

TOP
SPIN



Centrifuges Product Catalogue

LABOMODERNE

Hettich

ZENTRIFUGEN

LABOMODERNE

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Company

Andr. Hettich
Metallwaren- und Werkzeug-Fabrik.

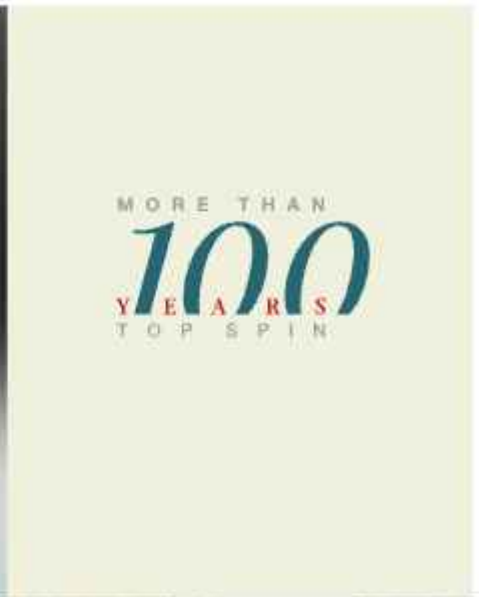


Yesterday, today and tomorrow

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.



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



Under Rule 3 in the Classification section of Annex IX to the EU Directive 93/42/EEC, centrifuges used for the manufacture of blood products for transfusion purposes require approval as Class IIa medical products. Hettich holds this approval for the ROTO SILENTA 630 RS, ROTIXA 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 Register¹⁾ - Foundation for the implementation of the 2002/96/EC directive (ElektroG²⁾), regarding the disposal of electrical and electronic equipment in the EU. With the symbol of the crossed-out bin, it is made clear that centrifuges may not be disposed of with household waste. The disposal regulations in the individual EU countries can vary. Please ask your supplier, if necessary. In this context, we refer to § 14 "Acceptance of returns / obligation to dispose of the goods" of the General Terms and Conditions.

¹⁾ Register of old electronic equipment
²⁾ Electrical and Electronic Equipment Act

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 (N₂) flushing:**

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

- **Heating/cooling variants (H/C):**

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

The heating/cooling variants of the UNIVERSAL 320 R feature no cooling unit and no built-in heater.

An external refrigerated/heating circulator must be provided by the customer. Depending on the circulator performance, the centrifuge is able to heat/refrigerate in a range from 0 °C to +90 °C.

The floorstanding ROTO SILENTA 630 RS and ROTIXA 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								  50 ml	 
MIKRO 220 / 220 R	 max. 50 ml	 max. 50 ml		 max. 50 ml				 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				 50 ml	
ROTINA 380 / 380 R	 max. 250 ml	 max. 50 ml	 max. 50 ml	 max. 94 ml	 max. 250 ml		 max. 225 ml	 50 ml	
ROTINA 420 / 420 R	 max. 250 ml	 max. 50 ml	 max. 50 ml	 max. 94 ml	 max. 600 ml		 max. 225 ml	 50 ml	
ROTANTA 460 / 460 R	 max. 250 ml	 max. 50 ml	 max. 50 ml	 max. 94 ml	 max. 750 ml		 max. 500 ml	 50 ml	
ROTANTA 460 RC / 460 RF	 max. 250 ml	 max. 50 ml	 max. 50 ml	 max. 94 ml	 max. 250 ml			 50 ml	
ROTANTA 460 Robotic	 max. 250 ml	 max. 50 ml	 max. 50 ml	 max. 94 ml	 max. 250 ml			 50 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	 50 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. 250 ml				

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 keypad. 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(economy) 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

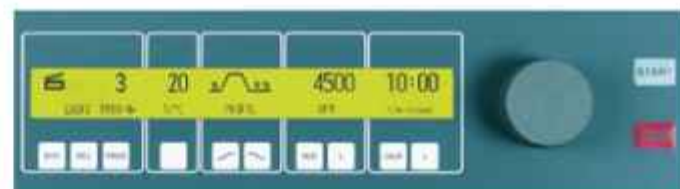
The W control panel is used to program the special functions of the cell washer ROTOLAVIT.

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

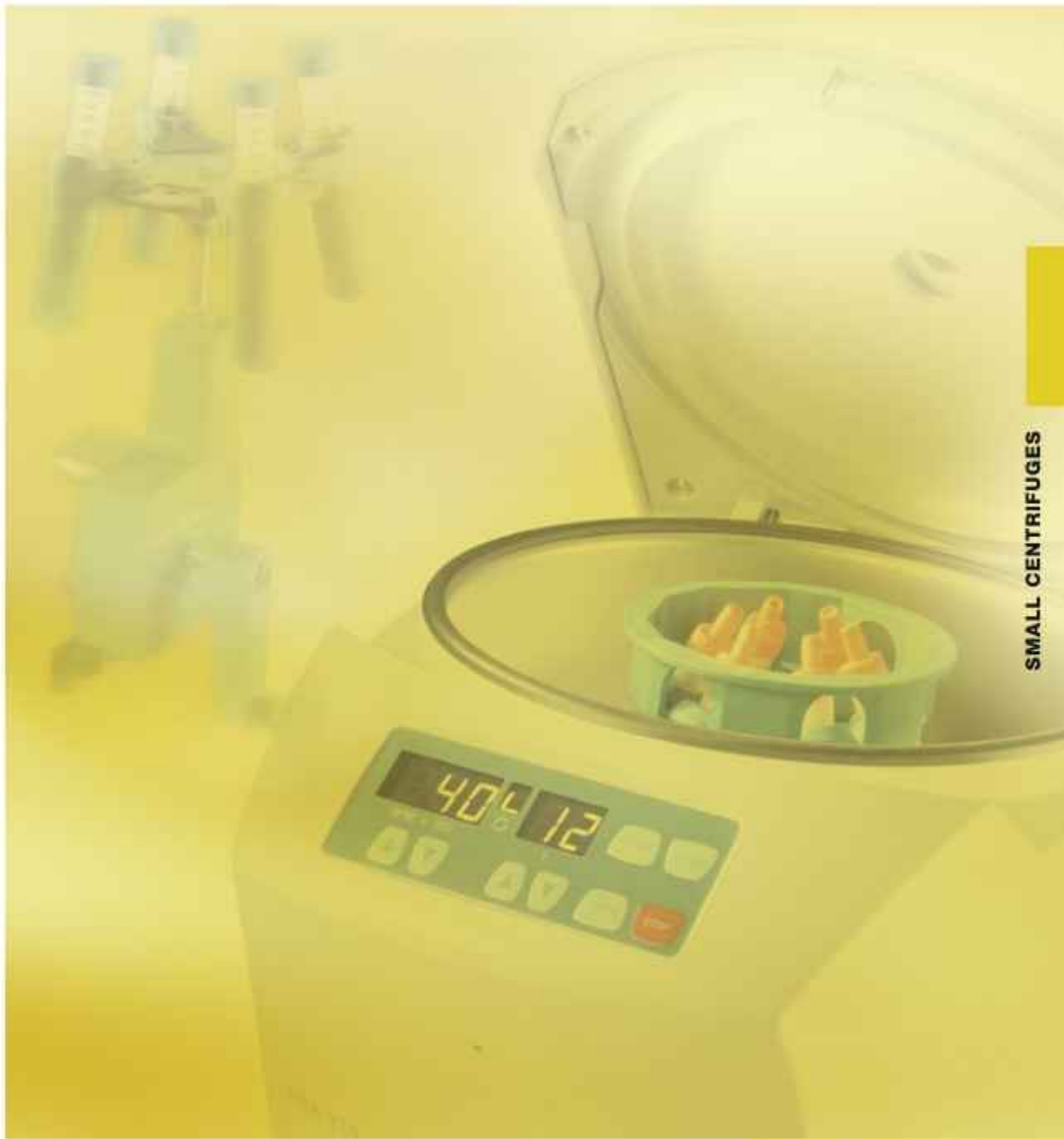
STO	Stores the program.
RCL	Calls up the selected program.
PROG	Selects the program menu.
	Entry of the temperature from -20 °C to +40 °C in increments of 1 °C with refrigerated centrifuges. Entry of the rotor radius in mm in RCF mode.
RCF	Switches from RPM to RCF display. Entry of the RCF in increments 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.
JRCF	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



SMALL CENTRIFUGES

HANDZENTRIFUGE

EBA 20 / EBA 20 S

EBA 270

EBA 21

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Tél. 01 42 50 50 50

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

↔ 90°

max. capacity 4 x 15 ml (conical only)
max. RPM (speed) 3,000 min⁻¹
max. RCF 1,298

Cat. No. 1014

Rotor, 4-place

↔ 50°

max. capacity 4 x 15 ml
max. RPM (speed) 3,000 min⁻¹
max. RCF 1,077

Cat. No. 1025

HANDZENTRIFUGE

Manual centrifuge, without rotor

Dimensions (HxWxD)	285 x 140 x 175 mm
Weight	approx. 0.9 kg

Cat. No.	1011
-----------------	-------------

EBA 20 / EBA 20 S



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.




EBA 20

TECHNOLOGY

EBA 20

EBA 20 S

Small centrifuge, with rotor		EBA 20		EBA 20 S	
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 (HxWxD)		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
∅ x L in mm	10 x 88	12 x 75	12 x 82	17 x 100	8 x 66	13 x 66	11 x 66	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102
Cat. No.	-	0553 ²⁾	0501 ²⁾	0516 ²⁾	blood collection/urine tubes							
rotor incl.												
Cat. No.	6305	1054-A	-	-	1054-A				-			
boring ∅ 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
∅ 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.					
Cat. No.	1054-A	1058	-		
boring ∅ 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:



Hettich

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.

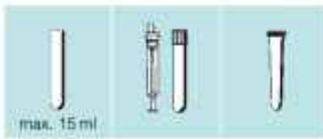
Please ask for our detailed brochure.

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Tél. 01 42 50 50 50

EBA 270



Optimal sample preparation starts in the medical practice


The EBA 270 is a small centrifuge with a swing-out rotor especially designed for use in medical practices. It accepts common blood or urine tubes up to a volume of 15 ml and accelerates them to a maximum speed of 4,000 min⁻¹. This corresponds to a RCF of 2,254.

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



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 (HxWxD)	239x326x389 mm
Weight	approx. 14 kg
Cat. No.	2300 2300-01

* Other voltages on request.

EBA 270




















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



↻ 90°

illustrated with blood collection tubes

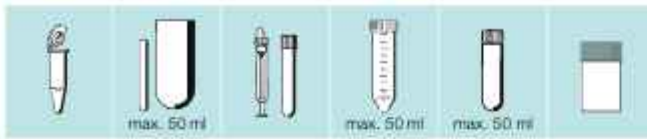
n = 4,000 min⁻¹
max. RCF 2,254

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.	-	0553²⁾	0501²⁾	0518²⁾	blood collection / urine tubes														
 rotor and carriers incl.																			
Cat. No.	2331	2333	2331	2333							2331				2333	2331	2333	2331	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																		

EBA 270

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	6 x 50 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
Angle rotor, 12-place

 $\pm 35^\circ$


 n = 6,000 min⁻¹
 max. RCF 4,025


Cat. No. 1116

 $\pm 35^\circ$

 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	13x75	13x100	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												
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	8
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
Angle rotor, 24-place
Angle rotor, 30-place

 $\angle 45^\circ$

 n = 18,000 min⁻¹
 max. RCF 25,718

Cat. No. 1022-A

 $\angle 40^\circ$

 n = 15,000 min⁻¹
 max. RCF 21,382

Cat. No. 1024-A

 $\angle 45^\circ$

 n = 14,000 min⁻¹
 max. RCF 21,255

Cat. No. 1089-A

 with bio-containment²¹

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
∅ x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				2078	0536
rotor Cat. No. 1022-A						
Cat. No.	2024	2023	2031 ²¹	-		
boring ∅ x L in mm	6x40	8x40	10.2x19	11.2x39.5		
tubes per rotor	12					
max. RCF ²¹	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
∅ x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				2078	0536
rotor Cat. No. 1024-A						
Cat. No.	2024	2023	2031 ²¹	-		
boring ∅ x L in mm	6x40	8x40	10.2x19	11.2x41.1		
tubes per rotor	24					
max. RCF ²¹	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
∅ x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				2078	0536
rotor Cat. No. 1089-A						
Cat. No.	2024	2023	2031 ²¹	-		
boring ∅ x L in mm	6x40	8x40	10.2x19	11.2x40.9		
tubes per rotor	30					
max. RCF ²¹	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-containment²¹,
 autoclavable

 lid Cat. No. 2423
 with bio-containment²¹,
 autoclavable,
 phenol-resistant

²¹ 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 footcote²¹ is 4,000.

