat. No. **1490**													 rubber insert
Cat. No.	**1347**	**1356**	**1365**	**1384**	**6311**	**1363**	**1365**	**6318**	**1348**	**4417**	**4416**	**1396**	**0765**
boring Ø x L in mm	17 x 90	17 x 107	26 x 80	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 100.5
tubes per rotor	4	12	4						16	4			
max. RCF [2]	2,630		2,630			2,308	2,630		2,486	2,415	2,594	2,576	2,504
radius in mm	147		147			129	147		139	135	145	144	140
run-up in sec	27												
run-down in sec, braked	30												

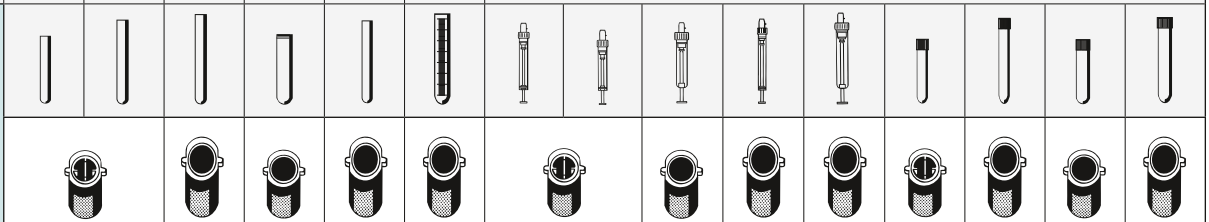
capacity in ml	5	6	7	9	15	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	9–10	10	1.6–5	4–7	4–7	12
Ø x L in mm	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	17 x 102
Cat. No.	**0553** [2]	**0501** [2]	**0578** [2]	**0500** [2]	**0518** [2]	**blood collection/urine tubes**										
 **carrier** Cat. No. **1398**																
								 + 2 x 0716							 + 0716	
Cat. No.	**1486**		**1482A**			**1486**		**1482A**	**1486**		**1482A**		**1486**		**1482A**	**1487**
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		13.4 x 57.5		17.5 x 81	17.5 x 74
tubes per rotor	20		16			20		16	20		16		20		16	12
max. RCF [2]	2,486		2,522			2,486		2,272	2,486		2,522		2,486		2,397	2,451
radius in mm	139		141			139		127	139		141		139		134	137
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, bucket 1490 cannot be closed with lid 1492.
[4] Please remove the inserts.

	Swing-out rotor, 6-place	Swing-out rotor, 8-place
	 ∢90°	 ∢90°
	n = 4,000 min^{-1} max. RCF 2,701	n = 4,000 min^{-1} max. RCF 2,415
Swing-out rotor 1324	**Cat. No.** (with carriers) **1619**	**Cat. No.** (without carriers) **1611**

capacity in ml	15	50	12	50
Ø x L in mm	17 x 120	29 x 115	17 x 100	29 x 115
Cat. No.	**0509**	**0513**	**-**	**-**
 **carrier** Cat. No. **1398**				
Cat. No.	**1483A**	**1484**	**1482A**	**1484** [4]
boring Ø x L in mm	17 x 100	30 x 98	17.5 x 81	30 x 98
tubes per rotor	16	4	16	4
max. RCF [2]	2,612	2,576	2,522	2,576
radius in mm	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	

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	17 x 70	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]	**2079**	**-**	**0518** [2]	**blood collection/urine tubes**								
 **rotor** Cat. No. **1611**															
Cat. No.	**1131**		**1643**	**1132**	**1643**	**1644**	**1131**		**1132**	**1643**	**1644**	**1131**	**1643**	**1132**	**1644**
boring Ø x L in mm	13 x 53		13.2 x 81	17.5 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	1,914	2,415
radius in mm	107		135	107	135		107		135			107	135	107	135
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.

Swing-out rotor, 8-place



∢45°

n = 4,000 min^{-1}
max. RCF 2,469

Cat. No. (with carriers) **1617**

Swing-out rotor, 12-place



∢55°
(with carriers 1127)
∢60°
(with carriers 1122)
∢80°
(with carriers 1621)

n = 4,000 min^{-1}
max. RCF 2,683

Cat. No. (without carriers) **1628**

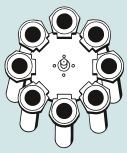
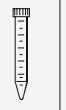
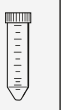
Angle rotor, 8-place

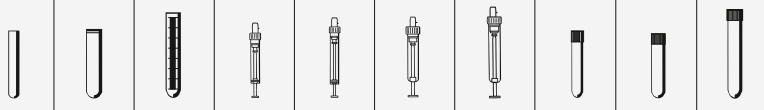
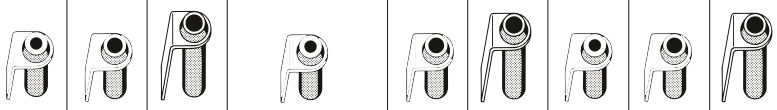


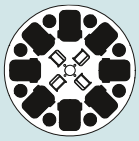
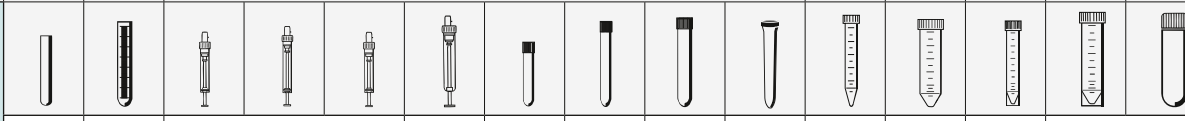
∢45°

n = 4,000 min^{-1}
max. RCF 2,612

Cat. No. (without adapters) **1418**

capacity in ml	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	

capacity in ml	5	10	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 70	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)]	**2079**	**0518**[2)]	**blood collection/urine tubes**						
 **rotor** Cat. No. **1628**										
										
Cat. No.	**1127**	**1122**	**1621**	**1127**		**1122**	**1621**	**1127**	**1122**	**1621**
boring Ø x L in mm	13.2 x 53	17.5 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	2,254	2,683	2,236		2,254	2,683	2,236	2,254	2,683
radius in mm	125	126	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	17 x 100	8 x 66	13 x 65	11 x 66	16 x 92	13 x 75	13 x 100	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**															
	+ 1054-A	+ 0716	+ 1054-A			+ 0716	+ 1054-A		+ 0716	+ 0716	+ E 2109	+ E 2110-A	+ 0716		
Cat. No.	**1467**	**1467**	**1467**			**1467**						**1468**	**1467**	**1468**	
boring Ø x L in mm	17.4 x 91	17.4 x 91	17.4 x 91			17.4 x 91						30.2 x 92	17.4 x 91	30.2 x 92	
tubes per rotor	32	32	32			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	30														
run-down in sec, braked	31														

[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.

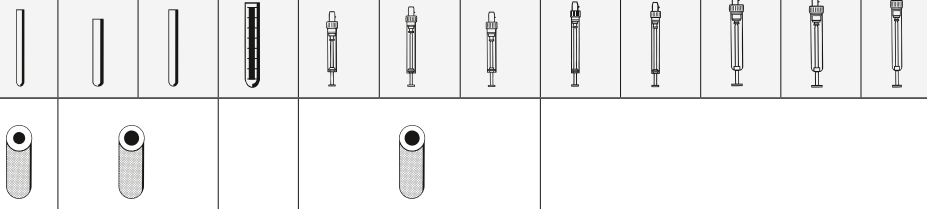
Angle rotor, 12-place

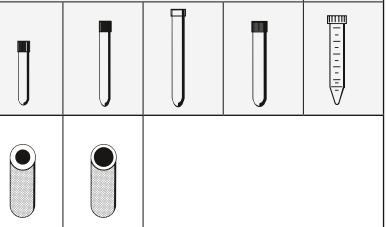


∢35°

n = 6,000 min^{-1}
max. RCF 4,146

Cat. No. 1613

capacity in ml	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	10
Ø x L in mm	10x88	12x75	12x82	17x100	8x66	13x65	11x66	11x92	13x90	15x92	16x92	15x102
Cat. No.	**-**	**0553**[2)]	**0501**[2)]	**0518**[2)]	**blood collection/urine tubes**							
 **rotor** Cat. No. **1613**												
Cat. No.	**6305**	**1054-A**		**-**	**1054-A**			**-**				
boring Ø x L in mm	11.5x67.5	13.5x60		17.7x88	13.5x60			17.7x88				
tubes per rotor	12											
max. RCF[2)]	3,502	3,300		4,146	3,300			4,146				
radius in mm	87	82		103	82			103				
run-up in sec	13											
run-down in sec, braked	15											

capacity in ml	1.6–5	4–7	8	8.5–10	15
Ø x L in mm	13x75	13x100	16x125	16x100	17x120
Cat. No.	**blood collection/urine tubes**				**0509**
 **rotor** Cat. No. **1613**					
Cat. No.	**1054-A**	**1058**	**-**		
boring Ø x L in mm	13.5x60	13.5x79	17.7x88		
tubes per rotor	12	12	6	12	6
max. RCF[2)]	3,300	4,146			
radius in mm	82	103			
run-up in sec	13				
run-down in sec, braked	15				

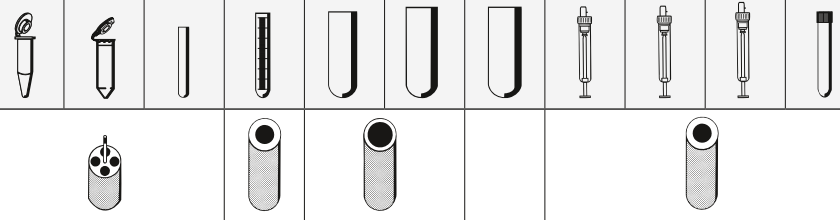
Angle rotor, 6-place

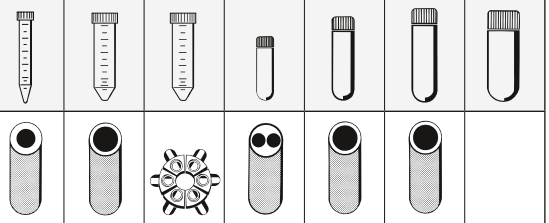


∢35°

n = 6,000 min^{-1}
max. RCF 4,226

Cat. No. 1620A

capacity in ml	1.5	2.0	3	15	50	75	94	7.5 – 8.5	9 – 10	10	8.5 – 10
Ø x L in mm	11 x 38		10 x 60	17 x 100	34 x 100	35 x 105	38 x 102	15 x 92	16 x 92	15 x 102	16 x 100
Cat. No.	**2078**	**0536**	**-**	**0518**[2)]	**0521**[2)]	**0548**	**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	6		6	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	15	50		10	30	50	85
Ø x L in mm	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.	**1466**	**1454**	**1646**[8)]	**1448**	**1447**	**1446**	**-**
boring Ø x L in mm	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)]	3,985	3,985	3,985	3,904	3,824	4,025	4,226
radius in mm	99			97	95	100	105
run-up in sec	19						
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.
[8)] 6-place adapter set for conical 50 ml tubes with screw cap.

Cyto rotors

The 4-place rotor **No. 1624** is best suited for laboratories not exclusively involved with cytological examinations. Both tubes and cytological preparations can be centrifuged without requiring a rotor change. Changing the carriers is all that is needed. Rotor **No. 1624** accommodates cyto suspensions **No. 1660** and **No. 1680**.

Rotors **No. 1626** and **No. 1648** were especially designed for use in cytology. They are recommended for laboratories working exclusively in this area.



Rotor, 4-place
illustrated with suspensions 1680
for angle chambers

Cat. No. 1624 (without suspensions)



Cyto rotor, 6-place
illustrated with suspensions 1680
for angle chambers

Cat. No. 1626 (without suspensions)



Cyto rotor, 8-place
illustrated with suspensions 1680
for angle chambers

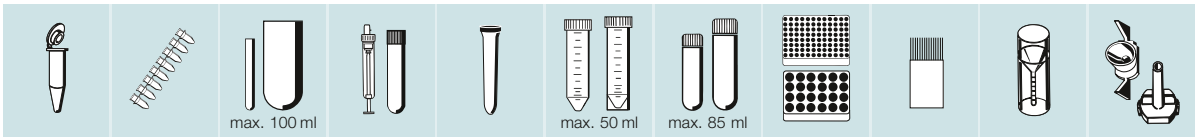
Cat. No. 1648 (with suspensions)



Cyto rotor, 6-place
illustrated with suspensions 1660
for cyto chambers

Cat. No. 1626 (without suspensions)

UNIVERSAL 320/320 R



Our multitalented 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.



TECHNOLOGY

	UNIVERSAL 320		UNIVERSAL 320 R[>)]		
Benchtop centrifuge, without rotor	**classic**		**cooled**		
Power supply[*)]	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 100 ml / 32 x 15 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 395 x 520 mm		346 x 401 x 695 mm		
Weight	approx. 31 kg		approx. 53 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.

Swing-out rotor, 4-place



∢90°

n = 5,000 min^{-1}
max. RCF 4,193

illustrated with carriers 1425

Cat. No. (without carriers) **1494**

capacity in ml	1.5	2.0	1	3	5	6	7	9	15	25	50	100	suspension for cyto accessories
Ø x L in mm	11 x 38		6 x 45	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	
Cat. No.	**2078**	**0536**	**Rhesus**	**-**	**0553**[2)]	**0501**[2)]	**0578**[2)]	**0500**[2)]	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0526**[2)]	**cyto chambers**[23)]
carrier Cat. No. **1425**													
Cat. No.	**1444**		**1432**	**1433**	**1434**			**1431**		**1435**	**1436**	**1437**	**1452**
boring Ø x L in mm	11.5 x 38		6.5 x 34	10.5 x 40	12.7 x 60			17.5 x 84		25.5 x 84	35.5 x 84	45.5 x 86	-
tubes per rotor	36		144	56	48			28		8	4	4	4
max. RCF[2)]	3,885		3,969	3,913								3,801	2,739
radius in mm	139		142	140								136	98
run-up in sec	30												
run-down in sec, braked	32												
temperature in °C[1)]	-10												

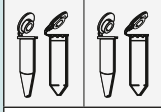
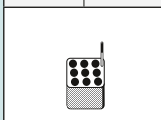
capacity in ml	2.6 – 3.4	2.7 – 3	4 – 5.5	4.5 – 5	4.9	7.5 – 8.5	9 – 10	1.6 – 5	4 – 7	4 – 7	8.5 – 10	15	50	50
Ø x L in mm	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 100	17 x 120	29 x 115	29 x 115
Cat. No.	**blood collection/urine tubes**											**0509**	**0513**	**-**
carrier Cat. No. **1425**														
Cat. No.	**1438**		**1441**	**1438**		**1441**	**1439**	**1438**		**1441**		**1442**	**1443**	**1737**
boring Ø x L in mm	13.4 x 50		16.5 x 50	13.4 x 50		16.5 x 50	17 x 45	13.4 x 50		16.5 x 50		17 x 90	30 x 90	30 x 90
tubes per rotor	28						16	28				4		
max. RCF[2)]	3,913											4,081		
radius in mm	140											146		
run-up in sec	30													
run-down in sec, braked	32													
temperature in °C[1)]	-10													

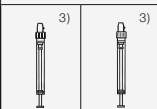
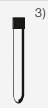
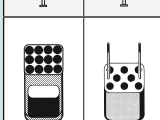
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
23) Please ask for our detailed cyto brochure.



illustrated with carriers 1427

Swing-out rotor Cat. No. (without carriers) **1494**

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	4–5.5
Ø x L in mm	11x38		6x45	10x60	12x75	12x82	12x100	14x100	17x100	24x100	34x100	8x66	13x65	11x66	15x75
Cat. No.	**2078/0536**	**-**	**Rhesus**	**-**	**0553**[2]	**0501**[2]	**0578**[2]	**0500**[2]	**0518**[2]	**0519**[2]	**0521**[2]	**blood collection/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**	**5279**
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	15.6x41
tubes per rotor	36		120	48	32	48	48	24		8	4	48	32	48	20
max. RCF[2]	4,109		4,081	4,053	4,025	4,053	3,941					4,109	4,025	4,053	4,109
radius in mm	147		146	145	144	145	141					147	144	145	147
run-up in sec	30														
run-down in sec, braked	32														
temperature in °C[1]	-7														

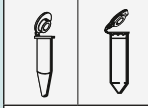
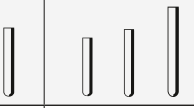
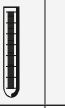
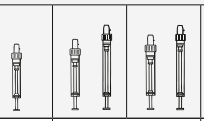
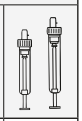
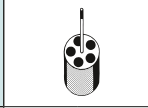
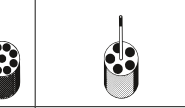
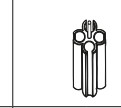
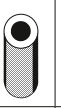
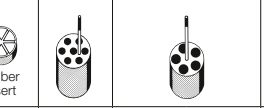
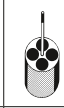
capacity in ml	4.5–5	4.9	7.5–8.5	9–10	1.6–5	4–7		8.5–10	15	50	25	30	50
Ø x L in mm	11x92	13x90	15x92	16x92	13x75	13x100	16x75	16x100	17x120	29x115	25x90	25x110	29x115
Cat. No.	**blood collection/urine tubes**								**0509**	**0513**	**-**	**-**	**-**
lid Cat. No. **1421**													
carrier Cat. No. **1427**													
Cat. No.	**5230**	**1732**	**5279**	**5271**[4]	**1732**		**5271**	**5231**	**5275**	**5276**	**1731**	**5272**	**5233**[4]
boring Ø x L in mm	12.4x87	13.4x58	15.6x41	17x66	13.4x58		17x66	17.8x87	17x90	30x90	25.5x72	25.5x85	35.5x87
tubes per rotor	48	32	20		32		20	24	4		8	4	4
max. RCF[2]	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	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												

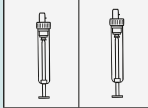
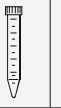
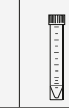
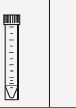
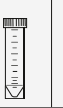
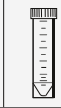
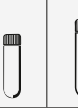
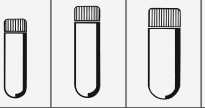
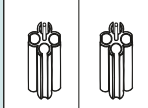
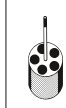
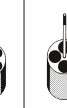
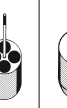
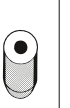
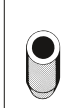
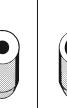
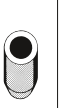
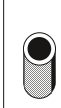
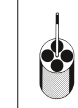
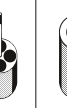
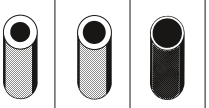
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 1427 cannot be closed with lid 1421.



illustrated with carriers 1495 and lids 1492
with bio-containment[5]

Swing-out rotor Cat. No. (without carriers) 1494

capacity in ml	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	4–8.5
Ø x L in mm	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	44 x 100	8 x 66	11 x 66/92	13 x 65/90	15 x 75/92
Cat. No.	**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**											 rubber insert			
Cat. No.	**1351**		**1339**	**1343**	**1383**	**1329**		**1330**	**1331**	**1396**	**0761**	**1457**	**1383**		**1459**
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	45.9 x 98	9 x 47	13.4 x 48		15.6 x 47
tubes per rotor	20		108	36	20	16		4				28	20		16
max. RCF[2]	3,857		4,081	4,137	4,025	3,997		3,829	3,801	4,109	4,025	4,053	4,025		4,053
radius in mm	138		146	148	144	143		137	136	147	144	145	144		145
run-up in sec	30														
run-down in sec, braked	32														
temperature in °C[1]	-10														

capacity in ml	9–10	10	1.6–7	4–10	15	30	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	16 x 92	15 x 102	13x75/100	16x75/100	17 x 120	25 x 110	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.	**blood/urine tubes**				**0509**	**-**	**0513**	**-**	**-**	**-**	**-**	**-**	**0545**	**0546**	**0547**	**0534[6]**
lid with bio-containment[5] Cat. No. **1492**																 chrome bath tube
carrier Cat. No. **1495**																 rubber insert
Cat. No.	**1329**	**1329[4]**	**1383**	**1348**	**1347**	**1365**	**1384**	**6311**	**1363**	**1365**	**6318**	**1348**	**4417**	**4416**	**1396**	**0765**
boring Ø x L in mm	17.6 x 91		13.4 x 48	16.5 x 56	17 x 90	26 x 80	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	45.9x98
tubes per rotor	16		20	16	4							16	4			4
max. RCF[2]	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	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															

[4] Please remove the inserts.
[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.

Swing-out rotor, 4-place



⊀90°

n = 4,000 min^{-1}
max. RCF 2,665

illustrated with carriers 1369

Cat. No. (without carriers) **1624**

capacity in ml	5		6	7	9		15		20	25	45	50	1.1–1.4	2.6–3.4	4–5.5
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	8 x 66	13 x 65	15 x 75
Cat. No.	**0553**[2]		**0501**[2]	**0578**[2]	**0500**[2]		**0518**[2]		**-**	**0519**[2]	**-**	**0521**[2]	**blood/urine tubes**		
rotor Cat. No. **1624**	with decanting aid		with decanting aid			+ 0701							+ 0701	+ 0716	
Cat. No.	**1369-91**	**1372**	**1369-92**		**1370**	**1741**	**1369**	**1742**	**1346**	**1745**	**1345**	**1746**	**1741**	**1742**	
boring Ø x L in mm	11.5 x 64.4	13.5 x 65	11.5 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	14.6 x 78	17.6 x 78	
tubes per rotor	16	68	16		20	40	16	28	8		4		40	28	
max. RCF[2]	2,057	2,164	2,308			2,415	2,308	2,451	2,361	2,451	2,361	2,451	2,415	2,325	
radius in mm	115	121	129			135	129	137	132	137	132	137	135	130	
run-up in sec	20														
run-down in sec, braked	25														
temperature in °C[1]	-17					-15	-17	-19	-17	-15	-17	-15		-19	

capacity in ml	4.9	1.6 – 5	4 – 7	8.5 – 10	30	suspensions for cyto accessories	
Ø x L in mm	13 x 90	13 x 75	16 x 75	16 x 100	26 x 95		
Cat. No.	**blood collection/urine tubes**				**0545**	**cyto chambers**[23]	
rotor Cat. No. **1624**		+ 0716					
Cat. No.	**1741**	**1742**		**1369**	**1745**	**1660**	**1680**
boring Ø x L in mm	14.6 x 78	17.6 x 78		17.6 x 74	26 x 78	-	
tubes per rotor	40	28		16	8	4	
max. RCF[2]	2,451	2,325		2,308	2,451	1,646	1,467
radius in mm	137	130		129	137	92	82
run-up in sec	20						
run-down in sec, braked	25						
temperature in °C[1]	-15	-19		-17	-15	-16	-17

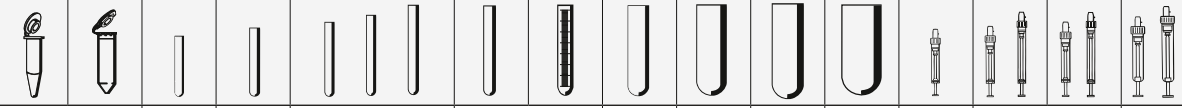
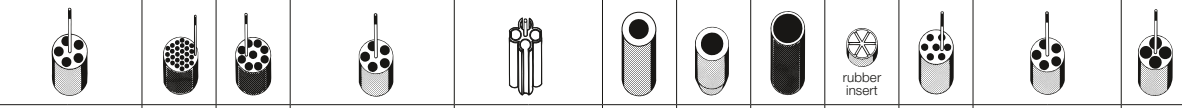
capacity in ml	1.5	2.0	1	3	4
Ø x L in mm	11 x 38		6 x 45	10 x 60	12 x 60
Cat. No.	**2078**	**0536**	**Rhesus**	**-**	**-**
carrier Cat. No. **1366**					
Cat. No.	**5277**		**1357**	**1327**	**1326**
boring Ø x L in mm	11.5 x 38		6.5 x 23	10.5 x 23	12.5 x 44
tubes per rotor	36		120	48	
max. RCF[2]	1,968		1,950	1,932	
radius in mm	110		109	108	
run-up in sec	20				
run-down in sec, braked	25				
temperature in °C[1]	-17				

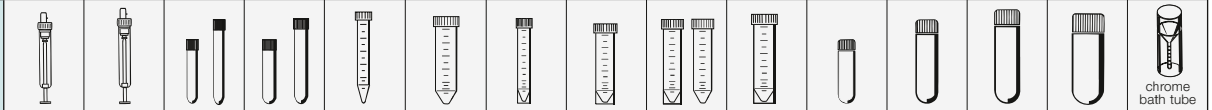
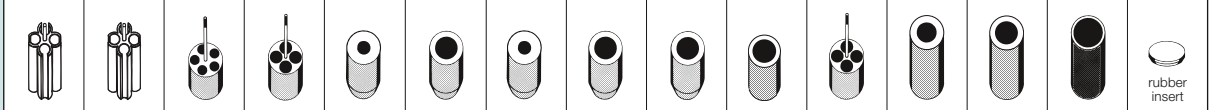
[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[4] Please remove the inserts.



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

Swing-out rotor Cat. No. (without carriers) **1624**

capacity in ml	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	4–8.5
Ø x L in mm	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	44 x 100	8 x 66	11 x 66/92	13 x 65/90	15 x 75/92
Cat. No.	**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. **1481**											rubber insert				
Cat. No.	**1351**		**1339**	**1343**	**1383**	**1329**		**1330**	**1331**	**1396**	**0761**	**1457**	**1383**		**1459**
boring Ø x L in mm	11.2 x 38		6.5x34	10.5 x43	13.4 x 48	17.6 x 91		25.2x87	35.2x87	38.5 x 92	45.9 x 98	9 x47	13.4 x48		15.6 x 47
tubes per rotor	20		108	36	20	16		4				28	20		16
max. RCF[2)]	2,451		2,594	2,630	2,558	2,540		2,433	2,415	2,612	2,558	2,576	2,558		2,576
radius in mm	137		145	147	143	142		136	135	146	143	144	143		144
run-up in sec	20														
run-down in sec, braked	25														
temperature in °C[1)]	-15														

capacity in ml	9–10	10	1.6–7	4–10	15	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	16 x 92	15 x 102	13 x 75/100	16 x 75/100	17 x 120	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.	**blood collection/urine tubes**				**0509**	**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.	**1329**	**1329[4)]**	**1383**	**1348**	**1347**	**1384**	**6311**	**1363**	**1365**	**6318**	**1348**	**4417**	**4416**	**1396**	**0765**
boring Ø x L in mm	17.6 x 91		13.4 x48	16.5x56	17 x 90	30 x 90	17 x 80	26 x 72	26 x 80	29.5x 80	16.5 x 56	26 x 83	29 x 93	38.5 x 92	45.9 x 98
tubes per rotor	16		20	16	4						16	4			
max. RCF[2)]	2,540	2,665	2,558	2,522	2,665			2,343	2,665		2,522	2,451	2,630	2,612	2,540
radius in mm	142	149	143	141	149			131	149		141	137	147	146	142
run-up in sec	20														
run-down in sec, braked	25														
temperature in °C[1)]	- 15														

[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.
[23)] Please ask for our detailed cyto brochure.

Swing-out rotor, 4-place

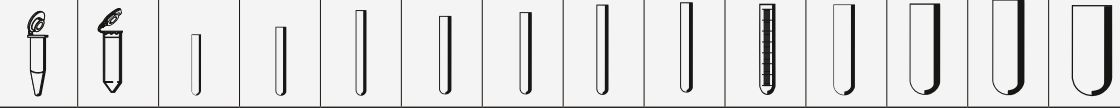


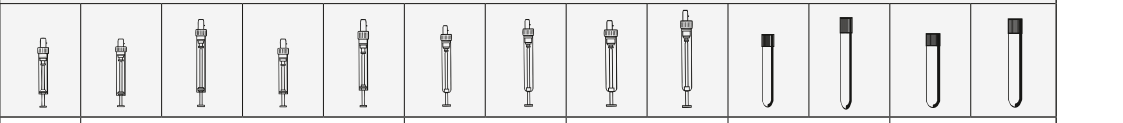
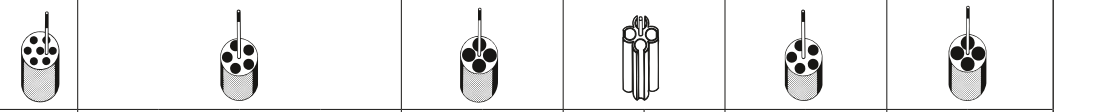
∢90°

n = 4,500 min^{-1}
max. RCF 3,328

illustrated with carriers 1490 and lids 1492
with bio-containment[5]

Cat. No. (without carriers) **1324**

capacity in ml	1.5	2.0	1	3	4	5	6	7	9	15	25	50	94	100
Ø x L in mm	11x38		6x45	10x60	10x88	12x75	12x82	12x100	14x100	17x100	24x100	34x100	38x102	44x100
Cat. No.	**2078**	**0536**	**Rhesus**	**-**	**-**	**0553**[2]	**0501**[2]	**0578**[2]	**0500**[2]	**0518**[2]	**0519**[2]	**0521**[2]	**0549**	**0526**[2]
lid with bio-containment[5] Cat. No. **1492**														
carrier Cat. No. **1490**														rubber insert
Cat. No.	**1351**		**1339**	**1343**		**1383**			**1329**		**1330**	**1331**	**1396**	**0761**
boring Ø x L in mm	11.2x38		6.5x34	10.5x43		13.4x48			17.6x91		25.2x87	35.2x87	38.5x92	45.9x100.5
tubes per rotor	20		108	36		20			16		4			
max. RCF[2]	3,056		3,237	3,283		3,192			3,170		3,034	3,011	3,260	3,192
radius in mm	135		143	145		141			140		134	133	144	141
run-up in sec	27													
run-down in sec, braked	30													
temperature in °C[1]	-6													

capacity in ml	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	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	8x66	13x65	13x90	11x66	11x92	15x75	15x92	16x92	15x102	13x75	13x100	16x75	16x100
Cat. No.	**blood collection/urine tubes**												
lid with bio-containment[5] Cat. No. **1492**													
carrier Cat. No. **1490**													
Cat. No.	**1457**	**1383**				**1459**		**1329**	**1329**[4]	**1383**		**1348**	
boring Ø x L in mm	9x47	13.4x48				15.6x47		17.6x91		13.4x48		16.5x56	
tubes per rotor	28	20				16				20		16	
max. RCF[2]	3,215	3,192				3,215		3,170	3,328	3,192		3,147	
radius in mm	142	141				142		140	147	141		139	
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 2) is 4,000.
3) When using these tubes, carrier 1490 cannot be closed with lid 1492.



illustrated with carriers 1398

Swing-out rotor 1324

capacity in ml	15		30	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	17x120		25x110	29x115	17x100	25x90	25x110	29x115	16x80	26x95	29x107	38x106	44x105
Cat. No.	**0509**		**-**	**0513**	**-**	**-**	**-**	**-**	**-**	**0545**	**0546**	**0547**	**0534**[6]
lid with bio-containment[5] Cat. No. **1492**		[3]											chrome bath tube
carrier Cat. No. **1490**													rubber insert
Cat. No.	**1347**	**1356**	**1365**	**1384**	**6311**	**1363**	**1365**	**6318**	**1348**	**4417**	**4416**	**1396**	**0765**
boring Ø x L in mm	17x90	17x107	26x80	30x90	17x80	26x72	26x80	29.5x80	16.5x56	26x83	29x93	38.5x92	45.9x100.5
tubes per rotor	4	12	4						16	4			
max. RCF[2]	3,328		3,328			2,920	3,328		3,147	3,056	3,283	3,260	3,170
radius in mm	147		147			129	147		139	135	145	144	140
run-up in sec	27												
run-down in sec, braked	30												
temperature in °C[1]	- 6												

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	12
Ø x L in mm	12x75	12x82	12x100	14x100	17x100	13x65	11x66	15x75	11x92	13x90	16x92	15x102	13x75	13x100	16x75	17x102
Cat. No.	**0553**[2]	**0501**[2]	**0578**[2]	**0500**[2]	**0518**[2]	**blood collection/urine tubes**										
carrier Cat. No. **1398**								+ 2 x 0716							+ 0716	
Cat. No.	**1486**			**1482A**		**1486**		**1482A**	**1486**		**1482A**		**1486**		**1482A**	**1487**
boring Ø x L in mm	13.4 x 57.5			17.5x81		13.4 x 57.5		17.5x81	13.4 x 57.5		17.5x81		13.4 x 57.5		17.5x81	17.5x74
tubes per rotor	20			16		20		16	20		16		20		16	12
max. RCF[2]	3,147			3,192		3,147		2,875	3,147		3,192		3,147		3,034	3,102
radius in mm	139			141		139		127	139		141		139		134	137
run-up in sec	27															
run-down in sec, braked	30															
temperature in °C[1]	- 6															

[4] Please remove the inserts.
[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.

