





Andreas Hettich GmbH & Co. KG

Föhrenstr. 12
D-78532 Tuttlingen
Germany

www.hettichlab.com
info@hettichlab.com

Phone +49 (0)7461 / 705 -0
Fax +49 (0)7461 / 705 -1122

Customer Service: -1201

IMPRINT



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PROVEN QUALITY

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

Hettich products are renowned all over the world for:

LONG SERVICE LIFE

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

Spread acquisition costs over many years.

RELIABILITY

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

Minimize downtime and save money on repair costs.

SUSTAINABILITY

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

Invest in quality.

SAFETY

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

Work with products that meet the requirements of legislation.

OUR STRENGTHS

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





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

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

Why trust in Hettich products and services?

ALWAYS AVAILABLE

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

ALWAYS ON YOUR SIDE

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

ALWAYS WELL ADVISED

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

ALWAYS QUICK ANSWERS

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

Certificates and registrations

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

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

Evidence is provided by national and international test marks such as IEC 61010 or the CE conformity. The ISO 9001, ISO 13485 and ISO 14001 certificates accredited to the company bear witness to the extreme care and responsibility Hettich puts into the manufacturing of centrifuges and their accessories. This is why Hettich centrifuges are known for safety and reliability all over the world.



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



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



according to directive 98/79/EC



QUALITY & SAFETY

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

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

General lab equipment

NON-POLLUTING WASTE DISPOSAL



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

¹⁾ Register of old electronic equipment

²⁾ Electrical and Electronic Equipment Act

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

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

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

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

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

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

[illegible]

Model variants for special requirements

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

Variants with connection for nitrogen (N₂) flushing:

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

Heating/cooling variants (H/C):

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

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

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

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

*) Other voltages on request.

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

Centrifugation

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

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

- angle rotors and
- swing-out rotors.

Both rotor types have their specific advantages.



THE ANGLE ROTOR

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



THE SWING-OUT ROTOR

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

CALCULATING CENTRIFUGAL FORCE

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

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

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

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

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

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

THE E CONTROL PANEL



EBA 270



ROTOFIX 32 A

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

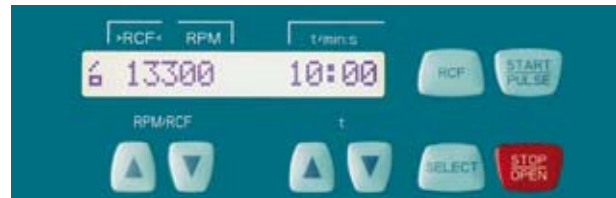
DISPLAY

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

KEYPAD

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

THE E PLUS CONTROL PANEL



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

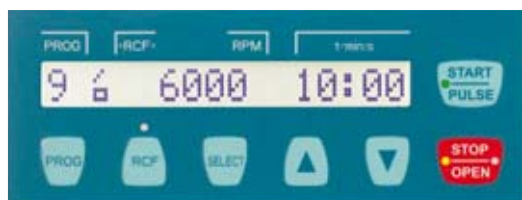
DISPLAY

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

KEYPAD

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

THE M CONTROL PANEL



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

DISPLAY

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

KEYPAD

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

SELECT Guides the user through the menu options.

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

START PULSE Starts centrifugation.
For short centrifugation steps.

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

A LED in the keyboard lights up:

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

THE N PLUS CONTROL PANEL



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

DISPLAY

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

KEYPAD

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

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

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

SELECT Guides the user through the menu options.

START IMPULSE Starts centrifugation.
For short centrifugation steps.

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

THE C CONTROL PANEL



The advanced C control panel significantly facilitates the daily laboratory routine. Parameter selection is done via the use of symbol keys. Values are set with the control knob, and recorded by pressing the Start key. The temperature in the refrigerated ROTINA 380 R, ROTINA 420 R, ROTANTA 460 R and ROTANTA 460 Robotic centrifuges can be set in either Celsius (°C) or Fahrenheit (°F) degrees.

DISPLAY

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

KEYPAD

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

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

OPTIONS

PROGRAM INTERLOCKING:
to combine several centrifugation runs.

THE S CONTROL PANEL



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

DISPLAY

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

KEYPAD

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

OPTIONS

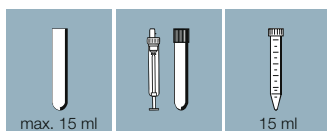
PROGRAM INTERLOCKING:
to combine several centrifugation runs.

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



Benchtop performance in a compact footprint

SMALL



HANDZENTRIFUGE

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

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

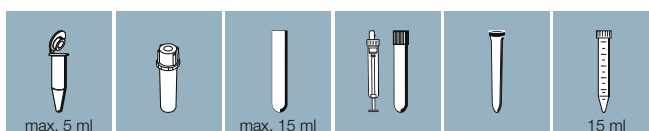
It can be operated with two different rotors.

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

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



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



EBA 200 / 200 S

Small and practical centrifuges for small sample volumes

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

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

21
20



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

^{*)} Other voltages on request.

ROTOR

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

Angle rotor illustrated with different blood collection tubes



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

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

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

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

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



EBA 270

Optimal sample preparation starts in the medical practice

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

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

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22



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

^{*)} Other voltages on request.

ROTOR

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

illustrated with blood collection tubes

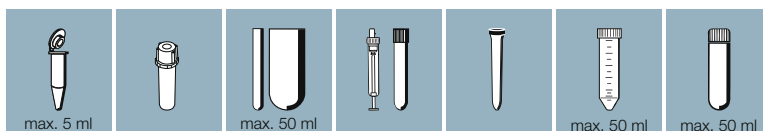


↗ 90° n = 4,000 min⁻¹ max. RCF 2,254

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

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

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



EBA 280 / 280 S

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

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

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

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24



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

¹⁾ Other voltages on request.

ROTORS

Swing-out rotor, 6-place



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

Cat. No. (without carriers) 1146

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

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

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

Swing-out rotor, 8-place



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

Swing-out rotor, 12-place



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

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

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

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

ROTORS

Angle rotor, 12-place, for decanting



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

Angle rotor, 6-place



$\angle 35^\circ$ $n = 6,000 \text{ min}^{-1}$ max. RCF 4,025
Cat. No. 1137

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

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

capacity in ml	7	15	25	50	9–10	10	1.6–5	4–7	15	50	30	50
Ø x L in mm	12x100	17x100	24x100	34x100	16x92	15x102	13x75	13x100	17x120	29x115	26x95	29x107
Cat. No.	0578 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	blood collection / urine tubes				0509	0513	0545	0546
 rotor Cat. No. 1137												
						+ 1054-A						
Cat. No.	1632	1635	1633	-	1635				1631	1641	1633	1634
boring Ø x L in mm	13x92	17.5x95	26x88	35x96	17.5x95				17x98	30x98	26x88	29x95
tubes per rotor	18	6							3		6	
max. RCF ²⁾	3,944	3,783	3,703	4,025	3,783		2,978	3,783	3,824	3,824	3,703	3,904
radius in mm	98	94	92	100	94		74	94	95	95	92	97
run-up in sec	20											
run-down in sec. braked	17											

Angle rotor, 12-place



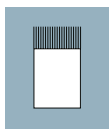
✂ 35° n = 6.000 min⁻¹ max. RCF 4.146

Cat. No. (without carriers) 1139

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

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

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



HAEMATOKRIT 200

Fast and reliable haematocrit determination

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

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

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



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

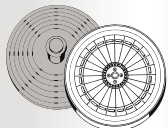
¹⁾ Other voltages on request.

ROTORS

Hematocrit rotor, 24-place



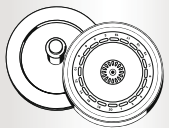
$n = 13,000 \text{ min}^{-1}$ max. RCF 16,060
Cat. No. 2076

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

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



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

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



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

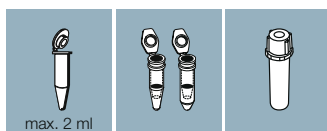
Cat. No. E1400 (24 trays)

¹²⁾ Not suited for standard capillaries



Powerful results at the micro level

MICRO



MIKRO 185

High-performance centrifuge with a small footprint.

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

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



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

*) Other voltages on request.

ROTORS

Angle rotor, 24-place



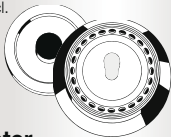
with bio-containment ⁶⁾
autoclavable,
phenol-resistant

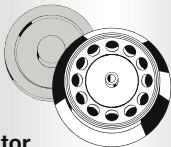
↘ 45° n = 13,300 min⁻¹ max. RCF 17,008
Cat. No. 1226

Angle rotor, 12-place



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

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10.7x36
Cat. No.	-	-	-	-	2078	0536	Pediatric
lid with bio-containment ⁵⁾ incl.							
 rotor Cat. No. 1226							
Cat. No.	2024		2023		2031⁷⁾	-	0788
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x39	11.2x39
tubes per rotor	24						12
max. RCF	17,008						16,019
radius in mm	86						81
run-up in sec	14						
run-down in sec, braked	16						

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10.7x36
Cat. No.	-	-	-	-	2078	0536	Pediatric
lid incl.							
 rotor Cat. No. 1252							
Cat. No.	2024		2023		2031 7)	-	0788
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x39	11.2x39
tubes per rotor	12						
max. RCF	14,041						13,052
radius in mm	71						66
run-up in sec	14						
run-down in sec, braked	16						

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

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

ROTORS

Angle rotor, 18-place



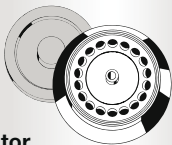
✂ 45° n = 13,300 min⁻¹ max. RCF 15,030
Cat. No. 1258

Angle rotor, 18-place, for spin column kits



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

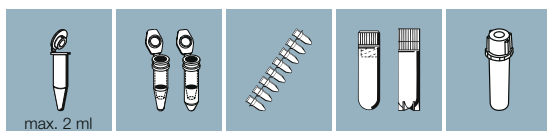
✂ 45° n = 13,300 min⁻¹ max. RCF 15,030
Cat. No. (without lid) 1213

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10.7x36
Cat. No.	-	-	-	-	2078	0536	Pediatric
lid incl.							
rotor Cat. No. 1258							
Cat. No.	2024		2023		2031 ⁷⁾	-	0788
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x39	11.2x39
tubes per rotor	18						9
max. RCF	15,030						14,041
radius in mm	76						71
run-up in sec	14						
run-down in sec, braked	16						

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

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

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



MIKRO 200 / 200 R

These microlitre centrifuges rank among the fastest in their class

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

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



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36

TECHNOLOGY		MIKRO 200		MIKRO 200 R	
Microlitre centrifuge, without rotor		classic		cooled	
Power supply ¹⁾		200–240 V 1 ~	100–127 V 1 ~	200–240 V 1 ~	100–127 V 1 ~
Frequency		50–60 Hz		50 Hz	50–60 Hz
Consumption		240 VA	270 VA	450 VA	630 VA
Emission, Immunity		EN/IEC 61326-1, class B	FCC class B	EN/IEC 61326-1, class B	FCC class B
	Max. capacity	30 x 1.5 / 2.0 ml			
	Max. RPM (speed)	15,000 min ⁻¹			
	Max. RCF	21,382			
Running time		1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key)			
Dimensions (H x W x D)		260 x 275 x 344 mm		260 x 281 x 553 mm	
Weight		approx. 11.5 kg		approx. 28 kg	
Refrigeration					
Temperature control, infinitely variable		-		from -10 to +40 °C	
Cat. No.		2400	2400-01	2405	2405-01

¹⁾ Other voltages on request.

ROTORS

Angle rotor, 24-place

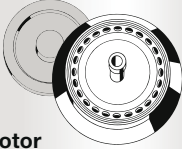


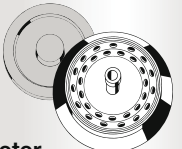
✂ 40° n = 15,000 min⁻¹ max. RCF 21,382
Cat. No. 2424-B

Angle rotor, 30-place



✂ 52,5° (inner row)
✂ 40° (outer row)
n = 15,000 min⁻¹ max. RCF 20,627
Cat. No. 2427-A

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10.7 x36
Cat. No.	-	-	-	-	2078	0536	Pediatric
lid E3243 incl.							
rotor Cat. No. 2424-B							
Cat. No.	2024	2023	2031 ⁷⁾	-	0788		
boring Ø x L in mm	6x40	8x40	10.2x19	11.2x42.6	11.2x39		
tubes per rotor		24			12		
max. RCF		21,382			20,376		
radius in mm		85			81		
run-up in sec		20					
run-down in sec, braked		28					
temperature in °C ¹⁾		+4					

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10.7 x36
Cat. No.	-	-	-	-	2078	0536	Pediatric
lid E3243 incl.							
rotor Cat. No. 2427-A							
Cat. No.	2024	2023	2031 ⁷⁾	-	0788		
boring Ø x L in mm	6x40	8x40	10.2x19	11.2x41.3	11.2x39		
tubes per rotor		30			15		
max. RCF		20,627			20,124		
radius in mm		82			80		
run-up in sec		22					
run-down in sec, braked		30					
temperature in °C ¹⁾		+4					

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

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

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

Angle rotor, 24-place, for spin column kits



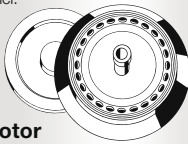
with bio-containment⁵⁾
autoclavable,
phenol-resistant

↘ 45° n = 15,000 min⁻¹ max. RCF 21,382
Cat. No. 2428

Angle rotor, 30-place



↘ 45° n = 15,000 min⁻¹ max. RCF 20,376
Cat. No. 2430-B

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	11x38		10.7x36
Cat. No.	-	-	-	-	2078	0536	micro spin columns		Pediatric
lid with bio-containment ⁵ incl.									
 rotor Cat. No. 2428									
Cat. No.	2024		2023		2031 ⁷⁾	-	2031 ⁷⁾	-	0788
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x42.6	10.2x19	11.2x42.6	11.2x39
tubes per rotor	24								12
max. RCF	21,382								20,376
radius in mm	85								81
run-up in sec	20								
run-down in sec, braked	28								
temperature in °C ¹⁾	+4								

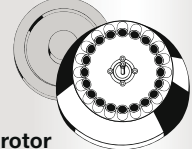
capacity in ml	0.5
Ø x L in mm	8x30
Cat. No.	-
lid E3243 incl.	
rotor Cat. No. 2430-B	
Cat. No.	-
boring Ø x L in mm	8.1 x 30.3
tubes per rotor	30
max. RCF	20,376
radius in mm	81
run-up in sec	19
run-down in sec, braked	28
temperature in °C ¹⁾	+4

ROTORS

Angle rotor, 20-place, for cryo tubes



✂ 40° n = 15,000 min⁻¹ max. RCF 21,130
Cat. No. 2426-B

capacity in ml	1.8
Ø x L in mm	-
Cat. No.	cryo tubes
lid E3243 incl.	
	
rotor Cat. No. 2426-B	
Cat. No.	-
boring Ø x L in mm	12.5 x 36
tubes per rotor	20
max. RCF	21,130
radius in mm	84
run-up in sec	19
run-down in sec, braked	28
temperature in °C ¹⁾	+4

Angle rotor, 4-place, for PCR strips



✂ 45° n = 15,000 min⁻¹ max. RCF 14,338
Cat. No. 2418-A

capacity in ml	0.2	0.2
Ø x L in mm	6x18	-
Cat. No.	-	PCR strips
		
rotor Cat. No. 2418-A		
Cat. No.	-	
boring Ø x L in mm	6.5 x 15.5	
tubes per rotor	32	4 x 8
max. RCF	14,338	
radius in mm	57	
run-up in sec	19	
run-down in sec, braked	28	
temperature in °C ¹⁾	+4	

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



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



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

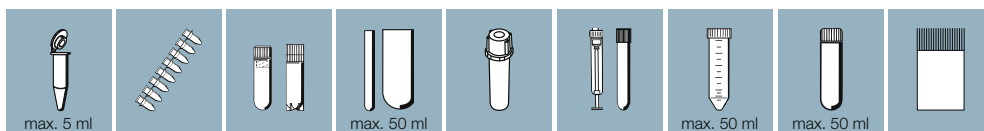
Optional for rotor 2418-A



lid **Cat. No. E3243**

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

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



MIKRO 220 / 220 R

Powerful microlitre specialists

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

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



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TECHNOLOGY		MIKRO 220		MIKRO 220 R	
Microlitre centrifuge, without rotor		classic		cooled	
Power supply ¹⁾		200–240 V 1 ~	100–127 V 1 ~	200–240 V 1 ~	100–127 V 1 ~
Frequency		50–60 Hz		50 Hz	60 Hz
Consumption		510 VA		850 VA	950 VA
Emission, Immunity		EN/IEC 61326-1, class B	FCC class B	EN/IEC 61326-1, class B	FCC class B
	Max. capacity	60 x 1.5 / 2.0 ml			
	Max. capacity	48 x 1.5 / 2.0 ml, 6 x 50 ml			
	Max. RPM (speed)	18,000 min ⁻¹			
	Max. RCF	31,514			
Running time		1 sec–99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key)			
Dimensions (H x W x D)		313 x 330 x 420 mm		313 x 330 x 650 mm	
Weight		approx. 21 kg		approx. 42 kg	
Refrigeration					
Temperature control, infinitely variable		-		from -20 to +40 °C	
Cat. No.		2200	2200-01	2205	2205-01

¹⁾ Other voltages on request.

ROTORS

Angle rotor, 12-place



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

Cat. No. 2218-A

Angle rotor, 24-place



with bio-containment⁵⁾,
phenol-resistant

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

Cat. No. 1195-A

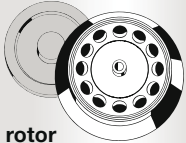
Angle rotor, 30-place



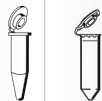
with bio-containment⁵⁾,
phenol-resistant

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

Cat. No. 1189-A

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11 x38		10.7 x36
Cat. No.	-				2078	0536	Pediatric
lid incl.							
 rotor Cat. No. 2218-A							
Cat. No.	2024	2023		2031⁷⁾	-	0788	
boring Ø x L in mm	6x40	8x40		10.2x19	11.2x41	11.2x39	
tubes per rotor	12						
max. RCF	25,718					24,270	
radius in mm	71					67	
run-up in sec	11						
run-down in sec, braked	10						
temperature in °C ¹⁾	-5						

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11 x38		10.7 x36
Cat. No.	-				2078	0536	Pediatric
lid with bio-containment ⁵⁾ incl.							
 rotor Cat. No. 1195-A							
Cat. No.	2024	2023	2031⁷⁾	-	0788		
boring Ø x L in mm	6x40	8x40	10.2x19	11.2x40.8	11.2x39		
tubes per rotor	24					12	
max. RCF	31,514					30,065	
radius in mm	87					83	
run-up in sec	26						
run-down in sec, braked	23						
temperature in °C ¹⁾	+3						

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11 x38		10.7 x36
Cat. No.	-				2078	0536	Pediatric
lid with bio-containment ⁹⁾ incl.							
rotor Cat. No. 1189-A							
Cat. No.	2024	2023	2031⁷⁾	-	0788		
boring Ø x L in mm	6x40	8x40	10.2x19	11.2x40.9	11.2x39		
tubes per rotor	30					15	
max. RCF	21,255					20,379	
radius in mm	97					93	
run-up in sec	20						
run-down in sec, braked	22						
temperature in °C ¹⁾	+3						

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

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

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

Angle rotor, 48-place, 2-row



with bio-containment[®],
phenol-resistant

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

Cat. No. 1158-L

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

Angle rotor, 20-place, for cryo tubes



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

Cat. No. 2219-A

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

Optional for rotor 2219-A



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



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

ROTORS

Swing-out rotor, 24-place



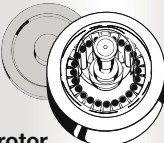
with bio-containment ⁵⁾

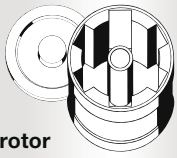
✂ 90° n = 13,000 min⁻¹ max. RCF 18,516
Cat. No. 1154-L

Drum rotor 6-place



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

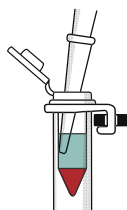
capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				2078	0536
lid 2425 ⁵⁾ incl.						
 rotor Cat. No. 1154-L						
Cat. No.	2024	2023	2031 ⁷⁾	-		
boring Ø x L in mm	6x40	8x40	10.2x19	11.5x38.5		
tubes per rotor	24					
max. RCF	18,516					
radius in mm	98					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

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

Optional for rotor 1154-L



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



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

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

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

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

Angle rotor, 6-place, for PCR strips



lid (optional)
Cat. No. 1162

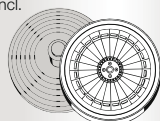
∠ 45° $n = 14,000 \text{ min}^{-1}$ max. RCF 18,845
Cat. No. (without lid) 1160

Hematocrit rotor 24-place



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

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

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

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

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

ROTORS

Angle rotor, 6-place



✂ 35° n = 6,000 min⁻¹ max. RCF 4,025
Cat. No. 1016

Angle rotor, 12-place



✂ 35° n = 6,000 min⁻¹ max. RCF 4,146
Cat. No. 1015

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

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

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

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

Swing-out rotor, 12-place



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

Swing-out rotor, 8-place



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

Rotors for MIKRO 220 R centrifuges only:

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

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

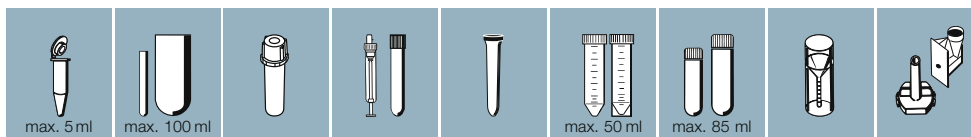
capacity in ml	5	6	2.6–3.4	2.7–3	4–5.5	1.6–5	4–7
Ø x L in mm	12x75	12x82	13x65	11x66	15x75	13x75	16x75
Cat. No.	0553 ²⁾	0501 ²⁾	blood collection tubes				
 rotor Cat. No. 1020							
							
Cat. No.	1131-A	1131-A	1132-A	1131-A	1132-A	1131-A	1132-A
boring Ø x L in mm	13x53	13x53	17.5x53	13x53	17.5x53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

Hettich



Specialists in diversity

BENCH



ROTOFIX 32 A

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

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

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



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

^{*)} Other voltages on request.

ROTORS

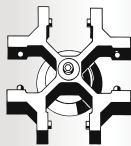
Swing-out rotor, 4-place



illustrated with
carriers 1369

✂ 90° n = 4,000 min⁻¹ max. RCF 2,665

Cat. No. (without carriers) 1624

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

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

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

⁴⁾ Please remove the inserts.

¹⁹⁾ Packed in units of 10 pieces.

²³⁾ This combination permits no Vacutainers made of glass.

ROTORS

Swing-out rotor 1624



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

capacity in ml	1.5	2.0	1	3	4
Ø x L in mm	11 x 38		6 x 45	10 x 60	12 x 60
Cat. No.	2078	0536	Rhesus	-	-
 carrier Cat. No. 1366					
					
Cat. No.	5277		1357	1327	1326
boring Ø x L in mm	11.5 x 38		6.5 x 23	10.5 x 23	12.5 x 44
tubes per rotor	36		120	48	
max. RCF ²⁾	1,968		1,950	1,932	
radius in mm	110		109	108	
run-up in sec	22				
run-down in sec, braked	25				

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

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

⁴⁾ Please remove the inserts.

Swing-out rotor 1624



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

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

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

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

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

ROTORS

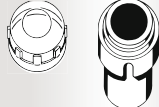
Swing-out rotor, 4-place



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

↗ 90° n = 4,000 min⁻¹ max. RCF 2,630

Cat. No. (without carriers) 1324

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

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

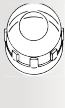
²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

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

⁴⁾ Please remove the inserts.

Swing-out rotor 1324



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

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

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

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

ROTORS

Swing-out rotor **1324**



illustrated with
carriers 1398

Swing-out rotor, 6-place



✂ 90° n = 4,000 min⁻¹ max. RCF 2,701

Cat. No. (with carriers) 1619

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

capacity in ml	1.6 – 5	4 – 7	4 – 7	8.5 – 10	12	15	50	12	50
Ø x L in mm	13 x 75	13 x 100	16 x 75	16 x 100	17 x 102	17 x 120	29 x 115	17 x 100	29 x 115
Cat. No.	blood / urine tubes				0509	0513	-	-	-
 carrier Cat. No. 1398									
Cat. No.	1486	1482A	1487	1483A	1484	1482A	1484 ⁴⁾	1486	1482A
boring Ø x L in mm	13.4 x 57.5	17.5 x 81	17.5 x 74	17 x 100	30 x 98	17.5 x 81	30 x 98	13.4 x 57.5	17.5 x 81
tubes per rotor	20	16	12	16	4	16	4	20	16
max. RCF ²⁾	2,486	2,397	2,451	2,612	2,576	2,522	2,576	2,486	2,272
radius in mm	139	134	137	146	144	141	144	139	127
run-up in sec	27								27
run-down in sec, braked	30								30

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

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

⁴⁾ Please remove the inserts.