Angle rotor, 12-place

Swing-out rotor, 8-place

Swing-out rotor, 6-place



↙ 35°

n = 5,000 min⁻¹
max. RCF 2,879

Cat. No. 1118



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

n = 5,000 min⁻¹
max. RCF 2,991





Cat. No. (without carriers) 1114











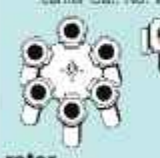














↙ 40°

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.	0553²⁾	0501²⁾	0578²⁾
 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.	0553²⁾	2079	blood collection tubes				
 rotor Cat. No. 1114							
Cat. No.	1127	1122	1127	1127	1122	1127	1122
boring Ø x L in mm	13.2x53	17.5x53	13.2x53	17.5x53	13.2x53	17.5x53	17.5x53
tubes per rotor	8						
max. RCF ²⁾	2,963	2,991	2,963	2,991	2,963	2,991	2,991
radius in mm	106	107	106	107	106	107	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.	0553²⁾	0501²⁾	2079	0518²⁾	blood collection/urine tubes									
 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	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													

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

¹⁾ For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

Swing-out rotor, 8-place

Swing-out rotor, 12-place

Hematocrit rotor, 24-place



↻ 90°

n = 5,000 min⁻¹
max. RCF 2,879

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



↻ 60°










n = 5,000 min⁻¹
max. RCF 2,963






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




n = 15,000 min⁻¹
max. RCF 21,382

Cat. No. **1450**

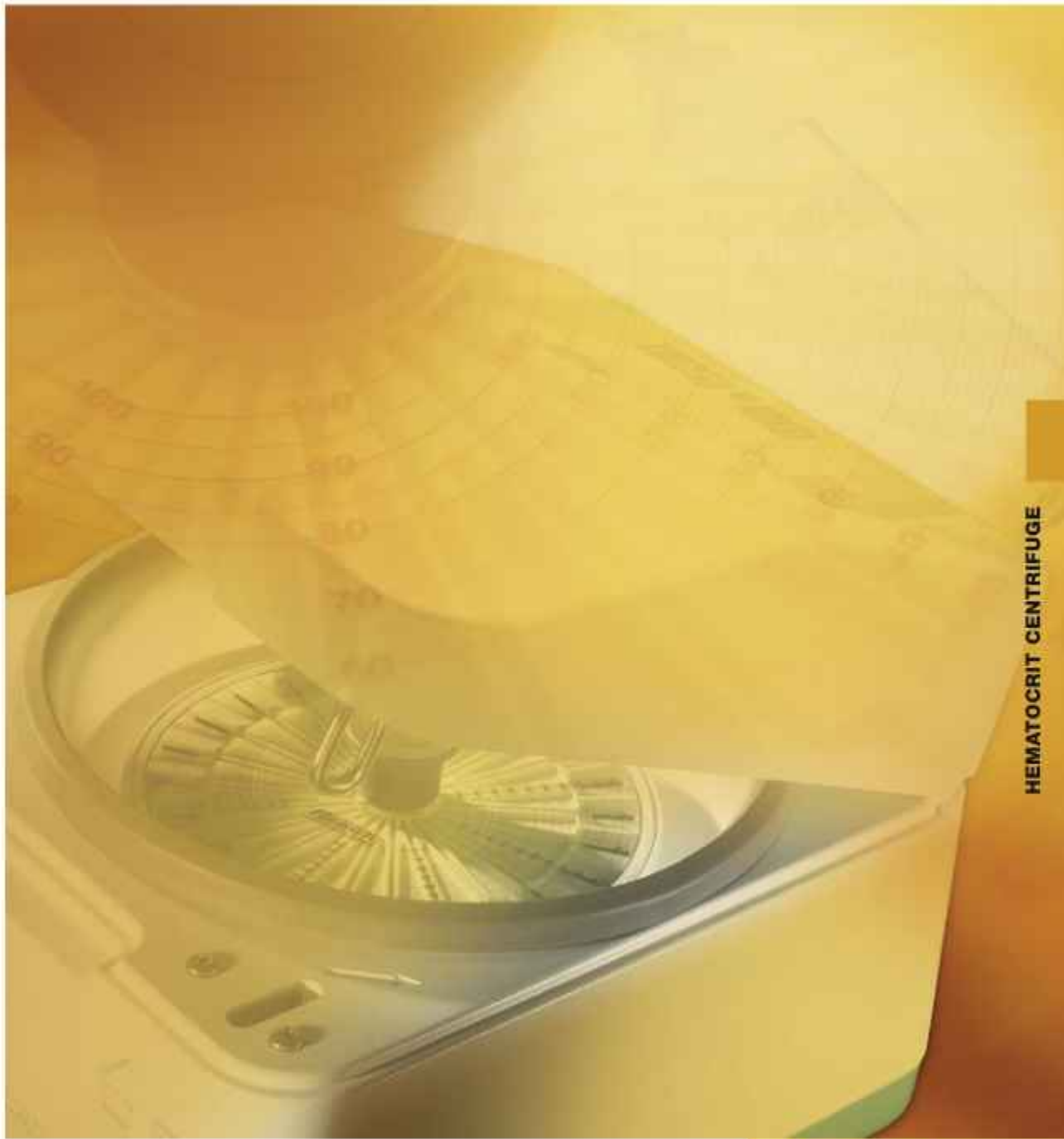
capacity in ml	5	6	10	2.6-3.4	2.7-3	4-5.5	1.6-5	4-7
∅ x L in mm	12x75	12x82	17x70	13x85	11x86	15x75	13x75	16x75
Cat. No.	0553²⁾	0501²⁾	2079	blood collection tubes				
 rotor Cat. No. 1120								
Cat. No.	1131	1132	1131	1132	1131	1132	1131	1132
boring ∅ x L in mm	13x53	17.5x53	13x53	17.5x53	13x53	17.5x53	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
∅ x L in mm	12x75	13x85	11x86	13x75
Cat. No.	0553²⁾	blood collection tubes		
 rotor Cat. No. 1126				
Cat. No.	1127			
boring ∅ 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 ∅ 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



HEMATOCRIT CENTRIFUGE

HAEMATOKRIT 210

LABOMODERNE

www.labomoderne.com - info@labomoderne.com

Tél. 01 42 50 50 50

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.



HAEMATOKRIT 210

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 (HxWxD)	247x275x330 mm	
Weight	approx. 10 kg	

Cat. No.	2104	2104-01
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^{*)} Other voltages on request.

Hematocrit rotor, 24-place

Disk rotor, 20-place, for buffy coat analysis



n = 13,000 min⁻¹
max. RCF 16,060

Cat. No. 2076



n = 13,000 min⁻¹
max. RCF 16,060

Cat. No. 2056¹²⁾

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. 2056¹²⁾		
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.



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

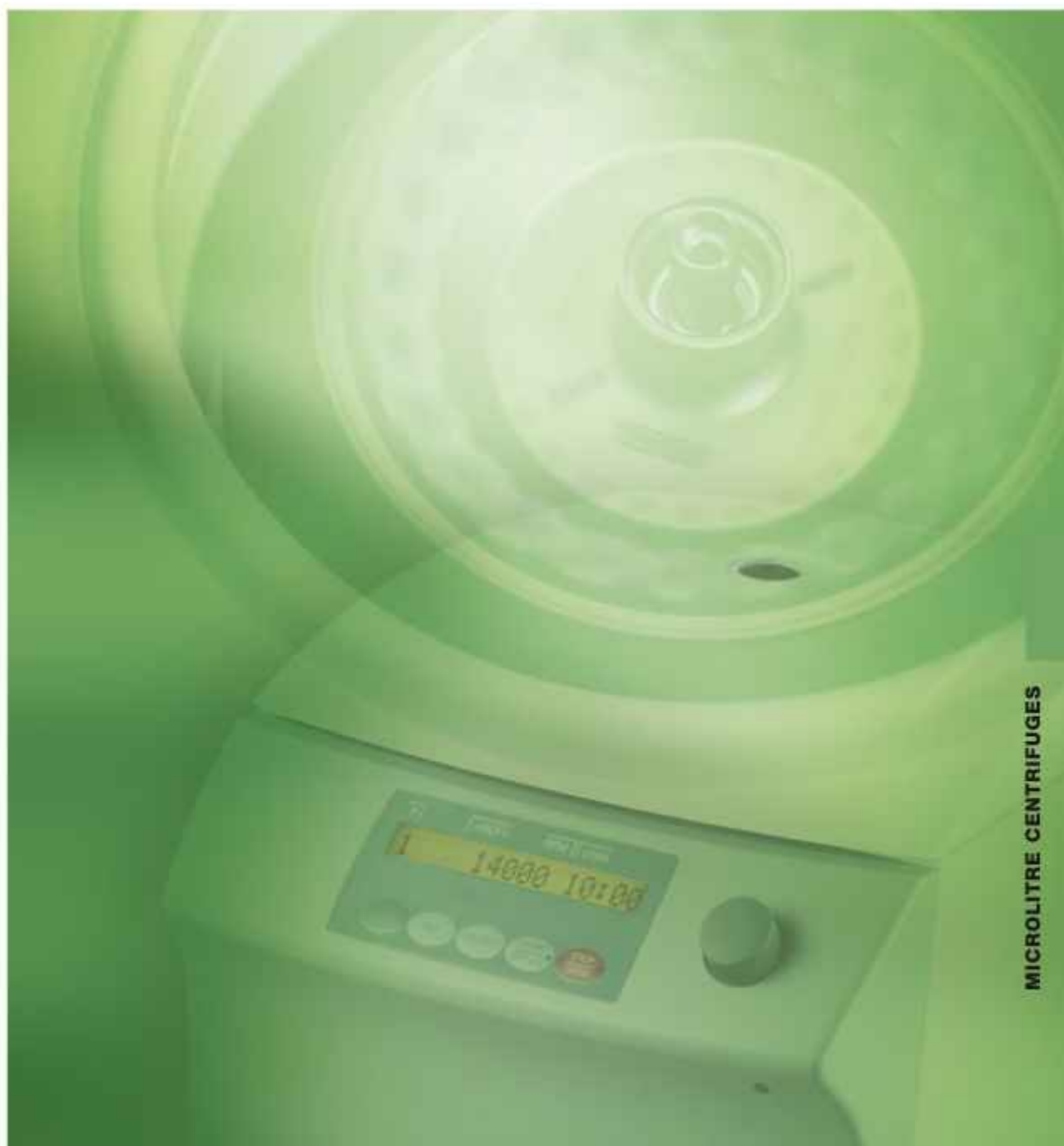
Cat. No. 4613-K



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

LABOMODERNE

www.labomoderne.com - info@labomoderne.com

Tél. 01 42 50 50 50

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 (HxWxD)	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^{§1}
autoclavable, phenol-resistant

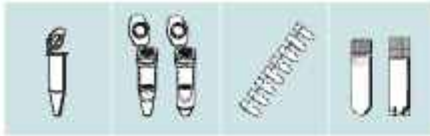
Cat. No. 1242

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 ^{§1} incl.						
rotor Cat. No. 1242						
Cat. No.	2024	2023	2031^{§1}	-		
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					

^{§1} Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

^{§2} For centrifugation at high speeds, we recommend to use form-filling, phenol-resistant adapters 2031.

MIKRO 200/200 R




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)			
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
Angle rotor, 24-place
Angle rotor, 30-place

 $\angle 40^\circ$

 n = 15,000 min⁻¹
 max. RCF 21,382

Cat. No. 2424-B

 $\angle 45^\circ$

 n = 15,000 min⁻¹
 max. RCF 21,382

Cat. No. 2428

 with bio-containment¹⁾,
 autoclavable,
 phenol-resistant

 $\angle 52,5^\circ$
 (inner row)
 $\angle 40^\circ$
 (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	2031¹⁾	-	-	-
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	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. 2427-A						
Cat. No.	2024	2023	2031¹⁾	-	-	-
boring Ø x L in mm	6 x 40	8 x 40	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 ²⁾ incl.								
rotor Cat. No. 2428								
Cat. No.	2024	2023	2031¹⁾	-	2031¹⁾	-	-	-
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.

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

³⁾ For centrifugation at high speeds, we recommend to use form-filling, phenol-resistant adapters 2031.

Angle rotor, 30-place
Angle rotor, 20-place, for cryo tubes
Angle rotor, 4-place, for PCR strips

 $\pm 45^\circ$

 n = 15,000 min⁻¹
 max. RCF 20,376

Cat. No. 2430-B

 $\pm 40^\circ$

 n = 15,000 min⁻¹
 max. RCF 21,130

Cat. No. 2426-B

 $\pm 45^\circ$

 n = 15,000 min⁻¹
 max. RCF 14,338

Cat. No. 2418-A

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

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

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-containment²⁾,
 autoclavable

lid Cat. No. 2423
 with bio-containment²⁾,
 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.
²⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

MIKRO 220/220 R



Powerful microlitre specialists

MIKRO 220 and 220 R are powerful, compact benchtop centrifuges for processing microlitre tubes of 0.2 ml to 2.0 ml. The refrigerated MIKRO 220 R also accepts standard tubes up to a volume of 50 ml. Thanks to its performance, capacity and efficient cooling, the MIKRO 220 R is ideally suited for DNA and RNA extraction.



TECHNOLOGY

TECHNOLOGY	MIKRO 220		MIKRO 220 R	
	classic		cooled	
Microlitre centrifuge, without rotor				
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	60x1.5/2.0 ml			
Max. capacity	48x1.5/2.0 ml		48x1.5/2.0 ml, 6x50 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 (HxWxD)	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

Cat. No. 1195-A

with bio-containment[§]

Angle rotor, 30-place



∠45°

n = 14,000 min⁻¹
max. RCF 21,255

Cat. No. 1189-A

with bio-containment[§]

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
∅ 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[†]	-		
boring ∅ 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 ^{††}	-5					

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
∅ x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				2078	0536
lid with bio-containment [§] incl.						
rotor Cat. No. 1195-A						
Cat. No.	2024	2023	2031[†]	-		
boring ∅ 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 ^{††}	+3					

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
∅ x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				2078	0536
lid with bio-containment [§] incl.						
rotor Cat. No. 1189-A						
Cat. No.	2024	2023	2031[†]	-		
boring ∅ 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 ^{††}	+3					

^{††} Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

[§] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

[†] For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031. The capacity of rotor 1189-L is reduced to 40 tubes when these adapters will be used.