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



∢ 45°

n = 5,000 min^{-1}
max. RCF 3,857

Cat. No. (with carriers) **1617**

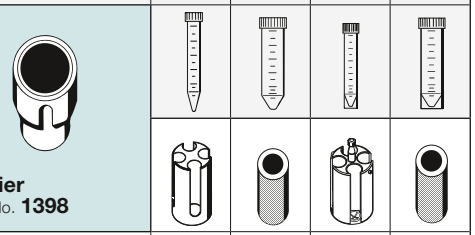
Swing-out rotor, 12-place



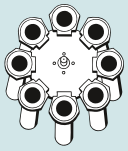
∢ 55° (with carriers 1127)
∢ 60° (with carriers 1122)
∢ 80° (with carriers 1621)

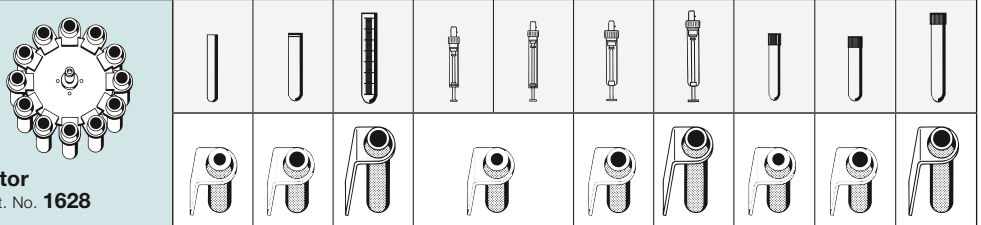
n = 5,000 min^{-1}
max. RCF 4,193

Cat. No. (without carriers) **1628**

capacity in ml	15	50	12	50
Ø x L in mm	17 x 120	29 x 115	17 x 100	29 x 115
Cat. No.	**0509**	**0513**	**-**	**-**
carrier Cat. No. **1398**				
Cat. No.	**1483A**	**1484**	**1482A**	**1484** [4]
boring Ø x L in mm	17 x 100	30 x 98	17.5 x 81	30 x 98
tubes per rotor	16	4	16	4
max. RCF [2]	3,305	3,260	3,192	3,260
radius in mm	146	144	141	144
run-up in sec	27			
run-down in sec, braked	30			
temperature in °C [1]	- 6			

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	20	
run-down in sec, braked	22	
temperature in °C [1]	- 15	

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]	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	10	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 70	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]	**2079**	**0518** [2]	**blood collection/urine tubes**						
rotor Cat. No. **1628**										
Cat. No.	**1127**	**1122**	**1621**	**1127**		**1122**	**1621**	**1127**	**1122**	**1621**
boring Ø x L in mm	13.2 x 53	17.5 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]	3,494	3,522	4,193	3,494		3,522	4,193	3,494	3,522	4,193
radius in mm	125	126	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

[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

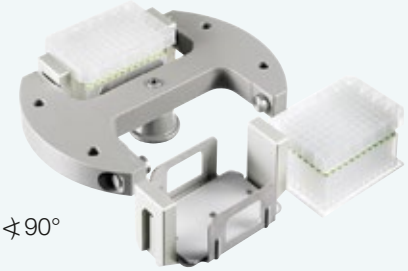


∢90°

n = 4,000 min^{-1}
max. RCF 2,415

Cat. No. (without carriers) **1611**

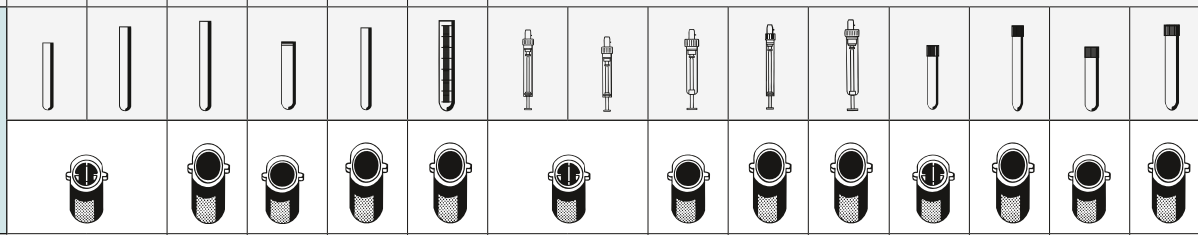
Swing-out rotor, 2-place

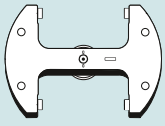
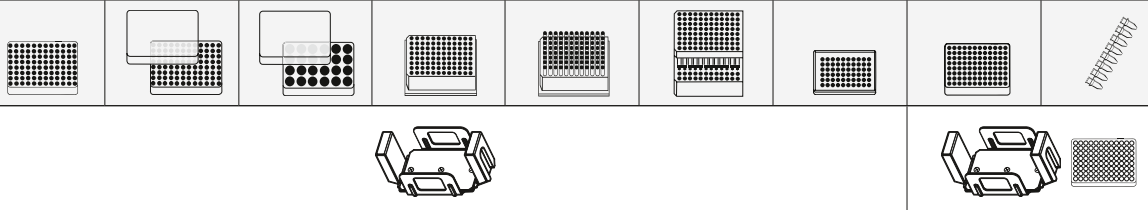


∢90°

n = 4,000 min^{-1}
max. RCF 2,218

Cat. No. (without carriers) **1460**

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	17 x 70	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]	**2079**	**-**	**0518**[2]	**blood collection/urine tubes**								
 **rotor** Cat. No. **1611**															
Cat. No.	**1131**		**1643**	**1132**	**1643**	**1644**	**1131**		**1132**	**1643**	**1644**	**1131**	**1643**	**1132**	**1644**
boring Ø x L in mm	13 x 53		13.2 x 81	17.5 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	1,914	2,415
radius in mm	107		135	107	135		107		135			107	135	107	135
run-up in sec	20														
run-down in sec, braked	20														
temperature in °C[1]	-16														

D x W x H in mm	86 x 128 x 15/17.5		86 x 128 x 22	86 x 128 x 44.5	86 x 128 x 46	86 x 128 x 83	59 x 84 x 11	82 x 124 x 20	-
capacity in ml	-								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	24 x 8
max. RCF[2]	2,218								
radius in mm	124								
run-up in sec	40								
run-down in sec, braked	45								
temperature in °C[1]	- 6								

[4] Please remove the inserts.

Swing-out rotor, 4-place



∢90°

n = 4,000 min^{-1}
max. RCF 1,896

Cat. No. (without carriers) **1645**

Angle rotor, 12-place



∢45°

n = 15,000 min^{-1}
max. RCF 16,602

Cat. No. 1612

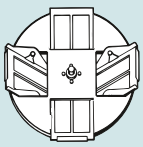
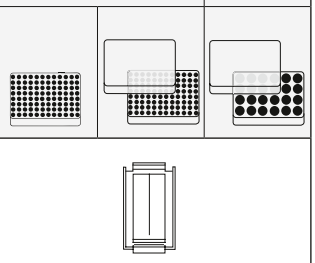
Angle rotor, 24-place

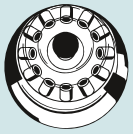
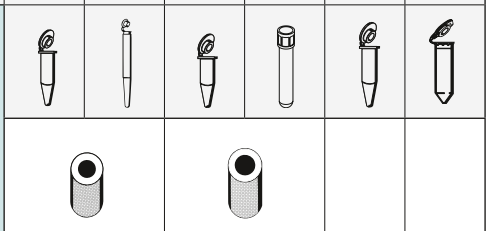


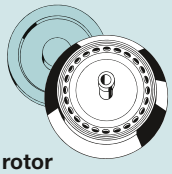
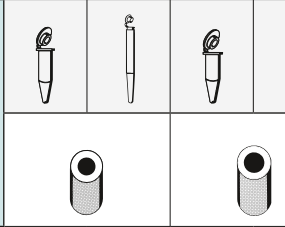
∢40°

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

Cat. No. 1420-B

D x W x H in mm	86 x 128 x 15/17.5	86 x 128 x 22
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	

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	
Cat. No.	**-**	**-**	**-**	**-**	**2078**	**0536**
lid incl.  **rotor** Cat. No. **1612**						
Cat. No.	**2024**		**2023**		**2031**[7)]	**-**
boring Ø x L in mm	6 x 40		8 x 40		10.2 x 19	11.4 x 39
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
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	
Cat. No.	**-**	**-**	**-**	**-**	**2078**	**0536**
lid incl.  **rotor** Cat. No. **1420-B**						
Cat. No.	**2024**		**2023**		**2031**[7)]	**-**
boring Ø x L in mm	6 x 40		8 x 40		10.2 x 19	11.2 x 42.6
tubes per rotor	24					
max. RCF[2)]	21,382					
radius in mm	85					
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[5)],
autoclavable



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

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, 30-place



∢45°

n = 14,000 min^{-1}
max. RCF 21,255

with bio-containment[5)]

Cat. No. 1689-A

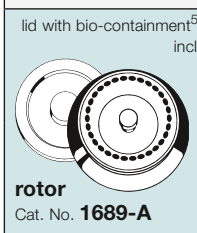
Angle rotor, 8-place



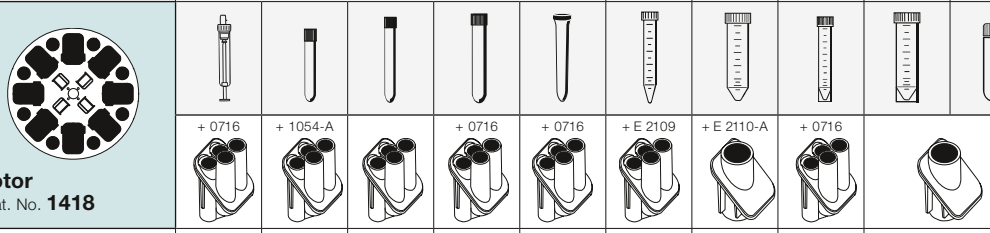
∢45°

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
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	
Cat. No.	-	-	-	-	**2078**	**0536**
lid with bio-containment[5)] incl. **rotor** Cat. No. **1689-A**						
Cat. No.	**2024**		**2023**		**2031**[7)]	-
boring Ø x L in mm	6 x 40		8 x 40		10.2x19	11.2x40.9
tubes per rotor	30					
max. RCF[2)]	21,255					
radius in mm	97					
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
Ø x L in mm	12 x 75	17x100	8x66	13x65	11x66
Cat. No.	**0553**[2)]	**0518**[2)]	**blood/urine tubes**		
rotor Cat. No. **1418**					
Cat. No.	**1467**	**1467**	**1467**		
boring Ø x L in mm	17.4 x 91	17.4 x 91	17.4 x 91		
tubes per rotor	32	32	32		
RCF max.[2)]	2,762	3,215	2,762		
radius in mm	122	142	122		
run-up in sec	30				
run-down in sec, braked	31				
temperature in °C[1)]	- 11				

capacity in ml	9–10	1.6–5	4–7	8.5–10	12	15	50	12	50	50
Ø x L in mm	16x92	13x75	13x100	16x100	17x102	17x120	29x115	17x100	29x115	29x107
Cat. No.	**blood collection/urine tubes**					**0509**	**0513**	-	-	**0546**
rotor Cat. No. **1418**										
Cat. No.	**1467**	**1467**	**1467**	**1467**	**1467**	**1467**	**1468**	**1467**	**1468**	
boring Ø x L in mm	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	30.2 x 92	17.4 x 91	30.2 x 92	
tubes per rotor	32	32	32	32	32	32	8	32	8	
RCF max.[2)]	3,215	2,762	3,305	3,215	3,215	3,283	3,147	3,215	3,147	
radius in mm	142	122	146	142	142	145	139	142	139	
run-up in sec	30									
run-down in sec, braked	31									
temperature in °C[1)]	- 11									

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

Angle rotor, 6-place



∢35°

n = 9,000 min^{-1}
max. RCF 9,509

Cat. No. 1620A

Angle rotor, 12-place



∢35°

n = 6,000 min^{-1}
max. RCF 4,146

Cat. No. 1613

Angle rotor, 12-place



∢35°

n = 12,000 min^{-1}
max. RCF 16,582

Cat. No. 1615

capacity in ml	1.5	2.0	15	50	75	94	7.5–8.5	9–10	10	8.5–10	15	50		10	30	50	85
Ø x L in mm	11x38		17x100	34x100	35x105	38x102	15x92	16x92	15x102	16x100	17x120	29x115		16x80	26x95	29x107	38x106
Cat. No.	**2078**	**0536**	**0518**[2]	**0521**[2]	**0548**	**0549**	**blood/urine tubes**				**0509**	**0513**		**-**	**0545**	**0546**	**0547**
rotor Cat. No. **1620A**																	
Cat. No.	**1449**		**1451**	**1463**		**-**	**1451**				**1466**	**1454**	**1646**[8]	**1448**	**1447**	**1446**	**-**
boring Ø x L in mm	11.4x39		17.5x92	35x89		38.6x90.2	17.5x92				17x106	29.8x97	-	16.5x74	26x85	29x92	38.6x90.2
tubes per rotor	24		6	6		6	6				6	3	6	12	6		
max. RCF[2]	9,237		8,784	9,327		9,509	8,784				8,965			8,784	8,603	9,056	9,509
radius in mm	102		97	103		105	97				99			97	95	100	105
run-up in sec	30																
run-down in sec, braked	30																
temperature in °C[1]	-11																

capacity in ml	4	5	6	15	1.1–1.4	2.6–3.4	2.7–3	4.5–5	4.9	7.5–10	10	1.6–5	4–7	8–10		15
Ø x L in mm	10x88	12x75	12x82	17x100	8x66	13x65	11x66	11x92	13x90	15/16x92	15x102	13x75	13x100	16x100/125		17x120
Cat. No.	**-**	**0553**[2]	**0501**[2]	**0518**[2]	**blood collection/urine tubes**											**0509**
rotor Cat. No. **1613**																
Cat. No.	**6305**	**1054-A**		**-**	**1054-A**			**-**				**1054-A**	**1058**	**-**		
boring Ø x L in mm	11.5x67.5	13.5x60		17.7x88	13.5x60			17.7x88				13.5x60	13.5x79	17.7x88		
tubes per rotor	12											12	12	12	6	6
max. RCF[2]	3,502	3,300		4,146	3,300			4,146				3,300	4,146			
radius in mm	87	82		103	82			103				82	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.
[8] 6-place adapter set for conical 50 ml tubes with screw cap.

Hematocrit rotor, 24-place



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

Cat. No. 1650

Cyto rotor, 6-place

For detailed information on the comprehensive Hettich cyto system, please turn to the pages 156-158.



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

illustrated with suspensions 1660 and lids 1661 for cyto chambers

Cat. No. (without suspensions) **1626**

Cyto rotor, 8-place



n = 4,000 min^{-1}
max. RCF 2,218

illustrated with suspensions 1680 for angle chambers

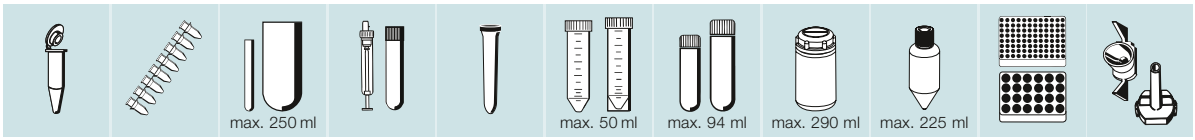
Cat. No. (with suspensions) **1648**

capacity in ml	4	5	6	15	1.1–1.4	2.6–3.4	2.7–3	4.5–5	4.9	7.5–10	10	1.6–5	4–7	8–10	15
Ø x L in mm	10x88	12x75	12x82	17x100	8x66	13x65	11x66	11x92	13x90	15/16x92	15x102	13x75	13x100	16x100/125	17x120
Cat. No.	-	**0553**[2]	**0501**[2]	**0518**[2]	**blood collection/urine tubes**										**0509**
rotor Cat. No. **1615**															
Cat. No.	**6305**	**1054-A**		**-**	**1054-A**			**-**				**1054-A**	**1058**	**-**	**1647**[29]
boring Ø x L in mm	11.5x67.5	13.5x60		17.7x88	13.5x60			17.7x88				13.5x60	13.5x79	17.7x88	17x104
tubes per rotor	12											12	12	12 / 6	6
max. RCF[2]	14,006	13,201		16,582	13,201			16,582				13,201	16,582	16,582	15,455
radius in mm	87	82		103	82			103				82	103	103	96
run-up in sec	40														
run-down in sec, braked	40														
temperature in °C[1]	- 2														

standard capillaries, heparinised	basic	self-sealing and mylar-coated
Cat. No.	**2074**	**1071**
lid as evaluation disk incl. **rotor** Cat. No. **1650**		
	sealing putty	
Cat. No.	**2077**	**-**
boring Ø x L in mm	-	
capillaries per rotor	24	
max. RCF[2]	21,382	
radius in mm	85	
run-up in sec	13	
run-down in sec, braked	9	
temperature in °C[1]	- 1	

[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.

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 microlitre 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 ~	110 – 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 sec – 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode (impulse key)			
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



∢90°

n = 5,000 min^{-1}
max. RCF 4,863

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

Cat. No. (without carriers) **1754**

capacity in ml	1.5	2.0	3	4	5	6	7	9	10	15	20	25	45	50	75
Ø x L in mm	11x38		10x60	12x60	12x75	12x82	12x100	14x100	17x70	17x100	21x100	24x100	31x100	34x100	35x105
Cat. No.	**2078**	**0536**	**-**		**0553**[2)]	**0501**[2)]	**0578**[2)]	**0500**[2)]	**2079**	**0518**[2)]	**-**	**0519**[2)]	**-**	**0521**[2)]	**0548**
lid with bio-containment[5)] Cat. No. **1751** / **carrier** Cat. No. **1752**															
Cat. No.	**1761**		**1761**	**1762-A**				**1763-A**			**1764**		**1765**		
boring Ø x L in mm	11.2x39.5		11.2x39.5	12.5x56				17.5x62			25.5x81		35.5x81		
tubes per rotor	144		72	96				52			24		12		
max. RCF[2)] upper/lower	3,494/4,779		4,779	4,668											
radius in mm upper/lower	125/171		171	167											
run-up in sec	42														
run-down in sec, braked	27														
temperature in °C[1)]	0														

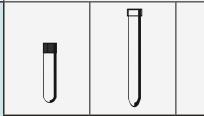
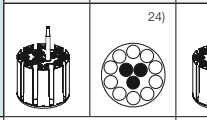
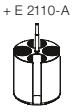
capacity in ml	94	100	100	250	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7
Ø x L in mm	38x102	40x115	44x100	65x115	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100
Cat. No.	**0549**	**0523**[2)]	**0526**[2)]	**0530**[2)]	**blood collection/urine tubes**										
lid with bio-containment[5)] Cat. No. **1751** / **carrier** Cat. No. **1752**															
Cat. No.	**1777**	**1767**	**1766**	**1768**	**1781**	**1783-A**	**1762-A**	**1763-A**	**1762-A**	**1783-A**	**1763-A**			**1783-A**	
boring Ø x L in mm	38.5x80	41x97	45x87	66x104.5	9x49	13.5x54	12.5x56	17.5x62	12.5x56	13.5x54	17.5x62			13.5x54	
tubes per rotor	8	4	4	4	96	64	96	52	96	64	52			64	
max. RCF[2)]	4,807	4,640	4,640		4,668										
radius in mm	172	166	166		167										
run-up in sec	42														
run-down in sec, braked	27														
temperature in °C[1)]	0														

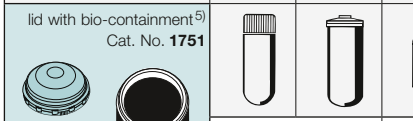
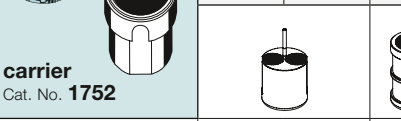
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.



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

Swing-out rotor Cat. No. (without carriers) **1754**

capacity in ml	4–7	8	8.5–10	15	50	12	25	30	50	50	10	14	30	50
Ø x L in mm	16x75	16x125	16x100	17x120	29x115	17x100	25x90	25x110	29x115	29x115	16x80	16.5x106	26x95	29x107
Cat. No.	**blood collection tubes**			**0509**	**0513**	**-**				**0513**	**-**	**0545**	**0546**	
lid with bio-containment[5)] Cat. No. **1751**														
carrier Cat. No. **1752**		24)								 + E 2110-A				
Cat. No.	**1763-A**		**1763-A**	**1771-A**	**1772-A**	**1773**	**1779**		**1774-A**		**1763-A**		**1775**	**1774-A**
boring Ø x L in mm	17.5x62		17.5x62	17x84	30x84	17x78	26.5x72		30x80		17.5x62		26.5x70	30x80
tubes per rotor	52	12	52	36	16	36	20		16		52		24	16
max. RCF [2)]	4.668			4.863	4.863	4.696	4.528		4.752		4.668		4.807	4.752
radius in mm	167			174	174	168	162		170		167		172	170
run-up in sec	42													
run-down in sec, braked	27													
temperature in °C[1)]	0													

capacity in ml	85	94	175	175	200	225	250	290
Ø x L in mm	38x106	38x102	61x118	62x144	60x130	61x137	61x122	62x137
Cat. No.	**0547**	**0538** 13)	**Falcon®**	**Nalgene®**	**Nunc®**	**Falcon®**	**5127** 28)	**-** 28)
lid with bio-containment[5)] Cat. No. **1751**				3)				3)
carrier Cat. No. **1752**								
Cat. No.	**1777**		**1782**	**1778**	**1778**	**1782**	**1769**	
boring Ø x L in mm	38.5x80		62x111	62x111	62x111	62x111	62x100	
tubes per rotor	8		4					
max. RCF [2)]	4.807		4.863					
radius in mm	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 reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 1752 and 5051 cannot be closed with lid 1751 resp. 5053.

Swing-out rotor, 4-place

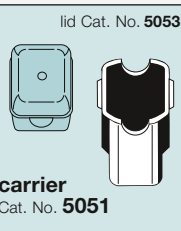


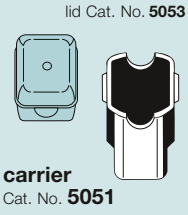
∢ 90°

n = 4,000 min^{-1}
max. RCF 3,095

illustrated with carriers 5051 and lids 5053

Cat. No. (without carriers) **1798**

capacity in ml	1.5/2.0		3	5	6	7	9	15	25	50	100	100
Ø x L in mm	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** / **carrier** 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)] 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	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** / **carrier** Cat. No. **5051**									3)				
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		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												

[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 106 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.



illustrated with carriers 5051

Swing-out rotor Cat. No. (without carriers) 1798

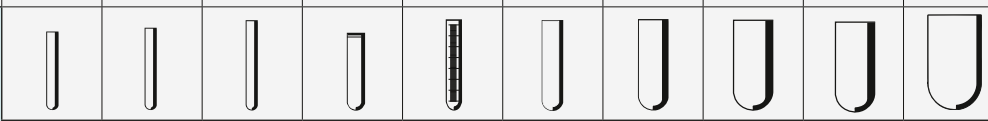
capacity in ml	15	30	50	12	30	50	two-tier frame for cyto accessories
Ø x L in mm	17x120	25x110	29x115	17x100	25x110	29x115	
Cat. No.	**0509**	**-**	**0513**	**-**	**-**	**-**	**cyto chambers** [23]
lid Cat. No. **5053** / **carrier** Cat. No. **5051**	[3]	[3]	[3]		[3]	[3]	
						+ 2 x 6316	
Cat. No.	**6306**	**5266**	**5259**	**6306**	**5266**	**5243**	**5280**
boring Ø x L in mm	17x90	26x86	30x86	17x90	26x86	36x86	-
tubes per rotor	28	20	8	28	20	8	8
max. RCF [2] upper/lower	2,898	2,755	2,826	2,898	2,755	2,755	1,735 / 2,737
radius in mm upper/lower	162	154	158	162	154	154	97 / 153
run-up in sec	24						
run-down in sec, braked	17						
temperature in °C [1]	-8						

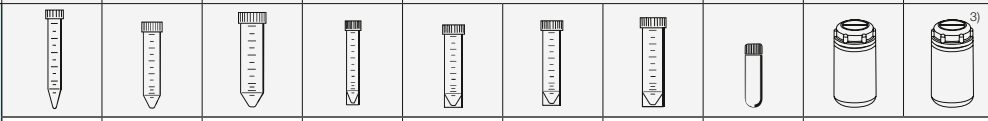
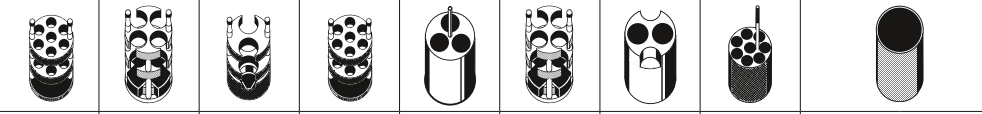
[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[3] When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.



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

Swing-out rotor Cat. No. (without carriers) 1798

capacity in ml	5	6	7	10	15	25	50	100	100	250
Ø x L in mm	12x75	12x82	12x100	17x70	17x100	24x100	34x100	44x100	40x115	65x115
Cat. No.	**0553**[2)]	**0501**[2)]	**0578**[2)]	**2079**	**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	12.8x45		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									

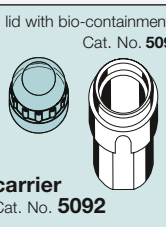
capacity in ml	15	30	50	12	25	30	50	10	250	290
Ø x L in mm	17x120	25x110	29x115	17x100	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	**0509**	**-**	**0513**	**-**		**-**		**-**	**5127**[28)]	**-**[28)]
lid with bio-containment[5)] Cat. No. **5093**										
carrier Cat. No. **5092**										
Cat. No.	**5129**[4)]	**5122**	**5123**	**5121**	**5134**	**5122**	**5135**	**5136**	**6319**	
boring Ø x L in mm	17x85	25.5x82	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									

[4)] Please remove the inserts.
[5)] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
[23)] Please ask for our detailed cyto brochure.
[28)] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



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

Swing-out rotor Cat. No. (without carriers) **1798**

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 tube**											
lid with bio-containment[5)] Cat. No. **5093** / **carrier** 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** / **carrier** 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 reached by reducing the speed.
[2)] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2)] is 4,000.
[3)] When using these tubes, carrier 5092 cannot be closed with lid 5093.

Swing-out rotor, 6-place



∢90°

n = 4,000 min^{-1}

max. RCF 2,808

illustrated with carriers 1742

Cat. No. (without carriers) **1726**

capacity in ml	5		6	7	9	15	20	25	45	50	8.5 x 10	30
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	16 x 100	26 x 95
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	with decanting aid								
Cat. No.	**1369-91**	**1372**	**1369-92**	**1369-92**	**1370**	**1369**	**1346**	**1745**	**1345**	**1746**	**1369**	**1745**
boring Ø x L in mm	11.5 x 64.4	13.5 x 65	11.5 x 71.5	11.5 x 71.5	14.6 x 74	17.6 x 74	21.5 x 74	26 x 78	32 x 74	35 x 78	17.6 x 74	26 x 78
tubes per rotor	24	102	24	24	30	24	12		6		24	12
max. RCF[2)]	2,576	2,522	2,665	2,665			2,719	2,808	2,719	2,808	2,665	2,808
radius in mm	144	141	149	149			152	157	152	157	149	157
run-up in sec	19											
run-down in sec, braked	18											
temperature in °C[1)]	-6											

capacity in ml	suspensions for cyto accessories	
Ø x L in mm		
Cat. No.	**cyto chambers**[23)]	
rotor Cat. No. **1726**		
Cat. No.	**1660**	**1680**
boring Ø x L in mm	-	
tubes per rotor	6	
max. RCF[2)]	2,003	1,825
radius in mm	112	102
run-up in sec	19	
run-down in sec, braked	18	
temperature in °C[1)]	-6	

[4)] Please remove the inserts.
[5)] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
[23)] Please ask for our detailed cyto brochure.



illustrated with carriers 1742

Cat. No. (without carriers) **1726**

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.	**0518**[2]	**blood collection/urine tubes**								**0509**
carrier Cat. No. **1742**		rubber insert				[24]	rubber insert			[24]
Cat. No.	**-**	**0716**		**-**		**-**	**0716**		**-**	
boring Ø x L in mm	17.6x78									
tubes per rotor	42	42		42		18	42		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									

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	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	4–7
Ø x L in mm	14x100	8x66	11x92	13x90	13x100
Cat. No.	**0500**[2]	**blood collection tubes**			
carrier Cat. No. **1741**	rubber insert		[24]		
Cat. No.	**0701**		**-**	**-**	**-**
boring Ø x L in mm	14.6x78				
tubes per rotor	60		36	60	60
max. RCF[2]	2,773		2,808		2,808
radius in mm	155		157		157
run-up in sec	19				
run-down in sec, braked	18				
temperature in °C[1]	-6				

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[24] Carrier must be loaded as illustrated.

Swing-out rotor, 10-place

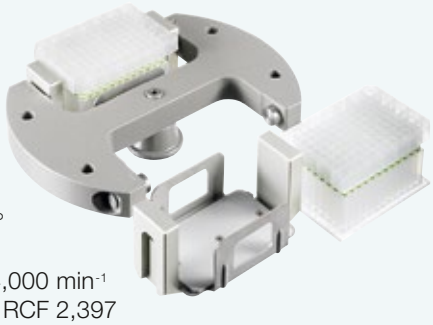


∢45°

n = 4,000 min^{-1}
max. RCF 2,916

Cat. No. (with carriers) **1717**

Swing-out rotor, 2-place

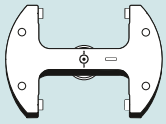
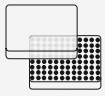
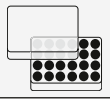
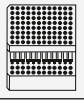


∢90°

n = 4,000 min^{-1}
max. RCF 2,397

Cat. No. (without carriers) **1760**

capacity in ml	15	50
Ø x L in mm	17 x 120	29 x 115
Cat. No.	**0509**	**0513**
 **rotor** Cat. No. **1717**	 	
Cat. No.	**1462-A**	**-**
boring Ø x L in mm	17 x 84	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	

D x W x H in mm	86 x 128 x 15/17.5		86 x 128 x 22	86 x 128 x 44.5	86 x 128 x 46	86 x 128 x 83	59 x 84 x 11	82 x 124 x 20	-
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	24 x 8
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								

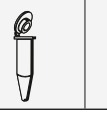
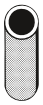
Angle rotor, 6-place

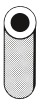


∢45°

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	75	94	7.5–8.5	9–10
Ø x L in mm	11x38		17x100	24x100	34x100	35x105	38 x 102	15x92	16x92
Cat. No.	**2078**	**0536**	**0518**[2]	**0519**[2]	**0521**[2]	**0548**	**0549**	**blood/urine tubes**	
 **rotor** Cat. No. **1720**									
									
Cat. No.	**1449**		**1451**	**1447**	**1463**		**-**	**1451**	
boring Ø x L in mm	11.4x39		17.5x92	26x85	35x89		38.4x89	17.5x92	
tubes per rotor	24		6	6	6		6	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 classic/**cooled**, braked	36/**44**								
temperature in °C[1]	+1								

capacity in ml	8.5–10	15	50	10	30	50	85	94
Ø x L in mm	16x100	17x120	29x115	16x80	26x95	29x107	38x106	38x102
Cat. No.	**blood/urine tube**	**0509**	**0513**	**-**	**0545**	**0546**	**0547**	**0538**[13]
 **rotor** Cat. No. **1720**								
								
Cat. No.	**1451**	**1466**	**1454**	**1448**	**1447**	**1446**	**-**	
boring Ø x L in mm	17.5x92	17x106	29.8x97	16.5x74	26x85	29x92	38.4x89	
tubes per rotor	6	6		12	6		6	
max. RCF[2] classic/**cooled**	12,745/**15,422**	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	117	114	111	111	116	121	
run-up in sec classic/**cooled**	39/**45**							
run-down in sec classic/**cooled**, braked	36/**44**							
temperature in °C[1]	+1							

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.

Angle rotor, 6-place

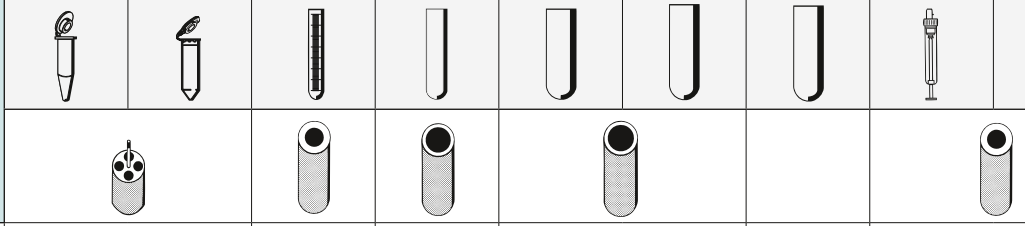


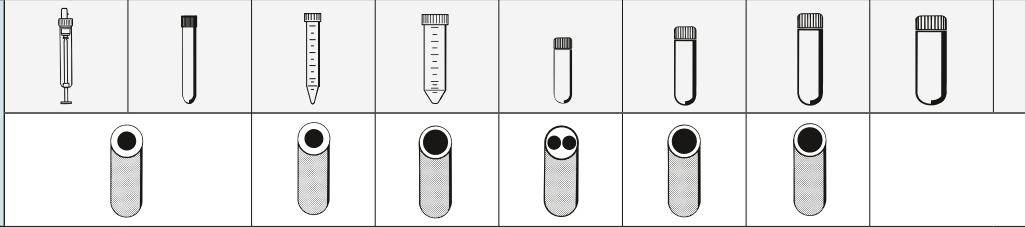
∢45°

with bio-containment[5)]

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	75	94	7.5–8.5	9–10
Ø x L in mm	11 x 38		17 x 100	24 x 100	34 x 100	35 x 105	38 x 102	15 x 92	16 x 92
Cat. No.	**2078**	**0536**	**0518** [2)]	**0519** [2)]	**0521** [2)]	**0548**	**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	11.4 x 39		17.5 x 92	26 x 85	35 x 89		38.2 x 89.6	17.5 x 92	
tubes per rotor	24		6						
max. RCF[2)] classic/**cooled**	13,081/**15,828**		12,857/**15,557**	12,522/**15,151**	13,640/**16,504**		13,640/**16,504**	12,857/**15,557**	
radius in mm	117		115	112	122		122	115	
run-up in sec classic/**cooled**	40/**48**								
run-down in sec classic/**cooled**, braked	37/**44**								
temperature in °C[1)]	+4								

capacity in ml	10	8.5–10	15	50	10	30	50	85	94
Ø x L in mm	15 x 102	16 x 100	17 x 120	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	38 x 102
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**		**1466**	**1454**	**1448**	**1447**	**1446**	**-**	
boring Ø x L in mm	17.5 x 92		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**		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		117	119	115	112	117	122	
run-up in sec classic/**cooled**	40/**48**								
run-down in sec classic/**cooled**, braked	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 106 mm.

Angle rotor, 30-place



∢45°

n = 15,000 min^{-1}
max. RCF 24,400

with bio-containment[5]

Cat. No. 1789-A

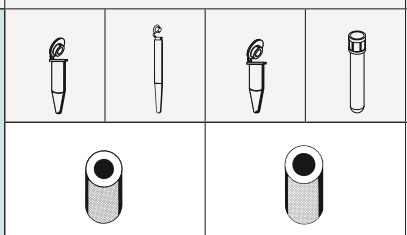
Drum rotor, 6-place

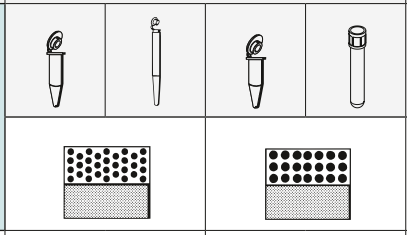


n = 15,000 min^{-1}
max. RCF 18,866

illustrated with adapters 1377

Cat. No. (without adapters) **1711**

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[5] incl. **rotor** Cat. No. **1789-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.9
tubes per rotor	30					
max. RCF[2]	24,400					
radius in mm	97					
run-up in sec	23					
run-down in sec, braked	20					
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 reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[5] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

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 suspensions) **1748**

For detailed information on the comprehensive Hettich cyto system please turn to the pages 156-158.

