



# GENERAL CATALOG

2023 | 2024

CENTRIFUGES  
INCUBATORS





**Hettich**





## DEAR PARTNER,

In this issue, we look back on the 120-year success story of our company. What began in 1904 as a small metalware factory is today a future-oriented, internationally active family-run business that's long been making its mark in the world of medical technology. One thing has never changed, though: our dedicated focus on our customers and our motivation to improve people's lives. Yet, a look ahead to the future reveals some challenges that need rethinking. Automation is progressing, systems aided by robotics and artificial intelligence are advancing and helping laboratories to work more quickly and efficiently. We're ready to meet these challenges and are proud to contribute to such advancement.

Besides guaranteeing reliable and safe products, the pioneering expansions to our portfolio are also important. In this issue, we introduce you to our new HettCube incubators in 60 and 120 liter sizes as well as the SBS 300 Robotic – a robotic centrifuge specially developed for microtiter plates that deftly supplements our portfolio.

You'll find these and other innovations presented in the following pages. And they all come with our 24-month performance guarantee and 10-year spare parts warranty.

We wish you enjoyable browsing through our new catalog and every success working with centrifuges and incubators from Hettich.

Sincerely,

**Kristina Apollinaris Eberle**  
CEO

Sincerely,

**Klaus-Günter Eberle**  
CEO

OVER  
**120**  
YEARS  
TRADITION  
& QUALITY



# GOOD IDEAS FOR EVEN MORE EFFICIENCY: NEW PRODUCTS FROM HETTICH IN 2023.

## NEW HETTCUBE SIZES EXPAND THE VERSATILITY OF LABORATORIES

**More compact, just as efficient:** The HettCube incubators from HETTICH are renowned for their large usable space within a small footprint. Where space is limited or samples require personal observation, our new HettCubes, with internal volumes of 60 and 120 liters, are the ideal, high-quality solution.

Both models are available with a natural or forced convection and ensure uniform temperature distribution. The user-friendly 4.3-inch touchscreen offers a neatly arranged dashboard displaying the most important parameters. All generated data, including the event logging and logbook, are available for download via the USB port or LAN connection. The interior structure and inserts are of high-quality stainless steel and thus easy to clean. A door-locking mechanism and sealable Ø 30 mm access port bushing come standard.

**Good cost-performance ratio:** a slimmer design and reduced number of options make the HettCube 60 and HETTCUBE 120 particularly attractive without compromising on quality. Learn more on page 197.



— page 197





### SBS 300 ROBOTIC – AUTOMATED CENTRIFUGATION OF MICROTITER PLATES

HETTICH has pioneered innovations in laboratory automation for over 25 years. We know the market and its requirements offering a broad portfolio of products and services that feature intelligent, reliable, and customized solutions.

Our new SBS 300 ROBOTIC offers an innovative front-loading centrifuge specially developed for automated processing of microtiter plates. It's well-suited for virtually all laboratory robotic systems and can be easily integrated into existing settings thanks to its slim, modular design.

Follow the QR code and learn more about the SBS 300 Robotic and other automation solutions from HETTICH.



### NEW MEDICAL PRODUCT REQUIREMENTS IN ACCORDANCE WITH MDR / IVDR

The new EU Regulations governing medical devices – the Medical Device Regulation (MDR) and In Vitro Diagnostic Medical Devices Regulation (IVDR) – supersede the pertinent directives and guidelines applicable to date ensuring greater transparency and traceability, thereby enhancing patient safety. As a manufacturer of medical devices, timely and diligent compliance with all regulations takes top priority at HETTICH. Our quality management systems and all of our medical devices are already (re) certified. All HETTICH products are marked accordingly with an appropriate seal of approval to distinguish them.



according to regulation (EU) 2017/746



## CONTACT

### — RESPONSIBILITY FOR YEARS

To get help selecting the perfect choice of equipment, sales support or any general inquiry, please contact our Global Customer Service Team.

Select your direct contact person by area or search our contact directory on [www.hettichlab.com/contact](http://www.hettichlab.com/contact)



### — YOUR CONTACT OPTIONS BY AREA

EUROPE, UK,  
BALKANS

✉ sales1@hettichlab.com ☎ + 49 7461 705 1402

RUSSIA, UKRAINE,  
BELARUS, POLAND

✉ sales1@hettichlab.com ☎ + 49 7461 705 1402

AFRICA

✉ sales2@hettichlab.com ☎ + 49 7461 705 1403

MIDDLE EAST

✉ sales2@hettichlab.com ☎ + 49 7461 705 1403

INDIA, PAKISTAN

✉ sales3@hettichlab.com ☎ + 49 7461 705 1404

ASIA-PACIFIC

✉ sales3@hettichlab.com ☎ + 49 7461 705 1404

NORTH- / SOUTH  
AMERICA

✉ sales3@hettichlab.com ☎ + 49 7461 705 1404

## SERVICE

### — 5 GOOD REASONS TO CHOOSE HETTICH SERVICE

- 1** Short response time thanks to our 48-hour response promise.\*
- 2** Our technical specialists are always available for one-to-one communication. No more waiting on a hotline or in a call-center.
- 3** Localized consulting and qualification.
- 4** Preventive maintenance contracts available.\*
- 5** Parts and service are available for 10 years, even after a specific model has been discontinued.

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 we have branch offices in throughout Europe as well as the USA (North America) and Singapore (ASEAN) to offer fast, local support. You can find an overview of an authorized service provider for your country on our Website: [www.hettichlab.com/contact](http://www.hettichlab.com/contact)

You can reach us through the following email address:



[service@hettichlab.com](mailto:service@hettichlab.com)

\*) Not available in all countries.





MANUAL CENTRIFUGE



EBA 200 | 200 S



EBA 200 (MD)



EBA 270



EBA 280 | 280 S



HAEMATOKRIT 200



MIKRO 185



MIKRO 200



MIKRO 200 R



MIKRO 220



MIKRO 220 R



ROTOFIX 32 A



ROTOFIX 32 A (MD)



UNIVERSAL 320



UNIVERSAL 320 R



ROTINA 380



ROTINA 380 R



ROTINA 420



ROTINA 420 R



ROTANTA 460 RC



ROTANTA 460 RF



ROTIXA 500 RS



ROTO SILENTA 630 RS



ROTO LAVIT II



ZENTRIMIX 380 R



MIKRO 220 ROBOTIC



SBS 300 ROBOTIC



ROTINA 380 | 380 R | 380 RC ROBOTIC



ROTANTA 460 ROBOTIC



CYTO SYSTEMS



ROLLING CABINET



BLOOD BANK ACCESSORIES



HETTCUBE 60



HETTCUBE 120



HETTCUBE 200



HETTCUBE 200 R



HETTCUBE 400



HETTCUBE 400 R



HETTCUBE 600



HETTCUBE 600 R



PLANT GROWTH CABINETS



STABILITY TEST CABINETS



# CONTENTS

**SMALL CENTRIFUGES** **ON PAGE 8**

---

**MICROLITER CENTRIFUGES** **ON PAGE 32**

---



ROTANTA 460



ROTANTA 460 R



ROTOFIX 46 | 46 H

**BENCHTOP CENTRIFUGES** **ON PAGE 52**

---

**FLOORSTANDING CENTRIFUGES** **ON PAGE 136**

---

**WASH CENTRIFUGE** **ON PAGE 164**

---

**DUAL CENTRIFUGE** **ON PAGE 170**

---

**AUTOMATED CENTRIFUGES** **ON PAGE 176**

---

**EQUIPMENT** **ON PAGE 178**

---

**INCUBATORS** **ON PAGE 186**

---

**ENVIRONMENTAL CABINETS** **ON PAGE 200**

---

CONTROL PANELS | CAPACITIES | FEATURES | MODEL VARIANTS  
CERTIFICATES / REGISTRATIONS | CATALOG EXPLANATION



# SMALL CENTRIFUGES

Benchtop performance in a compact footprint



MANUAL CENTRIFUGE  
on page 10



EBA 200 | 200 S  
on page 12



EBA 270  
on page 18

# 01



EBA 280 | 280 S  
on page 22



HAEMATOKRIT 200  
on page 30



# MANUAL CENTRIFUGE

Operate independently anywhere

The adaptable manual centrifuge can be simply clamped to any benchtop, with no need for electricity. Its self-lubricating drive system makes it virtually maintenance-free.

## — FEATURES

- Max. RPM: 3,000 min<sup>-1</sup>
- Max. RCF: 1,298
- Max. capacity: 4 x 15 ml
- Maintenance-free due to its self-lubricating drive system
- Clamping device for simple table mounting
- Choice of 2 rotors

## — FIELDS OF APPLICATION

- Field Testing
- Aid Organizations
- Pharmacies



## TECHNICAL DATA

	MANUAL CENTRIFUGE without rotor	Swing-out rotor, 4-place	Swing-out rotor, 4-place
angle	-	90°	50°
max. capacity	-	4 x 15 ml (conical only)	4 x 15 ml
max. RPM	-	3,000 min <sup>-1</sup>	3,000 min <sup>-1</sup>
max. RCF	-	1,298	1,077
dimensions (WxDxH)	140 x 175 x 285 mm	-	-
weight	approx. 0.9 kg	-	-
<b>Cat. No.</b>	<b>1011</b>	<b>1014</b>	<b>1025</b>





# EBA 200 | 200 S

## Top performance for small laboratories

The EBA 200 and EBA 200 S are practical, compact centrifuges for small sample sizes. The high speed S model can deliver reliable results in 3 minutes or less. An 8-place fixed angle rotor is included to hold standard blood and urine tubes up to 15 ml in capacity.

### — FEATURES

- Max. RPM: 200 - 6,000 min<sup>-1</sup> | 8,000 min<sup>-1</sup> – adjustable in increments of 10
- Max. RCF: 3,461 | 6,153
- Max. capacity: 8 x 15 ml
- Small centrifuge including 8-place angle rotor
- Compact design
- IVDR-conform according to regulation (EU) 2017/746
- Maximum noise level of ≤ 50 dB(A) (EBA 200)
- Impulse key for short cycle mode
- 1 acceleration and 2 deceleration stages
- Easy operation with keypad

### — FIELDS OF APPLICATION

- Physician's Office Laboratory (POL)
- Small laboratories
- Off-site draw locations



Centrifuge packages for the model can be found on [page 15](#)



More information about the control panel can be found on [page 202](#)



according to regulation (EU) 2017/746



## TECHNICAL DATA

	EBA 200	EBA 200 S
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~
frequency	50 – 60 Hz	50 – 60 Hz
consumption	100 VA	160 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	8 x 15 ml	8 x 15 ml
max. RPM	6,000 min <sup>-1</sup>	8,000 min <sup>-1</sup>
max. RCF	3,461	6,153
running time	1 – 99 min, ∞ continuous run, short cycle mode (impulse button)	1 – 99 min, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	261 x 353 x 228 mm	261 x 353 x 228 mm
weight	approx. 9 kg	approx. 11 kg
max. noise level	≤ 50 dB (A)	≤ 55 dB (A)
<b>Cat. No.</b>	<b>1800</b>	<b>1802</b>
100 – 127 V 1 ~ / 50–60 Hz	1800-01	1802-01
emission, immunity	FCC class B	FCC class B

\*) Other voltages on request.

## AVAILABLE ROTORS

### ANGLE ROTORS

	angle	max. RPM	max. capacity	Cat. No	page
 angle rotor, 8-place	33°	6,000 min <sup>-1</sup>   8,000 min <sup>-1</sup>	8 x 15 ml	<b>INCLUSIVE</b>	14

## — ANGLE ROTOR, 8-PLACE



### Rotor

max. RPM	EBA 200   200 S	6,000 min <sup>-1</sup>   8,000 min <sup>-1</sup>
max. RCF		3,461   6,153
max. capacity		8 x 15 ml
run up / run down, braked in sec		17 / 12   37 / 17
angle		33°
<b>Cat. No.</b>		<b>INCLUSIVE</b>

### Vessels

capacity in ml	0.5	1.5	2	4	5	6	15	1.1-1.4	2.6-3.4	2.7-3	4.5-5	4.9	7.5-8.2	9-10	15
Ø x L in mm	10.7 x 46	11 x 38	11 x 38	12 x 60	13 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	17 x 120
max. RCF <sup>2)</sup>	EBA 200	2,214	2,173	2,173	2,656	2,697	2,697	3,461	2,697	2,697	2,697	3,461	3,461	3,461	3,461
max. RCF <sup>2)</sup>	EBA 200 S	3,935	3,864	3,864	5,009	4,794	4,794	6,153	4,794	4,794	4,794	6,153	6,153	6,153	6,153
radius in mm	55	54	54	66	67	67	86	67	67	67	86	86	86	86	86
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>			<b>blood collection / urine tubes</b>							<b>-</b>



### Adapter

boring Ø x L in mm	11 x 35	11 x 35	11 x 35	11.5 x 67.5	13.5 x 60	13.5 x 60	17.7 x 88	13.5 x 60	13.5 x 60	13.5 x 60	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88
vessels per rotor	8	8	8	8	8	8	8	8	8	8	8	8	8	8	4
<b>Cat. No.</b>	<b>1063-8 (8 pcs.)</b>			<b>6305</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

### Vessels

capacity in ml	10	1.6-5	4-7	8	8.5-10	12
Ø x L in mm	15 x 102	13 x 75	13 x 100	16 x 125	16 x 100	17 x 102
max. RCF <sup>2)</sup>	EBA 200	3,461	2,697	3,461	3,461	3,461
max. RCF <sup>2)</sup>	EBA 200 S	6,153	4,794	6,153	6,153	6,153
radius in mm	86	69	86	86	86	86
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>					



### Adapter

boring Ø x L in mm	17.7 x 88	13.5 x 60	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88
vessels per rotor	8	8	8	4	8	8
<b>Cat. No.</b>	<b>-</b>	<b>1059</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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.

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



## — PACKAGES

### EBA 200 S BLOOD TUBE PACKAGE 1

	number of vessels	volume (ml)	size (mm)	RPM	RCF	
- 1 x EBA 200 S centrifuge incl. angle rotor, 8-place	1802	8	1.1 - 6	13 x 75	8,000	4,794
- 8 x adapter, 1-place	1054-A	8	4 - 7	13 x 100	8,000	6,153
- 8 x adapter, 1-place	1058					

#### 1802SET1

### EBA 200 BLOOD TUBE PACKAGE 2

	number of vessels	volume (ml)	size (mm)	RPM	RCF	
- 1 x EBA 200 centrifuge incl. angle rotor	1800	8	1.1 - 6	13 x 75	6,000	2,777
- 8 x adapter, 1-place	1059	8	4 - 7	13 x 100	6,000	3,461
- 8 x adapter, 1-place	1058					

#### 1800SET2



## PRODUCT VIDEOS

Would you like to learn more about this product? Scan the QR Code to visit our YouTube channel:

[www.youtube.com/hettichlabtechnology](http://www.youtube.com/hettichlabtechnology)



# EBA 200

## Top performance for small laboratories

The EBA 200 small centrifuge is a compact medical device used for separating whole blood or blood components of human origin, for example to obtain platelet-rich plasma for autologous therapies. This centrifuge comes equipped as standard with an 8-place angled rotor to accommodate tubes with volumes of up to 10 ml.

### — FEATURES

- Max. RPM: 200 - 6,000 min<sup>-1</sup> – adjustable in increments of 10
- Max. RCF: 3,461
- Max. capacity: 8 x 10 ml
- Small centrifuge including 8-place angle rotor
- Compact design
- Medical Device according to regulation (EU) 2017/745
- Maximum noise level of ≤ 50 dB(A)
- Impulse key for short cycle mode
- 1 acceleration and 2 deceleration stages
- Easy operation with keypad

### — FIELDS OF APPLICATION

- Physician's Office Laboratory (POL)
- Dentists
- Small laboratories
- Orthopedics
- Hospitals



More information about the control panel can be found on [page 202](#)



\* If you use special PRP kits, please contact us: [info@hettichlab.com](mailto:info@hettichlab.com)

## TECHNICAL DATA

		<b>EBA 200</b>
voltage <sup>*)</sup>		200 – 240 V 1 ~
frequency		50 – 60 Hz
consumption		100 VA
emission, immunity		EN/IEC 61326-1, class B
max. capacity		8 x 10 ml
max. RPM		6,000 min <sup>-1</sup>
max. RCF		3,461
running time		1 – 99 min, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)		261 x 353 x 228 mm
weight		approx. 9 kg
max. noise level		≤ 50 dB (A)
<b>Cat. No.</b>		<b>1810</b>
100 – 127 V 1 ~ / 50–60 Hz		1810-01
emission, immunity		FCC class B

\*) Other voltages on request.

## ANGLE ROTOR, 8-PLACE



<b>Rotor</b>	
max. RPM	6,000 min <sup>-1</sup>
max. RCF	3,461
max. capacity	8 x 10 ml
run up / run down, braked in sec	17 / 12
angle	33°
<b>Cat. No.</b>	<b>INCLUSIVE</b>



<b>Vessels</b>									
capacity in ml	1.4	2.6–3.4	2.7–3	4.5–5	4.9	7.5–8.2	9–10	10	8.5-10
Ø x L in mm	8x66	13x65	11x66	11x92	13x90	15x92	16x92	15x102	16x100
max. RCF <sup>2)</sup>	2,697	2,697	2,697	3,461	3,461	3,461	3,461	3,461	3,461
radius in mm	67	67	67	86	86	86	86	86	86
<b>Bestell-Nr.</b>	<b>tubes / kits</b>								

<b>Adapter</b>								
boring Ø x L in mm	13.5x60	13.5x60	13.5x60	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88
vessels per rotor	8	8	8	8	8	8	8	8
<b>Cat. No.</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	-	-	-	-	-

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.



# EBA 270

## Superior separation results in medical applications

The EBA 270 is a small centrifuge with a built-in swing-out rotor that has been developed specifically for use in clinical settings. It can centrifuge blood tubes and urine tubes up to 15 ml in volume at a maximum speed of 4,000 RPM / 2,254 RCF. Its 90° rotor is ideally suited for spinning blood tubes containing a separating gel.

### — FEATURES

- Max. RPM: 500 - 4,000 min<sup>-1</sup> – adjustable in increments of 100
- Max. RCF: 2,254
- Max. capacity: 6 x 15 ml
- Small centrifuge including 6-place swing-out rotor
- Compact design
- IVDR-conform according to regulation (EU) 2017/746
- Maximum noise level of ≤ 51 dB(A)
- Impulse key for short cycle mode
- 1 acceleration and 2 deceleration stages
- Easy operation with keypad

### — FIELDS OF APPLICATION

- Small laboratories
- Physician's Office Laboratory (POL)
- Hospitals



Centrifuge packages for the model can be found on [page 21](#)



More information about the control panel can be found on [page 202](#)



according to regulation (EU) 2017/746

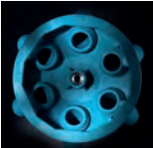


## TECHNICAL DATA

<b>EBA 270</b>	
voltage *)	200 – 240 V 1 ~
frequency	50 – 60 Hz
consumption	130 VA
emission, immunity	EN/IEC 61326-1, class B
max. capacity	6 x 15 ml
max. RPM	4,000 min <sup>-1</sup>
max. RCF	2,254
running time	1 – 99 min, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	326 x 400 x 239 mm
weight	approx. 14 kg
max. noise level	≤ 51 dB (A)
<b>Cat. No.</b>	<b>2300</b>
100 – 127 V 1 ~ / 50–60 Hz	2300-01
consumption	125 VA
emission, immunity	FCC class B

\*) Other voltages on request.

## AVAILABLE ROTORS

<b>SWING-OUT ROTORS</b>		angle	max. RPM	max. capacity	Cat. No	page
	swing-out rotor, 6-place	90°	4,000 min <sup>-1</sup>	6 x 15 ml	<b>INCLUSIVE</b>	20





## — PACKAGES

### EBA 270 BLOOD TUBE COMPLETE PACKAGE 1

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x EBA 270 centrifuge incl. swing-out rotor	2300	6	1.1 - 7	16 x 75	4,000	1,807
- 1 x adapter (set), 1-place	2333-6	6	1,5 - 15	17 x 102	4,000	2,254
- 1 x adapter (set), 1-place	2331-6	6	0.5 (Pediatric)	10,7 x 46	4,000	1,359
- 1 x adapter Pediatric (set), 1-place	1063-6					
<b>2300SET1</b>						



## PRODUCT VIDEOS

Would you like to learn more about this product? Scan the QR Code to visit our YouTube channel:

[www.youtube.com/hettichlabtechnology](http://www.youtube.com/hettichlabtechnology)



# EBA 280 | 280 S

## Simple rotor change for greater versatility

The EBA 280 and EBA 280 S offer exceptional user comfort and a choice of 6 rotors. The rotor can be removed and replaced easily thanks to the quick release system. The rotor locks in place and remains secure without the use of tools or extra effort. The backlit digital control panel offers the opportunity to save 9 multiple program settings.

### — FEATURES

- RPM: 200 - 6,000 min<sup>-1</sup> – adjustable in increments of 10
- Max. RCF: 4,146 | 5,071
- Max. capacity: 6 x 50 ml
- Small centrifuge with rapid rotor change system
- Choice of 6 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Maximum noise level of ≤ 51 dB(A) (EBA 280)
- Impulse key for short cycle mode
- 9 individual acceleration and 10 deceleration stages
- Easy operation with keypad
- 9 programmable memory settings

### — FIELDS OF APPLICATION

- Small laboratories
- Hospitals
- Blood banks
- Physician's Office Laboratory (POL)



Centrifuge packages for the model can be found on [page 28](#)



More information about the control panel can be found on [page 202](#)



according to regulation (EU) 2017/746






## TECHNICAL DATA

	EBA 280	EBA 280 S
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~
frequency	50 – 60 Hz	50 – 60 Hz
consumption	185 VA	330 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	6 x 50 ml	6 x 50 ml
max. RPM	6,000 min <sup>-1</sup>	6,000 min <sup>-1</sup>
max. RCF	4,146	5,071
running time	1 – 99 min: 59 sec, y continuous run, short cycle mode (impulse button)	1 – 99 min: 59 sec, y continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	326 x 400 x 242 mm	326 x 400 x 242 mm
weight	approx. 12 kg	approx. 12 kg
noise level	≤ 47 dB (A) with rotor 1137	≤ 50 dB (A) with rotor 1137
<b>Cat. No.</b>	<b>1101</b>	<b>1102</b>
100 – 127 V 1 ~ / 50–60 Hz	1101-01	1102-01
emission, immunity	FCC class B	FCC class B




\*) Other voltages on request.

## AVAILABLE ROTORS

### SWING-OUT ROTORS

	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 6-place	90°	6,000 min <sup>-1</sup>	6 x 15 ml	<b>1146</b>	24
 swing-out rotor, 8-place	90°	5,000 min <sup>-1</sup>	8 x 10 ml	<b>1148</b>	25
 swing-out rotor, 12-place	60°	5,000 min <sup>-1</sup>	12 x 5 ml	<b>1142</b>	25

### ANGLE ROTORS

 angle rotor, 6-place	35°	6,000 min <sup>-1</sup>	6 x 50 ml	<b>1137</b>	26
 angle rotor, 12-place	35°	5,000 min <sup>-1</sup>	12 x 7 ml	<b>1133</b>	26
 angle rotor, 12-place	35°	6,000 min <sup>-1</sup>	12 x 15 ml	<b>1139</b>	27



## SWING-OUT ROTOR, 6-PLACE | 1146



### Rotor

max. RPM	EBA 280   EBA 280 S	4,700 min <sup>-1</sup>   6,000 min <sup>-1</sup>
max. RCF		3,112   5,071
max. capacity		6 x 15 ml
run up / run down, braked in sec		9 / 11   11 / 13
angle   max. noise level		90°   49 dB (A)
<b>Cat. No.</b>		<b>1146</b>

### Bucket

<b>Cat. No.</b>	<b>1147-6 (6 pcs.)</b>
-----------------	------------------------



### Vessels

capacity in ml	0.5	1.5	2	4	5	6	15	1.1-1.4	2.6-3.4	2.7-3	4-5.5	4.5-5	4.9	7.5-10	1.6-5	
Ø x L in mm	10.7x46	11 x 38	11 x 38	10x88	12x75	12x82	17x100	8x66	13x65	11x66	15x75	11x92	13x90	15/16x92	13x75	
max. RCF <sup>2)</sup>	EBA 280	1,877	1,902	1,902	3,112	2,618	2,865	3,112	2,618	2,618	2,618	3,112	3,112	3,112	3,112	2,618
max. RCF <sup>2)</sup>	EBA 280 S	3,059	3,099	3,099	5,071	4,266	4,669	5,071	4,266	4,266	4,266	5,071	5,071	5,071	5,071	4,266
radius in mm		76	77	77	126	106	116	126	106	106	106	126	126	126	126	106
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>			<b>blood collection / urine tubes</b>								



### Adapter

boring Ø x L in mm	11 x 35	11 x 35	11 x 35	17.5x80	13.5x59	17.5x80	17.5x80	13.5x59	13.5x59	13.5x59	17.5x80	17.5x80	17.5x80	17.5x80	17.5x80	13.5x59
vessels per rotor	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
<b>Cat. No.</b>	<b>1063-6 (6 pcs.)</b>			-	<b>1053-6</b>	<b>0767-6</b>	-	<b>1053-6 (6 pcs.)</b>			-	-	-	-	-	<b>1053-6</b>

### Vessels

capacity in ml	4-7	4-7	8.5-10	12	
Ø x L in mm	16x75	13x100	16 x 100	17x102	
max. RCF <sup>2)</sup>	EBA 280	2,865	3,112	3,112	3,112
max. RCF <sup>2)</sup>	EBA 280 S	4,669	5,071	5,071	5,071
radius in mm		116	126	126	126
<b>Cat. No.</b>	<b>blood collection/urine tubes</b>				



### Adapter

boring Ø x L in mm	17.5x80	13.5x79	17.5x80	17.5x80
vessels per rotor	6	6	6	6
<b>Cat. No.</b>	<b>0767-6</b>	<b>1058</b>	-	-

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 | 1148



### Rotor

max. RPM   max. RCF	5,000 min <sup>-1</sup>   2,991
max. capacity	8 x 10 ml
run up   run down, braked in sec	8   10
angle   max. noise level	90°   50 dB (A)
<b>Cat. No.</b>	<b>1148</b>



### Vessels

capacity in ml	5	6	10	2.6–3.4	2.7–3	4–5.5	1.6–5	4–7
Ø x L in mm	12 x 75	12 x 82	17 x 70	13 x 65	11 x 66	15 x 75	13 x 75	16 x 75
max. RCF <sup>2)</sup>	2,991	2,991	2,991	2,991	2,991	2,991	2,991	2,991
radius in mm	107	107	107	107	107	107	107	107
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>			<b>blood collection / urine tubes</b>				



### Bucket

boring Ø x L in mm	13 x 53	13 x 53	17.5 x 53	13 x 53	13 x 53	17.5 x 53	13 x 53	17.5 x 53
vessels per rotor	8	8	8	8	8	8	8	8
<b>Cat. No.</b>	<b>1131-A</b>	<b>1131-A</b>	<b>1132-A</b>	<b>1131-A</b>	<b>1131-A</b>	<b>1132-A</b>	<b>1131-A</b>	<b>1132-A</b>

## — SWING-OUT ROTOR, 12-PLACE | 1142



### Rotor

max. RPM   max. RCF	5,000 min <sup>-1</sup>   2,963
max. capacity	12 x 5 ml
run up   run down, braked in sec	10   12
angle   max. noise level	60°   49 dB (A)
<b>Cat. No.</b>	<b>1142</b>



### Vessels

capacity in ml	5	2.6–3.4	2.7–3	1.6–5
Ø x L in mm	13 x 75	13 x 65	11 x 66	13 x 75
max. RCF <sup>2)</sup>	2,963	2,963	2,963	2,963
radius in mm	106	106	106	106
<b>Cat. No.</b>	<b>tube<sup>2)</sup></b>	<b>blood collection / urine tubes</b>		



### Bucket

boring Ø x L in mm	13.2 x 53	13.2 x 53	13.2 x 53	13.2 x 53
vessels per rotor	12	12	12	12
<b>Cat. No.</b>	<b>1127-A</b>	<b>1127-A</b>	<b>1127-A</b>	<b>1127-A</b>

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 | 1137

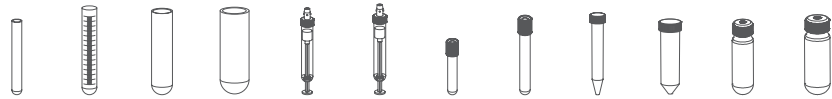


### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   4,025
max. capacity	6 x 50 ml
run up   run down, braked in sec	20   17
angle   max. noise level	35°   47 dB (A)

<b>Cat. No.</b>	<b>1137</b>
-----------------	-------------

### Vessels

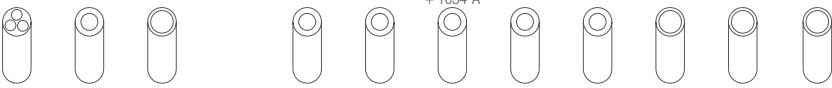


capacity in ml	7	15	25	50	9-10	10	1.6-5	4-7	15	50	30	50
Ø x L in mm	12 x 100	17 x 100	24 x 100	34 x 100	16 x 92	15 x 102	13 x 75	13 x 100	17 x 120	29 x 115	26 x 95	29 x 107
max. RCF <sup>2)</sup>	3,944	3,783	3,703	4,025	3,783	3,783	2,978	3,783	3,824	3,824	3,703	3,904
radius in mm	98	94	92	100	94	94	74	94	95	95	92	97

<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>				<b>blood collection / urine tubes</b>				<b>tubes with screw cap</b>			
-----------------	---------------------------	--	--	--	---------------------------------------	--	--	--	-----------------------------	--	--	--



### Adapter



boring Ø x L in mm	13 x 92	17.5 x 95	26 x 88	35 x 96	17.5 x 95	17.5 x 95	17.5 x 95	17.5 x 95	17 x 98	30 x 98	26 x 88	29 x 95
vessels per rotor	18	6	6	6	6	6	6	6	6	3	6	6

<b>Cat. No.</b>	<b>1632</b>	<b>1635</b>	<b>1633</b>	<b>-</b>	<b>1635</b>	<b>1635</b>	<b>1635</b>	<b>1635</b>	<b>1631</b>	<b>1641</b>	<b>1633</b>	<b>1634</b>
-----------------	-------------	-------------	-------------	----------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

## — ANGLE ROTOR, 12-PLACE | 1133

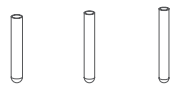


### Rotor

max. RPM   max. RCF	5,000 min <sup>-1</sup>   2,879
max. capacity	12 x 7 ml
run up   run down, braked in sec	8   10
angle   max. noise level	35°   51 dB (A)

<b>Cat. No.</b>	<b>1133</b>
-----------------	-------------

### Vessels



capacity in ml	5	6	7
Ø x L in mm	12 x 75	12 x 82	12 x 100
max. RCF <sup>2)</sup>	2,879	2,879	2,879
radius in mm	103	103	103

<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>		
-----------------	---------------------------	--	--



### Adapter

boring Ø x L in mm	12.5 x 66	12.5 x 66	12.5 x 66
vessels per rotor	12	12	12

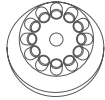
<b>Cat. No.</b>	<b>-</b>	<b>-</b>	<b>-</b>
-----------------	----------	----------	----------

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 typing serology.

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



## — ANGLE ROTOR, 12-PLACE | 1139



### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   4,146
max. capacity	12 x 15 ml
run up   run down, braked in sec	16   16
angle   max. noise level	35°   50 dB (A)
<b>Cat. No.</b>	<b>1139</b>

### Vessels

capacity in ml	0.5	1.5	2	4	5	6	15	1.1–1.4	2.6–3.4	2.7–3	4.5–5	4.9	7.5–10	10	1.6–5
Ø x L in mm	10.7 x 46	11 x 38	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	15 x 102	13 x 75
max. RCF <sup>2)</sup>	2,777	2,737	2,737	3,300	3,300	3,300	4,146	3,300	3,300	3,300	4,146	4,146	4,146	4,146	3,300
radius in mm	69	68	68	82	82	82	103	82	82	82	103	103	103	103	82
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>		<b>tubes<sup>2)</sup></b>				<b>blood collection / urine tubes</b>							



### Adapter

boring Ø x L in mm	11 x 35	11 x 35	11 x 35	11,5x67,5	13,5x60	13,5x60	17,7x88	13,5x60	13,5x60	13,5x60	13,5x60	13,5x60	13,5x60	17,7x88	17,7x88	
vessels per rotor	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
<b>Cat. No.</b>	<b>1063-6 (6 uds.)</b>			<b>6305</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>1054-A</b>

### Vessels

capacity in ml	4–7	8	8.5–10	12	15
Ø x L in mm	13 x 100	16 x 125	16 x 100	17 x 102	17 x 120
max. RCF <sup>2)</sup>	4,146	4,146	4,146	4,146	4,146
radius in mm	103	103	103	103	103
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>				<b>-</b>



### Adapter

boring Ø x L in mm	13.5x79	17.7x88	17.7x88	13.5x60	17.7x88
vessels per rotor	12	6	12	12	6
<b>Cat. No.</b>	<b>1058</b>	<b>-</b>	<b>-</b>	<b>1054-A</b>	<b>-</b>

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.

## PACKAGES

### EBA 280 SEROLOGY PACKAGE 1

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x EBA 280 centrifuge	1101	12	1.6 - 5	13 x 75	5,000	2,963
- 1 x swing-out rotor, 12-place	1142					
- 12 x bucket	1127-A					

#### 1101SET1

### EBA 280 BLOOD TUBE PACKAGE 2

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x EBA 280 centrifuge	1101	6	1.1 - 5	13 x 75	4,700	2,618
- 1 x swing-out rotor, 6-place	1146	6	4 - 7	13 x 100	4,700	3,112
- 1 x bucket (set)	1147-6	6	4 - 7	16 x 75	4,700	2,865
- 1 x adapter (set), 1-place	1053-6					
- 6 x adapter, 1-place	1058					
- 1 x spacer (set)	0767-6					

#### 1101SET2

### EBA 280 BLOOD TUBE PACKAGE 3

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x EBA 280 centrifuge	1101	12	1.6 - 5	13 x 75	6,000	3,381
- 1 x angle rotor, 12-place	1139	12	4 - 7	13 x 100	6,000	4,146
- 12 x adapter, 1-place	1059					
- 12 x adapter, 1-place	1058					

#### 1101SET3

### EBA 280 BLOOD TUBE PACKAGE 4

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x EBA 280 centrifuge	1101	8	1.6 - 6	13 x 75	5,000	2,991
- 1 x swing-out rotor, 8-place	1148	8	4 - 10	16 x 75	5,000	2,991
- 8 x bucket	1131-A					
- 8 x bucket	1132-A					

#### 1101SET4

### EBA 280 SEROLOGY DECANTING PACKAGE 5

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x EBA 280 centrifuge	1101	12	5 - 7	12 x 75 / 100	5,000	2,879
- 1 x angle rotor, 12-place	1133					

#### 1101SET5

### EBA 280 S BLOOD TUBE PACKAGE 1

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x EBA 280 S centrifuge	1102	6	1.1 - 5	13 x 75	6,000	4,266
- 1 x swing-out rotor, 6-place	1146	6	4 - 7	13 x 100	6,000	5,071
- 1 x bucket (set)	1147-6	6	4 - 7	16 x 75	6,000	4,669
- 1 x adapter (set)	1053-6					
- 6 x adapter, 1-place	1058					
- 1 x spacer (set)	0767-6					

#### 1102SET1



## PRODUCT VIDEOS

Would you like to learn more about this product? Scan the QR Code to visit our YouTube channel:

[www.youtube.com/hettichlabtechnology](http://www.youtube.com/hettichlabtechnology)





# HAEMATOKRIT 200

## Haematokrit determination in just 7 minutes

The HAEMATOKRIT 200 is a fast and efficient centrifuge for determining hematocrit count. It runs at 13,000 RPM and accommodates up to 24 capillary tubes to a maximum RCF of 16,060. Results can be clearly viewed with the integrated Haematocrit reader in the rotor lid.

### — FEATURES

- RPM: 200 - 13,000  $\text{min}^{-1}$  – adjustable up to 10,000 RPM in increments of 10, above in increments of 100
- Max. RCF: 16,060
- Compact, high-performance hematocrit centrifuge
- IVD-conform according to directive 98/79/EC
- Maximum noise level of  $\leq 56$  dB(A)
- Impulse key for short cycle mode
- 1 acceleration and 2 deceleration stages
- Easy operation with keypad

### — FIELDS OF APPLICATION

- Manufacturers of analyzing systems
- Small hospitals
- Sports medicine



More information about the control panel can be found on [page 202](#)



## TECHNICAL DATA

### HAEMATOKRIT 200

voltage *)	200 – 240 V 1 ~
frequency	50 – 60 Hz
consumption	270 VA
emission, immunity	EN/IEC 61326-1, class B
max. capacity	24 capillaries
max. RPM	13,000 min <sup>-1</sup>
max. RCF	16,060
running time	1 – 99 min, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	261 x 353 x 228 mm
weight	approx. 10 kg
max. noise level	≤ 56 dB (A)

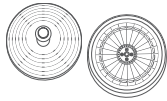
<b>Cat. No.</b>	<b>1801</b>
-----------------	-------------

100 – 127 V 1 ~ / 50–60 Hz	1801-01
----------------------------	---------

emission, immunity	FCC class B
--------------------	-------------

\*) Other voltages on request.

## AVAILABLE ROTOR



### Rotor

max. RPM   max. RCF	13,000 min <sup>-1</sup>   16,060
max. capacity	24 capillaries
run up   run down, braked in sec	9   16
angle   max. noise level	90°   56 dB (A)
measuring lid	inclusive
<b>Cat. No.</b>	<b>INCLUSIVE</b>



### Capillaries

Standard	
max. RCF <sup>2)</sup>	16,060
radius in mm	85
<b>Cat. No.</b>	<b>-</b>



### Adapter

boring Ø x L in mm	-
capillaries per rotor	24
<b>Cat. No.</b>	<b>-</b>

### HOLDING TRAYS

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



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.

# MICROLITER CENTRIFUGES

Powerful results at the micro level



MIKRO 185  
on page 34



MIKRO 200 | 200 R  
on page 38



MIKRO 220 | 220 R  
on page 44



# 02





# MIKRO 185

## Small footprint with unmatched capacity

The MIKRO 185 accommodates 12, 18 or 24 samples and is suitable for a wide range of tasks, thanks to a maximum RCF of 18,845 and a choice of 4 rotors. Spin column kits (minipreps) can also be used thanks to the special design of the 1213-A rotor.

### — FEATURES

- RPM: 200 - 14,000  $\text{min}^{-1}$  – Adjustable up to 10,000 RPM in increments of 10, above in increments of 100
- Max. RCF: 18,845
- Max. capacity: 24 x 2.0 ml
- Compact, high-performance microlitre centrifuge
- Choice of 4 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Noise level of  $\leq 54$  dB (A) with rotor 1252-A
- Impulse button for short centrifugation
- 1 acceleration and 2 deceleration stages
- Easy operation with keypad

### — FIELDS OF APPLICATION

- Hospitals
- Pediatric clinics
- Pharmaceutical laboratories
- Food analyzing laboratories
- University / Academic Research
- Forensic laboratories
- Paternity testing laboratories
- Blood centers
- PCR analytics



More information about the control panel can be found on [page 202](#)



according to regulation (EU) 2017/746



## TECHNICAL DATA

<b>MIKRO 185</b>	
voltage *)	200 – 240 V 1 ~
frequency	50 – 60 Hz
consumption	390 VA
emission, immunity	EN/IEC 61326-1, class B
max. capacity	24 x 1.5 / 2.0 ml
max. RPM	14,000 min <sup>-1</sup>
max. RCF	18,845
running time	1 – 99 min: 59 s, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	261 x 353 x 228 mm
weight	approx. 11 kg
noise level	≤ 54 dB (A) with rotor 1252-A
<b>Cat. No.</b>	<b>1203</b>
100 – 127 V 1 ~ / 50–60 Hz	1203-01
emission, immunity	FCC class B

\*) Other voltages on request.

## AVAILABLE ROTORS

<b>ANGLE ROTORS</b>		angle	max. RPM	max. capacity	Cat. No.	page
	angle rotor, 24-place	45°	14,000 min <sup>-1</sup>	24 x 2 ml	<b>1226-A</b>	36
	angle rotor, 12-place	45°	14,000 min <sup>-1</sup>	12 x 2 ml	<b>1252-A</b>	36
	angle rotor, 18-place	45°	14,000 min <sup>-1</sup>	18 x 2 ml	<b>1258-A</b>	37
	angle rotor, 18-place for spin column kits	45°	14,000 min <sup>-1</sup>	18 x 2 ml	<b>1213-A</b>	37

## PRODUCT VIDEOS

Would you like to learn more about this product? Scan the QR Code to visit our YouTube channel:

[www.youtube.com/hettichlabtechnology](http://www.youtube.com/hettichlabtechnology)



## — ANGLE ROTOR, 24-PLACE | 1226-A



### Rotor

max. RPM   max. RCF	14,000 min <sup>-1</sup>   18,845
max. capacity	24 x 2 ml
run up   run down, braked in sec	15   15
angle   max. noise level	45°   59 dB (A)

<b>Cat. No.</b>	<b>1226-A</b>
-----------------	---------------

### Lid bioseal<sup>5)</sup>

<b>Cat. No.</b>	<b>INCLUSIVE</b>
-----------------	------------------



### Vessels



capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38	10.7 x 46
max. RCF <sup>2)</sup>	18,845	18,845	18,845	18,845	18,845	18,845	17,749
radius in mm	86	86	86	86	86	86	81

<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>
-----------------	-------------------------	--	--	--	--	--	------------------



### Adapter



boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10,2x19,3	11,2x39	11,2x39
vessels per rotor	24	24	24	24	24	24	12

<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788</b>
-----------------	-------------	-------------	-------------	-------------	--------------------------	----------	-------------

## — ANGLE ROTOR, 12-PLACE | 1252-A



### Rotor

max. RPM   max. RCF	14,000 min <sup>-1</sup>   15,558
max. capacity	12 x 2 ml
run up   run down, braked in sec	15   15
angle   max. noise level	45°   54 dB (A)

<b>Cat. No.</b>	<b>1252-A</b>
-----------------	---------------

### Lid

<b>Cat. No.</b>	<b>INCLUSIVE</b>
-----------------	------------------



### Vessels



capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38	10.7 x 46
max. RCF <sup>2)</sup>	15,558	15,558	15,558	15,558	15,558	15,558	14,462
radius in mm	71	71	71	71	71	71	66

<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>
-----------------	-------------------------	--	--	--	--	--	------------------



### Adapter



boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10,2x19,3	11,2x39	11,2x39
vessels per rotor	12	12	12	12	12	12	12

<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788</b>
-----------------	-------------	-------------	-------------	-------------	--------------------------	----------	-------------

- 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.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters 2031.

## — ANGLE ROTOR, 18-PLACE | 1258-A



### Rotor

max. RPM   max. RCF	14,000 min <sup>-1</sup>   16,654
max. capacity	18 x 2 ml
run up   run down, braked in sec	15   15
angle   max. noise level	45°   56 dB (A)
<b>Cat. No.</b>	<b>1258-A</b>



### Lid

Cat. No.	<b>INCLUSIVE</b>
----------	------------------



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38	10.7 x 46
max. RCF <sup>2)</sup>	16,654	16,654	16,654	16,654	16,654	16,654	15,558
radius in mm	76	76	76	76	76	76	71
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>



### Adapter

boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10,2x19,3	10,2x19	11,2x39
vessels per rotor	18	18	18	18	18	18	9
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788</b>

## — ANGLE ROTOR, 18-PLACE | 1213-A



### Rotor

max. RPM   max. RCF	14,000 min <sup>-1</sup>   16,654
max. capacity	18 x 2 ml
run up   run down, braked in sec	16   15
angle   max. noise level	45°   57 dB (A)
<b>Cat. No.</b>	<b>1213-A</b>



### Lid bioseal<sup>5)</sup>

Cat. No.	<b>INCLUSIVE</b>
----------	------------------



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38	11 x 38	11 x 38
max. RCF <sup>2)</sup>	16,654	16,654	16,654	16,654	16,654	16,654	16,654	16,654
radius in mm	76	76	76	76	76	76	76	76
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>micro spin columns</b>	



### Adapter

boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10,2x19,3	11,2x39	10,2x19,3	11,2x39
vessels per rotor	18	18	18	18	18	18	18	18
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>2031<sup>7)</sup></b>	<b>-</b>

- 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.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters 2031.



# MIKRO 200 | 200 R

## Faster results in molecular biology

The MIKRO 200 and MIKRO 200 R are amongst the highest-speed microliter centrifuges in their class. Rotors are designed to spin microliter and PCR tubes. MIKRO 200 achieves a maximum RCF of 21,382 with up to 30 tubes, enabling rapid processing of samples and optimal separation, at low noise levels of 54 dB(A). This unit is available with refrigeration and a temperature range from -10 °C to +40 °C (MIKRO 200 R).

### — FEATURES

- RPM: 500 - 15,000 min<sup>-1</sup> – adjustable in increments of 10
- Max. RCF: 21,382
- Max. capacity: 30 x 2.0 ml
- Choice of 4 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Impulse key for short cycle mode
- Easy operation with keypad and control knob
- 4 program memories for more individuality
- 9 individual acceleration and 9 deceleration stages
- Model 200 R coolable from -10 to +40 °C with pre-cooling function

### — FIELDS OF APPLICATION

- Hospitals
- Pediatric clinics
- Pharmaceutical laboratories
- Food analyzing laboratories
- University / Academic research
- Forensic laboratories
- Molecular diagnostics



Centrifuge packages for the model can be found on [page 42](#)



More information about the control panel can be found on [page 202](#)



according to regulation (EU) 2017/746



## TECHNICAL DATA

	<b>MIKRO 200</b> non-refrigerated	<b>MIKRO 200 R</b> refrigerated
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~
frequency	50 – 60 Hz	50 Hz
consumption	240 VA	450 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	30 x 1.5 / 2.0 ml	30 x 1.5 / 2.0 ml
max. RPM	15,000 min <sup>-1</sup>	15,000 min <sup>-1</sup>
max. RCF	21,382	21,382
running time	1 – 99 min: 59 s, ∞ continuous run, short cycle mode (impulse button)	1 – 99 min: 59 s, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	275 x 344 x 260 mm	281 x 553 x 260 mm
weight	approx. 11.5 kg	approx. 28 kg
noise level	≤ 58 dB (A) with rotor 2434	≤ 51 dB (A) with rotor 2437
temperature control, infinitely variable	-	from -10 to +40 °C
<b>Cat. No.</b>	<b>2400</b>	<b>2405</b>
100 – 127 V 1 ~ / 50–60 Hz	2400-01	2405-01
consumption	270 VA	630 VA
emission, immunity	FCC class B	FCC class B

\*) Other voltages on request.

## AVAILABLE ROTORS

<b>ANGLE ROTORS</b>	angle	max. RPM	max. capacity	Cat. No.	page
 angle rotor, 24-place	45°	15,000 min <sup>-1</sup>	24 x 2 ml	<b>2434</b>	40
 angle rotor, 30-place	45° inside / 55° outside	15,000 min <sup>-1</sup>	30 x 2 ml	<b>2437</b>	40
 angle rotor, 24-place for spin column kits	45°	15,000 min <sup>-1</sup>	24 x 2 ml	<b>2428</b>	41
 angle rotor, 4-place	45°	15,000 min <sup>-1</sup>	4 x 8 PCR strips	<b>2418-A</b>	41

## — ANGLE ROTOR, 24-PLACE | 2434



### Rotor

max. RPM   max. RCF	15,000 min <sup>-1</sup>   21,382
max. capacity	24 x 2 ml
run up   run down, braked in sec	20   28
angle   max. noise level	45°   53 dB (A)
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>2434</b>



### Lid bioseal<sup>9)</sup>

<b>Cat. No.</b>	<b>INCLUSIVE</b>
-----------------	------------------



### Vessels

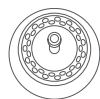
capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38	10.7 x 46
max. RCF <sup>2)</sup>	21,382	21,382	21,382	21,382	21,382	21,382	20,376
radius in mm	85	85	85	85	85	85	81
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>



### Adapter

boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10,2 x 19,3	11,2 x 42,6	11,2 x 39
vessels per rotor	24	24	24	24	24	24	12
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788</b>

## — ANGLE ROTOR, 30-PLACE | 2437



### Rotor

max. RPM   max. RCF	15,000 min <sup>-1</sup>   21,382
max. capacity	30 x 2 ml
run up   run down, braked in sec	22   30
angle   max. noise level	45° inside / 55° outside   51 dB (A)
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>2437</b>



### Lid bioseal<sup>9)</sup>

<b>Cat. No.</b>	<b>INCLUSIVE</b>
-----------------	------------------



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0	0.5
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38	10.7 x 46
max. RCF <sup>2)</sup>	21,382	21,382	21,382	21,382	21,382	21,382	20,376
radius in mm	85	85	85	85	85	85	81
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>



### Adapter

boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10,2 x 19,3	11,2 x 41,3	11,2 x 39
vessels per rotor	30	30	30	30	30	30	15
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters. Cat. No. 2031.