Angle rotor, 48-place, 2-row

Angle rotor, 20-place, for cryo tubes

Swing-out rotor, 24-place



↗ 45°

n = 14,000 min⁻¹ with bio-containment[®]
max. RCF outer 21,255 / inner 18,845

Cat. No. 1158-L



↗ 40°

n = 14,000 min⁻¹
max. RCF 18,407

Cat. No. 2219-A



↘ 90°

n = 13,000 min⁻¹ with bio-containment[®]
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 [®] incl.						
rotor Cat. No. 1158-L						
Cat. No.	2024	2023	2031^{†)}	-		
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 ^{†)}	-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[®] incl.						
rotor Cat. No. 1154-L						
Cat. No.	2024	2023	2031^{†)}	-		
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					

Optional for rotor 2219-A



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

Optional for rotor 2219-A and 1154-L



lid **Cat. No. 2423**
with bio-containment[®],
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 38
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 ^{†)}	-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
∅ x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				2078	0536
rotor Cat. No. 1161	lid incl.					
Cat. No.	1378	1379	1377			
boring ∅ 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
∅ x L in mm	6 x 18	-
Cat. No.	-	PCR strips
rotor Cat. No. 1160	lid (optional)	
Cat. No.	-	
boring ∅ x L in mm	6.5 x 15.5	
tubes per rotor	48	6 x 8
max. RCF	18,845	
radius in mm	86	
run-up in sec	20	
run-down in sec, braked	22	
temperature in °C ¹⁾	-4	

standard capillaries; heparinised	basic	self-sealing and mylar-coated
Cat. No.	2074	1071
rotor Cat. No. 1023	lid as evaluation disk incl.	
Cat. No.	2077	-
boring ∅ x L in mm	-	
capillaries per rotor	24	
max. RCF	21,382	
radius in mm	86	
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°	∠35°
	n = 6,000 min ⁻¹ max. RCF 4,025	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
∅ x L in mm	12x100	17x100	24x100	34x100	16x92	15x102	17x120	29x115	26x95	29x107
Cat. No.	0578²⁾	0518²⁾	0519²⁾	0521²⁾	blood collection/urine tubes		0509	0513	0545	0546
 rotor Cat. No. 1016										
Cat. No.	1632	1635	1633	-	1635	1631	1641	1633	1634	1634
boring ∅ 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
∅ x L in mm	12x75	17x100	8x66	13x65	11x66	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x100	17x120
Cat. No.	0553²⁾	0518²⁾	blood collection/urine tubes										0509	
 rotor Cat. No. 1015														
Cat. No.	1054-A	-	1054-A			-					1054-A	1058	-	-
boring ∅ 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													

Swing-out rotor, 12-place

Swing-out rotor, 8-place

**Accessories for
MIKRO 220 R only:**

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


 $\pm 60^\circ$







n = 5,000 min⁻¹
max. RCF 2,963


















Cat. No. (without carriers) **2226**


 $\pm 90^\circ$

n = 5,000 min⁻¹
max. RCF 2,879

Cat. No. (without carriers) **1020**

capacity in ml	5	2,6–3,4	2,7–3	1,6–5
Ø x L in mm	12 x 75	13 x 65	11 x 66	13 x 75
Cat. No.	0553²⁾	blood collection tubes		
				
rotor Cat. No. 2226				
Cat. No.	1127			
boring Ø x L in mm	13,2 x 53			
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	12 x 75	12 x 82	17 x 70	13 x 65	11 x 66	15 x 75	13 x 75	16 x 75
Cat. No.	0553²⁾	0501²⁾	2079	blood collection tubes				
								
rotor Cat. No. 1020								
Cat. No.	1131	1132	1131	1132	1131	1131	1132	1132
boring Ø x L in mm	13 x 53	17,5 x 53	13 x 53	17,5 x 53	13 x 53	13 x 53	17,5 x 53	17,5 x 53
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



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

LABOMODERNE

www.labomoderne.com - info@labomoderne.com

Tél. 01 42 50 50 50

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.



ROTOFIX 32 A

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 (HxWxD)	257 x 366 x 430 mm	
Weight	approx. 23 kg	
Cat. No.	1206	1206-01

* Other voltages on request.






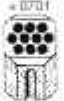



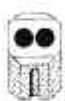

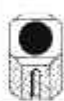


Swing-out rotor, 4-place









 $\pm 90^\circ$





 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.	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	-	0519²⁾	-	0521²⁾	blood/urine tubes			
 rotor Cat. No. 1624													
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 chambers²³⁾
 rotor Cat. No. 1624							
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[®]

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	-	0553²⁾/0501³⁾/0578³⁾		0500²⁾	0518²⁾	0519²⁾	0521²⁾	0549	0526²⁾	blood/urine tubes			
lid with bio-containment [®] Cat. No. 1492																
carrier Cat. No. 1481																
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[®]	
lid with bio-containment [®] Cat. No. 1492																
carrier Cat. No. 1481																
Cat. No.	1329	1329⁴⁾	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 footcote[®] 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-containment²¹

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	-	-	0553²¹	0501²¹	0578²¹	0500²¹	0518²¹	0519²¹	0521²¹	0549	0526²¹
lid with bio-containment ²¹ Cat. No. 1492														
carrier Cat. No. 1490														
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 ²¹	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 ²¹ Cat. No. 1492													
carrier Cat. No. 1490													
Cat. No.	1457		1383			1459	1329	1329²¹		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 ²¹	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												

²¹ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

²¹ 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 ²⁾	
lid with bio-containment ³⁾ Cat. No. 1492													
carrier Cat. No. 1490													
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																
Cat. No.	1486	1482A	1486	1482A	1486	1482A	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	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	20	16	20	16	20	16	12	
max. RCF ²⁾	2,486	2,522	2,486	2,272	2,486	2,272	2,486	2,522	2,486	2,522	2,486	2,397	2,451			
radius in mm	139	141	139	127	139	127	139	141	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°

n = 4,000 min⁻¹
max. RCF 2,701








±90°




n = 4,000 min⁻¹
max. RCF 2,415













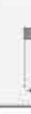


Swing-out rotor 1324

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	1484⁶⁾
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.	0553²⁾	0501²⁾	0578²⁾	2079	-	0518²⁾	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	1,914	2,415	
radius in mm	107	135	107	135	107			135	107	135	107	135	107	135	
run-up in sec	22														
run-down in sec, braked	25														

²⁾ 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

Swing-out rotor, 12-place

Angle rotor, 8-place



↙ 45°

n = 4,000 min⁻¹
max. RCF 2,469

Cat. No. (with carriers) 1617



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

n = 4,000 min⁻¹
max. RCF 2,683


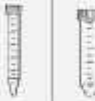
Cat. No. (without carriers) 1628






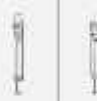
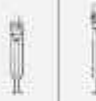











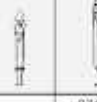






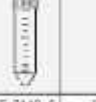



↙ 45°

n = 4,000 min⁻¹
max. RCF 2,612

Cat. No. (without adapters) 1418

capacity in ml	15	50
∅ x L in mm	17x120	29x115
Cat. No.	0509	0513
 rotor Cat. No. 1617		
Cat. No.	1462-A	-
boring ∅ x L in mm	17 x 84	30x94.5
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
∅ x L in mm	12 x 75	17 x 70	17 x 100	13x65	11 x 66	15x75	15 x 92	13 x 75	16 x 75	16 x 100
Cat. No.	0553²⁾	2079	0518²⁾	blood collection/urine tubes						
 rotor Cat. No. 1628										
Cat. No.	1127	1122	1621	1127	1122	1621	1127	1122	1621	1621
boring ∅ 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	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	2,683
radius in mm	125	126	150	125	126	150	125	126	150	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
∅ x L in mm	12x75	17x100	8x66	13x65	11x66	16x92	13x75	13x100	16x100	17x102	17x120	29x115	17x100	29x115	29x107
Cat. No.	0553²⁾	0518²⁾	blood collection/urine tubes							0509	0513	-	-	0546	
 rotor Cat. No. 1418															
Cat. No.	1467	1467	1467			1467					1468	1467	1468		
boring ∅ x L in mm	17.4x91	17.4x91	17.4x91			17.4x91					30.2x92	17.4x91	30.2x92		
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	13x85	11x86	11x92	13x90	15x92	16x92	15x102
Cat. No.	-	0553²⁾	0501²⁾	0518²⁾	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
∅ 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	-	0518²⁾	0521²⁾	0548	0549	blood/urine tubes			
 rotor Cat. No. 1620A											
											
Cat. No.	1449		1451	1463	-	1451					
boring ∅ 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	90	50	85
∅ 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	1646³⁾	1448	1447	1446
boring ∅ x L in mm	17 x 106	29.8 x 97	-	16.5 x 74	26 x 85	29 x 92
tubes per rotor	6	3	6	12	6	6
max. RCF ²⁾	3,985	3,985	3,985	3,904	3,824	4,025
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.

³⁾ 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

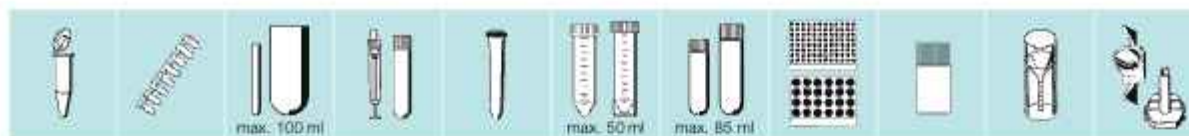
Cat. No. 1648 (with suspensions)



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 (HxWxD)	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	8	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	-	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	cyto chambers²⁾	
														
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	1438	1441	1439	1438		1441	1442	1443	1443	1737	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		16,5 x 50	17 x 90	30 x 90	30 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.

³⁾ 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	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	8 x 66	13 x 65	11 x 66	15 x 75
Cat. No.	2078/0536	-	Rhesus	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	0500 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	blood collection/urine tubes		
Id 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	11.5 x 38	6.5 x 23	10.5 x 23	13.4 x 58	12.5 x 44	12.4 x 87	15 x 73	17.8 x 87	25.5 x 87	35.5 x 87	9 x 41	13.4 x 58	12.5 x 44	15.6 x 41
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	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	25 x 90	25 x 110	29 x 115
Cat. No.	blood collection/urine tubes								0509	0513	-	-	-
Id 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	12.4 x 87	13.4 x 58	15.6 x 41	17 x 86	13.4 x 58	17 x 86	17.8 x 87	17 x 90	30 x 90	25.5 x 72	25.5 x 85	35.5 x 87	
tubes per rotor	48	32	20		32	20	24	4	8	4	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-containment⁴⁾

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	11x38		6x45	10x60	12x75/82/100		14x100	17x100	24x100	34x100	38x102	44x100	8x66	11x66/92	13x65/90	15x75/92
Cat. No.	2078	0536	Rhesus	-	0553⁴⁾/0501⁵⁾/0578⁶⁾		0500²⁾	0518²⁾	0519²⁾	0521²⁾	0549	0526²⁾	blood/urine tubes			
lid with bio-containment ⁴⁾ Cat. No. 1492																
carrier Cat. No. 1495																
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	138	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	16x92	15x102	13x75/100	16x75/100	17x120	25x110	29x115	17x100	25x90	25x110	29x115	16x80	26x95	29x107	38x106	44x105
Cat. No.	blood/urine tubes				0509	-	0513	-	-	-	-	-	0545	0546	0547	0534⁴⁾
lid with bio-containment ⁴⁾ Cat. No. 1492																
carrier Cat. No. 1495																
Cat. No.	1329	1329⁵⁾	1383	1348	1347	1365	1384	6311	1363	1365	6318	1348	4417	4416	1396	0765
boring Ø x L in mm	17.6x91		13.4x48	16.5x56	17x90	26x80	30x90	17x80	26x72	26x80	29.5x80	16.5x56	26x83	29x93	38.5x92	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°






$n = 4,000 \text{ min}^{-1}$
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	2.8–3.4	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.	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	-	0519²⁾	-	0521²⁾	blood/urine tubes			
 rotor Cat. No. 1624													
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	40	40	28
max. RCF ²⁾	2,057	2,164	2,308	2,415	2,308	2,451	2,381	2,451	2,381	2,451	2,451	2,415	2,325
radius in mm	115	121	129	135	129	137	132	137	132	137	132	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	-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 chambers²⁾
 rotor Cat. No. 1624						
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	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 pre-cooled 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-containment²⁾

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	2.8-4.9	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	-	0553²⁾/0501²⁾/0578³⁾		0500²⁾	0518²⁾	0519²⁾	0521²⁾	0549	0526²⁾	blood/urine tubes			
lid with bio-containment ²⁾ Cat. No. 1492																
carrier Cat. No. 1481																
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	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	0534²⁾	
lid with bio-containment ²⁾ Cat. No. 1492																
carrier Cat. No. 1481																
Cat. No.	1329	1329⁴⁾	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	20															
run-down in sec, braked	25															
temperature in °C ¹⁾	-15															

¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

²⁾ 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.

³⁾ Please ask for our detailed cyto brochure.

Swing-out rotor, 4-place



↻ 90°

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

illustrated with carriers 1490 and lids 1492
with bio-containment²⁾

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	11 x 38		6 x 45	10 x 60	10 x 88	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	38 x 102	44 x 100
Cat. No.	2078	0536	Rhesus	-	-	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0549	0526²⁾
lid with bio-containment ²⁾ Cat. No. 1492														
carrier Cat. No. 1490														
Cat. No.	1351	1339	1343	1343	1343	1383	1383	1329	1329	1330	1331	1396	1396	0761
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 100.5	
tubes per rotor	20		108	36		20		16		4		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	8 x 66	13 x 85	13 x 90	11 x 66	11 x 92	15 x 75	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100
Cat. No.	blood collection/urine tubes												
lid with bio-containment ²⁾ Cat. No. 1492													
carrier Cat. No. 1490													
Cat. No.	1457	1383	1383	1383	1459	1329	1329⁴⁾	1383	1348	1383	1348	1348	1348
boring Ø x L in mm	9 x 47	13.4 x 48		15.6 x 47		17.6 x 91		13.4 x 48		16.5 x 56		16.5 x 56	
tubes per rotor	28	20		16		16		20		16		16	
max. RCF ²⁾	3,215	3,192		3,215		3,170	3,328	3,192		3,147		3,147	
radius in mm	142	141		142		140	147	141		139		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.