Swing-out rotor, 8-place



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

Swing-out rotor, 8-place



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

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

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

ROTORS

Swing-out rotor, 12-place



✂ 55°
(with carriers 1127-A)

✂ 60°
(with carriers 1122)

✂ 80°
(with carriers 1621)

n = 4,000 min⁻¹ max. RCF 2,683

Cat. No. (without carriers) 1628

Angle rotor, 8-place



✂ 45° n = 4,000 min⁻¹ max. RCF 2,612

Cat. No. (without adapters) 1418

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

capacity in ml	5	15	1.1 – 1.4	2.6 – 3.4	2.7 – 3	9 – 10	1.6–5	4–7	8.5 – 10	12	15	50	12	50	50
Ø x L in mm	12 x 75	17x100	8 x 66	13 x 65	11 x 66	16 x 92	13 x 75	13x100	16 x 100	17 x 102	17 x 120	29 x 115	17 x 100	29 x 115	29 x 107
Cat. No.	0553 ²⁾	0518 ²⁾	blood collection / urine tubes								0509	0513	-	-	0546
 rotor Cat. No. 1418															
	+ 1054-A 	+ 0716 	+ 1054-A 			+ 0716 	+ 1054-A 	+ 0716 	+ 0716 	+ 0716 	+ E2109 	+ E2110-A 	+ 0716 		
Cat. No.	1467	1467	1467			1467					1468	1467	1468		
boring Ø x L in mm	17.4 x 91											30.2 x 92	17.4 x 91	30.2 x 92	
tubes per rotor	32											8	32	8	
max. RCF ²⁾	2,182	2,540	2,182			2,540	2,182	2,612	2,540		2,594	2,486	2,540	2,486	
radius in mm	122	142	122			142	122	146	142		145	139	142	139	
run-up in sec	36														
run-down in sec, braked	43														

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

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

Angle rotor, 6-place



illustrated with 6-place
adapter set 1646

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

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

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

ROTORS

Angle rotor, 12-place



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

Cyto rotor, 6-place



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

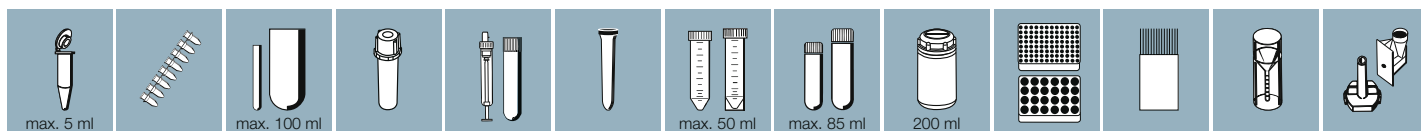
illustrated with carriers 1660 and
lids 1661 for cyto chambers

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

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

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

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



UNIVERSAL 320 / 320 R

Our multitasking centrifuges save space and costs

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

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



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TECHNOLOGY	UNIVERSAL 320		UNIVERSAL 320 R ^{>)}		
Benchtop centrifuge, without rotor	classic		cooled		
Power supply ¹⁾	200–240 V 1 ~	100–127 V 1 ~	200–240 V 1 ~	240 V 1 ~	115–127 V 1 ~
Frequency	50–60 Hz		50 Hz	60 Hz	60 Hz
Consumption	400 VA		800 VA		950 VA
Emission, Immunity	EN/IEC 61326-1, class B	FCC class B	EN/IEC 61326-1, class B		FCC class B
 /  Max. capacity	4 x 200 ml / 6 x 94 ml				
 Max. RPM (speed)	15,000 min ⁻¹				
 Max. RCF	21,382				
Running time	1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key)				
Dimensions (H x W x D)	346 x 401 x 529 mm		346 x 407 x 698 mm		
Weight	approx. 31 kg		approx. 52 kg		
Refrigeration					
Temperature control, infinitely variable	-		from -20 to +40 °C		
Cat. No.	1401	1401-01	1406	1406-01	

^{*)} Other voltages on request.

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

ROTORS

Swing-out rotor, 4-place

Carrier **1565**



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



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

↗ 90° n = 4,500 min⁻¹ max. RCF 3,328

Cat. No. (without carriers) 1554

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

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

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

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

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

Swing-out rotor, 4-place

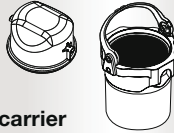


illustrated with carriers 1560
with single-hand clamp lock
and lids 1561 with bio-contain-
ment ⁵⁾



illustrated with
carriers 1560

Cat. No. (without carriers) 1554

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

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

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

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

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

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

ROTORS

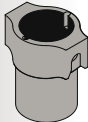
Swing-out rotor 1554

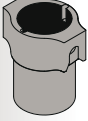


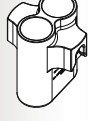
illustrated with
carriers 1559



illustrated with
carriers 1563

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

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

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

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

²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ³⁾ is 4,000.

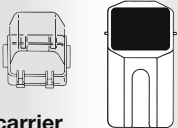
⁴⁾ Please remove the inserts.

ROTORS

Swing-out rotor 1494



illustrated with
carriers 1427

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

Capacity in ml	4–5.5	4.5–5	4.9	7.5–8.5	9–10	1.6–5	4–7		8.5–10	15	50	25	30	50
Ø x L in mm	15x75	11x92	13x90	15x92	16x92	13x75	13x100	16x75	16x100	17x120	29x115	25x90	25x110	29x115
Cat. No.	blood collection / urine tubes									0509	0513	-	-	-
lid Cat. No. 1421														
 carrier Cat. No. 1427														+ 6316
Cat. No.	5279	5230	1732	5279	5271⁴⁾	1732	5271	5231	5275	5276	1731	5272	5233⁴⁾	
boring Ø x L in mm	15.6x41	12.4x87	13.4x58	15.6x41	17x66	13.4x58	17x66	17.8x87	17x90	30x90	25.5x72	25.5x85	35.5x87	
tubes per rotor	20	48	32	20		32	20	24	4		8	4	4	
max. RCF ²⁾	4,109	3,941	4,025	4,109	3,969	4,025	3,969	3,941	4,165	4,053	3,969	4,025	4,053	
radius in mm	147	141	144	147	142	144	142	141	149	145	142	144	145	
run-up in sec	30													
run-down in sec, braked	32													
temperature in °C ¹⁾	-7													

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

²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ³⁾ is 4,000.

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

⁴⁾ Please remove the inserts.

Swing-out rotor 1494



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

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

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

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

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

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

ROTORS

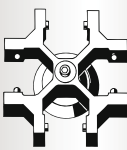
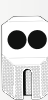
Swing-out rotor, 4-place

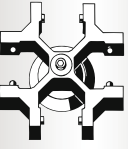


illustrated with
carriers 1369

✂ 90° n = 4,000 min⁻¹ max. RCF 2,665

Cat. No. (without carriers) 1624

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

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

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

²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ³⁾ is 4,000.

⁴⁾ Please remove the inserts.

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

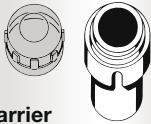
Swing-out rotor 1624



illustrated with carriers 1481 and
lids 1492 with bio-containment¹⁾

Capacity in ml	1.5	2.0	1	3	4
Ø x L in mm	11x38		6x45	10x60	12x60
Cat. No.	2078	0536	Rhesus	-	-
 carrier Cat. No. 1366					
					

Cat. No.	5277	1357	1327	1326
boring Ø x L in mm	11.5x38	6.5x23	10.5x23	12.5x44
tubes per rotor	36	120	48	
max. RCF ²⁾	1,968	1,950	1,932	
radius in mm	110	109	108	
run-up in sec	20			
run-down in sec, braked	25			
temperature in °C ¹⁾	-15			

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

¹⁾ Packed in units of 10 pieces.

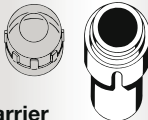
²⁾ This combination permits no Vacutainers made of glass.

ROTORS

Swing-out rotor 1624



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

Capacity in ml	100	1.1–1.4	2.7–5	2.6–4.9	4–8.5	9–10	10	1.6–7	4–10	5	15
Ø x L in mm	44x100	8x66	11x66/92	13x65/90	15x75/92	16x92	15x102	13x75/100	16x75/100	17x59	17x120
Cat. No.	0526²⁾	blood collection / urine tubes								-	0509
lid with bio-containment ⁵⁾ Cat. No. 1492											
 carrier Cat. No. 1481	 rubber insert										
Cat. No.	0761	1457	1383	1459	1329	1329⁴⁾	1383	1348	6341	1347	
boring Ø x L in mm	45.9x98	9x47	13.4x48	15.6x47	17.6x91		13.4x48	16.5x56	17x45	17x90	
tubes per rotor	4	28	20	16	16		20	16	12	4	
max. RCF ²⁾	2,558	2,576	2,558	2,576	2,540	2,665	2,558	2,522	2,665		
radius in mm	143	144	143	144	142	149	143	141	149		
run-up in sec	20										
run-down in sec, braked	25										
temperature in °C ¹⁾	-15										

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

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

²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ³⁾ is 4,000.

⁴⁾ Please remove the inserts.

Swing-out rotor, 4-place

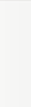
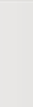


illustrated with carriers 1490 and
lids 1492 with bio-containment⁵⁾

✂ 90° n = 4,500 min⁻¹ max. RCF 3,328

Cat. No. (without carriers) 1324

Capacity in ml	0.5	1.5	2.0	1	3	4	5	6	7	9	15	25
Ø x L in mm	10.7x36	11x38		6x45	10x60	10x88	12x75	12x82	12x100	14x100	17x100	24x100
Cat. No.	Pediatric	2078	0536	Rhesus	-	-	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾
lid with bio-containment ⁵⁾ Cat. No. 1492												
 carrier Cat. No. 1490												
Cat. No.	1351			1339	1343		1383			1329		1330
boring Ø x L in mm	11.2x38			6.5x34	10.5x43		13.4x48			17.6x91		25.2x87
tubes per rotor	20			108	36		20			16		4
max. RCF ²⁾	2,966	3,056		3,237	3,283		3,192			3,170		3,034
radius in mm	131	135		143	145		141			140		134
run-up in sec	27											
run-down in sec, braked	30											
temperature in °C ¹⁾	-6											

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

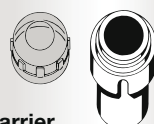
⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

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

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

ROTORS

Swing-out rotor 1324

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

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

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

²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ³⁾ is 4,000.

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

⁴⁾ Please remove the inserts.

Swing-out rotor 1324



illustrated with
carriers 1398

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

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

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

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

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

ROTORS

Swing-out rotor, 6-place



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

Swing-out rotor, 8-place



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

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

Capacity in ml	5	6	7	10	15	2.6–3.4	2.7–3	4–5.5	4.5–5	7.5–8.5	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	12x75	12x82	12x100	13x100	17x100	13x65	11x66	15x75	11x92	15x92	13x75	13x100	16x75	16x100
Cat. No.	0553 ²⁾	0501 ²⁾	0578 ²⁾	-	0518 ²⁾	blood collection / urine tubes								
 rotor Cat. No. 1611														
														
Cat. No.	1131-A		1643	1643	1644	1131-A		1132-A	1643	1644	1131-A	1643	1132-A	1644
boring Ø x L in mm	13x53		13.2x81	13.2x81	17.5x81	13x53		17.5x53	13.2x81	17.5x81	13x53	13.2x81	17.5x53	17.5x81
tubes per rotor	8													
max. RCF ²⁾	1,914		2,415	2,415		1,914			2,415		1,914	2,415	1,914	2,415
radius in mm	107		135	135		107			135		107	135	107	135
run-up in sec	20													
run-down in sec, braked	20													
temperature in °C ¹⁾	-16													

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

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

Swing-out rotor, 8-place



✂ 45° $n = 5,000 \text{ min}^{-1}$ max. RCF 3,857
Cat. No. (with carriers) 1617

Swing-out rotor, 12-place



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

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

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

ROTORS

Swing-out rotor, 4-place

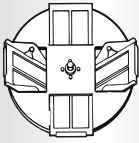
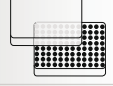


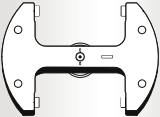
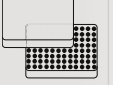
✂ 90° n = 4,000 min⁻¹ max. RCF 1,896
Cat. No. (without carriers) 1645

Swing-out rotor, 2-place



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

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

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

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

²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ³⁾ is 4,000.

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

Angle rotor, 12-place



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

Angle rotor, 24-place



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

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

Capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38		10.7x36
Cat. No.	-	-	-	-	2078	0536	Pediatric
lid incl.							
rotor Cat. No. 1420-B							
Cat. No.	2024	2023	2031⁷⁾	-	0788²⁰⁾		
boring Ø x L in mm	6x40	8x40	10.2x19	11.2x42.6	11.2x39		
tubes per rotor	24						12
max. RCF ²⁾	21,382						20,376
radius in mm	85						81
run-up in sec	25						
run-down in sec, braked	24						
temperature in °C ¹⁾	-4						

Optional for rotor 1420-B:



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



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

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

²⁰⁾ Packed in units of 15 pieces.

ROTORS

Angle rotor, 30-place



with bio-containment ⁵⁾,
phenol-resistant

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

Angle rotor, 8-place



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

Capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38		10.7x36
Cat. No.	-	-	-	-	2078	0536	Pediatric
lid with bio-containment ⁵⁾ incl.							
rotor Cat. No. 1689-A							
Cat. No.	2024	2023	2031⁷⁾	-	0788²⁰⁾		
boring Ø x L in mm	6x40	8x40	10.2x19	11.2x40.9	11.2x39		
tubes per rotor	30						15
max. RCF ²⁾	21,255						20,376
radius in mm	97						93
run-up in sec	35						
run-down in sec, braked	31						
temperature in °C ¹⁾	0						

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

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

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

Angle rotor, 6-place



illustrated with 6-place
adapter set 1646

✶ 35° n = 9,000 min⁻¹
Cat. No. 1620A

max. RCF 9,509

Capacity in ml	0.5	1.5	2.0	3	15	50	94	7.5–8.5	9–10	10	8.5–10
Ø x L in mm	10.7x36	11x38		10x60	17x100	34x100	38x102	15x92	16x92	15x102	16x100
Cat. No.	Pediatric	2078	0536	-	0518²⁾	0521²⁾	0549	blood- / urine tubes			
 rotor Cat. No. 1620A											
											
Cat. No.	1449				1451	1463	-	1451			
boring Ø x L in mm	11.4x39				17.5x92	35x89	38.6x90.2	17.5x92			
tubes per rotor	24				6	6	6	6			
max. RCF ²⁾	9,237				8,784	9,327	9,509	8,784			
radius in mm	102				97	103	105	97			
run-up in sec	30										
run-down in sec, braked	30										
temperature in °C ¹⁾	-11										

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

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

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

²⁰⁾ Packed in units of 15 pieces.

ROTORS

Angle rotor, 12-place



✶ 35° n = 6,000 min⁻¹

max. RCF 4,146

Cat. No. 1613

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

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

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

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

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

Angle rotor, 12-place



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

Hematocrit rotor, 24-place



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

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

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

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

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

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

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

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

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



Rotor, 4-place

illustrated with carriers 1660
and lids 1661 for cyto chambers

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

Cat. No. 1624 (without carriers)



Rotor, 6-place

illustrated with carriers 1660
and lids 1661 for cyto chambers

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

Cat. No. 1626 (without carriers)



Rotor, 12-place

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

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

Cat. No. 1515-A (without clips)



Disk rotor, 12-place

illustrated with clips 1524
for different cyto chambers

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

Cat. No. 1520 (without clips)

Rolling Cabinets

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

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

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

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

- ROTINA 420 R
- ROTANTA 460 R



Low and narrow,
with one drawer.
Depth 650 mm

Cat. No. 4612-A



Low and wide,
with one drawer.
Depth 650 mm

Cat. No. 4614-A



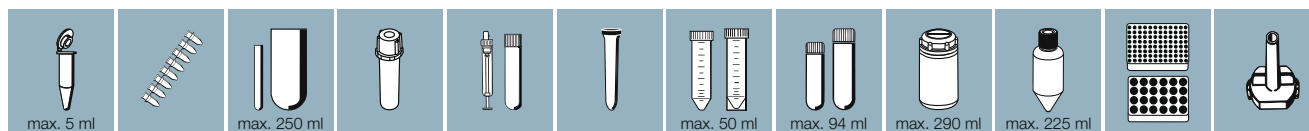
High and narrow,
with two drawers.
Depth 650 mm

Cat. No. 4613-A



High and wide,
with two drawers.
Depth 650 mm

Cat. No. 4615-A



ROTINA 380 / 380 R

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

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

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



TECHNOLOGY	ROTINA 380		ROTINA 380 R ^{>)}	
Benchtop centrifuge, without rotor	classic		cooled	
Power supply ^{*)}	200–240 V 1 ~	100–127 V 1 ~	200–240 V 1 ~	100–127 V 1 ~
Frequency	50–60 Hz		50–60 Hz	60 Hz
Consumption	650 VA	700 VA	1.300 VA	1.400 VA
Emission, Immunity	EN/IEC 61326-1, class B	FCC class B	EN/IEC 61326-1, class B	FCC class B
Max. capacity	4 x 290 ml			
Max. RPM (speed)	15,000 min ⁻¹			
Max. RCF	24,400			
Running time	1 s – 99 h : 59 min : 59 s, ∞ continuous run, short cycle mode			
Dimensions (H x W x D)	418 x 457 x 600 mm		418 x 457 x 750 mm	
Weight	approx. 51 kg	approx. 58.5 kg	approx. 81 kg	approx. 88.5 kg
Refrigeration				
temperature control, infinitely variable	-		from -20 to +40 °C	
Cat. No.	1701	1701-01	1706	1706-01

^{*)} Other voltages on request.

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

Swing-out rotor, 4-place



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

✂ 90° n = 5,000 min⁻¹ max. RCF 4,863

Cat. No. (without carriers) 1754

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

85
84

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

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

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

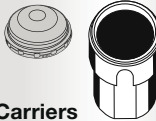
⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

ROTORS

Swing-out rotor 1754



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

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

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

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

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

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

Swing-out rotor, 4-place

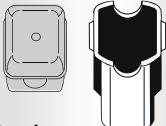


illustrated with carriers 5051
and lids 5053

✂ 90° n = 4,000 min⁻¹ max. RCF 3,095

Cat. No. (without carriers) 1798

capacity in ml	1.5	2.0	1.5	2.0	3	5	6	7	9	15	25	50	100	100	
Ø x L in mm	11x38		11x38		10x60	12x75	12x82	12x100	14x100	17x100	24x100	34x100	40x115	44x100	
Cat. No.	-	-	2078	0536	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	0500 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0523 ²⁾	0526 ²⁾	
lid Cat. No. 5053															
 Carriers Cat. No. 5051															
Cat. No.	5257		5281		5267	5227		5247 ¹⁸⁾	5264	5248 ¹⁸⁾	5242	5243	5249	5262	
boring Ø x L in mm	12.5x42		11.5x50		11x44	12.5x42		12.5x86	16x50	17.5x86	26x86	36x86	42x86	45.5x86	
tubes per rotor	160		64		80	80		80	48	48	20	8	4		
max. RCF ²⁾	1,950/2,826		2,826		2,737	2,773		2,755	2,773	2,755					
radius in mm	109/158		158		153	155		154	155	154					
run-up in sec	24														
run-down in sec, braked	17														
temperature in °C ¹⁾	-8														

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8.5–10	
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x75	16x100	
Cat. No.	blood collection / urine tubes													
lid Cat. No. 5053														
 Carriers Cat. No. 5051														
														
Cat. No.	5267	5268	5227	5264	5227	5268	5264	5258	5268		5264	5248		
boring Ø x L in mm	11x44	13.5x52	12.5x42	16x50	12.5x42	13.5x52	16x50	17.6x86	13.5x52		16x50	17.5x86		
tubes per rotor	80	48	80	48	80	48	48	44	48					
max. RCF ²⁾	2,737	2,808	2,773			2,808	2,773	2,755	2,808		2,773	2,755		
radius in mm	153	157	155			157	155	154	157		155	154		
run-up in sec	24													
run-down in sec, braked	17													
temperature in °C ¹⁾	-8													

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

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

²⁴⁾ Carrier must be loaded as illustrated.

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

ROTORS

Swing-out rotor 1798



illustrated with carriers 5051
and lids 5053

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

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

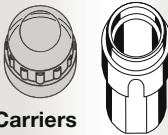
²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

Swing-out rotor 1798



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

capacity in ml	5	6	7	15	25	50	100	100	250
Ø x L in mm	12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115
Cat. No.	0553 ²⁾	0501 ²⁾	0578 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0526 ²⁾	0523 ²⁾	0530 ²⁾
lid with bio-containment ⁵⁾ Cat. No. 5093									
 Carriers Cat. No. 5092									
Cat. No.	5128	5120	5136	5122	5124	5125	5126	1791	
boring Ø x L in mm	12.8x45	12.8x82	17.5x60.7	25.5x82	35.5x85	45.5x85	42x85	66x103	
tubes per rotor	48		32	16	4			4	
max. RCF ²⁾	3,005		2,952	2,898	2,952			3,095	
radius in mm	168		165	162	165			173	
run-up in sec	24								
run-down in sec, braked	17								
temperature in °C ¹⁾	-8								

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

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

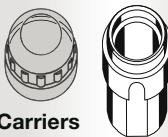
²⁸⁾ At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

ROTORS

Swing-out rotor 1798



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

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	16x75	16x75
Cat. No.	blood collection / urine tubes											
lid with bio-containment ⁵⁾ Cat. No. 5093												
 Carriers Cat. No. 5092												
Cat. No.	5138			5136	5120	5137	5136			5138	5136	5121-93
boring Ø x L in mm	12.8x54.5			17.5x60.7	12.8x82	13.5x60.7	17.5x60.7			12.8x54.5	17.5x60.7	17.5x52
tubes per rotor	48			32	48	32	32			48	32	28
max. RCF ²⁾	2,540			2,952	3,005	2,952	2,952			2,540	2,952	3,005
radius in mm	142			165	168	165	165			142	165	168
run-up in sec	24											
run-down in sec, braked	17											
temperature in °C ¹⁾	-8											

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

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

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.

Swing-out rotor, 6-place



illustrated with
carriers 1742

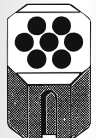
✱ 90° n = 4,000 min⁻¹ max. RCF 2,808

Cat. No. (without carriers) 1726

capacity in ml	5	6	7	9	15	20	25	45	50	8.5x10	30
Ø x L in mm	12x75	12x82	12x100	14x100	17x100	21x100	24x100	31x100	34x100	16x100	26x95
Cat. No.	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	-	0519²⁾	-	0521²⁾	blood coll. tube	0545
 rotor Cat. No. 1726											
											
Cat. No.	1369-91	1372	1369-92	1370	1369	1346	1745	1345	1746	1369	1745
boring Ø x L in mm	12.5 x 64.4	13.5x65	12.5 x 71.5	14.6x74	17.6x74	21.5x74	26x78	32x74	35x78	17.6x74	26x78
tubes per rotor	24	102	24	30	24	12	6	24	12		
max. RCF ²⁾	2,576	2,522	2,665	2,719	2,808	2,719	2,808	2,665	2,808		
radius in mm	144	141	149	152	157	152	157	149	157		
run-up in sec	19										
run-down in sec, braked	18										
temperature in °C ¹⁾	-6										

91
90

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

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

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

²⁴⁾ Carrier must be loaded as illustrated.

ROTORS

Swing-out rotor 1726



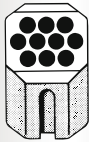
illustrated with
carriers 1742

Swing-out rotor, 10-place



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

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

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

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

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

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

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

Swing-out rotor, 2-place



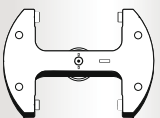
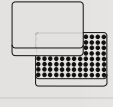
↘ 90° n = 4,000 min⁻¹ max. RCF 2,397
Cat. No. (without carriers) 1760

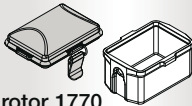
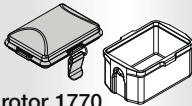
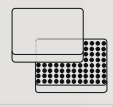
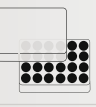
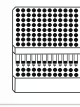
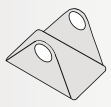
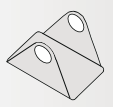
Swing-out rotor, 2-place



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

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

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

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

¹⁾ Packed in units of 10 pieces.

²⁾ Carrier must be loaded as illustrated.

ROTORS

Angle rotor, 6-place



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

Cat. No. 1720

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

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

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

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

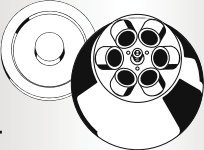
Angle rotor, 6-place

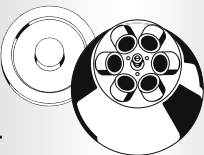


with bio-containment ⁵⁾

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

Cat. No. 1792

capacity in ml	1.5	2.0	15	25	50	94	7.5–8.5	9–10
Ø x L in mm	11x38		17x100	24x100	34x100	38x102	15x92	16x92
Cat. No.	2078	0536	0518 ²⁾	0519 ²⁾	0521 ²⁾	0549	blood / urine tubes	
lid with bio-containment ⁵⁾ incl.								
 rotor Cat. No. 1792								
Cat. No.	1449		1451	1447	1463	-	1451	
boring Ø x L in mm	11.4x39		17.5x92	26x85	35x89	38.2x89.6	17.5x92	
tubes per rotor	24		6					
max. RCF ²⁾ classic/ cooled	13,081/ 15,828		12,857 / 15,557	12,522 / 15,151	13,416 / 16,233	13,640 / 16,504	12,857 / 15,557	
radius in mm	117		115	112	120	122	115	
run-up in sec classic/ cooled	40/48							
run-down in sec, braked classic/ cooled	37/44							
temperature in °C ¹⁾	+4							

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

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

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

ROTORS

Angle rotor, 30-place



with bio-containment ⁵⁾,
phenol-resistant

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

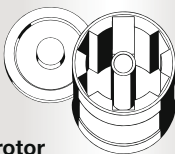
Drum rotor, 6-place



illustrated with
adapters 1377

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

capacity in ml	0.2		0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18		6x45	8x30	8x45	11x38		10.7x36
Cat. No.	-					2078	0536	Pediatric
lid with bio-containment ⁹⁾ incl.								
 rotor Cat. No. 1789-A								
Cat. No.	2024			2023		2031 ⁷⁾	-	0788 ²⁰⁾
boring Ø x L in mm	6x40			8x40		10.2x19	11.2x40.9	
tubes per rotor	30						15	
max. RCF ²⁾	24,400						23,394	
radius in mm	97						93	
run-up in sec	24							
run-down in sec, braked	24							
temperature in °C ¹⁾	+4							

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

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

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

Angle rotor, 8-place



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

Cyto rotor, 8-place



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

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

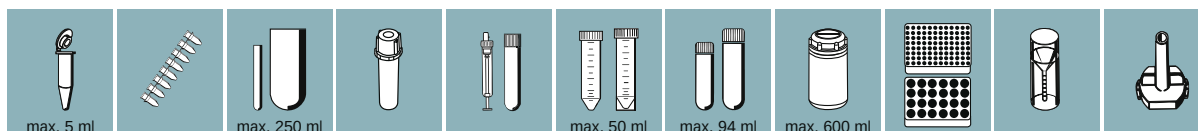
capacity in ml	5	15	1.1–1.4	2.6–3.4	2.7–3	9–10	1.6–5	4–7	8.5–10	12	15	50
Ø x L in mm	12x75	17x100	8x66	13x65	11x66	16x92	13x75	13x100	16x100	17x102	17x120	29x115
Cat. No.	0553 ²⁾	0518 ²⁾	blood collection / urine tubes								0509	0513
 rotor Cat. No. 1721												
	+ 1054-A 	+ 0716 	+ 1054-A 			+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

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

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

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

²⁰⁾ Packed in units of 15 pieces.