## — ANGLE ROTOR, 24-PLACE | 2428



Rotor	
max. RPM   max. RCF	15,000 min <sup>-1</sup>   21,382
max. capacity	24 x 2 ml
run up   run down, braked in sec	20   28
angle   max. noise level	45°   53 dB (A)
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>2428</b>

Lid bioseal <sup>5)</sup>	
<b>Cat. No.</b>	<b>INCLUSIVE</b>

Vessels									
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	6 x 45	8 x 30	8x45	11x38	11x38	11x38	11x38	10.7 x 46
max. RCF <sup>2)</sup>	21,382	21,382	21,382	21,382	21,382	21,382	21,382	21,382	20,376
radius in mm	85	85	85	85	85	85	85	85	81
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>micro spin columns</b>		<b>Pediatric</b>



Adapter								
boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10,2 x 19,3	10,2 x 19	10,2 x 19,3	11,2 x 42,6
vessels per rotor	24	24	24	24	24	24	24	12
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>2031<sup>7)</sup></b>	<b>-</b>
								<b>0788</b>

## — ANGLE ROTOR, 4-PLACE | 2418-A



Rotor	
max. RPM   max. RCF	15,000 min <sup>-1</sup>   14,338
max. capacity	4 x 8 PCR strips
run up   run down, braked in sec	19   28
angle	45°
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>2418-A</b>

Lid	
<b>Cat. No.</b>	<b>E3243</b>

Vessels	
capacity in ml	0.2   0.2
Ø x L in mm	6x18   -
max. RCF <sup>2)</sup>	14,338   14,338
radius in mm	57   57
<b>Cat. No.</b>	<b>-</b>   <b>PCR strips</b>



Adapter	
boring Ø x L in mm	6,5 x 15,5   6,5 x 15,5
vessels per rotor	32   4 x 8
<b>Cat. No.</b>	<b>-</b>   <b>-</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters. Cat. No. 2031.



## PACKAGES

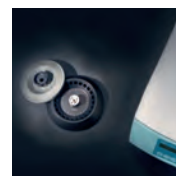
<b>MIKRO 200 MICROLITER TUBES PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 200	2400	24	0.2 - 2.0	11 x 38	15,000	21,382
- 1 x angle rotor 24-place, incl. lid bioseal	2434	12	0.5 (Pediatric)	10.7 x 46	15,000	20,376
<b>2400SET1</b>						



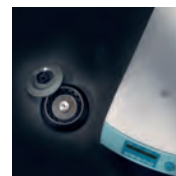
<b>MIKRO 200 MICROLITER TUBES PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 200	2400	30	0.2 - 2.0	11 x 38	15,000	21,382
- 1 x angle rotor 30-place, incl. lid bioseal	2437	15	0.5 (Pediatric)	10.7 x 46	15,000	20,376
<b>2400SET2</b>						



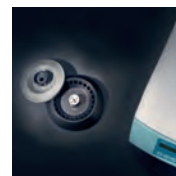
<b>MIKRO 200 R MICROLITER TUBES PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 200 R	2405	24	0.2 - 2.0	11 x 38	15,000	21,382
- 1 x angle rotor 24-place, incl. lid bioseal	2434	12	0.5 (Pediatric)	10.7 x 46	15,000	20,376
<b>2405SET1</b>						



<b>MIKRO 200 R MICROLITER TUBES PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 200 R	2405	30	0.2 - 2.0	11 x 38	15,000	21,382
- 1 x angle rotor 30-place, incl. lid bioseal	2437	15	0.5 (Pediatric)	10.7 x 46	15,000	20,376
<b>2405SET2</b>						



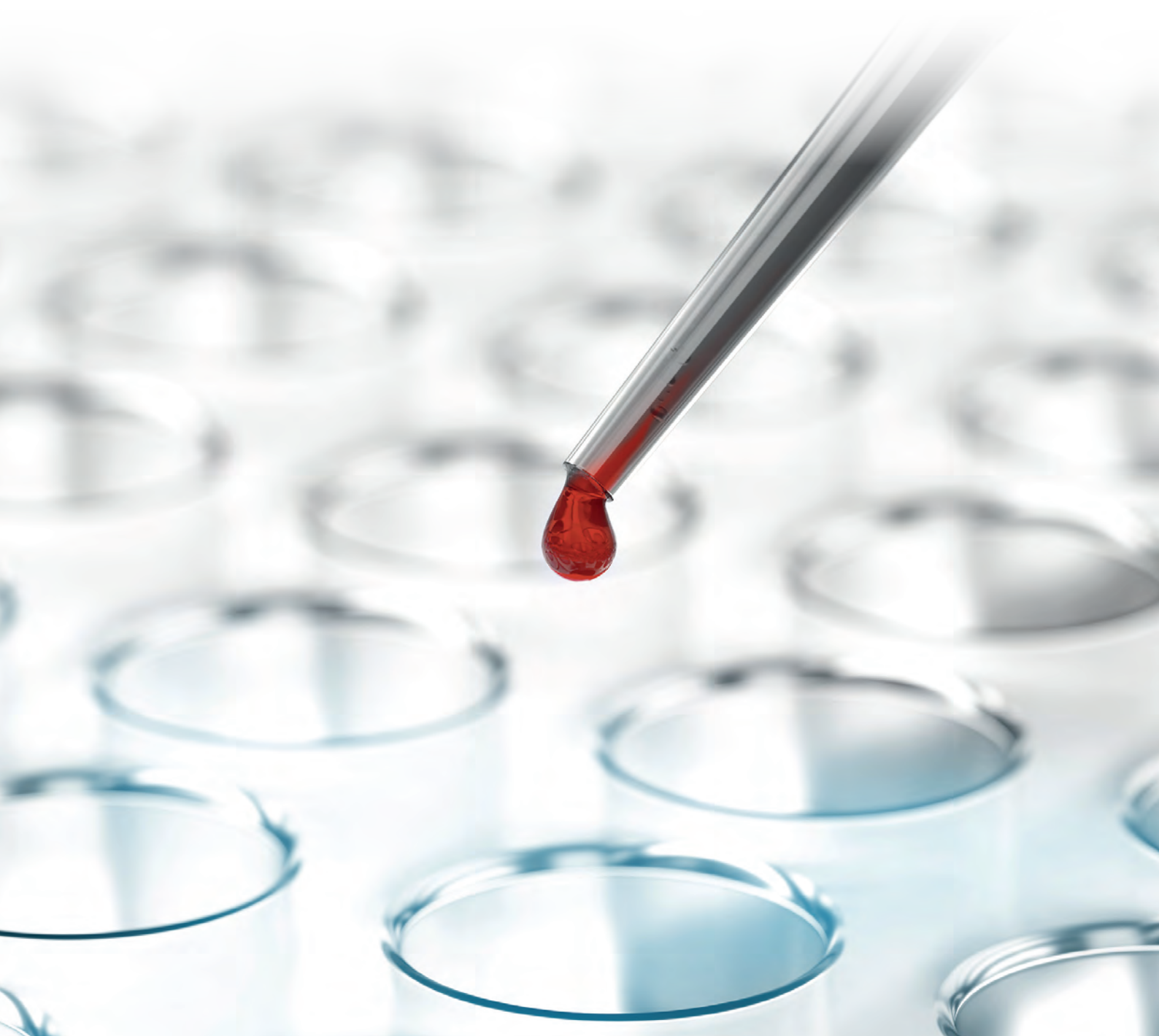
<b>MIKRO 200 R SPIN COLUMN PACKAGE 3</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 200 R	2405	24	0.2 - 2.0	11 x 38	15,000	21,382
- 1 x angle rotor 24-place, incl. lid bioseal for spin column kits	2428	12	0.5 (Pediatric)	10.7 x 46	15,000	20,376
<b>2405SET3</b>						



## DID YOU KNOW?

The Download Center on our website allows you to access the most up to date documents including catalogs, brochures, data sheets and certificates.

Try it now: [www.hettichlab.com/downloadcenter](http://www.hettichlab.com/downloadcenter)



# MIKRO 220 | 220 R

## Fast and flexible

The MIKRO 220 spins at an unmatched speed of 18,000 RPM and delivers an RCF of 31,514 in just 26 seconds. Ultimate flexibility is provided by a choice of 8 different rotors from 0.2 ml microliter tubes to 50 ml conical tubes, allowing for numerous research applications on a single machine. This unit is available with refrigeration and a temperature range from -20 °C to +40 °C (MIKRO 220 R).

### — FEATURES

- RPM: 500 - 18,000 min<sup>-1</sup> – adjustable in increments of 10
- Max. RCF: 31,514
- Max. capacity: 60 x 2.0 ml
- Compact, high-performance microlitre centrifuge
- Choice of 8 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Impulse key for short cycle mode
- Easy operation with keypad and control knob
- Impulse key for short cycle mode
- 9 program memories for more individuality
- 9 individual acceleration and 10 deceleration stages
- Model 220 R coolable from -20 to +40 °C (with pre-cooling function)

### — FIELDS OF APPLICATION

- Hospitals
- Pediatric clinics
- Pharmaceutical laboratories
- Food analyzing laboratories
- University / Academic research
- Forensic laboratories
- Molecular diagnostics



Centrifuge packages for the model can be found on [page 50](#)



More information about the control panel can be found on [page 202](#)



according to regulation (EU) 2017/746




## TECHNICAL DATA

	MIKRO 220 non-refrigerated	MIKRO 220 R refrigerated
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~
frequency	50 – 60 Hz	50 Hz
consumption	510 VA	850 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	48 x 1.5 / 2.0 ml, 6 x 50 ml	48 x 1.5 / 2.0 ml, 6 x 50 ml
max. RPM	18,000 min <sup>-1</sup>	18,000 min <sup>-1</sup>
max. RCF	31,514	31,514
running time	1 – 99 min: 59 s, ∞ continuous run, short cycle mode (impulse button)	1 – 99 min: 59 s, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	330x420x313 mm	335x650x313 mm
weight	approx. 21 kg	approx. 42 kg
noise level	≤ 58 dB (A) with rotor 1189-A	≤ 59 dB (A) with rotor 1016
temperatur control, infinitely variable	-	from -20 to +40 °C
<b>Cat. No.</b>	<b>2200</b>	<b>2205</b>
100 – 127 V 1 ~ / 60 Hz	2200-01	2205-01
consumption	510 VA	950 VA
emission, immunity	FCC class B	FCC class B








\*) Other voltages on request.

## AVAILABLE ROTORS

### SWING-OUT ROTORS


	angle	max. RPM	max. capacity	Cat. No.	page
 Swing-out rotor, 24-place	90°	13,000 min <sup>-1</sup>	24 x 2 ml	<b>1154-L</b>	47

### ANGLE ROTOR

 Angle rotor, 24-place	45°	18,000 min <sup>-1</sup>	24 x 2 ml	<b>1195-A</b>	46
 Angle rotor, 30-place	45°	14,000 min <sup>-1</sup>	30 x 2 ml	<b>1189-A</b>	46
 Angle rotor, 48-place	45°	14,000 min <sup>-1</sup>	48 x 2 ml	<b>1158-L</b>	47
 Angle rotor, 6-place	45°	6,000 min <sup>-1</sup>	6 x 50 ml	<b>1016</b>	48
 Drum rotor, 6-place	90°	13,000 min <sup>-1</sup>	60 x 2 ml	<b>1161</b>	48
 Angle rotor, 12-place	35°	6,000 min <sup>-1</sup>	12 x 15 ml	<b>1015</b>	49
 Angle rotor, 6-place	45°	14,000 min <sup>-1</sup>	6 x PCR strips	<b>1160</b>	49




## — ANGLE ROTOR, 24-PLACE | 1195-A



<b>Rotor</b>	
max. RPM   max. RCF	18,000 min <sup>-1</sup>   31,514
max. capacity	24 x 2 ml
run-up   run-down, braked in sec	26   23
angle	45°
temperature in °C <sup>1)</sup>	+3
<b>Cat. No.</b>	<b>1195-A</b>



<b>Lid bioseal<sup>5)</sup></b>	
<b>Cat. No.</b>	<b>INCLUSIVE</b>


<b>Vessels</b>	
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   10.7x46
max. RCF <sup>2)</sup>	31,514   31,514   31,514   31,514   31,514   31,514   30,065
radius in mm	87   87   87   87   87   87   83
<b>Cat. No.</b>	<b>microliter tubes</b>   <b>Pediatric</b>



<b>Adapter</b>	
boring Ø x L in mm	6 x 40   6 x 40   8 x 40   8 x 40   10.2x19.3   11.2x40.8   11.2x39
vessels per rotor	24   24   24   24   24   24   12
<b>Cat. No.</b>	<b>2024</b>   <b>2024</b>   <b>2023</b>   <b>2023</b>   <b>2031<sup>7)</sup></b>   <b>-</b>   <b>0788</b>




## — ANGLE ROTOR, 30-PLACE | 1189-A



<b>Rotor</b>	
max. RPM   max. RCF	14,000 min <sup>-1</sup>   21,255
max. capacity	30 x 2 ml
run-up   run-down, braked in sec	20   22
angle   max. noise level	45°   58 dB (A)
temperature in °C <sup>1)</sup>	+3
<b>Cat. No.</b>	<b>1189-A</b>



<b>Lid bioseal<sup>5)</sup></b>	
<b>Cat. No.</b>	<b>INCLUSIVE</b>

<b>Vessels</b>	
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   10.7x46
max. RCF <sup>2)</sup>	21,255   21,255   21,255   21,255   21,255   21,255   20,379
radius in mm	97   97   97   97   97   97   93
<b>Cat. No.</b>	<b>microliter tubes</b>   <b>Pediatric</b>



<b>Adapter</b>	
boring Ø x L in mm	6 x 40   6 x 40   8 x 40   8 x 40   10.2x19.3   11.2x40.9   11.2x39
vessels per rotor	30   30   30   30   30   30   15
<b>Cat. No.</b>	<b>2024</b>   <b>2024</b>   <b>2023</b>   <b>2023</b>   <b>2031<sup>7)</sup></b>   <b>-</b>   <b>0788</b>



- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters. Cat. No. 2031.

## — ANGLE ROTOR, 48-PLACE | 1158-L



### Rotor

max. RPM	14,000 min <sup>-1</sup>
max. RCF	21,255 outside / 18,845 inside
max. capacity	48 x 2 ml
run-up   run-down, braked in sec	21   22
angle   max. noise level	45°   59 dB (A)
temperature in °C <sup>1)</sup>	-4

<b>Cat. No.</b>	<b>1158-L</b>
-----------------	---------------

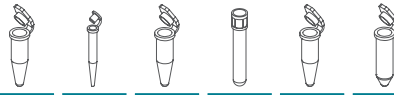


### Lid bioseal<sup>5)</sup>

<b>Cat. No.</b>	<b>INCLUSIVE</b>
-----------------	------------------



### Vessels

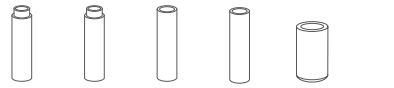


capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38
max. RCF <sup>2)</sup>	outside / inside	21,255 / 18,845	21,255 / 18,845	21,255 / 18,845	21,255 / 18,845	21,255 / 18,845
radius in mm	outside / inside	97 / 86	97 / 86	97 / 86	97 / 86	97 / 86

<b>Cat. No.</b>	<b>microliter tubes</b>					
-----------------	-------------------------	--	--	--	--	--



### Adapter



boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10.2x19.3	11.4 x 39
vessels per rotor	48	48	48	48	48	48

<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>
-----------------	-------------	-------------	-------------	-------------	--------------------------	----------

## — SWING-OUT ROTOR, 24-PLACE | 1154-L



### Rotor

max. RPM   max. RCF	13,000 min <sup>-1</sup>   18,516
max. capacity	24 x 2 ml
run-up   run-down, braked in sec	25   26
angle   max. noise level	90°   60 dB (A)
temperature in °C <sup>1)</sup>	-2

<b>Cat. No.</b>	<b>1154-L</b>
-----------------	---------------

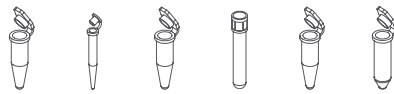


### Lid bioseal<sup>5)</sup>

<b>Cat. No.</b>	<b>INCLUSIVE</b>
-----------------	------------------



### Vessels

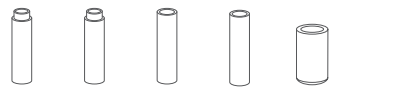


capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38
max. RCF <sup>2)</sup>	18,516	18,516	18,516	18,516	18,516	18,516
radius in mm	98	98	98	98	98	98

<b>Cat. No.</b>	<b>microliter tubes</b>					
-----------------	-------------------------	--	--	--	--	--



### Adapter



boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10.2x19.3	11.5x38.5
vessels per rotor	24	24	24	24	24	24

<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>
-----------------	-------------	-------------	-------------	-------------	--------------------------	----------

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters. Cat. No. 2031.

## — ANGLE ROTOR, 6-PLACE | 1016



### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   4,025
max. capacity	6 x 50 ml
run-up   run-down, braked in sec	14   17
angle   max. noise level	35°   59 dB (A)
temperature in °C <sup>1)</sup>	-20
<b>Cat. No.</b>	<b>1016</b>

### Vessels

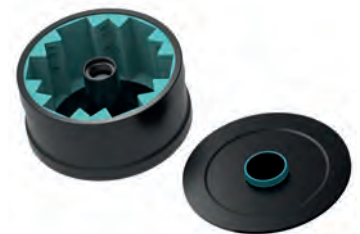
capacity in ml	7	15	25	50	9-10	10	1.6-5	4-7	5	15	50	30	50
Ø x L in mm	12x100	17x100	24x100	34x100	16x92	15x102	13 x 75	13 x 100	17x59	17x120	29x115	26x95	29x107
max. RCF <sup>2)</sup>	3,944	3,783	3,622	4,025	3,783	3,783	2,978	3,783	3,622	3,824	3,824	3,703	3,904
radius in mm	98	94	90	100	94	94	74	94	90	95	95	92	97
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>				<b>blood collection / urine tubes</b>				<b>-</b>	<b>tubes with screw cap</b>			



### Adapter

boring Ø x L in mm	13 x 91.5	17.5 x 95	26 x 88	35x96	17.5x95	17.5x51	17.5 x 95	17.5 x 95	17x51	17x97.8	30x97.8	26x88	29x95
vessels per rotor	18	6	6	6	6	6	6	6	6	6	3	6	6
<b>Cat. No.</b>	<b>1632</b>	<b>1635</b>	<b>1633</b>	<b>-</b>	<b>1635</b>	<b>1635</b>	<b>1635</b>	<b>1635</b>	<b>1649</b>	<b>1631</b>	<b>1641</b>	<b>1633</b>	<b>1634</b>

## — DRUM ROTOR, 6-PLACE | 1161



### Rotor

max. RPM   max. RCF	13,000 min <sup>-1</sup>   14,171
max. capacity	60 x 2 ml
run-up   run-down, braked in sec	17   18
angle   max. noise level	90°   60 dB (A)
temperature in °C <sup>1)</sup>	-3
<b>Cat. No.</b>	<b>1161</b>



### Lid

<b>Cat. No.</b>	<b>INCLUSIVE</b>
-----------------	------------------

### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6x18	6 x 45	8 x 30	8x45	11 x 38	11 x 38
max. RCF <sup>2)</sup>	14,171	14,171	14,171	14,171	14,171	14,171
radius in mm	75	75	75	75	75	75
<b>Cat. No.</b>	<b>microliter tubes</b>					



### Adapter

boring Ø x L in mm	6 x 40	6 x 40	8.4 x 42.5	8.4 x 42.5	10.8 x 37	10.8 x 37
vessels per rotor	192	192	126	126	60	60
<b>Cat. No.</b>	<b>1378</b>	<b>1378</b>	<b>1379</b>	<b>1379</b>	<b>1377</b>	<b>1377</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.

## — ANGLE ROTOR, 12-PLACE | 1015



### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   4,146
max. capacity	12 x 15 ml
run-up   run-down, braked in sec	14   16
angle   max. noise level	35°   60 dB (A)
temperature in °C <sup>1)</sup>	-20
<b>Cat. No.</b>	<b>1015</b>



### Vessels

capacity in ml	5	15	1.1–1.4	2.6–3.4	2.7–3	4.5–5	4.9	7.5–8.2	9–10	10	1.6–5	4–7	8.5–10	15
Ø x L in mm	12x75	17x100	8x66	13x65	11x66	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x100	17x120
max. RCF <sup>2)</sup>	3,300	4,146	3,300	3,300	3,300	4,146	4,146	4,146	4,146	4,146	3,300	4,146	4,146	4,146
radius in mm	82	103	82	82	82	103	103	103	103	103	82	103	103	103
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>	<b>blood collection / urine tubes</b>											<b>-</b>	



### Adapter

boring Ø x L in mm	13.5 x 59	17.7 x 88	13.5 x 59	13.5 x 59	13.5 x 59	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88	13.5 x 59	13.5 x 79	17.7 x 88	17.7 x 88
vessels per rotor	12	12	12	12	12	12	12	12	12	12	12	12	12	6
<b>Cat. No.</b>	<b>1054-A</b>	<b>-</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1054-A</b>	<b>1058</b>	<b>-</b>	<b>-</b>

## — ANGLE ROTOR, 6-PLACE | 1160



### Rotor

max. RPM   max. RCF	14,000 min <sup>-1</sup>   18,845
max. capacity	6 x 8 PCR strips
run up   run down, braked in sec	20   22
angle   temperature in °C <sup>1)</sup>	45°   -4
<b>Cat. No.</b>	<b>1160</b>



### Lid

<b>Cat. No.</b>	<b>1162</b>
-----------------	-------------



### Vessels

capacity in ml	0.2	0.2
Ø x L in mm	6x18	-
max. RCF <sup>2)</sup>	18,845	18,845
radius in mm	86	86
<b>Cat. No.</b>	<b>-</b>	<b>PCR strips</b>



### Adapter

boring Ø x L in mm	6.5 x 15.5	6.5 x 15.5
vessels per rotor	48	6 x 8
<b>Cat. No.</b>	<b>-</b>	<b>-</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.



## PACKAGES

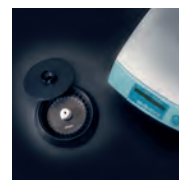
### MIKRO 220 MICROLITER TUBES PACKAGE 1

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 220	2200	24	0.2 - 2.0	11 x 38	18,000	31,514
- 1 x angle rotor 24-place, incl. lid bioseal	1195-A	12	0.5 (Pediatric)	10.7 x 46	18,000	30,065
<b>2200SET1</b>						



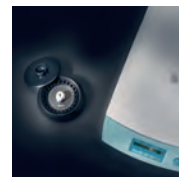
### MIKRO 220 MICROLITER TUBES PACKAGE 2

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 220	2200	30	0.2 - 2.0	11 x 38	14,000	21,255
- 1 x angle rotor 30-place, incl. lid bioseal	1189-A	15	0.5 (Pediatric)	10.7 x 46	14,000	20,379
<b>2200SET2</b>						



### MIKRO 220 R MICROLITER TUBES PACKAGE 1

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 220 R	2205	24	0.2 - 2.0	11 x 38	18,000	31,514
- 1 x angle rotor 24-place, incl. lid bioseal	1195-A	12	0.5 (Pediatric)	10.7 x 46	18,000	30,065
<b>2205SET1</b>						



### MIKRO 220 R MICROLITER TUBES PACKAGE 2

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x MIKRO 220 R	2205	30	0.2 - 2.0	11 x 38	14,000	21,255
- 1 x angle rotor 30-place, incl. lid bioseal	1189-A	15	0.5 (Pediatric)	10.7 x 46	14,000	20,379
<b>2205SET2</b>						



## DID YOU KNOW?

The Download Center on our website allows you to access the most up to date documents including catalogs, brochures, data sheets and certificates.

Try it now: [www.hettichlab.com/downloadcenter](http://www.hettichlab.com/downloadcenter)



# BENCHTOP CENTRIFUGES

Specialists in diversity



ROTOFIX 32 A  
on page 52



UNIVERSAL 320 | 320 R  
on page 64



ROTINA 380 | 380 R  
on page 88



# 03



ROTINA 420 | 420 R  
on page 100



ROTANTA 460 | 460 R  
on page 110



ROTOFIX 46 | 46 H  
on page 128



# ROTOFIX 32 A

## Rugged and indispensable

For decades, the ROTOFIX 32 A has set the standard in daily lab routine thanks to its versatility and solid construction. The benchtop centrifuge spins sample volumes up to 4 x 100 ml, 40 blood collection tubes or 8 x 50 ml conical tubes with a simple user interface. Hettich's cytology rotors are compatible with most existing funnel/slide systems and have bio-containment lids.

### — FEATURES

- RPM: 500 - 6,000 min<sup>-1</sup> – adjustable in increments of 100
- Max. RCF: 4,226
- Max. capacity: 4 x 100 ml / 6 x 85 ml
- Choice of 9 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Easy operation with keypad
- 2 individual deceleration stages

### — FIELDS OF APPLICATION

- Hospitals
- Cell culture laboratories
- University / Academic research
- Pharmaceutical laboratories
- Physician's Office Laboratory (POL)



Centrifuge packages for the model can be found on [page 65](#)



More information about the control panel can be found on [page 202](#)

**CYTO**

Cyto system available for this model. More information on [page 180](#)



according to regulation (EU) 2017/746



## TECHNICAL DATA





<b>ROTOFIX 32 A</b>	
voltage *)	208 – 240 V 1 ~
frequency	50 – 60 Hz
consumption	300 VA
emission, immunity	EN/IEC 61326-1, class B
max. capacity	4 x 100 ml / 6 x 94 ml
max. RPM	6,000 min <sup>-1</sup>
max. RCF	4,226
running time	1–99 min, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	366x430x257 mm
weight	approx. 23 kg
noise level	52 dB (A) with rotor 1628
<b>Cat. No.</b>	<b>1206</b>

100 – 127 V 1 ~ / 50 – 60 Hz *)	1206-01
emission, immunity	FCC class B




\*) Other voltages on request.

## AVAILABLE ROTORS

### SWING-OUT ROTORS

	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 4-place	90°	4,000 min <sup>-1</sup>	4x100 ml	<b>1624</b>	56
 swing-out rotor, 4-place	90°	4,000 min <sup>-1</sup>	4x100 ml	<b>1324</b>	59
 swing-out rotor, 6-place	90°	4,000 min <sup>-1</sup>	6x50 ml	<b>1619</b>	61
 swing-out rotor, 8-place	45°	4,000 min <sup>-1</sup>	8x50 ml	<b>1617</b>	61
 swing-out rotor, 8-place	90°	4,000 min <sup>-1</sup>	8x15 ml	<b>1611</b>	63
 swing-out rotor, 12-place	55° / 60° / 80°	4,000 min <sup>-1</sup>	12x15 ml	<b>1628</b>	63

### ANGLE ROTORS

 angle rotor, 8-place	45°	4,000 min <sup>-1</sup>	8x50 ml	<b>1418</b>	63
 angle rotor, 6-place	35°	6,000 min <sup>-1</sup>	6x85 ml	<b>1620A</b>	65
 angle rotor, 12-place	35°	6,000 min <sup>-1</sup>	12x15 ml	<b>1613</b>	65

## SWING-OUT ROTOR, 4-PLACE | 1624



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,451
max. capacity	4 x 50 ml
run-up   run-down, braked in sec	22   25
angle   max. noise level	90°   55 dB (A)
<b>Cat. No.</b>	<b>1624</b>

### Vessels

capacity in ml	5	5	6	7	9	9	15	15	20	25	45	50
Ø x L in mm	12x75	12x75	12 x 82	12 x 100	14 x 100	14 x 100	17 x 100	17 x 100	21 x 100	24 x 100	31 x 100	34 x 100
max. RCF <sup>2)</sup>	2,218	2,164	2,343	2,343	2,308	2,415	2,308	2,451	2,361	2,451	2,361	2,451
radius in mm	124	121	131	131	129	135	129	137	132	137	132	137

<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>											
<b>+</b>	with decanting aid		with decanting aid	with decanting aid		+ 0701						
<b>Carrier</b>												
boring Ø x L in mm	12 x 75	13.5 x 65	12.5 x 71.5	12.5 x 71.5	14.6 x 74	14.6 x 78	17.6 x 71.5	17.6 x 78	21.5 x 74	26 x 78	32 x 74	35 x 78
vessels per rotor	16	68	16	16	20	40	16	28	8	8	4	4
<b>Cat. No.</b>	<b>1369-91</b>	<b>1372</b>	<b>1369-92</b>	<b>1369-92</b>	<b>1370</b>	<b>1741</b>	<b>1369</b>	<b>1742</b>	<b>1346</b>	<b>1745</b>	<b>1345</b>	<b>1746</b>

### Vessels

capacity in ml	1.1–1.4	2.6–3.4	4–5.5	4.9	1.6–5	4–7	4–7	8.5–10	30	1–8
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 100	16 x 100	26 x 95	simple / multiple
max. RCF <sup>2)</sup>	2,415	2,325	2,325	2,451	2,325	2,325	2,451	2,451	2,451	1,646
radius in mm	135	130	130	137	130	130	137	129	137	92

<b>Cat. No.</b>	<b>blood collection / urine vessels</b>								-	<b>cyto chambers</b>
<b>+</b>	+ 0701	+ 0716	+ 0716		+ 0716	+ 0716				
<b>Carrier</b>										
boring Ø x L in mm	14.6 x 78	17.6 x 78	17.6 x 78	14.6 x 78	17.6 x 78	17.6 x 78	13.5 x 78	17.6 x 71.5	26 x 78	-
vessels per rotor	40	28	28	40	28	28	28	16	8	4
<b>Cat. No.</b>	<b>1741</b>	<b>1742</b>	<b>1742</b>	<b>1741</b>	<b>1742</b>	<b>1742</b>	<b>1739</b>	<b>1369<sup>4)</sup></b>	<b>1745</b>	<b>1660</b>

**CYTO** Cyto system available for this model. More information on page 180

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 spacer.  
 16) Packed in units of 10 pieces.  
 20) Vacutainers made of glass may not be used.

## — SWING-OUT ROTOR, 4-PLACE | 1624



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   1,968
max. capacity	48 x 4 ml
run-up   run-down, braked in sec	22   25
angle   max. noise level	90°   56 dB (A)
<b>Cat. No.</b>	<b>1624</b>

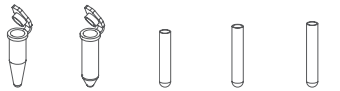


### Bucket

Cat. No.	1366
----------	------



### Vessels



capacity in ml	1.5	2.0	1	3	4
Ø x L in mm	11 x 38	11 x 38	6 x 45	10 x 60	12 x 60
max. RCF <sup>2)</sup>	1,968	1,968	1,950	1,932	1,932
radius in mm	110	110	109	108	108
<b>Cat. No.</b>	<b>microliter tubes</b>	<b>Rhesus</b>	<b>tubes<sup>2)</sup></b>		



### Adapter



boring Ø x L in mm	11.5 x 38	11.5 x 38	6.5 x 23	10.5 x 23	12.5 x 44
vessels per rotor	36	36	120	48	48
<b>Cat. No.</b>	<b>5277</b>	<b>5277</b>	<b>1357</b>	<b>1327</b>	<b>1326</b>

## — SWING-OUT ROTOR, 4-PLACE | 1624



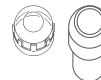
### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,665
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	22   25
angle   max. noise level	90°   55 dB (A)
<b>Cat. No.</b>	<b>1624</b>

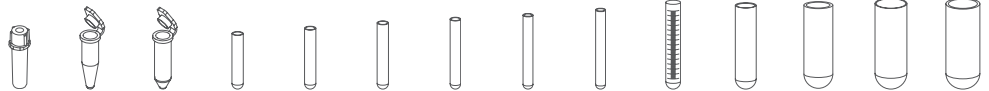


### Bucket

Lid bioeasel <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1481</b>



### Vessels



capacity in ml	0,5	1,5	2,0	1	3	5	6	7	9	15	25	50	85	100
Ø x L in mm	10.7 x 46	11 x 38	11 x 38	6 x 45	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	38 x 101	44 x 100
max. RCF <sup>2)</sup>	2,379	2,451	2,451	2,594	2,630	2,558	2,558	2,558	2,540	2,540	2,433	2,415	2,612	2,558
radius in mm	133	135	135	145	147	141	141	141	142	142	136	135	146	143
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microtubes</b>		<b>Rhesus</b>	<b>tubes<sup>2)</sup></b>									



### Adapter

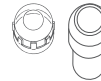


boring Ø x L in mm	11.2 x 38	11.2 x 38	11.2 x 38	6.5 x 34	10.5 x 43	13.4 x 48	13.4 x 48	13.4 x 48	17.6 x 89	17.6 x 89	25.2 x 77	35.2 x 77	38.5 x 92	45.9 x 98	Spacer
vessels per rotor	20	20	20	108	36	20	20	20	16	16	4	4	4	4	
<b>Cat. No.</b>	<b>1351</b>	<b>1351</b>	<b>1351</b>	<b>1339</b>	<b>1343</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1329</b>	<b>1329</b>	<b>1330</b>	<b>1331</b>	<b>1396</b>	<b>0761</b>	

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 TÜV in conformity with DIN EN 61010, section 2-020.



## SWING-OUT ROTOR, 4-PLACE | 1624



<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,665
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	22   25
angle   max. noise level	90°   55 dB (A)
<b>Cat. No.</b>	<b>1624</b>

<b>Bucket</b>	
Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1481</b>

<b>Vessels</b>	
capacity in ml	1.1–1.4   2.7–3   2.6–4.9   4–8.5   9–10   10   1.6–7   4–10   15   50   12   25   30   50   10
Ø x L in mm	8 x 66   11 x 66   13 x 65/90   15 x 75/92   16 x 92   15 x 102   13 x 75/100   16 x 75/100   17 x 120   29 x 115   17 x 100   25 x 90   25 x 110   29 x 115   16 x 80
max. RCF <sup>2)</sup>	2,540   2,558   2,558   2,576   2,540   2,665   2,558   2,522   2,665   2,665   2,665   2,343   2,665   2,665   2,522
radius in mm	142   143   143   144   142   149   143   141   149   149   149   131   149   149   141
<b>Cat. No.</b>	<b>blood collection / urine vessels</b> <b>tubes with screw cap</b>

<b>Adapter</b>	
boring Ø x L in mm	9 x 49   13.4 x 48   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 90   30 x 90   17 x 80   26 x 72   26 x 80   29.5 x 80   16.5 x 56
vessels per rotor	28   20   20   16   16   16   20   16   4   4   4   4   4   4   16
<b>Cat. No.</b>	<b>1457   1383   1383   1459   1329   1329<sup>4)</sup>   1383   1348   1347   1384   6311   1363   1365   6318   1348</b>

<b>Vessels</b>	
capacity in ml	30   50   85   30
Ø x L in mm	26 x 95   29 x 107   38 x 106   44 x 105
max. RCF <sup>2)</sup>	2,451   2,630   2,612   2,540
radius in mm	137   147   146   142
<b>Cat. No.</b>	<b>tubes with screw cap   0534<sup>6)</sup></b>

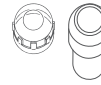
<b>Adapter</b>	
boring Ø x L in mm	26 x 83   29 x 93   38.5 x 92   45.9 x 98
vessels per rotor	4   4   4   4
<b>Cat. No.</b>	<b>4417   4416   1396   0765</b>

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3) When using these tubes, bucket 1490 cannot be closed with lid 1492.  
 4) Please remove spacer.  
 5) Tested by TÜV in conformity with DIN EN 61010, section 2-020.  
 6) A rubber stopper for closing the tube for agitating or mixing is available under Cat. No. 0535. The tube may not be centrifuged with the stopper.

## SWING-OUT ROTOR, 4-PLACE | 1324



<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,630
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	27   30
angle   max. noise level	90°   55 dB (A)
<b>Cat. No.</b>	<b>1324</b>



<b>Bucket</b>	
Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1490</b>



<b>Vessels</b>															
capacity in ml	0.5	1.5	2.0	1	3	4	5	6	7	9	15	25	50	85	100
Ø x L in mm	10.7x46	11x38	11x38	6x45	10x60	10x88	12x75	12x82	12x100	14x100	17x100	24x100	34x100	38x101	44x100
max. RCF <sup>2)</sup>	2,343	2,415	2,415	2,558	2,594	2,594	2,522	2,522	2,522	2,504	2,504	2,397	2,379	2,576	2,522
radius in mm	131	135	135	143	145	145	141	141	141	140	140	134	133	144	141
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>Rhesus</b>	<b>tubes<sup>2)</sup></b>									

<b>Adapter</b>															
boring Ø x L in mm	11.2x38	11.2x38	11.2x38	6.5x34	10.5x43	10.5x43	13.4x48	13.4x48	13.4x48	17.6x91	17.6x91	25.2x87	35.2x87	38.5x92	45.9x100.5
vessels per rotor	20	20	20	108	36	36	20	20	20	16	16	4	4	4	4
<b>Cat. No.</b>	<b>1351</b>	<b>1351</b>	<b>1351</b>	<b>1339</b>	<b>1343</b>	<b>1343</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1329</b>	<b>1329</b>	<b>1330</b>	<b>1331</b>	<b>1396</b>	<b>0761</b>

<b>Vessels</b>															
capacity in ml	1.1-1.4	2.6-3.4	4.9	2.7-3	4.5-5	4-5.5	7.5-8.2	9-10	10	1.6-5	4-7	4-7	8.5-10	15	
Ø x L in mm	8 x 66	13x65	13x90	11x66	11x92	15x75	15x92	16x92	15x102	13x75	13x100	16x75	16x100	17x120	
max. RCF <sup>2)</sup>	2,540	2,522	2,522	2,522	2,522	2,540	2,540	2,504	2,630	2,522	2,522	2,486	2,486	2,630	
radius in mm	142	141	141	141	141	142	142	140	147	141	141	139	139	147	
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>														<b>-</b>

<b>Adapter</b>														
boring Ø x L in mm	9x47	13.4x45	13.4x45	13.4x45	13.4x45	15.6x47	15.6x47	17.6x91	17.6x91	13.4x45	13.4x45	16.5x56	16.5x56	17x90
vessels per rotor	28	20	20	20	20	16	16	16	16	20	20	16	16	4
<b>Cat. No.</b>	<b>1457</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1459</b>	<b>1459</b>	<b>1329</b>	<b>1329<sup>4)</sup></b>	<b>1383</b>	<b>1383</b>	<b>1348</b>	<b>1348</b>	<b>1347</b>

<b>Vessels</b>													
capacity in ml	15	50	12	25	30	50	10	30	50	85	30		
Ø x L in mm	17x120	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	26 x 95	29x107	38x106	44x105		
max. RCF <sup>2)</sup>	2,630	2,630	2,630	2,308	2,630	2,630	2,486	2,415	2,594	2,576	2,504		
radius in mm	147	147	147	129	147	147	139	135	145	144	140		
<b>Cat. No.</b>	<b>tubes with screw cap</b>											<b>0534<sup>6)</sup></b>	

<b>Adapter</b>											
boring Ø x L in mm	17x107	30x90	17x80	26x72	26x80	29.5x80	16.5x56	26x83	29x93	38.5x92	45.9x100.5
vessels per rotor	12	4	4	4	4	4	16	4	4	4	4
<b>Cat. No.</b>	<b>1356</b>	<b>1384</b>	<b>6311</b>	<b>1363</b>	<b>1365</b>	<b>6318</b>	<b>1348</b>	<b>4417</b>	<b>4416</b>	<b>1396</b>	<b>0765</b>

## SWING-OUT ROTOR, 4-PLACE | 1324



**Rotor**

max. RPM   max. RCF	4,000 min <sup>1</sup>   2,612
max. capacity	4 x 50 ml
run-up   run-down, braked in sec	27   30
angle	90°   56 dB (A)
<b>Cat. No.</b>	<b>1324</b>



**Bucket**

<b>Cat. No.</b>	<b>1398</b>
-----------------	-------------



**Vessels**

capacity in ml	5	6	7	9	15	2.6-3.4	2.7-3	4.5-5	4.9	9-10	10	1.6-5	4-7	4-7
Ø x L in mm	12x75	12x82	12x100	14x100	17x100	13x65	11x66	11x92	13x90	16x92	15x102	13x75	13x100	16x75
max. RCF <sup>2)</sup>	2,486	2,486	2,486	2,522	2,522	2,486	2,486	2,486	2,486	2,522	2,522	2,486	2,486	2,397
radius in mm	139	139	139	141	141	139	139	139	139	141	141	139	139	134
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>					<b>blood collection / urine vessels</b>								



**Adapter**

boring Ø x L in mm	13.4x57.5	13.4x57.5	13.4x57.5	17.5x81	17.5x81	13.4x57.5	13.4x57.5	13.4x57.5	13.4x57.5	17.5x81	17.5x81	13.4x57.5	13.4x57.5	17.5x81
vessels per rotor	20	20	20	16	16	20	20	20	20	16	16	20	20	16
<b>Cat. No.</b>	<b>1486</b>	<b>1486</b>	<b>1486</b>	<b>1482A</b>	<b>1482A</b>	<b>1486</b>	<b>1486</b>	<b>1486</b>	<b>1486</b>	<b>1482A</b>	<b>1482A</b>	<b>1486</b>	<b>1486</b>	<b>1482A</b>

**Vessels**

capacity in ml	15	50	12	50
Ø x L in mm	17 x 120	29 x 115	17 x 100	29 x 115
max. RCF <sup>2)</sup>	2,612	2,576	2,522	2,576
radius in mm	146	144	141	144
<b>Cat. No.</b>	<b>tubes with screw cap</b>			



**Adapter**

boring Ø x L in mm	17x100	30x98	17.5x81	30x98
vessels per rotor	16	4	16	4
<b>Cat. No.</b>	<b>1483A</b>	<b>1484</b>	<b>1482A</b>	<b>1484<sup>4)</sup></b>

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 spacer.

## — SWING-OUT ROTOR, 6-PLACE | 1619



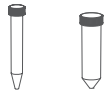
### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,701	
max. capacity	6 x 50 ml	
run-up   run-down, braked in sec	22   25	
angle   max. noise level	90°   54 dB (A)	
<b>Cat. No.</b>	<b>1619</b>	



### Vessels

capacity in ml	15	50
Ø x L in mm	17 x 120	29 x 115
max. RCF <sup>2)</sup>	2,701	2,701
radius in mm	151	151
<b>Cat. No.</b>	<b>tubes with screw cap</b>	



### Adapter

boring Ø x L in mm	17 x 84	30 x 87.5
vessels per rotor	6	6
<b>Cat. No.</b>	<b>1462-A</b>	<b>-</b>



## — SWING-OUT ROTOR, 8-PLACE | 1617



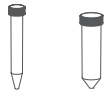
### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,469	
max. capacity	8 x 50 ml	
run-up   run-down, braked in sec	22   25	
angle   max. noise level	45°   53 dB (A)	
<b>Cat. No.</b>	<b>1617</b>	



### Vessels

capacity in ml	15	50
Ø x L in mm	17 x 120	29 x 115
max. RCF <sup>2)</sup>	2,469	2,469
radius in mm	138	138
<b>Cat. No.</b>	<b>tubes with screw cap</b>	



### Adapter

boring Ø x L in mm	17 x 84	30 x 94.5
vessels per rotor	8	8
<b>Cat. No.</b>	<b>1462-A</b>	<b>-</b>



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 | 1611



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,415
max. capacity	8 x 15 ml
run-up   run-down, braked in sec	22   25
angle   max. noise level	90°   53 dB (A)

<b>Cat. No.</b>	<b>1611</b>
-----------------	-------------

### Vessels

capacity in ml	5	6	7	10	15	2.6–3.4	2.7–3	4–5.5	4.5–5	7.5–8.2	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	12/13x75	12x82	12x100	13x100	17x100	13x65	11x66	15x75	11x92	15x92	13x75	13x100	16x75	16x100
max. RCF <sup>2)</sup>	1,914	1,914	2,415	2,415	2,415	1,914	1,914	1,914	2,415	2,415	1,914	2,415	1,914	2,415
radius in mm	107	107	135	135	135	107	107	107	135	135	107	135	107	135

<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>					<b>blood collection / urine vessels</b>								
-----------------	---------------------------	--	--	--	--	---	--	--	--	--	--	--	--	--



### Bucket

boring Ø x L in mm	13x53	13x53	13.2x81	13.2x81	17.5x81	13 x 53	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
vessels per rotor	8	8	8	8	8	8	8	8	8	8	8	8	8	8

<b>Cat. No.</b>	<b>1131-A</b>	<b>1131-A</b>	<b>1643</b>	<b>1643</b>	<b>1644</b>	<b>1131-A</b>	<b>1131-A</b>	<b>1132-A</b>	<b>1643</b>	<b>1644</b>	<b>1131-A</b>	<b>1643</b>	<b>1132-A</b>	<b>1644</b>
-----------------	---------------	---------------	-------------	-------------	-------------	---------------	---------------	---------------	-------------	-------------	---------------	-------------	---------------	-------------

## — SWING-OUT ROTOR, 12-PLACE | 1628



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,683
max. capacity	12 x 15 ml
run-up   run-down, braked in sec	22   25
angle   max. noise level	55° / 60° / 80°   52 dB (A)

<b>Cat. No.</b>	<b>1628</b>
-----------------	-------------

### Vessels

capacity in ml	5	15	2.6–3.4	2.7–3	4–5.5	7.5–8.2	1.6–5	4–7	8.5–10
Ø x L in mm	12/13x75	17x100	13x65	11x66	15x75	15x92	13x75	16x75	16x100
max. RCF <sup>2)</sup>	2,236	2,683	2,236	2,236	2,254	2,683	2,236	2,254	2,683
radius in mm	125	150	125	125	126	150	125	126	150

<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>		<b>blood collection / urine vessels</b>						
-----------------	---------------------------	--	---	--	--	--	--	--	--



### Bucket

boring Ø x L in mm	13.2x53	17.5x79	13.2x53	13.2x53	17.5x53	17.5x79	13.2x53	17.5x53	17.5x79
vessels per rotor	12	12	12	12	12	12	12	12	12

<b>Cat. No.</b>	<b>1127-A</b>	<b>1621</b>	<b>1127-A</b>	<b>1127-A</b>	<b>1122</b>	<b>1621</b>	<b>1127-A</b>	<b>1122</b>	<b>1621</b>
-----------------	---------------	-------------	---------------	---------------	-------------	-------------	---------------	-------------	-------------

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 | 1418



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,612
max. capacity	8 x 50 ml
run-up   run-down, braked in sec	36   43
angle   max. noise level	45°   53 dB (A)
<b>Cat. No.</b>	<b>1418</b>



ROTOFIX 32-A

### Vessels

capacity in ml	5	12	1.1–1.4	2.6–3.4	2.7–3	9–10	1.6–5	15	50	15	50	50
Ø x L in mm	12 x 75	17 x 100	8 x 66	13 x 65	11 x 66	16 x 92	13 x 75	17 x 120	29 x 115	17 x 100	29 x 115	29 x 107
max. RCF <sup>2)</sup>	2,182	2,540	2,182	2,182	2,182	2,540	2,182	2,594	2,486	2,540	2,486	2,486
radius in mm	122	142	122	122	122	142	122	145	139	142	139	139

Cat. No.	tubes <sup>2)</sup>		blood collection / urine vessels				tubes with screw cap					
	+ 1054-A	+ 0716	+ 1054-A	+ 1054-A	+ 1054-A	+ 0716	+ 1054-A	+ E2109	+ E2110-A	+ 0716		
<b>Carrier</b>												
boring Ø x L in mm	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	30.2 x 92	17.4 x 91	30.2 x 92	30.2 x 92
vessels per rotor	32	32	32	32	32	32	32	32	8	32	8	8
<b>Cat. No.</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1468</b>	<b>1467</b>	<b>1468</b>	<b>1468</b>

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 | 1620A

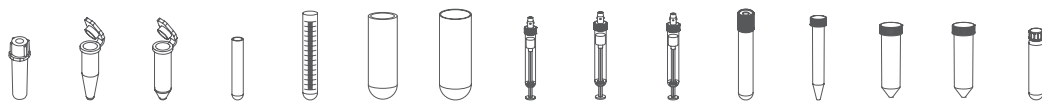


### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   4,226
max. capacity	6 x 85 ml
run-up   run-down, braked in sec	19   22
angle   max. noise level	35°   53 dB (A)

<b>Cat. No.</b>	<b>1620A</b>
-----------------	--------------

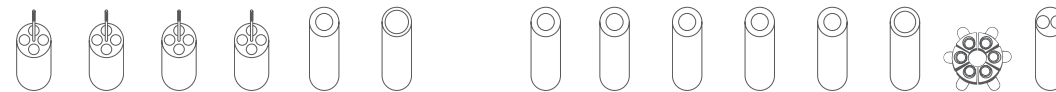
### Vessels



capacity in ml	0.5	1.5	2.0	3	15	50	94	7.5 – 8.2	9 – 10	10	8.5 – 10	15	50	50	10
Ø x L in mm	10.7 x 46	11 x 38	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	17 x 120	29 x 115	29 x 115	16 x 80
max. RCF <sup>2)</sup>	4,105	4,105	4,105	4,105	3,904	4,146	4,226	3,904	3,904	3,904	3,904	3,985	3,985	3,985	3,904
radius in mm	102	102	102	102	97	103	105	97	97	97	97	99	99	99	97
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>			<b>blood collection / urine vessels</b>				<b>tubes with screw cap</b>			



### Adapter



boring Ø x L in mm	11.4 x 39	11.4 x 39	11.4 x 39	11.4 x 39	17.5 x 91.5	35 x 89.3	38.6 x 90.2	17.5 x 91.5	17.5 x 91.5	17.5 x 91.5	17.5 x 91.5	17 x 106	29.8 x 96.7	-	16.5 x 74
vessels per rotor	24	24	24	24	6	6	6	6	6	6	6	6	3	6	12
<b>Cat. No.</b>	<b>1449</b>	<b>1449</b>	<b>1449</b>	<b>1449</b>	<b>1451</b>	<b>1463</b>	<b>-</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1466</b>	<b>1454</b>	<b>1646<sup>8)</sup></b>	<b>1448</b>

### Vessels

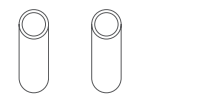


capacity in ml	30	50	85
Ø x L in mm	26 x 95	29 x 107	38 x 106
max. RCF <sup>2)</sup>	3,824	4,025	4,226
radius in mm	95	100	105

<b>Cat. No.</b>	<b>tubes with screw cap</b>		
-----------------	-----------------------------	--	--



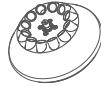
### Adapter



boring Ø x L in mm	26 x 85	29 x 92	38.6 x 90.2
vessels per rotor	6	6	6
<b>Cat. No.</b>	<b>1447</b>	<b>1446</b>	<b>-</b>

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.  
 The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 8) Adapter (Set), 6-place: for conical 50 ml tubes with screw cap.