⁴⁾ 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	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-containers ⁴⁾ Cat. No. 1492													
carrier Cat. No. 1490													
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 ⁵⁾	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	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	13 x 85	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																
Cat. No.	1486	1482A	1486	1482A	1486	1482A	1486	1482A	1486	1482A	1486	1482A	1486	1482A	1487	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	
tubes per rotor	20		16		20		16		20		16		20		12	
max. RCF ⁵⁾	3,147		3,192		3,147		2,875		3,147		3,192		3,147		3,102	
radius in mm	139		141		139		127		139		141		139		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

Swing-out rotor, 8-place

Swing-out rotor, 12-place



↙ 90°

n = 4,000 min⁻¹
max. RCF 2,701

Cat. No. (with carriers) **1619**



↙ 45°

n = 5,000 min⁻¹
max. RCF 3,857










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






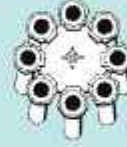



↙ 55°
(with carriers 1127)
↙ 60°
(with carriers 1122)
↙ 80°
(with carriers 1621)






















n = 5,000 min⁻¹
max. RCF 4,193

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

capacity in ml	15	50	12	50
∅ x L in mm	17x120	29x115	17x100	29x115
Cat. No.	0509	0513	-	-
				
carrier Cat. No. 1398				
Cat. No.	1483A	1484	1482A	1484¹⁾
boring ∅ x L in mm	17x100	30x98	17.5x81	30x98
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
∅ x L in mm	17x120	29x115
Cat. No.	0509	0513
		
rotor Cat. No. 1619		
Cat. No.	1462-A	-
boring ∅ x L in mm	17 x 84	30x 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
∅ x L in mm	17x120	29x115
Cat. No.	0509	0513
		
rotor Cat. No. 1617		
Cat. No.	1462-A	-
boring ∅ x L in mm	17 x 84	30x 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
∅ x L in mm	12 x 75	17x70	17x100	13x65	11x66	15x75	15x92	13x75	16x75	16 x100
Cat. No.	0553²⁾	2079	0518²⁾	blood collection/urine tubes						
										
rotor Cat. No. 1628										
Cat. No.	1127	1122	1621	1127	1122	1621	1127	1122	1621	
boring ∅ 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
Swing-out rotor, 2-place

 $\pm 90^\circ$
































 n = 4,000 min⁻¹
 max. RCF 2,415



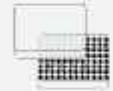
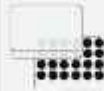








Cat. No. (without carriers) **1611**

 $\pm 90^\circ$

 n = 4,000 min⁻¹
 max. RCF 2,218

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

capacity in ml	5	8	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.	0553²⁾	0501²⁾	0578²⁾	2079	-	0518²⁾	blood collection/urine tubes								
															
rotor Cat. No. 1611															
Cat. No.	1131	1643	1132	1643	1644	1131	1132	1643	1644	1131	1643	1132	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	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	2,415
radius in mm	107	135	107	135					107	135	107	135	107	135	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		2031¹⁾	-
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		2031¹⁾	-
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-containment³⁾,
autoclavable



lid **Cat. No. 2423**
with bio-containment³⁾,
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.

³⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-320.

Angle rotor, 30-place
Angle rotor, 8-place

 $\pm 45^\circ$

 n = 14,000 min⁻¹
 max. RCF 21,255

 with bio-containment[®]
Cat. No. 1689-A

 $\pm 45^\circ$

 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-containers [®] incl.						
rotor Cat. No. 1689-A						
Cat. No.	2024	2023	2031⁷⁾	-		
boring Ø x L in mm	6 x 40	8 x 40	10.2 x 19	11.2 x 40.9		
tubes per rotor	30					
max. RCF ⁷⁾	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	17 x 100	8 x 66	13 x 65	11 x 66
Cat. No.	0553²⁾	0518²⁾	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	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.	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

 $\pm 35^\circ$

 n = 9,000 min⁻¹
 max. RCF 9,509

Cat. No. 1620A
Angle rotor, 12-place

 $\pm 35^\circ$


















 n = 6,000 min⁻¹
 max. RCF 4,146

















Cat. No. 1613
Angle rotor, 12-place

 $\pm 35^\circ$

 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	
∅ x L in mm	11 x 38		17 x 100	34 x 100	35 x 105	38 x 102	15 x 92	16 x 92	15 x 102	16 x 100	17 x 120	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	
Cat. No.	2078	0536	0518²⁾	0521²⁾	0548	0549	blood/urine tubes				0509	0513	-	0545	0546	0547	
 rotor Cat. No. 1620A																	
Cat. No.	1449	1451	1463	-	1451	1466	1454	1646²⁾	1448	1447	1446	-					
boring ∅ x L in mm	11.4 x 39		17.5 x 92	35 x 89	38.6 x 90.2		17.5 x 92				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	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		
∅ 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	15/16 x 92	15 x 102	13 x 75	13 x 100	16 x 100/125	17 x 120		
Cat. No.	-	0553²⁾	0501²⁾	0518²⁾	blood collection/urine tubes										0509		
 rotor Cat. No. 1613																	
Cat. No.	6305	1054-A	-	1054-A								1054-A	1058		-		
boring ∅ 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		13.5 x 60	13.5 x 79		17.7 x 88		
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.

³⁾ 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

Cat. No. (without suspensions) 1626

illustrated with
suspensions 1660
and lids 1661
for cyto chambers


Cyto rotor, 8-place



n = 4,000 min⁻¹
max. RCF 2,218

Cat. No. (with suspensions) 1648

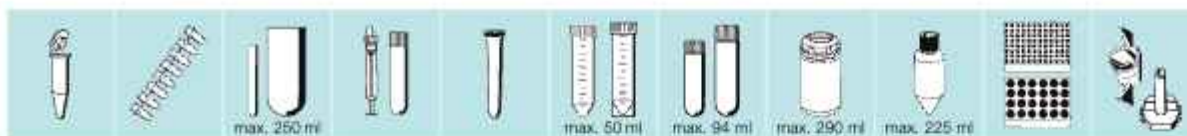
illustrated with
suspensions 1680
for angle chambers

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 ²⁾	
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	

²⁾ Set of 8 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 (HxWxD)	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-containment¹⁾

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	11 x 38		10 x 60	12 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 70	17 x 100	21 x 100	24 x 100	31 x 100	34 x 100	35 x 105	
Cat. No.	2078	0536	-	-	0553²⁾	0501²⁾	0578²⁾	0500²⁾	2079	0518²⁾	-	0519²⁾	-	0521²⁾	0548	
lid with bio-containment ¹⁾ Cat. No. 1751																
carrier Cat. No. 1752																
Cat. No.	1761	1761			1762-A				1763-A		1764			1765		
boring Ø x L in mm	11.2 x 39.5		11.2 x 39.5		12.5 x 56			17.5 x 62			25.5 x 81		35.5 x 81			
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	38 x 102	40 x 115	44 x 100	65 x 115	8 x 66	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	
Cat. No.	0549	0523²⁾	0526²⁾	0530²⁾	blood collection/urine tubes											
lid with bio-containment ¹⁾ 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	38.5 x 80	41 x 97	45 x 87	66 x 104.5	9 x 49	13.5 x 54	12.5 x 58	17.5 x 62	12.5 x 58	13.5 x 54	17.5 x 62		13.5 x 54			
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.

³⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.



illustrated with carriers 1752 and lids 1751
with bio-containment²⁾

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 ²⁾ Cat. No. 1751															
carrier Cat. No. 1752															
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	4.526		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 ¹⁾	Falcon [®]	Nalgene [®]	Nunc [®]	Falcon [®]	5127 ²⁾	3 ²⁾
lid with bio-containment ²⁾ Cat. No. 1751								
carrier Cat. No. 1752								
Cat. No.	1777	1782	1778	1778	1782	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	11 x 38		10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	40 x 115	44 x 100
Cat. No.	-	2078/0536	-	0553¹⁾	0501¹⁾	0578¹⁾	0500¹⁾	0518²⁾	0519²⁾	0521²⁾	0523²⁾	0526²⁾
  carrier Cat. No. 5051												
Cat. No.	5257	5281	5267	5227	5247¹⁾	5264	5248¹⁾	5242	5243	5249	5262	
boring Ø x L in mm	12.5 x 42	11.5 x 50	11 x 44	12.5 x 42	12.5 x 86	16 x 50	17.5 x 86	26 x 86	36 x 86	42 x 86	45.5 x 86	
tubes per rotor	160	64	80	80	80	48	48	20	8		4	
max. RCF ²⁾ upper/lower	1,950/2,826	2,826	2,737	2,773	2,755	2,773			2,755			
radius in mm upper/lower	109/158	158	153	155	154	155			154			
run-up in sec	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	8 x 66	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 100
Cat. No.	blood collection/urine tubes												
  carrier Cat. No. 5051													
Cat. No.	5267	5268	5227	5264	5227	5268	5264	5258	5268	5264	5264	5248	
boring Ø x L in mm	11 x 44	13.5 x 62	12.5 x 42	16 x 50	12.5 x 42	13.5 x 52	16 x 50	17.6 x 86	13.5 x 52	16 x 50	16 x 50	17.5 x 86	
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												

¹⁾ 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.
¹⁴⁾ With Cat. No. 5247-91 or 5248-91 these adaptors can also be ordered with a decanting aid.
¹⁴⁾ Carrier must be loaded as illustrated.
²⁰⁾ 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 ²³
Ø x L in mm	17 x 120	25 x 110	29 x 115	17 x 100	25 x 110	29 x 115	
Cat. No.	0509	-	0513	-	-	-	cyto chambers ²³
lid Cat. No. 5053							
carrier Cat. No. 5051							
Cat. No.	6306	5266	5259	6306	5266	5243	5280
boring Ø x L in mm	17 x 90	26 x 86	30 x 86	17 x 90	26 x 86	36 x 86	-
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 6051 resp. 5092 cannot be closed with lid 5053 resp. 5093.



illustrated with carriers 5092 and lids 5093
with bio-containment⁴⁾

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

capacity in ml	5	8	7	10	15	25	50	100	100	250
Ø x L in mm	12 x 75	12 x 82	12 x 100	17 x 70	17 x 100	24 x 100	34 x 100	44 x 100	40 x 115	65 x 115
Cat. No.	0553²⁾	0501²⁾	0578²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	0530²⁾
lid with bio-containment ⁴⁾ Cat. No. 5093										
carrier Cat. No. 5092										
Cat. No.	5128	5120	5136	5122	5124	5125	5126	5126	5126	1791
boring Ø x L in mm	12.8 x 45	12.8 x 82	17.5 x 60.7	25.5 x 82	35.5 x 85	45.5 x 85	42 x 85	42 x 85	66 x 103	66 x 103
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	17 x 120	25 x 110	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	61 x 122	62 x 137
Cat. No.	0509	-	0513	-	-	-	-	-	5127^{2B)}	5127^{2B)}
lid with bio-containment ⁴⁾ Cat. No. 5093										
carrier Cat. No. 5092										
Cat. No.	5129⁴⁾	5122	5123	5121	5134	5122	5135	5136	6319	6319
boring Ø x L in mm	17 x 85	25.5 x 82	30 x 85	17.5 x 82	26 x 73	25.5 x 82	30 x 99	17.5 x 60.7	66 x 103	66 x 103
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.
²⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
^{2B)} Please ask for our detailed cyto brochure.
^{2B)} At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.








ROTINA 380



illustrated with carriers 5092 and lids 5093
with bio-containment^{B)}

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
∅ 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 ^{B)} Cat. No. 5093 												
carrier Cat. No. 5092 												
Cat. No.	5138		5136		5120	5137	5136		5138		5136	5121-93
boring ∅ 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
∅ x L in mm	13x100	16x125	16x100
Cat. No.	blood/urine tubes		
lid with bio-containment ^{B)} Cat. No. 5093 			
carrier Cat. No. 5092 			
Cat. No.	5120	5121¹⁾	5136
boring ∅ 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.

^{B)} 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.	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	-	0519²⁾	-	0521²⁾	blood coll. tube	0545	
 rotor Cat. No. 1726												
												
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 chambers²⁾	
 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	

¹⁾ Please remove the inserts.
















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










^{2a)} 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
∅ x L in mm	17 x 100	13 x 65	15 x 75	15 x 92	16 x 92	15 x 102	13 x 75	16 x 75	16 x 100	17 x 120
Cat. No.	0518²⁾	blood collection/urine tubes								0509
 carrier Cat. No. 1742										
		 rubber insert				 ²⁴⁾ rubber insert		 rubber insert		 ²⁴⁾
Cat. No.	-	0716		-	-	0716		-	-	-
boring ∅ x L in mm	17.6 x 78									
tubes per rotor	42	42		42		18	42		42	18
max. RCF ²⁾	2,808	2,663		2,808		2,663		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
∅ 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 ∅ 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
∅ x L in mm	14 x 100	8 x 66	11 x 92	13 x 90	13 x 100
Cat. No.	0500²⁾	blood collection tubes			
 carrier Cat. No. 1741					
		 rubber insert		 ²⁴⁾	
Cat. No.	0701	-	-	-	-
boring ∅ x L in mm	14.6 x 78				
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

Swing-out rotor, 2-place



±45°

n = 4,000 min⁻¹
max. RCF 2,916

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















±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											
	 1753-A							 1753-A + 1485			
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
∅ 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.						-			
Cat. No.	1449	1451	1447	1463	-	1451			
boring ∅ 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	
∅ x L in mm	16x100	17x120	29x115	16x80	26x95	29x107	38x106	38x102	
Cat. No.	blood/urine tube	0509	0513	-	0545	0546	0547	0538 ²⁾	
 rotor Cat. No. 1720									
Cat. No.							-		
Cat. No.	1451	1466	1454	1448	1447	1446			
boring ∅ x L in mm	17.5x92	17x106	29.8x97	16.5x74	26x85	29x92	38.4x89		
tubes per rotor	6	6	12	6	6	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-containment¹⁾

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	0518²⁾	0519²⁾	0521²⁾	0548	0549	blood/urine tubes		
lid with bio-containment ²⁾ 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	0538¹⁾	
lid with bio-containment ²⁾ 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 108	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					

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

¹⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

Angle rotor, 30-place

Drum rotor, 6-place



±45°

n = 15,000 min⁻¹
max. RCF 24,400

with bio-containment²⁾

Cat. No. 1789-A



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
∅ x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.					2078	0536
lid with bio-containment ²⁾ incl.						
rotor Cat. No. 1789-A						
Cat. No.	2024	2023	2031 ¹⁾	-		
boring ∅ 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
∅ 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 ∅ 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.

³⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

Angle rotor, 8-place

Cyto rotor, 8-place



±45°

n = 4,500 min⁻¹
max. RCF 3,305

Cat. No. (without adapters) **1721**



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

n = 4,000 min⁻¹
max. RCF 2,415

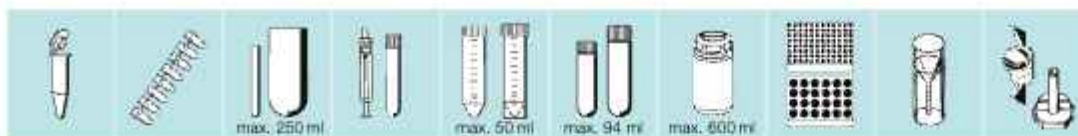
Cat. No. (without suspensions) **1748**

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.	0553⁷⁾	0518⁷⁾	blood collection/urine tube								0509	0513
 rotor Cat. No. 1721												
	+ 1054-A 	+ 0716 		+ 1054-A 		+ 0716 	+ 1054-A 			+ 0716 	+ 0716 	+ E 2109
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 ⁷⁾	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 ⁷⁾	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





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 (HxWxD)	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-containment²⁾

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	11 x 38		10 x 60	10 x 88	12 x 60	12 x 75	12 x 82	12 x 100	17 x 70	17 x 100	24 x 100	34 x 100	35 x 105	38 x 102	40 x 115	44 x 100	65 x 115	
Cat. No.	2078	0536	-			0553²⁾	0501²⁾	0578²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0548	0549	0523²⁾	0526²⁾	0530²⁾	
lid with bio-containment ²⁾ Cat. No. 4751																		
carrier Cat. No. 4781																		
Cat. No.	4773	4761	4762			4763			4764	4765	4766	4767	4768					
boring Ø x L in mm	11.2 x 38		11.2 x 54		13.4 x 55			17.5 x 62		26.5 x 69		36 x 77		42 x 76.5		46 x 76.5		66 x 103
tubes per rotor	96		140		104			72		28		16		12		8		4
max. RCF ²⁾	4,585						4,559						4,534					
radius in mm	178						177						176					
run-up in sec	54																	
run-down in sec, braked	38																	
temperature in °C ¹⁾	+4																	

capacity in ml	1.1-1.4	2.6-3.4	2.7-3	4-5.5	4.5-5	4.9	7.5-8.5	9-10	1.6-7	4-7	8	8.5-10	15	50	12	
Ø x L in mm	8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75/100	16 x 75	16 x 125	16 x 100	17 x 120	29 x 115	17 x 100	
Cat. No.	blood collection / urine tubes												0509	0513	-	
lid with bio-containment ²⁾ Cat. No. 4751																
carrier Cat. No. 4781																
Cat. No.	4761	4762	4761	4763	4761	4762	4763	4762	4775	4763	4763	4763	4769	4770	4774	
boring Ø x L in mm	11.2 x 54	13.4 x 55	11.2 x 54	17.5 x 62	11.2 x 54	13.4 x 55	17.5 x 62	13.4 x 55	13.7 x 54	17.5 x 62			17 x 84	30 x 82.5	172 x 82.5	
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 footnote²⁾ is 4,000.
³⁾ When using these tubes, carrier 4781 cannot be closed with lid 4751.
⁴⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
⁵⁾ Carrier must be loaded as illustrated. ⁶⁾ For blood collection tubes with a cap of diameter greater than 17 mm.

ROTINA 420



illustrated with carriers 4781
and lids 4751
with bio-containment¹⁾



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 ¹⁾	Falcon®	Nalgene®	Nunc®	Falcon®	5127 ²⁾	- ²⁾	- ²⁾	- ²⁾	0551 ²⁾
lid with bio-containment ¹⁾ Cat. No. 4751																	
carrier Cat. No. 4781																	
Cat. No.	4764	4770 ¹⁾	4763	4764	4770 ¹⁾		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	178				184								
run-up in sec									54								
run-down in sec, braked									38								
temperature in °C ¹⁾									+4								

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	59 x 84 x 11	82 x 124 x 20	-
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	48 x 8
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	8	7	9	15	25	50	100	100
Ø x L in mm	11 x 38		11 x 38		10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	40 x 115
Cat. No.	-	-	2078	0536	-	0553⁽¹⁾	0501⁽²⁾	0578⁽³⁾	0500⁽⁴⁾	0518⁽⁵⁾	0519⁽⁶⁾	0521⁽⁷⁾	0526⁽⁸⁾	0523⁽⁹⁾
lid Cat. No. 5053														
carrier Cat. No. 5051														
Cat. No.	5257	5281	5267	5227	5247⁽¹⁰⁾	5264	5248⁽¹¹⁾	5242	5243	5262	5249			
boring Ø x L in mm	12.5 x 42	11.5 x 50	11 x 44	12.5 x 42	12.5 x 86	16 x 50	17.5 x 86	26 x 86	36 x 86	45.5 x 86	42 x 86			
tubes per rotor	160	64	80	80	80	48	48	20	8	4				
max. RCF ⁽²⁾	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	8 x 66	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	16 x 75	13 x 100	16 x 100
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	11 x 44	13.5 x 52	12.5 x 42	16 x 50	12.5 x 42	13.5 x 52	16 x 50	17.6 x 86	13.5 x 52	16 x 50	13.5 x 52	17.5 x 86	
tubes per rotor	80	48	80	48	80	48	48	44		48			
max. RCF ⁽²⁾	2,737	2,808	2,773	2,773	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												

⁽¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

⁽²⁾ The screw cap for tube No. 0536 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

⁽³⁾ With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

⁽⁴⁾ 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 ²⁾
lid Cat. No. 5053						
carrier Cat. No. 5051						
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		97/163
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 ³⁾	0578 ⁴⁾	2079	0518 ²⁾
lid with bio-containment ²⁾ 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 ²⁾ Cat. No. 5083																	
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-containment²⁾

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	16 x 75	16 x 100	16 x 125	17 x 120	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	61 x 122	62 x 137
Cat. No.	blood/urine tubes		0509	0513	-					5127²⁾	5127²⁾	- ²⁾
lid with bio-containment ²⁾ Cat. No. 5093												
rotor 4753 carrier Cat. No. 5092												
Cat. No.	5136	5121¹⁾	5129	5123	5121	5134	5122	5135	5136	6319		
boring Ø x L in mm	17.5 x 60.7	17.5 x 82	17 x 85	30 x 85	17.5 x 82	26 x 73	25.5 x 82	30 x 99	17.5 x 60.7	66 x 103		
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	11 x 38	11 x 38	6 x 45	10 x 60	10 x 88	12 x 75	12 x 82	12 x 100	16 x 81	14 x 100	17 x 100	24 x 100	34 x 100	38 x 102	44 x 100
Cat. No.	2078	0536	Rhesus	-	-	0553²⁾	0501²⁾	0578²⁾	-	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0549	0526²⁾
lid with bio-containment ²⁾ Cat. No. 1492															
rotor 4754 carrier Cat. No. 1495															
Cat. No.	1351	1339	1343			1383		1348		1329	1330	1331	1396	0761	
boring Ø x L in mm	11.2 x 38	6.5 x 34	10.5 x 43			13.4 x 48		16.5 x 56		17.6 x 91	25.2 x 87	35.2 x 87	38.5 x 92	45.9 x 98	
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														

¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

²⁾ Please ask for our detailed cyto brochure.

²⁾ 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 ²⁾ Cat. No. 1492													
carrier Cat. No. 1495													
Cat. No.	1457	1383	1459	1383	1459	1329	1329 ³⁾			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	3,632			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 ³⁾
lid with bio-containment ²⁾ 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	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	8	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	-		0553⁴⁾	0501⁵⁾	0578⁶⁾	0500⁶⁾	0518⁶⁾	0519⁶⁾	0521⁶⁾	0526⁶⁾
 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 ⁵⁾	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 ⁵⁾	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.

ROTINA 420



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	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	17 x 120	29 x 115	29 x 115
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														
carrier Cat. No. 1427														
Cat. No.	5277	1357	1327	1326	1732	5229	5230	5237	5231	5232	5233	1733	5276	5233 ⁴⁾
boring Ø x L in mm	11.5 x 38	6.5 x 23	10.5 x 23	12.5 x 44	13.4 x 58	12.5 x 44	12.4 x 87	15 x 73	17.8 x 87	25.5 x 87	35.5 x 87	17 x 90	30 x 90	35.5 x 87
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
Ø x L in mm	8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 100
Cat. No.	blood collection/urine tubes											
lid Cat. No. 1421												
carrier Cat. No. 1427												
Cat. No.	5278	1732	5229	5279	5230	1732	5279	5271 ⁶⁾	1732	5271	5231	
boring Ø x L in mm	9 x 41	13.4 x 58	12.5 x 44	15.6 x 41	12.4 x 87	13.4 x 58	15.6 x 41	17 x 66	13.4 x 58	17 x 66	17.8 x 87	
tubes per rotor	48	32	48	20	48	32	20		32	20	24	
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	
radius in mm	159	156	157	159	153	156	159	154	156	154	153	
run-up in sec							14					
run-down in sec, braked							14					
temperature in °C ¹⁾							0					

suspension for cyto accessories	
cyto chambers ²⁾	
	1452
	-
	4
	2,721
	115
	14
	14
	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



























±90°

n = 3,800 min⁻¹
max. RCF 2,906

illustrated with carriers 1742

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.	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	-	-	0521²⁾	blood collection/urine tubes					
 rotor Cat. No. 4758														
Cat. No.	1369-91	1372	1369-92	1741	1742²⁾	1346	1345	1746	1741	1742²⁾	1741	1741	1742²⁾	1742²⁾
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	14.6 x 78	17.6 x 78	17.6 x 78
tubes per rotor	32	136	32	80	56	16	8	80	80	56	80	80	56	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 chambers²⁾		
 rotor Cat. No. 4758											
Cat. No.	1742²⁾	1742²⁾	1742²⁾	1741²⁾	1742²⁾	1742²⁾	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	8
max. RCF ²⁾	2,906	2,906	2,793	2,906	2,906	2,906	2,906	2,906	2,906	2,179	2,179
radius in mm	180	180	173	180	180	180	180	180	180	135	135
run-up in sec	19										
run-down in sec, braked	16										
temperature in °C ¹⁾	0										

¹⁾ Please remove the inserts.
²⁾ For further tubes accommodated by adapter 1742, please refer to page 80.
²⁾ Please ask for our detailed cyto brochure.
²⁾ Please load only the middle row.

ROTINA 420

Angle rotor, 30-place

Angle rotor, 4-place



±45°

n = 15,000 min⁻¹
max. RCF 24,400

with bio-containment[Ⓜ]

Cat. No. 4790-A


















±25°



















n = 9,500 min⁻¹
max. RCF 12,007

Cat. No. 4795

Swing-out rotor 4758

capacity in ml	1.5/2.0	1	3	4
∅ 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 ∅ 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
∅ 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 [Ⓜ] incl.						
						
Cat. No.	2024	2023	2031 ¹⁾	-		
boring ∅ x L in mm	6 x 40	8 x 40	10.2 x 19	11.2 x 40.9		
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					

capacity in ml	15	25	94	10	30	50	85	94	250
∅ x L in mm	17x100	24x100	38 x 102	16x80	26 x 95	29 x 107	38 x 106	38 x 102	61 x 122
Cat. No.	0518 ²⁾	0519 ²⁾	0549	-	0545	0546	0547	0538 ^{1,3)}	5127 ²⁾
 rotor Cat. No. 4795									
									
Cat. No.	5646	5642	5644	5641	5642	5643	5644	-	
boring ∅ x L in mm	17.6 x 83	26 x 80	38.6 x 88	16.6 x 70	26 x 80	29 x 90	38.6 x 88	61.5 x 109	
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 performances. 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⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

Angle rotor, 6-place

Angle rotor, 6-place, for PCR strips



±45°

n = 11,000 min⁻¹
max. RCF 16,504

with bio-containment²⁾

Cat. No. 4794



±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	11x38		10x80	17x100	24x100	34x100	35x105	38x102	15x92	16x92	15x102	16x100
Cat. No.	2078	0536	-	0518²⁾	0519²⁾	0521²⁾	0548	0549	blood collection/urine tubes			
lid with bio-containment ²⁾ incl.												
rotor Cat. No. 4794												
Cat. No.	1449			1451	1447	1463	-		1451			
boring Ø x L in mm	11.4x39			17.5x92	26x85	35x89		38.2x89.6	17.5x92			
tubes per rotor	24			6				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	17x120	29x115	16x80	26x95	29x107	38x106	38x102
Cat. No.	0509	0513	-	0545	0546	0547	0538¹³⁾
lid with bio-containment ²⁾ incl.							
rotor Cat. No. 4794							
Cat. No.	1466	1454	1448	1447	1446	-	
boring Ø x L in mm	17x106	29.8x97	16.5x74	26x85	29x92	38.2x89.6	
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						

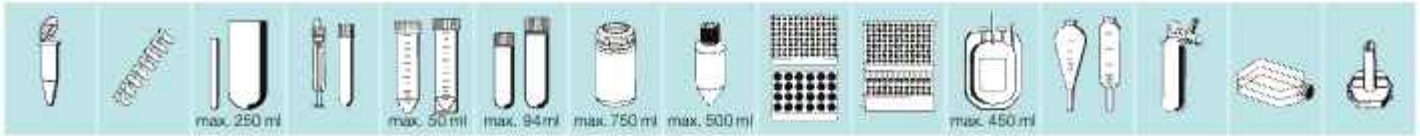
capacity in ml	0.2	0.2
Ø x L in mm	6x18	-
Cat. No.	-	PCR strips
rotor Cat. No. 4760		
Cat. No.	-	
boring Ø x L in mm	6.5x15.5	
tubes per rotor	48	6x8
max. RCF ²⁾	18,845	
radius in mm	86	
run-up in sec	15	
run-down in sec, braked	15	
temperature in °C ¹⁾	+1	

¹⁾ 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.

²⁾ 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.