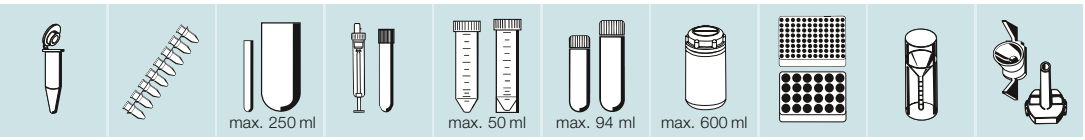
capacity in ml	5	15	1.1–1.4	2.6–3.4	2.7–3	9–10	1.6–5	4–7	8.5–10	12	15	50
Ø x L in mm	12x75	17x100	8x66	13x65	11x66	16x92	13x75	13x100	16x100	17x102	17x120	29x115
Cat. No.	**0553**[2]	**0518**[2]	**blood collection/urine tube**								**0509**	**0513**
rotor Cat. No. **1721**	+ 1054-A	+ 0716	+ 1054-A			+ 0716	+ 1054-A		+ 0716	+ 0716	+ E 2109	+ E 2110-A
Cat. No.	**1467**	**1467**	**1467**								**1467**	**1468**
boring Ø x L in mm	17.4x91		17.4x91								17.4x91	30.2x92
tubes per rotor	32		32								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											

capacity in ml	12	50	50
Ø x L in mm	17x100	29x115	29x107
Cat. No.	**-**	**-**	**0546**
rotor Cat. No. **1721**	+ 0716		
Cat. No.	**1467**	**1468**	
boring Ø x L in mm	17.4x91	30.2x92	
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		

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

ROTINA 420/420 R

IVD conform
according to directive 98/79/EC



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	
Benchtop centrifuge, without rotor	**classic**		**cooled**	
Power supply*)	200 – 240 V 1 ~	100 – 127 V 1 ~	200 – 240 V 1 ~	100 – 127 V 1 ~ / 100 V 1 ~
Frequency	50 – 60 Hz		50 Hz	60 Hz / 50 Hz
Consumption	870 VA	800 VA	1,500 VA	1,750 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**

*) Other voltages on request.
>) For a list of further versions of this model, please refer to page 12.

Swing-out rotor, 4-place

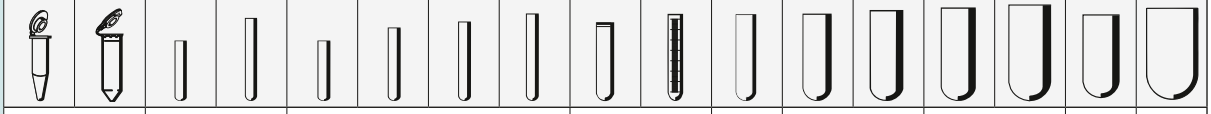
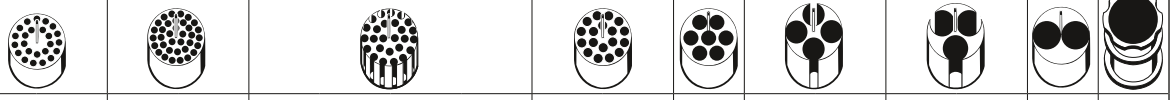


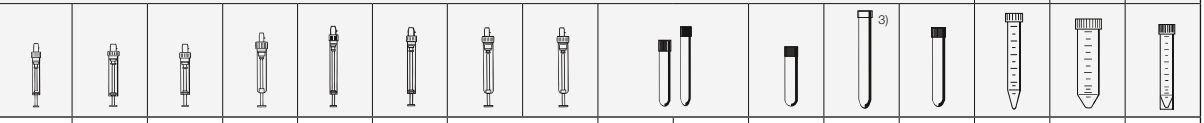
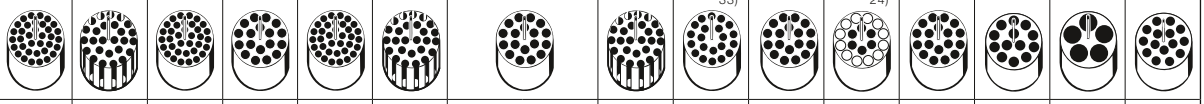
∢90°

n = 4,800 min^{-1}
max. RCF 4,740

illustrated with carriers 4781 and lids 4751
with bio-containment[5]

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

capacity in ml	1.5	2.0	3	4	4	5	6	7	10	15	25	50	75	94	100	100	250
Ø x L in mm	11x38		10x60	10x88	12x60	12x75	12x82	12x100	17x70	17x100	24x100	34x100	35x105	38x102	40x115	44x100	65x115
Cat. No.	**2078**	**0536**	-			**0553**[2]	**0501**[2]	**0578**[2]	**2079**	**0518**[2]	**0519**[2]	**0521**[2]	**0548**	**0549**	**0523**[2]	**0526**[2]	**0530**[2]
lid with bio-containment[5] Cat. No. **4751**																	
carrier Cat. No. **4781**																	
Cat. No.	**4773**		**4761**		**4762**				**4763**		**4764**	**4765**		**4766**		**4767**	**4768**
boring Ø x L in mm	11.2x38		11.2x54		13.4x55				17.5x62		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	15	50	12
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	13x75/100		16x75	16x125	16x100	17x120	29x115	17x100
Cat. No.	**blood collection / urine tubes**													**0509**	**0513**	-
lid with bio-containment[5] Cat. No. **4751**												3)				
carrier Cat. No. **4781**										33)		24)				
Cat. No.	**4761**	**4762**	**4761**	**4763**	**4761**	**4762**	**4763**		**4762**	**4775**	**4763**	**4763**	**4763**	**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	13.7x54	17.5x62			17x84	30x82.5	17.2x82.5
tubes per rotor	140	104	140	72	140	104	72		104	84	72	24	72	52	20	60
max. RCF [2]	4,585													4,740	4,688	
radius in mm	178													184	182	
run-up in sec	54															
run-down in sec, braked	38															
temperature in °C[1]	+4															

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[3] When using these tubes, carrier 4781 cannot be closed with lid 4751.
[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 diameter greater than 17 mm.

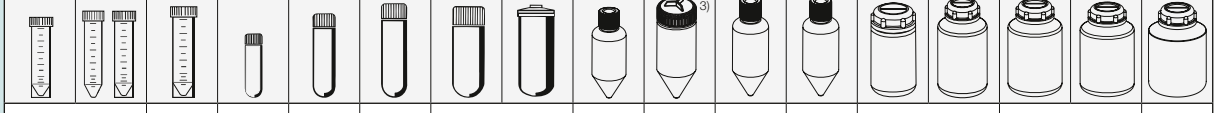
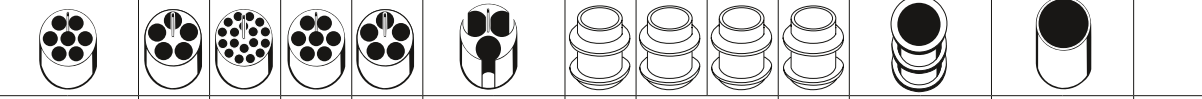


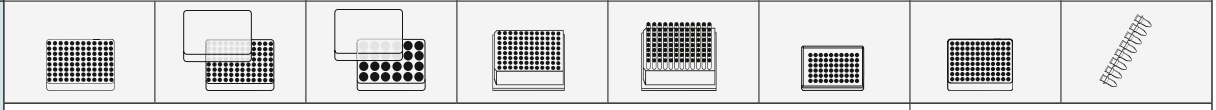
illustrated with carriers 4781
and lids 4751
with bio-containment[5)]



illustrated with carriers 4782

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

capacity in ml	25	30	50	10	30	50	85	94	175	175	200	225	250	290	400	400	600
Ø x L in mm	25x90	25x110	29x115	16x80	26x95	29x107	38x106	38x102	61x118	62x144	60x130	61x137	61x122	62x137	81x136	84x134	93x134
Cat. No.	**-**				**0545**	**0546**	**0547**	**0538**[13)]	**Falcon®**	**Nalgene®**[3)]	**Nunc®**	**Falcon®**	**5127**[28)]	**-**[28)]	**-**[28)]	**-**[28)]	**0551**[28)]
lid with bio-containment[5)] Cat. No. **4751**																	
carrier Cat. No. **4781**																	
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																

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

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 4781 resp. 5051 cannot be closed with lid 4751 resp. 5053.
4) Please remove the inserts.

Swing-out rotor, 4-place



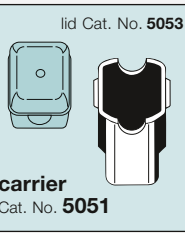
∢90°

n = 4,000 min^{-1}
max. RCF 3,095

illustrated with carriers 5051 and lids 5053

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

capacity in ml	1.5	2.0	1.5	2.0	3	5	6	7	9	15	25	50	100	100
Ø x L in mm	11x38		11x38		10x60	12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115
Cat. No.	-	-	**2078**	**0536**	-	**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	12.5x42		11.5x50		11x44	12.5x42		12.5x86	16x50	17.5x86	26x86	36x86	45.5x86	42x86
tubes per rotor	160		64		80	80		80	48	48	20	8	4	
max. RCF[2)] upper/lower	1,950/2,826		2,826		2,737	2,773		2,755	2,773	2,755				
radius in mm upper/lower	109/158		158		153	155		154	155	154				
run-up in sec	18													
run-down in sec, braked	16													
temperature in °C[1)]	- 1													

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	16x75	13x100	16x100
Cat. No.	**blood collection / urine tubes**												
lid Cat. No. **5053** / **carrier** Cat. No. **5051**													
Cat. No.	**5267**	**5268**	**5227**	**5264**	**5227**	**5268**	**5264**	**5258**		**5268**	**5264**	**5268**	**5248**
boring Ø x L in mm	11x44	13.5x52	12.5x42	16x50	12.5x42	13.5x52	16x50	17.6x86		13.5x52	16x50	13.5x52	17.5x86
tubes per rotor	80	48	80	48	80	48	48	44		48			
max. RCF[2)]	2,737	2,808	2,773		2,773	2,808	2,773	2,755		2,808	2,773	2,808	2,755
radius in mm	153	157	155		155	157	155	154		157	155	157	154
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.
[13)] The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.
[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.



illustrated with carriers 5051

Swing-out rotor 4753

capacity in ml	15	50	12	30	50	two-tier frame for cyto accessories
Ø x L in mm	17x120	29x115	17x100	25x110	29x115	
Cat. No.	**0509**	**0513**	**-**			**cyto chambers**[23]
lid Cat. No. **5053** / **carrier** Cat. No. **5051**	[3]	[3]		[3]	[3]	
					+ 2 x 6316	
Cat. No.	**6306**	**5259**	**6306**	**5266**	**5243**	**5280**
boring Ø x L in mm	17x90	30x86	17x90	26x86	36x86	-
tubes per rotor	28	8	28	20	8	8
max. RCF[2] upper/lower	2,898	2,826	2,898	2,755		1,735/2,737
radius in mm upper/lower	162	158	162	154		97/153
run-up in sec	18					
run-down in sec, braked	16					
temperature in °C[1]	-1					

capacity in ml	5	6	7	10	15
Ø x L in mm	12x75	12x82	12x100	17x70	17x100
Cat. No.	**0553**[2]	**0501**[2]	**0578**[2]	**2079**	**0518**[2]
lid with bio-containment[5] Cat. No. **5093** / **carrier** Cat. No. **5092**					
Cat. No.	**5128**		**5120**	**5136**	
boring Ø x L in mm	12.8x45		12.8x82	17.5x60.7	
tubes per rotor	48			32	
max. RCF[2]	3,005			2,952	
radius in mm	168			165	
run-up in sec	18				
run-down in sec, braked	16				
temperature in °C[1]	-1				

capacity in ml	25	50	100	100	250	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	24x100	34x100	44x100	40x115	65x115	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100
Cat. No.	**0519**[2]	**0521**[2]	**0526**[2]	**0523**[2]	**0530**[2]	**blood collection/urine tubes**										
lid with bio-containment[5] Cat. No. **5093** / **carrier** Cat. No. **5092**																
Cat. No.	**5122**	**5124**	**5125**	**5126**	**1791**	**5138**			**5136**	**5120**	**5137**	**5136**			**5138**	**5120**
boring Ø x L in mm	25.5x82	35.5x82.5	45.5x85	42x85	66x103	12.8x54.5			17.5x60.7	12.8x82	13.5x60.7	17.5x60.7			12.8x54.5	12.8x82
tubes per rotor	16	4				48			32	48	32				48	48
max. RCF[2]	2,898	2,952			3,095	2,540			2,952	3,005	2,952				2,540	3,005
radius in mm	162	165			173	142			165	168	165				142	168
run-up in sec	18															
run-down in sec, braked	16															
temperature in °C[1]	-1															

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.
4) Please remove the inserts.

Swing-out rotor, 4-place



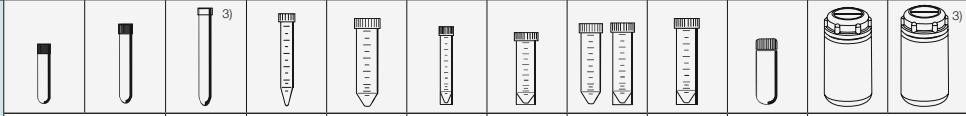
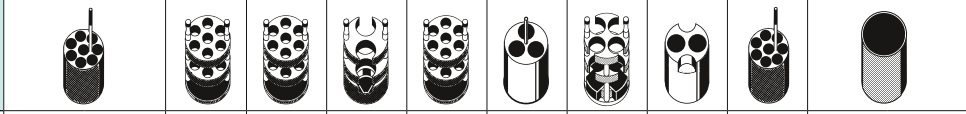
∢90°

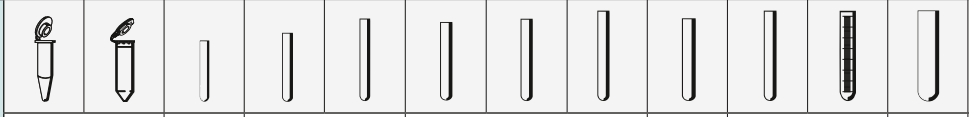
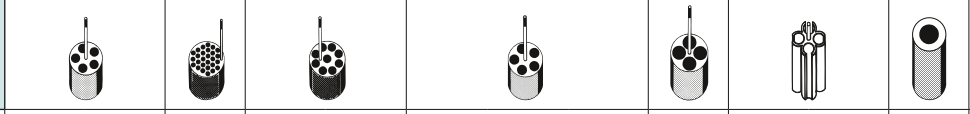
n = 4,600 min^{-1}
max. RCF 3,832

illustrated with carriers 1495 and lids 1492
with bio-containment[5)]

Swing-out rotor 4753

Cat. No. (without carriers) **4754**

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**												
rotor 4753 **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											

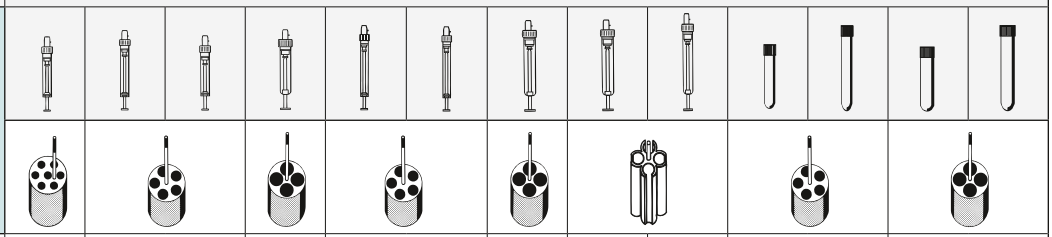
capacity in ml	1.5	2.0	1	3	4	5	6	7	8	9	15	25	50	94	100
Ø x L in mm	11x38	11x38	6x45	10x60	10x88	12x75	12x82	12x100	16x81	14x100	17x100	24x100	34x100	38x102	44x100
Cat. No.	**2078**	**0536**	**Rhesus**	**-**		**0553**[2)]	**0501**[2)]	**0578**[2)]	**-**	**0500**[2)]	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0549**	**0526**[2)]
lid with bio-containment[5)] Cat. No. **1492**															
rotor 4754 **carrier** Cat. No. **1495**															rubber insert
Cat. No.	**1351**		**1339**	**1343**		**1383**			**1348**	**1329**		**1330**	**1331**	**1396**	**0761**
boring Ø x L in mm	11.2x38		6.5x34	10.5x43		13.4x48			16.5x56	17.6x91		25.2x87	35.2x87	38.5x92	45.9x98
tubes per rotor	20		108	36		20			16	16		4			
max. RCF[2)]	3,549		3,738	3,785		3,690			3,690	3,667		3,525	3,501	3,761	3,690
radius in mm	150		158	160		156			156	155		149	148	159	156
run-up in sec	14														
run-down in sec, braked	14														
temperature in °C[1)]	0														

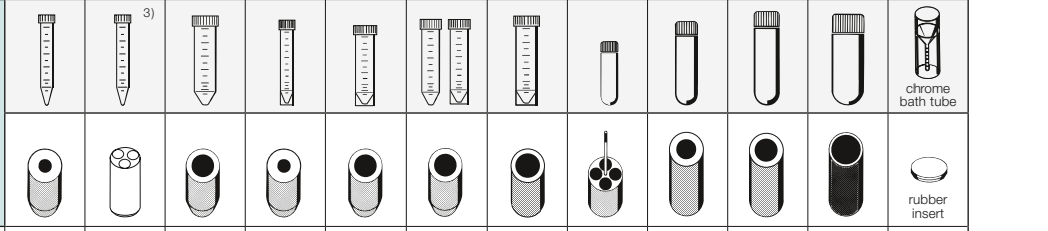
[5)] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
[23)] Please ask for our detailed cyto brochure.
[28)] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



illustrated with carriers 1495

Swing-out rotor Cat. No. (without carriers) 4754

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 with bio-containment[5] Cat. No. **1492** **carrier** Cat. No. **1495**													
Cat. No.	**1457**	**1383**		**1459**	**1383**		**1459**	**1329**	**1329**[4]	**1383**		**1348**	
boring Ø x L in mm	9x47	13.4x48		15.6x47	13.4x48		15.6x47	17.6x91		13.4x48		16.5x56	
tubes per rotor	28	20		16	20		16	16		20		16	
max. RCF[2]	3,714	3,690		3,714	3,690		3,714	3,667	3,832	3,690			
radius in mm	157	156		157	156		157	155	162	156			
run-up in sec	14												
run-down in sec, braked	14												
temperature in °C[1]	0												

capacity in ml	15	15	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	17x120	17x120	29x115	17x100	25x90	25x110	29x115	16x80	26x95	29x107	38x106	44x105
Cat. No.	**0509**	**0509**	**0513**	**-**					**0545**	**0546**	**0547**	**0534**[6]
lid with bio-containment[5] Cat. No. **1492** **carrier** Cat. No. **1495**													
Cat. No.	**1347**	**1356**	**1384**	**6311**	**1363**	**1365**	**6318**	**1348**	**4417**	**4416**	**1396**	**0765**
boring Ø x L in mm	17x90	17x107	30x90	17x80	26x72	26x80	29.5x80	16.5x56	26x83	29x93	38.5x92	45.9x98
tubes per rotor	4	12	4		4	4		16	4			
max. RCF[2]	3,832				3,407	3,832		3,690	3,549	3,785	3,761	3,667
radius in mm	162				144	162		156	150	160	159	155
run-up in sec	14											
run-down in sec, braked	14											
temperature in °C[1]	0											

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 1495 cannot be closed with lid 1492.



illustrated with carriers 1425

Swing-out rotor Cat. No. (without carriers) 4754

capacity in ml	1.5	2.0	1	3	4	5	6	7	9	15	25	50	100
Ø x L in mm	11 x 38	11 x 38	6 x 45	10 x 60	12 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
Cat. No.	**2078**	**0536**	**Rhesus**	**-**		**0553** [2]	**0501** [2]	**0578** [2]	**0500** [2]	**0518** [2]	**0519** [2]	**0521** [2]	**0526** [2]
carrier Cat. No. **1425**													
Cat. No.	**1444**		**1432**	**1433**	**1438**	**1434**			**1431**		**1435**	**1436**	**1437**
boring Ø x L in mm	11.5 x 38		6.5 x 34	10.5 x 40	13.4 x 50	12.7 x 60			17.5 x 84		25.5 x 84	35.5 x 84	45.5 x 86
tubes per rotor	36		144	56	28	48			28		8	4	4
max. RCF [2]	3,572		3,643	3,596									3,501
radius in mm	151		154	152									148
run-up in sec	14												
run-down in sec, braked	14												
temperature in °C [1]	0												

capacity in ml	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	1.6–5	4–7	4–7	8.5–10	15	50	50
Ø x L in mm	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 100	17 x 120	29 x 115	29 x 115
Cat. No.	**blood collection/urine tubes**											**0509**	**0513**	**-**
carrier Cat. No. **1425**														
Cat. No.	**1438**		**1441**	**1438**		**1431**	**1439**	**1438**		**1441**		**1736**	**1443**	**1737**
boring Ø x L in mm	13.4 x 50		16.5 x 50	13.4 x 50		17.5 x 84	17 x 45	13.4 x 50		16.5 x 50		17 x 90	30 x 90	
tubes per rotor	28						16	28				16	4	
max. RCF [2]	3,596						3,596	3,596				3,738	3,738	
radius in mm	152						152	152				158	158	
run-up in sec	14													
run-down in sec, braked	14													
temperature in °C [1]	0													

[4] Please remove the inserts.
[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.



illustrated with carriers 1427



illustrated with carriers 1427 and lids 1421

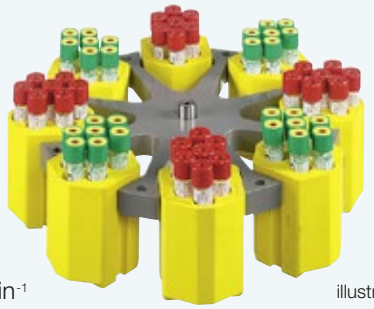
Swing-out rotor Cat. No. (without carriers) **4754**

capacity in ml	1.5/2.0	1	3	4	5	6	7	9	15	25	50	15	50	50
Ø x L in mm	11x38	6x45	10x60	12x60	12x75	12x82	12x100	14x100	17x100	24x100	34x100	17x120	29x115	29x115
Cat. No.	**2078/0536**	**Rhesus**	**-**		**0553**[2]	**0501**[2]	**0578**[2]	**0500**[2]	**0518**[2]	**0519**[2]	**0521**[2]	**0509**	**0513**	**-**
lid Cat. No. **1421**												[3]	[3]	[3]
carrier Cat. No. **1427**														+ 6316
Cat. No.	**5277**	**1357**	**1327**	**1326**	**1732**	**5229**	**5230**	**5237**	**5231**	**5232**	**5233**	**1733**	**5276**	**5233**[4]
boring Ø x L in mm	11.5x38	6.5x23	10.5x23	12.5x44	13.4x58	12.5x44	12.4x87	15x73	17.8x87	25.5x87	35.5x87	17x90	30x90	35.5x87
tubes per rotor	36	120	48		32	48	48	24	24	8	4	12	4	
max. RCF[2]	3,761	3,738	3,714		3,690	3,714	3,620					3,809	3,714	
radius in mm	159	158	157		156	157	153					161	157	
run-up in sec	14													
run-down in sec, braked	14													
temperature in °C[1]	0													

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	1.6–5	4–7	4–7	8.5–10	suspension for cyto accessories
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	13x75	13x100	16x75	16x100	
Cat. No.	**blood collection/urine tubes**												**cyto chambers**[23]
lid Cat. No. **1421**					[3]	[3]				[3]		[3]	
carrier Cat. No. **1427**													
Cat. No.	**5278**	**1732**	**5229**	**5279**	**5230**	**1732**	**5279**	**5271**[4]	**1732**		**5271**	**5231**	**1452**
boring Ø x L in mm	9x41	13.4x58	12.5x44	15.6x41	12.4x87	13.4x58	15.6x41	17x66	13.4x58		17x66	17.8x87	-
tubes per rotor	48	32	48	20	48	32	20		32		20	24	4
max. RCF[2]	3,761	3,690	3,714	3,761	3,620	3,690	3,761	3,643	3,690		3,643	3,620	2,721
radius in mm	159	156	157	159	153	156	159	154	156		154	153	115
run-up in sec	14												14
run-down in sec, braked	14												14
temperature in °C[1]	0												0

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 1427 cannot be closed with lid 1421.

Swing-out rotor, 8-place



illustrated with carriers 1742

∢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	7.5–8.5
Ø x L in mm	12 x 75		12 x 82	12 x 100	14 x 100	17 x 100	21 x 100	31 x 100	34 x 100	8 x 66	13 x 65	15 x 75	11 x 92	13 x 90	15 x 92
Cat. No.	**0553**[2]		**0501**[2]	**0578**[2]	**0500**[2]	**0518**[2]	-	-	**0521**[2]	**blood collection/urine tubes**					
rotor Cat. No. **4758**	with decanting aid		with decanting aid		+ 0701					+ 0701	+ 0716				
Cat. No.	**1369-91**	**1372**	**1369-92**		**1741**	**1742**[9]	**1346**	**1345**	**1746**	**1741**	**1742**[9]		**1741**		**1742**[9]
boring Ø x L in mm	11.5 x 64.4	13.5 x 65	11.5 x 71.5		14.6 x 78	17.6 x 78	21.5 x 74	32 x 74	35 x 78	14.6 x 78	17.6 x 78		14.6 x 78		17.6 x 78
tubes per rotor	32	136	32		80	56	16	8		80	56		80		56
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	9–10	10	1.6–5 / 4–7	4–7	8.5–10	15		50	30	suspension for cyto accessories	
Ø x L in mm	16 x 92	15 x 102	13 x 75/16 x 75	13 x 100	16 x 100	17 x 120		29 x 115	26 x 95		
Cat. No.	**blood collection/urine tubes**					**0509**		**0513**	**0545**	**cyto chambers**[23]	
rotor Cat. No. **4758**			+ 0716				+ 1462-A				
							+ 1641	+ 1641			
Cat. No.	**1742**[9]	**1742**[9,25]	**1742**[9]	**1741**[25]	**1742**[9]	**1742**[9,25]	**1746**	**1746**	**1745**	**1660**	**1680**
boring Ø x L in mm	17.6 x 78	17.6 x 78	17.6 x 78	14.6 x 78	17.6 x 78	17.6 x 78	30 x 98	30 x 98	26 x 78	-	
tubes per rotor	56	24	56	32	56	24	8	8	16	8	
max. RCF [2]	2,906		2,793	2,906	2,906	2,906			2,906	2,179	
radius in mm	180		173	180	180	180			180	135	
run-up in sec	19										
run-down in sec, braked	16										
temperature in °C[1]	0										

[4] Please remove the inserts.
[9] For further tubes accommodated by adapter 1742, please refer to page 80.
[23] Please ask for our detailed cyto brochure.
[25] Please load only the middle row.

Angle rotor, 30-place



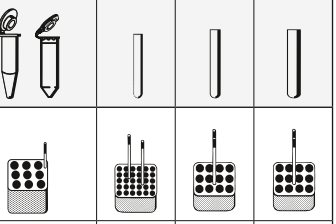
∢45°

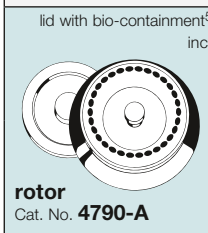
n = 15,000 min^{-1}
max. RCF 24,400

with bio-containment[5]

Swing-out rotor 4758

Cat. No. 4790-A

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**	**–**	**–**
rotor 4758 **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			

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[5] incl. **rotor** Cat. No. **4790-A**						
Cat. No.	**2024**		**2023**		**2031**[7]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.9
tubes per rotor	30					
max. RCF [2]	24,400					
radius in mm	97					
run-up in sec	19					
run-down in sec, braked	24					
temperature in °C[1]	+4					

Angle rotor, 4-place



∢25°

n = 9,500 min^{-1}
max. RCF 12,007

Cat. No. 4795

capacity in ml	15	25	94	10	30	50	85	94	250
Ø x L in mm	17x100	24x100	38x102	16x80	26x95	29x107	38x106	38x102	61x122
Cat. No.	**0518**[2]	**0519**[2]	**0549**	**-**	**0545**	**0546**	**0547**	**0538**[13]	**5127**[28]
rotor Cat. No. **4795**									
Cat. No.	**5646**	**5642**	**5644**	**5641**	**5642**	**5643**	**5644**		**-**
boring Ø x L in mm	17.6x83	26x80	38.6x88	16.6x70	26x80	29x90	38.6x88		61.5x109
tubes per rotor	28	12	4	32	12	4	4		4
max. RCF [2]	11,301	10,897	10,292	11,402	10,897	10,090	10,292		12,007
radius in mm	112	108	102	113	108	100	102		119
run-up in sec	45								
run-down in sec, braked	55								
temperature in °C[1]	+2								

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[5] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

Angle rotor, 6-place



∢45°

n = 11,000 min^{-1}
max. RCF 16,504

with bio-containment[5)]

Cat. No. 4794

Angle rotor, 6-place, for PCR strips

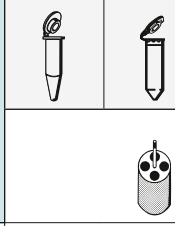


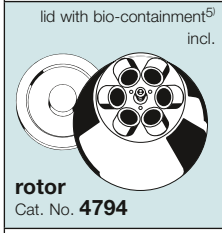
∢45°

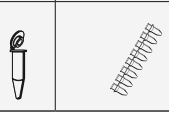
n = 14,000 min^{-1}
max. RCF 18,845

lid (optional)
Cat. No. **1162**

Cat. No. (without lid) **4760**

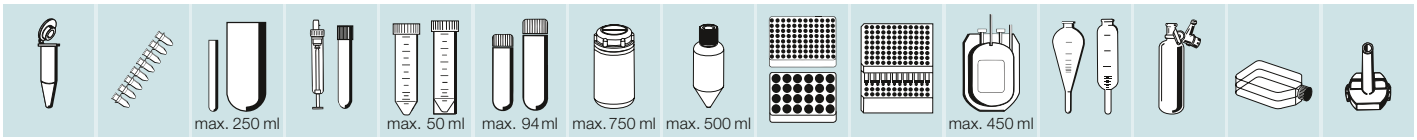
capacity in ml	1.5	2.0	3	15	25	50	75	94	7.5–8.5	9–10	10	8.5–10
Ø x L in mm	11 x 38		10 x 60	17 x 100	24 x 100	34 x 100	35 x 105	38 x 102	15 x 92	16 x 92	15 x 102	16 x 100
Cat. No.	**2078**	**0536**	**-**	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0548**	**0549**	**blood collection/urine tubes**			
lid 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	26 x 85	35 x 89		38.2 x 89.6	17.5 x 92			
tubes per rotor	24			6				6	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	15	50	10	30	50	85	94
Ø x L in mm	17 x 120	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	38 x 102
Cat. No.	**0509**	**0513**	**-**	**0545**	**0546**	**0547**	**0538**[13)]
lid with bio-containment[5)] incl. **rotor** Cat. No. **4794**							
Cat. No.	**1466**	**1454**	**1448**	**1447**	**1446**	**-**	
boring Ø x L in mm	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	6	12	6			
max. RCF[2)]	15,828	16,098	15,557	15,151	15,828	16,504	
radius in mm	117	119	115	112	117	122	
run-up in sec	40						
run-down in sec, braked	63						
temperature in °C[1)]	+4						

capacity in ml	0.2	0.2
Ø x L in mm	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 106 mm.
[28)] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

ROTANTA 460/460 R



Advanced laboratory technology makes a significant contribution to shortening processing times

Enhanced performance and an extended range of accessories guarantee fast, trouble-free operation in daily laboratory use. With a maximum capacity of 3 litres per run, the ROTANTA centrifuges are proving themselves in clinics and laboratory centres, as well as in Life Science R & D departments.



TECHNOLOGY

	ROTANTA 460		ROTANTA 460 R >)		
Benchtop centrifuge, without rotor	**classic**		**cooled**		
Power supply *)	200 – 240 V 1 ~	100 – 127 V 1 ~	200 – 240 V 1 ~	100–127 V 1 ~	100 V 1 ~
Frequency	50 – 60 Hz		50 Hz	60 Hz	50 Hz
Consumption	1,000 VA	1,100 VA	1,800 VA	2,000 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 750 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)	456 x 554 x 706 mm	456 x 554 x 715 mm	456 x 770 x 706 mm	456 x 770 x 715 mm
Weight	approx. 101 kg	approx. 111 kg	approx. 141 kg	approx. 151 kg

Refrigeration		
Temperature control, infinitely variable	-	from -20 to +40 °C

Cat. No.	**5650**	**5650-01**	**5660**	**5660-01**

*) Other voltages on request.
>) For a list of further versions of this model, please refer to page 12.

ROTANTA 460 RC / 460 RF

MEDICAL DEVICE 93/42/EEC

Model ROTANTA 460 RC is a refrigerated floor-standing centrifuge. It rests on castors, can be easily pushed beneath the workbench and thus does not take up any space on top of the workbench.
A further option is the refrigerated ROTANTA 460 RF floor-standing centrifuge.