## — ANGLE ROTOR, 12-PLACE | 1613



### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   4,146
max. capacity	12 x 15 ml
run-up   run-down, braked in sec	13   15
angle   max. noise level	35°   55 dB (A)
<b>Cat. No.</b>	<b>1613</b>



### Vessels

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	7.5-8.2	9-10	10
Ø x L in mm	10.7 x 46	10 x 88	12/13 x 75	12 x 82	17 x 100	8 x 66	13 x 65	11 x 66	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102
max. RCF <sup>2)</sup>	2,777	3,502	3,300	3,300	4,146	3,300	3,300	3,300	4,146	4,146	4,146	4,146	4,146
radius in mm	69	87	82	82	103	82	82	82	103	103	103	103	103
<b>Cat. No.</b>	<b>Pediatric</b>	<b>tubes<sup>2)</sup></b>				<b>blood collection / urine vessels</b>							



### Adapter

boring Ø x L in mm	11x35	11.5x67.5	13.5x60	13.5x60	17.7x88	13.5x60	13.5x60	13.5x60	17.7x88	17.7x88	17.7x88	17.7x88	17.7x88
vessels per rotor	12	12	12	12	12	12	12	12	12	12	12	12	12
<b>Cat. No.</b>	<b>2 x 1063-6 (6 pcs.)</b>	<b>6305</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

### Vessels

capacity in ml	1.6-5	8	8.5-10	15
Ø x L in mm	13 x 75	16 x 125	16 x 100	17 x 120
max. RCF <sup>2)</sup>	3,300	4,146	4,146	4,146
radius in mm	82	103	103	103
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>		<b>-</b>	



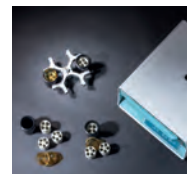
### Adapter

boring Ø x L in mm	13.5x60	17.7x88	17.7x88	17.7x88
vessels per rotor	12	6	12	6
<b>Cat. No.</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>-</b>

- 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.

## — PACKAGES

ROTOFIX 32 A BLOOD TUBE PACKAGE 1*	number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTOFIX 32 A centrifuge	1206	20	1.6 - 7	4,000	2,558
- 1 x swing-out rotor, 4-place	1624	16	4 - 10	4,000	2,522
- 4 x bucket	1481				
- 4 x lid (bioseal)	1492				
- 4 x adapter, 5-place	1383				
- 4 x adapter, 4-place	1348				
<b>1206SET1</b>					





# ROTOFIX 32 A

## Rugged and indispensable

The ruggedly built ROTOFIX 32 A benchtop centrifuge is a medical device used for separating whole blood or blood components of human origin, for example to obtain platelet-rich plasma for autologous therapies. The ROTOFIX 32 A delivers convincing performance thanks to its high capacity and the versatility of its rotor selection.

### — FEATURES

- RPM: 500 - 6,000 min<sup>-1</sup> – adjustable in increments of 100
- Max. RCF: 3,904
- Max. capacity: 8 x 50 ml
- Choice of 9 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Easy operation with keypad
- 2 individual deceleration stages

### — FIELDS OF APPLICATION

- Hospitals
- medical practices
- Dental surgeries
- Orthopedic practices



More information about the control panel can be found on [page 202](#)



\* If you use special PRP kits, please contact us: [info@hettichlab.com](mailto:info@hettichlab.com)

## TECHNICAL DATA

<b>ROTOFIX 32 A</b>	
voltage *)	208 – 240 V 1 ~
frequency	50 – 60 Hz
consumption	300 VA
emission, immunity	EN/IEC 61326-1, class B
max. capacity	8 x 50 ml
max. RPM	6,000 min <sup>-1</sup>
max. RCF	3,904
running time	1–99 min, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	366x430x257 mm
weight	approx. 23 kg
noise level	53 dB (A) with rotor 1418
<b>Cat. No.</b>	<b>1207</b>

100 – 127 V 1 ~ / 50 – 60 Hz \*)

1206-01



emission, immunity

FCC class B



\*) Other voltages on request.

## AVAILABLE ROTORS

### SWING-OUT ROTORS

	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 4-place	90°	4,000 min <sup>-1</sup>	16x10 ml	<b>1624</b>	68
 swing-out rotor, 4-place	90°	4,000 min <sup>-1</sup>	16x10 ml	<b>1324</b>	68

### ANGLE ROTORS

 angle rotor, 8-place	45°	4,000 min <sup>-1</sup>	8 x 50 ml	<b>1418</b>	69
 angle rotor, 6-place	35°	6,000 min <sup>-1</sup>	6 x 10ml	<b>1620A</b>	69

## SWING-OUT ROTOR, 4-PLACE | 1624



Rotor	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,665
max. capacity	16 x 10 ml
run-up   run-down, braked in sec	22   25
angle   max. noise level	90°   55 dB (A)
<b>Cat. No.</b>	<b>1624</b>



Bucket	
Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1481</b>



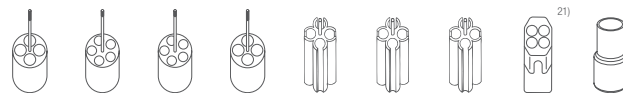
### Vessels

capacity in ml	4-5.5	4.5-5	4.9	7.5-8.2	7.5-8.2	9-10	10	8.5-10	20
Ø x L in mm	15 x 75	11 x 92	13 x 90	15 x 92	15 x 92	16 x 92	15 x 102	16 x 100	31 x 97
max. RCF <sup>2)</sup>	2,576	2,558	2,558	2,576	2,576	2,540	2,665	2,451	2,308
radius in mm	144	143	143	142	142	142	149	137	137
<b>Cat. No.</b>	<b>tubes / kits</b>								



### Adapter

boring Ø x L in mm	15.6x47	13.4x48	13.4x48	15.6x47	17.6x91	17.6x91	17.6x91	17.6x71.5	31x85
vessels per rotor	16	20	20	16	16	16	16	16	4
<b>Cat. No.</b>	<b>1459</b>	<b>1383</b>	<b>1383</b>	<b>1459</b>	<b>1329</b>	<b>1329</b>	<b>1329</b>	<b>1369<sup>4)</sup></b>	<b>1309</b>



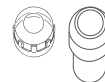
## SWING-OUT ROTOR, 4-PLACE | 1324



Rotor	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,630
max. capacity	16 x 10 ml
run-up   run-down, braked in sec	27   30
angle   max. noise level	90°   55 dB (A)
<b>Cat. No.</b>	<b>1324</b>

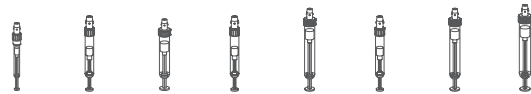


Bucket	
Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1490</b>



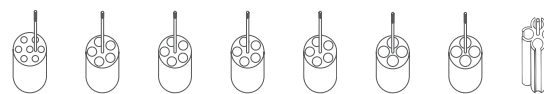
### Vessels

capacity in ml	1.1-1.4	2.6-3.4	4.9	2.7-3	4.5-5	4-5.5	7.5-8.2	9-10
Ø x L in mm	8 x 66	13 x 65	13 x 90	11 x 66	11 x 92	15 x 75	15 x 92	16 x 92
max. RCF <sup>2)</sup>	2,540	2,522	2,522	2,522	2,522	2,540	2,540	2,504
radius in mm	142	141	141	141	141	142	142	140
<b>Cat. No.</b>	<b>tubes / kits</b>							



### Adapter

boring Ø x L in mm	9x47	13.4x48	13.4x48	13.4x48	13.4x48	15.6x47	15.6x47	17.6x91
vessels per rotor	28	20	20	20	20	16	16	16
<b>Cat. No.</b>	<b>1457</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1459</b>	<b>1459</b>	<b>1329</b>



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

## — ANGLE ROTOR, 8-PLACE | 1418



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,683
max. capacity	8 x 50 ml
run-up   run-down, braked in sec	36   43
angle   max. noise level	45°   53 dB (A)
<b>Cat. No.</b>	<b>1418</b>



### Vessels

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	9–10	1.6–5	10	50
Ø x L in mm	8 x 66	13 x 65	11 x 66	16 x 92	13 x 75	16 x 100	29 x 107
max. RCF <sup>2)</sup>	2,182	2,182	2,182	2,540	2,182	2,683	2,486
radius in mm	122	122	122	142	122	150	139

Cat. No.	tubes / kits						
	+ 1054-A	+ 1054-A	+ 1054-A	+ 0716	+ 1054-A	+ 0716	+ E2110-A
<b>Carrier</b>							
boring Ø x L in mm	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	30.2 x 92
vessels per rotor	32	32	32	32	32	32	8
<b>Cat. No.</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1468</b>

## — ANGLE ROTOR, 6-PLACE | 1620A



### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   3,904
max. capacity	6 x 10 ml
run-up   run-down, braked in sec	19   22
angle   max. noise level	35°   53 dB (A)
<b>Cat. No.</b>	<b>1620A</b>



### Vessels

capacity in ml	7.5–8.2	9–10	10	8.5–10
Ø x L in mm	15 x 92	16 x 92	15 x 102	16 x 100
max. RCF <sup>2)</sup>	3,904	3,904	3,904	3,904
radius in mm	97	97	97	97

Cat. No.	tubes / kits			
<b>Adapter</b>				
boring Ø x L in mm	17.5 x 92	17.5 x 92	17.5 x 92	17.5 x 92
vessels per rotor	6	6	6	6
<b>Cat. No.</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>

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.



# UNIVERSAL 320 | 320 R

## A universal choice

The UNIVERSAL 320 is a compact, versatile and indispensable general purpose centrifuge. Excellent performance and a comprehensive range of accessories enable the UNIVERSAL 320 to carry out virtually any centrifuging tasks including plates, blood tubes, cell culture, microliter and cytology. This unit is available with refrigeration and a temperature range from -20 °C to +40 °C (UNIVERSAL 320 R).

### — FEATURES

- RPM: 500 - 16,000 min<sup>-1</sup> – adjustable in increments of 10
- Max. RCF: 24,900
- Max. capacity: 4 x 200 ml / 6 x 94 ml
- The universal choice among the benchtop centrifuges
- Choice of 18 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Noise level of 48 dB(A) with angle rotor 1611
- Easy operation with keypad and control knob
- Impulse key for short cycle mode
- 9 program memories
- 9 individual acceleration and 10 deceleration stages
- Model 320 R coolable from -20 to +40 °C (with pre-cooling function)

### — FIELDS OF APPLICATION

- Small laboratories
- Hospitals
- Cell Culture laboratories
- University / Academic research
- Pharmaceutical laboratories
- Food analyzing laboratories
- Physicians Office Lab (POL)



Centrifuge packages for the model can be found on [page 92](#)



More information about the control panel can be found on [page 202](#)

**CYTO**

Cyto system available for this model. More information on [page 180](#)



UNIVERSAL 320



UNIVERSAL 320 R



according to regulation (EU) 2017/746

## TECHNICAL DATA

	UNIVERSAL 320 non-refrigerated	UNIVERSAL 320 R refrigerated
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~      240 V 1 ~
frequency	50 – 60 Hz	50 – 60 Hz      60 Hz
consumption	400 VA	800 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	4 x 200 ml / 6 x 94 ml	4 x 200 ml / 6 x 94 ml
max. RPM	16,000 min <sup>-1</sup>	16,000 min <sup>-1</sup>
max. RCF	24,900	24,900
running time	1sec – 99 min: 59 sec, ∞ continuous run, short cycle mode (impulse button)	1sec – 99 min: 59 sec, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	401 x 529 x 346 mm	407 x 698 x 346 mm
weight	approx. 31 kg	approx. 52 kg
noise level	48 dB (A) with rotor 1611	50 dB (A) with rotor 1611
temperature control, infinitely variable	-	from -20 to +40 °C
<b>Cat. No.</b>	<b>1401</b>	<b>1406</b>
100 – 127 V 1 ~ / 50–60 Hz *)	1401-01	1406-01
consumption	400 VA	950 VA
emission, Immunity	FCC class B	FCC class B

\*) Other voltages on request.

## AVAILABLE ROTORS

SWING-OUT ROTORS	angle	max. RPM	max. capacity	Cat. No.	page
swing-out rotor, 4-places	90°	4,500 min <sup>-1</sup>	4x200 ml	<b>1554</b>	72
swing-out rotor, 4-places	90°	5,000 min <sup>-1</sup>	4x100 ml	<b>1494</b>	75
swing-out rotor, 4-places	90°	4,000 min <sup>-1</sup>	4x100 ml	<b>1624</b>	78
swing-out rotor, 4-places	90°	4,500 min <sup>-1</sup>	4x100 ml	<b>1324</b>	81
swing-out rotor, 8-places	90°	4,000 min <sup>-1</sup>	8x15 ml	<b>1611</b>	83
swing-out rotor, 12-places	55° / 60° / 80°	4,000 min <sup>-1</sup>	12x15 ml	<b>1628</b>	83
swing-out rotor, 8-places	45°	5,000 min <sup>-1</sup>	8x50 ml	<b>1617</b>	84
swing-out rotor, 6-places	90°	4,000 min <sup>-1</sup>	6x50 ml	<b>1619</b>	84
swing-out rotor, 2-places	90°	4,000 min <sup>-1</sup>	10 plates	<b>1460</b>	85
swing-out rotor, 24-places	90°	13,000 min <sup>-1</sup>	24x2 ml	<b>1555</b>	85
<b>ANGLE ROTORS</b>					
angle rotor, 24-places	50°	16,000 min <sup>-1</sup>	24x2 ml	<b>1552</b>	86
angle rotor, 30-places	45°	14,150 min <sup>-1</sup>	30x2 ml	<b>1553</b>	86
angle rotor, 64-places	45°	13,000 min <sup>-1</sup>	64x0.2 ml	<b>1551</b>	87
angle rotor, 18-places	45°	14,150 min <sup>-1</sup>	18 x 5 ml	<b>1627</b>	87
angle rotor, 6-places	35°	9,000 min <sup>-1</sup>	6x94 ml	<b>1556</b>	88
angle rotor, 12-places	35°	6,000 min <sup>-1</sup>	12x15 ml	<b>1613</b>	89
angle rotor, 12-places	35°	12,000 min <sup>-1</sup>	12x15 ml	<b>1615</b>	90
angle rotor, 8-places	45°	4,500 min <sup>-1</sup>	8x50 ml	<b>1418</b>	91

## SWING-OUT ROTOR, 4-PLACE | 1554



<b>Rotor</b>	
max. RPM   max. RCF	4,500 min <sup>1</sup>   3,328
max. capacity	4 x 200 ml
run-up   run-down, braked in sec	28   31
angle   max. noise level	90°   60 dB (A)
temperature in °C <sup>1)</sup>	-8
<b>Cat. No.</b>	<b>1554</b>



<b>Bucket with clamp lock</b>	
Lid bioseal <sup>5)</sup>	1561
<b>Cat. No.</b>	<b>1560</b>
<b>Bucket without clamp lock<sup>14)</sup></b>	
<b>Cat. No.</b>	<b>1565</b>



<b>Vessels</b>																	
capacity in ml	1.5	2.0	5	5	6	7	9	15	15	25	50	85	100	125	150		
Ø x L in mm	11 x 38	11 x 38	17 x 59	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	18 x 102	24 x 100	34 x 100	38 x 101	44 x 100	51 x 100	51 x 116		
max. RCF <sup>2)</sup>	3,328	2,332	3,328	3,215	3,215	3,215	3,215	3,215	3,260	3,056	3,147	3,260	3,124	3,328	3,328		
radius in mm	147	103	147	142	142	142	142	142	144	135	138	144	138	147	147		
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>												-	-

<b>Adapter</b>															
boring Ø x L in mm	11.5 x 39	11.5 x 39	17 x 52	13.5 x 60	13.5 x 60	13.5 x 60	17.5 x 60	17.5 x 60	18.5 x 74	25.2 x 66	35.2 x 69	38.5 x 74	45.5 x 69	52 x 77	52 x 77
vessels per rotor	56	56	16	28	28	28	20	20	16	4	4	4	4	4	4
<b>Cat. No.</b>	<b>1571</b>	<b>1571</b>	<b>1593</b>	<b>1589</b>	<b>1589</b>	<b>1589</b>	<b>1588</b>	<b>1588</b>	<b>1572</b>	<b>1573</b>	<b>1574</b>	<b>1575</b>	<b>1576</b>	<b>1594</b>	<b>1594</b>

<b>Vessels</b>															
capacity in ml	200	1.1-1.4	2.6-3.4	4.9	2.7-3	4-5	4-5.5	7.5-8.2	9-10	10	1.6-5	4-7	4-7	8.5-10	12
Ø x L in mm	56 x 112	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	13 x 75	13 x 100	16 x 75	16 x 100	17 x 102
max. RCF <sup>2)</sup>	3,328	3,215	3,215	3,215	3,215	3,215	3,215	3,215	3,215	3,215	3,215	3,215	3,215	3,215	3,215
radius in mm	147	142	142	142	142	142	142	142	142	142	142	142	142	142	142
<b>Cat. No.</b>	<b>0555</b>	<b>blood collection / urine vessels</b>													

<b>Adapter</b>															
boring Ø x L in mm	57 x 77	13.5 x 60	13.5 x 60	13.5 x 60	13.5 x 60	13.5 x 60	17.5 x 60	17.5 x 60	17.5 x 60	17.5 x 60	13.5 x 60	13.5 x 60	17.5 x 60	17.5 x 60	17.5 x 74
vessels per rotor	4	28	28	28	28	28	20	20	20	20	28	28	20	20	12
<b>Cat. No.</b>	-	<b>1589</b>	<b>1589</b>	<b>1589</b>	<b>1589</b>	<b>1589</b>	<b>1588</b>	<b>1588</b>	<b>1588</b>	<b>1588</b>	<b>1589</b>	<b>1589</b>	<b>1588</b>	<b>1588</b>	<b>1591</b>

<b>Vessels</b>																
capacity in ml	11	15	15 <sup>3,2)</sup>	30	50	12	25	30	50	10	30	50	85	94	30	
Ø x L in mm	16 x 110	17 x 120	17 x 120	25 x 110	30 x 115	17 x 100	25 x 90	15 x 110	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	38 x 102	44 x 105	
max. RCF <sup>2)</sup>	3,260	3,328	3,328	3,328	3,328	3,260	3,328	3,328	3,328	3,215	3,260	3,260	3,260	3,260	3,192	
radius in mm	144	147	147	147	147	144	147	147	147	142	144	144	144	144	141	
<b>Cat. No.</b>	<b>Nunc<sup>®</sup></b>	<b>tubes with screw cap</b>													<b>0534<sup>®</sup></b>	

<b>Adapter</b>															
boring Ø x L in mm	17.5 x 74	17 x 77	17 x 77	26 x 77	30 x 77	17.5 x 74	26 x 65	26 x 65	30 x 77	16.5 x 60	26 x 74	29 x 74	38.5 x 74	38.5 x 74	45 x 71
vessels per rotor	16	8	12	4	4	16	4	4	4	20	4	4	4	4	4
<b>Cat. No.</b>	<b>1581</b>	<b>1577</b>	<b>1595</b>	<b>1578</b>	<b>1579</b>	<b>1581</b>	<b>1582</b>	<b>1582</b>	<b>1583</b>	<b>1584</b>	<b>1585</b>	<b>1586</b>	<b>1575</b>	<b>1575</b>	<b>1587</b>

## SWING-OUT ROTOR, 4-PLACE | 1554



### Rotor

max. RPM   max. RCF	4,500 min <sup>-1</sup>   3,328
max. capacity	4 x 50 ml
run-up   run-down, braked in sec	28   31
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	-8
<b>Cat. No.</b>	<b>1554</b>



### Bucket

<b>Cat. No.</b>	<b>1559</b>
-----------------	-------------



### Vessels

capacity in ml	5	6	7	8	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
Ø x L in mm	12x75	12x82	12x100	16x125	14x100	17x100	13x65	11x66	15x75	11x92	13x90	16 x 92	15 x 102	13x75	13x100
max. RCF <sup>2)</sup>	3,215	3,215	3,215	3,328	3,260	3,260	3,215	3,215	3,215	3,215	3,215	3,260	3,260	3,215	3,215
radius in mm	142	142	142	147	144	144	142	142	142	142	142	144	144	142	142
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>						<b>blood collection / urine vessels</b>								



### Adapter

boring Ø x L in mm	13.4x57.5	13.4x57.5	13.4x57.5	16.4x82	17.5x81	17.5x81	13.4x57.5	13.4x57.5	17.5x81	13.4x57.5	13.4x57.5	17.5x81	17.5x81	13.4x57.5	13.4x57.5
vessels per rotor	20	20	20	16	16	16	20	20	16	20	20	16	16	20	20
<b>Cat. No.</b>	<b>1486</b>	<b>1486</b>	<b>1486</b>	<b>1488</b>	<b>1482A</b>	<b>1482A</b>	<b>1486</b>	<b>1486</b>	<b>1482A</b>	<b>1486</b>	<b>1486</b>	<b>1482A</b>	<b>1482A</b>	<b>1486</b>	<b>1486</b>

### Vessels

capacity in ml	4 – 7	8.5 – 10	12	15	50	12	50
Ø x L in mm	16x75	16x100	17x102	17x120	29 x 115	17x100	29x115
max. RCF <sup>2)</sup>	3,215	3,260	3,147	3,351	3,305	3,260	3,305
radius in mm	142	144	139	148	146	144	146
<b>Cat. No.</b>	<b>blood- / urine vessels</b>			<b>tubes with screw cap</b>			



### Adapter

boring Ø x L in mm	17.5x81	17.5x81	17.5x74	17x100	30x98	17.5x81	30x98
vessels per rotor	16	16	12	16	4	16	4
<b>Cat. No.</b>	<b>1482A</b>	<b>1482A</b>	<b>1487</b>	<b>1483A</b>	<b>1484</b>	<b>1482A</b>	<b>1484<sup>4)</sup></b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 3.2) When using these tubes, bucket 1560 cannot be closed with lid 1561.
- 4) Please remove the spacer.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
- 6) A rubber stopper for closing the tube for agitating or mixing is available under Cat. No. 0535. The tube may not be centrifuged with the stopper.
- 14) 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.



## — SWING-OUT ROTOR, 4-PLACE | 1554



### Rotor

max. RPM   max. RCF	4,500 min <sup>-1</sup>   3,260
max. capacity	8x50 ml
run-up   run-down, braked in sec	28   31
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	-8

**Cat. No.** 1554

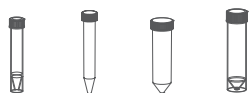


### Bucket

**Cat. No.** 1563



### Vessels



capacity in ml	12	15	50	50
Ø x L in mm	17x100	17x120	29x115	29x115
max. RCF <sup>2)</sup>	3,260	3,260	3,260	3,260
radius in mm	144	144	144	144

**Cat. No.** tubes with screw cap

+ E 2109 +E2110-A



### Adapter

boring Ø x L in mm	17x87	17x87	30x87	30x87
vessels per rotor	8	8	8	8

**Cat. No.** 1592 1592 - -

1) For cooled versions: Lowest temperature achievable with precooling and max. 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 | 1494



### Rotor

max. RPM   max. RCF	5,000 min <sup>-1</sup>   4,193
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	30   32
angle   max. noise level	90°   56 dB (A)
temperature in °C <sup>1)</sup>	-10
<b>Cat. No.</b>	<b>1494</b>



### Bucket

<b>Cat. No.</b>	<b>1425</b>
-----------------	-------------



### Vessels

capacity in ml	1.5	2.0	1	3	5	6	7	9	15	25	50	100	1-8
Ø x L in mm	11 x 38	11 x 38	6 x 45	10 x 60	12/18 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	simple / multiple
max. RCF <sup>2)</sup>	3,885	3,885	3,969	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,801	2,879
radius in mm	139	139	142	140	140	140	140	140	140	140	140	136	103
<b>Cat. No.</b>	<b>microliter tubes</b>		<b>Rhesus</b>	<b>tubes<sup>2)</sup></b>									<b>cyto chambers</b>



### Adapter

boring Ø x L in mm	11.2 x 38	11.2 x 38	6.5 x 34	10.5 x 40	13.4 x 50	12.5 x 60	12.5 x 60	17.5 x 84	17.5 x 84	25.5 x 84	35.5 x 84	45.5 x 80	-
vessels per rotor	36	36	144	56	28	48	48	28	28	8	4	4	4
<b>Cat. No.</b>	<b>1444</b>	<b>1444</b>	<b>1432</b>	<b>1433</b>	<b>1438</b>	<b>1434</b>	<b>1434</b>	<b>1431</b>	<b>1431</b>	<b>1435</b>	<b>1436</b>	<b>1437</b>	<b>1452</b>

### Vessels

capacity in ml	2.6-3.4	2.7-3	4-5.5	4.5-5	4.9	7.5-8.2	9-10	1.6-5	4-7	4-7	8.5-10	50
Ø x L in mm	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 100	29 x 115
max. RCF <sup>2)</sup>	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,913	4,081
radius in mm	140	140	140	140	140	140	140	140	140	140	140	146
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>											<b>-</b>



### Adapter

boring Ø x L in mm	13.4 x 50	13.4 x 50	16.5 x 50	13.4 x 50	13.4 x 50	16.5 x 50	17 x 45	13.4 x 50	13.4 x 50	16.5 x 50	16.5 x 50	30 x 90
vessels per rotor	28	28	28	28	28	28	16	28	28	28	28	4
<b>Cat. No.</b>	<b>1438</b>	<b>1438</b>	<b>1441</b>	<b>1438</b>	<b>1438</b>	<b>1441</b>	<b>1439</b>	<b>1438</b>	<b>1438</b>	<b>1441</b>	<b>1441</b>	<b>1443</b>

### CYTO

Cyto system available for this model.  
More information on [page 180](#)

1) For cooled versions: Lowest temperature achievable with precooling and max. 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 | 1494



### Rotor

max. RPM   max. RCF	5,000 min <sup>-1</sup>   4,109
max. capacity	4 x 50 ml
run-up   run-down, braked in sec	30   32
angle   max. noise level	90°   54 dB (A)
temperature in °C <sup>1)</sup>	-7
<b>Cat. No.</b>	<b>1494</b>

### Bucket



Lid	1421
<b>Cat. No.</b>	<b>1427</b>



### Vessels

capacity in ml	1.5	2.0	1	3	5	6	7	9	15	25	50	1.1-1.4	2.6-2.9	2.7-3	4-5.5
Ø x L in mm	11 x 38	11 x 38	6 x 45	10 x 60	12/13 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	8 x 66	13 x 65	11 x 66	15 x 75
max. RCF <sup>2)</sup>	4,109	4,109	4,081	4,053	4,025	4,053	3,941	3,941	3,941	3,941	3,941	4,109	4,025	4,053	4,109
radius in mm	147	147	146	145	144	145	141	141	141	141	141	147	144	145	147
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>Rhesus tubes<sup>2)</sup></b>								<b>blood collection / urine vessels</b>			



### Adapter

boring Ø x L in mm	11.5 x 38	11.5 x 38	6.5 x 23	10.5 x 23	13.4 x 58	12.5 x 42	12.4 x 82.5	15 x 69.5	17.8 x 82.5	25.5 x 82.5	35.5 x 82.5	9 x 41	13.4 x 58	12.5 x 42	15.6 x 41
vessels per rotor	36	36	120	48	32	48	48	24	24	8	4	48	32	48	20
<b>Cat. No.</b>	<b>5277</b>	<b>5277</b>	<b>1357</b>	<b>1327</b>	<b>1732</b>	<b>5229</b>	<b>5230</b>	<b>5237</b>	<b>5231</b>	<b>5232</b>	<b>5233</b>	<b>5278</b>	<b>1732</b>	<b>5229</b>	<b>5279</b>

### Vessels

capacity in ml	4.5 - 5	4.9	7.5 - 8.2	9 - 10	1.6 - 5	4 - 7	4 - 7	8.5 - 10	15	50	25	30	50
Ø x L in mm	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 100	17 x 120	29 x 115	25 x 90	25 x 110	34 x 100
max. RCF <sup>2)</sup>	3,941	4,025	4,109	3,969	4,025	4,025	3,969	3,941	4,165	4,053	3,665	4,025	3,941
radius in mm	141	144	147	142	144	144	142	141	145	145	142	144	141
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>								<b>tubes with screw cap</b>				



### Adapter

boring Ø x L in mm	12.4 x 82.5	13.4 x 58	15.6 x 41	17 x 66	13.4 x 58	13.4 x 58	17 x 66	17.8 x 82.5	17 x 90	30 x 90	25.5 x 72	25.5 x 85	35.5 x 82.5	+ 6316
vessels per rotor	48	32	20	20	32	32	20	24	4	4	8	4	4	
<b>Cat. No.</b>	<b>5230</b>	<b>1732</b>	<b>5279</b>	<b>5271<sup>4)</sup></b>	<b>1732</b>	<b>1732</b>	<b>5271<sup>4)</sup></b>	<b>5231</b>	<b>5275</b>	<b>5276</b>	<b>1731</b>	<b>5272</b>	<b>5233<sup>4)</sup></b>	

1) For cooled versions: Lowest temperature achievable with precooling and max. 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.  
 3.1) When using these tubes, carrier 1427 cannot be closed with lid 1421.  
 4) Please remove the spacer.

## SWING-OUT ROTOR, 4-PLACE | 1494



### Rotor

max. RPM   max. RCF	5.000 min <sup>-1</sup>   4.193
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	30   32
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	-10
<b>Cat. No.</b>	<b>1494</b>

### Bucket

Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1495</b>



### Vessels

capacity in ml	0.5	1.5	2.0	1	3	5	6	7	9	15	25	50	94	100
Ø x L in mm	10.7x46	11x38	11x38	6 x 45	10 x 60	12/13x75	12x82	12x100	14x100	17x100	24x100	34x100	38x102	44x100
max. RCF <sup>2)</sup>	3,745	3,857	3,857	4,081	4,137	4,025	4,025	4,025	3,997	3,997	3,829	3,801	4,109	4,025
radius in mm	134	138	138	145	148	144	144	144	143	143	137	136	147	144
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>Rhesus</b>	<b>tubes<sup>2)</sup></b>								



### Adapter

boring Ø x L in mm	11.2x38	11.2x38	11.2x38	6.5x34	10.5x40	13.4x45	13.4x45	13.4x45	17.6x89	17.6x89	25.2x77	35.2x77	38.5x92	45.6x98
vessels per rotor	20	20	20	108	36	20	20	20	16	16	4	4	4	4
<b>Cat. No.</b>	<b>1351</b>	<b>1351</b>	<b>1351</b>	<b>1339</b>	<b>1343</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1329</b>	<b>1329</b>	<b>1330</b>	<b>1331</b>	<b>1396</b>	<b>0761</b>

### Vessels

capacity in ml	1.1–1.4	2.7–3	4.5–5	2.6–2.9	4.9	4–5.5	7.5–8.2	9–10	10	1.6–7	1.6–7	4–10	4–10
Ø x L in mm	8 x 66	11x66	11x92	13x65	13x90	15x75	15x92	16 x 92	15 x 102	13x75	13 x 100	16 x 75	16 x 100
max. RCF <sup>2)</sup>	4,053	4,025	4,025	4,025	4,025	4,053	4,053	3,997	4,193	4,025	4,025	4,025	4,025
radius in mm	145	144	144	144	144	145	145	143	150	144	144	144	144
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>												



### Adapter

boring Ø x L in mm	9x47	13.4x45	13.4x45	13.4x45	13.4x45	15.6x47	15.6x47	17.6x89	17.6x89	13.4x45	13.4x45	16.5x52	16.5x52
vessels per rotor	28	20	20	20	20	16	16	16	16	20	20	16	16
<b>Cat. No.</b>	<b>1457</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1459</b>	<b>1459</b>	<b>1329</b>	<b>1329<sup>4)</sup></b>	<b>1383</b>	<b>1383</b>	<b>1348</b>	<b>1348</b>

### Vessels

capacity in ml	15	30	50	12	25	50	10	30	50	85	30
Ø x L in mm	17 x 120	25 x 110	29 x 115	17 x 100	25 x 90	29 x 115	16 x 80	26 x 95	29x107	38x106	44x105
max. RCF <sup>2)</sup>	4,193	4,193	4,193	4,193	3,689	4,193	4,025	3,857	4,137	4,109	3,997
radius in mm	150	150	150	150	132	150	144	138	148	147	143
<b>Cat. No.</b>	<b>tubes with screw cap</b>										<b>0534<sup>9)</sup></b>

chrome bath tube



### Adapter

boring Ø x L in mm	17x90	26x80	30x90	17x80	26x72	29.5x80	16.5x52	26x83	29x93	38.5x92	45.9x98
vessels per rotor	4	4	4	4	4	4	16	4	4	4	4
<b>Cat. No.</b>	<b>1347</b>	<b>1365</b>	<b>1384</b>	<b>6311</b>	<b>1363</b>	<b>6318</b>	<b>1348</b>	<b>4417</b>	<b>4416</b>	<b>1396</b>	<b>0765</b>

Spacer

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 1495 cannot be closed with lid 1492.
- 4) Please remove the spacer.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-Q20.
- 6) A rubber stopper for closing the tube for agitating or mixing is available under Cat. No. 0535. The tube may not be centrifuged with the stopper.



## SWING-OUT ROTOR, 4-PLACE | 1624



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,665
max. capacity	4 x 50 ml
run-up   run-down, braked in sec	20   25
angle	90°
<b>Cat. No.</b>	<b>1624</b>



### Vessels

capacity in ml	5	5	6	7	9	9	15	15	20	25	45	50	1-8
Ø x L in mm	12x75	12x75	12x82	12x100	14x100	14x100	17x100	17x100	21x100	24x100	31x100	34x100	simple / multiple
max. RCF <sup>2)</sup>	2,057	2,164	2,308	2,308	2,308	2,415	2,308	2,415	2,361	2,451	2,361	2,451	1,646
radius in mm	115	121	129	129	129	135	129	137	132	137	132	137	92
temperature in °C <sup>1)</sup>	-17	-17	-17	-17	-17	-15	-17	-15	-15	-15	-15	-15	-16
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>												<b>cyto chambers</b>



### Carrier

boring Ø x L in mm	12x75	13.5x65	12.5x71.5	12.5x71.5	14.6x74	14.6x78	17.6x71.5	17.6x78	21.5x74	26x78	32x74	35x78	-
vessels per rotor	16	68	16	16	20	40	16	28	8	8	4	4	4
<b>Cat. No.</b>	<b>1369-91</b>	<b>1372</b>	<b>1369-92</b>	<b>1369-92</b>	<b>1370</b>	<b>1741</b>	<b>1369</b>	<b>1742</b>	<b>1346</b>	<b>1745</b>	<b>1345</b>	<b>1746</b>	<b>1660</b>

### Vessels

capacity in ml	1.1-1.4	2.6-3.4	4.5-5	4.9	1.6-5	4-7	4-7	4-7	8.5-10	30
Ø x L in mm	8 x 66	13x65	15x75	13x90	13x75	16 x 75	13 x 100	13 x 100	16 x 100	26 x 95
max. RCF <sup>2)</sup>	2,415	2,325	2,325	2,451	2,325	2,325	2,361	2,451	2,308	2,451
radius in mm	135	130	130	137	130	130	132	137	129	137
temperature in °C <sup>1)</sup>	-15	-15	-15	-15	-15	-15	-15	-15	-17	-15
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>									<b>-</b>



### Carrier

boring Ø x L in mm	14.6x78	17.6x78	17.6x78	14.6x78	17.6x78	17.6x78	14.6x74	13.5x78	17.6x71.5	26x78
vessels per rotor	40	28	28	40	28	28	20	28	16	8
<b>Cat. No.</b>	<b>1741</b>	<b>1742</b>	<b>1742</b>	<b>1741</b>	<b>1742</b>	<b>1742</b>	<b>1370<sup>4)</sup></b>	<b>1739</b>	<b>1369<sup>4)</sup></b>	<b>1745</b>

### CYTO

For more information about our Cyto accessory, see [page 178](#)

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 spacer.
- 5) Tested by the TÜV in conformity with DIN EN 61010. section 2-020.
- 16) Packed in units of 10 pieces.
- 20) This combination permits no Vacutainers made of glass.

## — SWING-OUT ROTOR, 4-PLACE | 1624



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   1,968
max. capacity	48 x 4 ml
run-up   run-down, braked in sec	22   25
angle   max. noise level	90°   48 dB (A)
temperature in °C	-15
<b>Cat. No.</b>	<b>1624</b>



### Bucket

Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1366</b>



### Vessels

capacity in ml	1.5	2.0	1	4
Ø x L in mm	11 x 38	11 x 38	6 x 45	12 x 60
max. RCF <sup>2)</sup>	1,968	1,968	1,950	1,932
radius in mm	110	110	109	108
<b>Cat. No.</b>	<b>microliter tubes</b>	<b>Rhesus</b>	<b>tubes<sup>2)</sup></b>	



### Adapter

boring Ø x L in mm	11.5x38	11.5x38	6.5x23	12.5x44
vessels per rotor	36	36	120	48
<b>Cat. No.</b>	<b>5277</b>	<b>5277</b>	<b>1357</b>	<b>1326</b>

## — SWING-OUT ROTOR, 4-PLACE | 1624



### Rotor

max. RPM   max. RCF <sup>2)</sup>	4,000 min <sup>-1</sup>   2,665
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	20   25
angle   max. noise level	90°   58 dB (A)
temperature in °C	-15
<b>Cat. No.</b>	<b>1624</b>



### Bucket

Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1481</b>



### Vessels

capacity in ml	0.5	1.5	2.0	1	3	4	5	6	7	9	15	25	50	85	100
Ø x L in mm	10.7x46	11x38	11x38	6x45	10x60	10x88	12x75	12x82	12x100	14x100	17x100	24x100	34x100	38x106	44x100
max. RCF <sup>2)</sup>	2,379	2,451	2,451	2,594	2,630	2,630	2,558	2,558	2,558	2,540	2,540	2,433	2,415	2,612	2,558
radius in mm	133	137	137	145	147	131	143	143	143	142	142	136	135	146	143
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>		<b>Rhesus</b>	<b>tubes<sup>2)</sup></b>										



### Adapter

																Spacer
boring Ø x L in mm	11.2x38	11.2x38	11.2x38	6.5x34	10.5x43	13.4x45	13.4x45	13.4x45	13.4x45	17.6x89	17.6x89	25.2x77	35.2x75	38.5x92	45.9x98	
vessels per rotor	20	20	20	108	36	20	20	20	20	16	16	4	4	4	4	
<b>Cat. No.</b>	<b>1351</b>	<b>1351</b>	<b>1351</b>	<b>1339</b>	<b>1343</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1329</b>	<b>1329</b>	<b>1330</b>	<b>1331</b>	<b>1396</b>	<b>0761</b>	

## SWING-OUT ROTOR, 4-PLACE | 1624



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,665
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	20   25
angle   max. noise level	90°   58 dB (A)
temperature in °C	-15
<b>Cat. No.</b>	<b>1624</b>

### Bucket

Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1481</b>



### Vessels

capacity in ml	1.1–1.4	2.7–3	4.5–5	2.6–2.9	4.9	4–8.5	7.5–8.2	9–10	10	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	8 x 66	11 x 66	11 x 92	13 x 65	13 x 90	15 x 75	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100
max. RCF <sup>2)</sup>	2,576	2,558	2,558	2,558	2,558	2,576	2,576	2,540	2,665	2,558	2,558	2,522	2,522
radius in mm	144	143	143	143	143	144	144	142	149	143	143	141	141
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>												



### Adapter

boring Ø x L in mm	9 x 47	13.4 x 45	13.4 x 45	13.4 x 45	13.4 x 45	15.6 x 47	15.6 x 47	17.6 x 89	17.6 x 89	13.4 x 45	13.4 x 45	16.5 x 52	16.5 x 52
vessels per rotor	28	20	20	20	20	16	16	16	16	20	20	16	16
<b>Cat. No.</b>	<b>1457</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1459</b>	<b>1459</b>	<b>1329</b>	<b>1329<sup>4)</sup></b>	<b>1383</b>	<b>1383</b>	<b>1348</b>	<b>1348</b>

### Vessels

capacity in ml	15	50	12	25	30	50	10	30	50	85	30	
Ø x L in mm	17 x 120	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	44 x 105	
max. RCF <sup>2)</sup>	2,665	2,665	2,665	2,343	2,665	2,665	2,522	2,451	2,630	2,612	2,540	
radius in mm	149	149	149	131	149	149	141	137	147	146	142	
<b>Cat. No.</b>	<b>tubes with screw cap</b>											<b>0534<sup>6)</sup></b>

chrome bath tube



### Adapter

boring Ø x L in mm	17 x 90	30 x 90	17 x 80	26 x 72	26 x 80	29.5 x 80	16.5 x 52	26 x 83	29 x 93	38.5 x 92	45.9 x 98
vessels per rotor	4	4	4	4	4	4	16	4	4	4	4
<b>Cat. No.</b>	<b>1347</b>	<b>1384</b>	<b>6311</b>	<b>1363</b>	<b>1365</b>	<b>6318</b>	<b>1348</b>	<b>4417</b>	<b>4416</b>	<b>1396</b>	<b>0765</b>

Spacer

1) For cooled versions: Lowest temperature achievable with precooling and max. 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 1752 or 5051 cannot be closed with lid 1751 or 5053.  
 4) Please remove the spacer.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
 6) A rubber stopper for closing the tube for agitating or mixing is available under Cat. No. 0535. The tube may not be centrifuged with the stopper.

## SWING-OUT ROTOR, 4-PLACE | 1324



### Rotor

max. RPM   max. RCF	4,500 min <sup>-1</sup>   3,328
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	27   30
angle   max. noise level	90°   58 dB (A)
temperature in °C	-6
<b>Cat. No.</b>	<b>1324</b>

### Bucket

Lid bioseal <sup>5)</sup>	1492
<b>Cat. No.</b>	<b>1490</b>



### Vessels

capacity in ml	0.5	1.5	2.0	1	3	4	5	6	7	9	15	25	50	85	100
Ø x L in mm	10.7x46	11x38	11x38	6x45	10x60	10x88	12x75	12x82	12x100	14x100	17x100	24x100	34x100	38x106	44x100
max. RCF <sup>2)</sup>	2,966	3,056	3,056	3,237	3,283	3,283	3,192	3,192	3,192	3,170	3,170	3,034	3,011	3,260	3,192
radius in mm	131	135	135	143	145	145	141	141	141	140	140	134	133	144	141
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>Rhesus</b>	<b>tubes<sup>2)</sup></b>									



### Adapter

boring Ø x L in mm	11.2x38	11.2x38	11.2x38	6.5x34	10.5x43	10.5x43	13.4x45	13.4x45	13.4x45	17.6x89	17.6x89	25.2x77	35.2x77	38.5x92	45.9x100.5
vessels per rotor	20	20	20	108	36	36	20	20	20	16	16	4	4	4	4
<b>Cat. No.</b>	<b>1351</b>	<b>1351</b>	<b>1351</b>	<b>1339</b>	<b>1343</b>	<b>1343</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1329</b>	<b>1329</b>	<b>1330</b>	<b>1331</b>	<b>1396</b>	<b>0761</b>

### Vessels

capacity in ml	1.1–1.4	2.6–2.9	4.9	2.7–3	4.5–5	4–5.5	7.5–8.2	9–10	10	1.6–5	4–7	4–7	8.5–10	15
Ø x L in mm	8 x 66	13x65	13x90	11x66	11x92	15x75	15x92	16x92	15x102	13x75	13x100	16x75	16x100	17x120
max. RCF <sup>2)</sup>	3,215	3,192	3,192	3,192	3,192	3,215	3,215	3,170	3,328	3,192	3,192	3,147	3,147	3,328
radius in mm	142	141	141	141	141	142	142	140	147	141	141	139	139	147
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>													<b>-</b>



### Adapter

boring Ø x L in mm	9x47	13.4x45	13.4x45	13.4x45	13.4x45	15.6x47	15.6x47	17.6x89	17.6x89	13.4x45	13.4x45	16.5x52	16.5x52	17x90
vessels per rotor	28	20	20	20	20	16	16	16	16	20	20	16	16	4
<b>Cat. No.</b>	<b>1457</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1383</b>	<b>1459</b>	<b>1459</b>	<b>1329</b>	<b>1329<sup>4)</sup></b>	<b>1383</b>	<b>1383</b>	<b>1348</b>	<b>1348</b>	<b>1347</b>

### Vessels

Kapazität in ml	15	30	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	17x120	25 x 110	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	44 x 105
max. RCF <sup>2)</sup>	3,328	3,328	3,328	3,328	2,920	3,328	3,328	3,147	3,056	3,283	3,260	3,170
radius in mm	147	147	147	147	129	147	147	139	135	145	144	140
<b>Cat. No.</b>	<b>tubes with screw cap</b>											<b>- 6)</b>



### Adapter

boring Ø x L in mm	17 x 107	26x80	30x90	17x80	26x72	26x80	29.5x80	16,5x52	26x83	29x93	38.5x92	45.9x100.5
vessels per rotor	12	4	4	4	4	4	4	16	4	4	4	4
<b>Cat. No.</b>	<b>1356</b>	<b>1365</b>	<b>1384</b>	<b>6311</b>	<b>1363</b>	<b>1365</b>	<b>6318</b>	<b>1348</b>	<b>4417</b>	<b>4416</b>	<b>1396</b>	<b>0765</b>



## — SWING-OUT ROTOR, 4-PLACE | 1324



### Rotor

max. RPM   max. RCF	4,500 min <sup>1</sup>   3,305
max. capacity	4 x 50 ml
run-up   run-down, braked in sec	27   30
angle   max. noise level	90°   54 dB (A)
temperature in °C	-6
<b>Cat. No.</b>	<b>1324</b>



### Bucket

<b>Cat. No.</b>	<b>1398</b>
-----------------	-------------



### Vessels

capacity in ml	9	15	4-4,5	9-10	10	4-7	8,5-10	15	50	12	50
Ø x L in mm	14x100	17x100	15x75	16x92	15x102	16x75	16x100	17 x 120	29 x 115	17 x 100	29 x 115
max. RCF <sup>2)</sup>	3,192	3,192	2,875	3,192	3,192	3,034	3,034	3,305	3,260	3,192	3,260
radius in mm	141	141	127	141	141	134	134	146	144	141	144
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>		<b>blood collection / urine vessels</b>				<b>tubes with screw cap</b>				



### Adapter

boring Ø x L in mm	17.5x81	17.5x81	17.5x81	17.5x81	17.5x81	17.5x81	17.5x81	17x100	30x98	17.5x81	30x98
vessels per rotor	16	16	16	16	16	16	16	16	4	16	4
<b>Cat. No.</b>	<b>1482A</b>	<b>1482A</b>	<b>1482A</b>	<b>1482A</b>	<b>1482A</b>	<b>1482A</b>	<b>1482A</b>	<b>1483A</b>	<b>1484</b>	<b>1482A</b>	<b>1484<sup>4)</sup></b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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 spacer.