ROTINA 420 / 420 R

Well equipped for all centrifuging applications

The compact benchtop centrifuges are conceived for high sample throughput as well as for high sample volumes. With a maximum capacity of 4 x 600 ml, 140 blood collection tubes or

16 microtitre plates they are ideal for applications in clinical chemistry, in biotechnology and in life science research facilities.



TECHNOLOGY	ROTINA 420		ROTINA 420 R ^{>1}	
Benchtop centrifuge, without rotor	classic		cooled	
Power supply ^{*)}	200–240 V 1 ~	100–127 V 1 ~	200–240 V 1 ~	100–127 V 1 ~/100 V~
Frequency	50–60 Hz		50 Hz	60 Hz / 50 Hz
Consumption	870 VA	900 VA	1.600 VA	1.850 VA
Emission, Immunity	EN/IEC 61326-1, class B	FCC class B	EN/IEC 61326-1, class B	FCC class B
Max. capacity	4 x 600 ml			
Max. RPM (speed)	15,000 min ⁻¹			
Max. RCF	24,400			
Running time	1 sec – 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode			
Dimensions (H x W x D)	423 x 506 x 650 mm		423 x 713 x 654 mm	
Weight	approx. 75 kg	approx. 84 kg	approx. 108 kg	approx. 117 kg
Refrigeration				
Temperature control, infinitely variable	-		from -20 to +40 °C	
Cat. No.	4701	4701-01	4706	4706-01

^{*)} Other voltages on request.

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

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

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

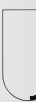
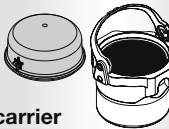
Swing-out rotor, 4-place

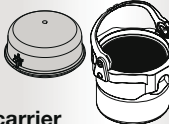


illustrated with carriers 4780 with single-hand clamp lock and lids 4783 with bio-containment ⁵⁾

✂ 90° n = 4,800 min⁻¹ max. RCF 4,740

Cat. No. (ohne Carrier) 4784-A

capacity in ml	1.5	2.0	3	4	4	5	6	7	15	25	50	94	100	100	250	
Ø x L in mm	11x38		10x60	10x88	12x60	12x75	12x82	12x100	17x100	24x100	34x100	38x102	40x115	44x100	65x115	
Cat. No.	2078	0536	-			0553 ²⁾	0501 ²⁾	0578 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0549	0523 ²⁾	0526 ²⁾	0530 ²⁾	
lid with bio-containment ⁵⁾ Cat. No. 4783																
 carrier Cat. No. 4780																
Cat. No.	4773		4761		4762				4763	4764	4765	4766		4767	4768	
boring Ø x L in mm	11.2x38		11.2x54		13.4x55				17.5 x 62	26.5x69	36x77	42x76.5		46x76.5	66x103	
tubes per rotor	96		140		104				72	28	16	12		8	4	
max. RCF ²⁾	4,585										4,559			4,534		
radius in mm	178										177			176		
run-up in sec									54							
run-down in sec, braked									38							
temperature in °C ¹⁾									+4							

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	1.6–7	4–7	8	8.5–10	5	15	50	12
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	13x75/100	16x75	16x125	16x100	17x59	17x120	29x115	17x100
Cat. No.	blood collection / urine tubes												-	0509	0513	-
lid with bio-containment ⁵⁾ Cat. No. 4783																
 carrier Cat. No. 4780																
Cat. No.	4761	4762	4761	4763	4761	4762	4763	4762	4775	4763	4763	4763	4778	4769	4770	4774
boring Ø x L in mm	11.2x54	13.4x55	11.2x54	17.5x62	11.2x54	13.4x55	17.5x62	13.4x55	13.7x55	17.5x62			17x52	17x84	30x82.5	17.2x82.5
tubes per rotor	140	104	140	72	140	104	72	104	84	72	24	72	48	52	20	56
max. RCF ²⁾	4,585												4,740		4,688	
radius in mm	178												184		182	
run-up in sec	54															
run-down in sec, braked	38															
temperature in °C ¹⁾	+4															

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

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

²⁴⁾ Carrier must be loaded as illustrated.

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

ROTORS

Swing-out rotor 4784-A



Carrier 4785

The 4780 carrier is also available without a lid and clamp lock. The catalogue number is 4785. ¹⁷⁾



illustrated with
carriers 4782

capacity in ml	25	30	50	10	30	50	85	94	175	175	200	225	250	290	400	400	600
Ø x L in mm	25x90	25x110	29x115	16x80	26x95	29x107	38x106	38x102	61x118	62x144	60x130	61x137	61x122	62x137	81x136	84x134	93x134
Cat. No.	-				0545	0546	0547	0538 ¹³⁾	Falcon®	Nalgene®	Nunc®	Falcon®	5127 ²⁸⁾	- ²⁸⁾	- ²⁸⁾	- ²⁸⁾	0551 ²⁸⁾
lid with bio-containment ⁵⁾ Cat. No. 4783																	
carrier Cat. No. 4780																	
Cat. No.	4764	4770 ⁴⁾	4763	4764	4770 ⁴⁾	4766	4776	4777	4776	4771	4772	-					
boring Ø x L in mm	26.5x69	30x82.5	17.5x62	26.5x69	30x82.5	42x76.5	61x105	61.5x110	61x105	62x100	85x100	94x99					
tubes per rotor	28	20	72	28	20	12	4										
max. RCF ²⁾	4,585	4,688	4,585	4,688	4,534	4,740											
radius in mm	178	182	178	182	176	184											
run-up in sec	54																
run-down in sec, braked	38																
temperature in °C ¹⁾	+4																
T x B x H in mm	86x128x15	86x128x17,5	86x128x22	86x128x44,5	86x128x46	59x84x11	82x124x20	-									
capacity in ml	-												0.2				
Cat. No.	MTP		CP	DWP	MS	Microtest plate (Terasaki)	PCR plate, 96 wells	PCR strips									
 carrier Cat. No. 4782																	
Cat. No.	-						1485										
boring Ø x L in mm	-																
plates / strips per rotor	16	16	12	4	4	8	4	48x8									
max. RCF ²⁾	4,096																
radius in mm	159																
run-up in sec	54																
run-down in sec, braked	38																
temperature in °C ¹⁾	+4																

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

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.

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

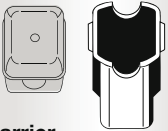
Swing-out rotor, 4-place

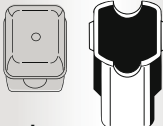


illustrated with carriers 5051
and lids 5053

✂ 90° n = 4.000 min⁻¹ max. RCF 3.095

Cat. No. (without carriers) 4753

capacity in ml	1.5	2.0	1.5	2.0	3	5	6	7	9	15	25	50	100	100
Ø x L in mm	11x38		11x38		10x60	12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115
Cat. No.	-	-	2078	0536	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	0500 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0526 ²⁾	0523 ²⁾
lid Cat. No. 5053														
 carrier Cat. No. 5051														
Cat. No.	5257		5281		5267	5227		5247 ¹⁸⁾	5264	5248 ¹⁸⁾	5242	5243	5262	5249
boring Ø x L in mm	12.5x42		11.5x50		11x44	12.5x42		12.5x86	16x50	17.5x86	26x86	36x86	45.5x86	42x86
tubes per rotor	160		64		80	80		80	48	48	20	8	4	
max. RCF ²⁾ upper/lower	1,950/2,826		2,826		2,737	2,773		2,755	2,773	2,755				
radius in mm upper/lower	109/158		158		153	155		154	155	154				
run-up in sec	18													
run-down in sec, braked	16													
temperature in °C ¹⁾	-1													

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

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

¹⁷⁾ With the E3905 add-on kit and the 4783 lid, the 4785 carrier can be converted at a later time to a 4780 carrier with single-hand clamp lock.

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

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

ROTORS

Swing-out rotor 4753

illustrated with
carriers 5051illustrated with
carriers 5092

capacity in ml	15	50	12	30	50	two-tier frame for cyto accessories
Ø x L in mm	17x120	29x115	17x100	25x110	29x115	
Cat. No.	0509	0513	-			cyto chambers
lid Cat. No. 5053	 ³⁾	 ³⁾		 ³⁾	 ³⁾	
carrier Cat. No. 5051					+ 2x6316 	
Cat. No.	6306	5259	6306	5266	5243	5280
boring Ø x L in mm	17x90	30x86	17x90	26x86	36x86	-
tubes per rotor	28	8	28	20	8	8
max. RCF ²⁾	2,898	2,826	2,898	2,755		1,735/2,737
radius in mm	162	158	162	154		97/153
run-up in sec	18					
run-down in sec, braked	16					
temperature in °C ¹⁾	-1					

capacity in ml	5	6	7	15	25	50	100	100	250
Ø x L in mm	12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115
Cat. No.	0553 ²⁾	0501 ²⁾	0578 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0526 ²⁾	0523 ²⁾	0530 ²⁾
lid with bio-containment ⁵⁾ Cat. No. 5093									
 carrier Cat. No. 5092									
Cat. No.	5128		5120	5136	5122	5124	5125	5126	1791
boring Ø x L in mm	12.8x45		12.8x82	17.5 x 60.7	25.5x82	35.5x82.5	45.5x85	42x85	66x103
tubes per rotor	48			32	16	4			
max. RCF ²⁾	3,005			2,952	2,898	2,952			3,095
radius in mm	168			165	162	165			173
run-up in sec	18								
run-down in sec, braked	16								
temperature in °C ¹⁾	-1								

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

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.

Swing-out rotor 4753



illustrated with
carriers 5092

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100

Cat. No.	blood collection / urine tubes										
lid with bio-containment ⁵⁾ Cat. No. 5093											
 carrier Cat. No. 5092											
Cat. No.	5138			5136	5120	5137	5136			5138	5120
boring Ø x L in mm	12.8x54.5			17.5x60.7	12.8x82	13.5x60.7	17.5x60.7			12.8x54.5	12.8x82
tubes per rotor	48			32	48	32			48	48	
max. RCF ²⁾	2,540			2,952	3,005	2,952			2,540	3,005	
radius in mm	142			165	168	165			142	168	
run-up in sec	18										
run-down in sec, braked	16										
temperature in °C ¹⁾	-1										

capacity in ml	4–7	8.5–10	8	15	50	12	25	30	50	10	250	290
Ø x L in mm	16x75	16x100	16x125	17x120	29x115	17x100	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	blood / urine tubes			0509	0513	-					5127 ²⁸⁾	- ²⁸⁾
lid with bio-containment ⁵⁾ Cat. No. 5093												
 carrier Cat. No. 5092												
Cat. No.	5136	5121 ⁴⁾	5129	5123	5121	5134	5122	5135	5136	6319		
boring Ø x L in mm	17.5x60.7	17.5x82	17x85	30x85	17.5x82	26x73	25.5x82	30x99	17.5x60.7	66x103		
tubes per rotor	32	28	28	8	28	12	16	8	32	4		
max. RCF ²⁾	2,952	3,059	3,095		3,005	2,826	2,898	3,023	2,952	3,095		
radius in mm	165	171	173		168	158	162	169	165	173		
run-up in sec	18											
run-down in sec, braked	16											
temperature in °C ¹⁾	-1											

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

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

ROTORS

Swing-out rotor, 8-place



illustrated with
carriers 1746

✂ 90° n = 3,800 min⁻¹ max. RCF 2,906

Cat. No. (without carriers) 4758

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

capacity in ml	7.5–8.5	9–10	10	1.6–5	1.6–5/4–7	4–7	8.5–10	15	50	30	suspension	
Ø x L in mm	15x92	16x92	15x102	13x75	13x75/16x75	13x100	16x100	17x120	29x115	26x95	for cyto accessories	
Cat. No.	blood collection / urine tubes							0509		0513	0545	cyto chambers
 rotor Cat. No. 4758												
			 25) + 8 x 0768 19)	 + 8 x 0768 19)	 + 0716			 25)	 + 1641	 + 1641	 + 1641	
Cat. No.	1742	1742	1742	1741	1742	1739	1742	1742	1746	1746	1745	1660
boring Ø x L in mm	17.6x78	17.6x78	17.6x78	14.6x78	17.6x78	13.5 x 78	17.6x78	17.6x78	30x98	30x98	26x78	-
tubes per rotor	56	56	24	80	56	56	56	24	8	8	16	8
max. RCF ²⁾	2,906			2,615	2,793	2,906					2,179	
radius in mm	180			162	173	180					135	
run-up in sec	19											
run-down in sec, braked	16											
temperature in °C ¹⁾	0											

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

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

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

Swing-out rotor 4758



illustrated with
carriers 1369-92

Swing-out rotor, 2-place



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

✂ 90° n = 5,100 min⁻¹ max. RCF 3,926

Cat. No. (without carriers) 4728

capacity in ml	1.5	2.0	1	3	4
Ø x L in mm	11x38		6x45	10x60	12x60
Cat. No.	2078	0536	Rhesus	-	-
 carrier Cat. No. 1366					
					
Cat. No.	5277		1357	1327	1326
boring Ø x L in mm	11.5x38		6.5x23	10.5x23	12.5x44
tubes per rotor	72		240	96	
max. RCF ²⁾	2,470		2,454	2,438	
radius in mm	153		152	151	
run-up in sec	19				
run-down in sec, braked	16				
temperature in °C ¹⁾	0				

T x B x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	86x128x46	86x128x83	59x84x11	82x124x20	-
capacity in ml	-								0.2
Cat. No.	MTP		CP	DWP	MS	QP	Microtest plate (Terasaki)	PCR plate, 96 wells	PCR strips
lid with bio-containment ⁵⁾ Cat. No. 4627									
 rotor 4728 carrier Cat. No. 4745									
Cat. No.	4626								4626 + 1485
boring Ø x L in mm	-								-
plates / strips per rotor	12	10	8	2			4	2	24x8
max. RCF ²⁾	3,926								
radius in mm	135								
run-up in sec	67								
run-down in sec, braked	41								
temperature in °C ¹⁾	+4								

¹⁹⁾ Packed in units of 10 pieces.

²⁵⁾ Please load only the middle row.

ROTORS

Angle rotor, 6-place



with bio-containment ⁵⁾

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

Cat. No. (without carrier) 4794

capacity in ml	1.5	2.0	3	15	25	50	94	7.5–8.5	9–10	10	8.5–10
Ø x L in mm	11x38		10x60	17x100	24x100	34x100	38x102	15x92	16x92	15x102	16x100
Cat. No.	2078	0536	-	0518 ²⁾	0519 ²⁾	0521 ²⁾	0549	blood collection / urine tubes			
lid with bio-containment ⁵⁾ incl.											
 rotor Cat. No. 4794											
Cat. No.	1449			1451	1447	1463	-	1451			
boring Ø x L in mm	11.4x39			17.5x92	26x85	35x89	38.2x89.6	17.5x92			
tubes per rotor	24			6							
max. RCF ²⁾	15,828			15,557	15,151	16,233	16,504	15,557			
radius in mm	117			115	112	120	122	115			
run-up in sec	40										
run-down in sec, braked	63										
temperature in °C ¹⁾	+4										

capacity in ml	5	15	50	10	30	50	85	94
Ø x L in mm	17x59	17x120	29x115	16x80	26x95	29x107	38x106	38x102
Cat. No.	-	0509	0513	-	0545	0546	0547	0538 ¹³⁾
lid with bio-containment ⁵⁾ incl.								
rotor Cat. No. 4794								
Cat. No.	1476	1466	1454	1448	1447	1446	-	
boring Ø x L in mm	17x51	17x106	29.8x97	16.5x74	26x85	29x92	38.2x89.6	
tubes per rotor	6			12	6			
max. RCF ²⁾	15,422	15,828	16,098	15,557	15,151	15,828	16,504	
radius in mm	114	117	119	115	112	117	122	
run-up in sec	40							
run-down in sec, braked	63							
temperature in °C ¹⁾	+4							

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

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

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

Angle rotor, 4-place



✶ 25° n = 9,500 min⁻¹
max. RCF 12,007

Cat. No. 4795

Angle rotor, 30-place



with bio-containment ⁵⁾,
phenol-resistant

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

Cat. No. 4790-A

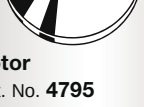
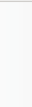
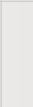
Angle rotor, 6-place, for PCR strips



lid (optional),
Cat. No. 1162

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

Cat. No. (without lid) 4760

capacity in ml	15	25	94	15	50	10	30	50	85	94	250
Ø x L in mm	17x100	24x100	38x102	17 x 20	29 x 115	16x80	26x95	29x107	38x106	38x102	61x122
Cat. No.	0518 ²⁾	0519 ²⁾	0549	0509	0513	-	0545	0546	0547	0538 ¹³⁾	5127 ²⁸⁾
 Rotor Cat. No. 4795											
											
Cat. No.	5646	5642	5644	5637	5638	5641	5642	5643	5644	-	-
boring Ø x L in mm	17.6x83	26x80	38.6x88	17 x 106	30 x 100	16.6x70	26x80	29x90	38.6x88	38.6x88	61.5x109
tubes per rotor	28	12	4	20	4	32	12	4	4	4	4
max. RCF ²⁾	11,301	10,897	10,292	10,998	10,090	11,402	10,897	10,090	10,292	10,292	12,007
radius in mm	112	108	102	109	100	113	108	100	102	102	119
run-up in sec	45										
run-down in sec, braked	55										
temperature in °C ¹⁾	+2										

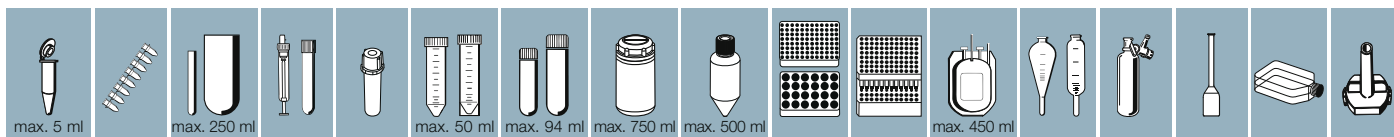
capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38		10.7x36
Cat. No.	-				2078	0536	Pediatric
lid with bio-containment ⁵⁾ incl.							
 Rotor Cat. No. 4790-A							
Cat. No.	2024		2023		2031 ⁷⁾	-	0788
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.9	11.2x40.9
tubes per rotor			30				15
max. RCF ²⁾			24,400				23,394
radius in mm			97				93
run-up in sec					19		
run-down in sec, braked					24		
temperature in °C ¹⁾					+4		

capacity in ml	0.2	0.2
Ø x L in mm	6x18	6x18
Cat. No.	-	PCR strips
 Rotor Cat. No. 4760		
Cat. No.	-	-
boring Ø x L in mm	6.5 x 15.5	
tubes per rotor	48	6 x 8
max. RCF ²⁾	18,845	
radius in mm	86	
run-up in sec	15	
run-down in sec, braked	15	
temperature in °C ¹⁾	+1	

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

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

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



ROTANTA 460 / 460 R

Advanced laboratory technology makes a significant contribution to shortening processing times

Enhanced performance and an extended range of accessories guarantee fast, trouble-free

operation in daily laboratory use. With a maximum capacity of 3 litres per run, the ROTANTA centrifuges are proving themselves in clinics and laboratory centres, as well as in Life Science R & D departments.



TECHNOLOGY		ROTANTA 460		ROTANTA 460 R ^{>)}	
Benchtop centrifuge, without rotor		classic		cooled	
Power supply*)		200 – 240 V 1 ~	100 – 127 V 1 ~	200 – 240 V 1 ~	100-127 V1 ~ 100 V 1 ~
Frequency		50 – 60 Hz		50 Hz	60 Hz 50 Hz
Consumption		1,000 VA	1,100 VA	1,800 VA	2,000 VA
Emission, Immunity		EN / IEC 61326-1, class B	FCC class B	EN / IEC 61326-1, class B	FCC class B
 Max. capacity	4 x 750 ml				
 Max. RPM (speed)	15,000 min ⁻¹				
 Max. RCF	24,400				
Running time		1 s–99 h : 59 min : 59 s, ∞ continuous run, short cycle mode			
Dimensions (H x W x D)		456 x 554 x 706 mm	456 x 554 x 715 mm	456 x 770 x 706 mm	456 x 770 x 715 mm
Weight		approx. 101 kg	approx. 111 kg	approx. 141 kg	approx. 151 kg
Refrigeration					
temperature control, infinitely variable		-		from -20 to +40 °C	
Cat. No.		5650	5650-01	5660	5660-01

^{*)} Other voltages on request.

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

ROTANTA 460 RC / 460 RF

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~		100 – 127 V 1 ~	100 V 1 ~
Frequency	50 Hz		60 Hz	50 Hz
Consumption	1,800 VA		2,000 VA	
Emission, Immunity	EN / IEC 61326-1, class B		EN / IEC 61326-1, class B	FCC class B
 Max. capacity	4 x 750 ml			
 Max. RPM (speed)	15,000 min ⁻¹			
Max. RCF	24,400			
Running time	1 s–99 h : 59 min : 59 s, ∞ continuous run, short cycle mode			
Dimensions (H x W x D)	683 x 554 x 697 mm		961 x 554 x 697 mm	
Weight	approx. 140 kg		approx. 164 kg	approx. 174 kg
Refrigeration				
temperaturee control, infinitely variable	from -20 to +40 °C			
Cat. No.	5670		5675	5675-01

ROTORS

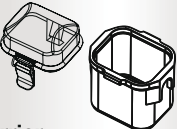
Swing-out rotor, 4-place

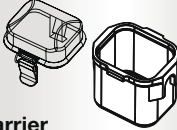


illustrated with carriers 5625-A
and lids 5627 with bio-containment⁵⁾

↗ 90° n = 4,600 min⁻¹ max. RCF 5,063

Cat. No. (without carriers) 5699-R

capacity in ml	1.5	2.0	3	4	4	5	6	7	15	25	50	94
Ø x L in mm	11 x 38		10 x 60	10 x 88	12 x 60	12 x 75	12 x 82	12 x 100	17 x 100	24 x 100	34 x 100	38 x 102
Cat. No.	2078	0536	-			0553 ²⁾	0501 ²⁾	0578 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0549
lid with bio-containment ⁵⁾ Cat. No. 5627												
 carrier Cat. No. 5625-A												
Cat. No.	4730				4732				4733	4734	4735	4736
boring Ø x L in mm	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
Ø 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.	0526 ²⁾	0523 ²⁾	0530 ²⁾	blood collection / urine tubes								
lid with bio-containment ⁵⁾ Cat. No. 5627												
 carrier Cat. No. 5625-A												
Cat. No.	4737	4736	4738	4730	4732		4733	4732		4733		
boring Ø x L in mm	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 attained by reducing the speed.

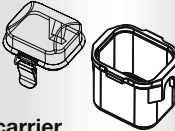
²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

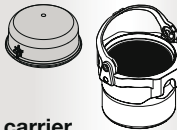
⁴⁾ Please remove the inserts.

Swing-out rotor 5699-R



Most of the adapters for carriers 5625-A and 4880 are built in layers. For shorter tubes, 1 to 2 layers should be removed. In the tables, the required layers are marked in grey.

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	0538¹³⁾			
lid with bio-containment ⁵⁾ Cat. No. 5627																			
 carrier Cat. No. 5625-A																			
Cat. No.	4732		4733		4739⁴⁾		4739	4740	4739⁴⁾		4734		4740⁴⁾		4733	4734	4740⁴⁾		4736
boring Ø x L in mm	13.5x84		17.5x84		17x80		30x80	17x80	26.5x84		30x80		17.5x84	26.5x84	30x80	42x80			
tubes per rotor	80		68		48		20	48	24		20		68	24	20	12			
max. RCF ²⁾	4,637																4,495		
radius in mm	196																190		
run-up in sec	90																		
run-down in sec, braked	95																		
temperature in °C ¹⁾	+4																		

capacity in ml	1.5	2.0	3	4	4	5	6	7	15	25	45	50	94	100
Ø x L in mm	11x38		10x60	10x88	12x60	12x75	12x82	12x100	17x100	24x100	31x100	34x100	38x102	40x115
Cat. No.	2078	0536	-			0553 ²⁾	0501 ²⁾	0578 ²⁾	0518 ²⁾	0519 ²⁾	-	0521 ²⁾	0549	0523 ²⁾
lid with bio-containment ⁵⁾ Cat. No. 4883														
 carrier Cat. No. 4880														
Cat. No.	4830			4832			4833	4834	4835		4836			
boring Ø x L in mm	11x84			13.5x84			17.5x84	26.5x84	36x80		42x80			
tubes per rotor	192		96		76				28		16		12	
max. RCF ²⁾ upper / lower	3,572/4,637					4,637						4,495		
radius in mm upper / lower	151/196					196						190		
run-up in sec	90													
run-down in sec, braked	95													
temperature in °C ¹⁾	+4													

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

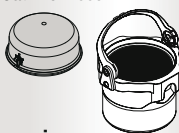
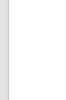
¹³⁾ The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

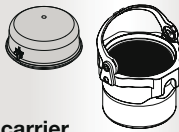
ROTORS

Swing-out rotor 5699-R



illustrated with carriers 4880
and lids 4883 with bio-containment ⁵⁾

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	1.6–5
Ø x L in mm	44x100	65x115	8x66	13x65	13x65	11x66	15x75	11x92	13x90	13x90	15x92	16x92	16x92	15x102	13x75	13x75
Cat. No.	0526 ²⁾	0530 ²⁾	blood collection / urine tubes													
lid with bio-containment ⁵⁾ Cat. No. 4883																
carrier Cat. No. 4880																
Cat. No.	4837	4838	4830	4847	4832	4833	4832	4847 ⁴⁾	4833	4848	4833	4847	4832			
boring Ø x L in mm	46x84	66x80	11x84	13.2x61	13.5x84	17.5x84	13.5x84	13.2x61	17.5x84	17.5x61	17.5x84	13.2x61	13.5x84			
tubes per rotor	8	4	96	108	76				108	76	88	76	108	76		
max. RCF ²⁾	4,637	4,495	4,637	4,116	4,637				4,684	4,637	4,684	4,637	4,116	4,637		
radius in mm	196	190	196	174	196				198	196	198	196	174	196		
run-up in sec	90															
run-down in sec, braked	95															
temperature in °C ¹⁾	+4															

capacity in ml	4–7	4–7	4–7	4–7	8	8.5–10	8.5–10	5	14	15	50	50	12	25	30	
Ø x L in mm	13x100	13x100	16x75	16x75	16x125	16x100	16x100	17x59	16.5x106	17x120	29x115	29x115	17x100	25x90	25x110	
Cat. No.	blood collection / urine tubes							-	0509	0513	0513	-	-			
lid with bio-containment ⁵⁾ Cat. No. 4883																
carrier Cat. No. 4880																
Cat. No.	4847 ⁴⁾	4832	4833	4848	4833	4848	4839	4839 ⁴⁾	4839	5647	4840	4839 ⁴⁾	4834			
boring Ø x L in mm	13.2x61	13.5x84	17.5x84	17.5x61	17.5x84	17.5x61	17x80			30x96.5	30x80	17x80	26.5x84			
tubes per rotor	108	76	76	88	76	88	56			28	20	56	28			
max. RCF ²⁾	4,684	4,637	4,637	4,684	4,637	4,684	4,637			4,708	4,637					
radius in mm	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 attained by reducing the speed.