TECHNOLOGY

	ROTANTA 460 RC [>)]	ROTANTA 460 RF [>)]
	Underbench centrifuge, cooled, without rotor	**Floorstanding centrifuge, cooled, without rotor**
Power supply [*)]	200 – 240 V 1 ~	
Frequency	50 Hz	
Consumption	1,800 VA	
Emission, Immunity	EN / IEC 61326-1, class B	
Max. capacity	4 x 750 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)	683 x 554 x 697 mm	961 x 554 x 697 mm
Weight	approx. 140 kg	approx. 164 kg
Refrigeration		
Temperature control, infinitely variable	from -20 to +40 °C	
Cat. No.	**5670**	**5675**

Swing-out rotor, 4-place

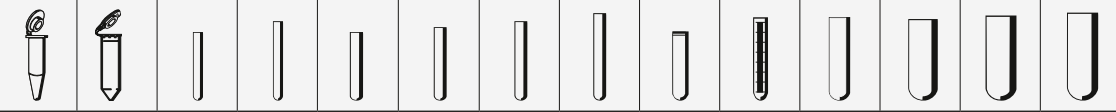
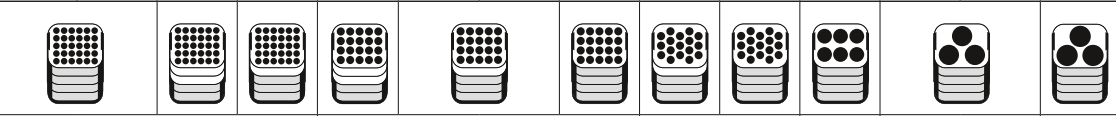


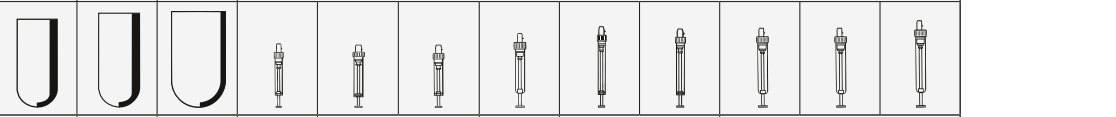
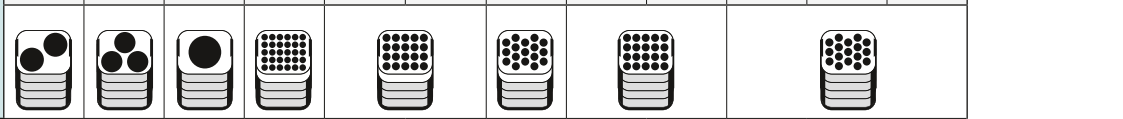
∢90°

n = 4,600 min^{-1}
max. RCF 5,063

illustrated with carriers 5625-A and lids 5627 with bio-containment[5)]

Cat. No. (without carriers) **5699**

capacity in ml	1.5	2.0	3	4	4	5	6	7	10	15	25	50	75	94
Ø x L in mm	11x38		10x60	10x88	12x60	12x75	12x82	12x100	17x70	17x100	24x100	34x100	35x105	38x102
Cat. No.	**2078**	**0536**	**-**			**0553**[2)]	**0501**[2)]	**0578**[2)]	**2079**	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0548**	**0549**
lid with bio-containment[5)] Cat. No. **5627**														
carrier Cat. No. **5625-A**														
Cat. No.	**4730**				**4732**				**4733**		**4734**	**4735**		**4736**
boring Ø x L in mm	11x84				13.5x84				17.5x84		26.5x84	36x80		42x80
tubes per rotor	224		120		80				68		24	12		
max. RCF[2)] upper/lower	3,572 / 4,637		4,637									4,495		
radius in mm upper/lower	151 / 196		196									190		
run-up in sec	90													
run-down in sec, braked	95													
temperature in °C[1)]	+4													

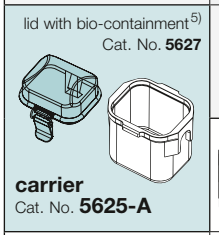
capacity in ml	100	100	250	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10
Ø x L in mm	44x100	40x115	65x115	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102
Cat. No.	**0526**[2)]	**0523**[2)]	**0530**[2)]	**blood collection/urine tubes**								
lid with bio-containment[5)] Cat. No. **5627**												
carrier Cat. No. **5625-A**												
Cat. No.	**4737**	**4736**	**4738**	**4730**	**4732**		**4733**	**4732**		**4733**		
boring Ø x L in mm	46x84	42x80	66x80	11x84	13.5x84		17.5x84	13.5x84		17.5x84		
tubes per rotor	8	12	4	120	80		68	80		68		
max. RCF[2)]	4,637	4,495		4,637								
radius in mm	196	190		196								
run-up in sec	90											
run-down in sec, braked	95											
temperature in °C[1)]	+4											

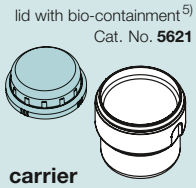
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
4) Please remove the inserts.



Most of the adapters for carriers 5625-A and 5620-A are built in layers. For shorter tubes, 1 to 2 layers should be removed. In the tables, the required layers are marked in grey.

Swing-out rotor 5699

capacity in ml	1.6–5	4–7	4–7	8.5–10	14	15	50	12	25	30	50	10	30	50	85	94
Ø x L in mm	13x75	13x100	16x75	16x100	16.5x106	17x120	29x115	17x100	25x90	25x110	29x115	16x80	26x95	29x107	38x106	38x102
Cat. No.	**blood collection/urine tubes**				**-**	**0509**	**0513**	**-**				**-**	**0545**	**0546**	**0547**	**0538**[13]
lid with bio-containment[5] Cat. No. **5627**																
carrier Cat. No. **5625-A**																
Cat. No.	**4732**		**4733**		**4739**[4]	**4739**	**4740**	**4739**[4]	**4734**		**4740**[4]	**4733**	**4734**	**4740**[4]	**4736**	
boring Ø x L in mm	13.5x84		17.5x84		17x80		30x80	17x80	26.5x84		30x80	17.5x84	26.5x84	30x80	42x80	
tubes per rotor	80		68		48		20	48	24		20	68	24	20	12	
max. RCF[2]	4,637														4,495	
radius in mm	196														190	
run-up in sec	90															
run-down in sec, braked	95															
temperature in °C[1]	+4															

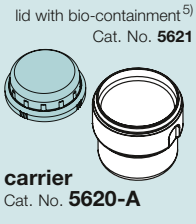
capacity in ml	1.5	2.0	3	4	4	5	6	7	10	15	25	45	50	75	94	100
Ø x L in mm	11x38		10x60	10x88	12x60	12x75	12x82	12x100	17x70	17x100	24x100	31x100	34x100	35x105	38x102	40x115
Cat. No.	**2078**	**0536**	**-**			**0553**[2]	**0501**[2]	**0578**[2]	**2079**	**0518**[2]	**0519**[2]	**-**	**0521**[2]	**0548**	**0549**	**0523**[2]
lid with bio-containment[5] Cat. No. **5621**																
carrier Cat. No. **5620-A**																
Cat. No.	**4830**				**4832**				**4833**		**4834**	**4835**			**4836**	
boring Ø x L in mm	11x84				13.5x84				17.5x84		26.5x84	36x80			42x80	
tubes per rotor	192		96		76						28	16			12	
max. RCF[2] upper/lower	3,572 / 4,637		4,637									4,495				
radius in mm upper/lower	151 / 196		196									190				
run-up in sec	90															
run-down in sec, braked	95															
temperature in °C[1]	+4															

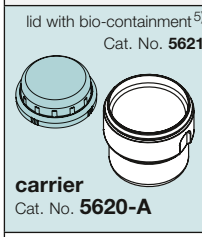
[5] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
[13] The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.



carrier 5620-A with lid 5621
and adapter 4839

Swing-out rotor 5699

capacity in ml	100	250	1.1–1.4	2.6–3.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	4.9	7.5–8.5	9–10	9–10	10	1.6–5
Ø x L in mm	44x100	65x115	8x66	13x65	13x65	11x66	15x75	11x92	13x90	13x90	15x92	16x92	16x92	15x102	13x75
Cat. No.	**0526**[2]	**0530**[2]	**blood collection/urine tubes**												
lid with bio-containment[5] Cat. No. **5621** **carrier** Cat. No. **5620-A**															
Cat. No.	**4837**	**4838**	**4830**	**4847**	**4832**		**4833**	**4832**		**4847**[4]	**4833**	**4848**	**4833**		**4847**
boring Ø x L in mm	46x84	66x80	11x84	13.2x61	13.5x84		17.5x84	13.5x84		13.2x61	17.5x84	17.5x61	17.5x84		13.2x61
tubes per rotor	8	4	96	108	76					108	76	88	76		108
max. RCF[2]	4,637	4,495	4,637	4,116	4,637					4,684	4,637	4,684	4,637		4,116
radius in mm	196	190	196	174	196					198	196	198	196		174
run-up in sec	90														
run-down in sec, braked	95														
temperature in °C[1]	+4														

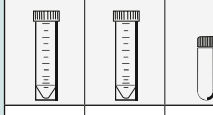
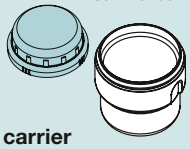
capacity in ml	1.6–5	4–7	4–7	4–7	4–7	8	8.5–10	8.5–10	14	15	50	50	12	25	30
Ø x L in mm	13x75	13x100	13x100	16x75	16x75	16x125	16x100	16x100	16.5x106	17x120	29x115	29x115	17x100	25x90	25x110
Cat. No.	**blood collection/urine tubes**								**-**	**0509**	**0513**	**0513**	**-**		**-**
lid with bio-containment[5] Cat. No. **5621** **carrier** Cat. No. **5620-A**															
Cat. No.	**4832**	**4847**[4]	**4832**	**4833**	**4848**	**4833**	**4848**		**4839**[4]	**4839**	**5647**	**4840**	**4839**[4]	**4834**	
boring Ø x L in mm	13.5x84	13.2x61	13.5x84	17.5x84	17.5x61	17.5x84	17.5x61		17x80		30x96.5	30x80	17x80	26.5x84	
tubes per rotor	76	108	76	76	88	76	88		56		28	20	56	28	
max. RCF[2]	4,637	4,684	4,637	4,637	4,684	4,637	4,684		4,637		4,708	4,637			
radius in mm	196	198	196	196	198	196	198		196		199	196			
run-up in sec	90														
run-down in sec, braked	95														
temperature in °C[1]	+4														

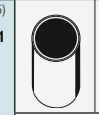
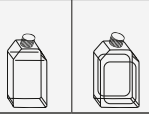
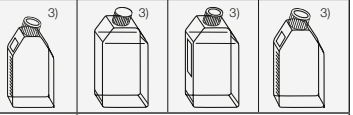
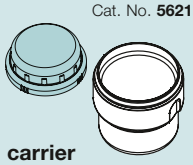
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 5620-A cannot be closed with lid 5621.
4) Please remove the inserts.



illustrated with carriers 5620-A
and lids 5621
with bio-containment[5)]

Swing-out rotor 5699

capacity in ml	50	50	10	10	30	50	50	85	94	250	290	500	600	650	750
Ø x L in mm	29x115	29x115	16x80	16x80	26x95	29x107	29x107	38x106	38x102	61x122	62x137	96x147	93x134	97x139	97x152
Cat. No.	**-**	**-**	**-**	**-**	**0545**	**0546**	**0546**	**0547**	**0538**[13)]	**5127**[28)]	**-**[28)]	**Corning**	**0551**[28)]	**0554**[28)]	**0512**[28)]
lid with bio-containment[5)] Cat. No. **5621**															 3)
carrier Cat. No. **5620-A**												Adapter **4845** + support cushion **431124** (Corning)			
Cat. No.	**5647**[4)]	**4840**[4)]	**4833**	**4848**	**4834**	**4840**[4)]	**5647**[4)]	**4836**		**4841**		**4845**	**4846**	**4845**	
boring Ø x L in mm	30x96.5	30x80	17.5x84	17.5x61	26.5x84	30x80	30x96.5	42x80		62x100		98x100	94x95	98x100	
tubes per rotor	28	20	76	88	28	20	28	12		4					
max. RCF[2)]	4,708	4,637	4,637	4,684	4,637		4,708	4,495		4,779					
radius in mm	199	196	196	198	196		199	190		202					
run-up in sec	90														
run-down in sec, braked	95														
temperature in °C[1)]	+4														

capacity in ml	450	750	30/50		40	160	200		
Ø x L in mm	97x113	96x135	-						
Cat. No.	**4447**	**4234-A**	**Falcon®**	**Corning**	**Nunc®**	**Nunc®**	**Falcon®**	**Greiner**	**Nunc®**
lid with bio-containment[5)] Cat. No. **5621**						 3)			
carrier Cat. No. **5620-A**									
Cat. No.	**4845**		**4849**		**4852**	**4851**	**4831**		
boring Ø x L in mm	98x100		-						
tubes per rotor	4		4						
max. RCF[2)]	4,779		4,613[31)]						
radius in mm	202		195						
run-up in sec	90								
run-down in sec, braked	95								
temperature in °C[1)]	+4								

Accommodated cell culture flasks:

30/50 ml
from Becton Dickinson, No. 353014
from Corning, No. 430168

40 ml
from Nunc, No. 156340

160 ml
from Nunc, No. 156472

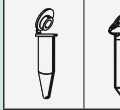
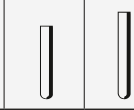
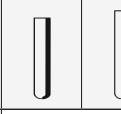
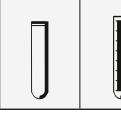
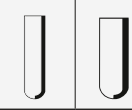
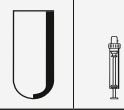
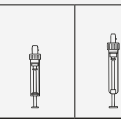
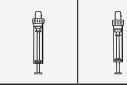
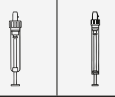
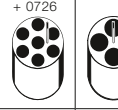
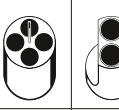
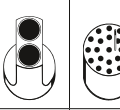
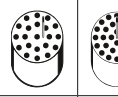
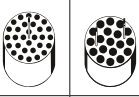
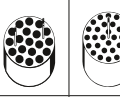
200 ml
from Becton Dickinson, No. 353024
from Greiner, No. 658170
from Nunc, No. 153732 or 147589

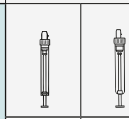
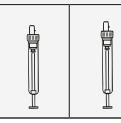
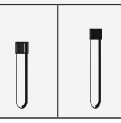
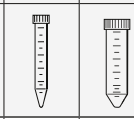
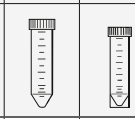
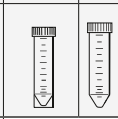
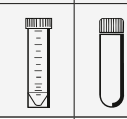
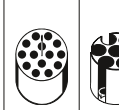
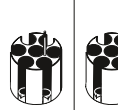
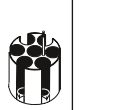
5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
13) The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.
28) At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
31) Please note that the RCF values indicated refer only to rotor performance.
The max. RCF for the accommodated cell culture flasks is 2,300.



illustrated with carriers 5620-A
and lids 5621
with bio-containment[5)]

Swing-out rotor 5699

capacity in ml	1.5	2.0	5	7	8	9	10	15	25	50	100	2.6–3.4	2.7–3	4–5.5	4.5–5
Ø x L in mm	11x38		12x75	12x100	16x81	14x100	17x70	17x100	24x100	34x100	44x100	13x65	11x66	15x75	11x92
Cat. No.	**2078**	**0536**	**0553**[2)]	**0578**[2)]	**-**	**0500**[2)]	**2079**	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0526**[2)]	**blood collection tubes**			
lid with bio-containment[5)] Cat. No. **5621**															
carrier Cat. No. **5623-A**									+ 0726 						
Cat. No.	**4432**		**4433**		**4434**				**4438**	**4439**	**4442**	**4435**	**4433**	**4434**	**4433**
boring Ø x L in mm	11.5x38		13x58		17.5x53				26x72	36x79	45x78	13.5x58	13x58	17.5x53	13x58
tubes per rotor	168		120		76				28	16	8	84	120	76	120
max. RCF[2)] upper/lower	3,407/4,542		4,471		4,637				4,353	4,424	4,400	4,471		4,637	4,471
radius in mm upper/lower	144/192		189		196				184	187	186	189		196	189
run-up in sec	90														
run-down in sec, braked	95														
temperature in °C[1)]	+4														

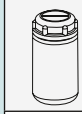
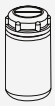
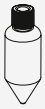
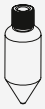
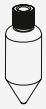
capacity in ml	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8	8.5–10	10	15	50	25	30	50	50
Ø x L in mm	13x90	15x92	16x92	15x102	13x75	13x100	16x75	16x125	16x100	16x80	17x120	29x115	25x90	25x110	29x115	29x107
Cat. No.	**blood collection/urine tubes**									**-**	**0509**	**0513**	**-**	**-**	**-**	**0546**
lid with bio-containment[5)] Cat. No. **5621**																
carrier Cat. No. **5623-A**															
Cat. No.	**4435**	**4434**			**4435**		**4434**				**4469**	**4468**	**4438**		**4468**[4)]	**4468**
boring Ø x L in mm	13.5x58	17.5x53			13.5x58		17.5x53				17x93.1	31x96	26x72		31x96	
tubes per rotor	84	76			84		76				56	28	28		28	
max. RCF[2)]	4,471	4,637			4,471		4,637				4,755	4,613	4,566		4,613	
radius in mm	189	196			189		196				201	195	193		195	
run-up in sec	90															
run-down in sec, braked	95															
temperature in °C[1)]	+4															

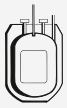
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 5623-A cannot be closed with lid 5621.
4) Please remove the inserts.



illustrated with carriers 5620-A

Swing-out rotor 5699

capacity in ml	250	290	650	750	175	175	200	225	250	500
Ø x L in mm	61 x 122	62 x 137	97 x 139	97 x 152	61 x 118	62 x 144	60 x 130	61 x 137	60 x 162	96 x 147
Cat. No.	**5127**[28]	**-**[28]	**0554**[28]	**0512**[28]	**Falcon®**	**Nalgene®**	**Nunc®**	**Falcon®**	**Corning**	**Corning**
lid with bio-containment[5] Cat. No. **5621**				 [3]					 [3]	
carrier Cat. No. **5623-A**										
Cat. No.	**4443**		**4451**		**4440**	**4430**		**4440**	**4430**	**4449**
boring Ø x L in mm	62 x 92		98.4 x 116		-					
tubes per rotor	4				4					
max. RCF[2]	4,873				5,063					
radius in mm	206				214					
run-up in sec	90									
run-down in sec, braked	95									
temperature in °C[1]	+4									

capacity in ml	450	750	450
Ø x L in mm	97 x 113	96 x 135	triplicate system without filter
Cat. No.	**4447**	**4234-A**	**blood bags**[32]
lid with bio-containment[5] Cat. No. **5621**			
carrier Cat. No. **5623-A**			
Cat. No.	**4451**		**-**
boring Ø x L in mm	98.4 x 116		
tubes per rotor	4		
max. RCF[2]	5,063		
radius in mm	214		
run-up in sec	90		
run-down in sec, braked	95		
temperature in °C[1]	+4		

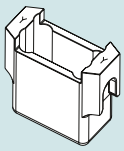
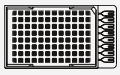
[5] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
[28] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
[32] We recommend the use of the refrigerated ROTANTA 460 R, 460 RC and 460 RF to ensure that the temperature of the blood is maintained during centrifugation.

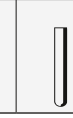
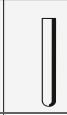
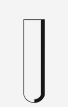
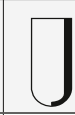
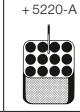
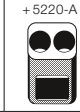
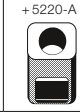
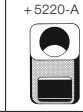
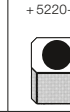


illustrated with carriers 5628
and adapters 6338-A

Swing-out rotor 5699

capacity in ml	450	
blood bags[32]	triplicate system	quadruplicate system
Cat. No.	**5693**	**5695**
carrier Cat. No. **5691-A**	holder for systems without filter 	holder for systems with or without filter 
		
Cat. No.	**5692**	
boring Ø x L in mm	-	
blood bag systems per rotor	4	
max. RCF[2]	4,637	
radius in mm	196	
run-up in sec	90	
run-down in sec, braked	95	
temperature in °C[1]	+11	

capacity in ml	-
L x W x H in mm	152.5 x 85.5 x 12
Cat. No.	**-**
carrier Cat. No. **5636** 	TaqMan array 
	
Cat. No.	**5648**
boring Ø x L in mm	-
arrays per rotor	12
max. RCF[2]	4,921
radius in mm	208
run-up in sec	90
run-down in sec, braked	95
temperature in °C[1]	+4

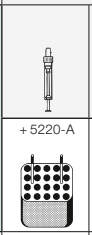
capacity in ml	1.5	2.0	3	5	6	7	9	25	50	100	100	250
Ø x L in mm	11x38		10x60	12x75	12x82	12x100	14x100	24x100	34x100	44x100	40x115	65x115
Cat. No.	**2078**	**0536**	**-**	**0553**[2]	**0501**[2]	**0578**[2]	**0500**[2]	**0519**[2]	**0521**[2]	**0526**[2]	**0523**[2]	**0530**[2]
(adaptable only without lid 5629) adapting frame Cat. No. **5220-A**												
carrier Cat. No. **5628**[11]	+ 5220-A 		+ 5220-A 	+ 5220-A 			+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 
Cat. No.[22]	**5281**		**5267**	**5268**			**5264**	**5242**	**5243**	**5262**	**5249**	**5263-A**
boring Ø x L in mm	11.5x50		11x44	13.5x52			16x50	26x86	36x86	45.5x86	42x86	66x87
tubes per rotor	128		160	96			96	40	16	8		4
max. RCF[2]	4,164		4,069	4,164			4,116	4,093		4,069		4,045
radius in mm	176		172	176			174	173		172		171
run-up in sec	90											
run-down in sec, braked	95											
temperature in °C[1]	+4											

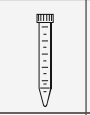
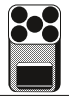
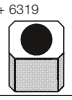
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
4) Please remove the inserts.



illustrated with carriers 5628, adapting frame 5220-A and adapters 5258

Swing-out rotor 5699

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	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	13x75	16x75	13x100	16x100
Cat. No.	**blood collection/urine tubes**											
(adaptable only without lid 5629) adapting frame Cat. No. **5220-A**												
carrier Cat. No. **5628** [11]	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A
Cat. No. [22]	**5267**	**5268**	**5227**	**5264**	**5227**	**5268**	**5264**	**5258**	**5268**	**5264**	**5268**	**5258**
boring Ø x L in mm	11x44	13.5x52	12.5x42	16x50	12.5x42	13.5x52	16x50	17.6x86	13.5x52	16x50	13.5x52	17.6x86
tubes per rotor	160	96	160	96	160	96	96	88	96			88
max. RCF [2]	4,069	4,164	4,116			4,164	4,116	4,093	4,164	4,116	4,164	4,093
radius in mm	172	176	174			176	174	173	176	174	176	173
run-up in sec	90											
run-down in sec, braked	95											
temperature in °C [1]	+4											

capacity in ml	15	30	50	50	250	two-tier frame for cyto accessories
Ø x L in mm	17x120	25x110	29x115	29x115	61x122	
Cat. No.	**0509**	**-**	**0513**	**-**	**5127** [28]	**cyto chambers** [23]
(adaptable only without lid 5629) adapting frame Cat. No. **5220-A**						
carrier Cat. No. **5628** [11]		+ 5220-A 			+ 5220-A + 6319 	+ 5220-A 
Cat. No. [22]	**6337-A**	**5266** [4]	**6338-A**	**6339-A**	**5263-A** [4]	**5280**
boring Ø x L in mm	17x90	26x86	30x90	30x87	66x87	-
tubes per rotor	56	40	24	24	4	16
max. RCF [2] upper/lower	4,258	4,187	4,258	4,187		2,744/4,069
radius in mm upper/lower	180	177	180	177		116/172
run-up in sec	90					
run-down in sec, braked	95					
temperature in °C [1]	+4					

For detailed information on the comprehensive Hettich cyto system please turn to the pages 156–158.



Carrier 5628, adapting frame 5220-A and adapters 5258



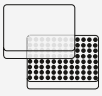
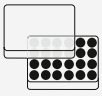
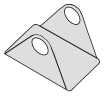
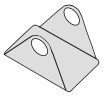
Carrier 5628 and adapter 6338-A

[11] Please make sure not to exceed the max. permissible loading weight of 800g of carrier 5628. The loading weight is the sum of the weight of the respective adapters, of frame 5220-A (where required), the tubes, and their contents.
[22] With the exception of adapters 5263-A, 6337-A, 6338-A and 6339-A, two of these adapters need to be placed into carrier 5628.
[23] Please ask for our detailed cyto brochure.
[28] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
[32] We recommend the use of the refrigerated ROTANTA 460 R, 460 RC and 460 RF to ensure that the temperature of the blood is maintained during centrifugation.



illustrated with carriers 5628
and lids 5629
with bio-containment[5)]
and removal frame 4626

Swing-out rotor Cat. No. (without carriers) **5699**

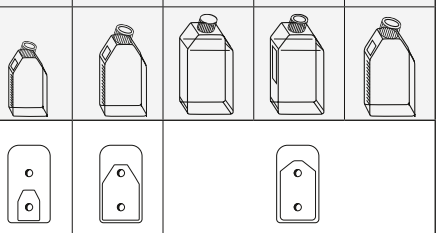
D x W x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	86x128x46	86x128x83	59x84x11	82x124x20	-
capacity in ml	-								0.2
Cat. No.	**MTP**		**CP**	**DWP**	**MS**	**QP**	**Microtest plate (Terasaki)**	**PCR plate, 96 wells**	**PCR strips**
lid with bio-containment[5)] Cat. No. **5629**									
carrier Cat. No. **5628**[11)]								 	
Cat. No.	**4626**							**4626 + 1485**	
boring Ø x L in mm	-								
plates/strips per rotor	24	20	16	4	4	4	8	4	48x8
max. RCF[2)]	4,211								
radius in mm	max. 178								
run-up in sec	90								
run-down in sec, braked	95								
temperature in °C[1)]	+ 4								

[1)] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2)] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2)] is 4,000.



illustrated with carriers 5630-B
and removal frame 4626

Swing-out rotor 5699

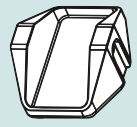
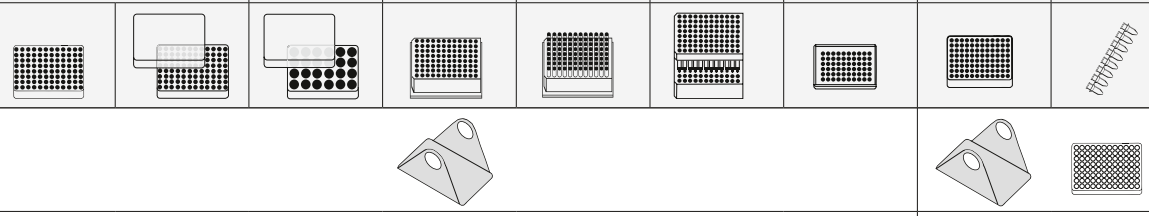
capacity in ml	40	160	200		
L x W x H in mm	-				
Cat. No.	**Nunc®**	**Nunc®**	**Falcon®**	**Greiner**	**Nunc®**
 **carrier** Cat. No. **5630-B**					
Cat. No.	**5672**	**5673**	**5671**		
boring Ø x L in mm	-				
flasks per rotor	4				
max. RCF[2)]	3,785[31)]				
radius in mm	160				
run-up in sec	90				
run-down in sec, braked	95				
temperature in °C[1)]	+4				

Accommodated cell culture flasks:

40 ml
from Nunc, No. 156340 or 156367

160 ml
from Nunc, No. 156472 or 156499

200 ml
from Becton Dickinson, No. 353024
from Greiner, No. 658170
from Nunc, No. 153732 or 147589

L x W 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**
 **carrier** Cat. No. **5630-B**									
Cat. No.	**4626**							**4626 + 1485**	
boring Ø x L in mm	-								
flasks per rotor	20	16	12	4	4	4	8	4	48x8
max. RCF[2)]	3,832								
radius in mm	max. 162								
run-up in sec	90								
run-down in sec, braked	95								
temperature in °C[1)]	+4								

5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
11) Please make sure not to exceed the max. permissible loading weight of 800g of carrier 5628. The loading weight is the sum of the weight of the respective adapters, of frame 5220-A (where required), the tubes, and their contents.
31) Please note that the RCF values indicated refer only to rotor performance. The max. RCF for the accommodated cell culture flasks is 2,300.

Swing-out rotor, 4-place

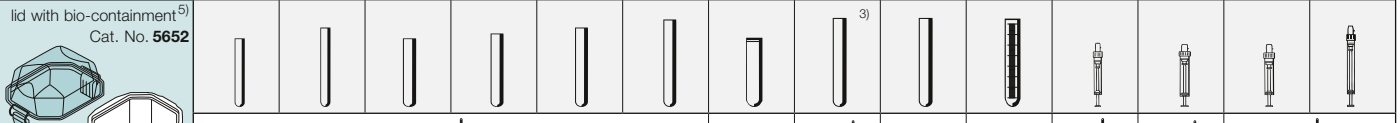
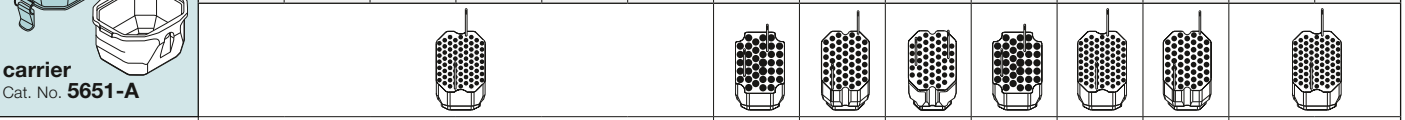


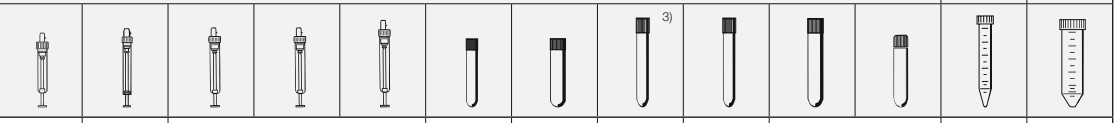
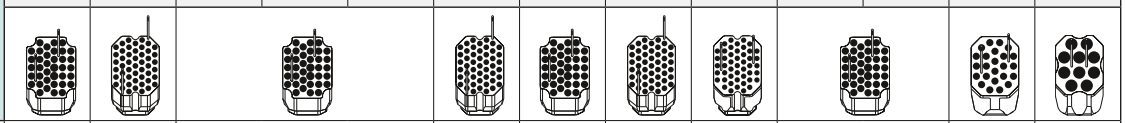
∢90°

n = 3,800 min^{-1}
max. RCF 3,196

illustrated with carriers 5651-A
and lids 5652
with bio-containment[5)]

Cat. No. (without carriers) **5654**

capacity in ml	3	4	4	5	6	7	10	10		15	1.1–1.4	2.6–3.4	2.7–3	4.5–5
Ø x L in mm	10x60	10x88	12x60	12x75	12x82	12x100	17x70	13x100		17x100	8x66	13x65	11x66	11x92
Cat. No.	-	-	-	**0553**[2)]	**0501**[2)]	**0578**[2)]	**2079**	-		**0518**[2)]	**blood collection tubes**			
lid with bio-containment[5)] Cat. No. **5652**								[3)]						
carrier Cat. No. **5651-A**														
Cat. No.	**5684**						**5682**	**5674**	**5685**	**5682**	**5684**	**5674**	**5684**	
boring Ø x L in mm	12.5x40						17.2x46.5	13.2x42.4		17.2x46.5	12.5x40	13.2x42.4	12.5x40	
tubes per rotor	292						148	196	188	148	292	196	292	
max. RCF	2,874						2,970	2,906		2,970	2,874	2,906	2,874	
radius in mm	178						184	180		184	178	180	178	
run-up in sec	61													
run-down in sec, braked	57													
temperature in °C[1)]	0													

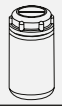
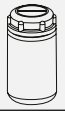
capacity in ml	4–5.5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7		8.5–10	10	15	50
Ø x L in mm	15x75	13x90	15x92	16x92	15x102	13x75	16x75	13x100		16x100	16x80	17x120	29x115
Cat. No.	**blood collection/urine tubes**											**0509**[2)]	**0513**[2)]
lid with bio-containment[5)] Cat. No. **5652**								[3)]					
carrier Cat. No. **5651-A**													
Cat. No.	**5682**	**5674**	**5682**			**5674**	**5682**	**5674**	**5685**	**5682**		**5683**	**5686**
boring Ø x L in mm	17.2x46.5	13.2x42.4	17.2x46.5			13.2x42.4	17.2x46.5	13.2x42.4	13.2x42.4	17.2x46.5		17x60	30x60
tubes per rotor	148	196	148			196	148	196	188	148		96	40
max. RCF	2,970	2,906	2,970			2,906	2,970	2,906	2,906	2,970		3,196	3,196
radius in mm	184	180	184			180	184	180	180	184		198	198
run-up in sec	61												
run-down in sec, braked	57												
temperature in °C[1)]	0												

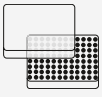
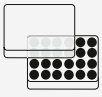
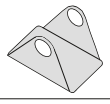
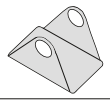
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 5651-A cannot be closed with lid 5652.



illustrated with carriers 5651-A
and lids 5652
with bio-containment[5)]

Swing-out rotor 5654

capacity in ml	175	175	200	225	250	290	450	500	600	650	750
Ø x L in mm	61x118	62x144	60x130	61x137	61x122	62x137	97x113	96x147	93x134	97x139	97x152
Cat. No.	**Falcon®**	**Nalgene®**	**Nunc®**	**Falcon®**	**5127**[28)]	**-**[28)]	**4447**	**Corning**	**0551**[28)]	**0554**[28)]	**0512**[28)]
lid with bio-containment[5)] Cat. No. **5652**											
carrier Cat. No. **5651-A**	 + 5677	 + 5676		 + 5677				 + 4449			
Cat. No.	**5681**						**5687**				
boring Ø x L in mm	62x100						98x100				
tubes per rotor	8						4				
max. RCF	3,196						3,196				
radius in mm	198						198				
run-up in sec	61										
run-down in sec, braked	57										
temperature in °C[1)]	0										

D x W 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. **5629**									
carrier Cat. No. **5653**								 	
Cat. No.	**4626**							**4626 + 1485**	
boring Ø x L in mm	-								
plates/strips per rotor	24	20	16	4	4	4	8	4	48x8
max. RCF[2)]	2,890								
radius in mm	max. 179								
run-up in sec	61								
run-down in sec, braked	57								
temperature in °C[1)]	-4								

[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.