## — SWING-OUT ROTOR, 8-PLACE | 1611



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,415
max. capacity	8 x 15 ml
run-up   run-down, braked in sec	20   20
angle   max. noise level	90°   48 dB (A)
temperature in °C <sup>1)</sup>	-16
<b>Cat. No.</b>	<b>1611</b>



### Vessels

capacity in ml	5	6	7	10	15	2.6–2.9	2.7–3	4–5.5	4.5–5	7.5–8.2	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	12/13 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
max. RCF <sup>2)</sup>	1,914	1,914	2,415	2,415	2,415	1,914	1,914	1,914	2,415	2,415	1,914	2,415	1,914	2,415
radius in mm	107	107	135	135	135	107	107	107	135	135	107	135	107	135
<b>Cat. No.</b>	<b>tubes <sup>2)</sup></b>					<b>blood collection / urine vessels</b>								



### Bucket

boring Ø x L in mm	13 x 53	13 x 53	13.2 x 81	13.2 x 81	17.5 x 81	13 x 53	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
vessels per rotor	8	8	8	8	8	8	8	8	8	8	8	8	8	8
<b>Cat. No.</b>	<b>1131-A</b>	<b>1131-A</b>	<b>1643</b>	<b>1643</b>	<b>1644</b>	<b>1131-A</b>	<b>1131-A</b>	<b>1132-A</b>	<b>1643</b>	<b>1644</b>	<b>1131-A</b>	<b>1643</b>	<b>1132-A</b>	<b>1644</b>

## — SWING-OUT ROTOR, 12-PLACE | 1628



### Rotor

max. RPM   max. RCF <sup>2)</sup>	5,000 min <sup>-1</sup>   4,193
max. capacity	12 x 15 ml
run-up   run-down, braked in sec	16   16
angle   max. noise level	55° / 60° / 80°   54 dB (A)
<b>Cat. No.</b>	<b>1628</b>



### Vessels

capacity in ml	5	10	15	2.6–2.9	2.7–3	4–5.5	7.5–8.2	1.6–5	4–7	8.5–10
Ø x L in mm	12/13 x 75	17 x 100	17 x 100	13 x 65	11 x 66	15 x 75	15 x 92	13 x 75	16 x 75	16 x 100
max. RCF <sup>2)</sup>	3,466	3,522	4,193	3,466	3,466	3,522	4,193	3,466	3,522	4,193
radius in mm	124	126	150	124	124	126	150	124	126	150
temperature in °C <sup>1)</sup>	-10	-10	-10	-15	-15	-15	-10	-15	-15	-10
<b>Cat. No.</b>	<b>tubes <sup>2)</sup></b>			<b>blood collection / urine vessels</b>						



### Bucket

boring Ø x L in mm	13.2 x 53	17.5 x 53	17.5 x 79	13.2 x 53	13.2 x 53	17.5 x 53	17.5 x 79	13.2 x 53	17.5 x 53	17.5 x 79
vessels per rotor	12	12	12	12	12	12	12	12	12	12
<b>Cat. No.</b>	<b>1127-A</b>	<b>1122</b>	<b>1621</b>	<b>1127-A</b>	<b>1127-A</b>	<b>1122</b>	<b>1621</b>	<b>1127-A</b>	<b>1122</b>	<b>1621</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 | 1617



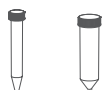
### Rotor

max. RPM   max. RCF	5,000 min <sup>-1</sup>   3,857	
max. capacity	8 x 50 ml	
run-up   run-down, braked in sec	20   19	
angle   max. noise level	45°   50 dB (A)	
temperature in °C <sup>1)</sup>	-10	

<b>Cat. No.</b>	<b>1617</b>
-----------------	-------------



### Vessels



capacity in ml	15	50
Ø x L in mm	17 x 120	29 x 115
max. RCF <sup>2)</sup>	3,857	3,857
radius in mm	138	138

<b>Cat. No.</b>	<b>tubes with screw cap</b>
-----------------	-----------------------------



### Adapter



boring Ø x L in mm	17 x 84	30 x 94.5
vessels per rotor	8	8

<b>Cat. No.</b>	<b>1462-A</b>	<b>-</b>
-----------------	---------------	----------

## SWING-OUT ROTOR, 6-PLACE | 1619



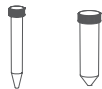
### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,701	
max. capacity	6 x 50 ml	
run-up   run-down, braked in sec	20   22	
angle   max. noise level	90°   50 dB (A)	
temperature in °C <sup>1)</sup>	-15	

<b>Cat. No.</b>	<b>1619</b>
-----------------	-------------



### Vessels



capacity in ml	15	50
Ø x L in mm	17 x 120	29 x 115
max. RCF <sup>2)</sup>	2,701	2,701
radius in mm	151	151

<b>Cat. No.</b>	<b>tubes with screw cap</b>
-----------------	-----------------------------



### Adapter

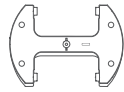


boring Ø x L in mm	17 x 84	30 x 87.5
vessels per rotor	6	6

<b>Cat. No.</b>	<b>1462-A</b>	<b>-</b>
-----------------	---------------	----------

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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, 2-PLACE | 1460



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,218
max. capacity	10 plates
run-up   run-down, braked in sec	40   45
angle   max. noise level	90°   55 dB (A)
temperature in °C <sup>1)</sup>	-6
<b>Cat. No.</b>	<b>1460</b>



### Vessels

capacity in ml	-	-	-	-	-	0,2
W x D x H in mm	128x86x15	128x86x22	128x86x44.5	128x86x46	124x82x20	-
max. RCF <sup>2)</sup>	2,433	2,433	2,433	2,433	2,433	2,433
radius in mm	136	136	136	136	136	136
<b>Cat. No.</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>PCR plate, 96 wells</b>	<b>PCR strips</b>



### Bucket

boring Ø x L in mm	-	-	-	-	-	-
vessels per rotor	10	8	2	2	2	24 x 8
<b>Cat. No.</b>	<b>1453-A</b>	<b>1453-A</b>	<b>1453-A</b>	<b>1453-A</b>	<b>1453-A + 1485</b>	<b>1453-A + 1485</b>

## — SWING-OUT ROTOR, 24-PLACE | 1555



### Rotor

max. RPM   max. RCF	13,000 min <sup>-1</sup>   18,327
max. capacity	24 x 2 ml
run-up   run-down, braked in sec	36   31
angle	90°
temperature in °C <sup>1)</sup>	3
<b>Cat. No.</b>	<b>1555</b>

Lid bioseal<sup>®</sup>,  
phenol-resistant

**Cat. No.**



**INCLUSIVE**



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38
max. RCF <sup>2)</sup>	18,327	18,327	18,327	18,327	18,327	18,327
radius in mm	97	97	97	97	97	97
<b>Cat. No.</b>	<b>microliter tubes</b>					



### Adapter

boring Ø x L in mm	6x40	6x40	8x40	8x40	10.2x19.3	11.5x38.5
vessels per rotor	24	24	24	24	24	24
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 TÜV in conformity with DIN EN 61010, section 2-020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters. Cat. No. 2031.

## — ANGLE ROTOR, 24-PLACE | 1552



### Rotor

max. RPM   max. RCF	16,000 min <sup>-1</sup>   24,900
max. capacity	24 x 2 ml
run-up   run-down, braked in sec	30   29
angle   max. noise level	50°   58 dB (A)
temperature in °C <sup>1)</sup>	2
<b>Cat. No.</b>	<b>1552</b>



Lid bioseal<sup>®</sup>, phenol-resistant

Cat. No.



**INCLUSIVE**



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10,7 x 46
max. RCF <sup>2)</sup>	24,900	24,900	24,900	24,900	24,900	24,900	23,755
radius in mm	87	87	87	87	87	87	83
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>



### Adapter

boring Ø x L in mm	6x40	6x40	8x40	8x40	10.2x19.3	11.2x42.6	11.2x39
vessels per rotor	24	24	24	24	24	24	12
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788<sup>17)</sup></b>

## — ANGLE ROTOR, 30-PLACE | 1553



### Rotor

max. RPM   max. RCF	14,150 min <sup>-1</sup>   21,713
max. capacity	30 x 2 ml
run-up   run-down, braked in sec	35   32
angle	45°
temperature in °C <sup>1)</sup>	-1
<b>Cat. No.</b>	<b>1553</b>



Lid bioseal<sup>®</sup>, phenol-resistant

Cat. No.



**INCLUSIVE**



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10,7 x 46
max. RCF <sup>2)</sup>	21,713	21,713	21,713	21,713	21,713	21,713	20,818
radius in mm	97	97	97	97	97	97	93
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>



### Adapter

boring Ø x L in mm	6x40	6x40	8x40	8x40	10.2x19.3	11.2x40.9	11.2x39
vessels per rotor	30	30	30	30	30	30	15
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788<sup>17)</sup></b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 TÜV in conformity with DIN EN 61010, section 2-020.
- 7) For centrifugation at high speeds, we recommend to use conical, phenol-resistant adapters. Cat. No. 2031.
- 17) Packed in units of 15 pieces.



## — ANGLE ROTOR, 8-PLACE | 1551



### Rotor

max. RPM   max. RCF	13,000 min <sup>-1</sup>   13,604	
max. capacity	8 x PCR-Strips	
run-up   run-down, braked in sec	36   31	
angle   max. noise level	45°   58 dB (A)	
temperature in °C <sup>1)</sup>	-4	
<b>Cat. No.</b>	<b>1551</b>	



Lid bioseal<sup>5)</sup>,  
phenol-resistant  
**Cat. No.**



**INCLUSIVE**



### Vessels



capacity in ml	0.2	0.2
Ø x L in mm	6x18	-
max. RCF <sup>2)</sup>	13,604	13,604
radius in mm	64	8x8
<b>Cat. No.</b>	-	<b>PCR-Strips</b>

## — ANGLE ROTOR, 18-PLACE | 1627



### Rotor

max. RPM   max. RCF	14,150 min <sup>-1</sup>   22,161	
max. capacity	18x5 ml	
run-up   run-down, braked in sec	35   32	
angle	45°	
temperature in °C <sup>1)</sup>	2	
<b>Cat. No.</b>	<b>1627</b>	



Lid bioseal<sup>5)</sup>,  
phenol-resistant  
**Cat. No.**



**INCLUSIVE**



### Vessels



capacity in ml	5
Ø x L in mm	17x59
max. RCF <sup>2)</sup>	22,161
radius in mm	18
<b>Cat. No.</b>	-

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 TÜV in conformity with DIN EN 61010, section 2-020.

## — ANGLE ROTOR, 6-PLACE | 1556



### Rotor

max. RPM   max. RCF	9.000 min <sup>-1</sup>   10.595
max. capacity	6 x 94 ml
run-up   run-down, braked in sec	36   32
angle   max. noise level	35°   60 dB (A)
temperature in °C <sup>1)</sup>	0
<b>Cat. No.</b>	<b>1556</b>



Lid bioseal<sup>5)</sup>, phenol-resistant

Cat. No.

**INCLUSIVE**



### Vessels

capacity in ml	1.5	2	15	50	50	85	7.5–8.2	9–10	10	8.5–10	15	50	10	30	50
Ø x L in mm	11 x 38	11 x 38	17 x 100	35 x 105	34 x 100	38 x 101	15 x 92	16 x 92	15 x 102	16 x 100	17 x 120	29 x 115	16 x 80	26 x 95	29 x 107
max. RCF <sup>2)</sup>	10,324	10,324	10,052	10,414	10,414	10,595	10,052	10,052	10,052	10,052	10,052	10,052	10,414	9,690	10,142
radius in mm	114	114	111	115	115	117	111	111	111	111	111	111	115	107	112
<b>Cat. No.</b>	<b>microliter tubes</b>		<b>tubes<sup>3)</sup></b>			<b>blood collection / urine vessels</b>				<b>tubes with screw cap</b>					



### Adapter

boring Ø x L in mm	11.4 x 39	11.4 x 39	17.5 x 78	35 x 89	35 x 89	-	17.5 x 78	17.5 x 78	17.5 x 78	17.5 x 78	17 x 106	29.8 x 97	16.5 x 72	26 x 85	29 x 92
vessels per rotor	24	24	6	6	6	6	6	6	6	6	6	6	12	6	6
<b>Cat. No.</b>	<b>1449</b>	<b>1449</b>	<b>1478</b>	<b>1463</b>	<b>1463</b>	<b>-</b>	<b>1478</b>	<b>1478</b>	<b>1478</b>	<b>1478</b>	<b>1466</b>	<b>1454</b>	<b>1477</b>	<b>1447</b>	<b>1446</b>

### Vessels

capacity in ml	85	94
Ø x L in mm	38 x 106	38 x 102
max. RCF <sup>2)</sup>	10,595	10,595
radius in mm	117	117
<b>Cat. No.</b>	<b>tubes with screw cap</b>	



### Adapter

boring Ø x L in mm	-	-
vessels per rotor	6	6
<b>Cat. No.</b>	<b>-</b>	<b>-</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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 TÜV in conformity with DIN EN 61010, section 2-020.

## — ANGLE ROTOR, 12-PLACE | 1613



### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   4,146
max. capacity	12 x 15 ml
run-up   run-down, braked in sec	15   15
angle   max. noise level	35°   50 dB (A)
temperature in °C <sup>1)</sup>	-16
<b>Cat. No.</b>	<b>1613</b>

### Vessels

capacity in ml	0.5	1.5	2.0	4	5	6	15	1.1 – 1.4	2.6 – 2.9	2.7 – 3	4.5 – 5	4.9	7.5 – 8.2	9 – 10	10
Ø x L in mm	10.7 x 46	11 x 38	11 x 38	10 x 88	12/13 x 75	12 x 82	17 x 100	8 x 66	13 x 65	11 x 66	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102
max. RCF <sup>2)</sup>	2,777	2,737	2,737	3,502	3,300	3,300	4,146	3,300	3,300	3,300	4,146	4,146	4,146	4,146	4,146
radius in mm	69	68	68	87	82	82	103	82	82	82	103	103	103	103	103
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>			<b>blood collection / urine vessels</b>							



### Adapter

boring Ø x L in mm	11 x 35	11 x 35	11 x 35	11.5x67.5	13.5 x 59	13.5 x 59	17.7 x 88	13.5 x 59	13.5 x 59	13.5 x 59	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88
vessels per rotor	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
<b>Cat. No.</b>	<b>2 x 1063-6 (6 pcs.)</b>			<b>6305</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

### Vessels

capacity in ml	1.6 – 5	4 – 7	8	8.5 – 10	5	15
Ø x L in mm	13 x 75	13 x 100	16 x 125	16 x 100	17 x 59	17 x 120
max. RCF <sup>2)</sup>	3,300	4,146	4,146	4,146	3,180	4,146
radius in mm	82	103	103	103	79	103
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>			<b>-</b>	<b>-</b>	<b>-</b>



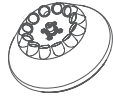
### Adapter

boring Ø x L in mm	13.5 x 60	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88
vessels per rotor	12	12	6	12	12	6
<b>Cat. No.</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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, 12-PLACE | 1615



### Rotor

max. RPM   max. RCF	12,000 min <sup>-1</sup>   16,582
max. capacity	12 x 15 ml
run-up   run-down, braked in sec	40   40
angle   max. noise level	35°   52 dB (A)
temperature in °C <sup>1)</sup>	-2
<b>Cat. No.</b>	<b>1615</b>

### Vessels

capacity in ml	0.5	1.5	2.0	4	5	6	15	1.1 - 1.4	2.6 - 2.9	2.7 - 3	4.5 - 5	4.9	7.5 - 10	10
Ø x L in mm	10.7 x 46	11 x 38	11 x 38	10 x 88	12/13 x 75	12 x 82	17 x 100	8 x 66	13 x 65	11 x 66	11 x 92	13 x 90	15/16 x 92	15 x 102
max. RCF <sup>2)</sup>	11,108	10,947	10,947	14,006	13,201	13,201	16,582	13,201	13,201	13,201	16,582	16,582	16,582	16,582
radius in mm	69	68	68	87	82	82	103	82	82	82	103	103	103	103
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>tubes <sup>2)</sup></b>			<b>blood collection / urine vessels</b>						



### Adapter

boring Ø x L in mm	11 x 35	11 x 35	11 x 35	11.5 x 67.5	13.5 x 59	13.5 x 59	17.7 x 88	13.5 x 59	13.5 x 59	13.5 x 59	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88
vessels per rotor	12	12	12	12	12	12	12	12	12	12	12	12	12	12
<b>Cat. No.</b>	<b>2 x 1063-6 (6 pcs.)</b>			<b>6305</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>1054-A</b>	<b>1054-A</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

### Vessels

capacity in ml	1.6 - 5	4 - 7	8.5 - 10	8	5	15
Ø x L in mm	13 x 75	13 x 100	16 x 100	16 x 125	17 x 59	17 x 120
max. RCF <sup>2)</sup>	13,201	16,582	16,582	16,582	12,718	15,455
radius in mm	82	103	103	103	79	96
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>			<b>-</b>	<b>-</b>	<b>-</b>



### Adapter

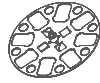
boring Ø x L in mm	13.5 x 59	17.7 x 88	17.7 x 88	17.7 x 88	17 x 25	17 x 104
vessels per rotor	12	12	12	6	12	6
<b>Cat. No.</b>	<b>1054-A</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1064</b>	<b>1647 <sup>25)</sup></b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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.

25) Adapter (set), 6-place: For conical 15 ml tubes with screw cap, remove carriers from rotor and replace them with adapters.

## — ANGLE ROTOR, 8-PLACE | 1418



### Rotor

max. RPM   max. RCF	4,500 min <sup>-1</sup>   3,305
max. capacity	8x50 ml
run-up   run-down, braked in sec	30   31
angle   max. noise level	45°   54 dB (A)
temperature in °C <sup>1)</sup>	-5
<b>Cat. No.</b>	<b>1418</b>



### Vessels

capacity in ml	5	15	1.1–1.4	2.6–2.9	2.7–3	9–10	1.6–5	4–7	8.5–10	12	15	50	12	50
Ø x L in mm	12/13x75	17x100	8x66	13x65	11x66	16x92	13x75	13x100	16x100	17x102	17x120	29x115	17x100	29x115
max. RCF <sup>2)</sup>	2,762	3,215	2,762	2,762	2,762	3,215	2,762	3,215	3,215	3,215	3,283	3,147	3,215	3,147
radius in mm	122	142	122	122	122	142	122	146	142	142	145	139	142	139

Cat. No.	tubes <sup>2)</sup>		blood collection / urine vessels						tubes with screw cap					
	+ 1054-A	+ 0716	+ 1054-A	+ 1054-A	+ 1054-A	+ 0716	+ 1054-A	+ 0716	+ 0716	+ 0716	+ E2109	+ E2110-A	+ 0716	
<b>Carrier</b>														
boring Ø x L in mm	17.4x91	17.4x91	17.4x91	17.4x91	17.4x91	17.4x91	17.4x91	17.4x91	17.4x91	17.4x91	17.4x91	30.2x92	17.4x91	30.2x92
vessels per rotor	32	32	32	32	32	32	32	32	32	32	32	8	32	8
<b>Cat. No.</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1467</b>	<b>1468</b>	<b>1467</b>	<b>1468</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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.



## PACKAGES

<b>UNIVERSAL 320 BLOOD TUBE PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 centrifuge	1401	28	1.6 - 7	13 x 90 / 100	5,000	3,913
- 1 x swing-out rotor, 4-place	1494	28	4 - 10	16 x 75 / 100	5,000	3,913
- 4 x bucket	1425					
- 4 x adapter, 7-place	1438					
- 4 x adapter, 7-place	1441					

### 1401SET1



<b>UNIVERSAL 320 BLOOD TUBE PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 centrifuge	1401	28	1.6 - 7	13 x 90 / 100	4,500	3,215
- 1 x swing-out rotor, 4-place	1554	20	4 - 10	16 x 75 / 100	4,500	3,215
- 4 x bucket	1560					
- 4 x lid (bioseal)	1561					
- 4 x adapter, 7-place	1589					
- 4 x adapter, 5-place	1588					

### 1401SET2



<b>UNIVERSAL 320 CONICAL PACKAGE 3</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 centrifuge	1401	16	15	17 x 120	4,500	3,305
- 1 x swing-out rotor, 4-place	1324	4	50	29 x 115	4,500	3,260
- 4 x bucket	1398					
- 4 x adapter, 4-place (conical)	1483A					
- 4 x adapter, 1-place (conical)	1484					

### 1401SET3



<b>UNIVERSAL 320 R CONICAL PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 R centrifuge	1406	16	15	17 x 120	4,500	3,328
- 1 x swing-out rotor, 4-place	1554	4	50	30 x 115	4,500	3,328
- 4 x bucket	1560					
- 4 x lid (bioseal)	1561					
- 4 x adapter, 2-place (conical)	1577					
- 4 x adapter, 1-place (conical)	1579					

### 1406SET1



<b>UNIVERSAL 320 R BLOOD TUBE PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 R centrifuge	1406	28	1.6 - 7	13 x 90 / 100	5,000	3,913
- 1 x swing-out rotor, 4-place	1494	28	4 - 10	16 x 75 / 100	5,000	3,913
- 4 x bucket	1425					
- 4 x adapter, 7-place	1438					
- 4 x adapter, 7-place	1441					

### 1406SET2



<b>UNIVERSAL 320 R CONICAL PACKAGE 3</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 R centrifuge	1406	20	1.6 - 7	13 x 90 / 100	4,000	2,558
- 1 x swing-out rotor, 4-place	1324	16	4 - 10	16 x 75 / 100	4,000	2,522
- 4 x bucket	1398					
- 4 x adapter, 4-place (conical)	1483A					
- 4 x adapter, 1-place (conical)	1484					

### 1406SET3



<b>UNIVERSAL 320 R BLOOD TUBE PACKAGE 4</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 R centrifuge	1406	16	15	17 x 120	4,500	3,305
- 1 x swing-out rotor, 4-place	1624	4	50	29 x 115	4,500	3,260
- 4 x bucket	1481					
- 4 x lid (bioseal)	1492					
- 4 x adapter, 5-place	1383					
- 4 x adapter, 4-place	1348					

### 1406SET4



## UNIVERSAL 320 R BLOOD TUBE PACKAGE 5

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 R centrifuge	1406	28	1.1 - 7	13 x 90 / 100	4,500	3,215
- 1 x swing-out rotor, 4-place	1554	20	4 - 10	17 x 100	4,500	3,215
- 4 x bucket	1560					
- 4 x lid (biodicht)	1561					
- 4 x adapter, 7-place	1589					
- 4 x adapter, 5-place	1588					
<b>1406SET5</b>						



## UNIVERSAL 320 R BLOOD TUBE PACKAGE 6

		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x UNIVERSAL 320 R centrifuge	1406	32	1.6 - 7	13 x 90 / 100	5,000	4,025
- 1 x swing-out rotor, 4-place	1494	24	8.5 - 15	17 x 100	5,000	3,941
- 4 x bucket	1427					
- 4 x lid (bioseal)	1421					
- 4 x adapter, 8-place	1732					
- 4 x adapter, 6-place	5231					
<b>1406SET6</b>						



# ROTINA 380 | 380 R

## High speed with space saving design

High performance unit supporting a wide array of accessories for multiple applications in just one rotor. Its size and performance make it the ideal benchtop centrifuge for most clinical, research and industrial laboratories. This unit is available with refrigeration and a temperature range from -20 °C to +40 °C (ROTINA 380 R).

### — FEATURES

- RPM: 50 - 15,000 min<sup>-1</sup> – adjustable in increments of 10
- RCF: 50 - 24,400 – adjustable in increments of 1
- Max. capacity: 4 x 290 ml
- Choice of 8 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Max. noise level of 54 dB(A) with rotor 1760
- Easy operation with keypad and control knob
- 98 program memories for more individuality
- 9 individual acceleration and 10 deceleration stages
- Model 380 R coolable from -20 to +40 °C with pre-cooling function

### — FIELDS OF APPLICATION

- Hospitals
- Hematological laboratories
- Small blood centers
- Pharmaceutical laboratories
- Food analyzing laboratories
- University / Academic research
- Forensic laboratories
- Paternity testing laboratories
- Environmental testing laboratories
- Cell culture laboratories



Centrifuge packages for the model can be found on [page 105](#)



More information about the control panel can be found on [page 202](#)

**CYTO**

Cyto system available for this model. More information on [page 180](#)



ROTINA 380



ROTINA 380 R











according to regulation (EU) 2017/746

## TECHNICAL DATA

	<b>ROTINA 380</b> non-refrigerated	<b>ROTINA 380 R</b> refrigerated
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~
frequency	50 – 60 Hz	50 – 60 Hz
consumption	650 VA	1,300 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	4 x 290 ml	4 x 290 ml
max. RPM	15,000 min <sup>-1</sup>	15,000 min <sup>-1</sup>
max. RCF	24,400	24,400
running time	1 – 99 h: 59 min: 59 sec, ∞ continuous run, short cycle mode	1 – 99 h: 59 min: 59 sec, ∞ continuous run, short cycle mode
dimensions (WxDxH)	457x600x418 mm	457x750x418 mm
weight	approx. 51 kg	approx. 81 kg
noise level	54 dB (A) with rotor 1760	54 dB (A) with rotor 1760
temperature control, infinitely variable	-	from -20 to +40 °C
<b>Cat. No.</b>	<b>1701</b>	<b>1706</b>
100 – 127 V 1 ~ / 50 – 60 Hz *)	1701-01	1706-01
consumption	700 VA	1,400 VA
emission, immunity	FCC class B	FCC class B
weight	approx. 58.5 kg	approx. 88.5 kg

\*) Other voltages on request.

## AVAILABLE ROTORS

<b>SWING-OUT ROTORS</b>		angle	max. RPM	max. capacity	Cat. No.	page
	swing-out rotor, 4-place	90°	5,000 min <sup>-1</sup>	4x290 ml	<b>1754</b>	96
	swing-out rotor, 4-place	90°	4,000 min <sup>-1</sup>	4x290 ml	<b>1798</b>	98
	swing-out rotor, 6-place	90°	4,000 min <sup>-1</sup>	6x50 ml	<b>1726</b>	100
	swing-out rotor, 2-place	90°	4,000 min <sup>-1</sup>	10 plates	<b>1760</b>	102
	swing-out rotor, 2-place	90°	5,100 min <sup>-1</sup>	10 plates	<b>1770</b>	102
<b>ANGLE ROTORS</b>						
	angle rotor, 6-place	45°	10,000   11,000 min <sup>-1</sup>	6x94 ml	<b>1720</b>	103
	angle rotor, 6-place	45°	10,000   11,000 min <sup>-1</sup>	6x94 ml	<b>1792</b>	104
	angle rotor, 30-place	45°	15,000 min <sup>-1</sup>	30x2 ml	<b>1789-A</b>	105

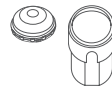


## SWING-OUT ROTOR, 4-PLACE | 1754



### Rotor

max. RPM   max. RCF	5,000 min <sup>1)</sup>   4,863
max. capacity	4 x 290 ml
run-up   run-down, braked in sec	42   27
angle   max. noise level	90°   60 dB (A)
temperature in °C <sup>1)</sup>	0
<b>Cat. No.</b>	<b>1754</b>



### Bucket

lid bioseal <sup>5)</sup>	1751
<b>Cat. No.</b>	<b>1752</b>



### Vessels

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	11 x 38	11 x 38	10 x 60	12 x 60	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	38 x 106	40 x 115
max. RCF <sup>2)</sup>	3,494 / 4,779	3,494 / 4,779	4,779	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,807	4,640
radius in mm	125 / 171	125 / 171	171	167	167	167	167	167	167	167	167	167	167	172	166
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>											



### Adapter

boring Ø x L in mm	11.2x39.5	11.2x39.5	11.2x39.5	12.5x56	12.5x56	12.5x56	12.5x56	17.5x62	17.5x62	25.5x81	25.5x81	35.5x81	35.5x81	38.5x80	41 x 97
vessels per rotor	144	144	72	96	96	96	96	52	52	24	24	12	12	8	4
<b>Cat. No.</b>	<b>1761</b>	<b>1761</b>	<b>1761</b>	<b>1762-A</b>	<b>1762-A</b>	<b>1762-A</b>	<b>1762-A</b>	<b>1763-A</b>	<b>1763-A</b>	<b>1764</b>	<b>1764</b>	<b>1765</b>	<b>1765</b>	<b>1777</b>	<b>1767</b>

### Vessels

capacity in ml	100	250	1.1-1.4	2.6-2.9	2.7-3	4.5-5	4.5-5	4.5-5	4.9	4.9	7.5-8.2	9-10	10	1.6-5	4-7
Ø x L in mm	44 x 100	65 x 115	8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	11 x 92	13 x 90	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100
max. RCF <sup>2)</sup>	4,640	4,640	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668	4,668
radius in mm	166	166	167	167	167	167	167	167	167	167	167	167	167	167	167
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>		<b>blood collection tubes / urine tubes</b>												



### Adapter

boring Ø x L in mm	45 x 87	66 x 104.5	9 x 49	13.5 x 54	12.5 x 56	17.5 x 62	12.5 x 56	13.2 x 72	13.5 x 54	13.2 x 72	17.5 x 62	17.5 x 62	17.5 x 62	13.5 x 54	13.5 x 54
vessels per rotor	4	4	96	64	96	52	96	76	64	76	52	52	52	64	64
<b>Cat. No.</b>	<b>1766</b>	<b>1768</b>	<b>1781</b>	<b>1783-A</b>	<b>1762-A</b>	<b>1763-A</b>	<b>1762-A</b>	<b>1787</b>	<b>1783-A</b>	<b>1787</b>	<b>1763-A</b>	<b>1763-A</b>	<b>1763-A</b>	<b>1783-A</b>	<b>1783-A</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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 TÜV in conformity with DIN EN 61010, section 2-020.



## SWING-OUT ROTOR, 4-PLACE | 1754



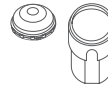
### Rotor

max. RPM   max. RCF	5,000 min <sup>-1</sup>   4,863
max. capacity	4 x 290 ml
run-up   run-down, braked in sec	42   27
angle   max. noise level	90°   60 dB (A)
temperature in °C <sup>1)</sup>	0
<b>Cat. No.</b>	<b>1754</b>



### Bucket

lid bioseal <sup>5)</sup>	1751
<b>Cat. No.</b>	<b>1752</b>



### Vessels

capacity in ml	4 – 7	4 – 7	8	8.5 – 10	5	15	50	12	25	30	50	50	14	10	30
Ø x L in mm	13x100	16x75	16x125	16x100	17x59	17x120	29 x 115	17x100	25x90	25x110	29x115	29x115	16,5x106	16x80	26x95
max. RCF <sup>2)</sup>	4,668	4,668	4,668	4,668	4,863	4,863	4,863	4,696	4,528	4,528	4,752	4,752	4,668	4,668	4,807
radius in mm	167	167	167	167	174	174	174	168	162	162	170	170	167	167	172
<b>Cat. No.</b>	<b>blood collection tubes / urine tubes</b>				<b>-</b>	<b>tubes with screw cap</b>									



### Adapter

boring Ø x L in mm	13.2x72	17.5x62	17.5x62 <sup>21)</sup>	17.5x62	17x52	17x84	30x84	17x78	26.5x72	26.5x72	30x80	30x80	17.5x62	17.5x62	26.5x70
vessels per rotor	76	52	12	52	32	36	16	36	20	20	16	16	52	52	24
<b>Cat. No.</b>	<b>1787</b>	<b>1763-A</b>	<b>1763-A</b>	<b>1763-A</b>	<b>1738</b>	<b>1771-A</b>	<b>1772-A</b>	<b>1773</b>	<b>1779</b>	<b>1779</b>	<b>1774-A</b>	<b>1774-A</b>	<b>1763-A</b>	<b>1763-A</b>	<b>1775</b>

### Vessels

capacity in ml	50	85	94	175	175 <sup>3.3)</sup>	200	225	250	290 <sup>3.3)</sup>
Ø x L in mm	29x107	38x106	38x106	61 x 118	62 x 144	60 x 130	61 x 137	62 x 122	62 x 137
max. RCF <sup>2)</sup>	4,752	4,807	4,807	4,863	4,863	4,863	4,863	4,863	4,863
radius in mm	170	172	172	174	174	174	174	174	174
<b>Cat. No.</b>	<b>tubes with screw cap</b>			<b>Falcon</b>	<b>Nalgene</b>	<b>Nunc®</b>	<b>Falcon</b>	<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>

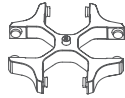


### Adapter

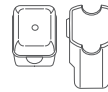
boring Ø x L in mm	30 x 80	38.5 x 80	38.5 x 80	62 x 111	62 x 111	62 x 111	62 x 111	62 x 100	62 x 100
vessels per rotor	16	8	8	4	4	4	4	4	4
<b>Cat. No.</b>	<b>1774-A</b>	<b>1777</b>	<b>1777</b>	<b>1782</b>	<b>1778</b>	<b>1778</b>	<b>1782</b>	<b>1769</b>	<b>1769</b>

- For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 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.
- When using these tubes, bucket 1752 or 5051 cannot be closed with lid 1751 or 5053.
- Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
- Adapter must be loaded as illustrated.
- At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## SWING-OUT ROTOR, 4-PLACE | 1798



<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,898
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	24   17
angle   max. noise level	90°   55 dB (A)
temperature in °C <sup>1)</sup>	-8
<b>Cat. No.</b>	<b>1798</b>



<b>Bucket</b>	
lid	5053
<b>Cat. No.</b>	<b>5051</b>



<b>Vessels</b>															
capacity in ml		1.5	2	1.5	2	3	5	6	7	9	15	25	50	100	100
Ø x L in mm		11 x 38	11 x 38	11 x 38	11 x 38	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	40 x 115	44 x 100
max. RCF <sup>2)</sup>	top / bottom	1,950 / 2,826	1,950 / 2,826	2,826	2,826	2,737	2,773	2,773	2,755	2,773	2,755	2,755	2,755	2,755	2,755
radius in mm		109 / 158	109 / 158	158	158	153	155	155	154	155	154	154	154	154	154
<b>Cat. No.</b>		<b>microliter tubes</b>				<b>tubes<sup>2)</sup></b>									

<b>Adapter</b>															
boring Ø x L in mm		12.5 x 37	12.5 x 37	11.5 x 50	11.5 x 50	11 x 41.5	12.5 x 39.5	12.5 x 39.5	12.5 x 82.5	16 x 47.5	17.5 x 82.5	26 x 82.5	36 x 82.5	42 x 86	45.5 x 86
vessels per rotor		160	160	64	64	80	80	80	80	48	48	20	8	4	4
<b>Cat. No.</b>		<b>5257</b>	<b>5257</b>	<b>5281</b>	<b>5281</b>	<b>5267</b>	<b>5227</b>	<b>5227</b>	<b>5247<sup>15)</sup></b>	<b>5264</b>	<b>5248<sup>15)</sup></b>	<b>5242</b>	<b>5243</b>	<b>5249</b>	<b>5262</b>

<b>Vessels</b>															
capacity in ml		1.1–1.4	2.6–2.9	2.7–3	4–5.5	4.5–5	4.9	7.5–8.2	9–10	10	1.6–5	4–7	4–7	8.5–10	
Ø x L in mm		8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100	
max. RCF <sup>2)</sup>		2,737	2,808	2,773	2,773	2,773	2,808	2,773	2,755	2,755	2,808	2,808	2,773	2,755	
radius in mm		153	157	155	155	155	157	155	154	154	157	157	155	154	
<b>Cat. No.</b>		<b>blood collection tubes / urine tubes</b>													

<b>Adapter</b>															
boring Ø x L in mm		11 x 41.5	13.5 x 49.5	12.5 x 39.5	16 x 47.5	12.5 x 39.5	13.5 x 49.5	16 x 47.5	17.6 x 82.5	17.6 x 82.5	13.5 x 49.5	13.5 x 49.5	16 x 47.5	17.5 x 82.5	
vessels per rotor		80	48	80	48	80	48	48	44	44	48	48	48	48	
<b>Cat. No.</b>		<b>5267</b>	<b>5268</b>	<b>5227</b>	<b>5264</b>	<b>5227</b>	<b>5268</b>	<b>5264</b>	<b>5258</b>	<b>5258</b>	<b>5268</b>	<b>5268</b>	<b>5264</b>	<b>5248</b>	

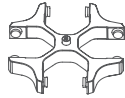
<b>Vessels</b>								
capacity in ml		30	50	15	12	30	50	1–8
Ø x L in mm		25 x 110	29 x 115	17 x 120	17 x 100	25 x 110	29 x 115	simple / multiple
max. RCF <sup>2)</sup>	top / bottom	2,755	2,826	2,898	2,898	2,755	2,755	1,735 / 2,737
radius in mm		154	158	162	162	154	154	97 / 153
<b>Cat. No.</b>		<b>tubes with screw cap</b>						<b>cyto chambers</b>

<b>Adapter</b>								
boring Ø x L in mm		26 x 82.5	30 x 90	17.2 x 90	17.2 x 90	26 x 82.5	36 x 82.5	-
vessels per rotor		20	8	28	28	20	8	8
<b>Cat. No.</b>		<b>5266</b>	<b>5259</b>	<b>6306</b>	<b>6306</b>	<b>5266</b>	<b>5243</b>	<b>5280</b>

**CYTO** Cyto system available for this model. More information on page 178

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 3.3) When using these tubes, bucket 1752 or 5051 cannot be closed with lid 1751 or 5053.
- 15) Also available with decanting aid. (Cat. No. 5247-91 or 5248-91).

## SWING-OUT ROTOR, 4-PLACE | 1798



<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   3,095
max. capacity	4 x 290 ml
run-up   run-down, braked in sec	24   17
angle   max. noise level	90°   56 dB (A)
temperature in °C <sup>1)</sup>	-8
<b>Cat. No.</b>	<b>1798</b>



<b>Bucket</b>	
lid bioseal <sup>5)</sup>	5093
<b>Cat. No.</b>	<b>5092</b>



<b>Vessels</b>																
capacity in ml		5	6	7	15	25	50	100	100	250	15	30	50	12	25	30
Ø x L in mm		12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115	17x120	25x110	29x115	17x100	25x90	25x110
max. RCF <sup>2)</sup>		3,005	3,005	3,005	2,952	2,898	2,952	2,952	2,952	3,095	3,095	2,898	3,095	3,005	2,826	2,898
radius in mm		168	168	168	165	162	165	165	165	173	173	162	173	168	158	162
<b>Cat. No.</b>		<b>tubes<sup>2)</sup></b>									<b>tubes with screw cap</b>					

<b>Adapter</b>																
boring Ø x L in mm		12.8x42	12.8x42	12.8x79.5	17.5x56.7	25.5x74	35.5x77.5	45.5x76.5	42x76.5	65x103	17x74	25.5x82	30x85	17.5x79.5	26x73	25.5x74
vessels per rotor		48	48	48	32	16	4	4	4	4	28	16	8	28	12	16
<b>Cat. No.</b>		<b>5128</b>	<b>5128</b>	<b>5120</b>	<b>5136</b>	<b>5122</b>	<b>5124</b>	<b>5125</b>	<b>5126</b>	<b>1791</b>	<b>5129</b>	<b>5122</b>	<b>5123</b>	<b>5121</b>	<b>5134</b>	<b>5122</b>

<b>Vessels</b>																
capacity in ml		50	10	250	290	1.1-1.4	2.7-3	4-4.5	4.9	7.5-8.2	9-10	10	1.6-5	4-7	4-7	8
Ø x L in mm		29x115	16 x 80	61 x 122	62 x 137	8 x 66	11x66	15x75	13x90	15x92	16x92	15x102	13x75	16x75	13x100	16x125
max. RCF <sup>2)</sup>		3,023	2,952	3,095	3,095	2,952	2,952	2,952	2,952	2,952	2,952	2,952	2,952	2,952	3,005	3,059
radius in mm		169	165	173	173	165	165	165	165	165	165	165	165	165	168	171
<b>Cat. No.</b>		<b>tubes with screw cap</b>		<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>blood collection tubes / urine tubes</b>										

<b>Adapter</b>																
boring Ø x L in mm		30x99	17.5x56.7	63x90	63x90	12.8x54.5	12.8x54.5	17.5x56.7	17.5x56.7	17.5x56.7	17.5x56.7	17.5x56.7	12.8x54.5	17.5x56.7	12.8x79.5	17.5x79.5
vessels per rotor		8	32	4	4	48	48	32	32	32	32	32	48	32	48	28
<b>Cat. No.</b>		<b>5135</b>	<b>5136</b>	<b>6319</b>	<b>6319</b>	<b>5138</b>	<b>5138</b>	<b>5136</b>	<b>5137</b>	<b>5136</b>	<b>5136</b>	<b>5136</b>	<b>5138</b>	<b>5136</b>	<b>5120</b>	<b>5121<sup>4)</sup></b>

<b>Vessels</b>		
capacity in ml		8.5 - 10
Ø x L in mm		16x100
max. RCF <sup>2)</sup>		2,952
radius in mm		165
<b>Cat. No.</b>		<b>-</b>

<b>Adapter</b>		
boring Ø x L in mm		17.5x56.7
vessels per rotor		32
<b>Cat. No.</b>		<b>5136</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 3.5) When using these tubes, bucket 5092 cannot be closed with lid 5053.
- 4) Please remove the spacer.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## — SWING-OUT ROTOR, 6-PLACE | 1726



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,808
max. capacity	6 x 50 ml
run-up   run-down, braked in sec	19   18
angle   temperature in °C <sup>1)</sup>	90°   -6
<b>Cat. No.</b>	<b>1726</b>



### Vessels

capacity in ml	5	5	6	7	9	15	20	25	45	50	8.5–10	30	1–8	
Ø x L in mm	12x75	12x75	12x82	12x100	14x100	17x100	21x100	24x100	31x100	34x100	16x100	26x95	simple / multiple	
max. RCF <sup>2)</sup>	2,576	2,522	2,665	2,665	2,665	2,665	2,719	2,808	2,719	2,808	2,665	2,808	2,003	
radius in mm	144	141	149	149	149	149	152	157	152	157	149	157	112	
<b>Cat. No.</b>	tubes <sup>2)</sup>											-	-	cyto chambers



### Carrier

boring Ø x L in mm	12.5x74	14.5x63	12.5x74	12.5x74	14.6x74	17.6x74	21.5x74	25x78	32x74	35x78	17.6x74	25x78	-
vessels per rotor	24	102	24	24	30	24	12	12	6	6	24	12	6
<b>Cat. No.</b>	<b>1369-91</b>	<b>1372</b>	<b>1369-92</b>	<b>1369-92</b>	<b>1370</b>	<b>1369</b>	<b>1346</b>	<b>1745</b>	<b>1345</b>	<b>1746</b>	<b>1369</b>	<b>1745</b>	<b>1660</b>

**CYTO**

Cyto system available for this model.  
More information on page 180

## — SWING-OUT ROTOR, 6-PLACE | 1726



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,808
max. capacity	42 x 15 ml
run-up   run-down, braked in sec	19   18
angle   max. noise level	90°   54 dB (A)
temperature in °C <sup>1)</sup>	-6
<b>Cat. No.</b>	<b>1726</b>



### Carrier

<b>Cat. No.</b>	<b>1742</b>
-----------------	-------------



### Vessels

capacity in ml	15	2.6–2.9	4–4.5	7.5–8.2	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
max. RCF <sup>2)</sup>	2,808	2,683	2,683	2,808	2,808	2,808	2,683	2,683	2,808	2,808
radius in mm	157	150	150	157	157	157	150	150	157	157
<b>Cat. No.</b>	- <sup>2)</sup>	blood collection tubes / urine tubes								-



### Spacer

boring Ø x L in mm	17.6 x 78	17.6 x 78	17.6 x 78	17.6 x 78	17.6 x 78	17.6 x 78	17.6 x 78	17.6 x 78	17.6 x 78	17.6 x 78
vessels per rotor	42	42	42	42	42	18	42	42	42	18
<b>Cat. No.</b>	-	<b>0716</b>	<b>0716</b>	-	-	-	<b>0716</b>	<b>0716</b>	-	-

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 21) Adapter must be loaded as illustrated.

## — SWING-OUT ROTOR, 6-PLACE | 1726



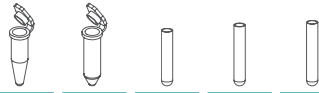
<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,325
max. capacity	72 x 4 ml
run-up   run-down, braked in sec	19   18
angle   max. noise level	90°   54 dB (A)
temperature in °C <sup>1)</sup>	-6
<b>Cat. No.</b>	<b>1726</b>



<b>Bucket</b>	
<b>Cat. No.</b>	<b>1366</b>



<b>Vessels</b>	
capacity in ml	1.5    2.0    1    3    4
Ø x L in mm	11 x 38    11 x 38    6 x 45    10 x 60    12 x 60
max. RCF <sup>2)</sup>	2,325    2,325    2,308    2,290    2,290
radius in mm	130    130    129    128    128
<b>Cat. No.</b>	<b>microliter tubes</b> <b>Rhesus</b> <b>tubes<sup>2)</sup></b>



<b>Adapter</b>	
boring Ø x L in mm	11.5 x 38    11.5 x 38    6.5 x 23    10.5 x 23    12.5 x 42
vessels per rotor	54    54    180    72    72
<b>Cat. No.</b>	<b>5277</b> <b>5277</b> <b>1357</b> <b>1327</b> <b>1326</b>



## — SWING-OUT ROTOR, 6-PLACE | 1726



<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,808
max. capacity	60 x 9 ml
run-up   run-down, braked in sec	19   18
angle   max. noise level	90°   54 dB (A)
temperature in °C <sup>1)</sup>	-6
<b>Cat. No.</b>	<b>1726</b>



<b>Carrier</b>	
<b>Cat. No.</b>	<b>1741</b>



<b>Vessels</b>	
capacity in ml	9    1.1 – 1.4    4.5 – 5    4.9    4 – 7
Ø x L in mm	14 x 100    8 x 66    11 x 92    13 x 90    13 x 100
max. RCF <sup>2)</sup>	2,773    2,773    2,808    2,808    2,808
radius in mm	155    155    157    157    157
<b>Cat. No.</b>	<b>-<sup>2)</sup></b> <b>blood collection tubes / urine tubes</b>



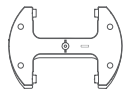
<b>Adapter</b>	
boring Ø x L in mm	14.6 x 78    14.6 x 78    14.6 x 78    14.6 x 78    14.6 x 78
vessels per rotor	60    60    60    60    60
<b>Cat. No.</b>	<b>0701</b> <b>0701</b> <b>-</b> <b>-</b> <b>-</b>



- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 16) Packaging unit 10 pieces.
- 21) Adapter must be loaded as illustrated.



## SWING-OUT ROTOR, 2-PLACE | 1760



### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,397
max. capacity	10 plates
run-up   run-down, braked in sec	30   23
angle   max. noise level	90°   54 dB (A)
temperature in °C <sup>1)</sup>	-8
<b>Cat. No.</b>	<b>1760</b>



### Plates

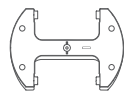
W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>	2,397	2,397	2,397	2,397	2,397	2,397	2,397	2,397	2,397
radius in mm	134	134	134	134	134	134	134	134	134
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plates</b>	<b>PCR plate</b>	<b>PCR strips</b>



### Bucket

boring Ø x L in mm	-	-	-	-	-	-	-	-	-
plates / strips per rotor	10	8	6	2	2	2	4	2	48 x 8
<b>Cat. No.</b>	<b>1753-A</b>	<b>1753-A</b>	<b>1753-A</b>	<b>1753-A</b>	<b>1753-A</b>	<b>1753-A</b>	<b>1753-A</b>	<b>1753-A+1485</b>	<b>1753-A+1485</b>

## SWING-OUT ROTOR, 2-PLACE | 1770



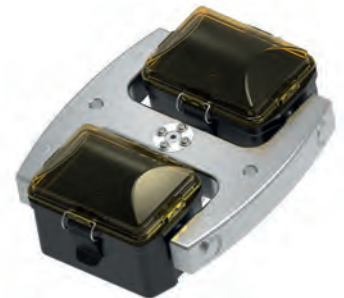
### Rotor

max. RPM   max. RCF	5,100 min <sup>-1</sup>   3,926
capacity in ml	10 plates
run-up   run-down, braked in sec	65   30
angle   temperature in °C <sup>1)</sup>	90°   -3
<b>Cat. No.</b>	<b>1770</b>



### Bucket

lid bioseal <sup>3)</sup>	4627
<b>Cat. No.</b>	<b>4745</b>



### Plates

W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
Ø x L in mm	-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>	3,926	3,926	3,926	3,926	3,926	3,926	3,926	3,926	3,926
radius in mm	135	135	135	135	135	135	135	135	135
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plates</b>	<b>PCR plate</b>	<b>PCR strips</b>



### Removal frame

boring Ø x L in mm	-	-	-	-	-	-	-	-	-
plates / strips per rotor	10	8	8	2	2	2	4	2	24 x 8
<b>Cat. No.</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626 + 1485</b>	<b>4626 + 1485</b>

## ANGLE ROTOR, 6-PLACE | 1720



### Rotor

max. RPM	ROTINA 380   380 R	10,000 min <sup>-1</sup>   11,000 min <sup>-1</sup>
max. RCF		13,528   16,369
max. capacity		6 x 94 ml
run-up / run-down, braked in sec		39 / 36   45 / 44
angle   max. noise level		45°   59 dB (A)
temperature in °C <sup>1)</sup>		+1
<b>Cat. No.</b>		<b>1720</b>



### Vessels

capacity in ml	1.5	2.0	15	25	50	94	7.5 – 8.2	9 – 10	8.5 – 10	15	50	10	30	50	85	
Ø x L in mm	11 x 38	11 x 38	17 x 100	24 x 100	34 x 100	38 x 102	15 x 92	16 x 92	16 x 100	17 x 120	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	
max. RCF <sup>2)</sup>	ROTINA 380	12,969	12,969	12,745	12,410	13,304	13,528	12,745	12,745	12,745	13,081	12,745	12,410	12,410	12,969	13,528
max. RCF <sup>2)</sup>	ROTINA 380 R	15,692	15,692	15,422	15,016	16,098	16,369	15,422	15,422	15,422	15,828	15,422	15,016	15,016	15,692	16,369
radius in mm	116	116	114	111	119	121	114	114	114	117	114	111	111	116	121	
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>			<b>blood collection tubes / urine tubes</b>			<b>tubes with screw cap</b>						



### Adapter

boring Ø x L in mm	11.4 x 39	11.4 x 39	17.5 x 91.5	26 x 85	35 x 89	38.4 x 89.3	17.5 x 91.5	17.5 x 91.5	17.5 x 91.5	17 x 106	29.8 x 96.7	16.5 x 74	26 x 85	29 x 92	38.4 x 89
vessels per rotor	24	24	6	6	6	6	6	6	6	6	6	12	6	6	6
<b>Cat. No.</b>	<b>1449</b>	<b>1449</b>	<b>1451</b>	<b>1447</b>	<b>1463</b>	-	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1466</b>	<b>1454</b>	<b>1448</b>	<b>1447</b>	<b>1446</b>	-



### Vessels

capacity in ml	94
Ø x L in mm	38 x 102
max. RCF <sup>2)</sup>	ROTINA 380
max. RCF <sup>2)</sup>	ROTINA 380 R
radius in mm	121
<b>Cat. No.</b>	<b>-</b>



### Adapter

boring Ø x L in mm	38.4 x 89
vessels per rotor	6
<b>Cat. No.</b>	<b>-</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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 | 1792



lid bioseal<sup>5)</sup>



Cat. No.

**INCLUSIVE**



### Rotor

max. RPM	ROTINA 380   380 R	10,000 min <sup>-1</sup>   11,000 min <sup>-1</sup>
max. RCF		13,640   16,504
max. capacity		6 x 94 ml
run-up   run-down, braked in sec		40 / 37   48 / 44
angle   max. noise level		45°   59 dB (A)
temperature in °C <sup>1)</sup>		+4
<b>Cat. No.</b>		<b>1792</b>

### Vessels

capacity in ml	1.5	2.0	15	25	50	94	7.5-8.2	9-10	10	8.5-10	5	15	50	10	30	
Ø x L in mm	11 x 38	11 x 38	17 x 100	24 x 100	34 x 100	38 x 102	15 x 92	16 x 92	15 x 102	16 x 100	17 x 59	17 x 120	29 x 115	16 x 80	26 x 95	
max. RCF <sup>2)</sup>	ROTINA 380	13,081	13,081	12,857	12,522	13,416	13,640	12,857	12,857	12,857	12,857	12,745	13,081	13,304	12,857	12,522
max. RCF <sup>2)</sup>	ROTINA 380 R	15,828	15,828	15,557	15,151	16,233	16,504	15,557	15,557	15,557	15,557	15,422	15,828	16,098	15,557	15,151
radius in mm	117	117	115	112	120	122	115	115	115	115	114	117	119	115	112	
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>3)</sup></b>			<b>blood collection tubes / urine tubes</b>				<b>-</b>	<b>tubes with screw cap</b>				



### Adapter

boring Ø x L in mm	11.4x39	11.4x39	17.5x92	26x85	35x89	38.2x89.6	17.5x92	17.5x92	17.5x92	17.5x92	17x51	17x106	29.8x97	16.5x74	26x85
vessels per rotor	24	24	6	6	6	6	6	6	6	6	6	6	6	12	6
<b>Cat. No.</b>	<b>1449</b>	<b>1449</b>	<b>1451</b>	<b>1447</b>	<b>1463</b>	<b>-</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1476</b>	<b>1466</b>	<b>1454</b>	<b>1448</b>	<b>1447</b>

### Vessels

capacity in ml	50	85	
Ø x L in mm	29 x 107	38 x 106	
max. RCF <sup>2)</sup>	ROTINA 380	13,081	13,640
max. RCF <sup>2)</sup>	ROTINA 380 R	15,828	16,504
radius in mm	117	122	
<b>Cat. No.</b>	<b>tubes with screw cap</b>		



### Adapter

boring Ø x L in mm	29 x 92	38.2 x 89.6
vessels per rotor	6	6
<b>Cat. No.</b>	<b>1446</b>	<b>-</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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 TÜV in conformity with DIN EN 61010, section 2-020.