ROTANTA 460

TECHNOLOGY

Benchtop centrifuge, without rotor	ROTANTA 460		ROTANTA 460 R ^{*)}		
	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	4x 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 (HxWxD)	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

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	4x750 ml	
Max. RPM (speed)	15,000 min ⁻¹	
Max. RCF	24,400	
Running time	1 sec - 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode	
Dimensions (HxWxD)	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-containment¹⁾

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

capacity in ml	1.5	2.0	3	4	4	5	6	7	10	15	25	50	75	94
∅ x L in mm	11 x 38		10 x 60	10 x 88	12 x 60	12 x 75	12 x 82	12 x 100	17 x 70	17 x 100	24 x 100	34 x 100	35 x 105	38 x 102
Cat. No.	2078	0536	-			0553²⁾	0501²⁾	0578²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0548	0549
lid with bio-containment ¹⁾ Cat. No. 5627														
carrier Cat. No. 5625-A														
Cat. No.	4730				4732				4733	4734	4735	4736		
boring ∅ x L in mm	11 x 84				13.5 x 84				17.5 x 84	26.5 x 84	36 x 80	42 x 80		
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
∅ x L in mm	44 x 100	40 x 115	65 x 115	8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102
Cat. No.	0526²⁾	0523²⁾	0530²⁾	blood collection/urine tubes								
lid with bio-containment ¹⁾ Cat. No. 5627												
carrier Cat. No. 5625-A												
Cat. No.	4737	4736	4738	4730	4732	4733	4732	4733				
boring ∅ x L in mm	46 x 84	42 x 80	66 x 80	11 x 84	13.5 x 84	17.5 x 84	13.5 x 84	17.5 x 84				
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 ¹²⁾
lid with bio-containment [®] Cat. No. 5627																
carrier Cat. No. 5625-A																
Cat. No.	4732	4733	4739 ¹⁾	4739	4740	4739 ¹⁾	4734	4740 ¹⁾	4733	4734	4740 ¹⁾	4733	4734	4740 ¹⁾	4736	
boring Ø x L in mm	13.5x84	17.5x84	17x80	30x80	17x80	26.5x84	30x80	17.5x84	26.5x84	30x80	17.5x84	26.5x84	30x80	42x80		
tubes per rotor	80	68	48	20	48	24	20	68	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 [®] 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															

¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

¹²⁾ 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.	0526²⁾	0530²⁾	blood collection/urine tubes													
lid with bio-containment ³⁾ Cat. No. 5621																
carrier Cat. No. 5620-A																
Cat. No.	4837	4838	4830	4847	4832	4833	4832	4847⁴⁾	4833	4848	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	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 ³⁾ Cat. No. 5621																
carrier Cat. No. 5620-A																
Cat. No.	4832	4847⁴⁾	4832	4833	4848	4833	4848	4839⁴⁾	4839	5647	4840	4839⁴⁾	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	28.5x84				
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-containment¹⁾

Swing-out rotor 5699

capacity in ml	50	50	10	10	30	50	50	85	94	250	290	500	800	850	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 ¹⁾	5127 ²⁾	- ²⁾	Corning	0551 ²⁾	0554 ²⁾	0512 ²⁾	
lid with bio-containment ¹⁾ Cat. No. 5621																
carrier Cat. No. 5620-A																
Cat. No.	5647 ¹⁾	4840 ¹⁾	4833	4848	4834	4840 ¹⁾	5647 ¹⁾	4836				Adaptor 4845 + support cushion 48124 (Carrying)	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 ³⁾	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 ¹⁾ Cat. No. 5621										
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 ³⁾	4,779		4,613 ¹⁾							
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

¹⁾ 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.

²⁾ At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

³⁾ 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-containment¹⁾

Swing-out rotor 5699

capacity in ml	1.5	2.0	5	7	8	9	10	15	25	50	100	2.8-3.4	2.7-3	4-5.5	4.5-5	
Ø x L in mm	11 x 38		12 x 75	12 x 100	16 x 81	14 x 100	17 x 70	17 x 100	24 x 100	34 x 100	44 x 100	13 x 65	11 x 66	15 x 75	11 x 92	
Cat. No.	2078	0536	0553²⁾	0578²⁾	-	0500²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾	blood collection tubes				
lid with bio-containment ¹⁾ Cat. No. 5621																
carrier Cat. No. 5623-A																
Cat. No.	4432	4433	4433	4433	4434	4434	4434	4438	4439	4442	4435	4433	4434	4434	4433	
boring Ø x L in mm	11.5 x 38		13 x 58		17.5 x 53			26 x 72	36 x 79	45 x 78	13.5 x 58	13 x 58	17.5 x 53	13 x 58		
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	1.8-5	4-7	4-7	8	8.5-10	10	15	50	25	30	50	50		
Ø x L in mm	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 125	16 x 100	16 x 80	17 x 120	29 x 115	25 x 90	25 x 110	29 x 115	29 x 107		
Cat. No.	blood collection/urine tubes											-	0509	0513	-	-	-	0546
lid with bio-containment ¹⁾ Cat. No. 5621																		
carrier Cat. No. 5623-A																		
Cat. No.	4435	4434	4434	4435	4434	4435	4434	4434	4434	4469	4468	4438	4468⁴⁾	4468⁴⁾	4468⁴⁾	4468	4468	
boring Ø x L in mm	13.5 x 58		17.5 x 53		13.5 x 58			17.5 x 53		17 x 93.1	31 x 96	26 x 72	31 x 96					
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	4,568	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 footnotes 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^{2B)}	-^{2B)}	0554^{2B)}	0512^{2B)}	Falcon®	Nalgene®	Nunc®	Falcon®	Corning	Corning	
lid with bio-containment ^{2B)} Cat. No. 5621											
carrier Cat. No. 5623-A											
Cat. No.	4443	4451	4440	4430	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	biplicate system without filter
Cat. No.	4447	4234-A	blood bags^{3B)}
lid with bio-containment ^{2B)} 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		

¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.



^{2B)} At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



^{3B)} 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.

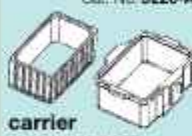



illustrated with carriers 5628
and adapters 6338-A

Swing-out rotor 5699

capacity in ml	450	
blood bags ²⁾	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	11 x 38		10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	24 x 100	34 x 100	44 x 100	40 x 115	65 x 115
Cat. No.	2078	0536	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	0500 ²⁾	0519 ²⁾	0521 ²⁾	0526 ²⁾	0523 ²⁾	0530 ²⁾
 carrier Cat. No. 5628 ¹⁾	 adaptable only without lid (6629) adapting frame Cat. No. 5220-A											
	+ 5220-A	+ 5220-A			+ 5220-A		+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A
Cat. No. ²⁾	5281	5267			5268		5264	5242	5243	5262	5249	5263-A
boring Ø x L in mm	11.5 x 50		11 x 44	13.5 x 52		16 x 50	26 x 86	36 x 86	45.5 x 86	42 x 86	66 x 87	
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 pre-cooled 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 ¹⁾												
Cat. No.²⁾	5267	5268	5227	5264	5227	5268	5264	5258	5268	5264	5268	5258
boring Ø x L in mm	11 x 44	13,5 x 52	12,5 x 42	16 x 50	12,5 x 42	13,5 x 52	16 x 50	17,6 x 86	13,5 x 52	16 x 50	13,5 x 52	17,6 x 86
tubes per rotor	160	96	160	96	160	96	96	88	96		88	
max. RCF ³⁾	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 ⁴⁾	+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 ²⁾	cyto chambers ²⁾
(adaptable only without lid 5629) adapting frame Cat. No. 5220-A						
carrier Cat. No. 5628 ¹⁾						
Cat. No.²⁾	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 ³⁾ 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





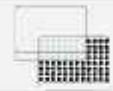
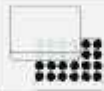









Carrier 5628 and adapter 6338-A

¹⁾ 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.
²⁾ 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.
³⁾ Please ask for our detailed cyto brochure.
⁴⁾ At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
⁵⁾ 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-containment²⁾
and removal frame 4626

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

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 ¹⁾ Cat. No. 5629  carrier Cat. No. 5628 ¹⁾									
									
Cat. No.	4626							4626 + 1485	
boring Ø x L in mm	-								
plates/strips per rotor	24	20	16	4	4	4	8	4	48 x 8
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 ²⁾¹⁾				
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	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	52 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	
 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	48 x 8	
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									

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

¹⁾ 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.

³⁾ 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-containment²⁾

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
∅ x L in mm	10x60	10x88	12x60	12x75	12x82	12x100	17x70	13x100	17x100	8x66	13x65	11x66	11x92
Cat. No.	-	-	-	0553²⁾	0501²⁾	0578²⁾	2079	-	0518²⁾	blood collection tubes			
lid with bio-containment ²⁾ Cat. No. 5652													
carrier Cat. No. 5651-A													
Cat. No.				5684			5682	5674	5685	5682	5684	5674	5684
boring ∅ 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
∅ x L in mm	15x75	13x90	15x92	16x92	15x102	13x75	16x75	13x100	16x100	16x80	17x120	29x115
Cat. No.	blood collection/urine tubes										0509²⁾	0513²⁾
lid with bio-containment ²⁾ Cat. No. 5652												
carrier Cat. No. 5651-A												
Cat. No.	5682	5674	5682	5674	5682	5674	5685	5682	5683	5686		
boring ∅ 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	17x80	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.

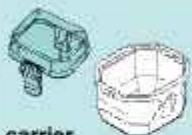











²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

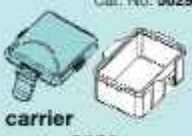









³⁾ When using these tubes, carrier 5651-A cannot be closed with lid 5652.



illustrated with carriers 5651-A
and lids 5652
with bio-containment²⁾

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 ²⁾	- ²⁾	4447	Corning	0551 ²⁾	0554 ²⁾	0512 ²⁾	
lid with bio-containment ²⁾ Cat. No. 5652  carrier Cat. No. 5651-A												
	Cat. No. 5681						Cat. No. 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	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 ²⁾ Cat. No. 5629  carrier Cat. No. 5653										
	Cat. No. 4626							Cat. No. 4626 + 1485		
boring Ø x L in mm	-									
plates/strips per rotor	24	20	16	4	4	4	8	4	48 x 8	
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									

¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

²⁾ 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	8	7	9	15	25	50	100	100	1.1-1.4	2.6-3.4	2.7-3	4-5.5
∅ x L in mm	11x38		11x38		12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115	8x86	13x65	11x66	15x75
Cat. No.	-	-	2078	0536	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	blood collection tubes			
lid Cat. No. 5053																	
carrier Cat. No. 5051																	
Cat. No.	5257	5281	5227	5247¹⁾	5264	5248¹⁾	5242	5243	5262	5249	5267	5268	5227	5264			
boring ∅ 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	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	2,755	2,755	2,737	2,808	2,773	2,737	2,808	2,773		
radius in mm upper/lower	109/158	158	155	154	155	154	155	154	154	153	157	155	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
∅ 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 chambers²⁾
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 ∅ 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	48	48	28	8	28	20	8	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 5063



















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.	0553²⁾	0501²⁾	0578²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	0530²⁾	blood collection tubes			
lid with bio-containment ¹⁾ Cat. No. 5093														
carrier Cat. No. 5092														
Cat. No.	5128	5120	5136	5122	5124	5125	5126	1791	5137	5138	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	13.5x60.7	12.8x54.5
tubes per rotor	48		32		16		4		32		48		32	
max. RCF ²⁾	3,006		2,952		2,898		2,952		3,095		2,952		2,540	
radius in mm	168		165		162		165		173		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	16x102	13x75	13x75	13x100	16x75	16x125	16x100
Cat. No.	blood collection/urine tubes													
lid with bio-containment ¹⁾ Cat. No. 5093														
carrier Cat. No. 5092														
Cat. No.	5137	5138	5136	5120	5137	5136	5137	5138	5137	5138	5120	5136	5121¹⁾	5136
boring Ø x L in mm	13.5x60.7	12.8x54.5	17.5x60.7	12.8x82	13.5x60.7	17.5x60.7	17.5x60.7	13.5x60.7	12.8x54.5	12.8x82	17.5x60.7	17.5x82	17.5x82	17.5x60.7
tubes per rotor	32	48	32	48	32	32	32	32	48	48	32	28	32	32
max. RCF ²⁾	2,952	2,540	2,952	3,005	2,952	2,952	2,952	2,952	2,540	3,005	2,952	3,059	2,952	2,952
radius in mm	165	142	165	168	165	165	165	165	142	168	165	171	165	165
run-up in sec	42													
run-down in sec, braked	51													
temperature in °C ¹⁾	-3													

¹⁾ With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.
²⁾ 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	17 x 120	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	61 x 122	62 x 137
Cat. No.	0509	0513						5127⁽²⁾	-⁽²⁾
lid with bio-containment ⁽¹⁾ Cat. No. 5093									
carrier Cat. No. 5092									
Cat. No.	5129	5123	5121	5134	5122	5135	5136	6319	
boring Ø x L in mm	17 x 85	30 x 85	17.5 x 82	26 x 73	25.5 x 82	30 x 99	17.5 x 60.7	66 x 103	
tubes per rotor	28	8	28	12	16	8	32	4	
max. RCF ⁽¹⁾	3,095		3,005	2,826	2,898	3,023	2,952	3,095	
radius in mm	173		168	158	182	189	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

 $\pm 90^\circ$

 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		10x80	12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115	8x66	13x65	11x66	
Cat. No.	-	-	2078	0536	-	0553⁽¹⁾	0501⁽¹⁾	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⁽¹⁾	5264	5248⁽¹⁾	5242	5243	5262	5249	5267	5268	5227				
boring Ø x L in mm	12.5 x 42	11.5 x 50	11 x 44	12.5 x 42	12.5 x 86	16 x 50	17.5 x 86	26 x 86	36 x 86	45.5 x 86	42 x 86	11 x 44	13.5 x 52	12.5 x 42				
tubes per rotor	240	96	120	120	120	72	72	30	12	6	6	120	72	120				
max. RCF ⁽²⁾	2,486/3,363	3,363	3,274	3,309	3,291	3,309	3,291	3,291	3,291	3,291	3,291	3,274	3,345	3,309				
radius in mm	139/188	188	183	185	184	185	184	185	184	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	cyto chambers ⁽²⁾		
Cat. No.	blood collection/urine tubes											0509	0513	-	-	cyto chambers⁽²⁾		
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	30x88	17x90	26x88	36x88	-			
tubes per rotor	72	120	72	72	66	72	72	72	42	12	42	30	12	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																	

⁽¹⁾ With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.
⁽²⁾ Please ask for our detailed cyto brochure.
⁽³⁾ 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[®]

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.	0553²⁾	0501²⁾	0578²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	0530²⁾	blood collection tubes			
lid with bio-containment [®] Cat. No. 5093														
carrier Cat. No. 5092														
Cat. No.	5128	5120	5136	5122	5124	5125	5126	1791	5137	5138	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	13.5x60.7	12.8x54.5
tubes per rotor	72	72	48	24	6		6	6	48	72	48	72	48	72
max. RCF ²⁾	3,542	3,542	3,488	3,434	3,488		3,488	3,631	3,488	3,077	3,488	3,077	3,488	3,077
radius in mm	198	198	195	192	195		195	203	195	172	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	11x86	11x86	13x90	15x75	11x92	15x92	16x92	15x102	13x75	13x75	13x100	16x75	16x125	16x100
Cat. No.	blood collection/urine tubes													
lid with bio-containment [®] Cat. No. 5093														
carrier Cat. No. 5092														
Cat. No.	5137	5138	5137	5136	5120	5136	5136	5137	5138	5120	5136	5121	5136	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	17.5x60.7
tubes per rotor	48	72	48	48	72	48	48	48	72	72	48	42	48	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	3,488
radius in mm	195	172	195	195	198	195	195	195	172	198	195	198	195	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^{2B)}	- ^{2B)}
lid with bio-containment ^{2B)} 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	65								
temperature in °C ¹⁾	0								

¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

^{2B)} 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-containment⁵⁾
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
  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.