Swing-out rotor, 4-place

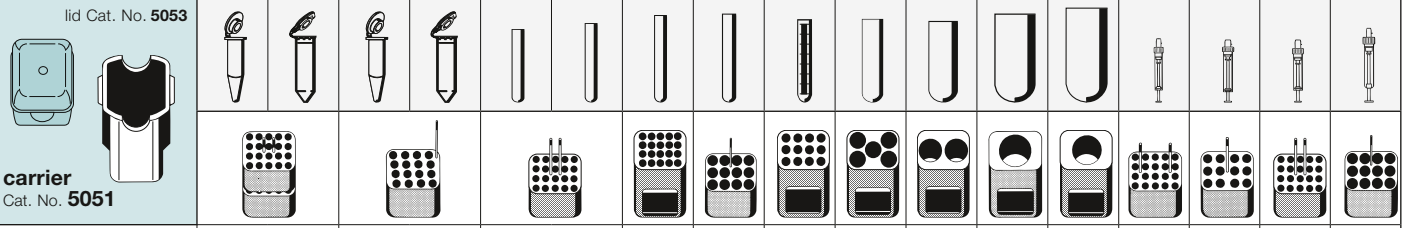


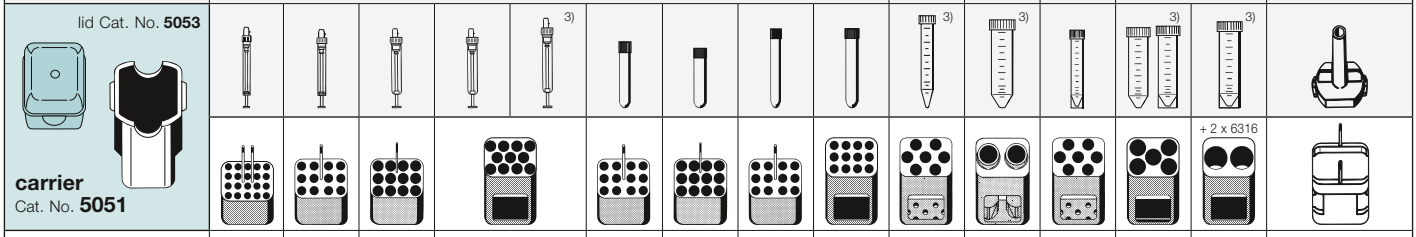
∢90°

n = 4,000 min^{-1}
max. RCF 3,095

illustrated with carriers 5051 and lids 5053

Cat. No. (without carriers) **5694**

capacity in ml	1.5	2.0	1.5	2.0	5	6	7	9	15	25	50	100	100	1.1–1.4	2.6–3.4	2.7–3	4–5.5
Ø x L in mm	11x38		11x38		12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115	8x66	13x65	11x66	15x75
Cat. No.	**-**	**-**	**2078**	**0536**	**0553**[2]	**0501**[2]	**0578**[2]	**0500**[2]	**0518**[2]	**0519**[2]	**0521**[2]	**0526**[2]	**0523**[2]	**blood collection tubes**			
lid Cat. No. **5053** / **carrier** Cat. No. **5051**																	
Cat. No.	**5257**		**5281**		**5227**		**5247**[18]	**5264**	**5248**[18]	**5242**	**5243**	**5262**	**5249**	**5267**	**5268**	**5227**	**5264**
boring Ø x L in mm	12.5x42		11.5x50		12.5x42		12.5x86	16x50	17.5x86	26x86	36x86	45.5x86	42x86	11x44	13.5x52	12.5x42	16x50
tubes per rotor	160		64		80		80	48	48	20	8	4		80	48	80	48
max. RCF[2] upper/lower	1,950/2,826		2,826		2,773		2,755	2,773	2,755			2,755		2,737	2,808	2,773	
radius in mm upper/lower	109/158		158		155		154	155	154			154		153	157	155	
run-up in sec	42																
run-down in sec, braked	51																
temperature in °C[1]	-3																

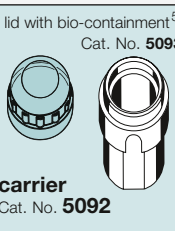
capacity in ml	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8.5–10	15	50	12	30	50	two-tier frame for cyto accessories
Ø x L in mm	11x92	13x90	15x92	16x92	15x102	13x75	16x75	13x100	16x100	17x120	29x115	17x100	25x110	29x115	
Cat. No.	**blood collection/urine tubes**									**0509**	**0513**	**-**	**-**		**cyto chambers**[23]
lid Cat. No. **5053** / **carrier** Cat. No. **5051**															
Cat. No.	**5227**	**5268**	**5264**	**5258**		**5268**	**5264**	**5268**	**5248**	**6306**	**5259**	**6306**	**5266**	**5243**	**5280**
boring Ø x L in mm	12.5x42	13.5x52	16x50	17.6x86		13.5x52	16x50	13.5x52	17.5x86	17x90	30x86	17x90	26x86	36x86	-
tubes per rotor	80	48	48	44		48				28	8	28	20	8	8
max. RCF[2] upper/lower	2,773	2,808	2,773	2,755		2,808	2,773	2,808	2,755	2,898	2,826	2,898	2,755		1,735/2,737
radius in mm upper/lower	155	157	155	154		157	155	157	154	162	158	162	154		97/153
run-up in sec	42														
run-down in sec, braked	51														
temperature in °C[1]	-3														

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.
4) Please remove the inserts.



illustrated with carriers 5051
and lids 5053

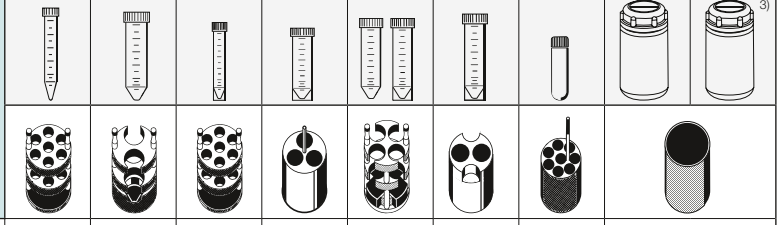
Swing-out rotor 5694

capacity in ml	5	6	7	10	15	25	50	100	100	250	1.1–1.4	1.1–1.4	2.6–3.4	2.6–3.4
Ø x L in mm	12x75	12x82	12x100	17x70	17x100	24x100	34x100	44x100	40x115	65x115	8x66	8x66	13x65	13x65
Cat. No.	**0553**[2]	**0501**[2]	**0578**[2]	**2079**	**0518**[2]	**0519**[2]	**0521**[2]	**0526**[2]	**0523**[2]	**0530**[2]	**blood collection tubes**			
lid with bio-containment[5] Cat. No. **5093** / **carrier** Cat. No. **5092**														
Cat. No.	**5128**		**5120**	**5136**		**5122**	**5124**	**5125**	**5126**	**1791**	**5137**	**5138**	**5137**	**5138**
boring Ø x L in mm	12.8x45		12.8x82	17.5x60.7		25.5x82	35.5x82.5	45.5x85	42x85	66x103	13.5x60.7	12.8x54.5	13.5x60.7	12.8x54.5
tubes per rotor	48			32		16	4				32	48	32	48
max. RCF[2]	3,005			2,952		2,898	2,952	2,952		3,095	2,952	2,540	2,952	2,540
radius in mm	168			165		162	165	165		173	165	142	165	142
run-up in sec	42													
run-down in sec, braked	51													
temperature in °C[1]	-3													

capacity in ml	2.7–3	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	1.6–5	4–7	4–7	8	8.5–10
Ø x L in mm	11x66	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x75	13x100	16x75	16x125	16x100
Cat. No.	**blood collection/urine tubes**													
lid with bio-containment[5] Cat. No. **5093** / **carrier** Cat. No. **5092**													3)	
Cat. No.	**5137**	**5138**	**5136**	**5120**	**5137**	**5136**			**5137**	**5138**	**5120**	**5136**	**5121**[4]	**5136**
boring Ø x L in mm	13.5x60.7	12.8x54.5	17.5x60.7	12.8x82	13.5x60.7	17.5x60.7			13.5x60.7	12.8x54.5	12.8x82	17.5x60.7	17.5x82	17.5x60.7
tubes per rotor	32	48	32	48	32	32			32	48	48	32	28	32
max. RCF[2]	2,952	2,540	2,952	3,005	2,952	2,952			2,952	2,540	3,005	2,952	3,059	2,952
radius in mm	165	142	165	168	165	165			165	142	168	165	171	165
run-up in sec	42													
run-down in sec, braked	51													
temperature in °C[1]	-3													

[18] With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.
[23] Please ask for our detailed cyto brochure.

Swing-out rotor 5694

capacity in ml	15	50	12	25	30	50	10	250	290
Ø x L in mm	17x120	29x115	17x100	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	**0509**	**0513**	**-**					**5127**[28)]	**-**[28)]
lid with bio-containment[5)] Cat. No. **5093** **carrier** Cat. No. **5092**									[3)]
Cat. No.	**5129**	**5123**	**5121**	**5134**	**5122**	**5135**	**5136**	**6319**	
boring Ø x L in mm	17x85	30x85	17.5x82	26x73	25.5x82	30x99	17.5x60.7	66x103	
tubes per rotor	28	8	28	12	16	8	32	4	
max. RCF[2)]	3,095		3,005	2,826	2,898	3,023	2,952	3,095	
radius in mm	173		168	158	162	169	165	173	
run-up in sec	42								
run-down in sec, braked	51								
temperature in °C[1)]	-3								

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 5092 resp. 5051 cannot be closed with lid 5093 resp. 5053.

Swing-out rotor, 6-place

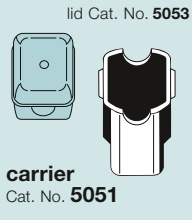


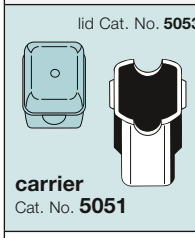
∢90°

n = 4,000 min^{-1}
max. RCF 3,631

illustrated with carriers 5051

Cat. No. (without carriers) **4446**

capacity in ml	1.5	2.0	1.5	2.0	3	5	6	7	9	15	25	50	100	100	1.1–1.4	2.6–3.4	2.7–3
Ø x L in mm	11x38		11x38		10x60	12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115	8x66	13x65	11x66
Cat. No.	**-**	**-**	**2078**	**0536**	**-**	**0553**[2)]	**0501**[2)]	**0578**[2)]	**0500**[2)]	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0526**[2)]	**0523**[2)]	**blood collection tubes**		
lid Cat. No. **5053** **carrier** Cat. No. **5051**																	
Cat. No.	**5257**		**5281**		**5267**	**5227**		**5247**[18)]	**5264**	**5248**[18)]	**5242**	**5243**	**5262**	**5249**	**5267**	**5268**	**5227**
boring Ø x L in mm	12.5x42		11.5x50		11x44	12.5x42		12.5x86	16x50	17.5x86	26x86	36x86	45.5x86	42x86	11x44	13.5x52	12.5x42
tubes per rotor	240		96		120	120		120	72	72	30	12	6	6	120	72	120
max. RCF[2)] upper/lower	2,486/3,363		3,363		3,274	3,309		3,291	3,309	3,291			3,291		3,274	3,345	3,309
radius in mm upper/lower	139/188		188		183	185		184	185	184			184		183	187	185
run-up in sec	45																
run-down in sec, braked	55																
temperature in °C[1)]	0																

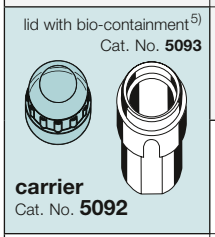
capacity in ml	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8.5–10	15	50	12	30	50	two-tier frame for cyto accessories
Ø x L in mm	15x75	11x92	13x90	15x92	16x92	15x102	13x75	16x75	13x100	16x100	17x120	29x115	17x100	25x110	29x115	
Cat. No.	**blood collection/urine tubes**										**0509**	**0513**	**-**	**-**		**cyto chambers**[23)]
lid Cat. No. **5053** **carrier** Cat. No. **5051**																
Cat. No.	**5264**	**5227**	**5268**	**5264**	**5258**		**5268**	**5264**	**5268**	**5248**	**6306**	**5259**	**6306**	**5266**	**5243**	**5280**
boring Ø x L in mm	16x50	12.5x42	13.5x52	16x50	17.6x86		13.5x52	16x50	13.5x52	17.5x86	17x90	30x86	17x90	26x86	36x86	-
tubes per rotor	72	120	72	72	66		72				42	12	42	30	12	12
max. RCF[2)]	3,309	3,309	3,345	3,309	3,291		3,345	3,309	3,345	3,291	3,434	3,363	3,434	3,291	3,291	2,290/3,291
radius in mm	185	185	187	185	184		187	185	187	184	192	188	192	184	184	128/184
run-up in sec		45														
run-down in sec, braked		55														
temperature in °C[1)]		0														

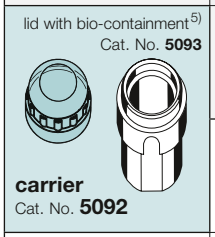
[18)] With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.
[23)] Please ask for our detailed cyto brochure.
[28)] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



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

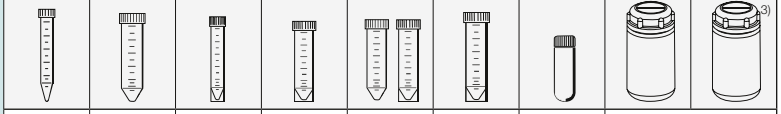
Swing-out rotor Cat. No. (without carriers) **4446**

capacity in ml	5	6	7	10	15	25	50	100	100	250	1.1–1.4	1.1–1.4	2.6–3.4	2.6–3.4
Ø x L in mm	12x75	12x82	12x100	17x70	17x100	24x100	34x100	44x100	40x115	65x115	8x66	8x66	13x65	13x65
Cat. No.	**0553**[2)]	**0501**[2)]	**0578**[2)]	**2079**	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0526**[2)]	**0523**[2)]	**0530**[2)]	**blood collection tubes**			
lid with bio-containment[5)] Cat. No. **5093** / **carrier** Cat. No. **5092**														
Cat. No.	**5128**		**5120**	**5136**		**5122**	**5124**	**5125**	**5126**	**1791**	**5137**	**5138**	**5137**	**5138**
boring Ø x L in mm	12.8x45		12.8x82	17.5x60.7		25.5x82	35.5x82.5	45.5x85	42x85	66x103	13.5x60.7	12.8x54.5	13.5x60.7	12.8x54.5
tubes per rotor	72		72	48		24	6			6	48	72	48	72
max. RCF[2)]	3,542		3,542	3,488		3,434	3,488			3,631	3,488	3,077	3,488	3,077
radius in mm	198		198	195		192	195			203	195	172	195	172
run-up in sec	45													
run-down in sec, braked	55													
temperature in °C[1)]	0													

capacity in ml	2.7–3	2.7–3	4.9	4–5.5	4.5–5	7.5–8.5	9–10	10	1.6–5	1.6–5	4–7	4–7	8	8.5–10
Ø x L in mm	11x66	11x66	13x90	15x75	11x92	15x92	16x92	15x102	13x75	13x75	13x100	16x75	16x125	16x100
Cat. No.	**blood collection/urine tubes**													
lid with bio-containment[5)] Cat. No. **5093** / **carrier** Cat. No. **5092**													[3)]	
Cat. No.	**5137**	**5138**	**5137**	**5136**	**5120**	**5136**	**5136**		**5137**	**5138**	**5120**	**5136**	**5121**	**5136**
boring Ø x L in mm	13.5x60.7	12.8x54.5	13.5x60.7	17.5x60.7	12.8x82	17.5x60.7	17.5x60.7		13.5x60.7	12.8x54.5	12.8x82	17.5x60.7	17.5x82	17.5x60.7
tubes per rotor	48	72	48	48	72	48	48		48	72	72	48	42	48
max. RCF[2)]	3,488	3,077	3,488	3,488	3,542	3,488	3,488		3,488	3,077	3,542	3,488	3,542	3,488
radius in mm	195	172	195	195	198	195	195		195	172	198	195	198	195
run-up in sec	45													
run-down in sec, braked	55													
temperature in °C[1)]	0													

[1)] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2)] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2)] is 4,000.
[3)] When using these tubes, carrier 5092 cannot be closed with lid 5093.

Swing-out rotor 4446

capacity in ml	15	50	12	25	30	50	10	250	290
Ø x L in mm	17x120	29x115	17x100	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	**0509**	**0513**	**-**	**-**	**-**	**-**	**-**	**5127**[28]	**-**[28]
lid with bio-containment[5] Cat. No. **5093**									
carrier Cat. No. **5092**									
Cat. No.	**5129**	**5123**	**5121**	**5134**	**5122**	**5135**	**5136**	**6319**	
boring Ø x L in mm	17x85	30x85	17.5x82	26x73	25.5x82	30x99	17.5x60.7	66x103	
tubes per rotor	42	12	42	18	24	12	48	6	
max. RCF[2]	3,631		3,542	3,363	3,434	3,560	3,488	3,631	
radius in mm	203		198	188	192	199	195	203	
run-up in sec	45								
run-down in sec, braked	55								
temperature in °C[1]	0								

[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.

Swing-out rotor, 2-place



∢90°

n = 5,900/6,200 min^{-1}
max. RCF 5,838/6,446

illustrated with carriers
5631 and lids 4627
with bio-containment[5]
and removal frame 4626

Cat. No. (without carriers) **5622**

D x W x H in mm	86 x 128 x 15	86 x 128 x 17.5	86 x 128 x 22	86 x 128 x 44.5	86 x 128 x 46	86 x 128 x 83	59 x 84 x 11	82 x 124 x 20	-
capacity in ml	-								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** **carrier** Cat. No. **5631**									
Cat. No.	**4626**							**4626 + 1485**	
boring Ø x L in mm	-							-	
plates/Strips pro rotor	12	10	8	2			4	2	24 x 8
max. RCF[2] classic/**cooled**	5,838/**6,446**								
radius in mm	max. 150								
run-up in sec classic/**cooled**	50/**52**								
run-down in sec, braked classic/**cooled**	32/**39**								
temperature in °C[1]	+12								

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[5] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

Angle rotor, 30-place



∢45°

n = 15,000 min^{-1}
max. RCF 24,400

with bio-containment[5)]

Cat. No. 4489-A

Angle rotor, 6-place

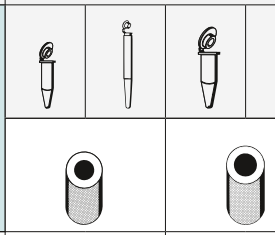


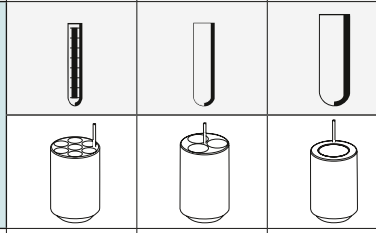
∢25°

n = 8,500/9,500 min^{-1}
max. RCF 11,228/14,025

with bio-containment[5)]

Cat. No. 5645

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[5)] incl. **rotor** Cat. No. **4489-A**						
Cat. No.	**2024**		**2023**		**2031**[7)]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.1
tubes per rotor	30					
max. RCF[2)]	24,400					
radius in mm	97					
run-up in sec	73					
run-down in sec, braked	77					
temperature in °C[1)]	+7					

capacity in ml	15	25	94	10	30	50	85	94	250
Ø x L in mm	17x100	24x100	38x102	16x80	26x95	29x107	38x106	38x102	61x122
Cat. No.	**0518**[2)]	**0519**[2)]	**0549**	**-**	**0545**	**0546**	**0547**	**0538**[13)]	**5127**[28)]
lid with bio-containment[5)] incl. **rotor** Cat. No. **5645**									
Cat. No.	**5646**	**5642**	**5644**	**5641**	**5642**	**5643**	**5644**		**-**
boring Ø x L in mm	17.6x83	26x80	38.6x88	16.6x70	26x80	29x90	38.6x88		61.5x109
tubes per rotor	42	18	6	48	18	6	6		6
max. RCF[2)] classic/**cooled**	10,662/**13,319**	10,339/**12,915**	9,855/**12,310**	10,743/**13,420**	10,339/**12,915**	9,693/**12,108**	9,855/**12,310**		11,228/**14,025**
radius in mm	132	128	122	133	128	120	122		139
run-up in sec classic/**cooled**	98/**115**								
run-down in sec, braked classic/**cooled**	105/**120**								
temperature in °C[1)]	+4								

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

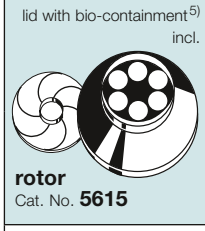
Angle rotor, 6-place

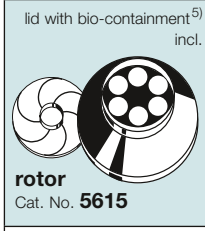


∢45°

n = 11.500 min^{-1} with bio-containment[5)]
max. RCF 18.038

Cat. No. 5615

capacity in ml	1.5	2.0	3	15	25	50	75	94	7.5–8.5	9–10	10	8.5–10	15	50	10
Ø x L in mm	11x38		10 x 60	17x100	24x100	34x100	35x105	38x102	15x92	16x92	15x102	16x100	17x120	29x115	16x80
Cat. No.	**2078**	**0536**	**-**	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0548**	**0549**	**blood/urine tubes**				**0509**	**0513**	**-**
lid with bio-containment[5)] incl. **rotor** Cat. No. **5615**															
Cat. No.	**1449**			**1451**	**1447**	**1463**	**1463**	**-**	**1451**				**1466**	**1454**	**1448**
boring Ø x L in mm	11.4x39			17.5x92	26x85	35x89	35x89	38.2x89.6	17.5x92				17x106	29.8x97	16.5x74
tubes per rotor	24			6				6	6				6		12
max. RCF[2)]	17,299			17,003	16,560	17,743	17,743	18,038	17,003				17,299	17,595	17,003
radius in mm	117			115	112	120	120	122	115				117	119	115
run-up in sec	66														
run-down in sec. braked	68														
temperature in °C[1)]	+4														

capacity in ml	30	50	85	94
Ø x L in mm	26x95	29x107	38x106	38x102
Cat. No.	**0545**	**0546**	**0547**	**0538**[13)]
lid with bio-containment[5)] incl. **rotor** Cat. No. **5615**				
Cat. No.	**1447**	**1446**	**-**	
boring Ø x L in mm	26x85	29x92	38.2x89.6	
tubes per rotor	6	6		
max. RCF[2)]	16,560	17,299	18,038	
radius in mm	112	117	122	
run-up in sec	66			
run-down in sec. braked	68			
temperature in °C[1)]	+4			

[1)] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed. Please be aware that sample material will warm to + 40 °C when centrifuging it for 20 minutes at max. speed in rotor 5655 in the air-cooled ROTANTA 460.

[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, 14-place



∢ 36°

n = 10.000 min^{-1}
max. RCF 17.441

Cat. No. 5655

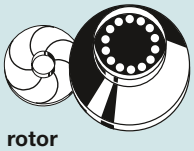
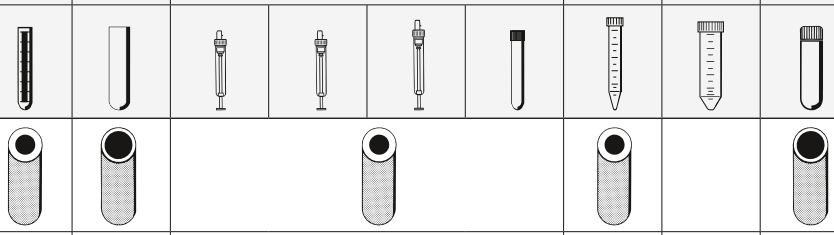
Angle rotor, 6-place, for Schlenk tubes

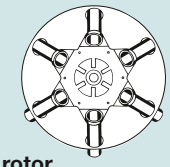
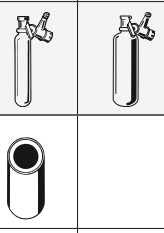


∢ 45°

n = 2.000 min^{-1}
max. RCF 805

Cat. No. 5616[34)]

capacity in ml	15	25	7.5–8.5	9–10	10	8.5–10	15	50	30
Ø x L in mm	17x100	24x100	15x92	16x92	15x102	16x100	17x120	29x115	26x95
Cat. No.	**0518**[2)]	**0519**[2)]	**blood/urine tubes**				**0509**	**0513**	**0545**
lid incl.  **rotor** Cat. No. **5655**									
Cat. No.	**1473**	**1472**	**1473**				**1474**	**-**	**1472**
boring Ø x L in mm	17.5x91.5	26x85	17.5x91.5				17x107	30x100	26x85
tubes per rotor	14								
max. RCF[2)]	16.658	16.211	16.658				16.994	17.441	16.211
radius in mm	149	145	149				152	156	145
run-up in sec	145								
run-down in sec. braked	108								
temperature in °C[1)]	+16								

capacity in ml	25	50
Ø x L in mm	24 x 146.5	38 x 148.5
Cat. No.	**0532**	**0533**
 **rotor** Cat. No. **5616**[34)]		
Cat. No.	**4317**	**-**
boring Ø x L in mm	25x86	38.5x89.9
tubes per rotor	6	
max. RCF	783	805
radius in mm	175	180
run-up in sec	17	
run-down in sec, braked	21	
temperature in °C[1)]	-14	

[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 106 mm.
[34)] In the heatable models 5660-50, 5660-51, 5660-70, 5670-50 and 5675-50, rotor 5616 may only be used up to a maximum of + 40 °C.

Swing-out rotor, 4-place, for ASTM tubes



∢90°

n = 2,000 min^{-1}
max. RCF 984

Cat. No. (without carriers) **4474**

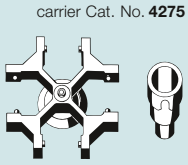
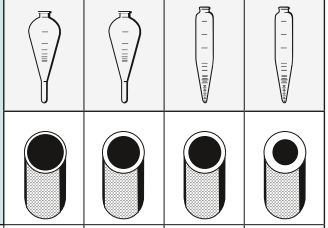
Swing-out rotor, 6-place, for chrome bath tubes



∢90°

n = 2,000 min^{-1}
max. RCF 917

Cat. No. 4619[34)]

capacity in ml	50	100	100	100
Ø x L in mm	45 x 130	58 x 161	44 x 168	37 x 200
Cat. No.	**-**[2)]	**0528**[2)]	**-**[2)]	**0531**[2)]
carrier Cat. No. **4275**				
rotor Cat. No. **4474**				
Cat. No.	**4278-A**	**0771**	**4277**	**4276**
boring Ø x L in mm	-			
tubes per rotor	4			
max. RCF[2)]	984		961	
radius in mm	220		215	
run-up in sec	17			
run-down in sec, braked	20			
temperature in °C[1)]	-8			

capacity in ml	30
Ø x L in mm	24 x 151
Cat. No.	**0529/0508**[6)]
	
rotor Cat. No. **4619**[34)]	
Cat. No.	**-**
boring Ø x L in mm	-
tubes per rotor	6
max. RCF	917
radius in mm	205
run-up in sec	17
run-down in sec, braked	21
temperature in °C[1)]	-11

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000, for ASTM tubes it is 700.
6) The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.
34) In the heatable models 5660-50, 5660-51, 5660-70, 5670-50 and 5675-50, rotor 4619 may only be used up to a maximum of + 40 °C.

Floorstanding Centrifuges

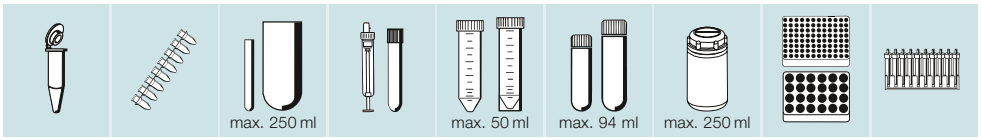


ROTANTA 460 Robotic

ROTIXA 50 S/50 RS

ROTO SILENTA 630 RS

ROTANTA 460 Robotic





Faster – automatically

The ROTANTA 460 Robotic models are refrigerated centrifuges with PC control and rotor positioning. They are ideal for use wherever sample processing can be automated. Especially in genetic and pharmaceutical research, these centrifuges can significantly contribute to rationalisation of routine tasks.

TECHNOLOGY

	ROTANTA 460 Robotic	
Floorstanding centrifuge, without rotor	**cooled**	
	rear hatch	**front hatch**
Power supply	Can be operated at different voltages. Units are fitted with a transformer.	
Frequency	50–60 Hz	
Consumption	max. 1,800 VA	
Emission, Immunity	EN / IEC 61326-1, class B / FCC class A	
Max. capacity *)	4 x 250 ml	
Max. RPM (speed)	6,200 min^{-1}	
Max. RCF	6,446	
Permissible density	1.2 kg / dm^3	
Dimensions (H x W x D)	684 x 554 x 697 mm	
Weight	approx.159 kg	
Temperature control, infinitely variable	from -20 to +40 °C	
Cat. No.	**5680-RS232**	**5680-10-RS232**

*) Basically, the ROTANTA 460 accepts a max. capacity of 4 x 750 ml. This capacity, however, requires accessories that are of only limited suitability for robotic applications. Details on request.

Selected standard accessories



Swing-out rotor, 4-place
illustrated with carriers 5632-R
n = 4,600 min^{-1}, max. RCF = 4,258

Cat. No. 5699-R (without carriers)



Swing-out rotor, 2-place
illustrated with carriers 5631-R
n = 6,200 min^{-1}, max. RCF = 6,446

Cat. No. 5622 (without carriers)



Swing-out rotor, 4-place
illustrated with carriers 4463-R
n = 4,500 min^{-1}, max. RCF = 4,460

Cat. No. 4444 (without carriers)



Swing-out rotor, 4-place
illustrated with carriers 4486-R
n = 4,500 min^{-1}, max. RCF = 4,392

Cat. No. 4444 (without carriers)

If you are looking for a benchtop solution, the MIKRO 220 Robotic and the ROTINA 380 Robotic are particularly suitable.

Solutions specific to customer needs

ROTANTA 460 Robotic centrifuges can be integrated in any workstation. However, automated applications require customized solutions. In addition to our standard range of accessories we therefore manufacture special carriers and inserts that can be tailored to your robot.

Please advise us of your requirements!

Examples of special fabrications

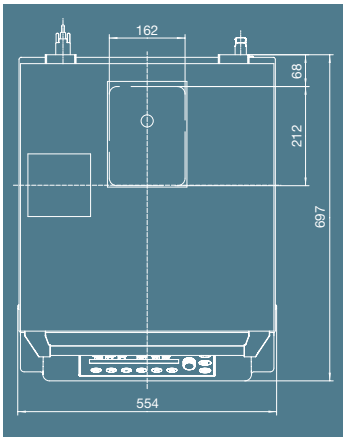


Adapter in carrier 4486-R
for accommodating different tubes, with adapted grip rod



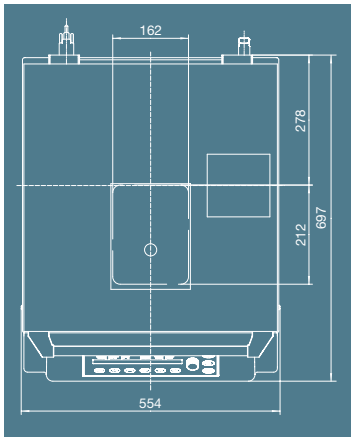
Adapter in carrier 4465-R
for accommodating plates

Rear access of the robotic arm



Cat. No. 5680-RS232

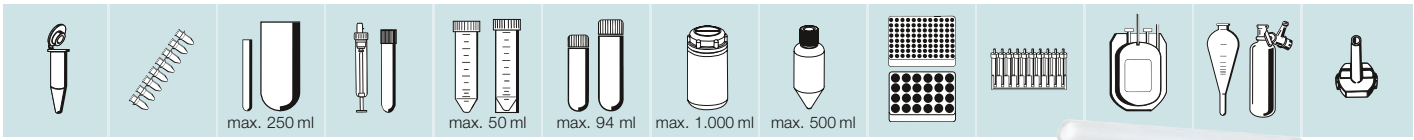
Front access of the robotic arm



Cat. No. 5680-10-RS232

A sliding hatch in the lid opens before and after every centrifuging cycle and allows loading and unloading of the rotor with a robotic arm. Two lid versions are available as standard equipment, depending on whether robotic access is at the front or the back of the lid. By means of the dimensioned drawings, the location of the centrifuge can be defined precisely before delivery.

ROTIXA 50 S/50 RS



Best for high sample throughput

ROTIXA has become a synonym for high sample throughput. This is why the ROTIXA models are the centrifuges of choice for medical routine laboratories, as well as research and quality control laboratories in the life science industry. ROTIXA centrifuges feature the extended S control panel.



TECHNOLOGY

	ROTIXA 50 S	ROTIXA 50 RS >)
Floorstanding centrifuge, without rotor	**classic**	**cooled**
Power supply *)	208 – 240 V 1~	220 – 240 V 1~
Frequency	50 – 60 Hz	
Consumption	2,700 VA	3,680 VA
Emission, Immunity	EN / IEC 61326-1, class B	
Max. capacity	4 x 1,000 ml	
Max. RPM (speed)	4,500 min^{-1}	
Max. RCF	5,252	
Running time	1 sec – 999 min : 59 sec, ∞ continuous run	
Dimensions (H x W x D)	1,030 x 650 x 720 mm	
Weight	approx. 115 kg	approx. 172 kg
Refrigeration		
Temperature control, infinitely variable	-	from - 20 to + 40 °C
Cat. No.	**4905**	**4910**

*) Other voltages on request.
>) For a list of further versions of this model, please refer to page 12.

Swing-out rotor, 4-place

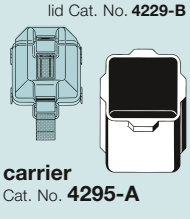


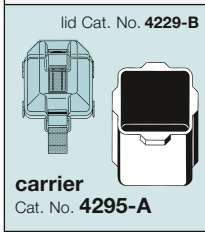
∢90°

n = 4,500 min^{-1}
max. RCF 5,252

illustrated with carriers 4295-A and lids 4229-B

Cat. No. (without carriers) **4294**

capacity in ml	0.8	1.5	2.0	4	5	6	7	9	12	15	25	50	94	100
Ø x L in mm	8x45	11x38		10x88	12x75	12x82	12x100	14x100	16x101	17x100	24x100	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 Cat. No. **4229-B** carrier Cat. No. **4295-A**														
Cat. No.	**4226**	**4225**		**4224**	**4213-93**	**4213**		**4223**		**4214**	**4215**	**4216**	**4218**	
boring Ø x L in mm	8.2x36	11.2x46		11x74	12.5x36	12.5x74		16x74		17.5x74	26x74	35x74	41.5x74	
tubes per rotor	312	336		252	192	192		100		120	44	24	16	
max. RCF[2] upper/lower	4,777	3,690/4,867		4,777										
radius in mm upper/lower	211	163/215		211										
run-up in sec	112													
run-down in sec, braked	105													
temperature in °C[1]	+7													

capacity in ml	2.6–3.4	2.7–3	4–5.5	4.5–5	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8	8.5–10	15	50	12
Ø x L in mm	13x65	11x66	15x75	11x92	15x92	16x92	15x102	13x75	13x100	16x75	16x125	16x100	17x120	29x115	17x100
Cat. No.	**blood collection/urine tubes**												**0509**	**0513**	**-**
lid Cat. No. **4229-B** carrier Cat. No. **4295-A**															
Cat. No.	**4222–93**	**4213–93**	**4214–93**	**4213**	**4214**	**4220**	**4214**	**4222–93**	**4222**	**4214-93**	**4223**	**4214**	**4232**	**4245-A**	**4220**
boring Ø x L in mm	13.2x36	12.5x36	17.5x36	12.5x74	17.5x74	17.5x74	17.5x74	13.2x36	13.2x74	17.5x36	16x74	17.5x74	17x70	30x70	17.5x74
tubes per rotor	120	192	120	192	120	64	120	120	120	120	100	120	92	32	64
max. RCF[2]	4,777												4,958		4,777
radius in mm	211												219		211
run-up in sec	112														
run-down in sec, braked	105														
temperature in °C[1]	+7														

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 4295-A cannot be closed with lid 4229-B.