## — ANGLE ROTOR, 30-PLACE | 1789-A



### Rotor

max. RPM   max. RCF	15,000 min <sup>-1</sup>   24,400 min <sup>-1</sup>
max. capacity	30 x 2 ml
run-up   run-down, braked in sec	24   24
angle   max. noise level	45°   60 dB (A)
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>1789-A</b>



Lid bioseal<sup>®</sup>, phenol-resistant

Cat. No.



**INCLUSIVE**



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38
max. RCF <sup>2)</sup>	24,400	24,400	24,400	24,400	24,400	24,400
radius in mm	97	97	97	97	97	97
<b>Cat. No.</b>	<b>microliter tubes</b>					



### Adapter

boring Ø x L in mm	6 x 40	6 x 40	8 x 40	8 x 40	10.2 x 19.3	11.2 x 40.9
vessels per rotor	30	30	30	30	30	30
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>



- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 7) For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters. Cat. No. 2031.
- 17) Packaging unit 15 pieces.

## — PACKAGES

ROTINA 380 BLOOD TUBE PACKAGE 1	number of vessels	volume (ml)	size (mm)	RPM	RCF	
- 1 x ROTINA 380 centrifuge	1701	64	1.6 - 7	13 x 90 / 100	5,000	4,668
- 1 x swing-out rotor, 4-place	1754	52	4 - 10	17 x 100	5,000	4,668
- 4 x bucket	1752					
- 4 x lid (bioseal)	1751					
- 4 x adapter, 16-place	1783-A					
- 4 x adapter, 13-place	1763-A					
<b>1701SET1</b>						



ROTINA 380 CONICAL PACKAGE 2	number of vessels	volume (ml)	size (mm)	RPM	RCF	
- 1 x ROTINA 380 centrifuge	1701	36	15	17 x 120	5,000	4,863
- 1 x swing-out rotor, 4-place	1754	16	50	29 x 115	5,000	4,863
- 4 x bucket	1752					
- 4 x adapter, 9-place (conical)	1771-A					
- 4 x adapter, 4-place (conical)	1772-A					
<b>1701SET2</b>						



ROTINA 380 R CONICAL PACKAGE 1	number of vessels	volume (ml)	size (mm)	RPM	RCF	
- 1 x ROTINA 380 R centrifuge	1706	36	15	17 x 120	5,000	4,863
- 1 x swing-out rotor, 4-place	1754	16	50	29 x 115	5,000	4,863
- 4 x bucket	1752					
- 4 x adapter, 9-place (conical)	1771-A					
- 4 x adapter, 4-place (conical)	1772-A					
<b>1706SET1</b>						



ROTINA 380 R BLOOD TUBE PACKAGE 2	number of vessels	volume (ml)	size (mm)	RPM	RCF	
- 1 x ROTINA 380 R centrifuge	1706	64	1.6 - 10	13 x 90 / 100	5,000	4,668
- 1 x swing-out rotor, 4-place	1754	52	4 - 15	17 x 100	5,000	4,668
- 4 x bucket	1752					
- 4 x lid (bioseal)	1751					
- 4 x adapter, 16-place	1783-A					
- 4 x adapter, 13-place	1763-A					
<b>1706SET2</b>						



# ROTINA 420 | 420 R

## Many solutions – one rotor

This compact benchtop centrifuge has been developed for large sample volumes. It has a maximum capacity of 4 x 600 ml bottles, 140 blood tubes, 16 microtiter plates or 52 x 15 ml conical tubes, all on a single cost-effective rotor. This unit is available with refrigeration and a temperature range from -20 °C to +40 °C (ROTINA 420 R).

### — FEATURES

- RPM: 50 - 15,000 min<sup>-1</sup> – adjustable in increments of 10
- RCF: 50 - 24,400 – adjustable in steps of 1
- Max. capacity: 4 x 600 ml
- High-performance with first-class equipment
- Choice of 5 rotors
- IVDR-conform according to regulation (EU) 2017/746
- Max. noise level of 51 dB(A) with rotor 4790-A
- Easy operation with keypad and control knob
- 98 program memories for more individuality
- 9 individual acceleration and 10 deceleration stages
- Model 420 R coolable from -20 to +40 °C (with pre-cooling function)

### — FIELDS OF APPLICATION

- Hospitals
- Hematological laboratories
- Blood centers
- Pharmaceutical laboratories
- Food analyzing laboratories
- University / Academic research



Centrifuge packages for the model can be found on [page 113](#)



More information about the control panel can be found on [page 202](#)

**CYTO**

Cyto system available for this model. More information on [page 180](#)



ROTINA 420



ROTINA 420 R



according to regulation (EU) 2017/746








## TECHNICAL DATA

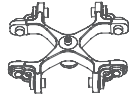
	<b>ROTINA 420</b> non-refrigerated	<b>ROTINA 420 R</b> refrigerated
voltage *)	200–240 V 1 ~	200–240 V 1 ~
frequency	50–60 Hz	50 Hz
consumption	870 VA	1,600 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	4 x 600 ml	4 x 600 ml
max. RPM	15,000 min <sup>-1</sup>	15,000 min <sup>-1</sup>
max. RCF	24,400	24,400
running time	1 – 99 h: 59 min: 59 s, ∞ continuous run, short cycle mode	1 – 99 h: 59 min: 59 s, ∞ continuous run, short cycle mode
dimensions (WxDxH)	506 x 650 x 423 mm	713 x 654 x 423 mm
weight	approx. 75 kg	approx. 108 kg
noise level	51 dB (A) with rotor 4790-A	50 dB (A) with rotor 4790-A
temperature control, infinitely variable	-	from -20 to +40 °C
<b>Cat. No.</b>	<b>4701</b>	<b>4706</b>
100–127 V 1 ~ / 50–60 Hz *)	4701-01	4706-01
consumption	900 VA	1,850 VA
emission, immunity	FCC class B	FCC class B
weight	approx. 84 kg	approx. 117 kg

\*) Other voltages on request.

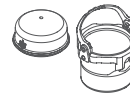
## AVAILABLE ROTORS

<b>SWING-OUT ROTORS</b>		angle	max. RPM	max. capacity	Cat. No.	page
	swing-out rotor, 4-place	90°	4,800 min <sup>-1</sup>	4x600 ml	<b>4784-A</b>	108
	swing-out rotor, 4-place	90°	4,000 min <sup>-1</sup>	4x290 ml	<b>4753</b>	110
<b>ANGLE ROTORS</b>						
	angle rotor, 4-place	25°	9,500 min <sup>-1</sup>	4x250 ml	<b>4795</b>	112
	angle rotor, 6-place	45°	11,000 min <sup>-1</sup>	6x94 ml	<b>4794</b>	112
	angle rotor, 30-place	45°	15,000 min <sup>-1</sup>	30x2 ml	<b>4790-A</b>	113

## SWING-OUT ROTOR, 4-PLACE | 4784-A



<b>Rotor</b>	
max. RPM   max. RCF	4,800 min <sup>-1</sup>   4,740
max. capacity	4x600 ml
run-up   run-down, braked in sec	54   38
angle   max. noise level	90°   56 dB (A)
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>4784-A</b>



<b>Bucket with clamp lock</b>	
lid bioseal <sup>5)</sup>	4783
<b>Cat. No.</b>	<b>4780</b>



<b>Bucket without clamp lock<sup>14)</sup></b>	
<b>Cat. No.</b>	<b>4785</b>



<b>Vessels</b>																
capacity in ml	1.5	2.0	3	4	4	5	6	7	15	25	50	94	100	100	250	
Ø x L in mm	11 x 38	11 x 38	10 x 60	10 x 88	12 x 60	12 x 75	12 x 82	12 x 100	17 x 100	24 x 100	34 x 100	38 x 102	40 x 115	44 x 100	65 x 115	
max. RCF <sup>2)</sup>	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,559	4,534	4,534	4,534	4,534	
radius in mm	178	178	178	178	178	178	178	178	178	178	177	176	176	176	176	
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>												

<b>Adapter</b>															
boring Ø x L in mm	11.2x38	11.2x38	11.2x54	11.2x54	13.4x55	13.4x55	13.4x55	13.4x55	17.5x62	26.5x69	36x77	42x76.5	42x76.5	46x76.5	66x97
vessels per rotor	96	96	140	140	104	104	104	104	72	28	16	12	12	8	4
<b>Cat. No.</b>	<b>4773</b>	<b>4773</b>	<b>4761</b>	<b>4761</b>	<b>4762A</b>	<b>4762A</b>	<b>4762A</b>	<b>4762A</b>	<b>4763A</b>	<b>4764</b>	<b>4765</b>	<b>4766</b>	<b>4766</b>	<b>4767</b>	<b>4768</b>

<b>Vessels</b>															
capacity in ml	1.1-1.4	2.6-3.4	4-5.5	4.5-5	4.9	7.5-8.2	9-10	1.6-7	1.6-7	4-7	8	8.5-10	15	50	12
Ø x L in mm	8 x 66	13 x 65	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 125	16 x 100	17 x 120	29 x 115	17 x 100
max. RCF <sup>2)</sup>	4,585	4,585	4,585	4,585	4,585	4,585	4,585	4,720	4,720	4,585	4,585	4,585	4,740	4,688	4,688
radius in mm	178	178	178	178	178	178	178	178	178	178	178	178	184	182	182
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>													-	<b>tubes with screw cap</b>

<b>Adapter</b>															
boring Ø x L in mm	11.2x54	13.4x55	17.5x62	11.2x54	13.4x55	17.5x62	17.5x62	13.4x54	13.7x54	17.5x62	17.5x62	17.5x62	17x84	30x82.5	17.2x58.5
vessels per rotor	140	104	72	140	104	72	72	104	84	72	24	72	52	20	56
<b>Cat. No.</b>	<b>4761</b>	<b>4762A</b>	<b>4763A</b>	<b>4761</b>	<b>4762A</b>	<b>4763A</b>	<b>4763A</b>	<b>4762A</b>	<b>4775A</b>	<b>4763A</b>	<b>4763A</b>	<b>4763A</b>	<b>4769A</b>	<b>4770A</b>	<b>4774A</b>

<b>Vessels</b>																
capacity in ml	25-30	50	10	30	50	85	94	175	175	200	225	250	400	400	600	
Ø x L in mm	25x90/110	29x115	16x80	26x95	29x107	38x106	38x102	61 x 118	62 x 144	60 x 130	61 x 137	62 x 122	81 x 136	84x134	93x134	
max. RCF <sup>2)</sup>	4,585	4,688	4,585	4,585	4,688	4,534	4,534	4,740	4,740	4,740	4,740	4,740	4,740	4,740	4,740	
radius in mm	178	182	178	178	182	176	176	184	184	184	184	184	184	184	184	
<b>Cat. No.</b>	<b>tubes with screw cap</b>								<b>Falcon</b>	<b>Nalgene</b>	<b>Nunc<sup>3,6)</sup></b>	<b>Falcon</b>	<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>0551<sup>24)</sup></b>

<b>Adapter</b>															
boring Ø x L in mm	26.5x69	30x82.5	17.5x62	26.5x69	30x82.5	42x76.5	42x76.5	61x105	61.5x110	61.5x110	61x105	62x100	85x100	85x100	94x99
vessels per rotor	28	20	72	28	20	12	12	4	4	4	4	4	4	4	4
<b>Cat. No.</b>	<b>4764</b>	<b>4770A<sup>4)</sup></b>	<b>4763A</b>	<b>4764</b>	<b>4770A<sup>4)</sup></b>	<b>4766</b>	<b>4766</b>	<b>4776</b>	<b>4777</b>	<b>4777</b>	<b>4776</b>	<b>4771</b>	<b>4772</b>	<b>4772</b>	<b>-</b>

## SWING-OUT ROTOR, 4-PLACE | 4753

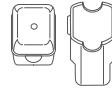


### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,898
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	18   16
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	-1
<b>Cat. No.</b>	<b>4753</b>

### Bucket

lid	5053
<b>Cat. No.</b>	<b>5051</b>



### Vessels

capacity in ml	1.5	2	1.5	2	3	5	6	7	9	15	25	50	100	100
Ø x L in mm	11 x 38	11 x 38	11 x 38	11 x 38	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	40 x 115
max. RCF <sup>2)</sup>	top / bottom	1,950 / 2,826	1,950 / 2,826	2,826	2,826	2,737	2,773	2,773	2,755	2,773	2,755	2,755	2,755	2,755
radius in mm	top / bottom	109 / 158	109 / 158	158	158	153	155	155	154	155	154	154	154	154
<b>Cat. No.</b>	<b>microliter tubes</b>							<b>tubes<sup>2)</sup></b>						



### Adapter

boring Ø x L in mm	12.5 x 37	12.5 x 37	11.5 x 50	11.5 x 50	11 x 44	12.5 x 39.5	12.5 x 39.5	12.5 x 82.5	16 x 50	17.5 x 82.5	26 x 82.5	36 x 82.5	45.5 x 82.5	42 x 86
vessels per rotor	160	160	64	64	80	80	80	80	48	48	20	8	4	4
<b>Cat. No.</b>	<b>5257</b>	<b>5257</b>	<b>5281</b>	<b>5281</b>	<b>5267</b>	<b>5227</b>	<b>5227</b>	<b>5247<sup>15)</sup></b>	<b>5264</b>	<b>5248<sup>15)</sup></b>	<b>5242</b>	<b>5243</b>	<b>5262</b>	<b>5249</b>

### Vessels

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.2	9–10	10	1.6–5	4–7	8.5–10	1–8
Ø x L in mm	8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	16 x 75	16 x 100	simple / multiple
max. RCF <sup>2)</sup>	2,737	2,808	2,773	2,773	2,773	2,808	2,773	2,755	2,755	2,808	2,773	2,755	1,735 / 2,737
radius in mm	153	157	155	155	155	157	155	154	154	157	155	154	97 / 153
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>									<b>tubes with screw cap</b>			<b>cyto chambers</b>



### Adapter

boring Ø x L in mm	11 x 41.5	13.5 x 52	12.5 x 37	16 x 50	12.5 x 37	13.5 x 52	16 x 50	17.6 x 82.5	17.6 x 82.5	13.5 x 52	16 x 50	17.5 x 82.5	-
vessels per rotor	80	48	80	48	80	48	48	44	44	48	48	48	8
<b>Cat. No.</b>	<b>5267</b>	<b>5268</b>	<b>5227</b>	<b>5264</b>	<b>5227</b>	<b>5268</b>	<b>5264</b>	<b>5258</b>	<b>5258</b>	<b>5268</b>	<b>5264</b>	<b>5248</b>	<b>5280</b>

### Vessels

capacity in ml	15	30	50	12	30	50
Ø x L in mm	17 x 120	25 x 110	29 x 115	17 x 100	25 x 110	29 x 115
max. RCF <sup>2)</sup>	2,898	2,755	2,826	2,898	2,755	2,755
radius in mm	162	154	158	162	154	154
<b>Cat. No.</b>	<b>tubes with screw cap</b>					



### Adapter

boring Ø x L in mm	17 x 90	26 x 82.5	30 x 90	17 x 90	26 x 82.5	36 x 82.5 <sup>+ 2 x 6316</sup>
vessels per rotor	28	20	8	28	20	8
<b>Cat. No.</b>	<b>6306</b>	<b>5266</b>	<b>5259</b>	<b>6306</b>	<b>5266</b>	<b>5243</b>

### CYTO

Cyto system available for this model.  
More information on page 180

- Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.
- 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.
- When using these tubes, carrier 4780 cannot be closed with lid 4783.
- Please remove the spacer.
- Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
- The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.
- 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.
- Adapter must be loaded as illustrated.
- At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
- Suitable for blood collection systems with a lid larger than 17 mm in diameter.

## SWING-OUT ROTOR, 4-PLACE | 4753



### Rotor

max. RPM   max. RCF	4,000 min <sup>1)</sup>   3,095
max. capacity	4x250 ml
run-up   run-down, braked in sec	18   16
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	-1
<b>Cat. No.</b>	<b>4753</b>



### Bucket

lid bioseal <sup>5)</sup>	5093
<b>Cat. No.</b>	<b>5092</b>



### Vessels

capacity in ml	5	6	7	15	25	50	100	100	250	1.1–1.4	2.6–2.9	2.7–3	4–4.5	4.5–5	4.9
Ø x L in mm	12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115	8 x 66	13 x 65	11x66	15x75	11x92	13x90
max. RCF <sup>2)</sup>	3,005	3,005	3,005	2,952	2,898	2,952	2,952	2,952	3,095	2,540	2,540	2,540	2,952	3,005	2,952
radius in mm	168	168	168	165	162	165	165	165	173	142	142	142	165	168	165
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>									<b>blood collection / urine vessels</b>					



### Adapter

boring Ø x L in mm	12.8x42	12.8x42	13.2x79.5	17.5x56.7	25.5x75	35.5x77.5	45.5x85	42x76.5	66x103	12.8x54.5	12.8x54.5	12.8x54.5	17.5x56.7	13.2x79.5	13.5x56.7
vessels per rotor	48	48	48	32	16	4	4	4	4	48	48	48	32	48	32
<b>Cat. No.</b>	<b>5128</b>	<b>5128</b>	<b>5120</b>	<b>5136</b>	<b>5122</b>	<b>5124</b>	<b>5125</b>	<b>5126</b>	<b>1791</b>	<b>5138</b>	<b>5138</b>	<b>5138</b>	<b>5136</b>	<b>5120</b>	<b>5137</b>

### Vessels

capacity in ml	7.5–8.2	9–10	10	1.6–5	4–7	4–7	8.5–10	15	50	12	25	30	50	10	250	
Ø x L in mm	15x92	16x92	15x102	13x75	13x100	16x75	16x100	17x120	29x115	17x100	25x90	25x110	29x115	16 x 80	61 x 122	
max. RCF <sup>2)</sup>	2,952	2,952	2,952	2,540	3,005	2,952	2,952	3,095	3,095	3,005	2,826	2,898	3,023	2,952	3,095	
radius in mm	165	165	165	142	168	165	165	173	173	168	158	162	169	165	173	
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>									<b>tubes with screw cap</b>						<b>5127<sup>24)</sup></b>

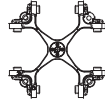


### Adapter

boring Ø x L in mm	17.5x56.7	17.5x56.7	17.5x56.7	12.8x54.5	13.2x79.5	17.5x56.7	17.5x56.7	17x85	30x85	17.5x85	26x73	25.5x75	30x99	17.5x57.7	62x90
vessels per rotor	32	32	32	48	48	32	32	28	8	28	12	16	8	32	4
<b>Cat. No.</b>	<b>5136</b>	<b>5136</b>	<b>5136</b>	<b>5138</b>	<b>5120</b>	<b>5136</b>	<b>5136</b>	<b>5129</b>	<b>5123</b>	<b>5121</b>	<b>5134</b>	<b>5122</b>	<b>5135</b>	<b>5136</b>	<b>6319</b>

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.  
 3.5) When using these tubes, bucket 5092 cannot be closed with lid 5053.  
 3.7) When using these tubes, bucket 4780 or 5051 cannot be closed with lid 4783 or 5053.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## SWING-OUT ROTOR, 4-PLACE | 4784-A



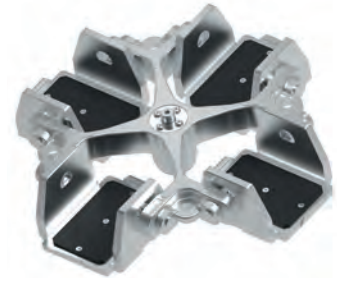
### Rotor

max. RPM   max. RCF	4,800 min <sup>-1</sup>   4,096
max. capacity	16 plates
run-up   run-down, braked in sec	54   38
angle   max. noise level	90°   56 dB (A)
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>4784-A</b>

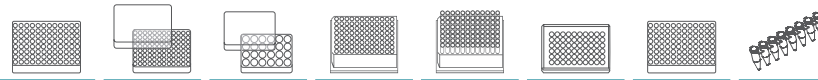


### Bucket

<b>Cat. No.</b>	<b>4782</b>
-----------------	-------------



### Plates

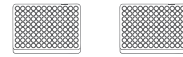


W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	84x59x11	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	0,2
max. RCF <sup>2)</sup>	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096
radius in mm	159	159	159	159	159	159	159	159
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>Microtest plate</b>	<b>PCR plate 96 wells</b>	<b>PCR strips</b>



### Adapter

boring Ø x L in mm	-	-	-	-	-	-	-	-
plates / strips per rotor	16	16	12	4	4	8	4	48 x 8
<b>Cat. No.</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1485</b>	<b>1485</b>



## ANGLE ROTOR, 4-PLACE | 4795



### Rotor

max. RPM   max. RCF	9,500 min <sup>-1</sup>   12,007
max. capacity	4x250 ml
run-up   run-down, braked in sec	45   55
angle	25°
temperature in °C <sup>1)</sup>	+2
<b>Cat. No.</b>	<b>4795</b>



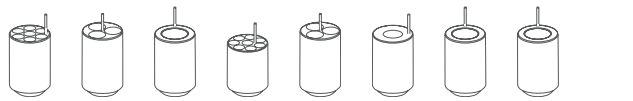
### Vessels



capacity in ml	15	25	94	10	30	50	85	85	250
Ø x L in mm	17 x 100	24 x 100	38 x 106	16 x 80	26 x 95	29 x 107	38 x 106	38 x 106	62 x 122
max. RCF <sup>2)</sup>	11,301	10,897	10,292	11,402	10,897	10,090	10,292	10,292	12,007
radius in mm	112	108	102	113	108	100	102	102	119
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>			<b>tubes with screw cap</b>				<b>5127<sup>24)</sup></b>	



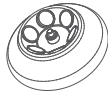
### Adapter



boring Ø x L in mm	17.6x83	26x80	38.6x88	16.6x70	26x80	29x90	38.6 x 88	38.6 x 88	61.5x109
vessels per rotor	28	12	4	32	12	4	4	4	4
<b>Cat. No.</b>	<b>5646</b>	<b>5642</b>	<b>5644</b>	<b>5641</b>	<b>5642</b>	<b>5643</b>	<b>5644</b>	<b>5644</b>	<b>-</b>



## ANGLE ROTOR, 6-PLACE | 4794



### Rotor

max. RPM   max. RCF	11,000 min <sup>-1</sup>   16,504
max. capacity	6 x 94 ml
run-up   run-down, braked in sec	40   63
angle   max. noise level	45°   58 dB (A)
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>4794</b>

### Lid bioseal<sup>5)</sup>

<b>Cat. No.</b>	<b>INCLUSIVE</b>
-----------------	------------------



### Vessels

capacity in ml	1.5	2	3	6	15	25	50	85	94	7.5 – 8,2	9 – 10	10	8.5 – 10	5
Ø x L in mm	11 x 38	11 x 38	10 x 60	17 x 100	17 x 100	24 x 100	34 x 100	38 x 106	38 x 102	15 x 92	16 x 92	15 x 102	16 x 100	17 x 51
max. RCF <sup>2)</sup>	15,828	15,828	15,828	15,557	15,557	15,151	16,233	16,504	16,504	15,557	15,557	15,557	15,557	16,504
radius in mm	117	117	117	115	115	112	120	122	122	115	115	115	117	122
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>						<b>blood collection / urine vessels</b>				<b>-</b>



### Adapter

boring Ø x L in mm	11.4 x 39	11.4 x 39	11.4 x 39	17,5 x 91,5	17,5 x 91,5	26 x 85	35 x 89,3	38,2 x 89,6	38,2 x 89,6	17,5 x 91,5	17,5 x 91,5	17,5 x 91,5	17,5 x 91,5	17 x 51
vessels per rotor	24	24	24	6	6	6	6	6	6	6	6	6	6	6
<b>Cat. No.</b>	<b>1449</b>	<b>1449</b>	<b>1449</b>	<b>1451</b>	<b>1451</b>	<b>1447</b>	<b>1463</b>	<b>-</b>	<b>-</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1476</b>

### Vessels

capacity in ml	4	15	20	10	30	50	85
Ø x L in mm	12 x 40	17 x 120	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106
max. RCF <sup>2)</sup>	15,557	15,828	16,098	15,557	15,151	15,828	16,504
radius in mm	115	117	119	115	112	117	122
<b>Cat. No.</b>	<b>tubes with screw cap</b>						




### Adapter

boring Ø x L in mm	15,6 x 30	17 x 106	29,8 x 96,7	16,5 x 74	26 x 85	29 x 92	38,2 x 89,6
vessels per rotor	24	6	6	12	6	6	6
<b>Cat. No.</b>	<b>1403</b>	<b>1466</b>	<b>1454</b>	<b>1448</b>	<b>1447</b>	<b>1446</b>	<b>-</b>







1) For cooled versions: Lowest temperature achievable with precooling and max. 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 | 4790-A

	
<b>Rotor</b>	
max. RPM   max. RCF	15,000 min <sup>-1</sup>   24,400
max. capacity	30 x 2 ml
run-up   run-down, braked in sec	19   24
angle   max. noise level	45°   50 dB (A)
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>4790-A</b>


**Lid bioseal<sup>®</sup>, phenol-resistant**  
**Cat. No.** **INCLUSIVE**



<b>Vessels</b>	
	     
capacity in ml	0.2    0.4    0.5    0.8    1.5    2
Ø x L in mm	6x18    6x45    8x30    8x45    11x38    11x38
max. RCF <sup>2)</sup>	24,400    24,400    24,400    24,400    24,400    24,400
radius in mm	97    97    97    97    97    97
<b>Cat. No.</b>	<b>microliter tubes</b>

<b>Adapter</b>	
	     
boring Ø x L in mm	6x40    6x40    8x40    8x40    10.2x19.3    11.2x40.9
vessels per rotor	30    30    30    30    30    30
<b>Cat. No.</b>	<b>2024    2024    2023    2023    2031<sup>7)</sup>    -</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.

## — PACKAGES

<b>ROTINA 420 BLOOD TUBE PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTINA 420 centrifuge	4701	104	1.6 - 7	13 x 90 / 100	4,800	4,585
- 1 x swing-out rotor, 4-place	4784-A	72	4 - 15	17 x 100	4,800	4,585
- 4 x bucket	4780					
- 4 x lid (bioseal)	4783					
- 4 x adapter, 26-place	4762A					
- 4 x adapter, 18-place	4763A					
<b>4701SET1</b>						



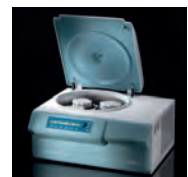
<b>ROTINA 420 CONICAL PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTINA 380 centrifuge	4701	52	15	17 x 120	4,800	4,740
- 1 x swing-out rotor, 4-place	4784-A	20	50	29 x 115	4,800	4,688
- 4 x bucket	4785					
- 4 x adapter, 13-place (conical)	4769A					
- 4 x adapter, 5-place (conical)	4770A					
<b>4701SET2</b>						



<b>ROTINA 420 R BLOOD TUBE PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTINA 420 centrifuge	4706	104	1.6 - 7	13 x 90 / 100	4,800	4,585
- 1 x swing-out rotor, 4-place	4784-A	72	4 - 15	17 x 100	4,800	4,585
- 4 x bucket	4780					
- 4 x lid (bioseal)	4783					
- 4 x adapter, 26-place	4762A					
- 4 x adapter, 18-place	4763A					
<b>4706SET1</b>						



<b>ROTINA 420 R CONICAL PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTINA 420 R centrifuge	4706	52	15	17 x 120	4,800	4,740
- 1 x swing-out rotor, 4-place	4784-A	20	50	29 x 115	4,800	4,688
- 4 x bucket	4785					
- 4 x adapter, 13-place (conical)	4769A					
- 4 x adapter, 5-place (conical)	4770A					
<b>4706SET2</b>						



# ROTANTA 460 | 460 R

## Superior benchtop for multi-purpose use

This powerful unit is capable of virtually any application you choose. It is able to spin high sample volumes of blood tubes, conical tubes, plates and bottles. Speciality buckets are able to accommodate 450 ml blood bags. This unit is available with refrigeration and a temperature range from -20 °C to +40 °C (ROTANTA 460 R).

### — FEATURES

- RPM: 50 - 15,000 min<sup>-1</sup> – adjustable in increments of 10
- RCF: 50 - 24,400 min<sup>-1</sup> – adjustable in increments of 1
- Max. Capacity: 4 x 1,000 ml
- Choice of 8 rotors
- Medical device according to regulation (EU) 2017/745
- 9 individual acceleration and 19 deceleration stages
- Easy operation with keypad and control knob
- 98 program memories for more individuality
- Model 460 R coolable from -20 to +40 °C (with pre-cooling function)

### — FIELDS OF APPLICATION

- Hospitals
- Blood centers
- Cell Culture Laboratories



Centrifuge packages for the model can be found on [page 130](#)



More information about the control panel can be found on [page 202](#)



ROTANTA 460



ROTANTA 460 R





## TECHNICAL DATA

	<b>ROTANTA 460</b> non-refrigerated	<b>ROTANTA 460 R</b> refrigerated
voltage *)	220 – 240 V 1 ~	220 – 240 V 1 ~
frequency	50 – 60 Hz	50 Hz
consumption	1,000 VA	1,800 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	4 x 1,000 ml	4 x 1,000 ml
max. RPM	15,000 min <sup>-1</sup>	15,000 min <sup>-1</sup>
max. RCF	24,400	24,400
running time	1 – 99 h: 59 min: 59 s, ∞ continuous run, short cycle mode	1 – 99 h: 59 min: 59 s, ∞ continuous run, short cycle mode
dimensions (WxDxH)	554x706x456 mm	770x706x456 mm
weight	approx. 101 kg	approx. 141 kg
noise level	46 dB (A) with rotor 4474	58 dB (A) with rotor 4474
temperature control, infinitely variable	-	from -20 to +40 °C
<b>Cat. No.</b>	<b>5650</b>	<b>5660</b>
100 – 127 V 1 ~ / 60 Hz *)	5650-01	5660-01
consumption	1,100 VA	2,000 VA
emission, immunity	FCC class B	FCC class B
weight	approx. 111 kg	approx. 151 kg




\*) Other voltages on request.

## AVAILABLE ROTORS

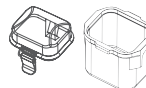
### SWING-OUT ROTORS

	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 4-place	90°	4,600 min <sup>-1</sup>	4x750 ml	<b>5699-R</b>	116
 swing-out rotor, 4-place	90°	3,800 min <sup>-1</sup>	4x1,000 ml	<b>5654</b>	123
 swing-out rotor, 6-place	90°	4,000 min <sup>-1</sup>	6x290 ml	<b>4446</b>	125
 swing-out rotor, 4-place	90°	2,000 min <sup>-1</sup>	4x100 ml	<b>4474</b>	127
 swing-out rotor, 2-place	90°	5,900 min <sup>-1</sup> / 6,200 min <sup>-1</sup>	12 plates	<b>5622</b>	127

### ANGLE ROTORS

 angle rotor, 30-place	45°	15,000 min <sup>-1</sup>	30x2 ml	<b>4489-A</b>	128
 angle rotor, 6-place	25°	8,500 min <sup>-1</sup> / 9,500 min <sup>-1</sup>	6x250 ml	<b>5645</b>	128
 angle rotor, 6-place	45°	11,500 min <sup>-1</sup>	6x94 ml	<b>5615</b>	129

## SWING-OUT ROTOR, 4-PLACE | 5699-R



<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   5,063
max. capacity	4x250 ml
run-up   run-down, braked in sec	79   88
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>

<b>Bucket</b>	
lid bioseal <sup>5)</sup>	5627
<b>Cat. No.</b>	<b>5625-A</b>

<b>Vessels</b>																
capacity in ml	1.5	2.0	3	4	4	5	6	7	15	25	75	94	100	100	250	
Ø x L in mm	11 x 38	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 110	44 x 100	40 x 115	65 x 115	
max. RCF <sup>2)</sup>	3,572 / 4,637	3,572 / 4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,495	4,495	4,637	4,495	4,495	
radius in mm	151/196	151/196	196	196	196	196	196	196	196	196	190	190	196	190	190	
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>												

<b>Adapter</b>															
boring Ø x L in mm	11 x 84	11 x 84	11 x 84	11 x 84	13.5 x 84	13.5 x 84	13.5 x 84	13.5 x 84	17.5 x 84	26.5 x 84	36 x 80	42 x 80	46 x 84	42 x 80	66 x 80
vessels per rotor	224	224	120	120	80	80	80	80	68	24	12	12	8	12	4
<b>Cat. No.</b>	<b>4730</b>	<b>4730</b>	<b>4730</b>	<b>4730</b>	<b>4732</b>	<b>4732</b>	<b>4732</b>	<b>4732</b>	<b>4733</b>	<b>4734</b>	<b>4735</b>	<b>4736</b>	<b>4737</b>	<b>4736</b>	<b>4738</b>

<b>Vessels</b>															
capacity in ml	1.1–1.4	2.6–2.9	2.7–3	4–5.5	4.5–5	4.9	7.5–8.2	9–10	10	1.6–5	4–7	4–7	8.5–10	14	15
Ø x L in mm	8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100	16.5 x 106	17 x 120
max. RCF <sup>2)</sup>	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637
radius in mm	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>													<b>tubes with screw cap</b>	

<b>Adapter</b>															
boring Ø x L in mm	11 x 84	13.5 x 84	13.5 x 84	17.5 x 84	13.5 x 84	13.5 x 84	17.5 x 84	17.5 x 84	17.5 x 84	13.5 x 84	13.5 x 84	17.5 x 84	17.5 x 84	17 x 80	17 x 80
vessels per rotor	120	80	80	68	80	80	68	68	68	80	80	68	68	48	48
<b>Cat. No.</b>	<b>4730</b>	<b>4732</b>	<b>4732</b>	<b>4733</b>	<b>4732</b>	<b>4732</b>	<b>4733</b>	<b>4733</b>	<b>4733</b>	<b>4732</b>	<b>4732</b>	<b>4733</b>	<b>4733</b>	<b>4739<sup>4)</sup></b>	<b>4739</b>

<b>Vessels</b>										
capacity in ml	50	12	25	30	50	10	30	50	85	94
Ø x L in mm	30 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	38 x 110
max. RCF <sup>2)</sup>	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,495	4,495
radius in mm	196	196	196	196	196	196	196	196	190	190
<b>Cat. No.</b>	<b>tubes with screw cap</b>									

<b>Adapter</b>										
boring Ø x L in mm	30 x 80	17 x 80	26.5 x 84	26.5 x 84	30 x 80	17.5 x 84	26.5 x 84	30 x 80	42 x 80	
vessels per rotor	20	48	24	24	20	68	24	20	12	
<b>Cat. No.</b>	<b>4740</b>	<b>4739<sup>4)</sup></b>	<b>4734</b>	<b>4734</b>	<b>4740</b>	<b>4733</b>	<b>4734</b>	<b>4740</b>	<b>4736</b>	<b>4736</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 spacer.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.



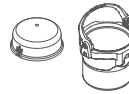
## SWING-OUT ROTOR, 4-PLACE | 5699-R



### Rotor

max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   4,779
max. capacity	4 x 750 ml
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +7
<b>Cat. No.</b>	<b>5699-R</b>

### Bucket with clamp lock



lid bioseal <sup>5)</sup>	4883
<b>Cat. No.</b>	<b>4880</b>

### Bucket without clamp lock<sup>14)</sup>



<b>Cat. No.</b>	<b>4885</b>
-----------------	-------------



### Vessels

capacity in ml	1.5	2.0	3	4	4	5	6	7	15	25	45	50	94	100	100	
Ø x L in mm	11 x 38	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	31 x 100	34 x 100	38 x 110	40 x 115	44 x 100	
max. RCF <sup>2)</sup>	3,572 / 4,637	3,572 / 4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,495	4,495	4,495	4,495	4,637	
radius in mm	151/196	151/196	196	196	196	196	196	196	196	196	190	190	190	190	196	
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>												



### Adapter

boring Ø x L in mm	11 x 84	11 x 84	11 x 84	11 x 84	13.5 x 84	13.5 x 84	13.5 x 84	13.5 x 84	17.5 x 84	26.5 x 84	36 x 80	36 x 80	42 x 80	42 x 80	46 x 84
vessels per rotor	192	192	96	96	76	76	76	76	76	28	16	16	12	12	8
<b>Cat. No.</b>	<b>4830</b>	<b>4830</b>	<b>4830</b>	<b>4830</b>	<b>4832</b>	<b>4832</b>	<b>4832</b>	<b>4832</b>	<b>4833</b>	<b>4834</b>	<b>4835</b>	<b>4835</b>	<b>4836</b>	<b>4836</b>	<b>4837</b>

### Vessels

capacity in ml	250	1.1–1.4	2.6–2.9	2.6–2.9	2.7–3	4–5.5	4.5–5	4.9	4.9	7.5–8.2	9–10	9–10	10	1.6–5	1.6–5
Ø x L in mm	65 x 115	8 x 66	13 x 65	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	13 x 90	15 x 92	16 x 92	16 x 92	15 x 102	13 x 75	13 x 75
max. RCF <sup>2)</sup>	4,495	4,637	4,116	4,637	4,637	4,637	4,637	4,637	4,684	4,637	4,684	4,637	4,637	4,116	4,637
radius in mm	190	196	174	196	196	196	196	196	198	196	198	196	196	174	196
<b>Cat. No.</b>	<b>-<sup>2)</sup></b>	<b>blood collection / urine vessels</b>													



### Adapter

boring Ø x L in mm	66 x 80	11 x 84	13.2 x 61	13.5 x 84	13.5 x 84	17.5 x 84	13.5 x 84	13.5 x 84	13.2 x 61	17.5 x 84	17.5 x 61	17.5 x 84	17.5 x 84	13.2 x 61	13.5 x 84
vessels per rotor	4	96	108	76	76	76	76	76	108	76	88	76	76	108	76
<b>Cat. No.</b>	<b>4838</b>	<b>4830</b>	<b>4847</b>	<b>4832</b>	<b>4832</b>	<b>4833</b>	<b>4832</b>	<b>4832</b>	<b>4847<sup>4)</sup></b>	<b>4833</b>	<b>4848</b>	<b>4833</b>	<b>4833</b>	<b>4847</b>	<b>4832</b>

### Vessels

capacity in ml	4–7	4–7	4–7	8	8.5–10	8.5–10	14	15	50	50	12	25	30	
Ø x L in mm	13 x 100	16 x 75	16 x 75	16 x 125	16 x 100	16 x 100	16.5 x 106	17 x 120	29 x 115	29 x 115	17 x 100	25 x 90	25 x 110	
max. RCF <sup>2)</sup>	4,684	4,637	4,684	4,637	4,637	4,684	4,637	4,637	4,708	4,637	4,637	4,637	4,637	
radius in mm	198	196	198	196	196	198	196	196	199	196	196	196	196	
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>							<b>tubes with screw cap</b>						



### Adapter

boring Ø x L in mm	13.2 x 61	17.5 x 84	17.5 x 61	17.5 x 84	17.5 x 84	17.5 x 61	17 x 80	17 x 80	30 x 96.5	30 x 80	17 x 80	26.5 x 84	26.5 x 84
vessels per rotor	108	76	88	76	76	88	56	56	28	20	56	28	28
<b>Cat. No.</b>	<b>4847<sup>4)</sup></b>	<b>4833</b>	<b>4848</b>	<b>4833</b>	<b>4833</b>	<b>4848</b>	<b>4839<sup>4)</sup></b>	<b>4839</b>	<b>5647</b>	<b>4840</b>	<b>4839<sup>4)</sup></b>	<b>4834</b>	<b>4834</b>

## SWING-OUT ROTOR, 4-PLACE | 5699-R



<b>Rotor</b>	
max. RPM   max. RCF	4,600 min <sup>1)</sup>   4,779
max. capacity	4 x 750 ml
run-up   run-down, braked in sec	90   95
angle	90°
temperature in °C <sup>1)</sup>	+7
<b>Cat. No.</b>	<b>5699-R</b>

### Bucket with clamp lock



lid bioseal <sup>5)</sup>	4883
<b>Cat. No.</b>	<b>4880</b>

### Bucket without clamp lock<sup>14)</sup>



<b>Cat. No.</b>	<b>4885</b>
-----------------	-------------



### Vessels

capacity in ml	50	50	10	10	30	50	50	85	94	250	500	600	750	450	750	
Ø x L in mm	30 x 115	29 x 115	16 x 80	16 x 80	26 x 95	29 x 107	29 x 107	38 x 106	38 x 110	61 x 122	96 x 147	93 x 134	97 x 152	97 x 110	96 x 135	
max. RCF <sup>2)</sup>	4,708	4,637	4,637	4,684	4,637	4,637	4,708	4,495	4,495	4,779	4,779	4,779	4,779	4,779	4,779	
radius in mm	199	196	196	198	196	196	199	190	190	202	202	202	202	202	202	
<b>Cat. No.</b>	tubes with screw cap										<b>5127<sup>24)</sup></b>	<b>Corning<sup>®</sup></b>	<b>0551<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	<b>4447</b>	<b>4234-A</b>



### Adapter

boring Ø x L in mm	30 x 96.5	30 x 80	17.5 x 84	17.5 x 61	26.5 x 84	30 x 80	30 x 96.5	42 x 80	42 x 80	62 x 100	98 x 100	94 x 95	98 x 100	98 x 100	98 x 100	
vessels per rotor	28	20	76	88	28	20	28	12	12	4	4	4	4	4	4	
<b>Cat. No.</b>	<b>5647<sup>4)</sup></b>	<b>4840<sup>4)</sup></b>	<b>4833</b>	<b>4848</b>	<b>4834</b>	<b>4840<sup>4)</sup></b>	<b>5647<sup>4)</sup></b>	<b>4836</b>	<b>4836</b>	<b>4841</b>	<b>4845</b>	<b>4846</b>	<b>4845</b>	<b>4845</b>	<b>4845</b>	<b>4845</b>

### Vessels

capacity in ml	30	50	40	160	200	200	200
Ø x L in mm	-	-	-	-	-	-	-
max. RCF <sup>2)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>
radius in mm	195	195	195	195	195	195	195
<b>Cat. No.</b>	<b>Falcon<sup>®</sup></b>	<b>Corning<sup>®</sup></b>	<b>Nunc<sup>®</sup></b>	<b>Nunc<sup>®</sup></b>	<b>Falcon<sup>®</sup></b>	<b>Greiner<sup>®</sup></b>	<b>Nunc<sup>®</sup></b>



### Adapter

boring Ø x L in mm	-	-	-	-	-	-	-
vessels per rotor	8	8	4	8	4	4	4
<b>Cat. No.</b>	<b>4849</b>	<b>4849</b>	<b>4852</b>	<b>4851</b>	<b>4831</b>	<b>4831</b>	<b>4831</b>

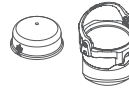
1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3.8) When using these tubes, bucket 4880 cannot be closed with lid 4883.  
 3.9) When using these tubes, bucket 4890 cannot be closed with lid 4883.  
 4) Please remove the spacer.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
 14) With the E3906 add-on kit and the 4783 lid, the 4885/4895 carrier can be converted at a later time to a 4780 carrier with single-hand clamp lock.  
 21) Adapter must be loaded as illustrated.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.  
 27) RCF values indicated refer only to rotor performance. The max. RCF for the accommodated cell culture flasks is 2,300.  
 28) 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.

## SWING-OUT ROTOR, 4-PLACE | 5699-R



Rotor	
max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   5,063
max. capacity	4 x 750 ml
run-up   run-down, braked in sec	90   95
angle	90°
temperature in °C <sup>1)</sup>	+7
<b>Cat. No.</b>	<b>5699-R</b>

### Bucket with clamp lock



lid bioseal <sup>5)</sup>	4883
<b>Cat. No.</b>	<b>4890</b>

### Bucket without clamp lock<sup>14)</sup>



<b>Cat. No.</b>	<b>4895</b>
-----------------	-------------



### Vessels

capacity in ml	1.5	2.0	5	7	8	9	15	25	50	100	2.6-2.9	2.7-3	4-5.5	4.5-5	4.9	
Ø x L in mm	11 x 38	11 x 38	12 x 75	12 x 100	16 x 81	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	
max. RCF <sup>2)</sup>	top / bottom	3,407 / 4,542	3,407 / 4,542	4,471	4,471	4,637	4,637	4,637	4,353	4,424	4,400	4,471	4,471	4,637	4,471	4,471
radius in mm	top / bottom	144 / 192	144 / 192	189	189	196	196	196	184	187	186	189	189	196	189	189
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>							<b>blood collection / urine vessels</b>					

### Adapter

boring Ø x L in mm	11.5 x 38	11.5 x 38	13 x 58	13 x 58	17.5 x 53	17.5 x 53	17.5 x 53	26 x 72	36 x 79	45 x 78	13.5 x 58	13 x 58	17.5 x 53	13 x 58	13.5 x 58
vessels per rotor	168	168	120	120	76	76	76	28	16	8	84	120	76	120	84
<b>Cat. No.</b>	<b>4432</b>	<b>4432</b>	<b>4433</b>	<b>4433</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4438</b>	<b>4439</b>	<b>4442</b>	<b>4435</b>	<b>4433</b>	<b>4434</b>	<b>4433</b>	<b>4435</b>

### Vessels

capacity in ml	7.5-8.2	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	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 81	16 x 100	16 x 80	17 x 120	29 x 115	25 x 90	25 x 110	29 x 115	29 x 107
max. RCF <sup>2)</sup>	4,637	4,637	4,637	4,471	4,471	4,637	4,637	4,637	4,637	4,755	4,613	4,566	4,566	4,613	4,613
radius in mm	196	196	196	189	189	196	196	196	196	201	195	193	193	195	195
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>										<b>tubes with screw cap</b>				

### Adapter

boring Ø x L in mm	17.5 x 60	17.5 x 60	17.5 x 60	13.5 x 58	13.5 x 58	17.5 x 60	17.5 x 60	17.5 x 60	17.5 x 60	17 x 102	31 x 96	26 x 72	26 x 72	31 x 96	31 x 96
vessels per rotor	76	76	76	84	84	76	76	76	76	56	28	28	28	28	28
<b>Cat. No.</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4435</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4469</b>	<b>4468</b>	<b>4438</b>	<b>4438</b>	<b>4468<sup>4)</sup></b>	<b>4468</b>

### Vessels

capacity in ml	250	290	600	750	175	175	200	225	250	500	450	750	450
Ø x L in mm	61 x 122	62 x 137	93 x 134	97 x 152	61 x 118	62 x 144	60 x 130	61 x 137	60 x 172	96 x 147	97 x 110	96 x 135	3-place-system without filter
max. RCF <sup>2)</sup>	4,873	4,873	4,873	4,873	5,063	5,063	5,063	5,063	5,063	5,063	5,063	5,063	5,063
radius in mm	206	206	206	206	214	214	214	214	214	214	214	214	214
<b>Cat. No.</b>	<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>0551<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	<b>Falcon®</b>	<b>Nalgene®</b>	<b>Nunc®</b>	<b>Falcon®</b>	<b>Corning®</b>	<b>Corning®</b>	<b>4447</b>	<b>4234-A</b>	<b>blood bags<sup>28)</sup></b>

### Adapter

boring Ø x L in mm	62 x 92	62 x 92	98.4 x 116	98.4 x 116	61 x 105	61 x 105	61 x 105	61 x 105	61 x 105	-	98.4 x 116	98.4 x 116	-
vessels per rotor	4	4	4	4	4	4	4	4	4	4	4	4	4
<b>Cat. No.</b>	<b>4443</b>	<b>4443</b>	<b>4451</b>	<b>4451</b>	<b>4440</b>	<b>4430</b>	<b>4430</b>	<b>4440</b>	<b>4430</b>	<b>4449</b>	<b>4451</b>	<b>4451</b>	-

## — SWING-OUT ROTOR, 4-PLACE | 5699-R



### Rotor

max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   4,637
max. capacity	4 x 450 ml
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>



### Bucket

<b>Cat. No.</b>	<b>5691-A</b>
-----------------	---------------



holder for systems without filter      holder for systems with and without filter



### Blood bags

capacity in ml	450	450
blood bag	3-place-System	4-place-System
max. RCF <sup>2)</sup>	4,637	4,637
radius in mm	196	196
<b>Cat. No.</b>	<b>5693</b>	<b>5695</b>



### Insert

boring Ø x L in mm	-	-
blood bags per rotor	4	4
<b>Cat. No.</b>	<b>5692</b>	<b>5692</b>

## — SWING-OUT ROTOR, 4-PLACE | 5699-R



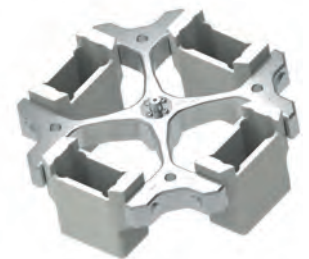
### Rotor

max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   4,921
max. capacity	12 Arrays
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>

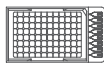


### Bucket

<b>Cat. No.</b>	<b>5636</b>
-----------------	-------------



TaqMan Array



### Array

capacity in ml	-
W x D x H in mm	152.5x85.5x12
max. RCF <sup>2)</sup>	4,921
radius in mm	208
<b>Cat. No.</b>	<b>-</b>




### Adapter


boring Ø x L in mm	-
arrays per rotor	12
<b>Cat. No.</b>	<b>5648</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 | 5699-R



<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   4,258
max. capacity	4 x 250 ml
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>




<b>Bucket</b>	
<b>Cat. No.</b>	<b>5628 9)</b>


  


<b>Adapter</b>	
<b>Cat. No.</b>	<b>5220-A</b>



<b>Vessels</b>															
capacity in ml	1.5	2.0	3	5	6	7	9	25	50	100	100	250	1.1-1.4	2.6-2.9	2.7-3
Ø x L in mm	11 x 38	11 x 38	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	24 x 100	34 x 100	44 x 100	40 x 115	65 x 115	8 x 66	13 x 65	11 x 66
max. RCF <sup>2)</sup>	4,164	4,164	4,069	4,164	4,164	4,164	4,116	4,093	4,093	4,069	4,069	4,045	4,069	4,164	4,116
radius in mm	176	176	172	176	176	176	174	173	173	172	172	171	172	176	174
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>									<b>blood collection / urine vessels</b>		
	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A
<b>Adapter</b>															
boring Ø x L in mm	11.5 x 50	11.5 x 50	11 x 44	13.5 x 52	13.5 x 52	13.5 x 52	16 x 50	26 x 82.5	36 x 82.5	45.5 x 82	42 x 82	66 x 81	11 x 44	13.5 x 52	12.5 x 39.5
vessels per rotor	128	128	160	96	96	96	96	40	16	8	8	4	160	96	160
<b>Cat. No.<sup>19)</sup></b>	<b>5281</b>	<b>5281</b>	<b>5267</b>	<b>5268</b>	<b>5268</b>	<b>5268</b>	<b>5264</b>	<b>5242</b>	<b>5243</b>	<b>5262</b>	<b>5249</b>	<b>5263-A</b>	<b>5267</b>	<b>5268</b>	<b>5227</b>

<b>Vessels</b>																									
capacity in ml	4-5.5	4.5-5	4.9	7.5-8.2	9-10	1.6-5	4-7	4-7	8.5-10	15	30	50	50	250											
Ø x L in mm	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	16 x 75	13 x 100	16 x 100	17 x 120	25 x 110	29 x 115	29 x 115	65 x 115											
max. RCF <sup>2)</sup>	4,116	4,116	4,164	4,116	4,093	4,164	4,116	4,164	4,093	4,258	4,187	4,258	4,187	4,045											
radius in mm	174	174	176	174	173	176	174	176	173	180	177	180	177	171											
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>								<b>tubes with screw cap</b>				<b>5127<sup>24)</sup></b>												
	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A				+ 6319											
<b>Adapter</b>													 <table border="1"> <tr> <td><b>Vessels</b></td> <td></td> </tr> <tr> <td>capacity in ml</td> <td>1-8</td> </tr> <tr> <td>Ø x L in mm</td> <td>simple / multiple</td> </tr> <tr> <td>max. RCF<sup>2)</sup></td> <td>2,744 / 4,069</td> </tr> <tr> <td>radius in mm</td> <td>116 / 172</td> </tr> <tr> <td><b>Cat. No.</b></td> <td><b>cyto chambers</b></td> </tr> </table>	<b>Vessels</b>		capacity in ml	1-8	Ø x L in mm	simple / multiple	max. RCF <sup>2)</sup>	2,744 / 4,069	radius in mm	116 / 172	<b>Cat. No.</b>	<b>cyto chambers</b>
<b>Vessels</b>																									
capacity in ml	1-8																								
Ø x L in mm	simple / multiple																								
max. RCF <sup>2)</sup>	2,744 / 4,069																								
radius in mm	116 / 172																								
<b>Cat. No.</b>	<b>cyto chambers</b>																								



<b>Adapter</b>	
boring Ø x L in mm	-
vessels per rotor	16
<b>Cat. No.<sup>19)</sup></b>	<b>5280</b>

**CYTO** Cyto system available for this model. More information on [page 180](#)

- For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 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.
- Please remove the spacer.
- Max. permissible loading weight of carrier 5628: 800 g. The loading weight is the sum of the weight of the respective adapters, frames, the tubes and their contents.
- Two adapters can be placed on each bucket.
- At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



## SWING-OUT ROTOR, 4-PLACE | 5699-R



<b>Rotor</b>	
max. RPM   max. RCF	4,600 min <sup>-1</sup>   3,785
max. capacity	4 x 200 ml
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>



<b>Bucket</b>	
<b>Cat. No.</b>	<b>5630-B</b>



<b>Vessels</b>						
capacity in ml		40	160	250/260	250/260	250/260
Ø x L in mm		-	-	-	-	-
max. RCF <sup>2)</sup>		3,785 <sup>2)</sup>	3,785 <sup>2)</sup>	3,785 <sup>2)</sup>	3,785 <sup>2)</sup>	3,785 <sup>2)</sup>
radius in mm		180	160	160	160	160
<b>Cat. No.</b>		<b>Nunc®</b>	<b>Nunc®</b>	<b>Falcon®</b>	<b>Greiner®</b>	<b>Nunc®</b>

**Accommodated cell culture flask:**

**40 ml**  
Nunc®, No. 156340 or 156367

**160 ml**  
Nunc®, No. 156472 or 156499  
Sarstedt®, No. 83.3911.xxx

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



<b>Adapter</b>						
boring Ø x L in mm		-	-	-	-	-
vessels per rotor		4	4	4	4	4
<b>Cat. No.</b>		<b>5672</b>	<b>5673</b>	<b>5671</b>	<b>5671</b>	<b>5671</b>

## SWING-OUT ROTOR, 4-PLACE | 5699-R



<b>Rotor</b>	
max. RPM   max. RCF	4,600 min <sup>-1</sup>   3,832
max. capacity	24 plates
run-up   run-down, braked in sec	79   88
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>



<b>Bucket</b>	
<b>Cat. No.</b>	<b>5630-B</b>



<b>Plates</b>										
W x D x H in mm		128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
capacity in ml		-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>		3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,832	3,832
radius in mm		max. 162	max. 162	max. 162	max. 162	max. 162	max. 162	max. 162	max. 162	max. 162
<b>Cat. No.</b>		<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plate</b>	<b>PCR plate</b>	<b>PCR strips</b>



<b>Removal frame</b>										
boring Ø x L in mm		-	-	-	-	-	-	-	-	-
plates / strips per rotor		24	20	16	4	4	4	8	4	48 x 8
<b>Cat. No.</b>		<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626 + 1485</b>	<b>4626 + 1485</b>

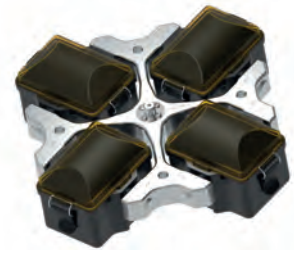
1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 27) RCF values indicated refer only to rotor performance. The max. RCF for the accommodated cell culture flasks is 2,300.