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Tél. 01 42 50 50 50

Angle rotor, 30-place

Angle rotor, 6-place



±45°

n = 15,000 min⁻¹
max. RCF 24,400

with bio-containment²⁵

Cat. No. 4489-A



±25°

n = 8,500/9,500 min⁻¹
max. RCF 11,228/14,025

with bio-containment²⁵

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 ²⁵ 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	26x96	29x107	38x106	38x102	61x122
Cat. No.	0518 ²⁾	0519 ²⁾	0549	-	0545	0546	0547	0538 ¹³⁾	5127 ²⁵⁾
lid with bio-containment ²⁵ 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.

²⁵⁾ At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

Angle rotor, 6-place



↙45°

$n = 11,500 \text{ min}^{-1}$
max. RCF 18.038

with bio-containment²⁾

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	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	17 x 120	29 x 115	16 x 80	
Cat. No.	2078	0536	-	0518²⁾	0519²⁾	0521²⁾	0548	0549	blood/urine tubes				0509	0513	-	
lid with bio-containment ²⁾ incl.																
rotor Cat. No. 5615																
Cat. No.	1449		1451	1447	1463	1463	-	1451	1466				1454	1448		
boring Ø x L in mm	11.4 x 39		17.5 x 92	26 x 85	35 x 89	35 x 89	38.2 x 89.6	17.5 x 92				17 x 106	29.8 x 97	16.5 x 74		
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	26 x 95	29 x 107	38 x 106	38 x 102
Cat. No.	0545	0546	0547	0538²⁾
lid with bio-containment ²⁾ incl.				
rotor Cat. No. 5615				
Cat. No.	1447	1446	-	
boring Ø x L in mm	26 x 85	29 x 92	38.2 x 89.6	
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
Angle rotor, 6-place, for Schlenk tubes

 $\pm 36^\circ$
















 n = 10.000 min⁻¹
 max. RCF 17.441




Cat. No. 5655

 $\pm 45^\circ$

 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	17 x 100	24 x 100	15 x 92	16 x 92	15 x 102	16 x 100	17 x 120	29 x 115	26 x 95
Cat. No.	0518^[31]	0519^[31]	blood/urine tubes				0509	0513	0545
 rotor Cat. No. 5655									
									
Cat. No.	1473	1472	1473				1474	-	1472
boring Ø x L in mm	17.5 x 91.5	26 x 85	17.5 x 91.5				17 x 107	30 x 100	26 x 85
tubes per rotor	14								
max. RCF ^[32]	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 ^[33]	+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	25 x 86	38.5 x 89.9
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 ^[33]	-14	

^[31] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

^[32] The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 108 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

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



↻ 90°

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







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




↻ 90°

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

Cat. No. **4619³⁴⁾**

capacity in ml	50	100	100	100
∅ x L in mm	45 x 130	58 x 161	44 x 168	37 x 200
Cat. No.	- ²⁾	0528²⁾	- ²⁾	0531²⁾
carrier Cat. No. 4275				
rotor Cat. No. 4474				
Cat. No.	4278-A	0771	4277	4276
boring ∅ 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
∅ x L in mm	24 x 151
Cat. No.	0529/0508²⁾
rotor Cat. No. 4619³⁴⁾	
Cat. No.	-
boring ∅ 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.

³⁾ 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

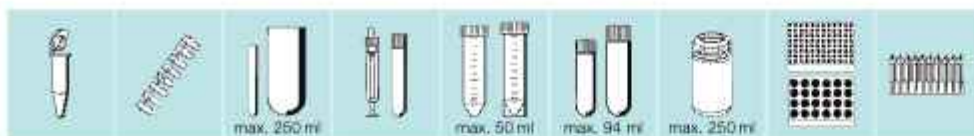
ROTO SILENTA 630 RS

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Tél. 01 42 50 50 50

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

	cooled	
	rear hatch	front hatch
Floorstanding centrifuge, without rotor		
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
 $n = 4,600 \text{ min}^{-1}$, max. RCF = 4,258

Cat. No. 5699-R (without carriers)



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

Cat. No. 5622 (without carriers)



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

Cat. No. 4444 (without carriers)



Swing-out rotor, 4-place
illustrated with carriers 4486-R
 $n = 4,500 \text{ min}^{-1}$, 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



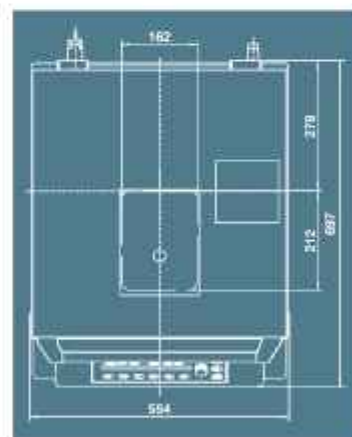
Adapter in carrier 4465-R
for accommodating plates

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 (HxWxD)	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	-	0553¹⁾	0501²⁾	0578³⁾	0500³⁾	-	0518²⁾	0519²⁾	0521²⁾	0549	0523²⁾
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 performances. 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	850	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 ¹⁾	5127 ²⁾	-	0551 ³⁾	0554 ²⁾	0512 ²⁾	4234-A	Corning	Corning	
lid Cat. No. 4229-B  carrier Cat. No. 4295-A														
Cat. No.	4241	4215	4249	4218	4218	4238	4238	4233	4233	4258	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		4,958		4,777	4,958	
radius in mm	211	211	215	211		219		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 ³⁾		
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 ³⁾	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.



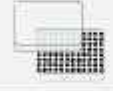








²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.



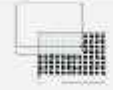








³⁾ When using these tubes, carrier 4295-A cannot be closed with lid 4229-B.



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	
 Id with bio-containers ²⁹⁾ 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 ³⁾	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 ³⁾	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							

¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

²⁾ The screw cap for tube No. 0538 is available with Cat. No. 0639. 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.











³³⁾ 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 ²¹⁾
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								
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⁾	4,818	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													
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	13.5x58	17.5x53			
tubes per rotor	84	120	76	120	84	76	84	76	76				
max. RCF ²⁾	4,818		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 pre-cooled 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⁽²⁾	- ⁽²⁾	0554⁽²⁾	0512⁽²⁾	4239⁽²⁾	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			

⁽²⁾ When using removal frame 4259-A, please take the insert out of carrier 4257.

⁽²⁾ At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

Swing-out rotor, 6-place

↻ 90°

n = 4,000 min⁻¹
max. RCF 3,631



illustrated with carriers 5051
and lids 5053

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	11 x 38		11 x 38		12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	40 x 115	
Cat. No.	-	-	2078	0536	0553¹⁾	0501²⁾	0578³⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	cyto chambers²⁾
lid Cat. No. 5053														
carrier Cat. No. 5051														
Cat. No.	5257	5281	5227	5247¹⁾	5264	5248²⁾	5242	5243	5262	5249	5280			
boring Ø x L in mm	12.5 x 42	11.5 x 50	12.5 x 42	12.5 x 86	16 x 50	17.5 x 86	26 x 86	36 x 86	45.5 x 86	42 x 86				
tubes per rotor	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	3,291	3,291	2,290/3,274				
radius in mm upper/lower	139/188	188	185	184	185	184	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	8 x 66	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 100	17 x 120	29 x 115
Cat. No.	blood collection/urine tubes													0509	0513
lid Cat. No. 5063															
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	11 x 44	13.5 x 52	12.5 x 42	16 x 50	12.5 x 42	13.5 x 52	16 x 50	17.6 x 86	13.5 x 52	16 x 50	17.5 x 86	17 x 90	30 x 86		
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.



















⁴⁾ 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-containment²⁾
Swing-out rotor Cat. No. (without carriers) 4296

capacity in ml	12	30	50
Ø x L in mm	17 x 100	25 x 110	29 x 115
Cat. No.	-		
lid Cat. No. 5053			
carrier Cat. No. 5051			
Cat. No.	6306	5266	5243
boring Ø x L in mm	17 x 90	26 x 86	36 x 86
tubes per rotor	42	30	12
max. RCF ¹⁾	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	8	7	10	15	25	50	100	100
Ø x L in mm	12 x 75	12 x 62	12 x 100	17 x 70	17 x 100	24 x 100	34 x 100	44 x 100	40 x 115
Cat. No.	0553²⁾	0501²⁾	0578²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾
lid with bio-containment ²⁾ Cat. No. 5093									
carrier Cat. No. 5092									
Cat. No.	5128	5120	5136	5122	5124	5125	5126	5125	5126
boring Ø x L in mm	12.8 x 45	12.8 x 82	17.5 x 60.7	25.5 x 82	35.5 x 82.5	45.5 x 85	42 x 85		
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 ²⁾	-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	65 x 115	8 x 66	6 x 88	13 x 65	11 x 66	11 x 66	11 x 92	15 x 75	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75
Cat. No.	0530²⁾	blood collection/urine tubes													
lid with bio-containment ²⁾ Cat. No. 5093															
carrier Cat. No. 5092															
Cat. No.	1791	5137	5138	5138	5137	5138	5120	5136	5137	5136	5138	5120	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 62	17,5 x 60,7	12,8 x 54,5	17,5 x 60,7
tubes per rotor	6	48	72	48	72	72	48	48	48	48	72	72	48	72	48
max. RCF ²⁾	3,631	3,488	3,077	3,488	3,077	3,542	3,488	3,488	3,488	3,488	3,077	3,542	3,488	3,542	3,488
radius in mm	203	195	172	195	172	198	195	195	195	195	172	198	195	198	195
run-up in sec	33														
run-down in sec, braked	38														
temperature in °C ¹⁾	-6														

¹⁾ With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

²⁾ 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	
∅ x L in mm	16x100	16x125	17x120	29 x 115	25x90	25 x 110	29 x 115	16x80	61x122	62x137	
Cat. No.	blood/urine tubes		0509	0513	-				5127²⁾	5127²⁾	5127²⁾
lid with bio-containment ³⁾ Cat. No. 5093											
carrier Cat. No. 5092											
Cat. No.	5136	5121¹⁾	5129	5123	5134	5122	5135	5136	6319		
boring ∅ 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 ∅ 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

Angle rotor, 6-place, for Schlenk tubes



↻ 90°

n = 2,000 min⁻¹
max. RCF 984



illustrated with
carriers 4275

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



↻ 45°

n = 2,000 min⁻¹
max. RCF 805

Cat. No. **4316³⁴⁾**

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		

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.	-	0528²⁾	-	0531²⁾
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. 4316³⁴⁾		
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.

^{2B)} 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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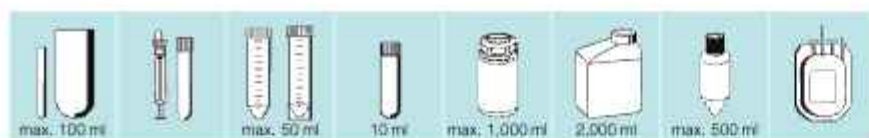
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Tél. 01 42 50 50 50

ROTO SILENTA 630 RS



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.





$n = 4,500 \text{ min}^{-1}$
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 ¹⁾	-	-	-
blood bags	quadruplicate	quadruplicate	quadruplicate	quadruplicate	quadruplicate	single
Cat. No.	4526 ²⁾	4527 ²⁾	4528 ²⁾	-	-	-
 carrier Cat. No. 4524-A						
Cat. No.		4525-A		4529 ³⁾ -A0,-AM,-AU		4592-B
boring \varnothing x L in mm	-					
blood bag systems per rotor	12 8					
max. RCF	6,498 5,683					
max. RCF ³⁾	1,000 1,000					
radius in mm	287 251					
run-up in sec	125 125					
run-down in sec, braked	197 197					
temperature in °C ¹⁾	+16 +10					

capacity in ml	450
blood bags, quadruplicate	
Cat. No.	-
 carrier Cat. No. 4546-A	
Cat. No.	4559-A
boring \varnothing x L in mm	-
blood bag systems per rotor	12 8
max. RCF	6,271 5,479
radius in mm	277 242
run-up in sec	125 125
run-down in sec, braked	197 197
temperature in °C ¹⁾	+13 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 \varnothing x L in mm	-			
blood bag systems per rotor	12 8			
max. RCF	6,498 5,705			
radius in mm	287 252			
run-up in sec	125 125			
run-down in sec, braked	197 197			
temperature in °C ¹⁾	+16 +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 16	6 4
max. RCF	3,821 3,328	3,848 3,369
max. RCF ³⁶⁾	1,000 1,000	- -
radius in mm	279 243	281 246
run-up in sec	125 125	29 95
run-down in sec, braked	197 197	41 131
temperature in °C ³⁷⁾	+16 -8	+16 -8

capacity in ml	500	750	1,000
blood bags	quadruplicate	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 4	6 4	
max. RCF	6,452 5,637	6,520 5,705	
radius in mm	285 249	288 252	
run-up in sec		125 125	
run-down in sec, braked		197 197	
temperature in °C ³⁷⁾		+9 +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 thrombocytes 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.	0553²⁾	0576²⁾	0500²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾	blood collection tubes					
bucket Cat. No. 4255														
carrier Cat. No. 4579-A														
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											
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										


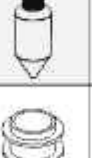
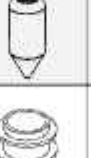





¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.