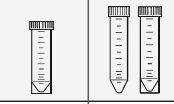
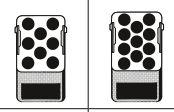


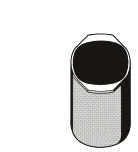
illustrated with carriers 4293

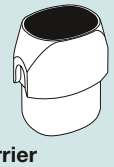


illustrated with carriers 4298-A

Swing-out rotor Cat. No. (without carriers) 4294

capacity in ml	25	30	50	85	94	250	290	600	650	750	750	250	500
Ø x L in mm	25x90	25x110	29x115	38x106	38x102	61x122	62x137	93x134	97x139	97x152	96x135	60x162	96x147
Cat. No.	**-**	**-**	**-**	**0547**	**0538**[13)]	**5127**[28)]	-	**0551**[28)]	**0554**[28)]	**0512**[28)]	**4234-A**	**Corning**	**Corning**
lid Cat. No. **4229-B**												[3)]	
carrier Cat. No. **4295-A**													+ 4449
Cat. No.	**4241**	**4215**	**4249**	**4218**		**4238**		**4233**	**4258**			**6322**	**4258**
boring Ø x L in mm	26x73	26x74	30x96	41.5x74		62x90		94x105	97.5x105			61x125	97.5x105
tubes per rotor	32	44	24	16		4		4	4			4	4
max. RCF[2)]	4,777	4,777	4,867	4,777				4,958	4,958			4,777	4,958
radius in mm	211	211	215	211				219	219			211	219
run-up in sec	112												
run-down in sec, braked	105												
temperature in °C[1)]	+7												

capacity in ml	450	500
blood bags, triplicate[32)]		
Cat. No.	**-**	**-**
carrier Cat. No. **4293**		
Cat. No.	**4244-A**	
boring Ø x L in mm	-	
blood bag systems per rotor	4	
max. RCF	5,252	
radius in mm	232	
run-up in sec	108	
run-down in sec, braked	103	
temperature in °C[1)]	+6	

capacity in ml	450	500	750	1,000
blood bags[32)]	**quadruplicate**		**single**	**single**
Cat. No.	**-**			**-**
carrier Cat. No. **4298-A**				
Cat. No.	**4237-A**			**-**
boring Ø x L in mm	-			-
blood bag systems per rotor	4			4
max. RCF	5,003			5,071
radius in mm	221			224
run-up in sec	108			
run-down in sec, braked	103			
temperature in °C[1)]	+6			

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 4295-A cannot be closed with lid 4229-B.



Carrier 4280, illustrated with Deep Well Plates and removal aid 4279

Swing-out rotor 4294

D x W x H in mm	86 x 128 x 15	86 x 128 x 17.5	86 x 128 x 22	86 x 128 x 44.5	86 x 128 x 46	86 x 128 x 83	82 x 124 x 20	-
Cat. No.	**MTP**		**CP**	**DWP**	**MS**	**QP**	**PCR-Platte, 96-fach**	**PCR-Strips**
lid with bio-containment[5] Cat. No. **5629** **carrier** Cat. No. **4280**								
Cat. No.	**4279**						**1485**	
boring Ø x L in mm	-							
plates/strips per rotor	24		20	8	4	4	4	48 x 8
max. RCF[2]	4,573							
radius in mm	202							
run-up in sec	112							
run-down in sec, braked	100							
temperature in °C[1]	+9							

D x W x H in mm	86 x 128 x 15	86 x 128 x 17.5	86 x 128 x 22	86 x 128 x 44.5	86 x 128 x 46	18 x 164 x 46	82 x 124 x 20	-
Cat. No.	**MTP**		**CP**	**DWP**	**MS**	**LKB racks**	**PCR plate, 96 wells**	**PCR strips**
carrier Cat. No. **4299-N**								
Cat. No.	**4236**					**-**	**4236 + 1485**	
boring Ø x L in mm	-							
plates/racks per rotor	16		8	4		16	4	48 x 8
max. RCF[2]	3,939					4,120	3,939	
radius in mm	174					182	174	
run-up in sec	108							
run-down in sec, braked	103							
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 106 mm.
[28] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
[32] We recommend the use of the refrigerated ROTIXA 50 RS to ensure that the temperature of the blood is maintained during centrifugation.



Carrier 4254, illustrated with
bucket 4255 with lid

Swing-out rotor 4294

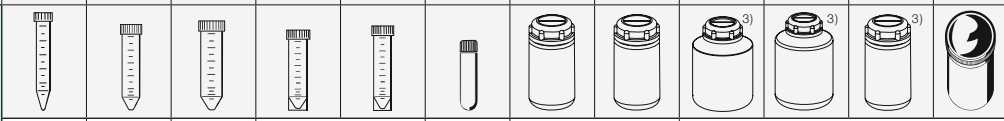
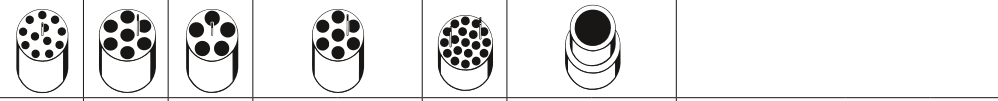
D x W x H in mm	20 x 118 x 70
Hitachi Racks	
Cat. No.	**-**
carrier Cat. No. **4257**	
Cat. No.	**4259-A** [26]
boring Ø x L in mm	-
racks per rotor	20
max. RCF [2]	4,867
radius in mm	215
run-up in sec	108
run-down in sec, braked	103
temperature in °C [1]	+6

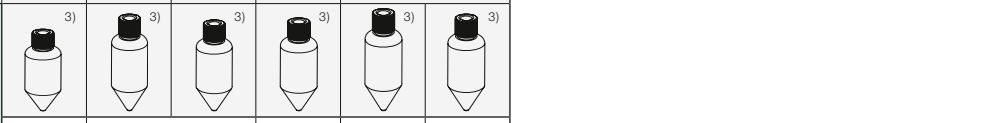
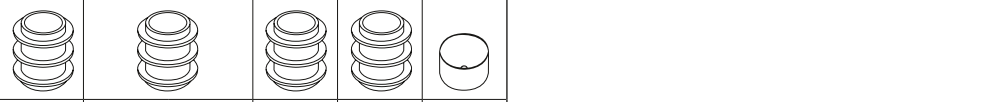
capacity in ml	5	7	9	10	15	25	50	100
Ø x L in mm	12x75	12x100	14x100	17x70	17x100	24x100	34x100	44x100
Cat. No.	**0553** [2]	**0578** [2]	**0500** [2]	**2079**	**0518** [2]	**0519** [2]	**0521** [2]	**0526** [2]
bucket Cat. No. **4255**								
carrier Cat. No. **4254**						+ 0726		
Cat. No.	**4433**		**4434**			**4438**	**4439**	**4442**
boring Ø x L in mm	13x58		17.5x53			26x72	36x79	45x78
tubes per rotor	120		76			28	16	8
max. RCF [2]	4,618		4,777			4,505	4,573	4,551
radius in mm	204		211			199	202	201
run-up in sec	108							
run-down in sec, braked	103							
temperature in °C [1]	+6							

capacity in ml	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	8.5–10
Ø x L in mm	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x75	16x125	16x100
Cat. No.	**blood collection/urine tubes**												
bucket Cat. No. **4255**								[3]				[3]	
carrier Cat. No. **4254**													
Cat. No.	**4435**	**4433**	**4434**	**4433**	**4435**	**4434**			**4435**		**4434**		
boring Ø x L in mm	13.5x58	13x58	17.5x53	13x58	13.5x58	17.5x53			13.5x58		17.5x53		
tubes per rotor	84	120	76	120	84	76			84		76		
max. RCF [2]	4,618		4,777	4,618		4,777			4,618		4,777		
radius in mm	204		211	204		211			204		211		
run-up in sec	108												
run-down in sec, braked	103												
temperature in °C [1]	+6												

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[3] When using these tubes, bucket 4255 cannot be closed with its lid.

Swing-out rotor 4294

capacity in ml	15	30	50	25	30	10	250	290	650	750	1,000	1,000
Ø x L in mm	17 x 120	25 x 110	29 x 115	25 x 90	25 x 110	16 x 80	61 x 122	62 x 137	97 x 139	97 x 152	96 x 176	98 x 138
Cat. No.	**0509**	**-**	**0513**	**-**	**-**	**-**	**5127**[28]	**-**[28]	**0554**[28]	**0512**[28]	**4239**[28]	**4255**
bucket Cat. No. **4255**												
carrier Cat. No. **4254**												
Cat. No.	**4437**	**4438**	**4441**	**4438**		**4434**	**4443**		**-**			
boring Ø x L in mm	17 x 88	26 x 72	30 x 87	26 x 72		17.5 x 53	62 x 92		98 x 138			-
tubes per rotor	48	28	20	28		76	4		4			
max. RCF[2]	4,890	4,709	4,890	4,709		4,777	5,003		5,184			
radius in mm	216	208	216	208		211	221		229			
run-up in sec	108											
run-down in sec, braked	103											
temperature in °C[1]	+6											

capacity in ml	175	175	200	225	250	500
Ø x L in mm	61 x 118	62 x 144	60 x 130	61 x 137	60 x 162	96 x 147
Cat. No.	**Falcon®**	**Nalgene®**	**Nunc®**	**Falcon®**	**Corning**	
bucket Cat. No. **4255**						
carrier Cat. No. **4254**						
Cat. No.	**4440**	**4430**		**4440**	**4430**	**4449**
boring Ø x L in mm	-					
tubes per rotor	4					
max. RCF[2]	5,184					
radius in mm	229					
run-up in sec	108					
run-down in sec, braked	103					
temperature in °C[1]	+6					

[26] When using removal frame 4259-A, please take the insert out of carrier 4257.
[28] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

Swing-out rotor, 6-place

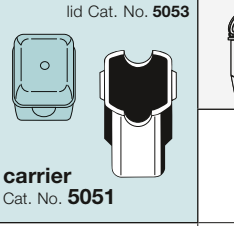


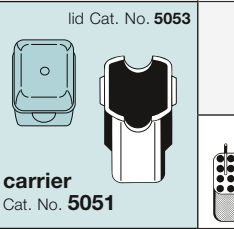
illustrated with carriers 5051 and lids 5053

⊀ 90°

n = 4,000 min^{-1}
max. RCF 3,631

Cat. No. (without carriers) **4296**

capacity in ml	1.5	2.0	1.5	2.0	5	6	7	9	15	25	50	100	100	two-tier frame for cyto accessories
Ø x L in mm	11x38		11x38		12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115	
Cat. No.	**-**	**-**	**2078**	**0536**	**0553**[2)]	**0501**[2)]	**0578**[2)]	**0500**[2)]	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0526**[2)]	**0523**[2)]	**cyto chambers**[23)]
lid Cat. No. **5053** / **carrier** Cat. No. **5051**														
Cat. No.	**5257**		**5281**		**5227**		**5247**[18)]	**5264**	**5248**[18)]	**5242**	**5243**	**5262**	**5249**	**5280**
boring Ø x L in mm	12.5x42		11.5x50		12.5x42		12.5x86	16x50	17.5x86	26x86	36x86	45.5x86	42x86	-
tubes per rotor	240		96		120		120	72	72	30	12	6		12
max. RCF[2)] upper/lower	2,486/3,363		3,363		3,309		3,291	3,309	3,291			3,291		2,290/3,274
radius in mm upper/lower	139/188		188		185		184	185	184			184		128/183
run-up in sec	33													
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	10	1.6–5	4–7	4–7	8.5–10	15	50
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x75	16x100	17x120	29x115
Cat. No.	**blood collection/urine tubes**													**0509**	**0513**
lid Cat. No. **5053** / **carrier** Cat. No. **5051**															
Cat. No.	**5267**	**5268**	**5227**	**5264**	**5227**	**5268**	**5264**	**5258**		**5268**		**5264**	**5248**	**6306**	**5259**
boring Ø x L in mm	11x44	13.5x52	12.5x42	16x50	12.5x42	13.5x52	16x50	17.6x86		13.5x52		16x50	17.5x86	17x90	30x86
tubes per rotor	120	72	120	72	120	72		66		72				42	12
max. RCF[2)]	3,274	3,345	3,309	3,309	3,309	3,345	3,309	3,291		3,345		3,309	3,291	3,434	3,363
radius in mm	183	187	185	185	185	187	185	184		187		185	184	192	188
run-up in sec	33														
run-down in sec, braked	38														
temperature in °C[1)]	-4														

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 5051 cannot be closed with lid 5053.
5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

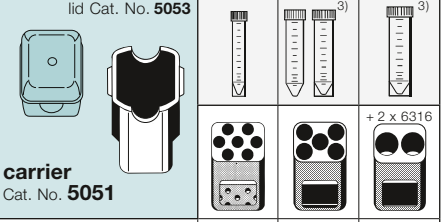


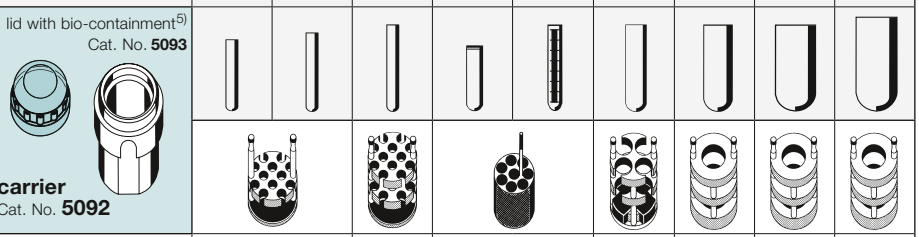
illustrated with carriers 5051

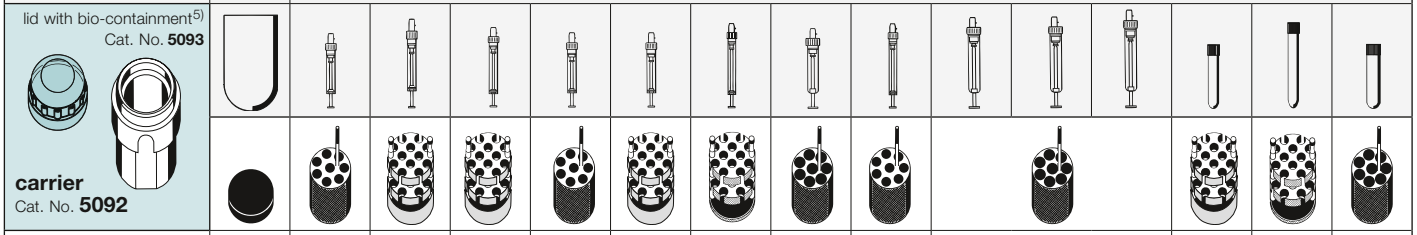


illustrated with carriers 5092
and lids 5093 with bio-containment[5)]

Swing-out rotor Cat. No. (without carriers) 4296

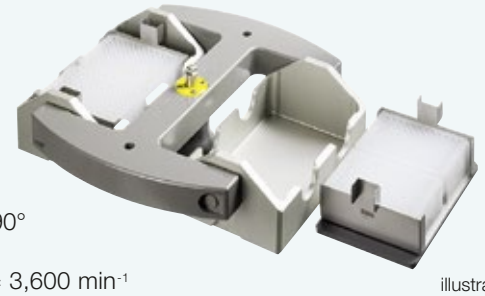
capacity in ml	12	30	50
Ø x L in mm	17x100	25x110	29x115
Cat. No.	-		
lid Cat. No. **5053** / **carrier** Cat. No. **5051**			
Cat. No.	**6306**	**5266**	**5243**
boring Ø x L in mm	17x90	26x86	36x86
tubes per rotor	42	30	12
max. RCF[2)]	3,434	3,291	
radius in mm	192	184	
run-up in sec	33		
run-down in sec, braked	38		
temperature in °C[1)]	-4		

capacity in ml	5	6	7	10	15	25	50	100	100
Ø x L in mm	12x75	12x82	12x100	17x70	17x100	24x100	34x100	44x100	40x115
Cat. No.	**0553**[2)]	**0501**[2)]	**0578**[2)]	**2079**	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0526**[2)]	**0523**[2)]
lid with bio-containment[5)] Cat. No. **5093** / **carrier** Cat. No. **5092**									
Cat. No.	**5128**		**5120**	**5136**		**5122**	**5124**	**5125**	**5126**
boring Ø x L in mm	12.8x45		12.8x82	17.5x60.7		25.5x82	35.5x82,5	45.5x85	42x85
tubes per rotor	72		72	48		24	6		
max. RCF[2)]	3,542		3,542	3,488		3,434	3,488		
radius in mm	198		198	195		192	195		
run-up in sec	33								
run-down in sec, braked	38								
temperature in °C[1)]	-6								

capacity in ml	250	1.1–1.4	1.1–1.4	2.6–3.4	2.7–3	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	65x115	8x66	6x88	13x65	11x66	11x66	11x92	15x75	13x90	15x92	16x92	15x102	13x75	13x100	16x75
Cat. No.	**0530**[2)]	**blood collection/urine tubes**													
lid with bio-containment[5)] Cat. No. **5093** / **carrier** Cat. No. **5092**															
Cat. No.	**1791**	**5137**	**5138**	**5138**	**5137**	**5138**	**5120**	**5136**	**5137**	**5136**			**5138**	**5120**	**5136**
boring Ø x L in mm	66 x 103	13.5 x 60.7	12.8 x 54.5	12.8 x 54.5	13.5 x 60.7	12.8 x 54.5	12.8 x 82	17.5 x 60.7	13.5 x 60.7	17.5 x 60.7			12.8 x 54.5	12.8 x 82	17.5 x 60.7
tubes per rotor	6	48	72		48	72	72	48		48			72	72	48
max. RCF[2)]	3,631	3,488	3,077		3,488	3,077	3,542	3,488		3,488			3,077	3,542	3,488
radius in mm	203	195	172		195	172	198	195		195			172	198	195
run-up in sec	33														
run-down in sec, braked	38														
temperature in °C[1)]	-6														

[18)] With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.
[23)] Please ask for our detailed cyto brochure.

Swing-out rotor, 2-place



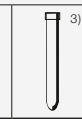
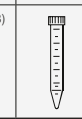
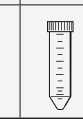
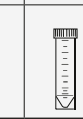
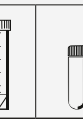
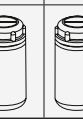
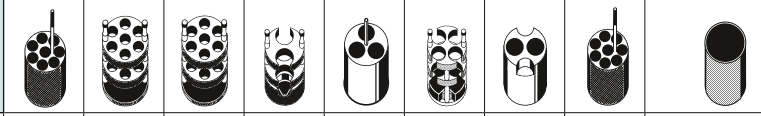
∢90°

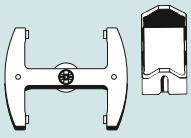
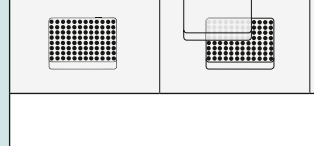
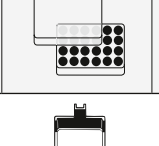
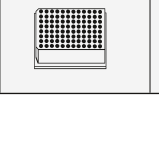
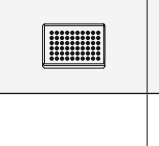
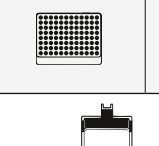
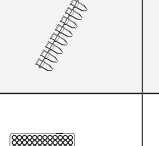
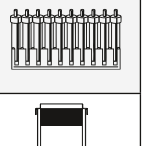
n = 3,600 min^{-1}
max. RCF 2,652

illustrated with carriers 4285-A, adapters 4281 and Deep Well Plates

Swing-out rotor 4296

Cat. No. (without carriers) **4282**

capacity in ml	8.5–10	8	15	50	25	30	50	10	250	290
Ø x L in mm	16x100	16x125	17x120	29x115	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	**blood/urine tubes**		**0509**	**0513**	**-**				**5127**[28]	**-**[28]
lid with bio-containment[5] Cat. No. **5093**		 [3]								 [3]
carrier Cat. No. **5092**										
Cat. No.	**5136**	**5121**[4]	**5129**	**5123**	**5134**	**5122**	**5135**	**5136**	**6319**	
boring Ø x L in mm	17.5x60.7	17.5x82	17x85	30x85	26x73	25.5x82	30x99	17.5x60.7	66x103	
tubes per rotor	48	42	42	12	18	24	12	48	6	
max. RCF[2]	3,488	3,542	3,631	3,631	3,363	3,434	3,560	3,488	3,631	
radius in mm	195	198	203	203	188	192	199	195	203	
run-up in sec	33									
run-down in sec, braked	38									
temperature in °C[1]	-6									

D x W x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	59x84x11	82x124x20	-	20x176x41
Cat. No.	**MTP**		**CP**	**DWP**	**Microtest plate (Terasaki)**	**PCR plate, 96-place**	**PCR strips**	**Olympus racks**
carrier Cat. No. **4285-A**								
rotor Cat. No. **4282**								
Cat. No.	**4281**					**4281 + 1485**		**4283-B**
boring Ø x L in mm	-							
plates/racks per rotor	16	16	12	4	4	4	48 x 8	12
max. RCF[2]	2,434					2,434		2,652
radius in mm	168					168		183
run-up in sec	87							
run-down in sec, braked	87							
temperature in °C[1]	-8							

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for ASTM tubes annotated with footnote [2] is 700.
[3] When using these tubes, carrier 5092 cannot be closed with lid 5093.

Swing-out rotor, 4-place, for ASTM tubes



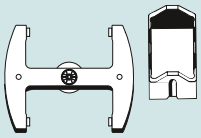
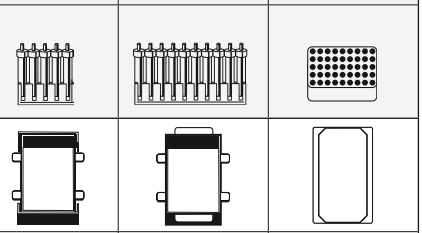


∢ 90°

n = 2,000 min^{-1}
max. RCF 984

illustrated with carriers 4275

Cat. No. (without carriers) **4274**

D x W x H in mm	20 x 118 x 70	25 x 193 x 60	110 x 210 x 44
Cat. No.	**Hitachi racks**	**Behring racks**	**rack, 50-place**
carrier Cat. No. **4285-A**  **rotor** Cat. No. **4282**			
Cat. No.	**4287-B**	**4288-A**	**4263-A**
boring Ø x L in mm	-		
plates/racks per rotor	20	10	2
max. RCF[2)]	2,652	2,652	2,579
radius in mm	183	183	178
run-up in sec	87		
run-down in sec, braked	87		
temperature in °C[1)]	-8		

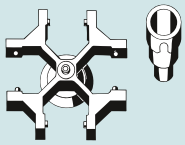
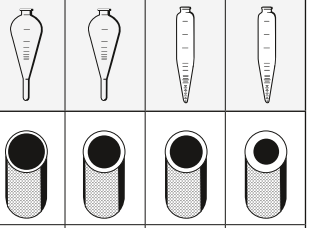
Angle rotor, 6-place, for Schlenk tubes



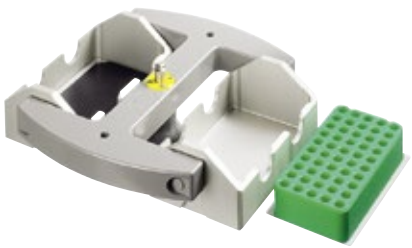
∢ 45°

n = 2,000 min^{-1}
max. RCF 805

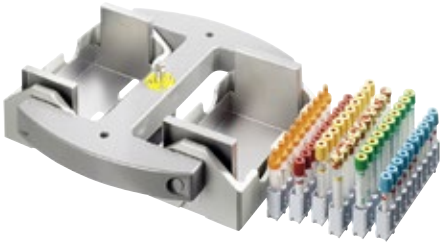
Cat. No. 4316[34)]

capacity in ml	50	100	100	100
Ø x L in mm	45 x 130	58 x 161	44 x 168	37 x 200
Cat. No.	**-**	**0528**[2)]	**-**	**0531**[2)]
carrier Cat. No. **4275**  **rotor** Cat. No. **4274**				
Cat. No.	**4278-A**	**0771**	**4277**	**4276**
boring Ø x L in mm	-			
tubes per rotor	4			
max. RCF[2)]	984		961	
radius in mm	220		215	
run-up in sec	18			
run-down in sec, braked	23			
temperature in °C[1)]	-8			

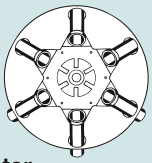
rotor 4282:



illustrated with carriers 4285-A,
inserts 4263-A and rack, 50-place



illustrated with carriers 4285-A,
adapters 4283-B and Olympus racks

capacity in ml	25	50
Cat. No.	**0532**	**0533**
 **rotor** Cat. No. **4316**[34)]		
Cat. No.	**4317**	**-**
boring Ø x L in mm	25 x 86	-
tubes per rotor	6	
max. RCF[2)]	783	805
radius in mm	175	180
run-up in sec	48	
run-down in sec, braked	48	
temperature in °C[1)]	-12	

4) Please remove the inserts.
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.
34) In heating / cooling model 4910-50 rotor 4316 can only be used up to a maximum of + 40 °C.

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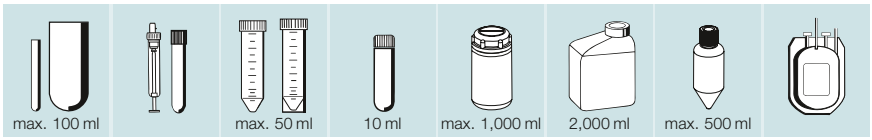


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Variable, extensive, adaptable
Our comprehensive range of accessories includes a solution for almost every conceivable application. If you have special requirements that cannot be met with standard accessories, we can develop custom solutions in very short order.

ROTO SILENTA 630 RS

MEDICAL DEVICE 93/42/EEC





Blood bags and much more

Now even safer and with smoother, quieter operation. Thanks to its improved running performance, the ROTO SILENTA 630 RS guarantees best separating results with blood bags, bottles up to 2,000 ml, tubes and blood collection tubes.
Every commercial blood bag system can be accommodated. Loading the carriers and inserts is convenient and easy. Wind shielding the rotor is not necessary.

TECHNOLOGY

	ROTO SILENTA 630 RS[>)]
Floorstanding centrifuge, without rotor	**cooled**
Power supply[*)]	400 V 3 ~ + N
Frequency	50 – 60 Hz
Consumption	9,700 VA
Emission, Immunity	EN/IEC 61326-1, class B

Max. capacity	6 x 2,000 ml
Max. RPM (speed)	4,500 min^{-1}
max. RCF	6,520
Running time	1 sec – 999 min : 59 sec, ∞ continuous run

Dimensions (H x W x D)	973 x 813 x 1,015 mm
Weight	approx. 355 kg

Refrigeration	
Temperature control, infinitely variable	from - 20 to + 40 °C

Cat. No.	**5005**

*) Other voltages on request.
>) For a list of further versions of this model, please refer to page 12.

Swing-out rotor, 6-place

In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.

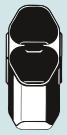
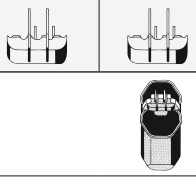


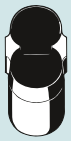
∢ 90°

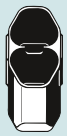
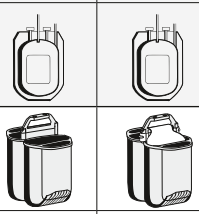
n = 4,500 min^{-1}
max. RCF 6,520

illustrated with carriers 4591-A and inserts 4592-B

Cat. No. (without carriers) **4176**

capacity in ml	500	500	500	500	500	750
holding system for blood bags	**Baxter/ Fenwal**	**Fresenius**	**Terumo**[10)]	**-**	**-**	**-**
blood bags	**quadruplicate**	**quadruplicate**	**quadruplicate**	**quadruplicate**	**quadruplicate**	**single**
Cat. No.	**4526**[27)]	**4527**[27)]	**4528**[27)]	**-**	**-**	
carrier Cat. No. **4524-A**						
Cat. No.	**4525-A**			**4529**[30)]**-A0,-AM,-AU**	**4592-B**	
boring Ø x L in mm	-					
blood bag systems per rotor	12 I 8					
max. RCF	6,498 I 5,683					
max. RCF[30)]	1,000 I 1,000					
radius in mm	287 I 251					
run-up in sec	125 I 125					
run-down in sec, braked	197 I 197					
temperature in °C[1)]	+16 I +10					

capacity in ml	450
blood bags, quadruplicate	
Cat. No.	**-**
carrier Cat. No. **4546-A**	  
Cat. No.	**4559-A**
boring Ø x L in mm	-
blood bag systems per rotor	12 I 8
max. RCF	6,271 I 5,479
radius in mm	277 I 242
run-up in sec	125 I 125
run-down in sec, braked	197 I 197
temperature in °C[1)]	+13 I 0

capacity in ml	450	450	500	750
blood bags	**triplicate**	**triplicate**	**quadruplicate**	**single**
Cat. No.	**-**	**-**	**-**	
carrier Cat. No. **4591-A**	 			
Cat. No.	**4598**	**4598-P**	**4592-B**	
boring Ø x L in mm	-			
blood bag systems per rotor	12 I 8			
max. RCF	6.498 I 5.705			
radius in mm	287 I 252			
run-up in sec	125 I 125			
run-down in sec, braked	197 I 197			
temperature in °C[1)]	+16 I +10			



carrier 4524-A with insert 4525-A

insert 4529-A in 4529-AM version (hooks for suspending the blood bags are fixed in middle position)

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
10) As well as Macopharma and Kawasumi.
27) Please order by pairs.

Swing-out rotor, 4-place

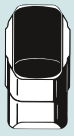


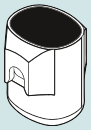
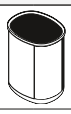
∢ 90°

n = 4,500 min^{-1}
max. RCF 5,705

illustrated with carriers 4591-A and inserts 4592-B

Cat. No. (without carriers) **4174**

capacity in ml	100	2.000
	thrombocyte plate	180x150x100
Cat. No.	**4597**	**0550**
 **carrier** Cat. No. **4595-B** [35]	  for 4 plates	
Cat. No.	**4596-B**	**-**
boring Ø x L in mm	-	-
qty. per rotor	24 I 16	6 I 4
max. RCF	3,821 I 3,328	3,848 I 3,369
max. RCF[36]	1,000 I 1,000	- I -
radius in mm	279 I 243	281 I 246
run-up in sec	125 I 125	29 I 95
run-down in sec, braked	197 I 197	41 I 131
temperature in °C[1]	+16 I -8	+16 I -8

capacity in ml	500	750	1,000
blood bags	**quadrupli-cate**	**single**	**single**
Cat. No.	**-**		**-**
 **carrier** Cat. No. **4523-A**	 		
Cat. No.	**4516-A**		**-**
boring Ø x L in mm	-		-
blood bag systems per rotor	6 I 4		6 I 4
max. RCF	6,452 I 5,637		6,520 I 5,705
radius in mm	285 I 249		288 I 252
run-up in sec	125 I 125		
run-down in sec, braked	197 I 197		
temperature in °C[1]	+9 I +3		



Balancing inserts
Cat. No.
4584-A (for insert 4559-A),
4587-A (for insert 4592-B) and
4589-A (for insert 4516-A)

In case there are not enough blood bag systems to occupy every carrier of the rotor, empty carriers can be filled with balancing inserts. Taring weights supplied with the inserts may be used for fine balancing.



carrier 4591-A
with insert 4592-B



carrier 4595-B, insert 4596-A
and 4 thrombocyte plates 4597



carrier 4523-A
with insert 4516-A



carrier 4546-A
with insert 4559-A

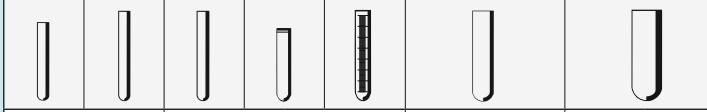
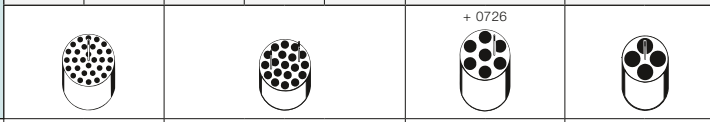
30) When using inserts 4529-AO, 4529-AM, 4529-AU at lower speeds (e.g. for processing thrombocytes), the blood bags may be hung up to avoid accumulation of erythrocytes. Hooks at three different heights (4529-AO upper position, 4529-AM middle position, 4529-AU low position) allow to meet specific customer requirements. Suspended blood bags, however, may not be exposed to a RCF exceeding 1,000.
35) Adapter for accommodating sample tubes and blood collection tubes in carrier 4595-B on request.
36) The max. permissible RCF for centrifuging thromboplates 4597 is 1,000, for centrifuging bottles 0550 it is RCF 3,848.