## SWING-OUT ROTOR, 4-PLACE | 5699-R

Rotor	
max. RPM   max. RCF	4,600 min <sup>-1</sup>   4,211
max. capacity	24 plates
run-up   run-down, braked in sec	79   88
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>



Bucket	
lid bioseal <sup>5)</sup>	5629
<b>Cat. No.</b>	<b>5628<sup>9)</sup></b>



Plates									
W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>	4,211	4,211	4,211	4,211	4,211	4,211	4,211	4,211	4,211
radius in mm	max. 178	max. 178	max. 178	max. 178	max. 178	max. 178	max. 178	max. 178	max. 178
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plate</b>	<b>PCR plate</b>	<b>PCR strips</b>
+									
Removal frame									
boring Ø x L in mm	-	-	-	-	-	-	-	-	-
plates / strips per rotor	24	20	16	4	4	4	8	4	48 x 8
<b>Cat. No.</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626 + 1485</b>	<b>4626 + 1485</b>

## SWING-OUT ROTOR, 4-PLACE | 5654

Rotor	
max. RPM   max. RCF	3,800 min <sup>-1</sup>   2,890
max. capacity	24 plates
run-up   run-down, braked in sec	62   58
angle   max. noise level	90°   57 dB (A)
temperature in °C <sup>1)</sup>	-4
<b>Cat. No.</b>	<b>5654</b>



Bucket	
lid bioseal <sup>5)</sup>	5629
<b>Cat. No.</b>	<b>5653</b>



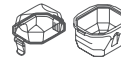
Plates									
W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>	2,890	2,890	2,890	2,890	2,890	2,890	2,890	2,890	2,890
radius in mm	max. 179	max. 179	max. 179	max. 179	max. 179	max. 179	max. 179	max. 179	max. 179
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plate</b>	<b>PCR plate</b>	<b>PCR strips</b>
+									
Removal frame									
boring Ø x L in mm	-	-	-	-	-	-	-	-	-
plates / strips per rotor	24	20	16	4	4	4	8	4	48 x 8
<b>Cat. No.</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626 + 1485</b>	<b>4626 + 1485</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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 TÜV in conformity with DIN EN 61010, section 2-020.
- 9) Max. permissible loading weight of carrier 5628: 800 g. The loading weight is the sum of the weight of the respective adapters, frames, the tubes and their contents.

## SWING-OUT ROTOR, 4-PLACE | 5654



<b>Rotor</b>	
max. RPM   max. RCF	3,800 min <sup>-1</sup>   3,196
max. capacity	4 x 1,000 ml
run-up   run-down, braked in sec	62   58
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	+3
<b>Cat. No.</b>	<b>5654</b>



<b>Bucket</b>	
lid bioseal <sup>5)</sup>	5652
<b>Cat. No.</b>	<b>5651-A</b>



<b>Vessels</b>															
capacity in ml	3	4	4	5	6	7	10	10	15	1.1-1.4	2.6-3.4	2.7-3	4.5-5	4-5.5	4.9
Ø x L in mm	10 x 60	10 x 88	12 x 60	12 x 75	12 x 82	12 x 100	13 x 100	13 x 100	17 x 100	8 x 66	13 x 65	11 x 66	11 x 92	15 x 75	13 x 90
max. RCF <sup>2)</sup>	2,874	2,874	2,874	2,874	2,874	2,874	2,906	2,906	2,970	2,874	2,906	2,874	2,874	2,970	2,906
radius in mm	178	178	178	178	178	178	180	180	184	178	180	178	178	184	180
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>								<b>blood collection / urine vessels</b>						

<b>Adapter</b>															
boring Ø x L in mm	12.5 x 40	12.5 x 40	12.5 x 40	12.5 x 40	12.5 x 40	12.5 x 40	13.2 x 42.4	13.2 x 42.4	17.2 x 46.5	12.5 x 40	13.2 x 42.4	12.5 x 40	12.5 x 40	17.2 x 46.5	13.2 x 42.4
vessels per rotor	292	292	292	292	292	292	196	188	148	292	196	292	292	148	196
<b>Cat. No.</b>	<b>5684</b>	<b>5684</b>	<b>5684</b>	<b>5684</b>	<b>5684</b>	<b>5684</b>	<b>5674</b>	<b>5685</b>	<b>5682</b>	<b>5684</b>	<b>5674</b>	<b>5684</b>	<b>5684</b>	<b>5682</b>	<b>5674</b>

<b>Vessels</b>															
capacity in ml	7.5-8.2	9-10	10	1.6-5	4-7	4-7	4-7	8.5-10	10	15	50	175	175	200	225
Ø x L in mm	15 x 92	16 x 92	15 x 102	13 x 75	16 x 75	13 x 100	13 x 100	16 x 100	16 x 80	17 x 120	29 x 115	61 x 118	62 x 144	60 x 130	61 x 137
max. RCF <sup>2)</sup>	2,970	2,970	2,970	2,906	2,970	2,906	2,906	2,970	2,970	3,196	3,196	3,196	3,196	3,196	3,196
radius in mm	184	184	184	180	184	180	180	184	184	198	198	198	198	198	198
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>									<b>tubes with screw cap</b>		<b>Falcon®</b>	<b>Nalgene®</b>	<b>Nunc®</b>	<b>Falcon®</b>

<b>Adapter</b>															
boring Ø x L in mm	17.2 x 46.5	17.2 x 46.5	17.2 x 46.5	13.2 x 42.4	17.2 x 46.5	13.2 x 42.4	13.2 x 42.4	17.2 x 46.5	17.2 x 46.5	17 x 60	30 x 60	62 x 100	62 x 100	62 x 100	62 x 100
vessels per rotor	148	148	148	196	148	196	188	148	148	96	40	8	8	8	8
<b>Cat. No.</b>	<b>5682</b>	<b>5682</b>	<b>5682</b>	<b>5674</b>	<b>5682</b>	<b>5674</b>	<b>5685</b>	<b>5682</b>	<b>5682</b>	<b>5683</b>	<b>5686</b>	<b>5681</b>	<b>5681</b>	<b>5681</b>	<b>5681</b>

<b>Vessels</b>							
capacity in ml	250	290	450	500	600	750	1,000
Ø x L in mm	62 x 122	62 x 137	97 x 110	96 x 147	93 x 134	97 x 152	99/126 x 140
max. RCF <sup>2)</sup>	3,196	3,196	3,196	3,196	3,196	3,196	3,196
radius in mm	198	198	198	198	198	198	198
<b>Cat. No.</b>	<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>4447</b>	<b>Corning®</b>	<b>0551<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	<b>-</b>

<b>Adapter</b>							
boring Ø x L in mm	62 x 100	62 x 100	98 x 100	98 x 100	98 x 100	98 x 100	100/127 x 68
vessels per rotor	8	8	4	4	4	4	4
<b>Cat. No.</b>	<b>5681</b>	<b>5681</b>	<b>5687</b>	<b>5687</b>	<b>5687</b>	<b>5687</b>	<b>5669</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 3.10) When using this tubes, bucket 5651-A cannot be closed with lid 5652.
- 5) Tested by TÜV in conformity with DIN EN 61010, section 2-020.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## SWING-OUT ROTOR, 6-PLACE | 4446

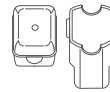


### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   3,631
max. capacity	6 x 100 ml
run-up   run-down, braked in sec	45   55
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	-3
<b>Cat. No.</b>	<b>4446</b>

### Bucket

lid	5053
<b>Cat. No.</b>	<b>5051</b>



### Vessels

capacity in ml	1.5	2	1.5	2	3	5	6	7	9	15	25	50	100	100
Ø x L in mm	11 x 38	11 x 38	11 x 38	11 x 38	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	40 x 115
max. RCF <sup>2)</sup>	top / bottom	2,486 / 3,363	2,486 / 3,363	3,363	3,363	3,274	3,309	3,309	3,291	3,309	3,291	3,291	3,291	3,291
radius in mm	top / bottom	139 / 188	139 / 188	188	188	183	185	185	184	185	184	184	184	184
<b>Cat. No.</b>	<b>microliter tubes</b>				<b>tubes<sup>2)</sup></b>									



### Adapter

boring Ø x L in mm	12.5 x 37	12.5 x 37	11.5 x 50	11.5 x 50	11 x 44	12.5 x 37	12.5 x 37	12.5 x 82.5	16 x 50	17.5 x 86	26 x 86	36 x 86	45.5 x 86	42 x 86
vessels per rotor	240	240	96	96	120	120	120	120	72	72	30	12	6	6
<b>Cat. No.</b>	<b>5257</b>	<b>5257</b>	<b>5281</b>	<b>5281</b>	<b>5267</b>	<b>5227</b>	<b>5227</b>	<b>5247<sup>15)</sup></b>	<b>5264</b>	<b>5248<sup>15)</sup></b>	<b>5242</b>	<b>5243</b>	<b>5262</b>	<b>5249</b>

### Vessels

capacity in ml	1.1–1.4	2.6–2.9	2.7–3	4–5.5	4.5–5	4.9	7.5–8.2	9–10	10	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100
max. RCF <sup>2)</sup>	3,274	3,345	3,309	3,309	3,309	3,345	3,309	3,291	3,291	3,345	3,345	3,309	3,291
radius in mm	183	187	185	185	185	187	185	184	184	187	187	185	184
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>												



### Adapter

boring Ø x L in mm	11 x 44	13.5 x 52	12.5 x 42	16 x 50	12.5 x 42	13.5 x 52	16 x 50	17.6 x 86	17.6 x 86	13.5 x 52	13.5 x 52	16 x 50	17.5 x 86
vessels per rotor	120	72	120	72	120	72	72	66	66	72	72	72	72
<b>Cat. No.</b>	<b>5267</b>	<b>5268</b>	<b>5227</b>	<b>5264</b>	<b>5227</b>	<b>5268</b>	<b>5264</b>	<b>5258</b>	<b>5258</b>	<b>5268</b>	<b>5268</b>	<b>5264</b>	<b>5248</b>

### Vessels

capacity in ml	15	50	12	50	1–8
Ø x L in mm	17 x 120	30 x 115	17 x 100	29 x 115	simple / multiple
max. RCF <sup>2)</sup>	top / bottom	3,434	3,291	3,434	3,291
radius in mm	top / bottom	192	188	192	184
<b>Cat. No.</b>	<b>tubes with screw cap</b>				<b>cyto chambers</b>



### Adapter

boring Ø x L in mm	17 x 90	30 x 86	17 x 90	36 x 86	-
vessels per rotor	42	12	42	12	12
<b>Cat. No.</b>	<b>6306</b>	<b>5259</b>	<b>6306</b>	<b>5243</b>	<b>5280</b>

### CYTO

Cyto system available for this model. More information on [page 180](#)

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 3.11) When using these tubes, bucket 5051 cannot be closed with lid 5053.
- 15) With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

## SWING-OUT ROTOR, 6-PLACE | 4446



<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>1</sup>   3,631
max. capacity	6x290 ml
run-up   run-down, braked in sec	38   46
angle   temperature in °C <sup>1)</sup>	90°   -3
<b>Cat. No.</b>	<b>4446</b>

<b>Bucket</b>	
lid bioseal <sup>5)</sup>	5093
<b>Cat. No.</b>	<b>5092</b>



<b>Vessels</b>															
capacity in ml	5	6	7	15	25	50	100	100	250	1.1-1.4	1.1-1.4	2.6-2.9	2.6-2.9	2.7-3	2.7-3
Ø x L in mm	12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115	8 x 66	8 x 66	13 x 65	13 x 65	11x66	11x66
max. RCF <sup>2)</sup>	3,542	3,542	3,542	3,488	3,434	3,631	3,488	3,488	3,631	3,488	3,077	3,488	3,077	3,488	3,077
radius in mm	198	198	198	195	192	195	195	195	203	195	172	195	172	195	172
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>									<b>blood collection tubes / urine tubes</b>					

<b>Adapter</b>															
boring Ø x L in mm	12.8x42	12.8x42	12.8x79.5	17.5x56.7	25.5x74	35.5x77.5	45.5x76.5	42x76.5	66x103	13.5x56.7	12.8x54.5	13.5x56.7	12.8x54.5	13.5x56.7	12.8x54.5
vessels per rotor	72	72	72	48	24	6	6	6	6	48	72	48	72	48	72
<b>Cat. No.</b>	<b>5128</b>	<b>5128</b>	<b>5120</b>	<b>5136</b>	<b>5122</b>	<b>5124</b>	<b>5125</b>	<b>5126</b>	<b>1791</b>	<b>5137</b>	<b>5138</b>	<b>5137</b>	<b>5138</b>	<b>5137</b>	<b>5138</b>

<b>Vessels</b>															
capacity in ml	4.9	4-4.5	4.5-5	7.5-8.2	9-10	10	1.6-5	1.6-5	4-7	4-7	8	8.5-10	10	15	30
Ø x L in mm	13x90	15x75	11x92	15x92	16x92	15x102	13x75	13x75	16x75	13x100	16x125	16x100	16x80	17x120	25 x 110
max. RCF <sup>2)</sup>	3,488	3,488	3,542	3,488	3,488	3,488	3,488	3,077	3,488	3,542	3,542	3,488	3,488	3,631	3,327
radius in mm	195	195	198	195	195	195	195	172	195	198	198	195	195	203	192
<b>Cat. No.</b>	<b>blood collection tubes / urine tubes</b>											<b>tubes with screw cap</b>			

<b>Adapter</b>															
boring Ø x L in mm	13.5x56.7	17.5x56.7	12.8x79.5	17.5x56.7	17.5x56.7	17.5x56.7	13.5x56.7	12.8x54.5	17.5x56.7	12.8x79.5	17.5x79.5	17.5x56.7	17.5x56.7	17x85	25.5 x 74
vessels per rotor	48	48	72	48	48	48	48	72	48	72	42	48	48	42	24
<b>Cat. No.</b>	<b>5137</b>	<b>5136</b>	<b>5120</b>	<b>5136</b>	<b>5136</b>	<b>5136</b>	<b>5137</b>	<b>5138</b>	<b>5136</b>	<b>5120</b>	<b>5121</b>	<b>5136</b>	<b>5136</b>	<b>5129</b>	<b>5122</b>

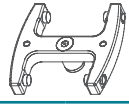
<b>Vessels</b>							
capacity in ml	50	50	12	25	30	250	290
Ø x L in mm	30x115	29x115	17x100	25x90	25x110	62 x 122	62 x 137
max. RCF <sup>2)</sup>	3,631	3,560	3,542	3,363	3,327	3,631	3,631
radius in mm	203	199	198	188	192	203	203
<b>Cat. No.</b>	<b>tubes with screw cap</b>					<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>

<b>Adapter</b>							
boring Ø x L in mm	30x85	30x99	17.5x79.5	26x73	25.5x74	62x90	62x90
vessels per rotor	12	12	42	18	24	6	6
<b>Cat. No.</b>	<b>5123</b>	<b>5135</b>	<b>5121</b>	<b>5134</b>	<b>5122</b>	<b>6319</b>	<b>6319</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. 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.  
 3.5) When using these tubes, bucket 5092 cannot be closed with lid 5053.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



## SWING-OUT ROTOR, 2-PLACE | 5622



<b>Rotor</b>	
max. RPM	ROTANTA 460   460 R 5,900 min <sup>-1</sup>   6,200 min <sup>-1</sup>
max. RCF	5,838   6,446
max. capacity	12 plates
run-up   run-down, braked in sec	50   52   32   39
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5622</b>





<b>Bucket</b>	
lid bioseal <sup>5)</sup>	4627
<b>Cat. No.</b>	<b>5631</b>



<b>Plates</b>									
W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446
radius in mm	150	150	150	150	150	150	150	150	150
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plate</b>	<b>PCR plate 96 wells</b>	<b>PCR strips</b>
<b>+</b>									
<b>Removal frame</b>									
boring Ø x L in mm	-	-	-	-	-	-	-	-	-
vessels per rotor	12	10	8	2	2	2	4	2	24
<b>Cat. No.</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626 + 1485</b>	<b>4626 + 1485</b>

## SWING-OUT ROTOR, 4-PLACE | 4474



<b>Rotor</b>	
max. RPM   max. RCF	2,000 min <sup>-1</sup>   984
max. capacity	4x100 ml
run-up   run-down, braked in sec	14   17
angle   max. noise level	90°   46 dB (A)
temperature in °C <sup>1)</sup>	-8
<b>Cat. No.</b>	<b>4474</b>




<b>Bucket</b>	
<b>Cat. No.</b>	<b>4275</b>



<b>Vessels</b>				
capacity in ml	100	100	100	50
Ø x L in mm	58x161	44x168	37x200	36.5x185
max. RCF <sup>2)</sup>	984	961	961	912
radius in mm	220	215	215	204
<b>Cat. No.</b>	<b>ASTM 0528<sup>2.1)</sup></b>	<b>ASTM<sup>2.1)</sup></b>	<b>ASTM 0531<sup>2.1)</sup></b>	<b>Babcock</b>
<b>+</b>				
<b>Adapter</b>				
boring Ø x L in mm	-	-	-	-
vessels per rotor	4	4	4	4
<b>Cat. No.</b>	<b>0771</b>	<b>4277</b>	<b>4276-B</b>	<b>0703-A</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2.1) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of vessels used should be verified with the individual manufacturers. The max. RCF for ASTM Tubes annotated with footnote 2) is 700.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

## — ANGLE ROTOR, 30-PLACE | 4489-A



### Rotor

max. RPM   max. RCF	15,000 min <sup>-1</sup>   24,400
max. capacity	30 x 2 ml
run-up   run-down, braked in sec	65   63
angle   temperature in °C <sup>1)</sup>	45°   +4
<b>Cat. No.</b>	<b>4489-A</b>



Lid bioseal<sup>®</sup> and phenol-resistant

Cat. No.



**INCLUSIVE**



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10.7x46
max. RCF <sup>2)</sup>	24,400	24,400	24,400	24,400	24,400	24,400	23,394
radius in mm	97	97	97	97	97	97	93
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>



### Adapter

boring Ø x L in mm	6x40	6x40	8x40	8x40	10.2x19.3	11.2x40.1	11.2x40.1
vessels per rotor	30	30	30	30	30	30	15
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788</b>

## — ANGLE ROTOR, 6-PLACE | 5645



### Rotor

max. RPM	ROTANTA 460   460 R	8,500 min <sup>-1</sup>   9,500 min <sup>-1</sup>
max. RCF		11,228   14,025
max. capacity		6 x 250 ml
run-up   run-down, braked in sec		98 / 115   105 / 120
angle   temperature in °C <sup>1)</sup>		25°   +7
<b>Cat. No.</b>		<b>5645</b>



Lid bioseal<sup>®</sup>

Cat. No.



**INCLUSIVE**



### Vessels


capacity in ml	15	25	94	15	50	10	30	50	85	94	250	
Ø x L in mm	17x100	24x100	38x110	17x120	29x115	16x80	26x95	29x107	38 x 106	38 x 110	61.5x122	
max. RCF <sup>2)</sup>	ROTANTA 460	10,662	10,339	9,855	10,824	9,693	10,743	10,339	9,693	9,855	9,855	11,228
max. RCF <sup>2)</sup>	ROTANTA 460 R	13,319	12,915	12,310	13,521	12,108	13,420	12,915	12,108	12,310	12,310	14,025
radius in mm		132	128	122	134	118	133	128	120	122	122	139
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>			<b>tubes with screw cap</b>							<b>5127<sup>29)</sup></b>	




### Adapter


boring Ø x L in mm	17.6 x 83	26 x 80	38.6 x 88	17 x 106	30 x 100	16.6 x 70	26 x 80	29 x 90	38.6 x 88	38.6 x 88	61.5 x 109
vessels per rotor	42	18	6	30	6	48	18	6	6	6	6
<b>Cat. No.</b>	<b>5646</b>	<b>5642</b>	<b>5644</b>	<b>5637</b>	<b>5638</b>	<b>5641</b>	<b>5642</b>	<b>5643</b>	<b>5644</b>	<b>5644</b>	<b>-</b>

## — ANGLE ROTOR, 6-PLACE | 5615

































+













<b>Rotor</b>			<b>Lid bioseal <sup>5)</sup></b>	
max. RPM   max. RCF	11,500 min <sup>-1</sup>   18,038		<b>Cat. No.</b>	<b>INCLUSIVE</b>
max. capacity	6x94 ml			
run-up   run-down, braked in sec	58   64			
angle   temperature in °C <sup>1)</sup>	45°   +6			
<b>Cat. No.</b>	<b>5615</b>			

<b>Vessels</b>															
capacity in ml	0.5	1.5	2.0	3	15	25	50	94	7.5 – 8.2	9 – 10	10	8.5 – 10	5	15	50
Ø x L in mm	10.7x46	11x38	11x38	10x60	17x100	24x100	34x100	38x110	15x92	16x92	15x102	16x100	17x51	17x120	29x115
max. RCF <sup>2)</sup>	17,299	17,299	17,299	17,299	17,003	16,560	17,743	18,038	17,003	17,003	17,003	17,003	16,856	17,299	17,595
radius in mm	117	117	117	117	115	112	120	122	115	115	115	115	114	117	119
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>		<b>tubes <sup>2)</sup></b>				<b>blood collection / urine tubes</b>			<b>-</b>	<b>tubes with screw cap</b>			

															
<b>Adapter</b>															
boring Ø x L in mm	11.4x39	11.4x39	11.4x39	11.4x39	17.5x92	26x85	35x89	38.2x89.6	17.5x92	17.5x92	17.5x92	17.5x92	17x51	17x106	29.8x97
vessels per rotor	24	24	24	24	6	6	6	6	6	6	6	6	6	6	6
<b>Cat. No.</b>	<b>1449</b>	<b>1449</b>	<b>1449</b>	<b>1449</b>	<b>1451</b>	<b>1447</b>	<b>1463</b>	<b>-</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1476</b>	<b>1466</b>	<b>1454</b>

				
<b>Vessels</b>				
capacity in ml	10	30	50	85
Ø x L in mm	16x80	26x95	29x107	38 x 106
max. RCF <sup>2)</sup>	17,003	16,560	17,299	18,038
radius in mm	115	112	117	122
<b>Cat. No.</b>	<b>tubes with screw cap</b>			

				
<b>Adapter</b>				
boring Ø x L in mm	16.5x74	26x85	29x92	38.2x89.6
vessels per rotor	12	6	6	6
<b>Cat. No.</b>	<b>1448</b>	<b>1447</b>	<b>1446</b>	<b>-</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 7) For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters. Cat. No. 2031.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## PACKAGES ROTANTA 460 | 460 R

<b>ROTANTA 460 CONICAL PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 centrifuge	5650	96	15	17 x 120	3,800	3,196
- 1 x swing-out rotor, 4-place	5654	40	50	29 x 115	3,800	3,196
- 4 x bucket	5651-A					
- 4 x adapter, 24-place (conical)	5683					
- 4 x adapter, 10-place (conical)	5686					

**5650SET1**



<b>ROTANTA 460 CONICAL PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 centrifuge	5650	56	15	17 x 120	4,600	4,637
- 1 x swing-out rotor, 4-place	5699-R	28	50	30 x 115	4,600	4,708
- 4 x bucket	4885					
- 4 x adapter, 14-place (conical)	4839					
- 4 x adapter, 7-place (conical)	5647					

**5650SET2**



<b>ROTANTA 460 R CONICAL PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 R centrifuge	5660	56	15	17 x 120	4,600	4,755
- 1 x swing-out rotor, 4-place	5699-R	28	50	29 x 115	4,600	4,613
- 4 x bucket	4890					
- 4 x lid (bioseal)	4883					
- 4 x adapter, 7-place (conical)	4468					
- 4 x adapter, 14-place (conical)	4469					

**5660SET1**



<b>ROTANTA 460 R CONICAL PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 R centrifuge	5660	96	15	17 x 120	3,800	3,196
- 1 x swing-out rotor, 4-place	5654	40	50	30 x 115	3,800	3,196
- 4 x bucket	5651-A					
- 4 x adapter, 24-place (conical)	5683					
- 4 x adapter, 10-place (conical)	5686					

**5660SET2**



<b>ROTANTA 460 R CONICAL PACKAGE 3</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 R centrifuge	5660	56	15	17 x 120	4,600	4,637
- 1 x swing-out rotor, 4-place	5699-R	28	50	30 x 115	4,600	4,708
- 4 x bucket	4885					
- 4 x adapter, 14-place (conical)	4839					
- 4 x adapter, 7-place (conical)	5647					

**5660SET3**



<b>ROTANTA 460 R BLOOD TUBES PACKAGE 4</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 R centrifuge	5660	196	4-7	13 x 90/100	3,800	2,906
- 1 x swing-out rotor, 4-place	5654	148	4-15	17 x 100	3,800	2,970
- 4 x bucket	5651-A					
- 4 x lid (bioseal)	5652					
- 4 x adapter, 47-place	5685					
- 4 x adapter, 37-place	5682					

**5660SET4**



<b>ROTANTA 460 R BLOOD TUBES PACKAGE 5</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 R centrifuge	5660	108	1.6 - 7	13 x 90/100	4,600	4,684
- 1 x swing-out rotor, 4-place	5699-R	88	4 - 10	16 x 100	4,600	4,684
- 4 x bucket	4880					
- 4 x lid (bioseal)	4883					
- 4 x adapter, 27-place	4847					
- 4 x adapter, 22-place	4848					

**5660SET5**



## — PACKAGES ROTANTA 460 RF

<b>ROTANTA 460 RF CONICAL PACKAGE 1</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 RF centrifuge	5675	96	15	17 x 120	3,800	3,196
- 1 x swing-out rotor, 4-place	5654	40	50	29 x 115	3,800	3,196
- 4 x bucket	5651-A					
- 4 x adapter, 24-place (conical)	5683					
- 4 x adapter, 10-place (conical)	5686					

### 5675SET1



<b>ROTANTA 460 RF CONICAL PACKAGE 2</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 RF centrifuge	5675	56	15	17 x 120	4,600	4,637
- 1 x swing-out rotor, 4-place	5699-R	28	50	30 x 115	4,600	4,708
- 4 x bucket	4885					
- 4 x adapter, 14-place (conical)	4839					
- 4 x adapter, 7-place (conical)	5647					

### 5675SET2



<b>ROTANTA 460 RF BLOOD TUBE PACKAGE 3</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 RF centrifuge	5675	188	4-10	13 x 90/100	3,800	2,906
- 1 x swing-out rotor, 4-place	5654	148	4-15	17 x 100	3,800	2,970
- 4 x bucket	5651-A					
- 4 x lid (bioseal)	5652					
- 4 x adapter, 47-place	5685					
- 4 x adapter, 37-place	5682					

### 5675SET3



<b>ROTANTA 460 RF BLOOD TUBE PACKAGE 4</b>		number of vessels	volume (ml)	size (mm)	RPM	RCF
- 1 x ROTANTA 460 RF centrifuge	5675	108	1.6 - 7	13 x 90/100	4,600	4,684
- 1 x swing-out rotor, 4-place	5699-R	88	4 - 10	16 x 100	4,600	4,684
- 4 x bucket	4880					
- 4 x lid (bioseal)	4883					
- 4 x adapter, 27-place	4847					
- 4 x adapter, 22-place	4848					

### 5675SET4





# ROTOFIX 46 | 46 H

## Robust industrial unit

These are ideal centrifuges for research and industrial laboratories. They are robust and can withstand intensive usage, in the field. Specialty buckets are able to hold ASTM pear-shaped and conical tubes for petroleum testing. Heated option provides chamber temperature up to +90 °C (ROTOFIX 46 H).

### — FEATURES

- Max. RPM: 4,000 min<sup>-1</sup> | 2.000 min<sup>-1</sup> – adjustable in increments of 10
- Max. RCF: 3,095 | 984
- Max. capacity: 4 x 290 ml | 4 x 100 ml
- Robust and versatile benchtop centrifuge
- Choice of 4 rotors
- Maximum noise level of ≤ 58 dB(A)
- Impulse button for short centrifugation
- Easy operation with keypad
- Model 46 H heatable from +10 to +90 °C

### — FIELDS OF APPLICATION

- Petrochemical laboratories
- Automobile industry
- Chemical laboratories



More information about the control panel can be found on [page 202](#)



INDUSTRIAL  
DEVICE  
CE



## TECHNICAL DATA

	<b>ROTOFIX 46</b> non-refrigerated	<b>ROTOFIX 46 H</b> heated
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~
frequency	50 – 60 Hz	50 – 60 Hz
consumption	460 VA	600 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	4 x 290 ml	4 x 100 ml
max. RPM	4,000 min <sup>-1</sup>	2,000 min <sup>-1</sup>
max. RCF	3,095	984
running time	1 – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse button)	1 – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse button)
dimensions (WxDxH)	538 x 647 x 345 mm	538 x 647 x 345 mm
weight	approx. 60 kg	approx. 60 kg
noise level	58 dB (A) with rotor 4474	58 dB (A) with rotor 4474
temperature setting, infinitely variable (dependent on the ambient temperature)	-	from +10 to +90 °C
<b>Cat. No.</b>	<b>4600</b>	<b>4600-50</b>
100 – 127 V 1 ~ / 50 – 60 Hz *)	4600-01	4600-51
consumption	500 VA	650 VA
emission, immunity	FCC class B	FCC class B

\*) Other voltages on request.

## AVAILABLE ROTORS

### SWING-OUT ROTORS

	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 4-place	90°	2,000 min <sup>-1</sup>	4x100 ml	<b>4474</b>	134
 swing-out rotor, 4-place	90°	4,000 min <sup>-1</sup>	4x290 ml	<b>5694</b>	134

## — SWING-OUT ROTOR, 4-PLACE | 4474



### Rotor

max. RPM   max. RCF	2,000 min <sup>-1</sup>   984
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	16   40
angle   max. noise level	90°   58 dB (A)
<b>Cat. No.</b>	<b>4474</b>



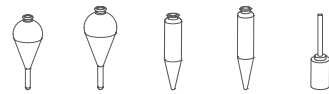
### Bucket

lid	5053
<b>Cat. No.</b>	<b>4275</b>



### Tubes

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
max. RCF <sup>2,1)</sup>	984	984	961	961	912
radius in mm	220	220	215	215	204
<b>Cat. No.</b>	<b>ASTM<sup>2,1)</sup> 0528<sup>2,1)</sup></b>	<b>ASTM<sup>2,1)</sup> 0531<sup>2,1)</sup></b>	<b>ASTM<sup>2,1)</sup> 0531<sup>2,1)</sup></b>	<b>Babcock</b>	



### Adapter

boring Ø x L in mm	-	-	-	-	-
tubes per rotor	4	4	4	4	4
<b>Cat. No.</b>	<b>4278-A</b>	<b>0771</b>	<b>4277</b>	<b>4276-B</b>	<b>0703-A</b>



## — SWING-OUT ROTOR, 4-PLACE | 5694 (NOT FOR 46 H)



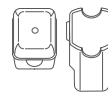
### Rotor

max. RPM   max. RCF	4,000 min <sup>-1</sup>   3,095
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	40   45
angle   max. noise level	90°   58 dB (A)
<b>Cat. No.</b>	<b>5694</b>



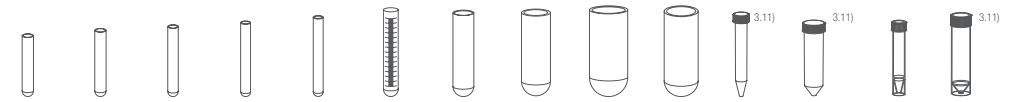
### Bucket

lid	5053
<b>Cat. No.</b>	<b>5051</b>



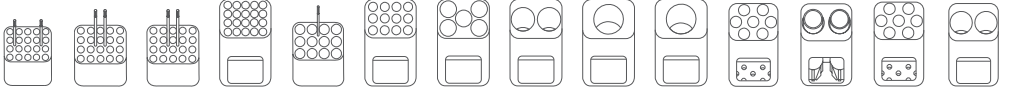
### Tubes

capacity in ml	3	5	6	7	9	15	25	50	100	100	15 <sup>3,11)</sup>	50 <sup>3,11)</sup>	12	50 <sup>3,11)</sup>
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	17 x 120	29 x 115	17 x 100	29 x 115
max. RCF <sup>2)</sup>	2,737	2,773	2,773	2,755	2,773	2,755	2,755	2,755	2,755	2,755	2,898	2,844	2,898	2,755
radius in mm	153	155	155	154	155	154	154	154	154	154	162	158	162	154
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>										<b>tubes with screw cap</b>			

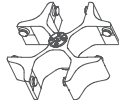


### Adapter

boring Ø x L in mm	11 x 44	12.5 x 39.5	12.5 x 39.5	12.5 x 82.5	16 x 50	17.5 x 82.5	26 x 82.5	36 x 82.5	45.5 x 82.5	42 x 82.5	17 x 90	30 x 82.5	17 x 90	36 x 82.5
tubes per rotor	80	80	80	80	48	48	20	8	4	4	28	8	28	8
<b>Cat. No.</b>	<b>5267</b>	<b>5227</b>	<b>5227</b>	<b>5247<sup>19)</sup></b>	<b>5264</b>	<b>5248<sup>19)</sup></b>	<b>5242</b>	<b>5243</b>	<b>5262</b>	<b>5249</b>	<b>6306</b>	<b>5259</b>	<b>6306</b>	<b>5243<sup>4)</sup></b>



## SWING-OUT ROTOR, 4-PLACE | 5694 (NOT FOR 46 H)



### Rotor

max. RPM   max. RCF <sup>2)</sup>	4,000 min <sup>-1</sup>   3,095
max. capacity	4 x 290 ml
run-up   run-down, braked in sec	40   45
angle   max. noise level	90°   58 dB (A)
<b>Cat. No.</b>	<b>5694</b>



### Bucket

lid bioseal <sup>5)</sup>	5093
<b>Cat. No.</b>	<b>5092</b>



### Tubes

capacity in ml	5	7	15	25	50	100	100	250	15	50	12	25	30	25	250
Ø x L in mm	13 x 75	12 x 100	17 x 100	24 x 100	34 x 100	44 x 100	40 x 115	65 x 115	17 x 120	29 x 115	17 x 100	25 x 90	25 x 110	25 x 90	61 x 122
max. RCF <sup>2)</sup>	3,005	3,005	2,952	2,898	2,952	2,952	2,952	3,095	3,095	3,095	3,005	2,826	2,898	2,826	3,095
radius in mm	168	168	165	162	165	165	165	173	173	173	168	158	162	158	173
<b>Cat. No.</b>	<b>tubes<sup>3)</sup></b>											<b>tubes with screw cap</b>			<b>5127<sup>24)</sup></b>



### Adapter

boring Ø x L in mm	12.8 x 42	13.2 x 82	17.5 x 56.7	25.5 x 74	35.5 x 77.5	45.5 x 76.5	42 x 76.5	66 x 103	17 x 85	30 x 85	17.5 x 79.5	26 x 73	25.5 x 74	26 x 73	62 x 90
tubes per rotor	48	48	32	16	4	4	4	8	28	8	28	12	16	12	4
<b>Cat. No.</b>	<b>5128</b>	<b>5120</b>	<b>5136</b>	<b>5122</b>	<b>5124</b>	<b>5125</b>	<b>5126</b>	<b>1791</b>	<b>5129</b>	<b>5123</b>	<b>5121</b>	<b>5134</b>	<b>5122</b>	<b>5134</b>	<b>6319</b>

### Tubes

capacity in ml	290
Ø x L in mm	62 x 137
max. RCF <sup>2)</sup>	3,095
radius in mm	173
<b>Cat. No.</b>	<b>- 24)</b>



### Adapter

boring Ø x L in mm	62 x 90
tubes per rotor	4
<b>Cat. No.</b>	<b>6319</b>

- 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.
- 2.1) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of vessels used should be verified with the individual manufacturers. The max. RCF for ASTM Tubes annotated with footnote 2) is 700.
- 3.1.1) When using these tubes, bucket 5051 cannot be closed with lid 5053.
- 4) Please remove the spacer.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
- 6) A rubber stopper for closing the tube for agitating or mixing is available under Cat. No. 0535. The tube may not be centrifuged with the stopper.
- 15) Also available with decanting aid. (Cat. No. 5247-91 or 5248-91).
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
- 30) In the heatable models 5660-50, 5660-51, 5660-70, 5670-50 and 5675-50, rotor 4619 may only be used up to a maximum of +40 °C.



# FLOORSTANDING CENTRIFUGES

High performance, throughput and capacity



ROTANTA 460 RC | 460 RF  
on page 138



ROTIXA 500 RS  
on page 140



ROTO SILENTA 630 RS  
on page 152





# 04

FLOORSTANDING  
CENTRIFUGES

# ROTANTA 460 RC | 460 RF

## The capability of a benchtop without the footprint

This modified version of the standard ROTANTA 460 allows for space saving storage below the bench and frees valuable working space on the benchtop. Both units include refrigeration with a temperature range from -20 °C to +40 °C.

### — FEATURES

- RPM: 50 - 15,000 min<sup>-1</sup> – adjustable in increments of 10
- RCF: 1 - 24,400 – adjustable in increments of 1
- Available in two versions as a floor-standing unit or under-bench model
- Max. capacity: 4 x 1,000 ml
- Choice of 8 rotors
- Medical device according to regulation (EU) 2017/745
- 9 individual acceleration and 19 deceleration stages
- Easy operation with keypad and control knob
- 98 program memories for more individuality
- Refrigerated from -20 to +40 °C with pre-cooling function

### — FIELDS OF APPLICATION

- Hospitals
- Blood centers
- Cell Culture Laboratories



Centrifuge packages for the model can be found on [page 130](#)



More information about the control panel can be found on [page 202](#)



ROTANTA 460 RC

ROTANTA 460 RF











## TECHNICAL DATA

	ROTANTA 460 RC refrigerated	ROTANTA 460 RF refrigerated
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~
frequency	50 Hz	50 Hz
consumption	1,800 VA	2,000 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	4 x 1,000 ml	4 x 1,000 ml
max. RPM	15,000 min <sup>-1</sup>	15,000 min <sup>-1</sup>
max. RCF	24,400	24,400
running time	1 – 99 h: 59 min: 59 s, ∞ continuous run, short cycle mode	1 – 99 h: 59 min: 59 s, ∞ continuous run, short cycle mode
dimensions (WxDxH)	554x697x683 mm	554x697x961 mm
weight	approx. 140 kg	approx. 164 kg
noise level	60 dB (A) with rotor 4474	60 dB (A) with rotor 4474
temperature control, infinitely variable	from -20 to +40 °C	from -20 to +40 °C
<b>Cat. No.</b>	<b>5670</b>	<b>5675</b>
100 – 127 V 1 ~ / 60 Hz <sup>1)</sup>	-	5675-01
emission, immunity	-	FCC class B
weight	-	approx. 174 kg

\*) Other voltages on request.

## AVAILABLE ROTORS (identical to the ROTANTA 460 | 460 R)

SWING-OUT ROTORS	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 4-place	90°	4,600 min <sup>-1</sup>	4x750 ml	<b>5699-R</b>	116
 swing-out rotor, 4-place	90°	3,800 min <sup>-1</sup>	4x750 ml	<b>5654</b>	123
 swing-out rotor, 6-place	90°	4,000 min <sup>-1</sup>	6x290 ml	<b>4446</b>	125
 swing-out rotor, 4-place	90°	2,000 min <sup>-1</sup>	4x100 ml	<b>4474</b>	127
 swing-out rotor, 2-place	90°	5,900 min <sup>-1</sup> / 6,200 min <sup>-1</sup>	12 plates	<b>5622</b>	127
ANGLE ROTORS					
 angle rotor, 30-place	45°	15,000 min <sup>-1</sup>	30x2 ml	<b>4489-A</b>	128
 angle rotor, 6-place	25°	8,500 min <sup>-1</sup> / 9,500 min <sup>-1</sup>	6x250 ml	<b>5645</b>	128
 angle rotor, 6-place	45°	11,500 min <sup>-1</sup>	6x94 ml	<b>5615</b>	129



# ROTIXA 500 RS

## Small footprint – high volumes

Its durable components make the ROTIXA 500 RS a reliable unit with a long service life. High sample capacity and maximum RCF of 18,038 make it suitable for 4 x 450-1,000 ml blood bags. Specially designed buckets keep blood bags upright during centrifugation for improved separation of blood components.

In industrial research labs, it accommodates 4 bottles up to 1,000 ml, specialty racks, as well as containers and vessels for various applications. This unit includes refrigeration with a temperature range from -20 °C to +40 °C.

### — FEATURES

- RPM: 50 - 11,500 min<sup>-1</sup> – adjustable in increments of 10
- RCF: 50 - 18,038 – adjustable in increments of 1
- Max. capacity: 4 x 1,000 ml
- Choice of 5 rotors
- Medical device according to regulation (EU) 2017/745
- Easy operation with keypad and control knob
- 89 program memories for more individuality
- 9 individual acceleration and 19 deceleration stages

### — FIELDS OF APPLICATION

- Hospitals
- Blood centers
- Cell Culture Laboratories



Documentation system for blood banks.  
More information on [page 162](#)



More information about the control panel  
can be found on [page 202](#)



## TECHNICAL DATA

### ROTIXA 500 RS <sup>>)</sup> refrigerated

voltage <sup>*)</sup>	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	11,500 min <sup>-1</sup>	
max. RCF	18,038	
running time	1 – 999 min: 59 s, ∞ continuous run	
dimensions (WxDxH)	650x814x973 mm	
weight	approx. 219 kg	
noise level	58 dB (A) with rotor 4282	
temperature control, infinitely variable	from -20 to +40 °C	
<b>Cat. No.</b>	<b>4950</b>	

<sup>\*)</sup> Other voltages on request.



<sup>>)</sup> Other models models on request.