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.

Swing-out rotor 5699-R



Carrier 4885

The 4880 carrier is also available without a lid and clamp lock. The catalogue number is 4885.¹⁷⁾

capacity in ml	50	50	10	10	30	50	50	85	94	250	290	500	600	650	750
Ø x L in mm	29x115	29x115	16x80	16x80	26x95	29x107	29x107	38x106	38x102	61x122	62x137	96x147	93x134	97x139	97x152
Cat. No.	-	-	-	-	0545	0546	0546	0547	0538 ¹³⁾	5127 ²⁸⁾	- ²⁸⁾	Corning®	0551 ²⁸⁾	0554 ²⁸⁾	0512 ²⁸⁾
lid with bio-containment ⁵⁾ Cat. No. 4883															
carrier Cat. No. 4880															
Cat. No.	5647 ⁴⁾	4840 ⁴⁾	4833	4848	4834	4840 ⁴⁾	5647 ⁴⁾	4836	4841	4845	4846	4845	4846	4845	4845
boring Ø x L in mm	30x96.5	30x80	17.5x84	17.5x61	26.5x84	30x80	30x96.5	42x80	62x100	98x100	94x95	98x100	94x95	98x100	98x100
tubes per rotor	28	20	76	88	28	20	28	12	4	4	4	4	4	4	4
max. RCF ²⁾	4,708	4,637	4,637	4,684	4,637	4,708	4,495	4,779	4,779	4,779	4,779	4,779	4,779	4,779	4,779
radius in mm	199	196	196	198	196	199	190	202	202	202	202	202	202	202	202
run-up in sec	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
run-down in sec, braked	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
temperature in °C ¹⁾	+4	+4	+4	+4	+4	+4	+4	+4	+4	+4	+4	+4	+4	+4	+4

capacity in ml	450	750	30/50		40	160	200		
Ø x L in mm	97x110	96x135	-						
Cat. No.	4447	4234-A	Falcon®	Corning®	Nunc®	Nunc®	Falcon®	Greiner	Nunc®
lid with bio-containment ⁹⁾ Cat. No. 4883									
 carrier Cat. No. 4880									
Cat. No.	4845		4849		4852	4851	4831		
boring Ø x L in mm	98x100						-		
tubes per rotor	4						4		
max. RCF ²⁾	4,779						4,613 ³¹⁾		
radius in mm	202						195		
run-up in sec					90				
run-down in sec, braked					95				
temperature in °C ¹⁾					+4				

Accommodated cell culture flasks:

30/50 ml

from Becton Dickinson, No. 353014
from Corning, No. 430168

40 ml

from Nunc, No. 156340

160 ml

from Nunc, No. 156472
from Sarstedt, No. 83.3911.xxx

200 ml

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

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

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

¹⁷⁾ With the E3905 add-on kit and the 4783 lid, the 4785 carrier can be converted at a later time to a 4780 carrier with single-hand clamp lock.

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

³¹⁾ Please note that the RCF values indicated refer only to rotor performance. The max. RCF for the accommodated cell culture flasks is 2,300.

ROTORS

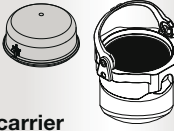
Swing-out rotor **5699-R**

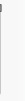
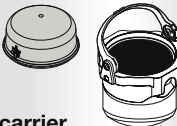


illustrated with carriers 4890
and lids 4883
with bio-containment ¹⁾



illustrated with
carriers 4890

capacity in ml	1.5	2.0	5	7	8	9	15	25	50	100	2.6–3.4	2.7–3	4–5.5	4.5–5
Ø x L in mm	11x38		12x75	12x100	16x81	14x100	17x100	24x100	34x100	44x100	13x65	11x66	15x75	11x92
Cat. No.	2078	0536	0553 ²⁾	0578 ²⁾	-	0500 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0526 ²⁾	blood collection tubes			
lid with bio-containment ³⁾ Cat. No. 4883														
 carrier Cat. No. 4890								+ 0726 						
Cat. No.	4432		4433		4434			4438	4439	4442	4435	4433	4434	4433
boring Ø x L in mm	11.5x38		13x58		17.5x53			26x72	36x79	45x78	13.5x58	13x58	17.5x53	13x58
tubes per rotor	168		120		76			28	16	8	84	120	76	120
max. RCF ²⁾ upper / lower	3,407/4,542		4,471		4,637			4,353	4,424	4,400	4,471		4,637	4,471
radius in mm upper / lower	144/192		189		196			184	187	186	189		196	189
run-up in sec	90													
run-down in sec. braked	95													
temperature in °C ¹⁾	+4													

capacity in ml	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8	8.5–10	10	15	50	25	30	50	50	
Ø x L in mm	13x90	15x92	16x92	15x102	13x75	13x100	16x75	16x125	16x100	16x80	17x120	29x115	25x90	25x110	29x115	29x107	
Cat. No.	blood collection / urine tubes										-	0509	0513	-	-	-	0546
lid with bio-containment ³⁾ Cat. No. 4883																	
 carrier Cat. No. 4890																	
Cat. No.	4435	4434			4435		4434			4469		4468	4438		4468⁴⁾		4468
boring Ø x L in mm	13.5x58	17.5x53			13.5x58		17.5x53			17x93.1		31x96	26x72		31x96		
tubes per rotor	84	76			84		76			56		28	28		28		
max. RCF ²⁾	4,471	4,637			4,471		4,637			4,755		4,613	4,566		4,613		
radius in mm	189	196			189		196			201		195	193		195		
run-up in sec	90																
run-down in sec, braked	95																
temperature in °C ¹⁾	+4																

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

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.

Swing-out rotor 5699-R



Carrier 4895

The 4890 carrier is also available without a lid and clamp lock. The catalogue number is 4895.¹⁷⁾

capacity in ml	250	290	650	750	175	175	200	225	250	500
Ø x L in mm	61x122	62x137	97x139	97x152	61x118	62x144	60x130	61x137	60x162	96x147
Cat. No.	5127²⁸⁾	-²⁸⁾	0554²⁸⁾	0512²⁸⁾	Falcon®	Nalgene®	Nunc®	Falcon®	Corning®	Corning®
lid with bio-containment ⁵⁾ Cat. No. 4883										
carrier Cat. No. 4890										
Cat. No.	4443	4451	4440	4430	4440	4430	4440	4430	4449	
boring Ø x L in mm	62x92	98.4x116								
tubes per rotor					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	97x110	96x135	triple system without filter
Cat. No.	4447	4234-A	blood bags³²⁾
lid with bio-containment ⁵⁾ Cat. No. 4883			
carrier Cat. No. 4890			
Cat. No.	4451	-	
boring Ø x L in mm	98.4x116		
tubes per rotor		4	
max. RCF ²⁾		5,063	
radius in mm		214	
run-up in sec		90	
run-down in sec, braked		95	
temperature in °C ¹⁾		+4	

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

¹⁷⁾ With the E3905 add-on kit and the 4783 lid, the 4785 carrier can be converted at a later time to a 4780 carrier with single-hand clamp lock.

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

³²⁾ We recommend the use of the refrigerated ROTANTA 460 R, 460 RC or 460 RF to ensure that the temperature of the blood is maintained during centrifugation.

ROTORS

Swing-out rotor **5699-R**

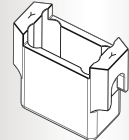


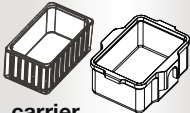
carrier 5691-A, insert 5692
and holders 5693 and 5695



illustrated with
carriers 5628
and adapters
6338-B

capacity in ml	450	
blood bags³⁾	triple system	quadruple 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	152.5x85.5x12
Cat. No.	-
 carrier Cat. No. 5636	TaqMan Array
	
Cat. No.	5648
boring Ø x L in mm	-
arrays per rotor	12
max. RCF ²⁾	4,921
radius in mm	208
run-up in sec	90
run-down in sec, braked	95
temperature in °C ¹⁾	+4

capacity in ml	1.5	2.0	3	5	6	7	9	25	50	100	100	250
Ø x L in mm	11x38		10x60	12x75	12x82	12x100	14x100	24x100	34x100	44x100	40x115	65x115
Cat. No.	2078	0536	-	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	0530²⁾
(without lid 5629) adapting frame Cat. No. 5220-A												
 carrier Cat. No. 5628 ¹⁾	+ 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	11.5x50		11x44	13.5x52		16x50	26x86	36x86	45.5x86	42x86	66x87	
tubes per rotor	128		160	96		96	40	16	8		4	
max. RCF ²⁾	4,164		4,069	4,164		4,116	4,093		4,069		4,045	
radius in mm	176		172	176		174	173		172		171	
run-up in sec	90											
run-down in sec, braked	95											
temperature in °C ¹⁾	+4											

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

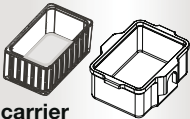
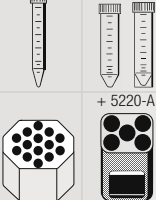
¹¹⁾ Please make sure not to exceed the max. permissible loading weight of 800 g of carrier 5628. The loading weight is the sum of the weight of the respective adapters, of frame 5220-A (where required), the tubes, and their contents.

Swing-out rotor 5699-R



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

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											
(without lid 5629) adapting frame Cat. No. 5220-A												
 carrier Cat. No. 5628 ¹⁾	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 	+ 5220-A 
Cat. No. ²⁾	5267	5268	5227	5264	5227	5268	5264	5258	5268	5264	5268	5258
boring Ø x L in mm	11x44	13.5x52	12.5x42	16x50	12.5x42	13.5x52	16x50	17.6x86	13.5x52	16x50	13.5x52	17.6x86
tubes per rotor	160	96	160	96	160	96	96	88	96		88	
max. RCF ²⁾	4,069	4,164	4,116			4,164	4,116	4,093	4,164	4,116	4,164	4,093
radius in mm	172	176	174			176	174	173	176	174	176	173
run-up in sec	90											
run-down in sec, braked	95											
temperature in °C ¹⁾	+4											

capacity in ml	15	30	50	50	250	two-tier frame for cyto accessories
Ø x L in mm	17x120	25x110	29x115	29x115	61x122	
Cat. No.	0509	-	0513	-	5127²⁸⁾	cyto chambers
(without lid 5629) adapting frame Cat. No. 5220-A						
carrier Cat. No. 5628 ¹⁾		+ 5220-A			+ 5220-A + 6319	+ 5220-A
Cat. No.²²⁾	6337-B	5266⁴⁾	6338-B	6339-A	5263-A⁴⁾	5280
boring Ø x L in mm	17x90	26x86	30x90	30x87	66x87	-
tubes per rotor	56	40	24	24	4	16
max. RCF ²⁾ upper / lower	4,258	4,187	4,258	4,187		2,744/4,069
radius in mm upper / lower	180	177	180	177		116/172
run-up in sec	90					
run-down in sec, braked	95					
temperature in °C ¹⁾	+4					



Carrier 5628, adapting frame 5220-A and
adapters 5258



Carrier 5628 and adapter 6338-B

²²⁾ With the exception of adapters 5263-A, 6337-B, 6338-B and 6339-A, two of these adapters need to be placed into carrier 5628.

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

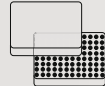
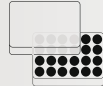
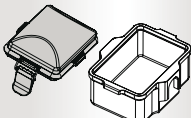
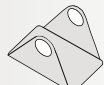
³²⁾ We recommend the use of the refrigerated ROTANTA 460 R, 460 RC or 460 RF to ensure that the temperature of the blood is maintained during centrifugation.

ROTORS

Swing-out rotor **5699-R**



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

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

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

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

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

Swing-out rotor 5699-R



illustrated with carriers 5630-B
and removal frame 4626

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

Accommodated cell culture flask:

40 ml

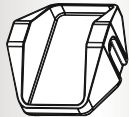
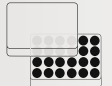
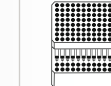
from Nunc, No. 156340 or 156367

160 ml

from Nunc, No. 156472 or 156499
from Sarstedt, No. 83.3911.xxx

200 ml

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

T x B x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	86x128x46	86x128x83	59x84x11	82x124x20	-
capacity in ml	-								0.2
Cat. No.	MTP		CP	DWP	MS	QP	Microtest plate (Terasaki)	PCR plate, 96 wells	PCR strips
									
									
carrier Cat. No. 5630-B									
Cat. No.	4626							4626 + 1485	
boring Ø x L in mm	-								
plates / strips per rotor	20	16	12	4	4	4	8	4	48x8
max. RCF ²⁾	3,832								
radius in mm	max. 162								
run-up in sec	90								
run-down in sec, braked	95								
temperature in °C ¹⁾	+4								

¹⁾ Please make sure not to exceed the max. permissible loading weight of 800 g of carrier 5628. The loading weight is the sum of the weight of the respective adapters, of frame 5220-A (where required), the tubes, and their contents.

³¹⁾ Please note that the RCF values indicated refer only to rotor performance. The max. RCF for the accommodated cell culture flasks is 2,300.

ROTORS

Swing-out rotor, 4 -place

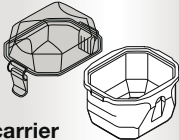


illustrated with carriers 5651-A
and lids 5652 with bio-containment ⁵⁾

↻ 90° n = 3,800 min⁻¹ max. RCF 3,196

Cat. No. (without carriers) 5654

capacity in ml	3	4	4	5	6	7	10	15	1.1–1.4	2.6–3.4	2.7–3	4.5–5
Ø x L in mm	10x60	10x88	12x60	12x75	12x82	12x100	13x100	17x100	8x66	13x65	11x66	11x92
Cat. No.	-	-	-	0553²⁾	0501²⁾	0578²⁾	-	0518²⁾	blood collection tubes			
lid with bio-containment ⁵⁾ Cat. No. 5652												
carrier Cat. No. 5651-A												
Cat. No.	5684						5674	5685	5682	5684	5674	5684
boring Ø x L in mm	12.5x40						13.2x42.4	17.2x46.5	12.5x40	13.2x42.4	12.5x40	12.5x40
tubes per rotor	292						196	188	148	292	196	292
max. RCF ²⁾	2,874						2,906	2,970	2,874	2,906	2,906	2,874
radius in mm	178						180	184	178	180	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	5	15	50	
Ø x L in mm	15x75	13x90	15x92	16x92	15x102	13x75	16x75	13x100	16x100	16x80	17x59	17x120	29x115	
Cat. No.	blood collection / urine tubes										-	0509	0513	
lid with bio-containment ⁵⁾ Cat. No. 5652														
 carrier Cat. No. 5651-A														
Cat. No.	5682	5674	5682		5674	5682	5674	5685	5682		5688	5683	5686	
boring Ø x L in mm	17.2x46.5	13.2x42.4	17.2x46.5		13.2x42.4	17.2x46.5	13.2x42.4	13.2x42.4	17.2x46.5		17x42	17x60	30x60	
tubes per rotor	148	196	148		196	148	196	188	148		80	96	40	
max. RCF ²⁾	2,970	2,906	2,970		2,906	2,970	2,906	2,906	2,970		3,196	3,196	3,196	
radius in mm	184	180	184		180	184	180	180	184		198	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 attained by reducing the speed.

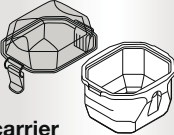
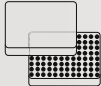
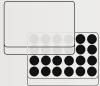
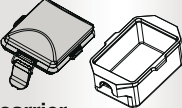
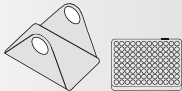
²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

Swing-out rotor 5654



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

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	97x110	96x147	93x134	97x139	97x152
Cat. No.	Falcon®	Nalgene®	Nunc®	Falcon®	5127 ²⁸⁾	- ²⁸⁾	4447	Corning®	0551 ²⁸⁾	0554 ²⁸⁾	0512 ²⁸⁾
lid with bio-containment ⁵⁾ Cat. No. 5652											
 carrier Cat. No. 5651-A	+ 5677 	+ 5676 	+ 5677 					+ 4449 			
Cat. No.	5681						5687				
boring Ø x L in mm	62x100						98x100				
tubes per rotor	8						4				
max. RCF ²⁾							3,196				
radius in mm							198				
run-up in sec							61				
run-down in sec, braked							57				
temperature in °C ¹⁾							0				
D x W x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	86x128x46	86x128x83	59x84x11	82x124x20	-		
capacity in ml	-									0.2	
Cat. No.	MTP		CP	DWP	MS	QP	Microtest plate (Terasaki)	PCR plate, 96 wells	PCR strips		
lid with bio-containment ⁵⁾ Cat. No. 5629											
 carrier Cat. No. 5653											
Cat. No.	4626								4626 + 1485		
boring Ø x L in mm	-										
plates / strips per rotor	24	20	16	4	4	4	8	4	48x8		
max. RCF ²⁾	2,890										
radius in mm	max. 179										
run-up in sec	61										
run-down in sec, braked	57										
temperature in °C ¹⁾	-4										

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

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

ROTORS

Swing-out rotor, 4 -place



illustrated with carriers 5051
and lids 5053



↻ 90° n = 4,000 min⁻¹ max. RCF 3,095

Cat. No. (without carriers) 5694

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

capacity in ml	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8.5–10	15	50	12	30	50	two-tier frame for cyto accessories	
Ø x L in mm	11x92	13x90	15x92	16x92	15x102	13x75	16x75	13x100	16x100	17x120	29x115	17x100	25x110	29x115		
Cat. No.	blood collection / urine tubes										0509	0513	-	-	cyto chambers	
lid Cat. No. 5053																
carrier Cat. No. 5051																
Cat. No.	5227	5268	5264	5258	5268	5264	6301	5248	6306	5259	6306	5266	5243	5280		
boring Ø x L in mm	12.5x42	13.5x52	16x50	17.6x86	13.5x52	16x50	13.5x86	17.5x86	17x90	30x86	17x90	26x86	36x86	-		
tubes per rotor	80	48	48	44	48				28	8	28	20	8	8		
max. RCF ²⁾ upper / lower	2,773	2,808	2,773	2,755	2,808	2,773	2,755		2,898	2,826	2,898	2,755		1,735/2,737		
radius in mm upper / lower	155	157	155	154	157	155	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 attained by reducing the speed.

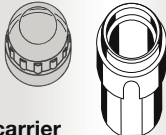
²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

Swing-out rotor 5694



illustrated with carriers 5092

capacity in ml	5	6	7	15	25	50	100	100	250	1.1–1.4	1.1–1.4	2.6–3.4
Ø x L in mm	12x75	12x82	12x100	17 x 100	24x100	34x100	44x100	40x115	65x115	8x66	8x66	13x65
Cat. No.	0553²⁾	0501²⁾	0578²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	0530²⁾	blood collection tubes		
lid with bio-containment ⁵⁾ Cat. No. 5093  carrier Cat. No. 5092												
												
Cat. No.	5128	5120	5136	5122	5124	5125	5126	1791	5137	5138	5137	
boring Ø x L in mm	12.8x45	12.8x82	17.5 x 60.7	25.5x82	35.5x82.5	45.5x85	42x85	66x103	13.5x60.7	12.8x54.5	13.5x60.7	
tubes per rotor	48		32	16	4				32	48	32	
max. RCF ²⁾	3,005		2,952	2,898	2,952	2,952		3,095	2,952	2,540	2,952	
radius in mm	168		165	162	165	165		173	165	142	165	
run-up in sec	42											
run-down in sec, braked	51											
temperature in °C ¹⁾	-3											

capacity in ml	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	1.6–5	4–7
Ø x L in mm	13x65	11x66	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x75	13x100
Cat. No.	blood collection / urine tubes											
lid with bio-containment ⁵⁾ Cat. No. 5093  carrier Cat. No. 5092 												
												
Cat. No.	5138	5137	5138	5136	5120	5137	5136			5137	5138	5120
boring Ø x L in mm	12.8x54.5	13.5x60.7	12.8x54.5	17.5x60.7	12.8x82	13.5x60.7	17.5x60.7			13.5x60.7	12.8x54.5	12.8x82
tubes per rotor	48	32	48	32	48	32			48			
max. RCF ²⁾	2,540	2,952	2,540	2,952	3,005	2,952			2,540		3,005	
radius in mm	142	165	142	165	168	165			142		168	
run-up in sec	42											
run-down in sec, braked	51											
temperature in °C ¹⁾	-3											

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

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

ROTORS

Swing-out rotor **5694**



illustrated with carriers 5092

capacity in ml	4–7	8	8.5–10	15	50	12	25	30	50	10	250	290
Ø x L in mm	16x75	16 x 125	16x100	17x120	29x115	17x100	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	blood collection tubes			0509	0513	-					5127^{2B)}	-^{2B)}
lid with bio-containment ⁵⁾ Cat. No. 5093												
carrier Cat. No. 5092												
Cat. No.	5136	5121⁴⁾	5136	5129	5123	5121	5134	5122	5135	5136	6319	
boring Ø x L in mm	17.5x60.7	17.5x82	17.5x60.7	17x85	30x85	17.5x82	26x73	25.5x82	30x99	17.5x60.7	66x103	
tubes per rotor	32	28	32	28	8	28	12	16	8	32	4	
max. RCF ²⁾	2,952	3,059	2,952	3,095		3,005	2,826	2,898	3,023	2,952	3,095	
radius in mm	165	171	165	173		168	158	162	169	165	173	
run-up in sec	42											
run-down in sec, braked	51											
temperature in °C ¹⁾	-3											

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

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

⁴⁾ Please remove the inserts.

Swing-out rotor, 6-place



illustrated with carriers 5051

↻ 90° n = 4,000 min⁻¹ max. RCF 3,631

Cat. No. (without carriers) 4446

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

125
124

capacity in ml	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8.5–10	15	50	12	30	50	two-tier frame for cyto accessories	
Ø x L in mm	15x75	11x92	13x90	15x92	16x92	15x102	13x75	16x75	13x100	16x100	17x120	29x115	17x100	25x110	29x115		
Cat. No.	blood collection / urine tubes										0509	0513	-	-	cyto chambers		
lid Cat. No. 5053																	
carrier Cat. No. 5051																	
															+ 2 x 6316		
Cat. No.	5264	5227	5268	5264	5258		5268	5264	5268	5248	6306	5259	6306	5266	5243	5280	
boring Ø x L in mm	16x50	12.5x42	13.5x52	16x50	17.6x86		13.5x52	16x50	13.5x52	17.5x86	17x90	30x86	17x90	26x86	36x86	-	
tubes per rotor	72	120	72	72	66			72			42	12	42	30	12	12	
max. RCF ²⁾ upper / lower	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 upper / lower	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																

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

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

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

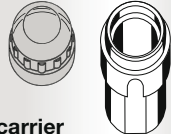
ROTORS

Swing-out rotor 4446



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

capacity in ml	5	6	7	15	25	50	100	100	250	1.1–1.4	1.1–1.4	2.6–3.4
Ø x L in mm	12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115	8x66	8x66	13x65
Cat. No.	0553²⁾	0501²⁾	0578²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	0530²⁾	blood collection tubes		
lid with bio-containment ⁵⁾ Cat. No. 5093												
carrier Cat. No. 5092												
Cat. No.	5128		5120	5136	5122	5124	5125	5126	1791	5137	5138	5137
boring Ø x L in mm	12.8x45		12.8x82	17.5 x 60.7	25.5x82	35.5x82.5	45.5x85	42x85	66x103	13.5x60.7	12.8x54.5	13.5x60.7
tubes per rotor	72			48	24	6			6	48	72	48
max. RCF ²⁾	3,542			3,488	3,434	3,488			3,631	3,488	3,077	3,488
radius in mm	198			195	192	195			203	195	172	195
run-up in sec	45											
run-down in sec, braked	55											
temperature in °C ¹⁾	0											

capacity in ml	2.6–3.4	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
Ø x L in mm	13x65	11x66	11x66	13x90	15x75	11x92	15x92	16x92	15x102	13x75	13x75	13x100
Cat. No.	blood collection / urine tubes											
lid with bio-containment ⁵⁾ Cat. No. 5093												
												
carrier Cat. No. 5092												
Cat. No.	5138	5137	5138	5137	5136	5120	5136	5136	5136	5137	5138	5120
boring Ø x L in mm	12.8x54.5	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
tubes per rotor	72	48	72	48	72	72	48				72	72
max. RCF ²⁾	3,077	3,488	3,077	3,488	3,542	3,542	3,488				3,077	3,542
radius in mm	172	195	172	195	198	198	195				172	198
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 attained by reducing the speed.