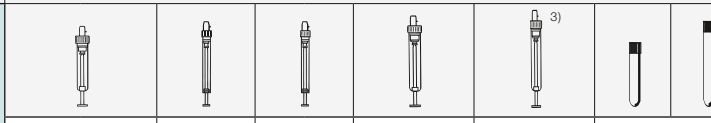
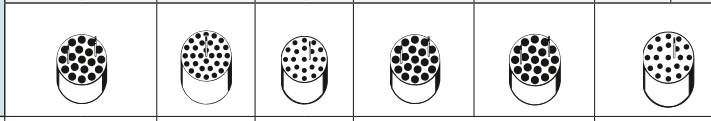
In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



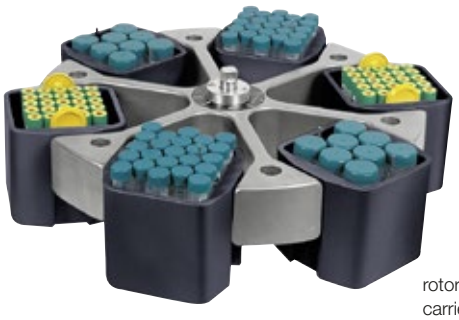
carrier 4579-A, illustrated with bucket 4255 with lid

Swing-out rotors 4176 / 4174

capacity in ml	5	7	9	10	15	25	50	100	2.6–3.4	2.7–3
Ø x L in mm	12 x 75	12 x 100	14 x 100	17 x 70	17 x 100	24 x 100	34 x 100	44 x 100	13 x 65	11 x 66
Cat. No.	**0553**[2]	**0578**[2]	**0500**[2]	**2079**	**0518**[2]	**0519**[2]	**0521**[2]	**0526**[2]	**blood collection tubes**	
bucket Cat. No. **4255**										
carrier Cat. No. **4579-A**						+ 0726				
Cat. No.	**4433**		**4434**			**4438**	**4439**	**4442**	**4435**	**4433**
boring Ø x L in mm	13 x 58		17.5 x 53			26 x 72	36 x 79	45 x 78	13.5 x 58	13 x 58
tubes per rotor	180 | 120		114 | 76			42 | 28	24 | 16	12 | 8	126 | 84	180 | 120
max. RCF[2]	5,750 | 4,935		5,886 | 5,094			5,615 | 4,845	5,705 | 4,890	5,683 | 4,867	5,750 | 4,935	5,750 | 4,935
radius in mm	254 | 218		260 | 225			248 | 214	252 | 216	251 | 215	254 | 218	254 | 218
run-up in sec	125 | 125									
run-down in sec, braked	197 | 197									
temperature in °C[1]	+4 | -11									

capacity in ml	4–5.5	4.5–5	4.9	9–10	10	1.6–5	4–7	4–7	8.5–10	15	50
Ø x L in mm	15 x 75	11 x 92	13 x 90	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100	17 x 120	29 x 115
Cat. No.	**blood collection / urine tubes**									**0509**	**0513**
bucket Cat. No. **4255**					[3]						
carrier Cat. No. **4579-A**											
Cat. No.	**4434**	**4433**	**4435**	**4434**		**4435**		**4434**		**4437**	**4441**
boring Ø x L in mm	17.5 x 53	13 x 58	13.5 x 58	17.5 x 53		13.5 x 58		17.5 x 53		17 x 88	30 x 87
tubes per rotor	114 | 76	180 | 120	126 | 84	114 | 76		126 | 84		114 | 76		72 | 48	30 | 20
max. RCF[2]	5,886 | 5,094	5,750 | 4,935		5,886 | 5,094		5,750 | 4,935		5,886 | 5,094		6,022 | 5,207	5,999 | 5,207
radius in mm	260 | 225	254 | 218		260 | 225		254 | 218		260 | 225		266 | 230	265 | 230
run-up in sec	125 | 125										
run-down in sec, braked	197 | 197										
temperature in °C[1]	+4 | -11										

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.



rotor 4176, illustrated with carriers 4522-A

Swing-out rotors 4176 / 4174

capacity in ml	25	30		10	250	290	650	750	1,000	1,000	175	175
Ø x L in mm	25 x 90	25 x 110		16 x 80	61 x 122	62 x 137	97 x 139	97 x 152	96 x 176	98 x 138	61 x 118	61 x 144
Cat. No.	**-**	**-**		**-**	**5127** [28]	**-** [28]	**0554** [28]	**0512** [28]	**4239** [28]	**4255**	**Falcon®**	**Nalgene®**
bucket Cat. No. **4255**								[3]	[3]		[3]	[3]
carrier Cat. No. **4579-A**												
Cat. No.	**4438**			**4434**	**4443**		**-**			**-**	**4440**	**4430**
boring Ø x L in mm	26 x 72			17.5 x 53	62 x 92		98 x 138			-	-	
tubes per rotor	42 I 28			114 I 76	6 I 4		6 I 4					
max. RCF [2]	5,818 I 5,026			5,886 I 5,094	6,113 I 5,320	6,113 I 5,411	6,294 I 5,501					
radius in mm	257 I 222			260 I 225	270 I 235	270 I 239	278 I 243					
run-up in sec	125 I 125											
run-down in sec, braked	197 I 197											
temperature in °C [1]	+4 I -11											

capacity in ml	200	225	250	500
Ø x L in mm	60 x 130	61 x 137	60 x 162	96 x 147
Cat. No.	**Nunc®**	**Falcon®**	**Corning**	
bucket Cat. No. **4255**	[3]	[3]	[3]	[3]
carrier Cat. No. **4579-A**				
Cat. No.	**4430**	**4440**	**4430**	**4449**
boring Ø x L in mm	-			
tubes per rotor	6 I 4			
max. RCF [2]	6,294 I 5,501			
radius in mm	278 I 243			
run-up in sec	125 I 125			
run-down in sec, braked	197 I 197			
temperature in °C [1]	+4 I -11			

capacity in ml	4	5	6	7	12
Ø x L in mm	10 x 88	12 x 75	12 x 82	12 x 100	16 x 101
Cat. No.	**-**	**0553** [2]	**0501** [2]	**0578** [2]	**-**
carrier Cat. No. **4522-A**					
Cat. No.	**4224**	**4213-93**	**4213**		**4223**
boring Ø x L in mm	11 x 74	12.5 x 36	12.5 x 74		16 x 74
tubes per rotor	378 I 252	288 I 192			150 I 100
max. RCF [2]	5,818 I 5,003				
radius in mm	257 I 221				
run-up in sec	125 I 125				
run-down in sec, braked	197 I 197				
temperature in °C [1]	+14 I -1				

[3] When using these tubes, bucket 4255 cannot be closed with its lid.
[28] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

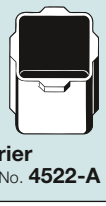
In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



carrier 4522-A with adapters for Falcon® tubes, blood collection tubes and bottles

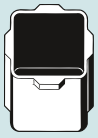
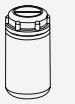
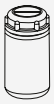
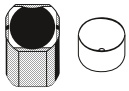
Swing-out rotors 4176 / 4174

capacity in ml	15	25	50	100	2.6–3.4	2.7–3	4–5.5	4.5–5	7.5–8.5	9–10	10	1.6–5
Ø x L in mm	17x100	24x100	34x100	40x115	13x65	11x66	15x75	11x92	15x92	16x92	15x102	13x75
Cat. No.	**0518**[2]	**0519**[2]	**0521**[2]	**0523**[2]	**blood collection/urine tubes**							
carrier Cat. No. **4522-A**												
Cat. No.	**4214**	**4215**	**4216**	**4218**	**4222-93**	**4213-93**	**4214-93**	**4213**	**4214**	**4220**	**4214**	**4222-93**
boring Ø x L in mm	17.5x74	26x74	35x74	41.5x74	13.2x36	12.5x36	17.5x36	12.5x74	17.5x74		17.5x74	13.2x36
tubes per rotor	180 | 120	66 | 44	36 | 24	24 | 16	180 | 120	288 | 192	180 | 120	288 | 192	180 | 120	96 | 64	180 | 120	
max. RCF[2]	5,818 | 5,003											
radius in mm	257 | 221											
run-up in sec	125 | 125											
run-down in sec, braked	197 | 197											
temperature in °C[1]	+14 | -1											

capacity in ml	4–7	4–7	8	8.5–10	15	50	12	25	30		50
Ø x L in mm	16x75	13x100	16x125	16x100	17x120	29x115	17x100	25x90	25x110		29x115
Cat. No.	**blood collection/urine tubes**				**0509**	**0513**	**-**	**-**	**-**	**-**	**-**
carrier Cat. No. **4522-A**											
Cat. No.	**4214-93**	**4222**	**4223**	**4214**	**4232**	**4245-A**	**4220**	**4241**	**4215**		**4249**
boring Ø x L in mm	17.5x36	13.2x74	16x74	17.5x74	17x70	30x70	17.5x74	26x73	26x74		30x96
tubes per rotor	180 | 120		150 | 100	180 | 120	138 | 92	48 | 32	96 | 64	48 | 32	66 | 44		36 | 24
max. RCF[2]	5,818 | 5,003				5,999 | 5,184		5,818 | 5,003				5,909 | 5,094
radius in mm	257 | 221				265 | 229		257 | 221				261 | 225
run-up in sec	125 | 125										
run-down in sec, braked	197 | 197										
temperature in °C[1]	+14 | -1										

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.

Swing-out rotors 4176 / 4174

capacity in ml	250	290	600	650	750	750	250	500
Ø x L in mm	61x122	62x137	93x134	97x139	97x152	96x135	60x162	96x147
Cat. No.	**5127** [28]	**-** [28]	**0551** [28]	**0554** [28]	**0512** [28]	**4234-A**	**Corning**	**Corning**
 **carrier** Cat. No. **4522-A**								
								
Cat. No.	**4238**		**4233**	**4258**			**6322**	**4258** + **4449**
boring Ø x L in mm	62x90		94x105	97.5x105			61x125	97.5x105
tubes per rotor	6 I 4							
max. RCF [2]	5,818 I 5,003		5,999 I 5,184				5,818 I 5,003	5,999 I 5,184
radius in mm	257 I 221		265 I 229				257 I 221	265 I 229
run-up in sec	125 I 125							
run-down in sec, braked	197 I 197							
temperature in °C [1]	+14 I -1							

Centrifugation of toxic or infectious samples:

Bucket 5052 with lid 5057 is available for use with hazardous samples. Lid 5057 provides aerosol-proof [5] containment and thus protects both the user and the environment against contamination.



lid 5057

Buckets 5052 and 4522-A have the same internal dimensions. This allows centrifugation of the adapters and sample tubes from the 4522-A bucket in bucket 5052 under the same conditions without the development of aerosols. Only if adapter 6322 is used will it not be possible to close bucket 5052 with lid 5057.

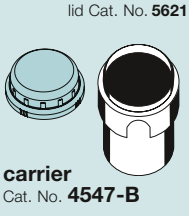
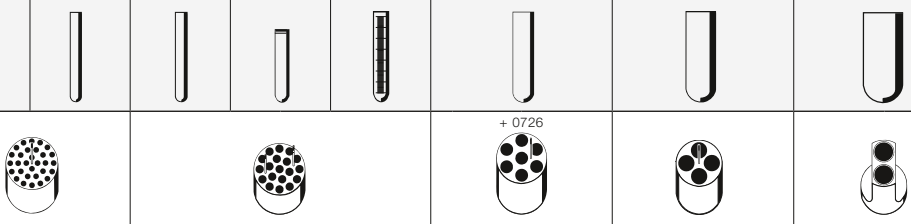
[5] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
[28] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

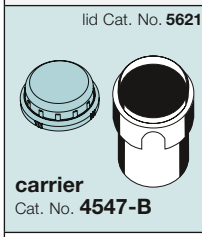
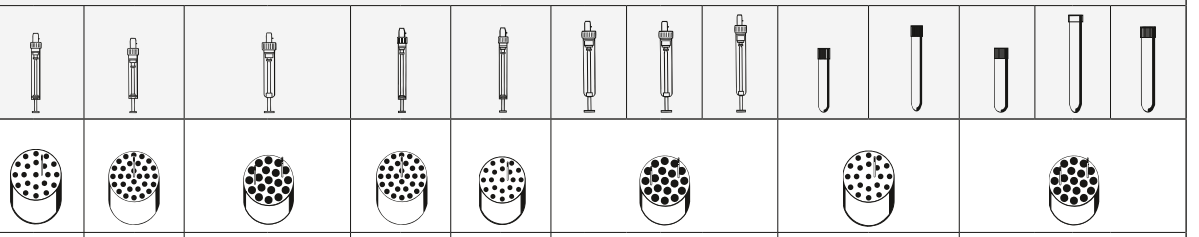
In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



rotor 4176, illustrated with carriers 4547-B and lids 5621

Swing-out rotors 4176 / 4174

capacity in ml	5	7	9	10	15	25	50	100
Ø x L in mm	12 x 75	12 x 100	14 x 100	17 x 70	17 x 100	24 x 100	34 x 100	44 x 100
Cat. No.	**0553** [2]	**0578** [2]	**0500** [2]	**2079**	**0518** [2]	**0519** [2]	**0521** [2]	**0526** [2]
lid Cat. No. **5621** **carrier** Cat. No. **4547-B**								
Cat. No.	**4433**		**4434**			**4438**	**4439**	**4442**
boring Ø x L in mm	13 x 58		17.5 x 53			26 x 72	36 x 79	45 x 78
tubes per rotor	180 | 120		114 | 76			42 | 28	24 | 16	12 | 8
max. RCF [2]	5,841 | 5,026		5,977 | 5,184			5,728 | 4,913	5,773 | 4,981	5,750 | 4,958
radius in mm	258 | 222		264 | 229			253 | 217	255 | 220	254 | 219
run-up in sec	125 | 125							
run-down in sec, braked	197 | 197							
temperature in °C [1]	+9 | -9							

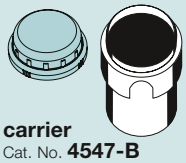
capacity in ml	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8	8.5–10
Ø x L in mm	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 125	16 x 100
Cat. No.	**blood collection / urine tubes**												
lid Cat. No. **5621** **carrier** Cat. No. **4547-B**													
Cat. No.	**4435**	**4433**	**4434**	**4433**	**4435**	**4434**			**4435**		**4434**		
boring Ø x L in mm	13.5 x 58	13 x 58	17.5 x 53	13 x 58	13.5 x 58	17.5 x 53			13.5 x 58		17.5 x 53		
tubes per rotor	126 | 84	180 | 120	114 | 76	180 | 120	126 | 84	114 | 76			126 | 84		114 | 76		
max. RCF [2]	5,841 | 5,026		5,977 | 5,184	5,841 | 5,026		5,977 | 5,184			5,841 | 5,026		5,977 | 5,184		
radius in mm	258 | 222		264 | 229	258 | 222		264 | 229			258 | 222		264 | 229		
run-up in sec	125 | 125												
run-down in sec, braked	197 | 197												
temperature in °C [1]	+9 | -9												

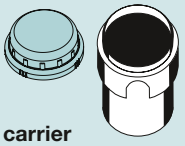
[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[28] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



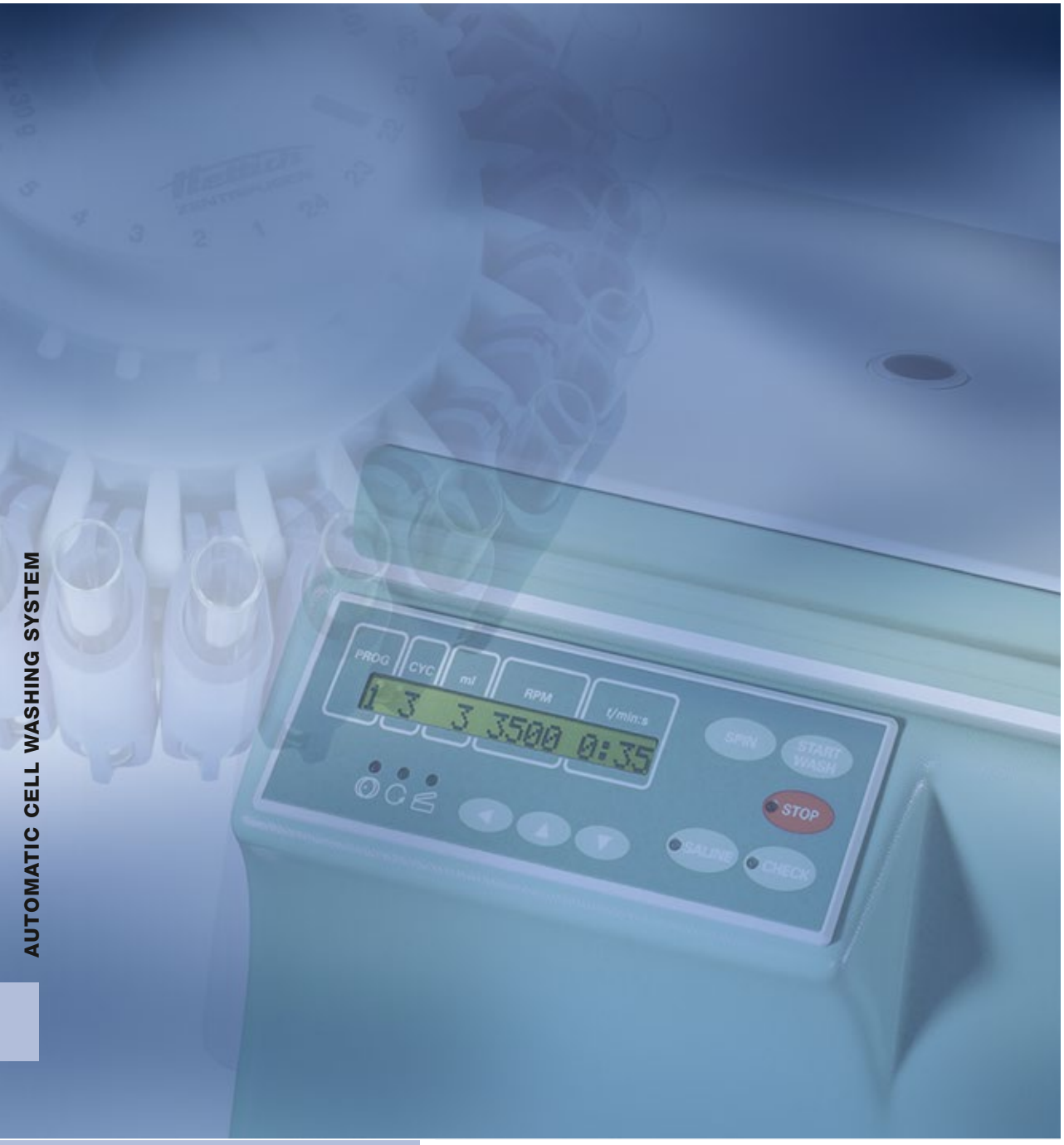
rotor 4176, illustrated with
carriers 4547-B and lids 5621

Swing-out rotors 4176 / 4174

capacity in ml	15	50	25	30		10	250	290	650	750	1,000
Ø x L in mm	17 x 120	29 x 115	25 x 90	25 x 110		16 x 80	61 x 122	62 x 137	97 x 139	97 x 152	96 x 176
Cat. No.	**0509**	**0513**	**-**	**-**	**-**	**-**	**5127**[28]	**-**[28]	**0554**[28]	**0512**[28]	**4239**[28]
lid Cat. No. **5621**											
 carrier Cat. No. **4547-B**											
Cat. No.	**4437**	**4441**	**4438**			**4434**	**4443**		**-**		
boring Ø x L in mm	17 x 88	30 x 87	26 x 72			17.5 x 53	62 x 92		98 x 141		
tubes per rotor	72 I 48	30 I 20	42 I 28			114 I 76	6 I 4				
max. RCF[2]	6,090 I 5,298		5,909 I 5,117			5,977 I 5,184	6,203 I 5,411		6,384 I 5,592		
radius in mm	269 I 234		261 I 226			264 I 229	274 I 239		282 I 247		
run-up in sec	125 I 125										
run-down in sec, braked	197 I 197										
temperature in °C[1]	+9 I -9										

capacity in ml	175	175	200	225	250	500
Ø x L in mm	61 x 118	61 x 144	60 x 130	61 x 137	60 x 162	96 x 147
Cat. No.	**Falcon®**	**Nalgene®**	**Nunc®**	**Falcon®**	**Corning**	
lid Cat. No. **5621**						
 carrier Cat. No. **4547-B**						
Cat. No.	**4440**	**4430**		**4440**	**4430**	**4449**
boring Ø x L in mm	-					
tubes per rotor	6 I 4					
max. RCF[2]	6,384 I 5,592					
radius in mm	282 I 247					
run-up in sec	125 I 125					
run-down in sec, braked	197 I 197					
temperature in °C[1]	+9 I -9					

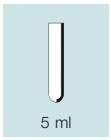
Automatic Cell Washing System



ROTOLAVIT

ROTOLAVIT

IVD conform
according to directive 98/79/EC



Automatic cell washing system for serological testing.

The ROTOLAVIT cell washing system facilitates routine tasks in transfusion centre laboratories. Its fields of application are cross-matching as well as antibody search and differentiation.



rotor, 12-place



Cat. No. 1017-A

rotor, 24-place



Cat. No 1018-A

Either for standard tubes 10 x 75 mm or 12 x 75 mm .

Cat. No. for 12 x 75 mm tubes: **0553**.

The use of 10 x 75 mm tubes requires adapters No.**1019**.

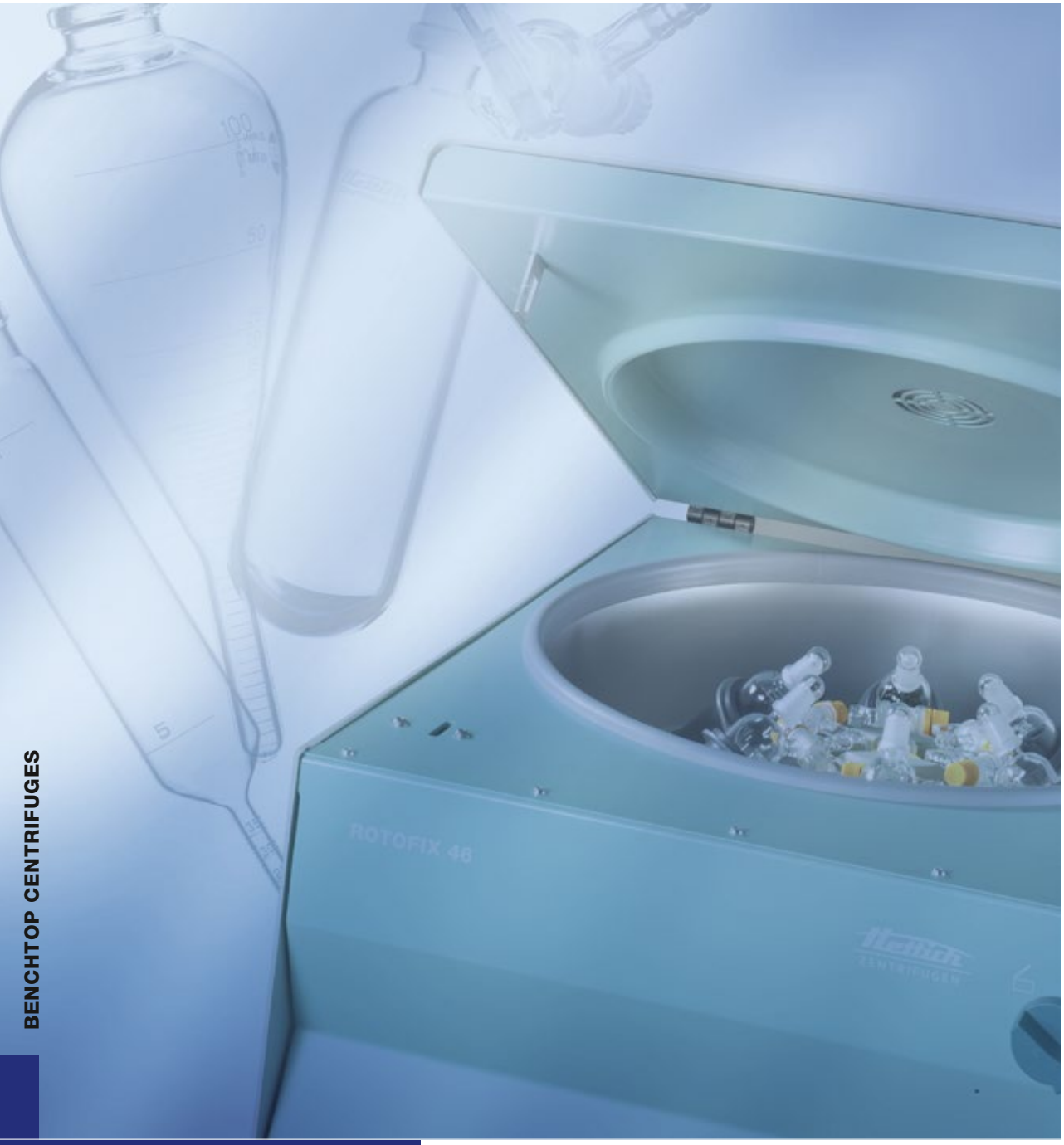


TECHNOLOGY

	ROTOLAVIT	
Cell Washing System, without rotor		
Power supply*)	200 – 240 V 1 ~	100 – 120 V 1 ~
Frequency	50 – 60 Hz	
Consumption	180 VA	
Emission, Immunity	EN / IEC 61326-1, class B	FCC class B
Max. capacity	24 standard tubes (10 x 75 mm or 12 x 75 mm)	
Max. RPM (speed)	3,500 min^{-1}	
Max. RCF	1,438	
Radius (both rotors)	105 mm	
Running time of the individual washing cycles	1 sec – 9 min : 59 sec	
Dimensions (H x W x D)	278 x 333 x 420 mm	
Weight	approx. 24 kg	
Cat. No.	**1006**	**1006-01**

*) Other voltages on request.

Benchtop centrifuge for special applications



BENCHTOP CENTRIFUGES

ROTOFIX 46/46 H

ROTOFIX 46/46 H

INDUSTRIAL DEVICE
CE





Special applications require special solutions

The robust and highly adaptable ROTOFIX 46/46 H models have been specially developed for use in industrial and research laboratories. They are mainly used for standardized quality assurance procedures, but are also suited to special applications in research.

TECHNOLOGY

	ROTOFIX 46		ROTOFIX 46 H	
Benchtop centrifuge, without rotor	**classic**		**heated**	
Power supply*)	200 – 240 V 1 ~	100 – 127 V 1 ~	200 – 240 V 1 ~	100 – 127 V 1 ~
Frequency	50 – 60 Hz			
Consumption	460 VA	500 VA	600 VA	650 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		4 x 100 ml
Max. RPM (speed)	4.000 min^{-1}		2.000 min^{-1}
Max. RCF	3,095		984
Running time	1 sec – 99 min : 59 sec, continuous run, short cycle mode (impulse key)		

Dimensions (H x W x D)	345 x 538 x 647 mm
Weight	approx. 60 kg

Heating		
Temperature setting, infinitely variable (dependent on the ambient temperature) 33)	-	+ 10 °C to + 90 °C

Cat. No.	**4600**	**4600-01**	**4600-50**	**4600-51**

*) Other voltages on request.
33) With the heating switched-off, the temperature within the centrifuge will be above ambient temperature, depending on the speed, type of rotor and run time. Activation of the heating can cause this temperature to rise, but it cannot be reduced to a lower value.

The sulphuric acid content of chrome baths used in galvanizing facilities has to be checked regularly for quality assurance purposes. Measurements may be carried out using chrome bath tubes which can be centrifuged in the ROTOFIX 46.

Schlenk tubes – glass vessels widely used in organometallic and co-ordination chemistry - can be centrifuged in the 5616 rotor in the ROTOFIX 46. Substances that have been prepared in the Schlenk tubes can then be separated in the tubes through centrifugation, if necessary.

The ROTOFIX 46 H is equipped with heating. For standardized petroleum tests suitable sample tubes can be centrifuged at the required temperature.

More information is available free of charge from **info@hettichlab.com** or can be downloaded from our website **www.hettichlab.com.**



ROTOFIX 46
illustrated with
rotor 5616

Cat. No. 4600

Because of their assigned use, ROTOFIX 46/46 H centrifuges **are not classified as medical products.**



Swing-out rotor, 6-place,
for chrome bath tubes
n = 2.000 min^{-1}, max. RCF = 917

Cat. No. 4619[34)]

for use in the models ROTOFIX 46 / 46 H



Angle rotor, 6-place,
for Schlenk tubes
n = 2.000 min^{-1}, max. RCF = 805

Cat. No. 5616[34)]

for use in the models ROTOFIX 46 / 46 H



Swing-out rotor, 4-place,
for ASTM tubes
illustrated with carriers 4275
n = 2.000 min^{-1}, max. RCF = 984

Cat. No. 4474 (without carriers)

for use in the models ROTOFIX 46 / 46 H



Swing-out rotor, 4-place
illustrated with carriers 5051
and lids 5053
n = 4.000 min^{-1}, max. RCF = 3.095

Cat. No. 5694 (without carriers)

only for use in model ROTOFIX 46

[34)] In heating model ROTOFIX 46 H, rotors 4619 and 5616 may only be used up to a maximum of + 40 °C.

Special accessories



PRESSOMAT

HettInfo

Cyto accessories

PRESSOMAT

A perfect team:
ROTO SILENTA 630 RS
and PRESSOMAT

The PRESSOMAT plasma separator was developed for the production of leucocyte-depleted plasma and leucocyte-depleted erythrocyte concentrate.

The ROTO SILENTA 630 RS with blood bag insert 4598-P and the PRESSOMAT plasma separator form a perfect combination. Centrifugation and separation take place in the same insert (= two-chamber insert 4598-P). Since it is not necessary to manipulate the blood bag system during transportation from the centrifuge to the separator, any disturbance of the erythrocytes is avoided.

Moreover, pressing two blood bags simultaneously saves valuable time.



PRESSOMAT

Cat. No. (without accessories) **1070**

TECHNOLOGY	PRESSOMAT
Power supply	100 – 240 V / 2.5 A
Frequency	50 – 60 Hz
Emission, Immunity	EN / IEC 61326-1, class B
Dimensions (H x W x D)	850 x 280 x 380 (450 *)
Weight	16.5 kg
Pump capacity	2 x 600 mbar
Max. pressing speed (flow rate)	6 ml / sec

	PRESSOMAT	Two-chamber insert with Pneumatic Kit
Cat. No.	**1070**	**4598-P**

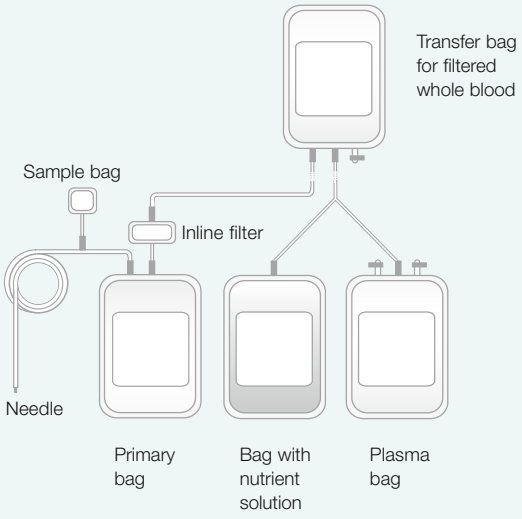
Accessories	HettControl (Basic Kit incl. software)	Barcode Kit	Taring rods
Cat. No.	**1078**	**1077**	**On request**

*) with extended sliding carriage

The blood bag system

An increasing number of blood donation facilities are taking advantage of the benefits of whole blood inline filtration, as long as the buffy coat is not required for the preparation of platelet concentrates.

The PRESSOMAT was specially developed for pre-filtered whole blood in a 450 – 500 ml T&T blood bag system. Blood bag systems from all suppliers which fulfil the following configuration may be used:



Benefits

- Simultaneous pressing of two blood bags
- Separation in the centrifuge insert for optimal product quality. Removing the bags prior to separation is no longer required
- Automatic feeding of the nutrient solution into the concentrated red cells
- Optimised process safety via optical and acoustic signals
- Maximum plasma recovery thanks to recognition of the erythrocytes at the tube
- Compressor not required
- **Over 50% time savings**

Equipment

- Integrated, process-independent sealing module
- 2 calibration-compatible scales:
  - Record plasma weight
  - Record the volume of nutrient solution fed to the concentrated red cells
  - Weigh the concentrated red cells
- 2 optical sensors:
  - Secure recognition of the erythrocytes at the tube
  - Are automatically calibrated with each new pressing process
- Interfaces for barcode reader and PC
- Taring rods to balance eventual weight discrepancies during centrifugation

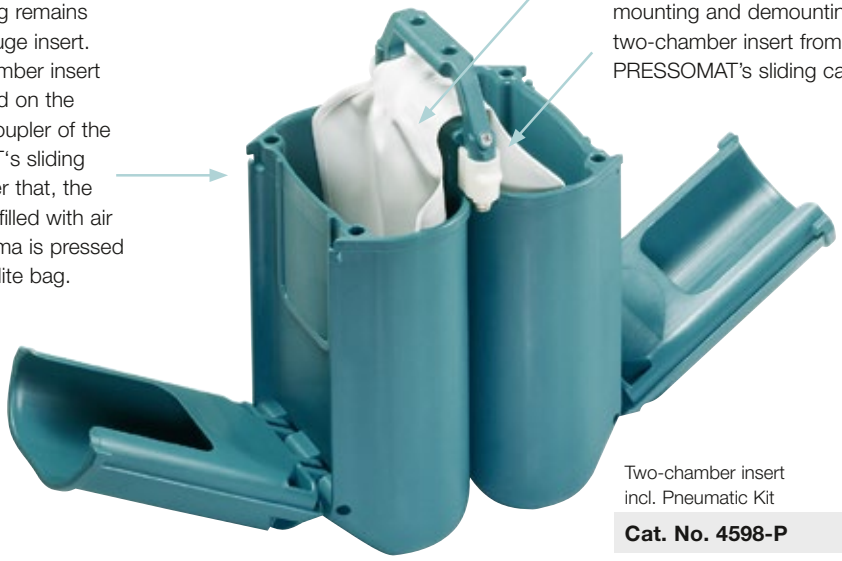
Data documentation system

HettControl (optional)

Main chamber for the blood bag
Following centrifugation, the blood bag remains in the centrifuge insert. The two-chamber insert is then placed on the pneumatic coupler of the PRESSOMAT's sliding carriage. After that, the press bag is filled with air and the plasma is pressed into the satellite bag.

Side chamber for the satellite bags
The satellite bags can be easily removed for separation, without dispersing the sedimented erythrocytes in the main chamber.

Pneumatic Kit
Press bag and pneumatic coupler with an unlocking device for easy mounting and demounting of the two-chamber insert from the PRESSOMAT's sliding carriage.



Two-chamber insert incl. Pneumatic Kit

Cat. No. 4598-P

HettInfo

HettInfo guarantees reliability, transparency and flexibility of data documentation.

Data documentation and traceability have to satisfy increasingly stringent requirements. As a consequence, more and more time has to be spent on documentation. With HettInfo transparency can be increased and at the same time processes can be streamlined and rationalized.



Packing room with external barcode unit



Barcode Kit ROTO SILENTA 630 RS



Centrifugation programs and the operator code can also be scanned-in by barcode.

Data log

Minimum PC requirements
(available from specialist computer resellers)

Processor	Pentium
Clock frequency	1 GHz
RAM	2 GB
Hard disk	20 GB
Interface	free RS 232
VGA graphics card	128 MB
Resolution	1024 x 768 (16 bit)
Operating system	Microsoft Windows XP®# (SP 3) and Windows 7

Additional components: network adapter card
(available from specialist computer resellers)

The HettInfo data documentation system consists of combinable modules and can be easily adapted to the required number of centrifuges. Up to 29 centrifuges and 3 external barcode units can be integrated into the network, which is reliable and absolutely immune to disturbances.