## AVAILABLE ROTORS

### SWING-OUT ROTORS

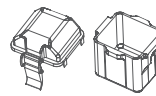
		angle	max. RPM	max. capacity	Cat. No.	page
	swing-out rotor, 4-place	90°	4,500 min <sup>-1</sup>	4 x 1,000 ml	<b>4294</b>	142
	swing-out rotor, 6-place	90°	4,000 min <sup>-1</sup>	6 x 250 ml	<b>4296</b>	147
	swing-out rotor, 2-place	90°	3,600 min <sup>-1</sup>	20 plates	<b>4282</b>	149

### ANGLE ROTORS

	angle rotor, 6-place	25°	9,500 min <sup>-1</sup>	6 x 250 ml	<b>4266</b>	150
	angle rotor, 6-place	45°	11,500 min <sup>-1</sup>	6 x 94 ml	<b>4246</b>	151



## SWING-OUT ROTOR, 4-PLACE | 4294



<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,500 min <sup>-1</sup>   4,958
max. capacity	4 x 750 ml
run-up   run-down, braked in sec	115   116
angle   temperature in °C <sup>1)</sup>	90°   +6
<b>Cat. No.</b>	<b>4294</b>

<b>Bucket</b>	
lid	4229-B
<b>Cat. No.</b>	<b>4295-A</b>

<b>Tubes</b>															
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	11x38	10x88	12x75	12x82	12x100	14x100	16x101	17x100	24x100	34x100	38x102	40x115
max. RCF <sup>2)</sup>		4,777	3,690	4,867	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777
radius in mm		211	163	215	211	211	211	211	211	211	211	211	211	211	211
<b>Cat. No.</b>		microliter tubes			tubes <sup>2)</sup>										

<b>Adapter</b>															
boring Ø x L in mm		8.2x32	11.2x40	11.2x40	11x70	12.5x32	12.5x70	12.5x70	16x70	16x70	17.5x74	26x70	35x70	41.5x70	41.5x70
tubes per rotor		312	336	336	252	192	192	192	100	100	120	44	24	16	16
<b>Cat. No.</b>		<b>4226</b>	<b>4225</b>	<b>4225</b>	<b>4224</b>	<b>4213-93</b>	<b>4213</b>	<b>4213</b>	<b>4223</b>	<b>4223</b>	<b>4214</b>	<b>4215</b>	<b>4216</b>	<b>4218</b>	<b>4218</b>

<b>Tubes</b>															
capacity in ml		2.6-3.4	2.7-3	4-5.5	4.5-5	7.5-8.2	9-10	10	1.6-5	4-7	4-7	8	8.5-10	15	50
Ø x L in mm		13 x 65	11x66	15x75	11x92	15x92	16x92	15x102	13 x 75	13 x 100	16x75	16x125	16x100	17x120	29x115
max. RCF <sup>2)</sup>		4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,777	4,958	4,958
radius in mm		211	211	211	211	211	211	211	211	211	211	211	211	219	219
<b>Cat. No.</b>		blood collection / urine tubes												tubes with screw cap	

<b>Adapter</b>															
boring Ø x L in mm		13.2x32	12.5x32	17.5x32	12.5x70	17.5x74	17.5x70	17.5x74	13.2x32	13.2x70	17.5x32	16x70	17.5x74	17x70	30x70
tubes per rotor		120	192	120	192	120	64	120	120	120	120	100	120	92	32
<b>Cat. No.</b>		<b>4222-93</b>	<b>4213-93</b>	<b>4214-93</b>	<b>4213</b>	<b>4214</b>	<b>4220</b>	<b>4214</b>	<b>4222-93</b>	<b>4222</b>	<b>4214-93</b>	<b>4223</b>	<b>4214</b>	<b>4232</b>	<b>4245-A</b>

<b>Tubes</b>													
capacity in ml		12	30	50	100	100	250	650	750	750	250	500	
Ø x L in mm		17x100	25x110	29x115	40x115	40x115	62 x 122	97 x 139	97 x 152	96 x 135	60 x 162	96 x 147	
max. RCF <sup>2)</sup>		4,777	4,777	4,867	4,777	4,777	4,777	4,958	4,958	4,958	4,777	4,958	
radius in mm		211	211	215	211	211	211	219	219	219	211	219	
<b>Cat. No.</b>		tubes with screw cap					<b>5127<sup>24)</sup></b>	<b>0554<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	<b>4234-A</b>	<b>Corning<sup>®</sup></b>	<b>Corning<sup>®</sup></b>	<b>+4449</b>

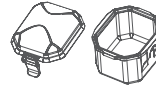
<b>Adapter</b>												
boring Ø x L in mm		17.5x70	26 x 70	30 x 96	41.5 x 70	41.5 x 70	62 x 90	97.5x105	97.5x105	97.5x105	62 x 125	97.5x105
tubes per rotor		64	44	24	16	16	4	4	4	4	4	4
<b>Cat. No.</b>		<b>4220</b>	<b>4215</b>	<b>4249</b>	<b>4218</b>	<b>4218</b>	<b>4238</b>	<b>4258</b>	<b>4258</b>	<b>4258</b>	<b>6322</b>	<b>4258</b>

## SWING-OUT ROTOR, 4-PLACE | 4294



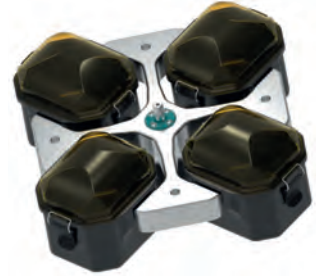
### Rotor

max. RPM   max. RCF <sup>2)</sup>	4.500 min <sup>-1</sup>   4.618
max. capacity	40 x 50 ml
run-up   run-down, braked in sec	115   116
angle	90°
temperature in °C <sup>1)</sup>	+2
<b>Cat. No.</b>	<b>4294</b>



### Bucket

lid bioseal <sup>5)</sup>	4291
<b>Cat. No.</b>	<b>4290</b>



### Tubes

capacity in ml	5	6	7	9	14	2.6-3.4	4.9	4-5.5	7.5-8.2	9-10	10	1.6-5	4-7	4-7	8.5-10
Ø x L in mm	12x75	12x82	12x100	14x100	16x101	13x65	13x90	15x75	15x92	16x92	15x102	13x75	13x100	16x75	16x100
max. RCF <sup>2)</sup>	4,551	4,551	4,551	4,551	4,551	4,551	4,551	4,551	4,551	4,573	4,573	4,551	4,551	4,551	4,551
radius in mm	201	201	201	201	201	201	201	201	201	202	202	201	201	201	201
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>					<b>blood collection / urine tubes</b>									



### Adapter

boring Ø x L in mm	13.2x57	13.2x57	13.2x57	17.5x62	17.5x62	13.2x57	13.2x57	17.5x62	17.5x62	17.5x63	17.5x63	13.2x57	13.2x57	17.5x62	17.5x62
tubes per rotor	200	200	200	168	168	200	200	168	168	132	132	200	200	168	168
<b>Cat. No.</b>	<b>4273</b>	<b>4273</b>	<b>4273</b>	<b>4338</b>	<b>4338</b>	<b>4273</b>	<b>4273</b>	<b>4338</b>	<b>4338</b>	<b>4311</b>	<b>4311</b>	<b>4273</b>	<b>4273</b>	<b>4338</b>	<b>4338</b>

### Tubes

capacity in ml	15	10	12	15	15	50	50	50	50
Ø x L in mm	17x100	16x80	17x100	17x120	17x120	29x115	29x115	29x115	29x115
max. RCF <sup>2)</sup>	4,551	4,551	4,437	4,607	4,607	4,607	4,607	4,517	4,517
radius in mm	201	201	196	204	204	204	204	200	200
<b>Cat. No.</b>	<b>-<sup>2)</sup></b>	<b>tubes with screw cap</b>							

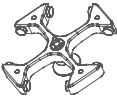


### Adapter

boring Ø x L in mm	17.5x62	17.5x62	17.2x57	17x60	17x60	30x60	30x60	30x56	30x56
tubes per rotor	168	168	112	68	112	32	40	32	40
<b>Cat. No.</b>	<b>4338</b>	<b>4338</b>	<b>4310</b>	<b>4314</b>	<b>4320<sup>3,12)</sup></b>	<b>4321</b>	<b>4323<sup>3,12)</sup></b>	<b>4313</b>	<b>4339<sup>3,12)</sup></b>

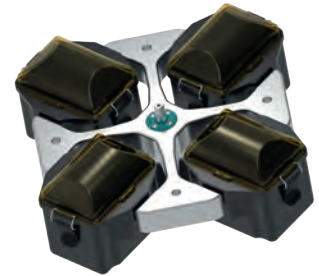
1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3.12) When using these tubes, bucket 4290 cannot be closed with lid 4291.  
 3.13) When using these tubes, bucket 4295-A cannot be closed with lid 4229-B.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

















## — SWING-OUT ROTOR, 4-PLACE | 4294

	
<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,500 min <sup>-1</sup>   4,573
max. capacity	24 plates
run-up   run-down, braked in sec	115   116
angle   temperature in °C <sup>1)</sup>	90°   +5
<b>Cat. No.</b>	<b>4294</b>




	
<b>Bucket</b>	
lid bioseal <sup>3)</sup>	5629
<b>Cat. No.</b>	<b>4280</b>



<b>Plates</b>								
W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>	4,625	4,625	4,625	4,625	4,625	4,625	4,625	4,625
radius in mm	204	204	204	204	204	204	204	204
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>PCR plates 96-places</b>	<b>PCR strips</b>
<b>+</b>								
<b>Removal aid</b>								
boring Ø x L in mm	-	-	-	-	-	-	-	-
plates / strips per rotor	24	24	20	8	4	4	4	48 x 8
<b>Cat. No.</b>	<b>4279</b>	<b>4279</b>	<b>4279</b>	<b>4279</b>	<b>4279</b>	<b>4279</b>	<b>4279 + 1485</b>	<b>4279 + 1485</b>




## — SWING-OUT ROTOR, 4-PLACE | 4294


	
<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,500 min <sup>-1</sup>   4,867
max. capacity	20 Racks
run-up   run-down, braked in sec	115   116
angle   temperature in °C <sup>1)</sup>	90°   +7
<b>Cat. No.</b>	<b>4294</b>



	
<b>Bucket</b>	
<b>Cat. No.</b>	<b>4257</b>



	
<b>Rack</b>	
W x D x H in mm	118 x 20 x 70
capacity in ml	-
max. RCF <sup>2)</sup>	4,867
radius in mm	215
<b>Cat. No.</b>	<b>Hitachi Rack</b>

	
<b>Removal aid</b>	
boring Ø x L in mm	-
tubes per rotor	20
<b>Cat. No.</b>	<b>4259-A<sup>23)</sup></b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
- 23) When using removal frame 4259-A, please take the spacer out of carrier 4257.

## SWING-OUT ROTOR, 4-PLACE | 4294



<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,500 min <sup>-1</sup>   5,184
max. capacity	4 x 1,000 ml
run-up   run-down, braked in sec	115   116
angle   temperature in °C <sup>1)</sup>	90°   +5
<b>Cat. No.</b>	<b>4294</b>

<b>Bucket</b>	
adapter including lid	4255
<b>Cat. No.</b>	<b>4254</b>



<b>Tubes</b>															
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	7.5-8.2	9-10	10
Ø x L in mm	12x75	12x100	14x100	17x100	24x100	34x100	44x100	13 x 65	11x66	15x75	11x92	13x90	15x92	16x92	15x102
max. RCF <sup>2)</sup>	4,618	4,618	4,777	4,777	4,505	4,573	4,551	4,618	4,618	4,777	4,618	4,618	4,777	4,777	4,777
radius in mm	204	204	211	211	199	202	201	204	204	211	204	204	211	211	211
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>							<b>blood collection / urine tubes</b>							

<b>Adapter</b>															
boring Ø x L in mm	13 x 58	13 x 58	17,5 x 60	17,5 x 60	26 x 72	36 x 79	45 x 78	13,5 x 58	13 x 58	17,5 x 60	13 x 58	13,5 x 58	17,5 x 60	17,5 x 60	17,5 x 60
tubes per rotor	120	120	76	76	28	16	8	84	120	76	120	84	76	76	76
<b>Cat. No.</b>	<b>4433</b>	<b>4433</b>	<b>4434</b>	<b>4434</b>	<b>4438</b>	<b>4439</b>	<b>4442</b>	<b>4435</b>	<b>4433</b>	<b>4434</b>	<b>4433</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>

<b>Tubes</b>															
capacity in ml	1.6-5	4-7	4-7	8	8.5-10	15	30	50	25	30	10	250	290	650	750
Ø x L in mm	13x75	13x100	16x75	16x81	16x100	17x120	25 x 110	29x115	25x90	25 x 110	16 x 80	61 x 122	62 x 137	97 x 139	97 x 152
max. RCF <sup>2)</sup>	4,618	4,618	4,777	4,777	4,777	4,890	4,709	4,890	4,709	4,709	4,777	5,003	5,003	5,184	5,184
radius in mm	204	204	211	211	211	216	208	216	208	208	211	221	221	229	229
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>					<b>tubes with screw cap</b>					<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>0554<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	

<b>Adapter</b>															
boring Ø x L in mm	13,5 x 58	13,5 x 58	17,5 x 60	17,5 x 60	17,5 x 60	17 x 86	26 x 72	30 x 87	26 x 72	26 x 72	17,5 x 60	62 x 92	62 x 92	98 x 138	98 x 138
tubes per rotor	84	84	76	76	76	48	28	20	28	28	76	4	4	4	4
<b>Cat. No.</b>	<b>4435</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4437</b>	<b>4438</b>	<b>4441</b>	<b>4438</b>	<b>4438</b>	<b>4434</b>	<b>4443</b>	<b>4443</b>	<b>-</b>	<b>-</b>

<b>Tubes</b>							
capacity in ml	1,000	1,000	175	175	200	225	250
Ø x L in mm	96 x 176	98 x 138	61 x 118	61,5x144,3	60 x 130	61 x 137	60 x 162
max. RCF <sup>2)</sup>	5,184	5,184	5,184	5,184	5,184	5,184	5,184
radius in mm	229	229	229	229	229	229	229
<b>Cat. No.</b>	<b>4239<sup>24)</sup></b>	<b>4255</b>	<b>Falcon</b>	<b>Nalgene</b>	<b>Nunc®</b>	<b>Falcon</b>	<b>Corning®</b>

<b>Adapter</b>							
boring Ø x L in mm	98 x 138	-	-	-	-	-	-
tubes per rotor	4	4	4	4	4	4	4
<b>Cat. No.</b>	<b>-</b>	<b>-</b>	<b>4440</b>	<b>4430</b>	<b>4430</b>	<b>4440</b>	<b>4430</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 3.15) When using these tubes, bucket 4255 cannot be closed with its lid.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## — SWING-OUT ROTOR, 4-PLACE | 4294



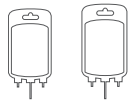
**Rotor**

max. RPM   max. RCF <sup>2)</sup>	4,500 min <sup>-1</sup>   5,252	
max. capacity	4 blood bags	
run-up   run-down, braked in sec	115   116	
angle   temperature in °C <sup>1)</sup>	90°   +2	
<b>Cat. No.</b>	<b>4294</b>	



**Bucket**

<b>Cat. No.</b>	<b>4293</b>
-----------------	-------------



**Blood bags**

capacity in ml	450	500
blood bags	3-place	3-place
max. RCF <sup>2)</sup>	5,252	5,252
radius in mm	232	232
<b>Cat. No.</b>	<b>blood bags</b>	



**Insert**

boring Ø x L in mm	-	-
blood bags per rotor	4	4
<b>Cat. No.</b>	<b>4244-A</b>	<b>4244-A</b>



Additional blood bank accessories can be found on page 185

## — SWING-OUT ROTOR, 4-PLACE | 4294



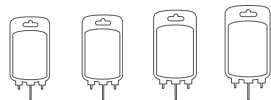
**Rotor**

max. RPM   max. RCF <sup>2)</sup>	4,500 min <sup>-1</sup>   5,071	
max. capacity	4 blood bags	
run-up   run-down, braked in sec	115   116	
angle   temperature in °C <sup>1)</sup>	90°   +3	
<b>Cat. No.</b>	<b>4294</b>	



**Bucket**

<b>Cat. No.</b>	<b>4298-A</b>
-----------------	---------------



**Blood bags**

capacity in ml	450	500	750	1,000
blood bags	4-place	4-place	1-place	1-place
max. RCF <sup>2)</sup>	5,003	5,003	5,003	5,071
radius in mm	221	221	221	224
<b>Cat. No.</b>	<b>blood bags</b>			



**Insert**

boring Ø x L in mm	-	-	-	-
blood bags per rotor	4	4	4	4
<b>Cat. No.</b>	<b>4237-A</b>	<b>4237-A</b>	<b>4237-A</b>	<b>-</b>



Additional blood bank accessories can be found on page 185

- 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, 6-PLACE | 4296

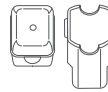


### Rotor

max. RPM   max. RCF <sup>2)</sup>	4,000 min <sup>-1</sup>   3,363
max. capacity	6 x 100 ml
run-up   run-down, braked in sec	33   50
angle   max. noise level	90°   52 dB (A)
temperature in °C <sup>1)</sup>	0
<b>Cat. No.</b>	<b>4296</b>

### Bucket

lid	5053
<b>Cat. No.</b>	<b>5051</b>



### Vessels

capacity in ml	1.5	2	1.5	2	5	6	7	9	15	25	50	100	100	1-8
Ø x L in mm	11x38	11x38	11x38	11x38	12x75	12x82	12x100	14x100	17x100	24x100	34x100	44x100	40x115	simple / multiple
max. RCF <sup>2)</sup>	2,486 / 3,363	2,486 / 3,363	3,363	3,363	3,309	3,309	3,291	3,309	3,291	3,291	3,291	3,291	3,291	2,290 / 3,274
radius in mm	139 / 188	139 / 188	188	188	185	185	184	185	184	184	184	184	184	128 / 183
<b>Cat. No.</b>	<b>microliter tubes</b>				<b>tubes<sup>2)</sup></b>									<b>cyto chambers</b>



### Adapter

boring Ø x L in mm	12.5x42	12.5x42	11.5x50	11.5x50	12.5x42	12.5x42	12.5x86	16x50	17.5x86	26x86	36x86	45.5x86	42x86	-
vessels per rotor	240	240	96	96	120	120	120	72	72	30	12	6	6	12
<b>Cat. No.</b>	<b>5257</b>	<b>5257</b>	<b>5281</b>	<b>5281</b>	<b>5227</b>	<b>5227</b>	<b>5247<sup>15)</sup></b>	<b>5264</b>	<b>5248<sup>15)</sup></b>	<b>5242</b>	<b>5243</b>	<b>5262</b>	<b>5249</b>	<b>5280</b>

### Vessels

capacity in ml	1.1-1.4	2.6-2.9	2.7-3	4-5.5	4.5-5	4.9	7.5-8.2	9-10	1.6-5	4-7	8.5-10	15	50	15	30
Ø x L in mm	8x66	13x65	11 x 66	15 x 75	11 x 92	13x90	15x92	16x92	13x75	16x75	16x100	17x120	29x115	17x100	25x110
max. RCF <sup>2)</sup>	3,274	3,345	3,309	3,309	3,309	3,345	3,309	3,291	3,345	3,309	3,291	3,434	3,363	3,434	3,291
radius in mm	183	187	185	185	185	187	185	184	187	185	184	192	188	192	184
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>											<b>tubes with screw cap</b>			



### Adapter

boring Ø x L in mm	11 x 44	13.5x52	12.5x42	16x50	12.5x42	13.5x52	16x50	17,6x82,5	13.5x52	16x50	17,5x82,5	17x90	30x82,5	17x90	26 x 82,5
vessels per rotor	120	72	120	72	120	72	72	66	72	72	72	42	12	42	30
<b>Cat. No.</b>	<b>5267</b>	<b>5268</b>	<b>5227</b>	<b>5264</b>	<b>5227</b>	<b>5268</b>	<b>5264</b>	<b>5258</b>	<b>5268</b>	<b>5264</b>	<b>5248</b>	<b>6306</b>	<b>5259</b>	<b>6306</b>	<b>5266</b>

### Vessels

capacity in ml	50
Ø x L in mm	29x115
max. RCF <sup>2)</sup>	3,291
radius in mm	184
<b>Cat. No.</b>	<b>tubes with screw cap</b> <b>6316</b>



### Adapter

boring Ø x L in mm	26 x 82,5
vessels per rotor	12
<b>Cat. No.</b>	<b>5243</b>



- 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.
- 3.11) When using these tubes, bucket 5051 cannot be closed with lid 5053.

## SWING-OUT ROTOR, 6-PLACE | 4296



<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   3,631
max. capacity	6 x 250 ml
run-up   run-down, braked in sec	33   50
angle   max. noise level	90°   59 dB (A)
temperature in °C <sup>1)</sup>	-2
<b>Cat. No.</b>	<b>4296</b>



<b>Bucket</b>	
lid bioseal <sup>5)</sup>	5093
<b>Cat. No.</b>	<b>5092</b>



<b>Vessels</b>															
capacity in ml	5	6	7	15	25	50	100	100	250	1.1-1.4	1.1-1.4	2.6-2.9	2.7-3	2.7-3	4.9
Ø x L in mm	12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115	8 x 66	8 x 66	13 x 65	11x66	11x66	13x90
max. RCF <sup>2)</sup>	3,542	3,542	3,542	3,488	3,434	3,488	3,488	3,488	3,641	3,488	3,077	3,077	3,488	3,077	3,488
radius in mm	198	198	198	195	192	195	195	195	203	195	172	172	195	172	195
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>									<b>blood collection / urine tubes</b>					

<b>Adapter</b>															
boring Ø x L in mm	12.8x42	12.8x42	12.8x79.5	17.5x56.7	25.5x74	35.5x77.5	45.5x85	42x86.5	66x103	13.5x56.7	12.8x54.5	12.8x54.5	13.5x56.7	12.8x54.5	13.5x56.7
vessels per rotor	72	72	72	48	24	6	6	6	6	48	72	72	48	72	48
<b>Cat. No.</b>	<b>5128</b>	<b>5128</b>	<b>5120</b>	<b>5136</b>	<b>5122</b>	<b>5124</b>	<b>5125</b>	<b>5126</b>	<b>1791</b>	<b>5137</b>	<b>5138</b>	<b>5138</b>	<b>5137</b>	<b>5138</b>	<b>5137</b>

<b>Vessels</b>															
capacity in ml	4-4.5	4.5-5	7.5-8.2	9-10	10	1.6-5	4-7	4-7	8	8.5-10	15	50	25	30	50
Ø x L in mm	15x75	11x92	15x92	16x92	15x102	13x75	16x75	13x100	16x125	16x100	17x120	29x115	25x90	25 x 110	29x115
max. RCF <sup>2)</sup>	3,488	3,542	3,488	3,488	3,488	3,077	3,488	3,542	3,542	3,488	3,631	3,631	3,363	3,434	3,560
radius in mm	195	198	195	195	195	172	195	198	198	195	203	203	188	192	199
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>										<b>tubes with screw cap</b>				


<b>Adapter</b>															
boring Ø x L in mm	17.5x56.7	12.8x79.5	17.5x56.7	17.5x56.7	17.5x56.7	12.8x54.5	17.5x56.7	12.8x79.5	17.5x79.5	17.5x56.7	17x85	30x85	26x73	25.5x87	30x99
vessels per rotor	48	72	48	48	48	72	48	72	42	48	42	12	18	24	12
<b>Cat. No.</b>	<b>5136</b>	<b>5120</b>	<b>5136</b>	<b>5136</b>	<b>5136</b>	<b>5138</b>	<b>5136</b>	<b>5120</b>	<b>5121<sup>4)</sup></b>	<b>5136</b>	<b>5129</b>	<b>5123</b>	<b>5134</b>	<b>5122</b>	<b>5135</b>

<b>Vessels</b>			
capacity in ml	10	250	290
Ø x L in mm	16 x 80	61 x 122	62 x 137
max. RCF <sup>2)</sup>	3,488	3,631	3,631
radius in mm	195	203	203
<b>Cat. No.</b>	-	<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>

<b>Adapter</b>			
boring Ø x L in mm	17.5x56.7	62x90	62x90
vessels per rotor	48	6	6
<b>Cat. No.</b>	<b>5136</b>	<b>6319</b>	<b>6319</b>

- 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.
- 3,4) When using these tubes, bucket 5051 or 5092 cannot be closed with lid 5053 or 5093.
- 4) Please remove the spacer.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.








## SWING-OUT ROTOR, 2-PLACE | 4282








	
<b>Rotor</b>	
max. RPM   max. RCF	3,600 min <sup>-1</sup>   2,652
max. capacity	20 plates
run-up   run-down, braked in sec	87   94
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	-2
<b>Cat. No.</b>	<b>4282</b>











	
<b>Bucket</b>	
<b>Cat. No.</b>	<b>4285-A</b>



<b>Plates</b>							
W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	84x59x46	124x82x20	-
max. RCF <sup>2)</sup>	2,434	2,434	2,434	2,434	2,434	2,434	2,434
radius in mm	168	168	168	168	168	168	168
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>PCR plates</b>	<b>PCR strips</b>

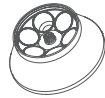
<b>Removal aid</b>							
boring Ø x L in mm	-	-	-	-	-	-	-
plates / strips per rotor	16	12	12	4	4	4	48 x 8
<b>Cat. No.</b>	<b>4281</b>	<b>4281</b>	<b>4281</b>	<b>4281</b>	<b>4281</b>	<b>4281+1485</b>	<b>4281+1485</b>

<b>Racks</b>				
W x D x H in mm	176x20x41	118x20x70	193x25x60	210x110x44
max. RCF <sup>2)</sup>	2,652	2,652	2,652	2,579
radius in mm	183	183	183	178
<b>Cat. No.</b>	<b>Olympus Racks</b>	<b>Hitachi Racks</b>	<b>Behring Racks</b>	<b>Rack, 50-place</b>

<b>Adapter</b>				
boring Ø x L in mm	-	-	-	-
plates / racks per rotor	12	20	10	2
<b>Cat. No.</b>	<b>4283-B</b>	<b>4287-B</b>	<b>4288-A</b>	<b>4263-A</b>

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 | 4266



### Rotor

max. RPM   max. RCF	9,500 min <sup>-1</sup>   14,025
max. capacity	6 x 250 ml
run-up   run-down, braked in sec	82   96
angle	25°
temperature in °C <sup>1)</sup>	+2
<b>Cat. No.</b>	<b>4266</b>



Lid bioseal<sup>5)</sup> and phenol-resistant



Cat. No.

**INCLUSIVE**



### Vessels

capacity in ml	15	25	94	10	30	50	85	94	250
Ø x L in mm	17 x 100	24 x 100	38 x 102	16 x 80	26 x 95	29 x 107	38 x 106	38 x 102	61.5 x 122
max. RCF <sup>2)</sup>	13,319	12,915	12,310	13,420	12,915	12,108	12,310	12,310	14,025
radius in mm	132	128	122	133	128	120	122	122	139
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>			<b>tubes with screw cap</b>					<b>5127<sup>24)</sup></b>




### Adapter

boring Ø x L in mm	17.6 x 83	26 x 80	38.6 x 88	16.6 x 70	26 x 80	29 x 90	38.6 x 88	38.6 x 88	61.5 x 109
vessels per rotor	42	18	6	48	18	6	6	6	6
<b>Cat. No.</b>	<b>5646</b>	<b>5642</b>	<b>5644</b>	<b>5641</b>	<b>5642</b>	<b>5643</b>	<b>5644</b>	<b>5644</b>	<b>-</b>

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

## — ANGLE ROTOR, 6-PLACE | 4246



<b>Rotor</b>	
max. RPM   max. RCF	11,500 min <sup>-1</sup>   18,038
max. capacity	6 x 94 ml
run-up   run-down, braked in sec	64   64
angle	45°
temperature in °C <sup>1)</sup>	+4
<b>Cat. No.</b>	<b>4246</b>

Lid bioseal<sup>®</sup> and phenol-resistant

Cat. No.

**INCLUSIVE**



<b>Vessels</b>															
capacity in ml	0.5	1.5	2.0	3	15	25	50	94	7.5 – 8.2	9 – 10	10	8.5 – 10	5	15	50
Ø x L in mm	10.7x46	11x38	11x38	10x60	17x100	24x100	34x100	38x102	15x92	16x92	15x102	16x100	17x51	17x120	29x115
max. RCF <sup>2)</sup>	17,299	17,299	17,299	17,299	17,003	16,560	17,743	18,038	17,003	17,003	17,003	17,003	16,856	17,299	17,595
radius in mm	117	117	117	117	115	112	120	122	115	115	115	115	114	117	119
<b>Cat. No.</b>	<b>pediatric</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>				<b>blood collection / urine tubes</b>				<b>-</b>	<b>tubes with screw cap</b>	

<b>Adapter</b>																
boring Ø x L in mm	11.4x39	11.4x39	11.4x39	11.4x39	17.5x91.5	26x85	35x89.3	38.2x89.6	17.5x91.5	17.5x91.5	17.5x91.5	17.5x91.5	17x51	17x106	29.8x96.7	
vessels per rotor	24	24	24	24	6	6	6	6	6	6	6	6	6	6	6	
<b>Cat. No.</b>	<b>1449</b>	<b>1449</b>	<b>1449</b>	<b>1449</b>	<b>1451</b>	<b>1447</b>	<b>1463</b>	<b>-</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1451</b>	<b>1476</b>	<b>1466</b>	<b>1454</b>	

<b>Vessels</b>				
capacity in ml	10	30	50	85
Ø x L in mm	16x80	26x95	29x107	38 x 106
max. RCF <sup>2)</sup>	17,003	16,560	17,299	18,038
radius in mm	115	112	117	122
<b>Cat. No.</b>	<b>tubes with screw cap</b>			

<b>Adapter</b>				
boring Ø x L in mm	16.5x74	26x85	29x92	38.2x89.6
vessels per rotor	12	6	6	6
<b>Cat. No.</b>	<b>1448</b>	<b>1447</b>	<b>1446</b>	<b>-</b>

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.



# ROTO SILENTA 630 RS

## Your first choice up to 12 liters

The ROTO SILENTA 630 RS is highly rated in the rapid and efficient centrifugation of blood bags. It is able to spin up to 12 liter of sample or 12 blood bags per run. Four and six-place rotor options are also available to offer the best possible fit.

In industrial or R&D applications the ROTO SILENTA accommodates six vessels up to 2,000 ml each. This unit includes refrigeration with a temperature range from -20°C to +40°C.

### — FEATURES

- RPM: 50 - 6,000 min<sup>-1</sup> – adjustable in increments of 10
- RCF: 1 - 6,520 – adjustable in increments of 1
- Max. capacity: 6 x 2,000 ml
- The first choice in blood banking centrifuges
- Choice of 3 rotors
- Medical device according to regulation (EU) 2017/745
- Easy operation with keypad and control knob
- 89 program memories for more individuality
- 9 individual acceleration and 19 deceleration stages
- Temperature adjustable from -20 to +40 °C with pre-cooling function
- Data reporting system (optional)

### — FIELDS OF APPLICATION

- Hospitals
- Blood banks and transfusion medicine laboratories
- Cell culture laboratories



Documentation system for blood banks.  
More information on [page 162](#)



More information about the control panel  
can be found on [page 202](#)



## TECHNICAL DATA

### ROTO SILENTA 630 RS <sup>>)</sup> refrigerated

voltage <sup>*)</sup>	400 V 3 ~ + N
frequency	50 – 60 Hz
consumption	9,700 VA
emission, immunity	EN/IEC 61326-1, class B
max. capacity	6 x 2,000 ml
max. RPM	6,000 min <sup>-1</sup>
max. RCF	6,520
running time	1 – 999 min: 59 s, ∞ continuous run
dimensions (WxDxH)	813 x 1,015 x 973 mm
weight	approx. 355 kg
temperature control, infinitely variable	from -20 to +40 °C
<b>Cat. No.</b>	<b>5005</b>

208 – 220 V +6 / -10 % 3- (+N) + PE,  
with internal transformer

consumption

weight

5005-08



9,000 VA

approx. 401 kg


<sup>\*)</sup> Other voltages on request.  
<sup>>)</sup> Other models on request.

## AVAILABLE ROTORS

### SWING-OUT ROTORS

	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 6-place	90°	4,500 min <sup>-1</sup>	6 x 2,000 ml	<b>4176</b>	152
 swing-out rotor, 4-place	90°	4,500 min <sup>-1</sup>	4 x 2,000 ml	<b>4174</b>	152

### ANGLE ROTORS

 angle rotor, 6-place	25°	6,000 min <sup>-1</sup>	6 x 250 ml	<b>4570</b>	158
--	-----	-------------------------	------------	-------------	-----

— SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174



**Rotor**

max. RPM	4,500 min <sup>-1</sup>
max. RCF	Rotor 4176 / 4174 6,498 / 5,683
max. capacity	12 / 8 blood bag
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +16 / +10
<b>Cat. No.</b>	<b>4176 / 4174</b>

**Bucket**

<b>Cat. No.</b>	<b>4524-A</b>
-----------------	---------------

**Blood bag**

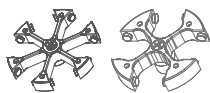
capacity in ml	500	500	750
blood bag per system	4-place	4-place	1-place
max. RCF <sup>26)</sup>	Rotor 4176 / 4174 6,498 / 5,683	6,498 / 5,683	6,498 / 5,683
radius in mm	287 / 251	287 / 251	287 / 251
<b>Cat. No.</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Insert**

boring Ø x L in mm	-	-	-
blood bag systems per rotor	12 / 8	12 / 8	12 / 8
<b>Cat. No.</b>	<b>4529<sup>26)</sup>-AO,-AM,-AU</b>	<b>4592-B</b>	<b>4592-B</b>

+ Additional blood bank accessories can be found on [page 185](#)

— SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174



**Rotor**

max. RPM	4,500 min <sup>-1</sup>
max. RCF	Rotor 4176 / 4174 6,271 / 5,479
max. capacity	12 / 8 blood bag
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +10 / 0
<b>Cat. No.</b>	<b>4176 / 4174</b>

**Bucket**

<b>Cat. No.</b>	<b>4546-A</b>
-----------------	---------------

**Blood bag**

capacity in ml	450
blood bag per system	4-place
max. RCF	Rotor 4176 / 4174 6,271 / 5,479
radius in mm	277 / 242
<b>Cat. No.</b>	<b>-</b>

**Insert**

boring Ø x L in mm	-
blood bag systems per rotor	12 / 8
<b>Cat. No.</b>	<b>4559-A</b>

+ Additional blood bank accessories can be found on [page 185](#)

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 26) Includes blood bag hanging to prevent erythrocyte accumulation at low speeds. Different hanging heights allow customer-specific adjustments. (4529-AO top, 4529-AM center, 4529-AU bottom). Hanging blood bags may be centrifuged with a maximum RCF of 1,000.

## — SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174



### Rotor

max. RPM	4,500 min <sup>-1</sup>
max. RCF	Rotor 4176 / 4174 6,498 / 5,705
max. capacity	12 / 8 blood bag
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +16 / +10
<b>Cat. No.</b>	<b>4176 / 4174</b>

### Bucket

<b>Cat. No.</b>	<b>4591-A</b>
-----------------	---------------

### Blood bags

capacity in ml	450	500	750
blood bag per system	3-place	4-place	1-place
max. RCF	Rotor 4176 / 4174 6,271 / 5,705	6,498 / 5,705	6,498 / 5,705
radius in mm	287 / 252	287 / 251	287 / 251
<b>Cat. No.</b>	<b>-</b>	<b>-</b>	<b>-</b>



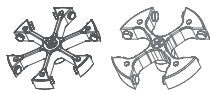
### Insert

boring Ø x L in mm	-	-	-
blood bag systems per rotor	12 / 8	12 / 8	12 / 8
<b>Cat. No.</b>	<b>4598-A</b>	<b>4592-B</b>	<b>4592-B</b>



Additional blood bank accessories can be found on [page 185](#)

## — SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174



### Rotor

max. RPM	3,500 min <sup>-1</sup>
max. RCF	Rotor 4176 / 4174 3,848 / 3,328
max. capacity	6 x 2,000 ml
angle   temperature in °C <sup>1)</sup>	90°   +16 / -12
<b>Cat. No.</b>	<b>4176 / 4174</b>

### Bucket

<b>Cat. No.</b>	<b>4595-C<sup>31)</sup></b>
-----------------	-----------------------------

### Vessels

capacity in ml	max. 1,600 <sup>35)</sup>	2,000
W x D x H in mm	-	150 x 100 x 180
max. RCF	Rotor 4176 / 4174 3,821 / 3,328	3,848 / -
radius in mm	279 / 243	281 / -
run-up, in sec	95 / 131	95 / -
run-down, braked in sec	131 / 131	41 / -
<b>Cat. No.</b>	<b>-</b>	<b>0550<sup>24)</sup></b>



### Insert

W x D x H in mm	145 x 91 x 146	-
vessels per rotor	6 / 4	6 / -
<b>Cat. No.</b>	<b>4596-A</b>	<b>-</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
- 31) Adapter for accommodating sample tubes and blood collection tubes in carrier 4595-C on request.
- 35) Depending on the sample.




— SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174




<b>Rotor</b>	
max. RPM	4,500 min <sup>-1</sup>
max. RCF	Rotor 4176 / 4174 6,520 / 5,705
max. capacity	6 / 4 blood bag
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +9 / +3
<b>Cat. No.</b>	<b>4176 / 4174</b>

<b>Bucket</b>	
<b>Cat. No.</b>	<b>4523-A</b>



<b>Blood bags</b>				
capacity in ml		500	750	1,000
blood bag per system		4-place	1-place	1-place
max. RCF	Rotor 4176 / 4174	6,475 / 5,660	6,475 / 5,660	6,520 / 5,705
radius in mm		285 / 250	285 / 250	288 / 252
<b>Cat. No.</b>		-	-	-

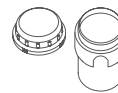


<b>Insert</b>				
boring Ø x L in mm		-	-	-
blood bag systems per rotor		6 / 4	6 / 4	6 / 4
<b>Cat. No.</b>		<b>4516-A</b>	<b>4516-A</b>	-



Additional blood bank accessories can be found on [page 185](#)



— SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174





<b>Rotor</b>	
max. RPM	4,500 min <sup>-1</sup>
max. RCF	Rotor 4176 / 4174 6,316 / 5,524
max. capacity	6 / 4 blood bag
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +9 / -9
<b>Cat. No.</b>	<b>4176 / 4174</b>

<b>Bucket</b>	
lid	5621
<b>Cat. No.</b>	<b>4547-B</b>



<b>Blood bags</b>			
capacity in ml		500	450
blood bag per system		4-place	3-place
max. RCF	Rotor 4176 / 4174	6,316 / 5,524	6,316 / 5,524
radius in mm		279 / 244	279 / 244
<b>Cat. No.</b>		-	-



<b>Insert</b>			
boring Ø x L in mm		-	-
blood bag systems per rotor		6 / 4	6 / 4
<b>Cat. No.</b>		<b>4548</b>	<b>4548</b>



Additional blood bank accessories can be found on [page 185](#)

1) For cooled versions: Lowest temperature achievable with precooling and max. speed.



## SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174



Rotor	
max. RPM	4,500 min <sup>-1</sup>
max. RCF	Rotor 4176 / 4174 6,294 / 5,501
max. capacity	6/4 x 1,000 ml
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +4 / -11
<b>Cat. No.</b>	<b>4176 / 4174</b>

Bucket	
adapter including lid	4255
<b>Cat. No.</b>	<b>4579-A</b>

Vessels															
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	9-10	10	1.6-5
Ø x L in mm	12x75	12x100	14x100	17x100	24x100	34x100	44x100	13 x 65	11x66	15x75	11x92	13x90	16x92	15x102	13x75
max. RCF <sup>2)</sup>	Rotor 4176 / 4174 5,750 / 4,935	5,750 / 4,935	5,886 / 5,094	5,886 / 5,094	5,615 / 4,845	5,705 / 4,890	5,683 / 4,867	5,750 / 4,935	5,750 / 4,935	5,886 / 5,094	5,750 / 4,935	5,750 / 4,935	5,886 / 5,094	5,886 / 5,094	5,750 / 4,935
radius in mm	254 / 218	254 / 218	260 / 225	260 / 225	248 / 214	252 / 216	251 / 215	254 / 218	254 / 218	260 / 225	254 / 218	254 / 218	260 / 225	260 / 225	254 / 218
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>							<b>blood collection / urine tubes</b>							

Adapter															
boring Ø x L in mm	13 x 58	13 x 58	17,5 x 60	17,5 x 60	26 x 72	36 x 79	45 x 78	13,5 x 58	13 x 58	17,5 x 60	13 x 58	13,5 x 58	17,5 x 60	17,5 x 60	13,5 x 58
vessels per rotor	180 / 120	180 / 120	114 / 76	114 / 76	42 / 28	24 / 16	12 / 8	126 / 84	180 / 120	114 / 76	180 / 120	126 / 84	114 / 76	114 / 76	126 / 84
<b>Cat. No.</b>	<b>4433</b>	<b>4433</b>	<b>4434</b>	<b>4434</b>	<b>4438</b>	<b>4439</b>	<b>4442</b>	<b>4435</b>	<b>4433</b>	<b>4434</b>	<b>4433</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4435</b>

Vessels															
capacity in ml	4-7	4-7	8.5-10	15	50	25	30	10	250	290	650	750	1,000	1,000	175
Ø x L in mm	13x100	16x75	16x100	17x120	29x115	25x90	25 x 110	16 x 80	61 x 122	62 x 137	97 x 139	97 x 152	96 x 176	98 x 138	61 x 118
max. RCF <sup>2)</sup>	Rotor 4176 / 4174 5,750 / 4,935	5,886 / 5,094	5,886 / 5,094	6,022 / 5,207	5,999 / 5,207	5,818 / 5,026	5,818 / 5,026	5,886 / 5,094	6,113 / 5,320	6,113 / 5,320	5,999 / 5,184	6,294 / 5,501	6,294 / 5,501	6,294 / 5,501	6,294 / 5,501
radius in mm	254 / 218	260 / 225	260 / 225	266 / 230	265 / 230	257 / 222	257 / 222	260 / 225	270 / 235	270 / 235	265 / 229	278 / 243	278 / 243	278 / 243	278 / 243
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>			<b>tubes with screw cap</b>				<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>0554<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	<b>4239<sup>24)</sup></b>	<b>4255</b>	<b>Falcon</b>	

Adapter															
boring Ø x L in mm	13,5 x 58	17,5 x 60	17,5 x 60	17 x 86	30 x 87	26 x 72	26 x 72	17,5 x 60	62 x 92	62 x 92	98 x 138	98 x 138	98 x 138	-	61 x 118
vessels per rotor	126 / 84	114 / 76	114 / 76	72 / 48	30 / 20	42 / 28	42 / 28	114 / 76	6 / 4	6 / 4	6 / 4	6 / 4	6 / 4	6 / 4	6 / 4
<b>Cat. No.</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4437</b>	<b>4441</b>	<b>4438</b>	<b>4438</b>	<b>4434</b>	<b>4443</b>	<b>4443</b>	<b>4258</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4440</b>

Vessels					
capacity in ml	175	200	225	250	500
Ø x L in mm	61.5x144	60 x 130	61 x 137	60 x 162	96 x 147
max. RCF <sup>2)</sup>	Rotor 4176 / 4174 6,294 / 5,501	6,294 / 5,501	6,294 / 5,501	6,294 / 5,501	6,294 / 5,501
radius in mm	278 / 243	278 / 243	278 / 243	278 / 243	278 / 243
<b>Cat. No.</b>	<b>Nalgene®</b>	<b>Nunc®</b>	<b>Falcon®</b>	<b>Corning®</b>	<b>Corning®</b>

Adapter					
boring Ø x L in mm	-	-	-	-	-
vessels per rotor	6 / 4	6 / 4	6 / 4	6 / 4	6 / 4
<b>Cat. No.</b>	<b>4430</b>	<b>4430</b>	<b>4440</b>	<b>4430</b>	<b>4449</b>

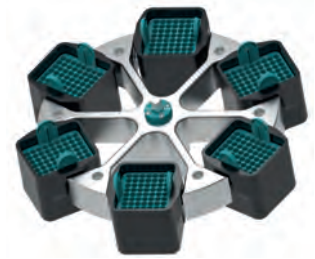
- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.  
The max. RCF for glass tubes annotated with footnote 2) is 4,000.
- 3.15) When using these tubes, carrier 4255 cannot be closed with its lid.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174



<b>Rotor</b>	
max. RPM	4,500 min <sup>-1</sup>
max. RCF Rotor 4176 / 4174	5,999 / 5,184
max. capacity	6x750 ml
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +14 / -1
<b>Cat. No.</b>	<b>4176 / 4174</b>

<b>Bucket</b>	
<b>Cat. No.</b>	<b>4522-A</b>



<b>Vessels</b>	
capacity in ml	4 5 6 7 12 15 25 50 100 2.6-3.4 2.7-3 4-5.5 4.5-5 7.5-8.5 9-10
Ø x L in mm	10x88 12x75 12x82 12x100 16x101 17x100 24x100 34x100 44x115 13x65 11x66 15x75 11x92 15x92 16x92
max. RCF Rotor 4176 / 4174	5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003
radius in mm	257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b> <b>blood collection / urine tubes</b>

<b>Adapter</b>	
boring Ø x L in mm	11 x 70 12.5 x 32 12.5 x 70 12.5 x 70 16 x 70 17.5 x 70 26 x 70 35 x 70 41.5 x 70 13.2 x 32 12.5 x 32 17.5 x 32 12.5 x 70 17.5 x 70 17.5 x 70
vessels per rotor	378 / 252 288 / 192 288 / 192 288 / 192 150 / 100 180 / 120 66 / 44 36 / 24 24 / 16 180 / 120 288 / 192 180 / 120 288 / 192 180 / 120 96 / 64
<b>Cat. No.</b>	<b>4224 4213-93 4213 4213 4223 4214 4215 4216 4218 4222-93 4213-93 4214-93 4213 4214 4220</b>

<b>Vessels</b>	
capacity in ml	10 1.6-5 4-7 4-7 8 8.5-10 15 50 12 30 50 250 290 600 650
Ø x L in mm	15x102 13x75 16x75 13x100 16x125 16x100 17x120 29x115 17 x 100 25 x 110 29x115 61 x122 62 x 137 93x134 97 x 139
max. RCF Rotor 4176 / 4174	5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,818 / 5,003 5,999 / 5,184 5,999 / 5,184 5,818 / 5,003 5,818 / 5,003 5,909 / 5,094 5,818 / 5,003 5,818 / 5,003 5,999 / 5,184 5,999 / 5,184
radius in mm	257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 257 / 221 265 / 229 265 / 229 257 / 221 257 / 221 261 / 225 257 / 221 257 / 221 265 / 229 265 / 229 265 / 229
<b>Cat. No.</b>	<b>blood collection / urine tubes</b> <b>tubes with screw cap</b> <b>5127<sup>24)</sup></b> <b>-<sup>24)</sup></b> <b>0551<sup>24)</sup></b> <b>0554<sup>24)</sup></b>

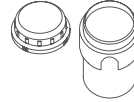
<b>Adapter</b>	
boring Ø x L in mm	17.5x70 13.2x32 17.5x32 13.2x70 16x70 17.5x70 17x70 30 x 70 17.5x70 26 x 70 30 x 96 62 x 90 62 x 90 94x105 97.5x105
vessels per rotor	180 / 120 180 / 120 180 / 120 180 / 120 150 / 100 180 / 120 138 / 92 48 / 32 96 / 64 66 / 44 36 / 24 6 / 4 6 / 4 6 / 4 6 / 4
<b>Cat. No.</b>	<b>4214 4222-93 4214-93 4222 4223 4214 4232 4245-A 4220 4215 4249 4238 4238 4233 4258</b>

<b>Vessels</b>	
capacity in ml	750 750 250 500
Ø x L in mm	97 x 152 96 x 135 60 x 162 96 x 147
max. RCF Rotor 4176 / 4174	5,999 / 5,184 5,999 / 5,184 5,818 / 5,003 5,999 / 5,184
radius in mm	265 / 229 265 / 229 257 / 221 265 / 229
<b>Cat. No.</b>	<b>0512<sup>24)</sup> 4234-A Corning® Corning®</b>

<b>Adapter</b>	
boring Ø x L in mm	97.5x105 97.5x105 60x125 97.5x105
vessels per rotor	6 / 4 6 / 4 6 / 4 6 / 4
<b>Cat. No.</b>	<b>4258 4258 6322 4258</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174



<b>Rotor</b>	
max. RPM	4,500 min <sup>-1</sup>
max. RCF Rotor 4176 / 4174	6,384 / 5,592
max. capacity	6 x 1,000 ml
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +9 / -9
<b>Cat. No.</b>	<b>4176 / 4174</b>

<b>Bucket</b>	
lid	5621
<b>Cat. No.</b>	<b>4547-B</b>

<b>Vessels</b>																
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	7.5-8.2	9-10	10
Ø x L in mm		12x75	12x100	14x100	17x100	24x100	34x100	44x100	13 x 65	11x66	15x75	11x92	13x90	15x92	16x92	15x102
max. RCF <sup>2)</sup> Rotor 4176 / 4174		5,841 / 5,026	5,841 / 5,026	5,977 / 5,184	5,977 / 5,184	5,728 / 4,913	5,773 / 4,981	5,750 / 4,958	5,841 / 5,026	5,841 / 5,026	5,977 / 5,184	5,841 / 5,026	5,841 / 5,026	5,977 / 5,184	5,977 / 5,184	5,977 / 5,184
radius in mm		258 / 222	258 / 222	264 / 229	264 / 229	253 / 217	255 / 220	254 / 219	258 / 222	258 / 222	264 / 229	258 / 222	258 / 222	264 / 229	264 / 229	264 / 229
<b>Cat. No.</b>		<b>tubes<sup>2)</sup></b>							<b>blood collection / urine tubes</b>							

<b>Adapter</b>																
boring Ø x L in mm		13 x 58	13 x 58	17,5 x 60	17,5 x 60	26 x 72	36 x 79	45 x 78	13,5 x 58	13 x 58	17,5 x 60	13 x 58	13,5 x 58	17,5 x 60	17,5 x 60	17,5 x 60
vessels per rotor		180 / 120	180 / 120	114 / 76	114 / 76	42 / 28	24 / 16	12 / 8	126 / 84	180 / 120	114 / 76	180 / 120	126 / 84	114 / 76	114 / 76	114 / 76
<b>Cat. No.</b>		<b>4433</b>	<b>4433</b>	<b>4434</b>	<b>4434</b>	<b>4438</b>	<b>4439</b>	<b>4442</b>	<b>4435</b>	<b>4433</b>	<b>4434</b>	<b>4433</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>

<b>Vessels</b>																
capacity in ml		1.6-5	4-7	4-7	8	8.5-10	15	50	25	30	10	250	290	650	750	1,000
Ø x L in mm		13x75	13x100	16x75	16 x 125	16x100	17x120	29x115	25x90	25x110	16 x 80	62 x 122	62 x 137	97 x 139	97 x 152	96 x 176
max. RCF <sup>2)</sup> Rotor 4176 / 4174		5,841 / 5,026	5,841 / 5,026	5,977 / 5,184	5,977 / 5,184	5,977 / 5,184	6,090 / 5,298	6,090 / 4,958	5,909 / 5,117	5,909 / 5,117	5,977 / 5,184	6,203 / 5,411	6,203 / 5,411	6,384 / 5,592	6,384 / 5,592	6,384 / 5,592
radius in mm		258 / 222	258 / 222	264 / 229	264 / 229	264 / 229	269 / 234	269 / 219	261 / 226	261 / 226	264 / 229	274 / 239	274 / 239	282 / 247	282 / 247	282 / 247
<b>Cat. No.</b>		<b>blood collection / urine tubes</b>					<b>tubes with screw cap</b>					<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>0554<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	<b>4239<sup>24)</sup></b>

<b>Adapter</b>																
boring Ø x L in mm		13,5 x 58	13,5 x 58	17,5 x 60	17,5 x 60	17,5 x 60	17 x 86	30 x 87	26 x 72	26 x 72	17,5 x 60	62x92	62x92	98 x 141	98 x 141	98 x 141
vessels per rotor		126 / 84	126 / 84	114 / 76	114 / 76	114 / 76	72 / 48	30 / 20	42 / 28	42 / 28	114 / 76	6 / 4	6 / 4	6 / 4	6 / 4	6 / 4
<b>Cat. No.</b>		<b>4435</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4437</b>	<b>4441</b>	<b>4438</b>	<b>4438</b>	<b>4434</b>	<b>4443</b>	<b>4443</b>	<b>-</b>	<b>-</b>	<b>-</b>

<b>Vessels</b>							
capacity in ml		175	175	200	225	250	500
Ø x L in mm		61 x 118	61.5x144.3	60x130	61 x 137	60 x 162	96 x 147
max. RCF <sup>2)</sup> Rotor 4176 / 4174		6,384 / 5,592	6,384 / 5,592	6,384 / 5,592	6,384 / 5,592	6,384 / 5,592	6,384 / 5,592
radius in mm		282 / 247	282 / 247	282 / 247	282 / 247	282 / 247	282 / 247
<b>Cat. No.</b>		<b>Falcon®</b>	<b>Nalgene®</b>	<b>Nunc®</b>	<b>Falcon®</b>	<b>Corning®</b>	<b>Corning®</b>

<b>Adapter</b>							
boring Ø x L in mm		-	-	-	-	-	-
vessels per rotor		6 / 4	6 / 4	6 / 4	6 / 4	6 / 4	6 / 4
<b>Cat. No.</b>		<b>4440</b>	<b>4430</b>	<b>4430</b>	<b>4440</b>	<b>4430</b>	<b>4449</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 3.17) When using these tubes, bucket 4547-B cannot be closed with lid 5621.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

— SWING-OUT ROTOR, 6- / 4-PLACE | 4176 / 4174

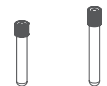
Rotor	
max. RPM	4,500 min <sup>-1</sup>
max. RCF	Rotor 4176 / 4174 5,999 / 5,184
max. capacity	6 x 750 ml
run-up   run-down, braked in sec	125   197
angle   temperature in °C <sup>1)</sup>	90°   +14 / -1
<b>Cat. No.</b>	<b>4176 / 4174</b>



Bucket	
<b>Cat. No.</b>	<b>4572</b>



Vessels		
capacity in ml	4 – 7	4 – 7
Ø x L in mm	13 x 75	13 x 100
max. RCF	Rotor 4176 / 4174 5,818 / 5,003	5,818 / 5,003
radius in mm	257 / 221	257 / 221
<b>Cat. No.</b>	<b>blood collection tubes</b>	



Adapter		
boring Ø x L in mm	13.2 x 59	13.2 x 59
vessels per rotor	336 / 224	336 / 224
<b>Cat. No.</b>	<b>4493</b>	<b>4493</b>



1) For cooled versions: Lowest temperature achievable with precooling and max. 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 | 4570



### Rotor

max. RPM   max. RCF	6,000 min <sup>-1</sup>   5,594
max. capacity	6 x 250 ml
run-up   run-down, braked in sec	64   69
angle   max. noise level	25°   54 dB(A)
temperature in °C <sup>1)</sup>	-16
<b>Cat. No.</b>	<b>4570</b>



### Lid bioseal<sup>®</sup> and phenol-resistant

Cat. No.