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

³⁾ When using these tubes, carrier 1560 cannot be closed with lid 1561.

Swing-out rotor 4446

capacity in ml	4–7	8	8.5–10	15	50	12	25	30	50	10	250	290
Ø x L in mm	16x75	16x125	16x100	17x120	29x115	17x100	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	blood collection tubes			0509	0513	-	-	-	-	-	5127 ²⁸⁾	- ²⁸⁾
lid with bio-containment ⁵⁾ Cat. No. 5093												
carrier Cat. No. 5092												
Cat. No.	5136	5121	5136	5129	5123	5121	5134	5122	5135	5136	6319	
boring Ø x L in mm	17.5x60.7	17.5x82	17.5x60.7	17x85	30x85	17.5x82	26x73	25.5x82	30x99	17.5x60.7	66x103	
tubes per rotor	48	42	48	42	12	42	18	24	12	48	6	
max. RCF ²⁾	3,488	3,542	3,488	3,631		3,542	3,363	3,434	3,560	3,488	3,631	
radius in mm	195	198	195	203		198	188	192	199	195	203	
run-up in sec	45											
run-down in sec, braked	55											
temperature in °C ¹⁾	0											

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

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

ROTORS

Swing-out rotor, 2 -place

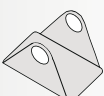


illustrated with carriers 5631 and
lids 4627 with bio-containment ⁵⁾
and removal frame 4626

✶ 90° n = 5,900 / 6,200 min⁻¹

max. RCF 5,838 / 6,446

Cat. No. (without carriers) 5622

D x W x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	86x128x46	86x128x83	59x84x11	82x124x20	-
capacity in ml	-								0.2
Cat. No.	MTP		CP	DWP	MS	QP	Microtest plate (Terasaki)	PCR plate, 96 wells	PCR strips
lid with bio-containment ⁵⁾ Cat. No. 4627									
carrier Cat. No. 5631								 	
Cat. No.	4626							4626 + 1485	
boring Ø x L in mm	-							-	
plates / strips per rotor	12	10	8	2			4	2	24x8
max. RCF ²⁾ 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 attained by reducing the speed.

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

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

Angle rotor, 30-place



with bio-containment⁵⁾,
phenol-resistant

✂ 45° n = 15,000 min⁻¹ max. RCF 24,400
Cat. No. 4489-A

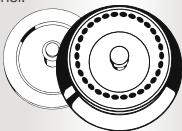
Angle rotor, 6-place

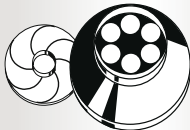


with bio-containment⁵⁾

✂ 25° n = 8,500 / 9,500 min⁻¹
Cat. No. 5645

max. RCF 11,228 / 14,025

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38		10.7x36
Cat. No.	-				2078	0536	Pediatric
lid with bio-containment ⁵⁾ incl.							
 Rotor Cat. No. 4489-A							
Cat. No.	2024		2023		2031⁷⁾	-	0788
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.1	11.2x40.1
tubes per rotor			30				15
max. RCF ²⁾			24,400				23,394
radius in mm			97				93
run-up in sec			73				
run-down in sec, braked			77				
temperature in °C ¹⁾			+7				

capacity in ml	15	25	94	15	50	10	30	50	85	94	250
Ø x L in mm	17x100	24x100	38x102	17x120	29x115	16x80	26x95	29x107	38x106	38x102	61x122
Cat. No.	0518 ²⁾	0519 ²⁾	0549	0509	0513	-	0545	0546	0547	0538 ¹³⁾	5127 ²⁸⁾
lid with bio-containment ⁵⁾ incl.											
 Rotor Cat. No. 5645											
Cat. No.	5646	5642	5644	5637	5638	5641	5642	5643	5644		-
boring Ø x L in mm	17.6 x 83	26 x 80	38.6 x 88	17 x 106	30 x 100	16.6 x 70	26 x 80	29 x 90	38.6 x 88		61.5 x 109
tubes per rotor	42	18	6	30	6	48	18	6			
max. RCF ²⁾ classic /cooled	10,662/13,319	10,339/12,915	9,855/12,310	10,339 / 12,915	9,693 / 12,108	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	128	120	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 110 mm.

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

ROTORS

Angle rotor, 6 -place



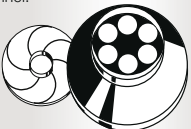
with bio-containment ⁵⁾

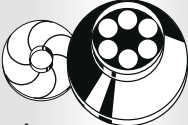
✂ 45° n = 11,500 min⁻¹ max. RCF 18,038
Cat. No. 5615

Angle rotor, 6-place, for Schlenk tubes



✂ 45° n = 2,000 min⁻¹ max. RCF 805
Cat. No. 5616 ³⁴⁾

capacity in ml	0.5	1.5	2.0	3	15	25	50	94	7.5–8.5	9–10	10	8.5–10	5	15	50
Ø x L in mm	10.7x36	11x38		10x60	17x100	24x100	34x100	38x102	15x92	16x92	15x102	16x100	17x59	17x120	29x115
Cat. No.	Pediatric	2078	0536	-	0518 ²⁾	0519 ²⁾	0521 ²⁾	0549	blood / urine tubes				-	0509	0513
lid with bio-containment ⁵⁾ incl.															
 rotor Cat. No. 5615															
Cat. No.	1449				1451	1447	1463	-	1451				1476	1466	1454
boring Ø x L in mm	11.4x39				17.5x92	26x85	35x89	38.2x89.6	17.5x92				17x51	17x106	29.8x97
tubes per rotor	24				6										
max. RCF ²⁾	17,299				17,003	16,560	17,743	18,038	17,003				16,856	17,299	17,595
radius in mm	117				115	112	120	122	115				114	117	119
run-up in sec	66														
run-down in sec, braked	68														
temperature in °C ¹⁾	+4														

capacity in ml	10	30	50	85	94
Ø x L in mm	16x80	26x95	29x107	38x106	38x102
Cat. No.	-	0545	0546	0547	0538¹³⁾
lid with bio-containment ⁵⁾ incl.					
rotor Cat. No. 5615					
Cat. No.	1448	1447	1446	-	
boring Ø x L in mm	16.5x74	26x85	29x92	38.2x89.6	
tubes per rotor	12	6			
max. RCF ²⁾	17,003	16,560	17,299	18,038	
radius in mm	115	112	117	122	
run-up in sec	66				
run-down in sec, braked	68				
temperature in °C ¹⁾	+4				

capacity in ml	25	50
Ø x L in mm	24x146.5	38x148.5
Cat. No.	0532	0533
		
rotor Cat. No. 5616³⁴⁾		
Cat. No.	4317	-
boring Ø x L in mm	25x86	38.5x89.9
tubes per rotor	6	
max. RCF ²⁾	783	805
radius in mm	175	180
run-up in sec	17	
run-down in sec, braked	21	
temperature in °C ¹⁾	-14	

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

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

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

ROTORS

Swing-out rotor, 4-place,
for ASTM tubes + 50 ml Babcock bottles

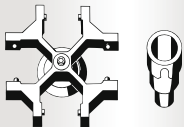


↗ 90° n = 2,000 min⁻¹ max. RCF 984
Cat. No. (without carriers) 4474

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



↗ 90° n = 2,000 min⁻¹ max. RCF 917
Cat. No. 4619³⁴⁾

capacity in ml	50	100	100	100	50
Ø x L in mm	45 x 130	58 x 161	44 x 168	37 x 200	36.5 x 185
Cat. No.	ASTM ²⁾	ASTM 0528 ²⁾	ASTM ²⁾	ASTM 0531 ²⁾	Babcock
carrier Cat. No. 4275					
 rotor Cat. No. 4474					
Cat. No.	4278-A	0771	4277	4276-A	0703-A
boring Ø x L in mm	-				
tubes per rotor	4				
max. RCF ²⁾	984		961		912
radius in mm	220		215		204
run-up in sec	17				
run-down in sec, braked	20				
temperature in °C ¹⁾	-8				

capacity in ml	30
Ø x L in mm	24x151
Cat. No.	0529/0508⁶⁾
rotor Cat. No. 4619 ³⁴⁾	
Cat. No.	-
boring Ø x L in mm	-
tubes per rotor	6
max. RCF ²⁾	917
radius in mm	205
run-up in sec	17
run-down in sec, braked	21
temperature in °C ¹⁾	-11

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

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

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.



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 ¹⁾		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 s – 99 min : 59 sec, continuous run, short cycle mode (impulse key)			
Dimensions (H x W x D)		345 x 538 x 647 mm			
Weight		approx. 60 kg			
Heating					
Temperature setting, infinitely variable (dependent on the ambient temperature) ¹⁵⁾		-		from +10 °C to +90 °C	
Cat. No.		4600	4600-01	4600-50	4600-51

^{*)} Other voltages on request.

¹⁵⁾ 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.

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

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 coordination 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.

SPECIAL TUBES

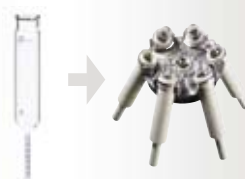
ASTM tubes

are designed to meet the requirements of the **A**merican **S**ociety for **T**esting **M**aterials.



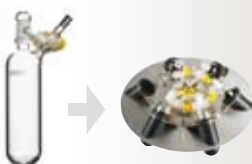
Chrome bath tubes

are used to determine the sulphuric acid content of chrome baths.



Schlenk tubes

Substances that have been prepared in Schlenk tubes can also be separated in them through centrifugation in rotor 5616.



ROTOFIX 46

illustrated with rotor 5616

Cat. No. 4600

ROTORS FOR ROTOFIX 46 AND 46 H

Swing-out rotor, 4-place,
for ASTM tubes and 50 ml Babcock flask



illustrated with
carriers 4275

✂ 90° n = 2,000 min⁻¹
max. RCF 984

Cat. No. (without carriers) 4474

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



✂ 90° n = 2,000 min⁻¹
max. RCF 917

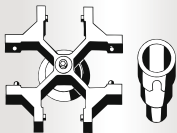
Cat. No. 4619³⁴⁾

Angle rotor, 6-place,
for Schlenk tubes



✂ 45° n = 2,000 min⁻¹
max. RCF 805

Cat. No. 5616³⁴⁾

capacity in ml	50	100	100	100	50
Ø x L in mm	45 x 130	58 x 161	44 x 168	37 x 200	36.5 x 185
Cat. No.	ASTM ²⁾	ASTM 0528 ²⁾	ASTM ²⁾	ASTM 0531 ²⁾	Babcock
Carrier Cat. No. 4275					
 Rotor Cat. No. 4474					
Cat. No.	4278-A	0771	4277	4276-A	0703-A
boring Ø x L in mm	-				
tubes per rotor	4				
max. RCF ²⁾	984		961		912
radius in mm	220		215		204
run-up in sec	16				
run-down in sec, braked	40				

capacity in ml	30
Ø x L in mm	24x151
Cat. No.	0529/0508⁶⁾
Rotor Cat. No. 4619 ³⁴⁾	
Cat. No.	-
boring Ø x L in mm	-
tubes per rotor	6
max. RCF ²⁾	917
radius in mm	205
run-up in sec	15
run-down in sec, braked	20

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 ²⁾	783	805
radius in mm	175	180
run-up in sec	15	
run-down in sec, braked	35	

The method used for determination of the sulphate content of chrome baths can be ordered from Hettich free of charge.

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.

⁶⁾ The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

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

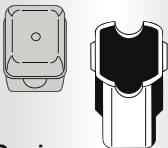
ROTOR FOR ROTOFIX 46, **NOT FOR ROTOFIX 46 H**

Swing-out rotor, 4 -place



illustrated with carriers 5051
and lids 5053

✶ 90° n = 4,000 min⁻¹ max. RCF 3,095
Cat. No. (without carriers) 5694

capacity in ml	3	5	6	7	9	15	25	50	100	100
Ø x L in mm	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.	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	0500 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0526 ²⁾	0523 ²⁾
lid Cat. No. 5053										
Carrier Cat. No. 5051										
Cat. No.	5267	5227		5247 ¹⁸⁾	5264	5248 ¹⁸⁾	5242	5243	5262	5249
boring Ø x L in mm	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	80				48		20	8	4	
max. RCF ²⁾	2,737	2,773		2,755	2,773	2, 755				
radius in mm	153	155		154	155	154				
run-up in sec	40									
run-down in sec, braked	45									

capacity in ml	15	50	12	30	50
Ø x L in mm	17 x 120	29 x 115	17 x 100	25 x 110	29 x 115
Cat. No.	0509	0513	-	-	
lid Cat. No. 5053					
Carrier Cat. No. 5051					
Cat. No.	6306	5259	6306	5266	5243⁴⁾
boring Ø x L in mm	17 x 90	30 x 86	17 x 90	26 x 86	36 x 86
tubes per rotor	28	8	28	20	8
max. RCF ²⁾	2,898	2,826	2,898	2,755	
radius in mm	162	158	162	154	
run-up in sec	40				
run-down in sec, braked	45				

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

⁴⁾ Please remove the inserts.

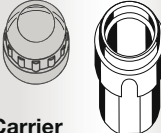
¹⁸⁾ With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

ROTOR

FOR ROTOFIX 46, **NOT FOR ROTOFIX 46 H**
Swing-out rotor **5694**



Illustrated with carriers 5092
and lids 5093
with bio-containment⁵⁾

capacity in ml	4	5	6	7	15	25	50	100	100	250	
Ø x L in mm	12 x 60	12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115	
Cat. No.	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0526 ²⁾	0523 ²⁾	0530 ²⁾	
lid with bio-containment ⁵⁾ Cat. No. 5093											
 Carrier Cat. No. 5092											
Cat. No.	5128			5120	5136	5122	5124	5125	5126	1791	
boring Ø x L in mm	12.8x45			12.8x82	17.5 x 60.7	25.5x82	35.5x82.5	45.5x85	42x85	66x103	
tubes per rotor	48				32	16	4				
max. RCF ²⁾	3,005				2,952	2,898	2,952				3,095
radius in mm	168				165	162	165				173
run-up in sec	40										
run-down in sec, braked	45										

capacity in ml	15	50	12	25	30	50	10	250	290
Ø x L in mm	17x120	29x115	17x100	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	0509	0513	-					5127 ²⁸⁾	- ²⁸⁾
lid with bio-containment ⁵⁾ Cat. No. 5093									
Carrier Cat. No. 5092									
Cat. No.	5129	5123	5121	5134	5122	5135	5136	6319	
boring Ø x L in mm	17x85	30x85	17.5x82	26x73	25.5x82	30x99	17.5x60.7	66x103	
tubes per rotor	28	8	28	12	16	8	32	4	
max. RCF ²⁾	3,095		3,005	2,826	2,898	3,023	2,952	3,095	
radius in mm	173		168	158	162	169	165	173	
run-up in sec	40								
run-down in sec, braked	45								

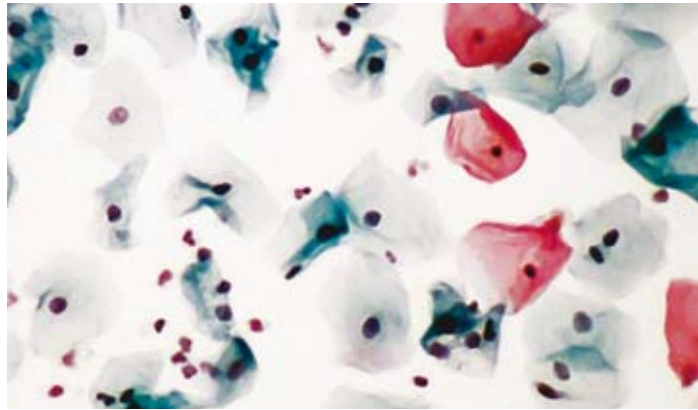
⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

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

CYTO-SYSTEM

Cytological preparations – fast and economic

Cytologists have to deal with considerable challenges: time and cost pressure, the need for 24 / 7 availability of cytology diagnostics, and in many cases the increased number of diagnostic parameters required for the same quantity of samples. The Hettich cytological system provides reliable, flexible and cost-saving solutions to meet the requirements of cytology laboratories.



Unbeatable flexibility

The exceptional range of accessories makes the Hettich Cyto system unique on the market. This range enables performance of all of the common centrifugation procedures used to yield cytological preparations. In addition to the classical Hettich method alternative methods (such as those using the Shandon^{®39)} cyto centrifuge) can also be carried out in Hettich centrifuges.

APPLICATIONS

Hettich methods for optimum preparations

We have prepared comprehensive descriptions of methods in close co-operation with users for our classical range of accessories. These methods can be obtained without charge.

They provide support for the preparation of different body fluids such as:

- Cerebrospinal fluid
- Bronchial washings (BAL)
- Pleural effusion
- Ascites
- Urine

Hettich specialists would be happy to answer any questions.

Valuable time savings

The new 12-place rotors complete the product range and are particularly suitable for labs that have a large throughput. Up to 12 samples can be centrifuged in a single run. The accessories tailored to the particular application are also offered as a complete package. This saves time in procurement.

Optimal cell yield

The cytologist can select the most appropriate accessories for the body fluid to be analysed. This creates ideal starting conditions to achieve the best results. The comprehensive Hettich methods for the classical cyto accessories provide valuable information on how optimal preparations can be derived from the different samples.

Low purchase costs

The cytological accessories fit in standard Hettich lab centrifuges in which tubes can also be centrifuged. It is therefore not necessary to purchase an expensive cyto centrifuge. This not only saves money, it also saves space on the lab bench.

³⁹⁾ Shandon[®] is a registered trademark of Thermo Fisher Scientific Inc.



CLASSICAL CYTO ACCESSORIES

Proven standard

Cytologists have valued the classical Hettich Cyto System for many years, because of the high cell yield and the high quality of the preparations derived with these accessories. They enable dry or wet preparations as the sedimentation and drying steps are separate. With classical cyto chambers a seal prevents the loss of cells during sedimentation. Drying (which is not necessary if wet fixation is carried out) is performed in a second centrifugation step once the cells already adhere to the slide.

The classical cyto accessories fit in almost all of the Hettich centrifuge models. A conventional centrifuge can be converted into a cyto centrifuge through a simple exchange of the carriers. One-funnel chambers are available in four different sizes, and there are two kinds of multi-funnel chambers. Cytologists thus have a solution for every application. Sample volumes of up to 2 x 8 ml can be handled in the large-capacity chambers together with the double slide carrier. This therefore dispenses with the need for cell enrichment in an extra step.



12-PLACE CYTO ROTORS AND ACCESSORIES

New solutions

In addition to the classical 4-place, 6-place and 8-place rotors, Hettich has now introduced two 12-place cyto rotors – one open and one closed. This completes the range of cyto products.

Cytological labs that wish to use methods other than the proven Hettich ones can now also use Hettich lab centrifuges. There is no need to acquire a special cyto centrifuge. The new 12-place cyto rotors fit in the benchtop centrifuge models ROTOFIX 32 A and UNIVERSAL 320. They can be fitted and removed very easily without the need for tools.

Assembly of a complete cyto insert with carrier 1660 for cyto chambers:



Cyto chambers



One-funnel chambers

We recommend:
1 ml chambers for small quantities of samples which are low in cells, such as cerebrospinal fluid; 2 / 4 ml chambers for samples rich in cells such as pleural effusions, ascites and BAL; 8 ml chambers for high-volume samples such as urine.



Multi-funnel chambers

If a number of sediments are required from a single sample (for example for tests with different antibodies) then the multi-funnel chambers may be used. If the 4-place chambers are used in combination with the double slide carrier then up to 8 individual sediments can be prepared per microscope slide.

Slide carriers



Slide carriers for one and two chambers

The surface area of two 8 ml chambers is especially suited for the evaluation of a large number of cells, e.g. when searching for tumour cells.

Two-tier frame



Two-tier frame 5280

for the use of cytology accessories in large benchtop centrifuges or floor-standing centrifuges: Up to 16 cytological preparations can be obtained in one run.

Cyto chambers

for slide carrier 1662 and slide carrier for two chambers 1670
to fit carriers 1660 and 1452 and two-tier frame 5280

The following products have been removed
from our range, but may still be ordered
from us:

Cyto chambers						
Capacity in ml	1	2	4	8	3x2	4x1
Area in mm ²	30	60	120	240	3x60	4x30
Ø in mm	6.2	8.7	12.4	17.5	3x8.7	4x6.2
Cat. No.	1663	1664	1665	1666	1667	1668
Filter cards for 1662						
Cat. No.	1675			1676	1677	1678
Filter cards for 1670						
Cat. No.	1692			1691	1694	1693

Product	Cat. No.
Carrier	1680
Angle chambers	1671
	1672
	1673
Filter cards	1696
	1697
	1698
Slide carrier	1470
Cyto chambers	1471
	1475

Slide carriers

Slide carrier (autoclavable)	Slide carrier with ring	Slide carrier for two chambers
		
Cat. No.	1662	1670

Carriers

Carriers (autoclavable)	Carrier	Lid for 1660	Carrier
			
Cat. No.	1660	1661	1452

Two-tier frame

Two-tier frame (autoclavable)	
Cat. No.	5280

Possible Combinations

Centrifuge	4-place rotor	6-place rotor	8-place rotor
ROTOFIX 32A	1624 + 1660	1626 + 1660	
UNIVERSAL 320 / 320 R	1624 + 1660 1494 + 1452	1626 + 1660	
ROTINA 380 / 380 R	1798 + 5051 + 5280	1726 + 1660	1748 + 1660
ROTINA 420 / 420 R	4753 + 5051 + 5280		4758 + 1660
ROTANTA 460 / 460 R / 460 RC / 460 RF	5699-R + 5628 + 5220-A + 2x5280 5694 + 5051 + 5280	4446 + 5051 + 5280	
ROTIXA 500 RS		4296 + 5051 + 5280	

Special rotors for cytology:

12 cytological preparations in a single step – rotor 1515-A with lid (above) and disk rotor 1520 enable this:



Disposable cyto chambers



The practical disposable cyto chambers eliminate the problem of cross-contamination with cells and save time as there is no need for cleaning and disinfection. The filter card / seal fixed to the chamber guarantees that handling is very simple.

Re-usable cyto chambers



These cyto chambers can be re-used many times and are supplied without filter cards / seals. They must be cleaned and disinfected after use before they are used again.

Clip



for cyto chambers

Stand



for disk rotor 1520

Closed rotor, 12-place



with bio-containment⁵⁾,
autoclavable, illustr. with
clips and cyto chambers

✂ 90° n = 2,000 min⁻¹ max. RCF 438

Cat. No. 1515-A (without clips and cyto chambers)

Open disk rotor, 12-place



autoclavable, illustr. with
clips, cyto chambers and
stand

✂ 90° n = 2,000 min⁻¹ max. RCF 438

Cat. No. 1520 (without clips, cyto chambers and stand)

Cyto chambers

Disposable cyto chambers			
Capacity in ml	0.5	0.2	6 ²¹⁾
Area in mm ² / (LxW) in mm	28.3		13.4x22
Ø in mm	6		-
Cat. No.	1531 (50 pcs.) 1534 (500 pcs.)	1532 (50 pcs.)	1535 (100 pcs.) 1533 (500 pcs.)
Filter cards / seals			
Cat. No.	Filter card, white (incl.)	Filter card, brown (incl.)	Seal (incl.)

Re-usable cyto chambers (autoclavable)		
Capacity in ml	0.5	6 ²¹⁾
Area in mm ² / (LxW) in mm	28.3	13.4x22
Ø in mm	6	-
Cat. No.	1538 (12 pcs.)	1536 (12 pcs.)
Filter cards / seals		
Cat. No.	1539 (200 pcs.)	1537 (100 pcs.)

Clips

Clips (autoclavable)	
Cat. No.	1524 (4 pcs.)

Stand

Stand for disk rotor 1520	
Cat. No.	1528

Possible Combinations

Centrifuge	12-place rotor 1515-A	12-place rotor 1520
ROTOFIX 32A	1524	1524
UNIVERSAL 320 / 320 R	1524	1524

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.

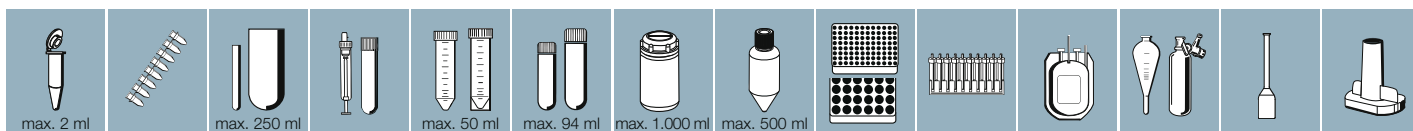
⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

²¹⁾ This is the maximum capacity. The recommended quantity to be used per chamber is 4 ml.



High performance, throughput and capacity

FLOOR



ROTIXA 500 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 500 RS ^{>)}	
Floorstanding centrifuge, without rotor		cooled	
Power supply ^{*)}		230 – 240 V 1 ~	220 V 1 ~
Frequency		50 Hz	60 Hz
Consumption		3,800 VA	
Emission, Immunity		EN/IEC 61326-1, class B	
	Max. capacity	4 x 1,000 ml	
	Max. RPM (speed)	11,500 min ⁻¹	
	Max. RCF	18,038	
Running time		1 sec – 999 min : 59 sec, ∞ continuous run	
Dimensions (H x W x D)		973 x 650 x 814 mm	
Weight		approx. 219 kg	
Refrigeration			
Temperature control, infinitely variable		from -20 to +40 °C	
Cat. No.		4950	

^{*)} Other voltages on request.