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											
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 28		114 76	6 4		6 4		6 4		-	
max. RCF ²⁸⁾	5,818 5,026		5,886 5,094	6,113 5,320	6,113 5,411	6,294 5,501		6,294 5,501		-	
radius in mm	257 222		260 225	270 235	270 239	278 243		278 243		-	
run-up in sec				125 125							
run-down in sec, braked				197 197							
temperature in °C ¹⁾				+4 -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				
carrier Cat. No. 4579-A				
Cat. No.	4430	4440	4430	4449
boring Ø x L in mm	-			
tubes per rotor	6 4			
max. RCF ²⁸⁾	6,294 5,501			
radius in mm	278 243			
run-up in sec	125 125			
run-down in sec, braked	197 197			
temperature in °C ¹⁾	+4 -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 ²⁸⁾	0501 ²⁸⁾	0578 ²⁸⁾	-
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	378 252	288 192		150 100	
max. RCF ²⁸⁾	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				

²⁸⁾ 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	17 x 100	24 x 100	34 x 100	40 x 115	13 x 65	11 x 66	15 x 75	11 x 92	15 x 92	16 x 92	15 x 102	13 x 75
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	17.5 x 74	26 x 74	35 x 74	41.5 x 74	13.2 x 36	12.5 x 36	17.5 x 36	12.5 x 74	17.5 x 74		17.5 x 74	13.2 x 36
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	16 x 75	13 x 100	16 x 125	16 x 100	17 x 120	29 x 115	17 x 100	25 x 90	25 x 110		29 x 115	
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	17.5 x 36	13.2 x 74	16 x 74	17.5 x 74	17 x 70	30 x 70	17.5 x 74	26 x 73	26 x 74		30 x 96	
tubes per rotor	180 120	150 100	180 120	138 92	48 32	96 64	48 32	66 44	36 24		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	62 x137	93 x134	97 x139	97 x152	96 x135	60 x162	96 x147
Cat. No.	5127 ^{2B)}	- ^{2B)}	0551 ^{2B)}	0554 ^{2B)}	0512 ^{2B)}	4234-A	Corning	Corning
 carrier Cat. No. 4522-A								
								
Cat. No.	4238	4233		4258		6322	4258 + 4449	
boring Ø x L in mm	62 x 90	94 x105		97,5 x105		61 x125	97,5 x105	
tubes per rotor	6 4							
max. RCF ²⁾	5,818 5,003			5,999 5,184		5,818 5,003	5,999 5,184	
radius in mm	257 221			265 229		257 221	265 229	
run-up in sec	125 125							
run-down in sec, braked	197 197							
temperature in °C ¹⁾	+14 -1							

Centrifugation of toxic or infectious samples:

Bucket 5052 with lid 5057 is available for use with hazardous samples. Lid 5057 provides aerosol-proof²⁾ 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.

¹⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

²⁾ 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.	0553²⁾	0578²⁾	0500²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾
lid Cat. No. 5621								
carrier Cat. No. 4547-B								
Cat. No.	4433	4433	4434	4434	4438	4438	4439	4442
boring Ø x L in mm	13 x 58	13 x 58	17.5 x 53	17.5 x 53	26 x 72	26 x 72	36 x 79	45 x 78
tubes per rotor	180 120	180 120	114 76	114 76	42 28	42 28	24 16	12 8
max. RCF ²⁾	5,841 5,026	5,841 5,026	5,977 5,184	5,977 5,184	5,728 4,913	5,728 4,913	5,773 4,981	5,750 4,958
radius in mm	258 222	258 222	264 229	264 229	253 217	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	4434	4434	4435	4435	4434	4434	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	17.5 x 53	17.5 x 53	13.5 x 58	13.5 x 58	16 x 75	17.5 x 53	17.5 x 53
tubes per rotor	126 84	180 120	114 76	180 120	126 84	114 76	114 76	114 76	126 84	126 84	114 76	114 76	114 76
max. RCF ²⁾	5,841 5,026	5,841 5,026	5,977 5,184	5,841 5,026	5,841 5,026	5,977 5,184	5,977 5,184	5,977 5,184	5,841 5,026	5,841 5,026	5,977 5,184	5,977 5,184	5,977 5,184
radius in mm	258 222	258 222	264 229	258 222	258 222	264 229	264 229	264 229	258 222	258 222	264 229	264 229	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.

³⁾ 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⁽²⁾	- ⁽²⁾	0554⁽²⁾	0512⁽²⁾	4239⁽²⁾
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	96 x 141	-	-	-	-	
tubes per rotor	72 48	30 20	42 28	114 76	6 4	-	-	-	-	-	
max. RCF ⁽²⁾	6,080 5,298	5,909 5,117	5,977 5,184	6,203 5,411	6,384 5,592	-	-	-	-	-	
radius in mm	269 234	261 226	264 229	274 239	282 247	-	-	-	-	-	
run-up in sec	125 125										
run-down in sec, braked	197 197										
temperature in °C ⁽¹⁾	+9 -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 4					
max. RCF ⁽²⁾	6,384 5,592					
radius in mm	282 247					
run-up in sec	125 125					
run-down in sec, braked	197 197					
temperature in °C ⁽¹⁾	+9 -9					

Automatic Cell Washing System



AUTOMATIC CELL WASHING SYSTEM

ROTOLAVIT

ROTOLAVIT



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



±45°

Cat. No. 1017-A

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

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

rotor, 24-place



±45°

Cat. No 1018-A

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 (HxWxD)	278 x 333 x 420 mm	
Weight	approx. 24 kg	

Cat. No.	1006	1006-01
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^{*)} Other voltages on request.

Benchtop centrifuge for special applications



BENCHTOP CENTRIFUGES

ROTOFIX 46/46 H

ROTOFIX 46/46 H




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 (HxWxD)	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.

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
 $n = 2.000 \text{ min}^{-1}$, max. RCF = 917

Cat. No. 4619³⁴⁾

for use in the models ROTOFIX 46 / 46 H



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

Cat. No. 5616³⁴⁾

for use in the models ROTOFIX 46 / 46 H



Swing-out rotor, 4-place,
for ASTM tubes
illustrated with carriers 4275
 $n = 2.000 \text{ min}^{-1}$, 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
 $n = 4.000 \text{ min}^{-1}$, max. RCF = 3.095

Cat. No. 5694 (without carriers)

only for use in model ROTOFIX 46



ROTOFIX 46
illustrated with
rotor 5616

Cat. No. 4600

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
HettlInfo
Cyto accessories

SPECIAL 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 (HxWxD)	850 x 280 x 380 (450*)
Weight	16.5 kg
Pump capacity	2 x 600 mbar
Max. pressing speed (flow rate)	6 ml / sec

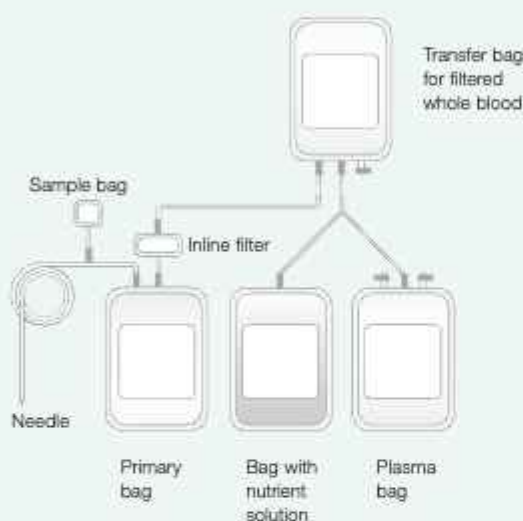
	PRESSOMAT	Two-chamber insert with Pneumatic Kit	
Cat. No.	1070	4598-P	
Accessories	HettControl (Basic Kit incl. software)	Barcode Kit	Taring rods
Cat. No.	1078	1077	On request

* 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.



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.

Program functions that can be connected:	Basic Kits	
	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		●

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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 ⁴⁾	Software with all functions (full version), fibre-optic cable ⁵⁾ for connection to one participant or distributor, RS 232 cable, opto data box
Basic Kit HettInfo Light	0910-L ⁴⁾	Software with limited functionality, fibre-optic cable ⁵⁾ 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 ⁶⁾	Front panel for ROTO SILENTA 630 RS with barcode unit and barcode scanner
	Barcode Kit ROTIXA 50 RS	0930-10 ⁶⁾	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 ⁶⁾	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 ⁴⁾

- ⁴⁾ Fibre-optic cable in standard length (10 metres). Other lengths on request.
⁵⁾ Fibre-optic cable in standard length (20 metres). Other lengths on request.
⁶⁾ 100 - 240 V version, 50 - 60 Hz
⁷⁾ 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.

The assembly of a complete cyto insert is really easy



suspension 1660 for cyto chambers

suspension 1680 for angle chambers



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

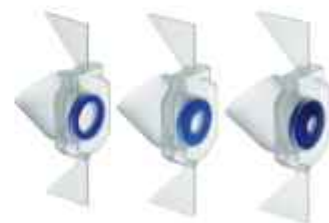
SPECIAL ACCESSORIES



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	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	
	8	5051 / 5280	5053	4/4	5694	4	ROTANTA 460/460 R ROTANTA 460 RC/460 RF
	12	5051 / 5280	5053	6/6	4446	6	ROTIXA 50 S/50 RS
12	5051 / 5280	5053	6/6	4296	6		

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	ROTINA 420/420 R
	8			8	4758	8	

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.

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Tél. 01 42 50 50 50

HettCube Incubators and cooled incubators

All models at a glance



MODEL	HettCube 200 / 200 R	HettCube 400 / 400 R	HettCube 600 / 800 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 1980
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

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www.labomoderne.com - info@labomoderne.com
Tél. 01 42 50 50 50

Special accessories



PRESSOMAT
HettInfo
Cyto accessories

SPECIAL 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 (HxWxD)	850 x 280 x 380 (450*)
Weight	16.5 kg
Pump capacity	2 x 600 mbar
Max. pressing speed (flow rate)	6 ml / sec

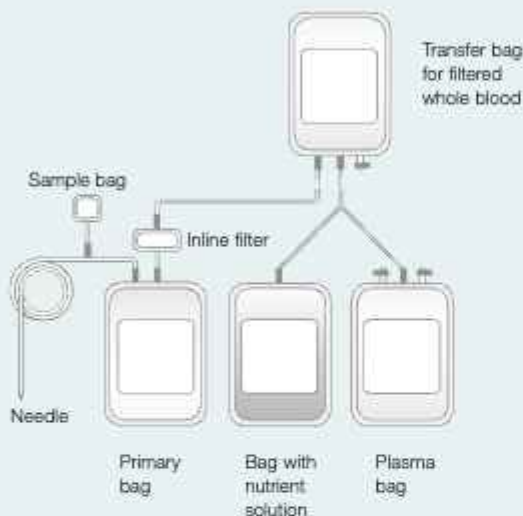
	PRESSOMAT	Two-chamber insert with Pneumatic Kit	
Cat. No.	1070	4598-P	
Accessories	HettControl (Basic Kit incl. software)	Barcode Kit	Taring rods
Cat. No.	1078	1077	On request

* 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.



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 ROTD 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.

Program functions that can be connected:	Basic Kits	
	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		●

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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 ⁴⁾	Software with all functions (full version), fibre-optic cable ²⁾ for connection to one participant or distributor, RS 232 cable, opto data box
Basic Kit HettInfo Light	0910-L ⁴⁾	Software with limited functionality, fibre-optic cable ²⁾ 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 ⁴⁾	Front panel for ROTO SILENTA 630 RS with barcode unit and barcode scanner
	Barcode Kit ROTIXA 50 RS	0930-10 ⁴⁾	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 ⁴⁾	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 ⁴⁾

- ⁴⁾ Fibre-optic cable in standard length (10 metres). Other lengths on request.
²⁾ Fibre-optic cable in standard length (20 metres). Other lengths on request.
⁴⁾ 100 - 240 V version, 50 - 60 Hz
⁴⁾ 230 V version. Other voltages on request.

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Cyto Accessories

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The assembly of a complete cyto insert is really easy



suspension 1660 for cyto chambers

suspension 1680 for angle chambers



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

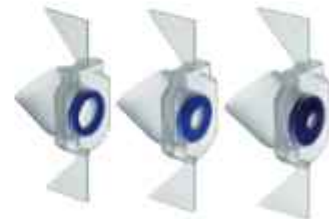
SPECIAL ACCESSORIES



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




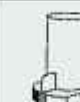










cyto chambers for slide carrier 1470

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	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	

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	ROTINA 380/380 R
	6			6	1726	6	
	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.

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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 1980
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

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Symbols and Abbreviations

	microlitre tubes up to 2.0 ml		swing-out rotor
	cryo tubes		angle rotor
	PCR strips		drum rotor
	standard tubes		hematocrit rotor, disk rotor
	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.		

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
		17 x 100	tube, glass, cylindrical	0507	
			tube, glass, cyl., calibrated	0518	
	15	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	tube, glass, cylindrical	0521	
	75	35 x 105	tube, PP, cylindrical	0548	
	94	38 x 102		0549	
	100	40 x 115		0523	
100	44 x 100	tube, glass, cylindrical	0526		
250	56 x 147		0525		
250	65 x 115		0530		
			0545		
	30	26 x 95	tube with screw cap, PC, cylindrical	0546	
	50	29 x 107		0547	
	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
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
			chrome bath tube	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, conical	0531
	100	58 x 161	glass, calibrated	0528
	-	1.4 x 75	capillaries, heparinized	1071
	-	1.4 x 75		self-sealing and mylar-coated
	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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The logo for Hettich, featuring the brand name in a bold, italicized, black serif font. A thin red horizontal line is positioned directly beneath the text.

LAB TECHNOLOGY