HettInfo enables logging of all centrifugation data. The user can log the date, end of the centrifugation run, program number and the temperature, and can select and de-select additional optional parameters. If barcode kits are used, the barcodes of blood bags and users can also be logged. In addition, the result of each run is automatically stored with all logged data. This simplifies any search for incorrect centrifuge runs.

Modern data back-up mechanisms increase data integrity. To avoid duplication and to ensure that higher-level databases are kept up to date, all data acquired using HettInfo can be integrated into these databases. For this, the data is stored in CSV format at the desired storage location. Time-consuming and costly programming of the interface is not required.

	Basic Kits	
Program functions that can be connected:	**HettInfo Light Cat. No. 0910-L**	**HettInfo Cat. No. 0910-F**
29 centrifuges	●	●
29 barcode kits	●	●
3 external barcode kits		●
Logging and storage of process data:		
Daily run time data	●	●
Overall run time data	●	●
Barcode result data	●	●
User barcodes and users		●
Centrifuge fault tables	●	●
Database functions:		
Delete table data	●	●
Print centrifuge report table		●
Print centrifuge fault table		●
Print barcode report table		●
Print barcode fault list		●
Print duplicate barcodes		●
Search barcodes		●
Delete packing room data		●
Password protection		●
Packing room		●
User administration		●

®# Microsoft, Windows and Windows XP are either registered trademarks or brand names of the Microsoft Corporation in the USA and/or in other countries.

Participants

The data collected through HettInfo by the participants is stored on a PC with a RS 232 interface. Participants are centrifuges with an online kit, an online kit plus a barcode kit, barcode kit ROTIXA 50 RS, external barcode units and additional distributors. A centrifuge fitted with a barcode kit always requires an online kit. In principle any centrifuge with an S or C control panel can be connected to HettInfo through an online kit.

Barcodes can be captured and documented through the use of a barcode kit or an external barcode kit. In addition to barcodes on blood bags, user data can also be captured via barcodes. This ensures full traceability and saves time and labour.



Key to symbols:

Capture of centrifuge data

Scanning of barcodes

Data distributors

With HettInfo, up to 29 centrifuges can be controlled by a single PC.

Data distributors ordered with the centrifuges are pre-installed and conform with the number of participants. Robust optical cables for connecting the participants are included in delivery. Everything is provided for start-up.

ROTO SILENTA 630 RS and ROTIXA 50 RS centrifuges can be retrofitted for connection to HettInfo at any time.

Article	Cat. No.	Scope of supply
Basic Kit HettInfo	**0910-F**[c]	Software with all functions (full version), fibre-optic cable[b] for connection to one participant or distributor, RS 232 cable, opto data box
Basic Kit HettInfo Light	**0910-L**[c]	Software with limited functionality, fibre-optic cable[b] for connection to one participant or distributor, RS 232 cable, opto data box
Online Kit ROTO SILENTA 630 RS	**0951-10**	Opto interface for a ROTO SILENTA 630 RS centrifuge
Online Kit ROTIXA 50 RS	**0931-10**	Opto interface for a ROTIXA 50 RS centrifuge
Barcode Kit ROTO SILENTA 630 RS	**0950-10**[d]	Front panel for ROTO SILENTA 630 RS with barcode unit and barcode scanner
Barcode Kit ROTIXA 50 RS	**0930-10**[d]	Front panel for ROTIXA 50 RS with barcode unit and barcode scanner
Barcode Kit, external for a packing room or for use on a centrifuge with C or S control panel and Online Kit	**0915-10**[c]	Barcode station with barcode scanner
Distributor, small	**0911-10**	For connection of max. 8 participants
Distributor, large	**0912-10**	For connection of max.15 participants
Connection Kit	**0913-10**	For connection of 1 participant, with fibre-optic cable[a]

[a] Fibre-optic cable in standard length (10 metres). Other lengths on request.
[b] Fibre-optic cable in standard length (20 metres). Other lengths on request.
[c] 100 - 240 V version, 50 - 60 Hz
[d] 230 V version. Other voltages on request.

Cyto Accessories

Cells – fundamental to life

Cytology makes a valuable contribution to medical diagnostics. High cell yield and good cell presentation are essential for the correct evaluation of cytological preparations.

The Hettich cyto system provides cytologists with a wide selection of accessories for preparing slides for the cytological examination of various body fluids.





two-tier adapter **5280** illustrated with slide carriers with fastening ring **1662** and cyto chamber **1663**

The assembly of a complete cyto insert is really easy



suspension 1660 for cyto chambers



suspension 1680 for angle chambers



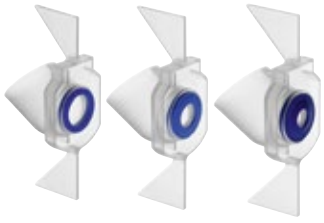
filter cards



one-funnel chambers



multi-funnel chambers



angle chambers

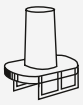
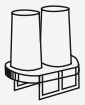


slide carrier **1662**
slide carrier **1670** for 2 chambers
slide carrier with fastening slider **1470**

Cyto Chambers

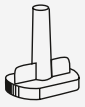
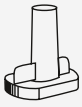
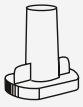
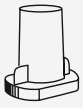
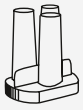
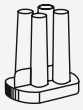
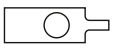
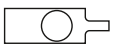
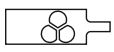
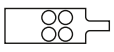
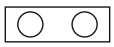
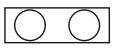
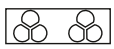
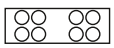
cyto chambers for slide carrier 1470

fitting into suspensions 1660, 1452 and two-tier adapter 5280

cyto chambers		
capacity in ml	8	2 x 8
area in mm^2	240	2 x 240
diameter in mm	17.5	2 x 17.5
Cat. No.	**1471**	**1475**

cyto chambers for slide carrier 1662 and slide carrier for 2 chambers 1670

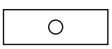
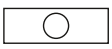
fitting into suspensions 1660, 1452 and two-tier adapter 5280

cyto chambers						
capacity in ml	1	2	4	8	3 x 2	4 x 1
area in mm^2	30	60	120	240	3 x 60	4 x 30
diameter in mm	6.2	8.7	12.4	17.5	3 x 8.7	4 x 6.2
Cat. No.	**1663**	**1664**	**1665**	**1666**	**1667**	**1668**
filter cards for 1662						
Cat. No.	**1675**			**1676**	**1677**	**1678**
filter cards for 1670						
Cat. No.	**1692**			**1691**	**1694**	**1693**

Angle Chambers

angle chambers for slide carrier 1662

fitting into suspension 1680

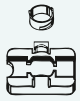
angle chambers			
area in mm^2	30	60	120
diameter in mm	6.2	8.7	12.4
Cat. No.	**1671**	**1672**	**1673**
filter cards			
Cat. No.	**1696**	**1697**	**1698**

You can find out how to sediment **cerebrospinal fluid, urine, bronchial washing, pleural fluid** and **ascitic fluid** on slides, and which accessories to use for obtaining best preparations by consulting Hettich's cyto application notes. These notes can be ordered free of charge or downloaded from our homepage www.hettichlab.com.

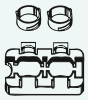
slide carriers



slide carrier with fastening slider
Cat. No. 1470



slide carrier with fastening ring
Cat. No. 1662



slide carrier for 2 chambers
Cat. No. 1670

suspensions



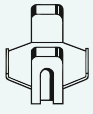
lid
Cat. No. 1661



suspension
Cat. No. 1660



suspension
Cat. No. 1680



suspension
Cat. No. 1452

two-tier adapter



Cat. No. 5280

Use of cyto chambers

slide carrier		suspension/adapter			rotor		centrifuge
Cat. No.	qty.	Cat. No.	lid	qty.	Cat. No.	places	
1470 1662 1670	4	1660	1661	4	1624	4	ROTOFIX 32 A UNIVERSAL 320/320 R
	6	1660	1661	6	1626	6	
	4	1452	-	4	1494	4	UNIVERSAL 320/320 R
	6	1660	1661	6	1726	6	ROTINA 380/380 R
	8	1660	1661	8	1748	8	
	8	5051 / 5280	5053	4/4	1798	4	
	8	1660	1661	8	4758	8	ROTINA 420/420 R
	4	1452	-	4	4754	4	
	8	5051 / 5280	5053	4/4	4753	4	
	16	5628 / 5220-A / 5280	-	4/4/8	5699	4	ROTANTA 460/460 R ROTANTA 460 RC/460 RF
	8	5051 / 5280	5053	4/4	5694	4	
	12	5051/ 5280	5053	6/6	4446	6	
	12	5051 / 5280	5053	6/6	4296	6	ROTIXA 50 S/50 RS

Use of angle chambers

slide carrier		suspension/adapter			rotor		centrifuge
Cat. No.	qty.	Cat. No.	lid	qty.	Cat. No.	places	
1662	4	1680	incl.	4	1624	4	ROTOFIX 32 A UNIVERSAL 320/320 R
	6			6	1626	6	
	8			8	1648	8	
	6			6	1726	6	ROTINA 380/380 R
	8			8	1748	8	
	8			8	4758	8	ROTINA 420/420 R

Disposable Pasteur pipettes for removing the supernatant are available under Cat. No. **0552**.

Please note that RCF values in excess of 1,100 may lead to glass breakage.

More for the lab
We have applied our many years of experience in the field of lab technology to other quality products. For example:

Hettich
INCUBATOR

HettCube
Incubators and cooled incubators

Economical: Maximum utility and low-cost operation



Space-saving, energy-saving and quiet in operation
The incubators from Hettich bring benefits for you, the environment and of course your cultures. The growth conditions are optimum. The latest control technology provides a constant temperature at all times. These incubators have an energy consumption of < 0.05 kWh, and thus help to save valuable resources!

Please ask for our detailed brochure.

HettCube Incubators and cooled incubators
All models at a glance







MODEL	HettCube 200 / 200 R	HettCube 400 / 400 R	HettCube 600 / 600 R
Temperature range for incubators / cooled incubators	1 K above ambient temperature up to +65 °C / 0 °C to +65 °C	1 K above ambient temperature up to +65 °C / 0 °C to +65 °C	1 K above ambient temperature up to +65 °C / 0 °C to +65 °C
Exterior dimensions (incl. adjustable feet and bushing on rear panel) W x D x H in mm	710 x 825 x 970	710 x 825 x 1425	710 x 825 x 1990
Interior dimensions W x D x H in mm	535 x 690 x 420	535 x 690 x 850	535 x 690 x 1415
Internal volume in litres	150	310	520
Footprint in m^2	0.6	0.6	0.6
Weight in kg	83 / 94	110 / 121	160 / 171
Number of shelves provided as standard	2	3	4
Temperature fluctuation at +37 °C	± 0.1 K	± 0.1 K	± 0.1 K
Temperature uniformity at +37 °C	± 0.2 K	± 0.2 K	± 0.2 K
Temperature uniformity at +25 °C	± 0.1 K	± 0.1 K	± 0.1 K
Recovery time after door has been opened for 30 s at +37 °C	≤ 3 min	≤ 4.5 min	≤ 5.5 min
Energy consumption at +37 °C	0.025 kWh	0.038 kWh	0.049 kWh
Noise level	≤ 41 dB(A) / ≤ 44 dB(A)	≤ 41 dB(A) / ≤ 44 dB(A)	≤ 41 dB(A) / ≤ 44 dB(A)
Power supply (other voltages on request)	200–240 V 1~	200–240 V 1~	200–240 V 1~
Frequency	50–60 Hz	50–60 Hz	50–60 Hz
Cat. No.	**62000 / 62005**	**64000 / 64005**	**66000 / 66005**

All temperature values were ascertained at an ambient temperature of + 22 °C in accordance with DIN 12880:2007-5.
The data apply for incubators with standard features.

Hettich INCUBATOR

Do you have any questions about Hettich incubators? In Germany, our customer service network will provide advice and technical support. In addition, you will find all the information you need about our HettCubes and other Hettich products on our Web site: **www.hettichlab.com**

Special accessories



PRESSOMAT

HettInfo

Cyto accessories

PRESSOMAT

A perfect team:
ROTO SILENTA 630 RS
and PRESSOMAT

The PRESSOMAT plasma separator was developed for the production of leucocyte-depleted plasma and leucocyte-depleted erythrocyte concentrate.

The ROTO SILENTA 630 RS with blood bag insert 4598-P and the PRESSOMAT plasma separator form a perfect combination. Centrifugation and separation take place in the same insert (= two-chamber insert 4598-P). Since it is not necessary to manipulate the blood bag system during transportation from the centrifuge to the separator, any disturbance of the erythrocytes is avoided.

Moreover, pressing two blood bags simultaneously saves valuable time.



PRESSOMAT

Cat. No. (without accessories) **1070**

TECHNOLOGY	PRESSOMAT
Power supply	100 – 240 V / 2.5 A
Frequency	50 – 60 Hz
Emission, Immunity	EN / IEC 61326-1, class B
Dimensions (H x W x D)	850 x 280 x 380 (450 *)
Weight	16.5 kg
Pump capacity	2 x 600 mbar
Max. pressing speed (flow rate)	6 ml / sec

	PRESSOMAT	Two-chamber insert with Pneumatic Kit
Cat. No.	**1070**	**4598-P**

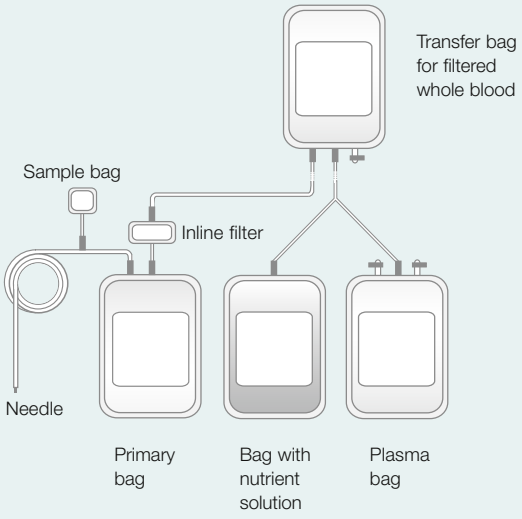
Accessories	HettControl (Basic Kit incl. software)	Barcode Kit	Taring rods
Cat. No.	**1078**	**1077**	**On request**

*) with extended sliding carriage

The blood bag system

An increasing number of blood donation facilities are taking advantage of the benefits of whole blood inline filtration, as long as the buffy coat is not required for the preparation of platelet concentrates.

The PRESSOMAT was specially developed for pre-filtered whole blood in a 450 – 500 ml T&T blood bag system. Blood bag systems from all suppliers which fulfil the following configuration may be used:



Benefits

- Simultaneous pressing of two blood bags
- Separation in the centrifuge insert for optimal product quality. Removing the bags prior to separation is no longer required
- Automatic feeding of the nutrient solution into the concentrated red cells
- Optimised process safety via optical and acoustic signals
- Maximum plasma recovery thanks to recognition of the erythrocytes at the tube
- Compressor not required
- **Over 50% time savings**

Equipment

- Integrated, process-independent sealing module
- 2 calibration-compatible scales:
  - Record plasma weight
  - Record the volume of nutrient solution fed to the concentrated red cells
  - Weigh the concentrated red cells
- 2 optical sensors:
  - Secure recognition of the erythrocytes at the tube
  - Are automatically calibrated with each new pressing process
- Interfaces for barcode reader and PC
- Taring rods to balance eventual weight discrepancies during centrifugation

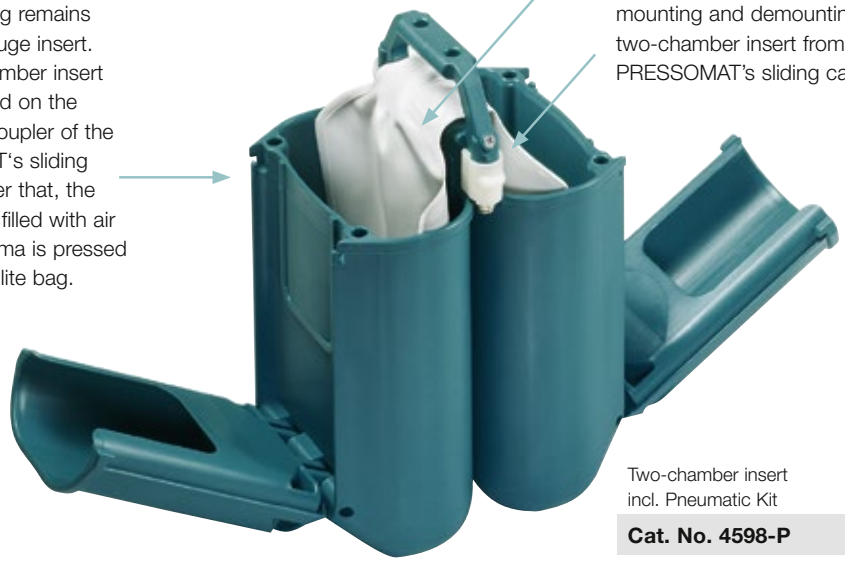
Data documentation system

HettControl (optional)

Main chamber for the blood bag
Following centrifugation, the blood bag remains in the centrifuge insert. The two-chamber insert is then placed on the pneumatic coupler of the PRESSOMAT's sliding carriage. After that, the press bag is filled with air and the plasma is pressed into the satellite bag.

Side chamber for the satellite bags
The satellite bags can be easily removed for separation, without dispersing the sedimented erythrocytes in the main chamber.

Pneumatic Kit
Press bag and pneumatic coupler with an unlocking device for easy mounting and demounting of the two-chamber insert from the PRESSOMAT's sliding carriage.



Two-chamber insert incl. Pneumatic Kit

Cat. No. 4598-P

HettInfo

HettInfo guarantees reliability, transparency and flexibility of data documentation.

Data documentation and traceability have to satisfy increasingly stringent requirements. As a consequence, more and more time has to be spent on documentation. With HettInfo transparency can be increased and at the same time processes can be streamlined and rationalized.



Packing room with external barcode unit



Barcode Kit ROTO SILENTA 630 RS



Centrifugation programs and the operator code can also be scanned-in by barcode.

Data log

Minimum PC requirements
(available from specialist computer resellers)

Processor	Pentium
Clock frequency	1 GHz
RAM	2 GB
Hard disk	20 GB
Interface	free RS 232
VGA graphics card	128 MB
Resolution	1024 x 768 (16 bit)
Operating system	Microsoft Windows XP®# (SP 3) and Windows 7

Additional components: network adapter card
(available from specialist computer resellers)

The HettInfo data documentation system consists of combinable modules and can be easily adapted to the required number of centrifuges. Up to 29 centrifuges and 3 external barcode units can be integrated into the network, which is reliable and absolutely immune to disturbances.

HettInfo enables logging of all centrifugation data. The user can log the date, end of the centrifugation run, program number and the temperature, and can select and de-select additional optional parameters. If barcode kits are used, the barcodes of blood bags and users can also be logged. In addition, the result of each run is automatically stored with all logged data. This simplifies any search for incorrect centrifuge runs.

Modern data back-up mechanisms increase data integrity. To avoid duplication and to ensure that higher-level databases are kept up to date, all data acquired using HettInfo can be integrated into these databases. For this, the data is stored in CSV format at the desired storage location. Time-consuming and costly programming of the interface is not required.

	Basic Kits	
Program functions that can be connected:	**HettInfo Light Cat. No. 0910-L**	**HettInfo Cat. No. 0910-F**
29 centrifuges	●	●
29 barcode kits	●	●
3 external barcode kits		●
Logging and storage of process data:		
Daily run time data	●	●
Overall run time data	●	●
Barcode result data	●	●
User barcodes and users		●
Centrifuge fault tables	●	●
Database functions:		
Delete table data	●	●
Print centrifuge report table		●
Print centrifuge fault table		●
Print barcode report table		●
Print barcode fault list		●
Print duplicate barcodes		●
Search barcodes		●
Delete packing room data		●
Password protection		●
Packing room		●
User administration		●

®# Microsoft, Windows and Windows XP are either registered trademarks or brand names of the Microsoft Corporation in the USA and/or in other countries.

Participants

The data collected through HettInfo by the participants is stored on a PC with a RS 232 interface. Participants are centrifuges with an online kit, an online kit plus a barcode kit, barcode kit ROTIXA 50 RS, external barcode units and additional distributors. A centrifuge fitted with a barcode kit always requires an online kit. In principle any centrifuge with an S or C control panel can be connected to HettInfo through an online kit.

Barcodes can be captured and documented through the use of a barcode kit or an external barcode kit. In addition to barcodes on blood bags, user data can also be captured via barcodes. This ensures full traceability and saves time and labour.



Key to symbols:

Capture of centrifuge data

Scanning of barcodes

Data distributors

With HettInfo, up to 29 centrifuges can be controlled by a single PC.

Data distributors ordered with the centrifuges are pre-installed and conform with the number of participants. Robust optical cables for connecting the participants are included in delivery. Everything is provided for start-up.

ROTO SILENTA 630 RS and ROTIXA 50 RS centrifuges can be retrofitted for connection to HettInfo at any time.

Article	Cat. No.	Scope of supply
Basic Kit HettInfo	**0910-F**[c]	Software with all functions (full version), fibre-optic cable[b] for connection to one participant or distributor, RS 232 cable, opto data box
Basic Kit HettInfo Light	**0910-L**[c]	Software with limited functionality, fibre-optic cable[b] for connection to one participant or distributor, RS 232 cable, opto data box
Online Kit ROTO SILENTA 630 RS	**0951-10**	Opto interface for a ROTO SILENTA 630 RS centrifuge
Online Kit ROTIXA 50 RS	**0931-10**	Opto interface for a ROTIXA 50 RS centrifuge
Barcode Kit ROTO SILENTA 630 RS	**0950-10**[d]	Front panel for ROTO SILENTA 630 RS with barcode unit and barcode scanner
Barcode Kit ROTIXA 50 RS	**0930-10**[d]	Front panel for ROTIXA 50 RS with barcode unit and barcode scanner
Barcode Kit, external for a packing room or for use on a centrifuge with C or S control panel and Online Kit	**0915-10**[c]	Barcode station with barcode scanner
Distributor, small	**0911-10**	For connection of max. 8 participants
Distributor, large	**0912-10**	For connection of max.15 participants
Connection Kit	**0913-10**	For connection of 1 participant, with fibre-optic cable[a]

[a] Fibre-optic cable in standard length (10 metres). Other lengths on request.
[b] Fibre-optic cable in standard length (20 metres). Other lengths on request.
[c] 100 - 240 V version, 50 - 60 Hz
[d] 230 V version. Other voltages on request.

Cyto Accessories

Cells – fundamental to life

Cytology makes a valuable contribution to medical diagnostics. High cell yield and good cell presentation are essential for the correct evaluation of cytological preparations.

The Hettich cyto system provides cytologists with a wide selection of accessories for preparing slides for the cytological examination of various body fluids.





two-tier adapter **5280** illustrated with slide carriers with fastening ring **1662** and cyto chamber **1663**

The assembly of a complete cyto insert is really easy



suspension 1660 for cyto chambers



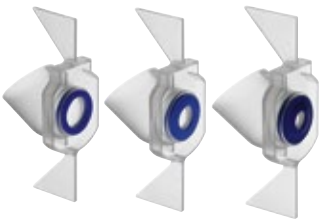
suspension 1680 for angle chambers



filter cards



one-funnel chambers



angle chambers



multi-funnel chambers

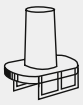
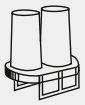


slide carrier **1662**
slide carrier **1670** for 2 chambers
slide carrier with fastening slider **1470**

Cyto Chambers

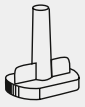
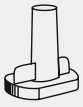
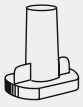
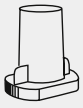
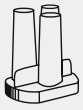
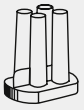
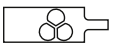
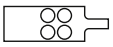
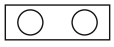
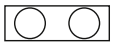
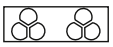
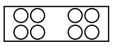
cyto chambers for slide carrier 1470

fitting into suspensions 1660, 1452 and two-tier adapter 5280

cyto chambers		
capacity in ml	8	2 x 8
area in mm^2	240	2 x 240
diameter in mm	17.5	2 x 17.5
Cat. No.	**1471**	**1475**

cyto chambers for slide carrier 1662 and slide carrier for 2 chambers 1670

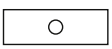
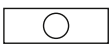
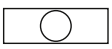
fitting into suspensions 1660, 1452 and two-tier adapter 5280

cyto chambers						
capacity in ml	1	2	4	8	3 x 2	4 x 1
area in mm^2	30	60	120	240	3 x 60	4 x 30
diameter in mm	6.2	8.7	12.4	17.5	3x8.7	4x6.2
Cat. No.	**1663**	**1664**	**1665**	**1666**	**1667**	**1668**
filter cards for 1662						
Cat. No.	**1675**			**1676**	**1677**	**1678**
filter cards for 1670						
Cat. No.	**1692**			**1691**	**1694**	**1693**

Angle Chambers

angle chambers for slide carrier 1662

fitting into suspension 1680

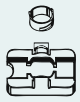
angle chambers			
area in mm^2	30	60	120
diameter in mm	6.2	8.7	12.4
Cat. No.	**1671**	**1672**	**1673**
filter cards			
Cat. No.	**1696**	**1697**	**1698**

You can find out how to sediment **cerebrospinal fluid, urine, bronchial washing, pleural fluid** and **ascitic fluid** on slides, and which accessories to use for obtaining best preparations by consulting Hettich's cyto application notes. These notes can be ordered free of charge or downloaded from our homepage www.hettichlab.com.

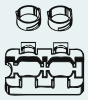
slide carriers



slide carrier with fastening slider
Cat. No. 1470



slide carrier with fastening ring
Cat. No. 1662



slide carrier for 2 chambers
Cat. No. 1670

suspensions



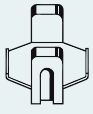
lid
Cat. No. 1661



suspension
Cat. No. 1660



suspension
Cat. No. 1680



suspension
Cat. No. 1452

two-tier adapter



Cat. No. 5280

Use of cyto chambers

slide carrier		suspension/adapter			rotor		centrifuge
Cat. No.	qty.	Cat. No.	lid	qty.	Cat. No.	places	
1470 1662 1670	4	1660	1661	4	1624	4	ROTOFIX 32 A UNIVERSAL 320/320 R
	6	1660	1661	6	1626	6	
	4	1452	-	4	1494	4	UNIVERSAL 320/320 R
	6	1660	1661	6	1726	6	ROTINA 380/380 R
	8	1660	1661	8	1748	8	
	8	5051 / 5280	5053	4/4	1798	4	
	8	1660	1661	8	4758	8	ROTINA 420/420 R
	4	1452	-	4	4754	4	
	8	5051 / 5280	5053	4/4	4753	4	
	16	5628 / 5220-A / 5280	-	4/4/8	5699	4	ROTANTA 460/460 R ROTANTA 460 RC/460 RF
	8	5051 / 5280	5053	4/4	5694	4	
	12	5051/ 5280	5053	6/6	4446	6	
	12	5051 / 5280	5053	6/6	4296	6	ROTIXA 50 S/50 RS

Use of angle chambers

slide carrier		suspension/adapter			rotor		centrifuge
Cat. No.	qty.	Cat. No.	lid	qty.	Cat. No.	places	
1662	4	1680	incl.	4	1624	4	ROTOFIX 32 A UNIVERSAL 320/320 R
	6			6	1626	6	
	8			8	1648	8	
	6			6	1726	6	ROTINA 380/380 R
	8			8	1748	8	
	8			8	4758	8	ROTINA 420/420 R

Disposable Pasteur pipettes for removing the supernatant are available under Cat. No. **0552**.

Please note that RCF values in excess of 1,100 may lead to glass breakage.

More for the lab
We have applied our many years of experience in the field of lab technology to other quality products. For example:

INFO

Hettich
INCUBATOR

HettCube
Incubators and cooled incubators

Economical: Maximum utility and low-cost operation



eco

Space-saving, energy-saving and quiet in operation
The incubators from Hettich bring benefits for you, the environment and of course your cultures. The growth conditions are optimum. The latest control technology provides a constant temperature at all times. These incubators have an energy consumption of < 0.05 kWh, and thus help to save valuable resources!

Please ask for our detailed brochure.

HettCube Incubators and cooled incubators
All models at a glance







MODEL	HettCube 200 / 200 R	HettCube 400 / 400 R	HettCube 600 / 600 R
Temperature range for incubators / cooled incubators	1 K above ambient temperature up to +65 °C / 0 °C to +65 °C	1 K above ambient temperature up to +65 °C / 0 °C to +65 °C	1 K above ambient temperature up to +65 °C / 0 °C to +65 °C
Exterior dimensions (incl. adjustable feet and bushing on rear panel) W x D x H in mm	710 x 825 x 970	710 x 825 x 1425	710 x 825 x 1990
Interior dimensions W x D x H in mm	535 x 690 x 420	535 x 690 x 850	535 x 690 x 1415
Internal volume in litres	150	310	520
Footprint in m^2	0.6	0.6	0.6
Weight in kg	83 / 94	110 / 121	160 / 171
Number of shelves provided as standard	2	3	4
Temperature fluctuation at +37 °C	± 0.1 K	± 0.1 K	± 0.1 K
Temperature uniformity at +37 °C	± 0.,2 K	± 0.2 K	± 0.2 K
Temperature uniformity at +25 °C	± 0.1 K	± 0.1 K	± 0.1 K
Recovery time after door has been opened for 30 s at +37 °C	≤ 3 min	≤ 4.5 min	≤ 5.5 min
Energy consumption at +37 °C	0.025 kWh	0.038 kWh	0.049 kWh
Noise level	≤ 41 dB(A) / ≤ 44 dB(A)	≤ 41 dB(A) / ≤ 44 dB(A)	≤ 41 dB(A) / ≤ 44 dB(A)
Power supply (other voltages on request)	200–240 V 1~	200–240 V 1~	200–240 V 1~
Frequency	50–60 Hz	50–60 Hz	50–60 Hz
Cat. No.	**62000 / 62005**	**64000 / 64005**	**66000 / 66005**

All temperature values were ascertained at an ambient temperature of + 22 °C in accordance with DIN 12880:2007-5.
The data apply for incubators with standard features.

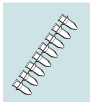
Hettich INCUBATOR

Do you have any questions about Hettich incubators? In Germany, our customer service network will provide advice and technical support. In addition, you will find all the information you need about our HettCubes and other Hettich products on our Web site: **www.hettichlab.com**

Symbols and Abbreviations

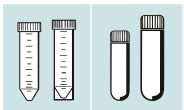

microlitre tubes up to 2.0 ml

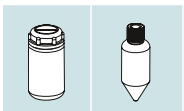

cryo tubes

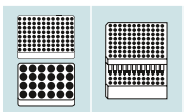

PCR strips

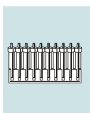

standard tubes

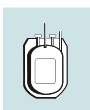

blood collection tubes
urine tubes

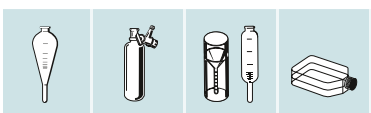

tubes with screw cap


bottles


plates
filter plates


racks


blood bags


special tubes


hematocrit capillaries


cyto accessories
For detailed information on the Hettich cyto system, please refer to the pages 156-158.


swing-out rotor


angle rotor


drum rotor


hematocrit rotor, disk rotor

ABBREVIATIONS

CP	=	Culture Plate
DWP	=	Deep Well Plate
MS	=	Micronic System
MTP	=	Microtitre Plate
QP	=	Filter Plate
PA	=	polyamide
PC	=	polycarbonate
PE	=	polyethylene
PP	=	polypropylene

C C after the model name stands for **underbench centrifuge**.

F F after the model name stands for **floorstanding centrifuge**.

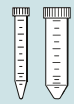
R R after the model name stands for **refrigerated centrifuge**.

S S after the model name stands for **S control panel** (except EBA 20 S).

max. angle the rotor swings out to

Available tubes

	Capacity in ml	Dimensions Ø x L in mm	Description	Cat. No.
	1.5	11 x 38	microlitre tube	**2078**
	2.0	11 x 38		**0536**
	5	12 x 75	tube, glass, cylindrical	**0553**
	6	12 x 82		**0501**
	7	12 x 100		**0578**
	9	14 x 100		**0500**
	10	17 x 70	tube, PP, with stopper, cyl.	**2079**
	12	17 x 100	tube, glass, conical, calibrated	**0503**
	15	17 x 100	tube, glass, cylindrical	**0507**
			tube, glass, cyl., calibrated	**0518**
		17 x 103	tube, glass, conical	**0502**
		16.5 x 112	tube, glass, conical	**0515**
			tube, glass, conical, calibrated	**0516**
	25	24 x 100	tube, glass, cylindrical	**0519**
	50	34 x 100		**0521**
	75	35 x 105	tube, PP, cylindrical	**0548**
	94	38 x 102		**0549**
	100	40 x 115	tube, glass, cylindrical	**0523**
	100	44 x 100		**0526**
	250	56 x 147		**0525**
	250	65 x 115		**0530**
	30	26 x 95	tube with screw cap, PC, cylindrical	**0545**
	50	29 x 107		**0546**
	85	38 x 106		**0547**
	94	38 x 102	tube, PC, with screw thread	**0538**
		-	screw cap for 0538	**0539**

	Capacity in ml	Dimensions Ø x L in mm	Description	Cat. No.
	15	17 x 120	tube with screw cap, PP, conical	**0509**
	50	29 x 115		**0513**
	250	61 x 122	bottle, PP, with screw cap	**5127**
	600	93 x 134		**0551**
	750	97 x 152		**0512**
	450	97 x 113	bucket, PP	**4447**
	750	93 x 137		**4234**
	1,000	96 x 176	bottle, PP, with screw cap	**4239**
	1,000	98 x 138	bucket, stainless steel, with screw cap	**4255**
	2,000	180x150x100 HxWxD	bottle, PP, with screw cap	**0550**
	30	24 x 151	chrome bath tube with stopper	**0508**
				0529
	30	44 x 105	chrome bath tube	**0534**
		-	rubber stopper for 0534	**0535**
	25	24 x 146.5	Schlenk tube	**0532**
	50	38 x 148.5		**0533**
	100	37 x 200	ASTM tube (petroleum tester), glass, calibrated	**0531** conical
	100	58 x 161		**0528** pear-shaped
	-	1.4 x 75	capillaries, heparinized	**1071** self-sealing and mylar-coated
	-	1.4 x 75		**2074**
	3.3	-	disposable Pasteur pipette, PE	**0552**

Please make sure not to exceed the tubes' max. permissible RCF. The capacity of the vessels is given as the nominal volume according to the manufacturer. The filling volume can be different. The chrome bath tubes 0508, 0529 and 0534 may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

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