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

Swing-out rotor, 4-place



illustrated with carriers 4295-A
and lids 4229-B

✂ 90° n = 4,500 min⁻¹ max. RCF 5,252

Cat. No. (without carriers) 4294

capacity in ml	0.8	1.5	2.0	4	5	6	7	9	12	15	25	50	94	100
Ø x L in mm	8x45	11x38	10x88	12x75	12x82	12x100	14x100	16x101	17x100	24x100	34x100	38x102	40x115	
Cat. No.	-	2078	0536	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	0500 ²⁾	-	0518 ²⁾	0519 ²⁾	0521 ²⁾	0549	0523 ²⁾
lid Cat. No. 4229-B														
carrier Cat. No. 4295-A														
Cat. No.	4226	4225	4224	4213-93	4213	4223	4214	4215	4216	4218				
boring Ø x L in mm	8.2x36	11.2x46	11x74	12.5x36	12.5x74	16x74	17.5x74	26x74	35x74	41.5x74				
tubes per rotor	312	336	252	192	192	100	120	44	24	16				
max. RCF ²⁾ upper / lower	4,777	3,690 / 4,867				4,777								
radius in mm upper / lower	211	163 / 215				211								
run-up in sec						115								
run-down in sec, braked						116								
temperature in °C ¹⁾						+6								

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
Ø x L in mm	13x65	11x66	15x75	11x92	15x92	16x92	15x102	13x75	13x100	16x75	16x125	16x100
Cat. No.	blood collection / urine tubes											
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
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
tubes per rotor	120	192	120	192	120	64		120			100	120
max. RCF ²⁾						4,777						
radius in mm						211						
run-up in sec						115						
run-down in sec, braked						116						
temperature in °C ¹⁾						+6						

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

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

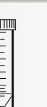
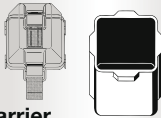
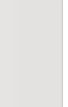
³⁾ When using these tubes, carrier 4295-A cannot be closed with lid 4229-B.

ROTORS

Swing-out rotor 4294



illustrated with
carriers 4295-A

capacity in ml	15	50	12	25	30	50	85	94	250	290	600	650	750
Ø x L in mm	17x120	29x115	17x100	25x90	25x110	29x115	38x106	38x102	61x122	62x137	93x134	97x139	97x152
Cat. No.	0509	0513	-	-	-	-	0547	0538 ¹³⁾	5127 ²⁸⁾	- ²⁸⁾	0551 ²⁸⁾	0554 ²⁸⁾	0512 ²⁸⁾
lid Cat. No. 4229-B													
 carrier Cat. No. 4295-A													
Cat. No.	4232	4245-A	4220	4241	4215	4249	4218	4238	4233	4258			
boring Ø x L in mm	17x70	30x70	17.5x74	26x73	26x74	30x96	41.5x74	62x90	94x105	97.5x105			
tubes per rotor	92	32	64	32	44	24	16	4					
max. RCF ²⁾	4,958		4,777			4,867	4,777			4,958			
radius in mm	219		211			215	211			219			
run-up in sec	115												
run-down in sec, braked	116												
temperature in °C ¹⁾	+6												

capacity in ml	750	250	500
Ø x L in mm	96 x 135	60 x 162	96 x 147
Cat. No.	4234-A	Corning®	Corning®
lid Cat. No. 4229-B			
carrier Cat. No. 4295-A			
Cat. No.	4258	6322	4258
boring Ø x L in mm	97.5 x 105	61 x 125	97.5 x 105
tubes per rotor	4		
max. RCF ²⁾	4,958	4,777	4,958
radius in mm	219	211	219
run-up in sec	115		
run-down in sec, braked	116		
temperature in °C ¹⁾	+6		

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

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

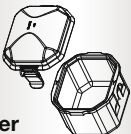
³⁾ When using these tubes, carrier 4295-A cannot be closed with lid 4229-B.

Swing-out rotor 4294



illustrated with
carriers 4290

capacity in ml	5	6	7	9	12	15	2.6 - 3.4	4.9	4-5.5	7.5 - 8.5	9 - 10	10
Ø x L in mm	12 x 75	12 x 82	12 x 100	14 x 100	16 x 101	17 x 100	13 x 65	13 x 90	15 x 75	15 x 92	16 x 92	15 x 102
Cat. No.	0553 ²⁾	0501 ²⁾	0578 ²⁾	0500 ²⁾	-	0518 ²⁾	blood collection / urine tubes					
lid with bio-containment ⁵⁾ Cat. No. 4291												
carrier Cat. No. 4290												
Cat. No.	4273			4338		4273		4338		4311		
boring Ø x L in mm	13.2 x 57			17.5 x 62		13.2 x 57		17.5 x 62		17.5 x 63		
tubes per rotor	200			168		200		168		132		
max. RCF ²⁾	4,551			4,551		4,551		4,551		4,573		
radius in mm	201			201		201		201		202		
run-up in sec	115											
run-down in sec, braked	116											
temperature in °C ¹⁾	+ 2											

capacity in ml	1.6-5	4-7	4-7	8.5-10	10	12	15	15	50	50	50	50
Ø x L in mm	13 x 75	13 x 100	16 x 75	16 x 100	16 x 80	17 x 100	17 x 120	17 x 120	29 x 115	29 x 115	29 x 115	29 x 115
Cat. No.	blood collection / urine tubes				-	-	0509	0509	0513	0513	-	-
lid with bio-containment ⁵⁾ Cat. No. 4291												
 carrier Cat. No. 4290												
Cat. No.	4273		4338		4310		4314	4320³⁾	4321	4323³⁾	4313	4339³⁾
boring Ø x L in mm	13.2 x 57		17.5 x 62		17.2 x 57		17 x 60	17 x 60	30 x 60	30 x 60	30 x 56	30 x 56
tubes per rotor	200		168		112		68	112	32	40	32	40
max. RCF ²⁾	4,551		4,551		4,437		4,618	4,618	4,618	4,618	4,528	4,528
radius in mm	201		201		196		204	204	204	204	200	200
run-up in sec	115											
run-down in sec, braked	116											
temperature in °C ¹⁾	+ 2											

³⁾ When using these adapters, carrier 4290 cannot be closed with lid 4291.

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

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

ROTORS

Swing-out rotor 4294



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

D x W x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	86x128x46	86x128x83	82x124x20	-
Cat. No.	MTP		CP	DWP	MS	QP	PCR plate 96 wells	PCR strips
lid with bio-containment ⁵⁾ Cat. No. 5629								
 carrier Cat. No. 4280								
Cat. No.	4279						4279 + 1485	
boring Ø x L in mm	-							
plates / strips per rotor	24		20	8	4			48x8
max. RCF ²⁾	4,573							
radius in mm	202							
run-up in sec	115							
run-down in sec, braked	116							
temperature in °C ¹⁾	+5							

D x W x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	86x128x46	18x164x46	82x124x20	-
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 / strips per rotor	16		8	4		16	4	48x8
max. RCF ²⁾	3,939					4,120	3,939	
radius in mm	174					182	174	
run-up in sec	115							
run-down in sec, braked	116							
temperature in °C ¹⁾	+4							

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

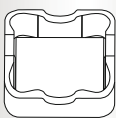
²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, bucket 4255 cannot be closed with its lid.

Swing-out rotor 4294



Carrier 4254, illustrated with
bucket 4255 with lid

D x W x H in mm	20x118x70
Hitachi Racks	
Cat. No.	-
 carrier Cat. No. 4257	 
Cat. No.	4259-A²⁶⁾
boring Ø x L in mm	-
racks per rotor	20
max. RCF ²⁾	4,867
radius in mm	215
run-up in sec	115
run-down in sec, braked	116
temperature in °C ¹⁾	+7

capacity in ml	5	7	9	15	25	50	100
Ø x L in mm	12x75	12x100	14x100	17x100	24x100	34x100	44x100
Cat. No.	0553²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾
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⁾	4,618	4,777	4,505	4,573	4,551		
radius in mm	204	211	199	202	201		
run-up in sec	115						
run-down in sec, braked	116						
temperature in °C ¹⁾	+5						

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	4435	4434	4435	4434	4435
boring Ø x L in mm	13.5x58	13x58	17.5x53	13x58	13.5x58	17.5x53	17.5x53	17.5x53	13.5x58	13.5x58	13.5x58	17.5x53	17.5x53
tubes per rotor	84	120	76	120	84	76	76	76	84	84	84	76	76
max. RCF ²⁾	4,618	4,618	4,777	4,618	4,618	4,777	4,777	4,777	4,618	4,618	4,618	4,777	4,777
radius in mm	204	204	211	204	204	211	211	211	204	204	204	211	211
run-up in sec	115												
run-down in sec, braked	116												
temperature in °C ¹⁾	+5												

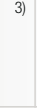
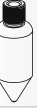
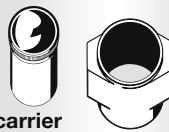
⁵⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

²⁶⁾ When using removal frame 4259-A, please take the insert out of carrier 4257.

ROTORS

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	17x120	25x110	29x115	25x90	25x110	16x80	61x122	62x137	97x139	97x152	96x176	98x138
Cat. No.	0509	-	0513	-	-	-	5127 ²⁸⁾	- ²⁸⁾	0554 ²⁸⁾	0512 ²⁸⁾	4239 ²⁸⁾	4255
bucket Cat. No. 4255												
												
carrier Cat. No. 4254												
Cat. No.	4437	4438	4441	4438		4434	4443		-		-	
boring Ø x L in mm	17 x 88	26 x 72	30 x 87	26 x 72		17.5 x 53	62 x 92		98 x 138		-	
tubes per rotor	48	28	20	28		76			4			
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	115											
run-down in sec, braked	116											
temperature in °C ¹⁾	+5											

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	115					
run-down in sec, braked	116					
temperature in °C ¹⁾	+ 5					

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

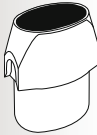
²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 4255 cannot be closed with its lid.

Swing-out rotor 4294



illustrated with carriers 4298-A
and inserts 4237-A

capacity in ml	450	500
blood bags	triple	
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	115	
run-down in sec, braked	116	
temperature in °C ¹⁾	+2	

capacity in ml	450	500	750	1,000
blood bags	quadruple		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			
max. RCF	5,003		5,071	
radius in mm	221		224	
run-up in sec	115			
run-down in sec, braked	116			
temperature in °C ¹⁾	+3			



HettLiner

Blood bags can be secured in inserts using HettLiners. After centrifuging, they can be removed by their loops without disturbing the sediment.

Cat. No. 4564



Set of balancing weights

If blood bag carriers are not filled to the same weight, then balancing weights can be used to make up the difference.

Cat. No. 4566

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

ROTORS

Swing-out rotor, 6-place

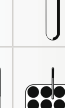
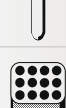
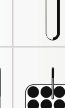
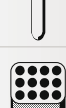


illustrated with carriers 5051
and lids 5053

✂ 90° n = 4,000 min⁻¹ max. RCF 3,631

Cat. No. (without carriers) 4296

capacity in ml	1.5	2.0	1.5	2.0	5	6	7	9	15	25	50	100	100	two-tier frame for cyto accessories
Ø x L in mm	11x38		11x38		12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115	
Cat. No.	-	-	2078	0536	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾	cyto chambers
lid Cat. No. 5053														
 carrier Cat. No. 5051														
Cat. No.	5257		5281		5227		5247¹⁸⁾	5264	5248¹⁸⁾	5242	5243	5262	5249	5280
boring Ø x L in mm	12.5x42		11.5x50		12.5x42		12.5x86	16x50	17.5x86	26x86	36x86	45.5x86	42x86	-
tubes per rotor	240		96		120		120	72	72	30	12	6		12
max. RCF ²⁾ oben/unten	2,486/3,363		3,363		3,309		3,291	3,309	3,291			3,291		2,290/3,274
radius in mm oben/unten	139/188		188		185		184	185	184			184		128/183
run-up in sec	33													
run-down in sec, braked	50													
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	10	1.6–5	4–7	4–7	8.5–10	15	50
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x75	16x100	17x120	29x115
Cat. No.	blood collection / urine tubes													0509	0513
lid Cat. No. 5053															
 carrier Cat. No. 5051															
															
Cat. No.	5267	5268	5227	5264	5227	5268	5264	5258		5268	6301	5264	5248	6306	5259
boring Ø x L in mm	11x44	13.5x52	12.5x42	16x50	12.5x42	13.5x52	16x50	17.6x86		13.5x52	13.5x86	16x50	17.5x86	17x90	30x86
tubes per rotor	120	72	120	72	120	72		66		72			42		12
max. RCF ²⁾	3,274	3,345	3,309	3,309	3,309	3,345	3,309	3,291		3,345	3,291	3,309	3,291	3,434	3,363
radius in mm	183	187	185	185	185	187	185	184		187	184	185	184	192	188
run-up in sec	33														
run-down in sec, braked	50														
temperature in °C ¹⁾	0														

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

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

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

Swing-out rotor 4296



illustrated with
carriers 5051



illustrated with carriers 5092
and lids 5093
with bio-containment⁵⁾

capacity in ml	12	30	50
Ø x L in mm	17x100	25x110	29x115

Cat. No.	-		
lid Cat. No. 5053			
carrier Cat. No. 5051			

Cat. No.	6306	5266	5243
boring Ø x L in mm	17x90	26x86	36x86
tubes per rotor	42	30	12
max. RCF ²⁾	3,434	3,291	
radius in mm	192	184	
run-up in sec		33	
run-down in sec, braked		50	
temperature in °C ¹⁾		0	

capacity in ml	5	6	7	15	25	50	100	100
Ø x L in mm	12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115

Cat. No.	0553²⁾	0501²⁾	0578²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	0523²⁾
lid with bio-containment ⁵⁾ Cat. No. 5093								
carrier Cat. No. 5092								

Cat. No.	5128	5120	5136	5122	5124	5125	5126
boring Ø x L in mm	12.8x45	12.8x82	17.5x60.7	25.5x82	35.5x82.5	45.5x85	42x85
tubes per rotor	72		48	24		6	
max. RCF ²⁾	3,542		3,488	3,434		3,488	
radius in mm	198		195	192		195	
run-up in sec				33			
run-down in sec, braked				50			
temperature in °C ¹⁾				-2			

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
Ø x L in mm	65x115	8x66	8x66	13x65	11x66	11x66	11x92	15x75	13x90	15x92	16x92	15x102	13x75

Cat. No.	0530²⁾	blood collection / urine tubes											
lid with bio-containment ⁵⁾ Cat. No. 5093													
carrier Cat. No. 5092													

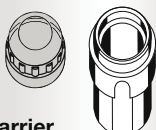
Cat. No.	1791	5137	5138	5138	5137	5138	5120	5136	5137	5136	5138
boring Ø x L in mm	66x103	13.5x60.7	12.8x54.5	12.8x54.5	13.5x60.7	12.8x54.5	12.8x82	17.5x60.7	13.5x60.7	17.5x60.7	12.8x54.5
tubes per rotor	6	48	72		48	72				48	72
max. RCF ²⁾	3,631	3,488	3,077		3,488	3,077	3,542			3,488	3,077
radius in mm	203	195	172		195	172	198			195	172
run-up in sec							33				
run-down in sec, braked							50				
temperature in °C ¹⁾							-2				

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

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

ROTORS

Swing-out rotor 4296

capacity in ml	4–7	4–7	8.5–10	8	15	50	25	30	50	10	250	290	
Ø x L in mm	13x100	16x75	16x100	16x125	17x120	29x115	25x90	25x110	29x115	16x80	61x122	62x137	
Cat. No.	blood / urine tubes					0509	0513	-				5127²⁸⁾	-²⁸⁾
lid with bio-containment ⁵⁾ Cat. No. 5093													
 carrier Cat. No. 5092													
Cat. No.	5120	5136	5121⁴⁾	5129	5123	5134	5122	5135	5136	6319			
boring Ø x L in mm	12.8x82	17.5x60.7	17.5x82	17x85	30x85	26x73	25.5x82	30x99	17.5x60.7	66x103			
tubes per rotor	72	48	42		12	18	24	12	48	6			
max. RCF ²⁾	3,542	3,488	3,542	3,631	3,631	3,363	3,434	3,560	3,488	3,631			
radius in mm	198	195	198	203	203	188	192	199	195	203			
run-up in sec	33												
run-down in sec, braked	50												
temperature in °C ¹⁾	-2												

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

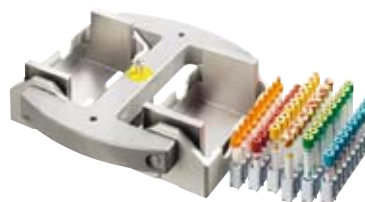
²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.
The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

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

Swing-out rotor, 2-place

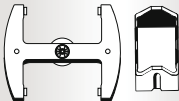


illustrated with carriers
4285-A, adapters 4281
and Deep Well Plates



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

✂ 90° n = 3,600 min⁻¹ max. RCF 2,652
Cat. No. (without carriers) 4282

D x W x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	59x84x11	82x124x20	-
Cat. No.	MTP		CP	DWP	Microtest plate (Terasaki)	PCR plate 96 wells	PCR strips
carrier Cat. No. 4285-A	 						
 rotor Cat. No. 4282						 	
Cat. No.	4281					4281 + 2 x 1485	
boring Ø x L in mm	-						
plates / racks per rotor	16		12	4			48x8
max. RCF ²⁾	2,434						
radius in mm	168						
run-up in sec	87						
run-down in sec, braked	94						
temperature in °C ¹⁾	-2						

D x W x H in mm	20x176x41	20x118x70	25x193x60	110x210x44
Cat. No.	Olympus racks	Hitachi racks	Behring racks	rack, 50-place
carrier Cat. No. 4285-A				
rotor Cat. No. 4282				
Cat. No.	4283-B	4287-B	4288-A	4263-A
boring Ø x L in mm	-			
plates / racks per rotor	12	20	10	2
max. RCF ²⁾	2,652			2,579
radius in mm	183			178
run-up in sec	87			
run-down in sec, braked	94			
temperature in °C ¹⁾	-2			

⁴⁾ Please remove the inserts.

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

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

ROTORS

Angle rotor, 6-place



with bio-containment ⁵⁾

✂ 25° n = 9,500 min⁻¹
Cat. No. 4266

max. RCF 14,025

Angle rotor, 6-place



with bio-containment ⁵⁾

✂ 45° n = 11,500 min⁻¹ max. RCF 18,038
Cat. No. 4246

capacity in ml	15	25	94	15	50	10	30	50	85	94	250
Ø x L in mm	17x100	24x100	38x102	17 x 120	29 x 115	16x80	26x95	29x107	38x106	38x102	61x122
Cat. No.	0518 ²⁾	0519 ²⁾	0549	0509	0513	-	0545	0546	0547	0538 ¹³⁾	5127 ²⁸⁾
lid with bio-containment ⁵⁾ incl.											
rotor Cat. No. 4266											
Cat. No.	5646	5642	5644	5637	5638	5641	5642	5643	5644	-	-
boring Ø x L in mm	17.6x83	26x80	38.6x88	17 x 106	30 x 100	16.6x70	26x80	29x90	38.6x88	61.5x109	-
tubes per rotor	42	18	6	30	6	48	18	6	6	6	6
max. RCF ²⁾	13,319	12,915	12,310	12,915	12,108	13,420	12,915	12,108	12,310	14,025	14,025
radius in mm	132	128	122	128	120	133	128	120	122	139	139
run-up in sec	82										
run-down in sec, braked	96										
temperature in °C ¹⁾	+2										

capacity in ml	0.5	1.5	2.0	3	15	25	50	94	7.5–8.5	9–10	10	8.5–10	5	15	50
Ø x L in mm	10.7x36	11x38		10x60	17x100	24x100	34x100	38x102	15x92	16x92	15x102	16x100	17x59	17x120	29x115
Cat. No.	Pediatric	2078	0536	-	0518²⁾	0519²⁾	0521²⁾	0549	blood collection / urine tubes				-	0509	0513
lid with bio-containment ⁵⁾ incl.															
 rotor Cat. No. 4246															
Cat. No.	1449				1451	1447	1463	-	1451				1476	1466	1454
boring Ø x L in mm	11.4x39				17.5x92	26x85	35x89	38.2x89.6	17.5x92				17x51	17x106	29.8x97
tubes per rotor	24								6						
max. RCF ²⁾	17,299				17,003	16,560	17,743	18,038	17,003				16,856	17,299	17,595
radius in mm	117				115	112	120	122	115				114	117	119
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 attained by reducing the speed.

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

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

Angle rotor, 4246

Angle rotor, 6-place, for Schlenk tubes



✶ 45° n = 2,000 min⁻¹ max. RCF 805

Cat. No. 4316³⁴⁾

capacity in ml	10	30	50	85	94
Ø x L in mm	16x80	26x95	29x107	38x106	38x102
Cat. No.	-	0545	0546	0547	0538 ¹³⁾
lid with bio-containment ⁵⁾ incl.					
					
rotor Cat. No. 4246					
Cat. No.	1448	1447	1446	-	
boring Ø x L in mm	16.5x74	26x85	29x92	38.2x89.6	
tubes per rotor	12	6			
max. RCF ²⁾	17,003	16,560	17,299	18,038	
radius in mm	115	112	117	122	
run-up in sec	66				
run-down in sec, braked	68				
temperature in °C ¹⁾	+4				

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. 4316 ³⁴⁾		
Cat. No.	4317	-
boring Ø x L in mm	25x86	-
tubes per rotor	6	
max. RCF ²⁾	783	805
radius in mm	175	180
run-up in sec	16	
run-down in sec, braked	29	
temperature in °C ¹⁾	-10	

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

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

³⁴⁾ In the heatable model 4950-50, rotor 4316 may only be used up to a maximum of +40 °C.

ROTOR

Swing-out rotor, 4-place, for ASTM tubes
+ 50 ml Babcock bottles



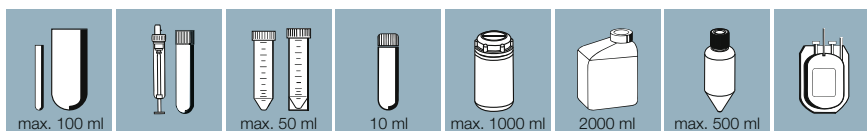
illustrated with
carriers 4275

✂ 90° $n = 2,000 \text{ min}^{-1}$ max. RCF 984
Cat. No. (without carriers) 4274

capacity in ml	50	100	100	100	50
Ø x L in mm	45x130	58x161	44x168	37x200	36.5x185
Cat. No.	ASTM ²⁾	ASTM 0528 ²⁾	ASTM ²⁾	ASTM 0531 ²⁾	Babcock
carrier Cat. No. 4275					
rotor Cat. No. 4274					
Cat. No.	4278-A	0771	4277	4276-A	0703-A
boring Ø x L in mm	-				
tubes per rotor	4				
max. RCF ²⁾	984		961		912
radius in mm	220		215		204
run-up in sec	16				
run-down in sec, braked	38				
temperature in °C ¹⁾	-5				

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 700.



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	208 – 220 V +6 / -10 % 3~ (+ N) + PE, with internal transformer
Frequency		50 – 60 Hz	50 – 60 Hz
Consumption		9,700 VA	9,000 VA
Emission, Immunity		EN / IEC 61326-1, class B	
	Max. capacity	6 x 2.000 ml	
	Max. RPM (speed)	6,000 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	approx. 401 kg
Refrigeration			
Temperature control, infinitely variable		from -20 to +40 °C	
Cat. No.		5005	5005-08

*) Other voltages on request.

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

ROTORS

Swing-out rotor, 6-place



illustrated with carriers 4591-A
and inserts 4592-B

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

↗ 90° $n = 4,500 \text{ min}^{-1}$ max. RCF 6,520

Cat. No. (without carriers) 4176

capacity in ml	500	500	500	750
blood bags	quadruple	quadruple	quadruple	single
Cat. No.	-	-	-	-
 Carrier Cat. No. 4524-A				
Cat. No.	4525-A	4529³⁰⁾-AO,-AM,-AU	4592-B	
boring Ø x L in mm	-			
blood bag systems per rotor		12	8	
max. RCF		6,498	5,683	
max. RCF ³⁰⁾		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	quadruple
Cat. No.	-
	
Carrier Cat. No. 4546-A	
Cat. No.	4559-A
boring Ø 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



carrier 4524-A
with insert 4525-A

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



carrier 4546-A
with insert 4559-A

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

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.

Swing-out rotor, 4-place



illustrated with carriers 4591-A
and inserts 4592-B

↗ 90° n = 4,500 min⁻¹ max. RCF 5,705

Cat. No. (without carriers) 4174

capacity in ml	450	500	750
blood bags	triple	quadruple	single
Cat. No.	-	-	-
Carrier Cat. No. 4591-A			
Cat. No.	4598	4592-B	
boring Ø 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	

capacity in ml	max. 1,600 ⁴⁰⁾	2,000
H x W x D in mm	-	180 x 150 x 100
Cat. No.	-	0550
Carrier Cat. No. 4595-C ³⁵⁾		
Cat. No.	4596-A	-
H x W x D in mm	146 x 145 x 91	-
blood bag systems per rotor	6 4	6 4
max. RCF	3,821 3,328	3,848 3,369
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 ¹⁾	+16 -8	+16 -8



carrier 4591-A
with insert 4592-B



carrier 4595-C with insert 4596-A

³⁵⁾ Adapter for accommodating sample tubes and blood collection tubes in carrier 4595-C on request.

⁴⁰⁾ Dependent on the material to be centrifuged.

ROTORS

Swing-out rotors 4176 / 4174

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

capacity in ml	500	750	1,000
blood bags	quadruple	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	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 ¹⁾		+9	+3

capacity in ml	500	450
blood bags	quadruple	triple
Cat. No.	-	-
lid Cat. No. 5621 		
Cat. No.	4547-B	4548
boring Ø x L in mm	-	-
blood bag systems per rotor	6 4	6 4
max. RCF	6,316	5,501
radius in mm	279	243
run-up in sec	125	125
run-down in sec, braked	197	197
temperature in °C ¹⁾	+9	-9



carrier 4523-A
with insert 4516-A



carrier 4547-B with insert 4548
and lid 5621

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

Accessories for centrifuging blood bag systems

HettLiner

Blood bags can be secured in adapters using HettLiners. After centrifuging, they can be removed by their loops without disturbing the sediment.



Cat. No. 4564

Set of compensatory weights

If blood bag carriers are not filled to the same weight, then compensatory weights can be used to make up the difference.



Cat. No. 4566

40 balancing weights, 2 g each
20 balancing weights, 5 g each
10 balancing weights, 10 g each
5 balancing weights, 20 g each
5 balancing weights, 40 g each

Loading aid

Quick and easy packing of blood bag systems with loading aid.



Cat. No. 4509

Balancing inserts

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.



Cat. No. 4584-A (for insert 4559-A)

Cat. No. 4587-A (for insert 4592-B)

Cat. No. 4589-A (for insert 4516-A)

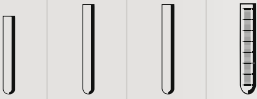
ROTORS

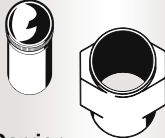
Swing-out rotors 4176 / 4174



carrier 4579-A, illustrated with
bucket 4255 with lid

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

capacity in ml	5	7	9	15	25	50	100	2.6–3.4	2.7–3	
Ø x L in mm	12x75	12x100	14x100	17x100	24x100	34x100	44x100	13x65	11x66	
Cat. No.	0553 ²⁾	0578 ²⁾	0500 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	0526 ²⁾	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	13x58		17.5x53		26x72	36x79	45x78	13.5x58	13x58	
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	15x75	11x92	13x90	16x92	15x102	13x75	13x100	16x75	16x100	17x120	29x115
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	4435	4434	4437	4441	
boring Ø x L in mm	17.5x53	13x58	13.5x58	17.5x53	13.5x58	17.5x53	13.5x58	17.5x53	17x88	30x87	
tubes per rotor	114 76	180 120	126 84	114 76	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	5,750 4,935	5,886 5,094	5,750 4,935	6,022 5,207	5,999 5,207	
radius in mm	260 225	254 218	260 225	254 218	260 225	254 218	260 225	254 218	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 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, bucket 4255 cannot be closed with its lid.

Swing-out rotors 4176 / 4174



rotor 4176, illustrated with
carriers 4522-A

capacity in ml	25	30	10	250	290	650	750	1.000	1.000	175	175
Ø x L in mm	25x90	25x110	16x80	61x122	62x137	97x139	97x152	96x176	98x138	61x118	61x144
Cat. No.	-	-	-	5127 ^{2B)}	- ^{2B)}	0554 ^{2B)}	0512 ^{2B)}	4239 ^{2B)}	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	26x72	17.5x53	62x92	98x138	-	-	-				
tubes per rotor	42 28	114 76	6 4	6 4							
max. RCF ²⁾	5,818 5,026	5,886 5,094	6,113 5,320	6,113 5,320				6,294 5,501			
radius in mm	257 222	260 225	270 235	270 235				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	60x130	61x137	60x162	96x147
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 ²⁾	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			

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

ROTORS

Swing-out rotors 4176 / 4174



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

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

capacity in ml	4	5	6	7	12	15	25	50	100	2.6–3.4	2.7–3	4–5.5	
Ø x L in mm	10x88	12x75	12x82	12x100	16x101	17x100	24x100	34x100	40x115	13x65	11x66	15x75	
Cat. No.	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	-	0518 ²⁾	0519 ²⁾	0521 ²⁾	0523 ²⁾	blood collection tubes			
 Carrier Cat. No. 4522-A													
													
Cat. No.	4224	4213-93	4213		4223	4214	4215	4216	4218	4222-93	4213-93	4214-93	
boring Ø x L in mm	11x74	12.5x36	12.5x74		16x74	17.5x74	26x74	35x74	41.5x74	13.2x36	12.5x36	17.5x36	
tubes per rotor	378 252	288 192		150 100		180 120	66 44	36 24	24 16	180 120	288 192	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	4.5–5	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8	8.5–10	15	50
Ø x L in mm	11x92	15x92	16x92	15x102	13x75	16x75	13x100	16x125	16x100	17x120	29x115
Cat. No.	blood collection / urine tubes									0509	0513
 Carrier Cat. No. 4522-A											
											
Cat. No.	4213	4214	4220	4214	4222-93	4214-93	4222	4223	4214	4232	4245-A
boring Ø x L in mm	12.5x74	17.5x74			13.2x36	17.5x36	13.2x74	16x74	17.5x74	17x70	30x70
tubes per rotor	288 192	180 120	96 64		180	120		150 100	180 120	138 92	48 32
max. RCF ²⁾					5,818	5,003				5,999	5,184
radius in mm					257	221				265	229
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 attained by reducing the speed.

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

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

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

Swing-out rotors 4176 / 4174

capacity in ml	12	25	30	50	250	290	600	650	750	750	
Ø x L in mm	17x100	25x90	25x110	29x115	61x122	62x137	93x134	97x139	97x152	96x135	
Cat. No.	-	-	-	-	-	5127 ²⁸⁾	- ²⁸⁾	0551 ²⁸⁾	0554 ²⁸⁾	0512 ²⁸⁾	4234-A
 Carrier Cat. No. 4522-A											
											
Cat. No.	4220	4241	4215	4249	4238	4233	4258				
boring Ø x L in mm	17.5x74	26x73	26x74	30x96	62x90	94x105	97.5x105				
tubes per rotor	96 64	48 32	66 44	36 24	6 4						
max. RCF ²⁾	5,818		5,003	5,909	5,094	5,818	5,003	5,999		5,184	
radius in mm	257		221	261	225	257	221	265		229	
run-up in sec	125 125										
run-down in sec, braked	197 197										
temperature in °C ¹⁾	+14 -1										

capacity in ml	250	500
Ø x L in mm	60x162	96x147
Cat. No.	Corning®	Corning®
 Carrier Cat. No. 4522-A		
		
Cat. No.	6322	4258 + 4449
boring Ø x L in mm	61x125	97.5x105
tubes per rotor	6 4	
max. RCF ²⁾	5,818 5,003	5,999 5,184
radius in mm	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-proof containment⁵⁾ and thus protects both the user and the environment against contamination.

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.



lid 5057

ROTORS

Swing-out rotors 4176 / 4174



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

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

capacity in ml	5	7	9	15	25	50	100	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9
Ø x L in mm	12x75	12x100	14x100	17x100	24x100	34x100	44x100	13x65	11x66	15x75	11x92	13x90
Cat. No.	0553²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	blood collection / urine tubes				
lid Cat. No. 5621												
Carrier Cat. No. 4547-B												
Cat. No.	4433	4434	4438	4439	4442	4435	4433	4434	4433	4435		
boring Ø x L in mm	13x58	17.5x53	26x72	36x79	45x78	13.5x58	13x58	17.5x53	13x58	13.5x58		
tubes per rotor	180 120	114 76	42 28	24 16	12 8	126 84	180 120	114 76	180 120	126 84		
max. RCF ²⁾	5,841 5,026	5,977 5,184	5,728 4,913	5,773 4,981	5,750 4,958	5,841 5,026	5,977 5,184	5,841 5,026	5,977 5,184	5,841 5,026		
radius in mm	258 222	264 229	253 217	255 220	254 219	258 222	264 229	258 222	264 229	258 222		
run-up in sec						125 125						
run-down in sec, braked						197 197						
temperature in °C ¹⁾						+9 -9						

capacity in ml	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8	8.5–10	15	50	25	30	10
Ø x L in mm	15x92	16x92	15x102	13x75	13x100	16x75	16x125	16x100	17x120	29x115	25x90	25x110	16x80
Cat. No.	blood collection / urine tubes								0509	0513	-	-	-
lid Cat. No. 5621													
Carrier Cat. No. 4547-B													
Cat. No.	4434	4435	4434	4437	4441	4438	4434						
boring Ø x L in mm	17.5x53	13.5x58	17.5x53	17x88	30x87	26x72	17.5x53						
tubes per rotor	114 76	126 84	114 76	72 48	30 20	42 28	114 76						
max. RCF ²⁾	5,977 5,184	5,841 5,026	5,977 5,184	6,090 5,298	5,909 5,117	5,977 5,184	5,977 5,184						
radius in mm	264 229	258 222	264 229	269 234	261 226	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 attained by reducing the speed.

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

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

Swing-out rotors 4176 / 4174



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

Angle rotor, 6-place

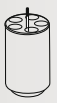
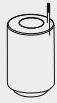
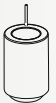
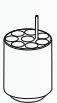
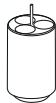


with bio-containment ⁵⁾

✶ 25° n = 6,000 min⁻¹
Cat. No. 4570

max. RCF 5,594

capacity in ml	250	290	650	750	1.000	175	175	200	225	250	500
Ø x L in mm	61x122	62x137	97x139	97x152	96x176	61x118	61x144	60x130	61x137	60x162	96x147
Cat. No.	5127 ²⁸⁾	- ²⁸⁾	0554 ²⁸⁾	0512 ²⁸⁾	4239 ²⁸⁾	Falcon®	Nalgene®	Nunc®	Falcon®	Corning®	
lid Cat. No. 5621											
Carrier											
Cat. No. 4547-B											
Cat. No.	4443		-			4440	4430		4440	4430	4449
boring Ø x L in mm	62x92		98x141			-					
tubes per rotor	6 4										
max. RCF ²⁾	6,203	5,411					6,384	5,592			
radius in mm	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	15	25	15	50	94	10	30	50	85	94	250
Ø x L in mm	17x100	24 x100	17 x 120	29 x 115	38 x 102	16 x 80	26 x 95	29 x 107	38 x 106	38 x 102	61 x 122
Cat. No.	0518²⁾	0519²⁾	0509	0513	0549	-	0545	0546	0547	0538¹³⁾	5127²⁸⁾
lid with bio-containment ³⁾ incl.											
 Rotor Cat. No. 4570											
Cat. No.	5646	5642	5637	5638	5644	5641	5642	5643	5644	-	
boring Ø x L in mm	17,6 x 83	26 x 80	17 x 106	30 x 100	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	42	18	30	6	6	48	18	6	6	6	
max. RCF ²⁾	5.315	5.152	5.152	4.830	4.910	5.353	5.152	4.830	4.910	5.594	
radius in mm	132	128	128	120	122	133	128	120	122	139	
run-up in sec						64					
run-down in sec, braked						69					
temperature in °C ¹⁾						-16					

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

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

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	1024x768 (16 bit)
Operating system	Microsoft Windows XP ^{®#} (SP 3), Windows 7 or Windows 8

Additional components: network adapter card

(available from specialist computer resellers)

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

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

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

Basic Kits		
Program functions that can be connected:	HettInfo Light Cat. No. 0910-L	HettInfo Cat. No. 0910-F
29 centrifuges	●	●
29 barcode kits	●	●
3 external barcode kits		●

Logging and storage of process data:

Daily run time data	●	●
Overall run time data	●	●
Barcode result data	●	●
User barcodes and users		●
Centrifuge fault tables	●	●

Database functions:

Delete table data	●	●
Print centrifuge report table		●
Print centrifuge fault table		●
Print barcode report table		●
Print barcode fault list		●
Print duplicate barcodes		●
Search barcodes		●
Delete packing room data		●
Password protection		●
Packing room		●
User administration		●

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

Participants

The data collected through HettInfo by the participants is stored on a PC with a RS 232 interface. Participants are centrifuges with an online kit, an online kit plus a barcode kit, external barcode units and additional distributors. A centrifuge fitted with a barcode kit 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 500 RS centrifuges can be retrofitted for connection to HettInfo at any time.

Article	Cat. No.	Scope of supply
Basis-Kit HettInfo	0910-F^{c)}	Software with all functions (full version), fibre-optic cable ^{b)} for connection to one participant or distributor, RS 232 cable, opto data box
Basis-Kit HettInfo Light	0910-L^{c)}	Software with limited functionality, fibre-optic cable ^{b)} for connection to one participant or distributor, RS 232 cable, opto data box

	Online-Kit ROTO SILENTA 630 RS	0951-10	Opto interface for a ROTO SILENTA 630 RS centrifuge
	Online-Kit ROTIXA 500 RS	0941-10	Opto interface for a ROTIXA 500 RS centrifuge
	Barcode-Kit ROTO SILENTA 630 RS	0950-10^{d)}	Front panel for ROTO SILENTA 630 RS with barcode unit and barcode scanner
	Barcode-Kit external for a packing room or for use on a centrifuge with C or S control panel and Online Kit	0915-10^{c)}	Barcode station with barcode scanner

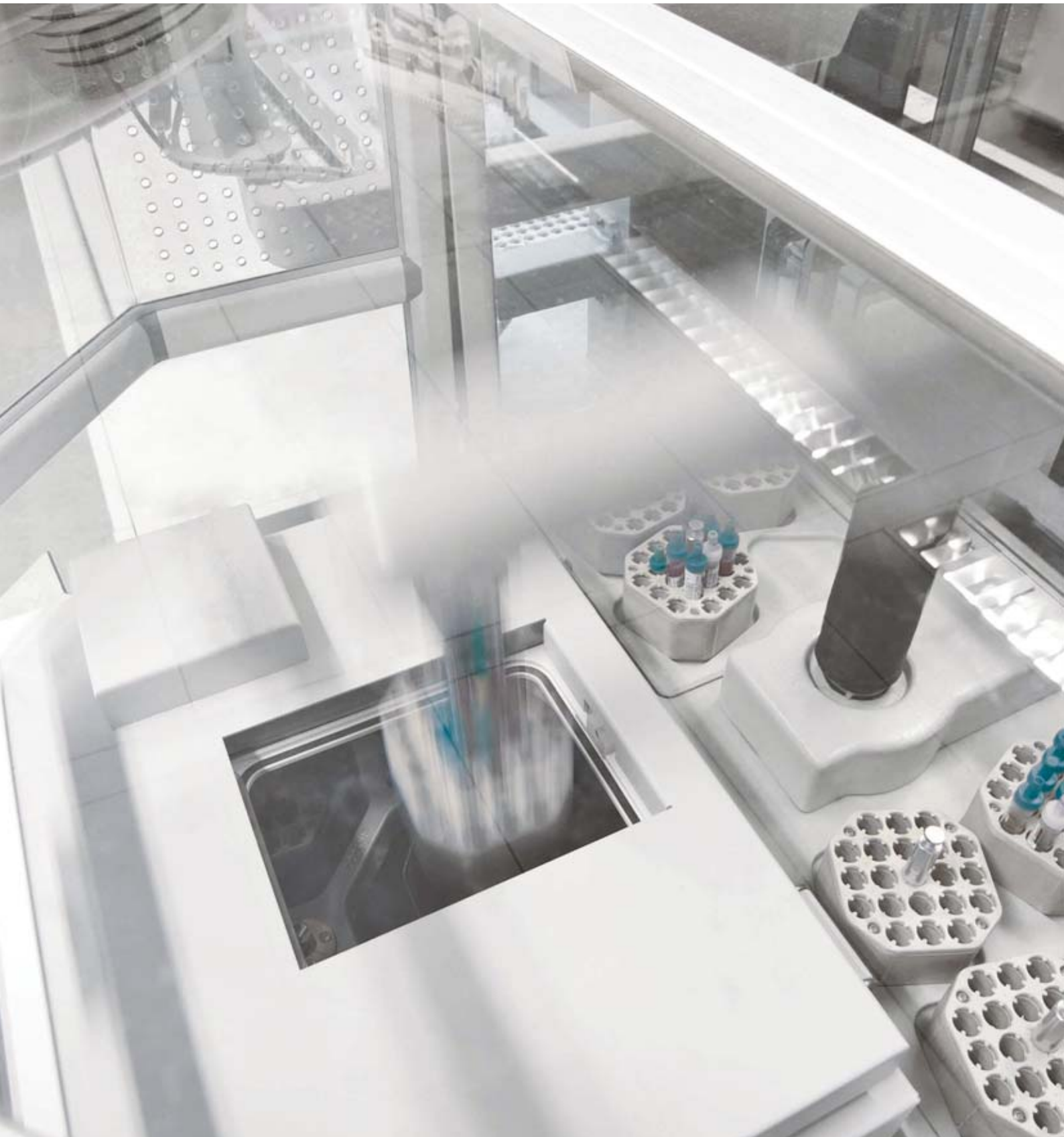
Distributor, small	0911-10	For connection of max. 8 participants
Distributor, large	0912-10	For connection of max. 15 participants
Connection Kit	0913-10	For connection of 1 participant, with fibre-optic cable ^{a)}

a) Fibre-optic cable in standard length (10 metres). Other lengths on request.

b) Fibre-optic cable in standard length (20 metres). Other lengths on request.

c) 100 - 240 V version, 50 - 60 Hz

d) 230 V version. Other voltages on request.



Automatically safe and fast

ROBOTIC

ROBOTIC CENTRIFUGES



Robotically operated centrifuges are used wherever sample processing can be automated, and make a significant contribution to the rationalisation and safety of routine tasks. They can be tailored for numerous applications.

More information is available free of charge from robotic@hettichlab.com.

Automatic, and therefore faster and more reliable

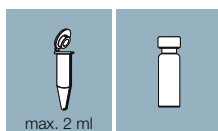
Hettich robotically operated centrifuges have been performing reliably in the laboratory for more than 20 years. They enable time-consuming, repetitive process steps to be carried out automatically. This not only minimises the risk of infection, but also allows laboratory personnel to concentrate on other tasks.

The floorstanding ROTANTA 460 Robotic centrifuges are recommended where large numbers of samples are involved. The MIKRO 220 Robotic, ROTINA 380 and 380 R Robotic models are ideally suited if you are looking for a benchtop solution.

Custom solutions

The Robotic models can be integrated into any workstation. However, automated applications require customized solutions. In addition to our standard range of accessories we therefore also manufacture special carriers and inserts that can be tailored to your robot and your application.





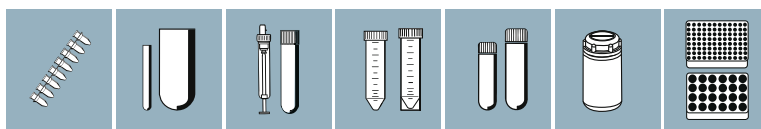
MIKRO 220 Robotic

The MIKRO 220 Robotic is an air-cooled, robotically operated microlitre centrifuge with PC control. Wherever processes can be automated, it will optimize the workflow. It centrifuges tubes up to 2.0 ml, e.g. microlitre tubes or HPLC tubes, quickly and safely (provided that flammable solvents

are not used). This qualifies it for sample preparation in research laboratories of the life sciences as well as for daily routine tasks in medical diagnostics or industrial quality control.



TECHNOLOGY	MIKRO 220 Robotic
Centrifuge, without rotor	without cooling
	Front hatch
Voltage	Can be operated at different voltages. Units are fitted with a transformer.
Frequency	50 – 60 Hz
Consumption	480 VA
Max. RPM (speed)	13,000 min ⁻¹
Max. RCF	18,516
Permissible density	1.2 kg / dm ³
Dimensions (H x W x D)	267 x 410 x 414 mm
Weight	approx. 27 kg
Cooling	
Temperature control, continuous	-
Cat. No.	2350



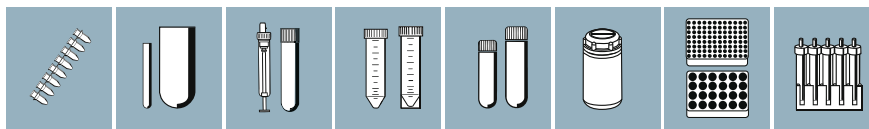
ROTINA 380 / 380 R / 380 RC Robotic

The ROTINA 380 Robotic models are available as air-cooled or cooled benchtop centrifuges and as cooled underbench units. They centrifuge microtitre plates and blood collection tubes quickly and reliably. The ROTINA 380 RC Robotic is ideally suited for setting up an automated work-station for routine clinical chemistry.

It can carry out special tasks, such as the centrifugation of STAT samples. In the research sector, the ROTINA 380 Robotic models also make a valuable contribution.



TECHNOLOGY	ROTINA 380 Robotic	ROTINA 380 R Robotic	ROTINA 380 RC Robotic
Centrifuge, without rotor	without cooling	with cooling	with cooling
	Rear hatch / front hatch		
Voltage	Can be operated at different voltages. Units are fitted with a transformer.		
Frequency	50 – 60 Hz		
Consumption	750 VA	1,500 VA	1,500 VA
Max. RPM (speed)	5,100 min ⁻¹		
Max. RCF	4,696		
Permissible density	1.2 kg / dm ³		
Dimensions (H x W x D)	447 x 470 x 579 mm	447 x 680 x 579 mm	622 x 470 x 579 mm
Weight	approx. 81 kg	approx. 113 kg	approx. 120 kg
Cooling			
Temperature control, continuous	-	from -20 to +40 °C	from -20 to +40 °C
Cat. No.	3700 / 3700-10	3702 / 3702-10	3704 / 3704-10



ROTANTA 460 Robotic

The ROTANTA 460 Robotic is a cooled, floor-standing centrifuge. Robotic centrifuges from the ROTANTA range have been an integral part of numerous laboratory automation systems for several decades. Today automated sample preparation is indispensable in medical diagnostics.

Robotically operated ROTANTA models have long been successfully deployed in biotechnology research laboratories and in the pharmaceutical industry, for example for high-throughput screening.



TECHNOLOGY	ROTANTA 460 Robotic ³⁶⁾
Centrifuge, without rotor	with cooling
	Rear hatch / front hatch
Voltage	Can be operated at different voltages. Units are fitted with a transformer.
Frequency	50 – 60 Hz
Consumption	1,800 VA
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
Cooling	
Temperature control, continuous	from -20 to +40 °C
Cat. No.	5680-RS232 / 5680-10-RS232

³⁶⁾ Also available on castors.

STANDARD ACCESSORIES FOR ROBOTIC CENTRIFUGES

MIKRO 220 Robotic

The MIKRO 220 Robotic can run with a swing-out rotor for microlitre tubes and a swing-out rotor for HPLC tubes. Centrifugation of flammable materials is not allowed; application is therefore restricted to non-flammable solvents.

Swing-out rotor, 24-place, for microlitre tubes



Cat. No. (with carriers) 2394

Swing-out rotor, 12-place, for HPLC tubes



Cat. No. (with carriers) 2362

ROTINA 380 / 380 R / 380 RC Robotic

The standard accessories for the ROTINA 380 Robotic models include two swing-out rotors with suitable carriers.

Swing-out rotor, 4-place illustrated with carriers 3725-R



Cat. No. (without carriers) 3724-R

Swing-out rotor, 2-place illustrated with carriers 3730-R



Cat. No. (without carriers) 3722-R

ROTANTA 460 Robotic

A comprehensive range of standard accessories is available for ROTANTA 460 Robotic centrifuges. Three swing-out rotors and eleven sorts of carriers are available for centrifuging different tubes and plates.

Swing-out rotor, 4-place illustrated with carriers 4486-R



Cat. No. (without carriers) 4444

Swing-out rotor, 4-place illustrated with carriers 5632-R



Cat. No. (without carriers) 5699-R

Swing-out rotor, 2-place illustrated with carriers 5631-R



Cat. No. (without carriers) 5622



Hands-free cell washing

WASH



ROTOLAVIT II



according to directive 98/79/EC

Automatic cell washing system for serological testing.

The ROTOLAVIT II cell washing system facilitates routine tasks in transfusion centre laboratories. It was developed for cross-matching, as well as antibody search and differentiation, and for cell washing in TB tests.

Its modern touch screen enables the simple and rapid input of up to 20 different programs. The centrifuge has a small footprint and delivers reliable results at low costs for consumables.



rotor, 12-place $\angle 45^\circ$
Cat. No. 1017-A



rotor, 24-place $\angle 45^\circ$
Cat. No. 1018-A

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

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

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



TECHNOLOGY	ROTOLAVIT II	
Cell Washing System, without rotor		
Power supply	100 – 240 V 1 ~	11 – 30 V 1 ~
Frequency	50–60 Hz	DC
Consumption	144 VA	
Emission, Immunity	EN / IEC 61326-3-2 / FCC CFR47 part 15, ed 2015-04-21 (e-CFR) 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	
Dimensions (H x W x D)	280 x 330 x 480 mm	
Weight	approx. 24.5 kg	
Cat. No.	1008	1008-03



Efficient use of valuable space

INCUBATORS

HETTCUBE RANGE

Warm for your samples,
cool for the climate





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					
Exterior dimensions (without bushing and door handle) W x D x H in mm	710 x 825 x 970		710 x 825 x 1425		710 x 825 x 1990	
Interior dimensions W x D x H in mm	535 x 690 x 420		535 x 690 x 850		535 x 690 x 1415	
Internal volume in litres	150		310		520	
Valid. usable volume as per DIN 12880:2007-05 in l	82		199		351	
Percentage valid. usable volume / internal volume	54 %		64 %		67 %	
Footprint in m ²	0.6		0.6		0.6	
Weight in kg	92	103	117	128	164	175
Number of trays provided as standard	2 (1 standard + 1 HTS)		3 (2 standard + 1 HTS)		4 (3 standard + 1 HTS)	
Temperature fluctuation at +37 °C			± 0.1 K			
Temperature uniformity at +37 °C			± 0.2 K			
Temperature uniformity at +25 °C			± 0.1 K			
Recovery time after door has been opened for 30 sec at +37 °C	≤ 3 min		≤ 4.5 min		≤ 5.5 min	
Energy consumption at +37 °C	0.033 kWh		0.043 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	220 – 240 V 1 ~ / 50 – 60 Hz					
Cat. No.	62000	62005	64000	64005	66000	66005

OTHER VOLTAGES	Cat. No.					
120 V 1 ~ / 50 – 60 Hz	62000-01	62005-01	64000-01	64005-01	66000-01	66005-01
110 V 1 ~ / 50 – 60 Hz	62000-03	62005-03	64000-03	64005-03	66000-03	66005-03
100 V 1 ~ / 50 – 60 Hz	62000-04	62005-04	64000-04	64005-04	66000-04	66005-04
127 V 1 ~ / 50 – 60 Hz	62000-05	62005-05	64000-05	64005-05	66000-05	66005-05
Weight in kg*	97	108	122	133	169	180
Energy consumption at +37 °C*	0.04 kWh		0.05 kWh		0.06 kWh	
Noise level*	≤ 42 dB(A)	≤ 44 dB(A)	≤ 42 dB(A)	≤ 44 dB(A)	≤ 42 dB(A)	≤ 44 dB(A)

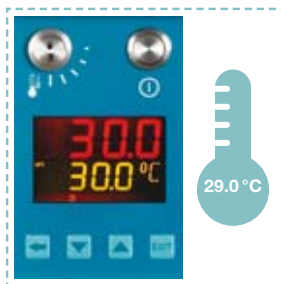
* All other data are the same as for the product versions with standard voltage (220 – 240 V 1 ~ / 50 – 60 Hz).

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.

ALL BENEFITS AT A GLANCE

More benefits for you.

The most important advantages of our three models are presented below. HettCube incubators will cater for all your requirements. See for yourself and save money. At an operating temperature of 37 °C a HettCube incubator consumes less than 0.05 kWh.



PROTECT THE ENVIRONMENT

HettCube incubators can also operate at a temperature 1 K above a stable ambient temperature. This allows a HettCube incubator to be used without cooling in situations in which incubators from other manufacturers must have cooling.



SAVE SPACE

The door does not require space at the side to open. This means that the incubator can be positioned in a corner or close to other lab equipment. The door hinges can easily be moved from one side of the incubator to the other.



PROVIDE PROTECTION

The practical door-locking mechanism locks both the door and the control panel at the same time. This prevents inadvertent changes to parameters and harmful effects on cultures.



PREPARED CONNECTION

One bushing on the rear panel is provided as standard.



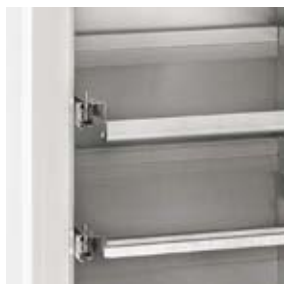
MOBILE STABILITY

The HettCube 400 and 600 models have castors for moving them to the desired position. Once in position they can be fixed with adjustable feet.



CLOSING BY ITSELF

A HettCube incubator will close automatically at an opening angle below 90°. A magnetic mechanism assists this automatic closing.



EASY CLEANING

The internal lining, drawers and shelves are made of stainless steel and can be readily removed for thorough cleaning and autoclaving.



UNIMPEDED ACCESS

Loading and unloading of the incubators is much easier because there is no inner door. Optional shelves and drawers run on telescopic rails and can be pulled out up to 70 %.



SAFE GRIP

Rounded grips on the standard shelves keep your gloves safe from ripping.

REMARKABLY QUIET

The fan is located outside the usable space. So HettCubes generate a remarkably low noise level of ≤ 44 dB(A).

HIGH-QUALITY EQUIPMENT

Each HettCube comes with an HTS tray with telescopic rails as a standard feature.

PERFECT CONDITIONS

Temperature control principle

Constant temperature.

Homogeneous temperature distribution.

Our guardians of culture: the HettCube range combines the advantages of natural and forced convection. The fan is housed outside the usable space, so that there is a low air flow inside the incubator. The temperature is maintained by radiated heat, preventing the formation of hot spots. Cultures do not dry out and the conditions inside the incubator are the same at all points, helping to deliver reproducible results. This sophisticated air circulation system, along with the good insulation, makes an inner door unnecessary.



Validated usable volume

Up to 67 % of the interior space is validated usable volume as per DIN 12880:2007-05.

In the laboratory every centimetre counts. For this reason, we decided against a strong air flow, which achieves validated temperature homogeneity in only 50 % of the interior space, and opted for gentle air flow. This, along with our highly efficient, space-saving insulation, allows you to benefit from a maximum validated usable volume and a minimum footprint.

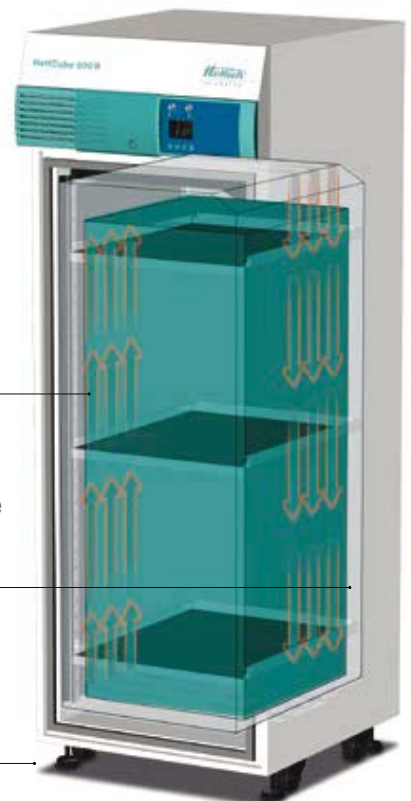
MODEL	200 / 200 R	400 / 400 R	600 / 600 R
Internal volume in litres	150	310	520
Validated usable volume in litres	82	199	351
Percentage of validated usable volume in the interior	54 %	64 %	67 %

Interior
Validated usable volume according to DIN 12880:2007-05

Gentle air flow: large validated usable volume. Guaranteed temperature homogeneity according to DIN 12880:2007-05.

Space-saving high-performance insulation provides additional usable interior space.

Small footprint.

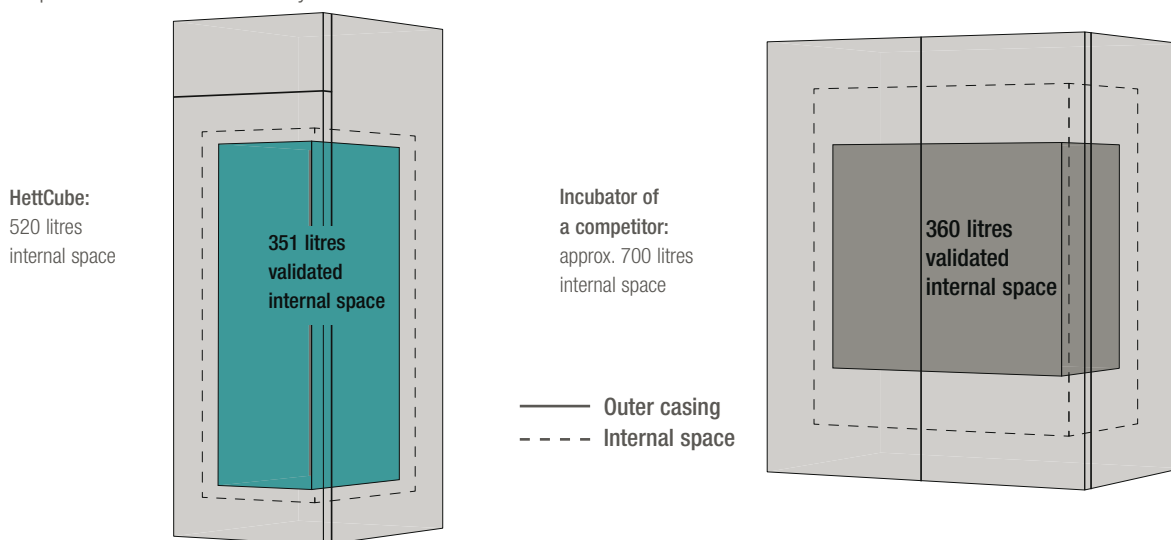


VALIDATED USABLE VOLUME

What really counts:

Only the validated usable volume in an incubator can guarantee homogenous temperature distribution for the cultures and therefore reliable results. However, a large internal space does not necessarily mean that the validated

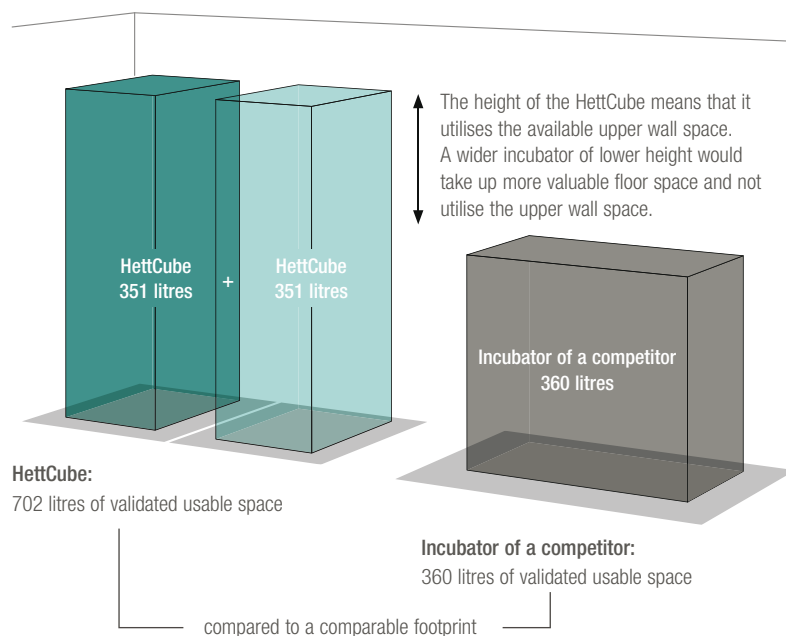
usable space is large. For a given size, HettCube models offer 20-30 % more validated usable space than other incubators.



Almost TWICE as much usable volume on the same footprint

For the same footprint, HettCube incubators offer 85 % more usable space, since two HettCube units fit into a

space that is only slightly greater than that occupied by a single unit of a competitor.



A HettCube incubator brings cost savings:

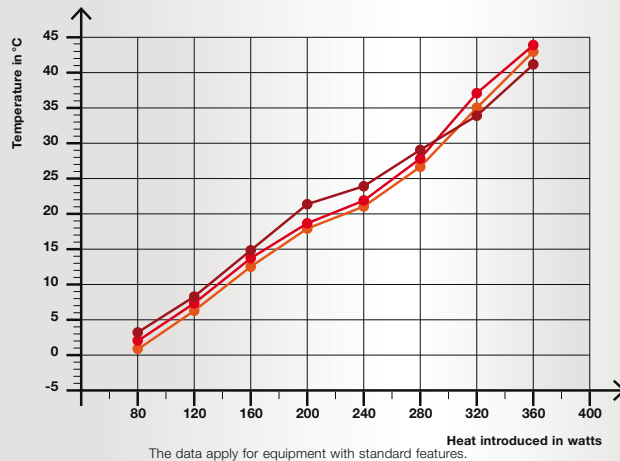
HettCube	Competitor
Gentle air flow + High-performance insulation + Small footprint =	Strong air flow + Bulky insulation + Large footprint =
Maximum loading capacity + cost savings per m ² laboratory space	Low loading capacity + higher costs per m ² laboratory space

PRACTICAL ACCESSORIES

Reliable compensation of temperature differences between the inside and outside

Heat compensation of the HettCube 200 R/400 R/600 R

Lowest attainable temperature values upon introduction of equipment with different heat outputs.



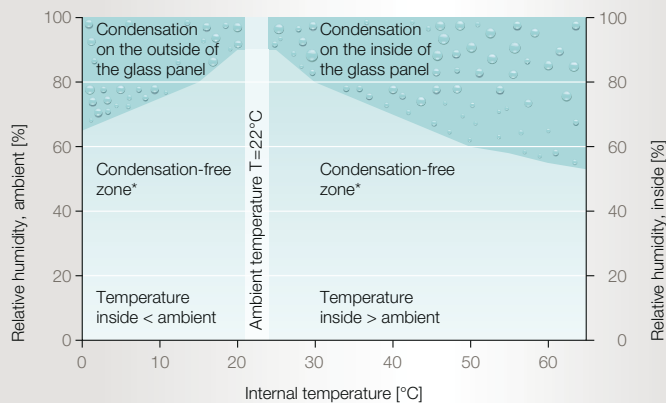
HettCube models react to changes in ambient conditions. Temperature fluctuations outside the incubator and energy introduced into the usable space by external equipment are compensated for immediately and actively.

- Temperature HettCube 200 R (0 °C to +65 °C)
- Temperature HettCube 400 R (0 °C to +65 °C)
- Temperature HettCube 600 R (0 °C to +65 °C)

HettCubes with glass door

The glass door enables users to check on their cultures without opening the door. The contents of the incubator can be easily reached since there is no additional inner door. The well-conceived air-guiding system makes this possible.

Condensation diagram for HettCubes size 200 / 400 / 600 with glass door at an ambient temperature of +22 °C



Glass door for 600 and 600 R

Cat. No. 60013

Hettich Tray System (HTS)

The Hettich Tray System, which fits in all three incubator sizes, allows the internal space of the HettCube to be used optimally. The trays, drawers, holders and rails are separate components. You just hang the rails in the grids of the holders and put in the tray or drawer of your choice.

Purchase information is provided on page 198.



HTS telescopic tray included

The advantages

- **Ideal grid dimensions**
The holders for the rails are placed to make optimum use of the internal space.
- **Standardised frame**
HTS trays and drawers are interchangeable. They fit in any HettCube.
- **Seal-welded drawers**
Liquids cannot drip to the floor.
- **High-quality stainless steel**
All of the components can be autoclaved in case of contamination.
- **Tray pulls out up to 70 %**
Telescopic rails make it easy to work and permit use of the entire surface area. Even samples that are way in the back can be easily reached. HTS trays and drawers can be inserted and removed almost horizontally.
- **Rugged pull-out mechanism**
External equipment like the Hettich HSM 10 orbital shaker can be loaded and unloaded with no trouble. A fixation kit (Cat. No. 60919) which additionally dampens the shaker movement in the cabinet is supplied at no charge.



HettCube 400 R shown with glass door and a Hettich HSM 10 shaker

PRACTICAL ACCESSORIES

Hettich-Rack_L and Hettich-Rack_{XL} (Löwenstein) for 16 tubes³⁷⁾

These flexible racks simplify handling, save time and enable the use of

- tubes of different diameters (15 - 20 mm)
- tubes of different lengths (100-125 mm or 126-170 mm)

- different slant angles³⁸⁾ (5° or 20°).

The slant angle of the tubes can be very easily changed without the need for tools.

The racks are of high-quality stainless steel and can be autoclaved.



Hettich-Rack_L

for tubes of length 100 -125 mm, handle of gold colour

Cat. No. 60027



Hettich-Rack_{XL}

for tubes of length 126 -170 mm, handle of champagne colour

Cat. No. 60028

Hettich orbital shaker (HSM 10) sets to fit in Hettich incubators with and without cooling³⁷⁾

The robust metal casing of the shaker enables it to withstand temperatures up to +65 °C and ensures a long service life. It is available with different platforms depending on the microbio-

logical application. Each combination of shaker and platform is a complete unit.

Technical Data HSM 10

- Shaking frequency: 50-250 RPM
- Max. load: 10 kg
- Dimensions (W x D x H): 410x595x140 mm
- Timer



HSM 10 (set 1)

including the universal platform (5 tension rollers) for different vessels

Cat. No. 60905



HSM 10 (set 2)

including platform (antislip mat) for a wide range of containers

Cat. No. 60906



HSM 10 (set 3)

including platform for Erlenmeyer flasks, with a set of 18 clamps of different sizes

Cat. No. 60907

³⁷⁾ More information is available from info@hettichlab.com or can be downloaded from our website www.hettichlab.com

³⁸⁾ The slant of the agar increases the surface area available for growth. It is necessary to use test tubes to hold the agar for micro-organisms that grow very slowly to avoid the cultures drying out.

Standard features

- RS 485/422 interface
- Microprocessor controller with program functions: Protection against temperatures above or below the set value. Temperatures can be set with an accuracy of 0.1 °C.
- Potential-free alarm output
- Acoustic and visual alarms
- Temperature selection monitor class 3.1
- Bushing on rear panel
- Control panel and door lockable simultaneously
- Interior of high-quality stainless steel (W-St 1.4301 (ASTM 304))
- One HTS tray (with telescopic rails)
- Factory certificate based on the Hettich QM system, mean value of 9 measurement points as per DIN 12880:2007-05 at 37 °C



Options and features

Customise your HettCube model to suit your individual requirements. The optional Hettich components satisfy the same high quality requirements as the incubators.

	Cat. No.
USB converter incl. connecting cable and software for programming and recording (60901)	60501
Ethernet converter incl. connecting cable and software for programming and recording (60901)	60502
Software for programming and recording data for a HettCube incubator for up to 60 days	60901
Independent, flexible PT 100 sensor (4-wire) with 4 – 20 mA analogue output on the rear panel, with external alarm monitoring for recording temperature in the event of a power failure (LIM compatible)	60503
Independent, flexible PT 100 sensor (4-wire) with 4-pole connection on the rear panel (LIM compatible)	60504
Object temperature display with flexible PT 100 sensor (4-wire), with data logging by Hettich software	60505
EU internal socket outlet IP 54, max. load 400 watts	60511
US internal socket outlet NEMA 5-15 R, IP 54, max. load 400 watts	60508
UK internal socket outlet BS 1363, IP 54, max. load 400 watts	60509
CH internal socket outlet SEV 1011, IP 54, max. load 400 watts	60510
Additional internal socket outlet for an electrical unit to connect to one of the main socket outlets (60508 – 60511). Max. 5 socket outlets per HettCube model (including the main one).	60520



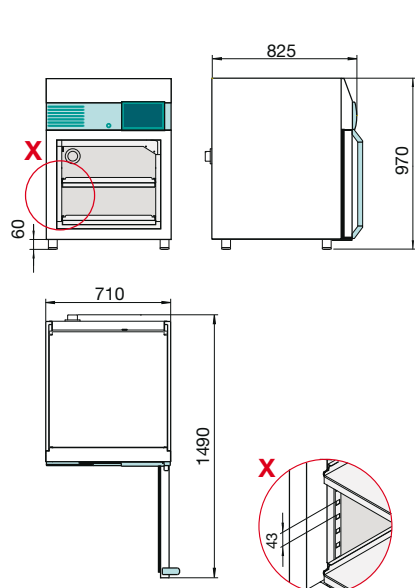
Options and features

	Cat. No.
Bushing on the left side of the incubator, Ø 22 mm	60006
Bushing on the left side of the incubator, Ø 42 mm	60007
Bushing on the left side of the incubator, Ø 67 mm	60008
Stacking kit, for safe stacking of two HettCube 200 or 200 R models on top of each other	60009
Tray of stainless steel with guide rails of stainless steel (standard tray)	60001
HTS tray of stainless steel with telescopic rails, pulls out up to 70%, max. load 40 kg	60031
HTS drawer of stainless steel with telescopic rails, pulls out up to 70%, max. load 40 kg, height 30 mm	60024
HTS drawer of stainless steel with telescopic rails, pulls out up to 70%, max. load 40 kg, height 65 mm	60025
HTS drawer of stainless steel with telescopic rails, pulls out up to 70%, max. load 40 kg, height 105 mm	60026
Separate interlocking of the control panel	60014
Glass door for HettCubes size 600	60013
Glass door for HettCubes size 400	60029
Glass door for HettCubes size 200	60030
Hettich-Rack _L for tubes of length 100-125 mm	60027
Hettich-Rack _{XL} for tubes of length 126-170 mm	60028
Hettich orbital shaker HSM 10 (set 1) incl. universal platform with 5 tension rollers	60905
Hettich orbital shaker HSM 10 (set 2) incl. antislip mat	60906
Hettich orbital shaker HSM 10 (set 3) incl. platform for Erlenmeyer flasks (incl. 18 clamps)	60907
Rolling cabinet for a HettCube 200 or 200 R model	60010
Rack for Petri dishes	60040
Rack for Petri dishes with standard rails	60039
Rack for Petri dishes with telescopic rails	60038

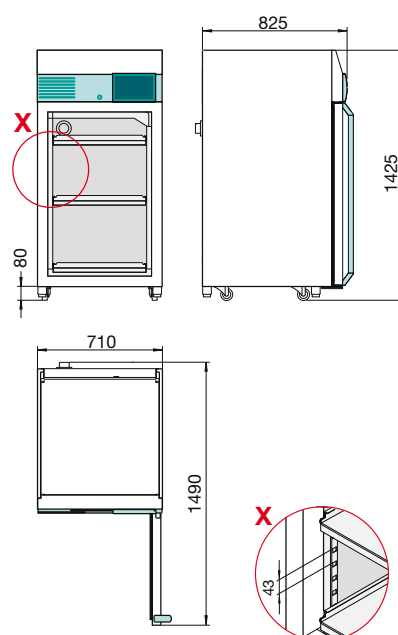


Other options on request.

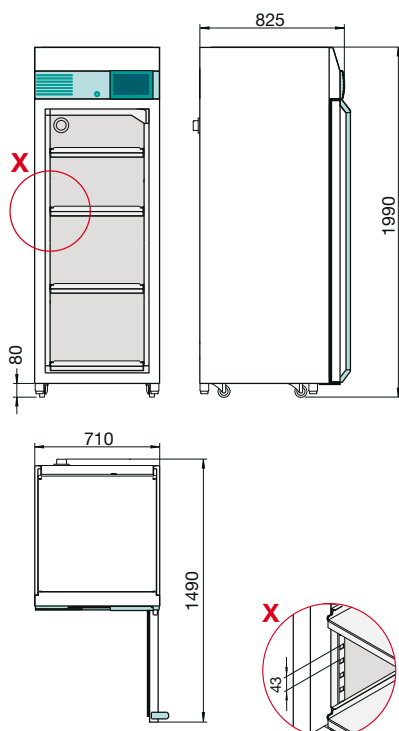
HettCube 200/200 R



HettCube 400/400 R



HettCube 600/600 R



All dimensions in mm

Symbols and Abbreviations

	reaction tubes up to 5.0 ml			
	cryo tubes			
	PCR strips			
	standard tubes			
			blood collection tubes urine tubes	
		tubes with screw cap		
		bottles		
		plates filter plates		
	racks			
	blood bags			
				special tubes
	hematocrit capillaries			
		cyto accessories For detailed information on the Hettich cyto system, please refer to the pages 138-143.		

	swing-out rotor
	angle rotor
	drum rotor
	hematocrit rotor, disk rotor

ABBREVIATIONS

CP	=	Culture Plate
DWP	=	Deep Well Platte
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 .	
H	H after the model name stands for heated centrifuge .	
R	R after the model name stands for refrigerated centrifuge .	
S	S after the model name stands for S control panel (except EBA 200 S, EBA 280 S).	
✱	max. angle the rotor swings out to	

Available tubes

	Capacity in ml	Dimensions Ø x L in mm	Description	Cat. No.
	1.5	11x38	microlitre tube	2078
	2.0	11x38		0536
	5	12x75	tube, glass, cylindrical	0553
	6	12x82		0501
	7	12x100		0578
	9	14x100		0500
	12	17x100		0503
	15	17x100	tube, glass, conical, calibrated	0507
		17x103	tube, glass, cyl., calibrated	0518
	15	17x103	tube, glass, conical	0502
		16.5x112	tube, glass, conical	0515
			tube, glass, conical, calibrated	0516
	25	24x100	tube, glass, cylindrical	0519
	50	34x100		0521
	94	38x102	tube, PP, cylindrical	0549
	100	40x115	tube, glass, cylindrical	0523
	100	44x100		0526
	250	56x147		0525
	250	65x115		0530
	30	26x95	tube with screw cap, PC, cylindrical	0545
	50	29x107		0546
	85	38x106		0547
	94	38x102	tube, PC, with screw thread	0538
	15	17x120	screw cap for 0538	0539
				0509
	50	29x115	tube with screw cap, PP, conical	0513

	Capacity in ml	Dimensions Ø x L in mm	Description	Cat. No.
	200	56 x 112	bottle, PP, with screw cap	0555
	250	61 x 122		5127
	600	93 x 134		0551
	650	97 x 139		0554
	750	97 x 152		0512
	1,000	96 x 176		4239
	450	97 x 110	bucket, PP	4447
	750	96 x 135		4234-A
	1,000	98 x 138	bucket, stainless steel, with screw cap	4255
	2,000	180x150x100 HxWxD	bottle, PP, with screw cap	0550
	30	24 x 151	chrome bath tube with stopper	0508
				0529
	30	44 x 105	chrome bath tube	0534
		-	rubber stopper for 0534	0535
	25	24 x 146.5	Schlenk tube	0532
	50	38 x 148.5		0533
	100	37 x 200	ASTM tube (petroleum tester), glass, calibrated	0531 conical
	100	58 x 161		0528 pear-shaped
	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.

BUSINESS PARTNERS

 **BENELUX**
Hettich Benelux B. V.
 De Aaldor 9
 NL-4191 PC Geldermalsen
 Tel. +31 (0)882 21 99 00
 Fax +31 (0)882 21 99 95
 info@hettichbenelux.com
 www.hettichbenelux.com

 **DENMARK**
Hettich Labinstrument ApS
 Frydenborgvej 27E
 DK- 3400 Hillerød
 Tel. +45 36775555
 info@hettich.dk
 www.hettich.dk

 **FRANCE**
Hettich SÀRL
 7, Place de la Gare
 F-57200 Sarreguemines
 Tel. +33 (0)4 72 49 01 62
 Fax +33 (0)4 72 24 66 08
 info-fr@hettichlab.com
 www.hettichlab.com

 **ITALY**
Hettich Italia S.R.L.
 Via Prestinari 2
 I - 20158 Milano
 Tel. +39 02 / 39 31 17 41
 Fax +39 02 / 39 31 58 75
 info@hettichitalia.it
 www.hettichitalia.it

 **SWEDEN**
Hettich Labinstrument AB
 Tegelluddsvägen 76 plan 3
 S - 11528 Stockholm
 Tel. +46 (0)8 7 52 00 30
 info@hettichlabinstrument.se
 www.hettichlabinstrument.se

 **SWITZERLAND**
Hettich AG
 Seestr. 204a
 CH - 8806 Bäch
 Tel. +41 (0)44 / 786 80 20
 Fax +41 (0)44 / 786 80 21
 info@hettich.ch
 www.hettich.ch

 **SINGAPORE**
Hettich
Asia Pacific Pte. Ltd.
 3 Ang Mo Kio Street 62,
 #01-47 LINK@AMK
 Singapore 569139
 Tel. +65 6358 3833
 Fax +65 6358 3558
 samuel@hettichlab.com.sg
 www.hettichlab.com.sg

 **USA**
Hettich Instruments LP
 100 Cummings Center, Ste 136L
 Beverly, MA 01915
 Tel. +1 (0)978 / 2 32 39 57
 Fax +1 (0)978 / 2 32 39 58
 info@hettweb.com
 www.hettweb.com

as well as more than 130 distributors worldwide