**INCLUSIVE**



### Vessels

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	38 x 106	38 x 102	61.5x122
max. RCF <sup>2)</sup>	5,315	5,152	4,910	5,152	4,830	5,353	5,152	4,830	4,910	4,910	5,594
radius in mm	132	128	122	128	120	133	128	120	122	122	139
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>			<b>tubes with screw cap</b>							<b>5127<sup>24)</sup></b>



### Adapter

boring Ø x L in mm	17.6 x 83	26 x 80	38.6 x 88	17 x 106	30 x 100	16.6 x 70	26 x 80	29 x 90	38.6 x 88	38.6 x 88	61.5 x 109
vessels per rotor	42	18	6	30	6	48	18	6	6	6	6
<b>Cat. No.</b>	<b>5646</b>	<b>5642</b>	<b>5644</b>	<b>5637</b>	<b>5638</b>	<b>5641</b>	<b>5642</b>	<b>5643</b>	<b>5644</b>	<b>5644</b>	<b>-</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. 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.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.





# HETTINFO II

## DOCUMENTATION SYSTEM

HettInfo II documents important work steps before and during centrifugation – this ensures transparency and traceable processes. The documentation system is operated via a touch display, which guides the user step by step through the centrifugation and records all significant process data.

All documented data points are temporarily stored locally and can be exported directly after the centrifugation or at a defined time as a CSV file. The data can be stored on the network or exported to a USB stick. This makes HettInfo II system independent and facilitates further processing into another software system.



### — ADVANTAGES

- 1 Touch display**  
 HettInfo II can be operated simply and easily via the touch display – even with laboratory gloves.
- 2 Step-by-step instructions**  
 With the step-by-step instructions, the user always knows exactly what to do next. In the event of incorrect operation or errors, a visual and audible message is issued immediately.
- 3 Automatic data export**  
 Data obtained can be exported after each run or in specific times.
- 4 Universal data format**  
 The exported CSV file is easy to process and work independently for greater compatibility with an existing system.

### — TECHNICAL FEATURES

<b>Compatibility</b>	ROTO SILENTA 630 RS, ROTIXA 500 RS
<b>4.3" touch display</b>	Process status display, error messages, settings
<b>User</b>	max. 3,000
<b>Data logging Scan Module</b>	User ID, blood bag ID, program number
<b>Run data logging</b>	Centrifuge names, centrifuge data, date, start and end time, temperature, radius, acceleration time, braking time, total running time, RPM, RCF, integral RCF, cycle time, brake deactivation speed, end result
<b>File format</b>	CSV
<b>Ports</b>	LAN, USB
<b>Logbook</b>	Documentation of error messages. Export as CSV file on USB stick possible.

## — MODULES

### HETTINFO II

With HettInfo II you can record running data of your ROTO SILENTA 630 RS or ROTIXA 500 RS centrifuge. To record a complete centrifugation process, we recommend HettInfo II plus Scan Module.



Articles	Includes	Cat. No
HettInfo II – ROTO SILENTA 630 RS	Firmware, touch display	<b>0955</b>
HettInfo II – ROTIXA 500 RS	Firmware, touch display	<b>0956</b>

### SCAN MODULE

The barcode scanner included in the Scan Module records all data reliably. The ergonomic holder ensures easy handling and offers secure protection when not in use.

Barcode scanners from the HettInfo I series are compatible with HettInfo II and can still be used.



Articles	Includes	Cat. No
Scan Module – ROTO SILENTA 630 RS	Barcode scanner, bracket, cable clamps	<b>0959</b>
Scan Module – ROTIXA 500 RS	Barcode scanner, bracket, cable clamps	<b>0960</b>

### ADD-ON KIT

Articles	Includes	Cat. No
Add-on Kit for model 5005	Firmware, touch display, front panel	<b>E4378</b>
Add-on Kit for model 5005-80	Firmware, touch display, front panel	<b>E4393</b>
Add-on Kit for model 5005-90	Firmware, touch display, front panel	<b>E4416</b>
Add-on Kit for model 4950	Firmware, touch display, front panel	<b>E4409</b>

With the Add-on Kit, ROTO SILENTA 630 RS models from model year 01/2008\* can be upgraded to HettInfo II. To capture a complete centrifugation process, we recommend the Add-on Kit plus Scan Module.

\* Older models on request.

## PRODUCT VIDEOS

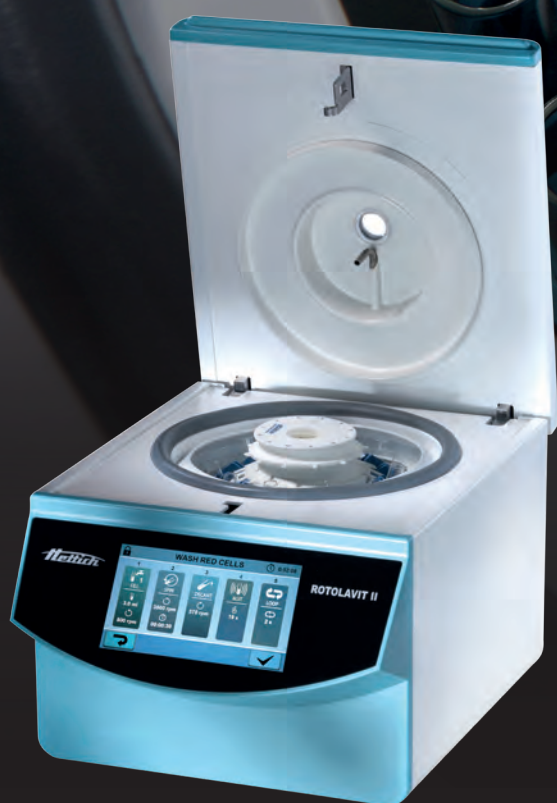
Would you like to learn more about this product? Scan the QR Code to visit our YouTube channel:

[www.youtube.com/hettichlabtechnology](http://www.youtube.com/hettichlabtechnology)



# CELL WASHER

Automated cell washing centrifuge



ROTOLAVIT II  
on page 166



# 05



# ROTOLAVIT II

## User friendly serology solutions

The ROTOLAVIT II cell washing system facilitates routine tasks in transfusion 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 without the need for costly consumables.

### — FEATURES

- Max. RPM: 3,500 min<sup>-1</sup>
- Max. RCF: 1,438
- Max. capacity: 24 standard tubes
- Automatic cell washing system for serological testing
- Choice of 2 rotors 12-place or 24-place
- IVDR-conform according to regulation (EU) 2017/746
- Maximum noise level of ≤ 49 dB (A)
- Easy operation with intuitiv touch screen
- 24 program memories for more individuality
- 7 pre-installed application programs

### — FIELDS OF APPLICATION

- Hospitals
- Hematological laboratories
- Blood centers
- Clinical laboratories



according to regulation (EU) 2017/746





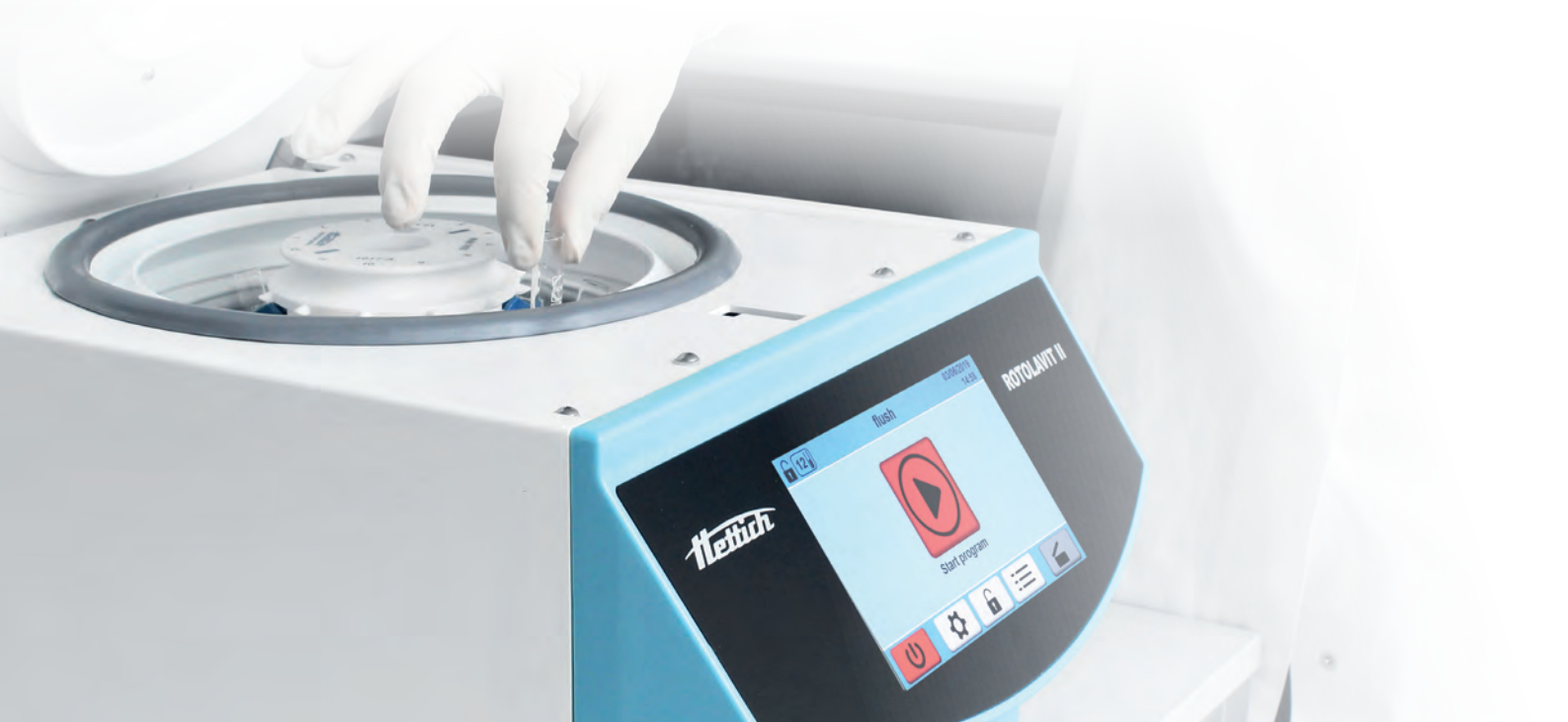
## TECHNICAL DATA

<b>ROTOLAVIT II</b>	
voltage	100 – 240 V 1 ~
frequency	50 – 60 Hz
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	3,500 min <sup>-1</sup>
max. RCF	1,438
radius (both rotors)	105 mm
dimensions (HxWxD)	330x480x280 mm
weight	approx. 24.5 kg
max. noise level	≤ 49 dB (A)
<b>Cat. No.</b>	<b>1008-00</b>

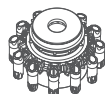
The ROTOLAVIT II is not available in all countries.

## AVAILABLE ROTORS

<b>SWING-OUT ROTORS</b>	angle	max. RPM	max. capacity	Cat. No	page
 swing-out rotor, 12-place	45°	3,500 min	12 x (10x75 mm* or 12x75 mm) * Tubes requires adapter No. <b>1019</b>	<b>1017-A</b>	168
 swing-out rotor, 24-place	45°	3,500 min	24 x (10x75 mm* or 12x75 mm) * Tubes requires adapter No. <b>1019</b>	<b>1018-A</b>	168



## — SWING-OUT ROTOR, 12-PLACE | 1017-A



### Rotor

max. RPM   max. RCF	3,500 min <sup>-1</sup>   1,438	
max. capacity	12 x 5 ml	
angle   max. noise level	45°   49 dB (A)	
<b>Cat. No.</b>	<b>1017-A</b>	



### Vessels

capacity in ml	3	5
Ø x L in mm	10 x 75	12 x 75
max. RCF <sup>2)</sup>	1,438	1,438
radius in mm	105	105

<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>	
-----------------	---------------------------	--



### Adapter

boring Ø x L in mm	-	-
vessels per rotor	12	12
<b>Cat. No.</b>	<b>1019 (12 pcs.)</b>	<b>-</b>

## — SWING-OUT ROTOR, 24-PLACE | 1018-A



### Rotor

max. RPM   max. RCF	3,500 min <sup>-1</sup>   1,438	
max. capacity	24 x 5 ml	
angle   max. noise level	45°   49 dB (A)	
<b>Cat. No.</b>	<b>1018-A</b>	



### Vessels

capacity in ml	3	5
Ø x L in mm	10 x 75	12 x 75
max. RCF <sup>2)</sup>	1,438	1,438
radius in mm	105	105

<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>	
-----------------	---------------------------	--



### Adapter

boring Ø x L in mm	-	-
vessels per rotor	24	24
<b>Cat. No.</b>	<b>1019 (12 pcs.)</b>	<b>-</b>

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.





# DUAL CENTRIFUGE

Homogenizing, mixing and  
milling – fast and efficient



ZENTRIMIX 380 R  
on page 172



06



# ZENTRIMIX 380 R

## Efficient and safe work in the laboratory

The dual centrifuge ZentriMix 380 R allows many challenging laboratory tasks in research, development and analytics in a very efficient way or makes them possible for the first time. Examples are the rapid mixing of viscous materials, the production of nanoparticles in closed (sterile) vessels or tissue disruption. A particular advantage is the powerful cooling system for temperature-sensitive samples.

The ZentriMix 380 R was developed on the basis of proven Hettich centrifuge technology. This makes the device safe, reliable and durable. In addition, the compact design and the low noise level ensure a comfortable working environment in the laboratory.

### — FEATURES

- (Nano-) Milling of samples
- QuEChERS-Analysis in one step in 50-70 % less time
- Fast und homogeneous Mixing of highly viscous materials
- Usage of inexpensive standard-vials
- Eliminates cleaning time and effort vs. the standard mills or mixers
- Guarantees sterility of the sample (i.e. genetic analysis after Milling)
- Integrated cooling for sensitive samples
- Very wide volume bandwidth when mixing (2 ml to 250 ml)

### — FIELDS OF APPLICATION

- Analytical laboratories
- Food control laboratories
- University / Academic research
- Pharmaceutical laboratories
- Forensic laboratories
- Environmental laboratories
- Cell culture laboratories
- Cosmetic laboratories



More information about the control panel can be found on [page 202](#)





## TECHNICAL DATA

### ZentriMix 380 R

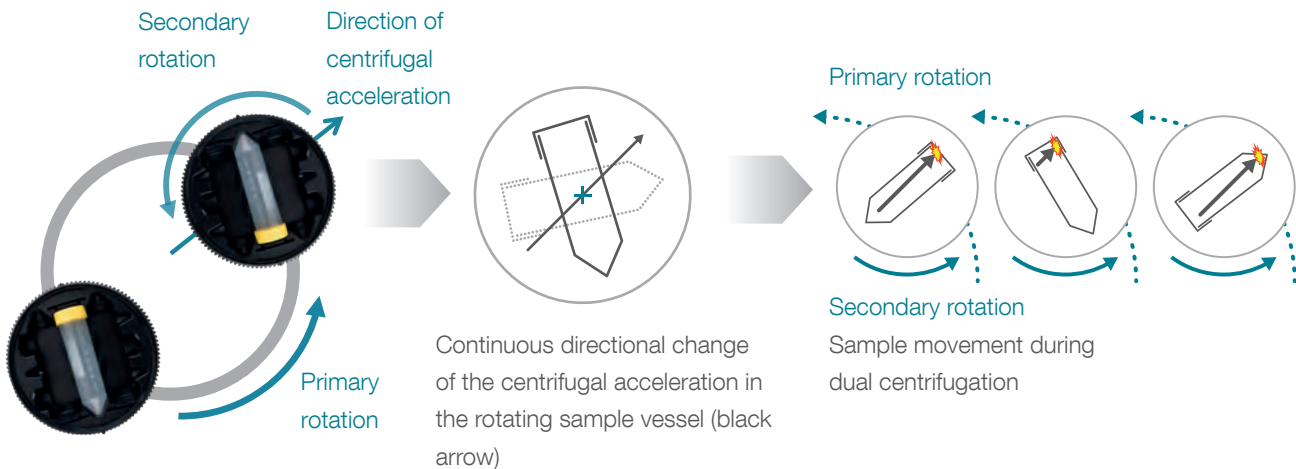
voltage <sup>1)</sup>	200 – 240 V 1 ~	110 – 127 V 1 ~
frequency	50 – 60 Hz	60 Hz
consumption	1,400 VA	1,600 VA
emission, immunity	EN/IEC 61326-1, class B	FCC class B
max. capacity	2 x 250 ml / 40 x 2.0 ml	2 x 250 ml / 40 x 2.0 ml
max. RPM (S rotor / Swing-out rotor, 4-place)	2,500 / 5,000 min <sup>-1</sup>	2,500 / 5,00 min <sup>-1</sup>
max. RCF (S rotor / Swing-out rotor, 4-place)	1,048 / 4,863	1,048 / 4,863
dimensions (WxDxH)	472 x 759 x 418 mm	472 x 769 x 418 mm
weight	approx. 81.5 kg	approx. 89 kg
<b>Cat. No.</b>	<b>3200</b>	<b>3200-01</b>

1) Other voltages on request.

## AVAILABLE ROTORS

ROTORS	angle	max. RPM	max. capacity	Cat. No.	page
 H rotor, 2-place	40°	1,500 min <sup>-1</sup>	2 x 250 ml	<b>3206</b>	174
 S rotor, 2-place	40°	2,500 min <sup>-1</sup>	2 x 250 ml	<b>3205</b>	174
 Swing-out rotor, 4-place	90°	5,000 min <sup>-1</sup>	4 x 250 ml	<b>3234</b>	175

## OPERATING PRINCIPLE OF THE ROTOR



## H ROTOR, 2-PLACE | 3206



### Rotor

max. RPM   max. RCF	1,500 min <sup>-1</sup>   377
max. capacity	2 x 250 ml
run-up   run-down, braked in sec	22   24
angle   temperature in °C <sup>2)</sup>	40°   +20
<b>Cat. No.</b>	<b>3206</b>



### Vessels

capacity in ml	2.0	10	15	50	125	185	250
Ø x L in mm	11 x 45.5	25.5 x 46	17 x 121	29.5 x 116	67 x 73,7	68 x 60	68 x 79
max. RCF <sup>2)</sup>	377	377	377	377	307	319	319
radius in mm	150	150	150	150	122	127	127
<b>Cat. No.</b>	-	-	tubes		jars with screw cap		



### Adapter

vessels per rotor	40	4	6	6	2	2	2
<b>Cat. No.</b>	<b>3236</b>	<b>3211</b>	<b>3218</b>	<b>3218</b>	<b>3237-2</b>	<b>3221-A</b>	<b>3221-A</b>

## S-ROTOR, 2-PLACE | 3205



### Rotor

max. RPM   max. RCF	2,500 min <sup>-1</sup>   1,048
max. capacity	2 x 250 ml
run-up   run-down, braked in sec	35   35
angle   temperature in °C <sup>2)</sup>	40°   +20
<b>Cat. No.</b>	<b>3205</b>



### Vessels

capacity in ml	2.0	10	125	185	250
Ø x L in mm	11 x 45.5	25.5 x 46	67 x 73,7	68 x 60	68 x 79
max. RCF <sup>2)</sup>	1,048	1,048	852	886	886
radius in mm	150	150	122	127	127
<b>Cat. No.</b>	-	-	jars with screw cap		



### Adapter

vessels per rotor	4	4	2	2	2
<b>Cat. No.</b>	<b>3236</b>	<b>3211</b>	<b>3237-2</b>	<b>3221-A</b>	<b>3221-A</b>



Removal aid for Twist-Top disk 3236

**3210**



Removal aid for Twist-Top disk 3237-2 and 3221-A

**3223**

37) Conical 2 ml Sarstedt PP microtitre tubes with screw cap (Art.No. 72.693.005)

38.1) Please only use polypropylene vessels in accordance with ISO 8362 (No Glass!), to fit into the adapter the height of the vessel including crimp cap and stopper should be 48.5 mm.

39) All S Rotor adapters can also be used in the H Rotor.

41) Straight-walled 125 ml Thermo Fischer PFCO wide-neck jars with screw cap (Art.No. 2118-0004)

## SWING-OUT ROTOR, 4-PLACE | 3234



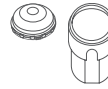
### Rotor

max. RPM   max. RCF	5,000 min <sup>-1</sup>   4,863
max. capacity	4x 250 ml
run-up   run-down, braked in sec	42   27
angle	90°
<b>Cat. No.</b>	<b>3234</b>



### Bucket

lid bioseal <sup>5)</sup>	1751
<b>Cat. No.</b>	<b>1752</b>



### Vessels

capacity in ml	10	9	15	94	100	100	250	15	50	30	50	250	
Ø x L in mm	25.5x49	14x100	17x100	38x102	40x115	44x100	65 x 115	17x120	30 x 115	25x110	30x115	62 x 122	
max. RCF <sup>7)</sup>	top / bottom	4,695	4,668	4,668	4,807	4,640	4,640	4,640	4,863	4,863	4,528	4,752	4,863
radius in mm	top / bottom	168	167	167	172	166	166	166	174	174	162	170	174
<b>Bestell-Nr.</b>	-	tubes <sup>7)</sup>						tubes with screw cap					



### Adapter

boring Ø x L in mm	26x33	17.5x62	17.5x62	38.5x80	41x97	45x87	66x104.5	17x84	30x84	26.5x72	30x80	62x100
vessels per rotor	24	52	52	8	4	4	4	36	16	20	16	4
<b>Cat. No.</b>	<b>3235</b>	<b>1763-A</b>	<b>1763-A</b>	<b>1777</b>	<b>1767</b>	<b>1766</b>	<b>1768</b>	<b>1771-A</b>	<b>1772-A</b>	<b>1779</b>	<b>1774-A</b>	<b>1769</b>

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

7) 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.

38.2) Polypropylene vessels in accordance with ISO 8362.

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

## PRODUCT VIDEOS

Would you like to learn more about this product? Scan the QR Code to visit our YouTube channel:

[www.youtube.com/hettichlabtechnology](http://www.youtube.com/hettichlabtechnology)







# AUTOMATED CENTRIFUGES

We are the world leader in automated centrifuges

Since the introduction of the first robotically integrated centrifuges over 25 years ago, Hettich is still setting the benchmark in centrifuge automation technology.

We have successfully integrated in most of today's laboratory automation systems and are recognized globally for the quality, precision and safety of our units. We currently offer four different automationfriendly models – each designed for reliable performance in high-use automation settings.



# 07



AUTOMATED  
CENTRIFUGES



MIKRO 220  
ROBOTIC



SBS 300  
ROBOTIC



ROTINA 380 | 380 R |  
380 RC ROBOTIC



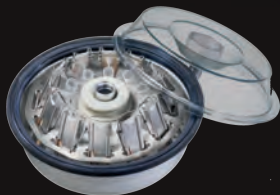
ROTANTA 460  
ROBOTIC

More information about our automated centrifuges can be found on our website at [www.hettichlab.com](http://www.hettichlab.com) or on [YouTube](#).



# EQUIPMENT

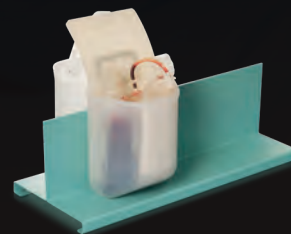
The useful addition



**CYTO SYSTEM**  
on page 180



**ROLLING CABINET**  
on page 185



**BLOOD BANK  
ACCESSORIES**  
on page 185

A person wearing blue nitrile gloves is working with a clear plastic container in a laboratory setting. The container has a lid and appears to be part of a piece of equipment. The background is slightly blurred, showing a white cabinet or wall. The overall lighting is soft and professional.

# 08

# HETTICH CYTO SYSTEM

## Cytological preparations – safe and economic

Increased demands on security or flexibility as well as time and cost pressures represent a large challenge for today's cytology laboratory. Hettich's three cyto systems are available to tackle these challenges. Reliable, flexible and cost-saving solutions – all IVDR-conform according to regulation (EU) 2017/746.

### SYSTEM 1

System 1 is particularly suitable for a high sample throughput thanks to its 12-place rotor. In addition, the autoclavable swing-out rotor with a TÜV certified, bioseal rotor lid provides maximum safety. This system can be used in two proven Hettich benchtop centrifuges, offers comprehensive accessories and is very easy to handle. The end result is an optimal cell presentation.



**Compatible for models:**

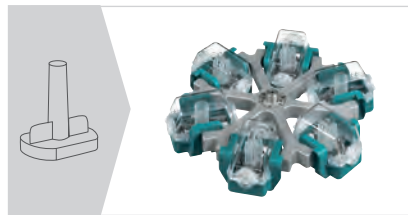
UNIVERSAL 320 / 320 R |  
ROTOFIX 32 A

**Benefits:**

- Closed, autoclavable rotor with Bio-Seal lid
- 12-place swing-out rotor for maximum sample throughput
- Large selection of cytochambers for single and multiple use. Re-usable cytochambers are autoclavable
- Easy handling
- Good cell representation

### SYSTEM 2

This system offers you the highest possible flexibility. On the one hand, volumes between 1 and 8 ml can be prepared while up to 8 cell sediments can fit on a single slide. In addition, this accessory can be used in many Hettich centrifuges, often without rotor replacement. This accessory is inexpensive and is characterized by a high, representative cell yield.



**Compatible for models:**

ROTOFIX 32 A | UNIVERSAL 320 /  
320 R | ROTINA 380 / 380 R | ROTINA  
420 / 420 R | ROTANTA 460 / 460 R |  
ROTIKA 500 RS

**Benefits:**

- Large variety of accessories
- Flexible sample volumes
- Can be used with and without filter cards, depending on application and requirements.
- Very high cell yield

### SYSTEM 3

System 3 combines the easy handling of System 1 with the flexibility and price advantage of System 2. It can operate in a variety of Hettich centrifuges and, like System 1, requires only a single centrifugation step to arrive at a dry cell pellet. The three different sediment size options give a distinct advantage.



**Compatible for models:**







ROTOFIX 32 A | ROTINA 420 / 420 R |  
UNIVERSAL 320 / 320 R

**Benefits:**

- Easy handling
- Ideal for small sample volumes
- Can be used with and without filter cards, depending on application and requirements (dry or moist cell sediment).






## Assembly of a complete cyto insert

SYSTEM 1	SYSTEM 2	SYSTEM 3
 <p>cyto chamber with filter card</p>	 <p>lid</p>	 <p>lid</p>
 <p>Clips</p>	 <p>ring</p>	 <p>cyto chamber</p>
 <p>swing-out rotor, 12-place</p>	 <p>cyto chamber</p>	 <p>Slide carrier with filter card and ring</p>
 <p>Slide carrier with filter card</p>	 <p>bucket</p>	 <p>bucket</p>
<b>MOST POPULAR</b>		


## SYSTEM 1 – rotor and accessories

### — SWING-OUT ROTOR


<p><b>Swing-out rotor, 12-place</b> For ROTOFIX 32 A   UNIVERSAL 320 / 320 R</p> 	+	<p><b>Lid bioseal<sup>5)</sup></b> Cat. No. <b>1528</b></p> 										
<table border="1"> <tr><td>max. RPM   max. RCF</td><td>2,000 min<sup>-1</sup>   438</td></tr> <tr><td>max. capacity</td><td>12 cyto chambers</td></tr> <tr><td>run-up   run-down, braked in sec</td><td>19   18</td></tr> <tr><td>Angle</td><td>90°</td></tr> <tr><td><b>Cat. No.</b></td><td><b>1515-A</b></td></tr> </table>	max. RPM   max. RCF	2,000 min <sup>-1</sup>   438	max. capacity	12 cyto chambers	run-up   run-down, braked in sec	19   18	Angle	90°	<b>Cat. No.</b>	<b>1515-A</b>		<p><b>Stand</b> Cat. No. <b>1528</b></p> 
max. RPM   max. RCF	2,000 min <sup>-1</sup>   438											
max. capacity	12 cyto chambers											
run-up   run-down, braked in sec	19   18											
Angle	90°											
<b>Cat. No.</b>	<b>1515-A</b>											




### — CYTO CHAMBERS

	1531 (50 pcs.) 1534 (500 pcs.)	1532 (50 pcs.)
<p><b>Cyto chambers</b> (disposable)</p> 	0.5	0.2
capacity in ml	0.5	0.2
area in mm <sup>2</sup>	28.3	28.3
∅ in mm	6	6
<b>Cat. No.</b>	<b>1531 (50 pcs.) 1534 (500 pcs.)</b>	<b>1532 (50 pcs.)</b>


  

	1524 (4 pcs.)	1524 (4 pcs.)
<p><b>Clips</b> (autoclavable)</p> 	1524 (4 pcs.)	1524 (4 pcs.)
<b>Cat. No.</b>	<b>1524 (4 pcs.)</b>	<b>1524 (4 pcs.)</b>

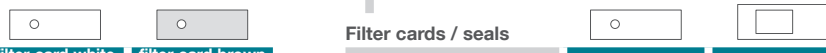
  

	1538 (12 pcs.)	1536 (12 pcs.)
<p><b>Cyto chambers</b> (re-usable, autoclavable)</p> 	0.5	6 <sup>18)</sup>
capacity in ml	0.5	6 <sup>18)</sup>
area in mm <sup>2</sup> / (L x W) in mm	28.3	13.4x22
∅ in mm	6	-
<b>Cat. No.</b>	<b>1538 (12 pcs.)</b>	<b>1536 (12 pcs.)</b>

	1524 (4 pcs.)	1524 (4 pcs.)
<p><b>Clips</b> (autoclavable)</p> 	1524 (4 pcs.)	1524 (4 pcs.)
<b>Cat. No.</b>	<b>1524 (4 pcs.)</b>	<b>1524 (4 pcs.)</b>

	1539 (200 pcs.)	1537 (100 pcs.)
<p><b>Filter cards / seals</b></p> 	1539 (200 pcs.)	1537 (100 pcs.)
<b>Cat. No.</b>	<b>1539 (200 pcs.)</b>	<b>1537 (100 pcs.)</b>


5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.  
18) This is the maximum capacity. The recommended quantity to be used per chamber is 4 ml.



# SYSTEM 2 – rotors and equipment

## — SWING-OUT ROTOR

**Swing-out rotor, 4-place**  
For ROTOFIX 32 A |  
UNIVERSAL 320 / 320 R



max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,451
max. capacity	8 cyto chambers
run-up   run-down, braked in sec	22   25
angle	90°
<b>Cat. No.</b>	<b>1624</b>


**Bucket**



lid	1661
<b>Cat. No.</b>	<b>1660</b>



**Swing-out rotor, 4-place**  
For UNIVERSAL 320 / 320 R



max. RPM   max. RCF	5,000 min <sup>-1</sup>   2,879
max. capacity	8 cyto chambers
run-up   run-down, braked in sec	30   32
angle   temperature in °C <sup>1)</sup>	90°   -10
<b>Cat. No.</b>	<b>1494</b>


**Bucket**



<b>Cat. No.</b>	<b>1452</b>
-----------------	-------------



**Swing-out rotor, 4-place**  
For ROTINA 380 / 380 R



max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,898
max. capacity	16 cyto chambers
run-up   run-down, braked in sec	24   17
angle   temperature in °C <sup>1)</sup>	90°   -8
<b>Cat. No.</b>	<b>1798</b>


**Bucket**



lid	5053
<b>Cat. No.</b>	<b>5051</b>



**Swing-out rotor, 4-place**  
For ROTINA 420 / 420 R



max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,898
max. capacity	16 cyto chambers
run-up   run-down, braked in sec	18   16
angle   temperature in °C <sup>1)</sup>	90°   -1
<b>Cat. No.</b>	<b>4753</b>


**Bucket**



lid	5053
<b>Cat. No.</b>	<b>5051</b>



**Swing-out rotor, 4-place**  
For ROTANTA 460 / 460 R |  
460 RC / 460 RF



max. RPM   max. RCF	4,000 min <sup>-1</sup>   3,095
max. capacity	16 cyto chambers
run-up   run-down, braked in sec	40   45
angle	90°
<b>Cat. No.</b>	<b>5694</b>

**Bucket**



lid	5053
<b>Cat. No.</b>	<b>5051</b>



**Adapter**



<b>Cat. No.</b>	<b>5280</b>
-----------------	-------------

**Swing-out rotor, 4-place**  
For ROTANTA 460 / 460 R  
/ 460 RC / 460 RF



max. RPM   max. RCF	4,600 min <sup>-1</sup>   4,069
max. capacity	16 cyto chambers
run-up   run-down, braked in sec	75   88
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>



<b>Bucket</b>	
<b>Cat. No.</b>	<b>5628</b>

<b>Adapter</b>	
<b>Cat. No.</b>	<b>5220-A</b>

<b>Adapter</b>	
<b>Cat. No.</b>	<b>5280</b>



**Swing-out rotor, 6-place**  
For ROTOFIX 32 A |  
UNIVERSAL 320 / 320 R



max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,039
max. capacity	12 cyto chambers
run-up   run-down, braked in sec	22   25
angle	90°
<b>Cat. No.</b>	<b>1626</b>



<b>Bucket</b>	
lid	1661
<b>Cat. No.</b>	<b>1660</b>



**Swing-out rotor, 6-place**  
Passend für ROTINA 380  
/ 380 R



max. RPM   max. RCF	4,000 min <sup>-1</sup>   2,003
max. capacity	12 cyto chambers
run-up   run-down, braked in sec	19   18
angle   temperature in °C <sup>1)</sup>	90°   -6
<b>Cat. No.</b>	<b>1726</b>



<b>Bucket</b>	
lid	1661
<b>Cat. No.</b>	<b>1660</b>



**Swing-out rotor, 6-place**  
For ROTANTA 460 | 460 R |  
460 RC | 460 RF



max. RPM   max. RCF	4,000 min <sup>-1</sup>   3,291
max. capacity	24 cyto chambers
run-up   run-down, braked in sec	38   46
angle   temperature in °C <sup>1)</sup>	90°   0
<b>Cat. No.</b>	<b>4446</b>



<b>Bucket</b>	
lid	5053
<b>Cat. No.</b>	<b>5051</b>

<b>Adapter</b>	
<b>Cat. No.</b>	<b>5280</b>



**Swing-out rotor, 6-place**  
For ROTIXA 500 RS



max. RPM   max. RCF	4,000 min <sup>-1</sup>   3,274
max. capacity	24 cyto chambers
run-up   run-down, braked in sec	33   50
angle   temperature in °C <sup>1)</sup>	90°   0
<b>Cat. No.</b>	<b>4296</b>



























<b>Bucket</b>	
lid	5053
<b>Cat. No.</b>	<b>5051</b>

<b>Adapter</b>	
<b>Cat. No.</b>	<b>5280</b>





## — CYTO CHAMBERS



						
<b>Cyto chambers</b>						
capacity in ml	1	2	4	8	3 x 2	4 x 1
area in mm <sup>2</sup>	30	60	120	240	3 x 60	4 x 30
Ø in mm	6.2	8.7	12.4	17.5	3x8.7	4x6.2
<b>Cat. No.</b>	<b>1663-100</b> (100 pcs.)	<b>1664-100</b> (100 pcs.)	<b>1665-100</b> (100 pcs.)	<b>1666-100</b> (100 pcs.)	<b>1667-100</b> (100 pcs.)	<b>1668-100</b> (100 pcs.)
<b>+</b>	Slide carrier with ring	Slide carrier for two chambers	Slide carrier with ring	Slide carrier for two chambers	Slide carrier with ring	Slide carrier for two chambers
<b>Slide carrier (autoclavable)</b>						
<b>Cat. No.</b>	<b>1662</b>	<b>1670</b>	<b>1662</b>	<b>1670</b>	<b>1662</b>	<b>1670</b>
<b>+</b>						
<b>Filter cards for 1662</b>						
<b>Cat. No.</b>	<b>1675</b> (200 pcs.)	<b>1675</b> (200 pcs.)	<b>1675</b> (200 pcs.)	<b>1676</b> (100 pcs.)	<b>1677</b> (100 pcs.)	<b>1678</b> (100 pcs.)
<b>+</b>						
<b>Filter cards for 1670</b>						
<b>Cat. No.</b>	<b>1692</b> (200 pcs.)	<b>1692</b> (200 pcs.)	<b>1692</b> (200 pcs.)	<b>1691</b> (100 pcs.)	<b>1694</b> (100 pcs.)	<b>1693</b> (100 pcs.)

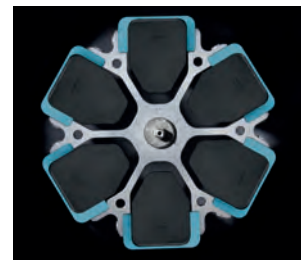
## SYSTEM 3 – rotors and equipment

### — SWING-OUT ROTORS










<b>Swing-out rotor, 4-place</b> For ROTOFIX 32 A   UNIVERSAL 320 / 320 R		<b>+</b>	<b>Bucket</b> lid	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   1,467			inclusive
max. capacity	4 cyto chambers		<b>Cat. No.</b>	<b>1680</b>
run-up   run-down, braked in sec	20   25			
angle	90°			
<b>Cat. No.</b>	<b>1624</b>			



<b>Swing-out rotor, 6-place</b> For ROTOFIX 32 A   UNIVERSAL 320 / 320 R		<b>+</b>	<b>Bucket</b> lid	
max. RPM   max. RCF	5,000 min <sup>-1</sup>   1,842			inclusive
max. capacity	6 cyto chambers		<b>Cat. No.</b>	<b>1680</b>
run-up   run-down, braked in sec	20   22			
angle	90°			
<b>Cat. No.</b>	<b>1626</b>			



### — CYTO CHAMBERS

				<b>+</b>			
<b>Cyto chambers</b>							
area in mm <sup>2</sup>	30	60	120				
Ø in mm	6.2	8.7	12.4				
<b>Cat. No.</b>	<b>1671-100</b> (100 pcs.)	<b>1672-100</b> (100 pcs.)	<b>1673-100</b> (100 pcs.)				
<b>+</b>	Slide carrier with ring	Slide carrier with ring	Slide carrier with ring				
<b>Slide carrier (autoclavable)</b>				<b>Filter cards</b>			
<b>Cat. No.</b>	<b>1662</b>	<b>1662</b>	<b>1662</b>	<b>Cat. No.</b>	<b>1696</b> (100 pcs.)	<b>1697</b> (100 pcs.)	<b>1698</b> (100 pcs.)

## ROLLING CABINETS

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



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**

MODEL	ROTOFIX	UNIVERSAL		ROTINA		ROTINA		ROTANTA		ROTOFIX	
Model variant	32 A	320	320 R	380	380 R	420	420 R	460	460 R	46	46 H
4612-A + 4613-A	•	•	•	•	•	•		•		•	•
4614-A + 4615-A							•		•		

• Rolling cabinet is compatible for the marked model.

## ACCESSORIES FOR CENTRIFUGING BLOOD BAG SYSTEMS



### 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**



### Compensatory weights (set)

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

**Cat. No. 4566**



### 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.

**4584-A** for insert 4559-A

**4587-A** for insert 4592-B

**4589-A** for insert 4516-A



### Loading aid

Secure your samples and avoid accidental spillage with the convenient Loading aid for centrifuge inserts. The Hettich Loading aid allows users to confidently hold and manage their samples without the risk of the inserts toppling over.

**Cat. No. 4509**

\* Can only be used for ROTO SILENTA 630 RS inserts.

# INCUBATORS

Efficient use of valuable space



HETTCUBE 200 | 200 R  
on page 186



HETTCUBE 400 | 400 R  
on page 186



HETTCUBE 600 | 600 R  
on page 186



# 09



HETTCUBE 60  
on page 197



HETTCUBE 120  
on page 197

# HETTCUBE INCUBATORS

## With touchscreen and more options

With the touch screen, HettCube incubators and cooled incubators guarantee intuitive operation with flexible and individual setting options and many new features. The proven combination of natural and forced convection ensures stable and homogeneous temperatures in a much larger part of the interior than conventional incubators. This offers you up to 30% more validated useful space with the same interior space. In addition, the high design of the HettCube incubators requires up to 50% less floor space with comparable capacity.

### — FEATURES

- Maximal validated usable space on a small footprint
- One-hand operation without additional inner door
- 4.3 inch touch display for intuitive operation
- Automatic door closure with magnetic seals, door orientation can be easily changed
- Low noise level of  $\leq 44$  dB(A)
- TÜV certified and factory certificate HettCert with 9 measuring points according to DIN 12880:2007-5 standard
- HettCube without cooling requires only 1°K (1 °C) above stable ambient temperature
- Models with IVDR approval
- Inclusive up to 3 standard shelves and 1 HTS shelf with telescopic rail

Additionally for cooled models:

- Temperature drop with holiday function
- Temperature selection monitor class 3.2

### — FIELDS OF APPLICATION

- Microbiological laboratories
- Hospital
- Pharmaceutical laboratories
- Food analyzing laboratories
- Scientific laboratories in universities
- Cosmetic industry
- Food and beverage
- Agricultural industry
- Life science



according to regulation (EU) 2017/746



\* also available as General Purpose version.

## TECHNICAL DATA



**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 up to +65 °C	1 K above ambient temperature up to +65 °C 0 °C up to +65 °C	1 K above ambient temperature up to +65 °C 0 °C up to +65 °C
Exterior dimensions (without access port and door handle) W x D x H in mm	710 x 825 x 970	710 x 825 x 1425	710 x 825 x 1,990
Interior dimensions W x D x H in mm	535 x 690 x 420	535 x 690 x 850	535 x 690 x 1,415
Internal volume in liters	150	310	520
Validated usable volume in liters	82	199	351
Percentage validated usable volume / internal volume	54 %	64 %	67 %
Footprint in m <sup>2</sup>	0.6	0.6	0.6
Weight in kg	92   103	117   128	164   175
Number of shelves 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	± 0.1 K	± 0.1 K
Temperature uniformity at +37 °C	± 0.2 K	± 0.2 K	± 0.2 K
Temperature uniformity at +25 °C	± 0.1 K	± 0.1 K	± 0.1 K
Recovery time after door has been opened for 30 s at +37 °C	≤ 3 min	≤ 4.5 min	≤ 5.5 min
Energy consumption at +37 °C	0.038 kWh/h	0.046 kWh/h	0.056 kWh/h
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	220 – 240 V 1 ~ / 50 – 60 Hz	220 – 240 V 1 ~ / 50 – 60 Hz
<b>Cat. No.</b>	<b>62000   62005</b>	<b>64000   64005</b>	<b>66000   66005</b>
General Purpose version	62001   62006	64001   64006	66001   66006
<b>Other voltages</b>			
100-120 V 1 ~ / 50 – 60 Hz	62000-01   62005-01	64000-01   64005-01	66000-01   66005-01

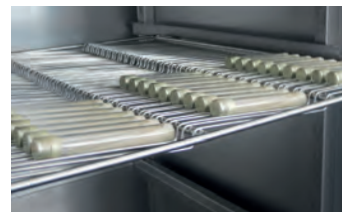
## MORE OPTIONS AND ACCESSORIES



Switchboard



Rack for petri dishes



Rack for Loewenstein application

	<b>Cat. No.</b>
<b>Shelf (Set)</b>   Made of stainless steel, with standard rails, max. load (kg): 50	<b>60001</b>
<b>Shelf (HTS-Set)</b>   Made of stainless steel, with telescopic rails, extendable up to 70 %, max. load (kg): 40	<b>60031</b>
<b>Drawer (HTS-Set), High 30 mm</b>   Made of stainless steel, with telescopic rails, extendable up to 70 %, tightly welded, max. load (kg): 40	<b>60024</b>
<b>Drawer (HTS-Set), High 65 mm</b>   Made of stainless steel, with telescopic rails, extendable up to 70 %, tightly welded, max. load (kg): 40	<b>60025</b>
<b>Drawer (HTS-Set), High 105 mm</b>   Made of stainless steel, with telescopic rails, extendable up to 70 %, tightly welded, max. load (kg): 40	<b>60026</b>
<b>Rack (HTS-Set)</b>   For Petri dishes, stainless steel, with telescopic rails, extendable up to 70 %, Petri dishes Ø (mm): 90, max. load (pcs): 90	<b>60038</b>
<b>Rack (Set)</b>   For Petri dishes, stainless steel, with standard rails, Petri dishes Ø (mm): 90, max. load (pcs): 90	<b>60039</b>
<b>Rack</b>   For Petri dishes, stainless steel, Petri dishes Ø (mm): 90, max. load (pcs): 90	<b>60040</b>
<b>Rack (HTS-Set)</b>   For inclined storage of cultures (Loewenstein), stainless steel, with telescopic rails, extendable up to 70 %, inclination angle: 5°, tube Ø (mm): 15-20, max. load (pcs): 81tube	<b>60036</b>
<b>Rack (Set)</b>   For inclined storage of cultures (Loewenstein), stainless steel, with standard rails, inclination angle: 5°, tube Ø (mm): 15-20, max. load (pcs): 81 tubes	<b>60037</b>
<b>Rack</b>   For inclined storage of cultures (Loewenstein), stainless steel, inclination angle: 5°, tube Ø (mm): 15-20, max. load (pcs): 81 tubes	<b>60041</b>
<b>Frame L, 16-place</b>   Made of stainless steel, for inclined storage of cultures, tube Ø (mm): 15-20, Tube length (mm): 100-125, inclination angle 5° or 20 °	<b>60027</b>
<b>Frame XL, 16-place</b>   Made of stainless steel, for inclined storage of cultures, tube Ø (mm): 15-20, Tube length (mm): 126-170, inclination angle 5° or 20 °	<b>60028</b>
<b>Switchboard</b>   4-fold socket strip, as a unit controllable via display, on the back of the device	<b>60521</b>
<b>Independent PT 100 sensor</b>   For independent temperature measurement, four-wire system, temperature values output with analogue output 4-20 mA on the back of the device	<b>60503</b>
<b>Passive dehumidification</b>   For individual or timed opening of a dehumidification module via the touchscreen	<b>60042</b>
<b>Service:</b> Assembly of the Stacking kit for the HettCube 200   200 R	<b>60043</b>
<b>Service:</b> Changing the door hinge	<b>60044</b>
<b>Glass door</b>   All-glass outer door, for HettCube 200   200 R	<b>60030</b>
<b>Glass door</b>   All-glass outer door, for HettCube 400   400 R	<b>60029</b>
<b>Glass door</b>   All-glass outer door, for HettCube 600   600 R	<b>60013</b>
<b>Access port</b>   Ø (mm): 22, Foam stoppers	<b>60006</b>
<b>Access port</b>   Ø (mm): 42, Foam stoppers	<b>60007</b>
<b>Access port</b>   Ø (mm): 67, Foam stoppers	<b>60008</b>
<b>Stacking kit</b>   For safe stacking of two HettCubes 200   200 R	<b>60009</b>
<b>Rolling cabinet</b>   Lockable, with one drawer, incl. lockable castors, WxDxH (mm): 770x800x550, for HettCube 200   200 R	<b>60010</b>
<b>USB Port Lock (Set)</b>   For securing the USB-A interface. Set consisting of 10 securing clips and 1 USB key tool.	<b>60525</b>
<b>Parameter for continuous cooling operation</b>   For storing samples below 15 °C for more than 2 weeks	<b>60526</b>



## EXTENSIVE STANDARD EQUIPMENT



4.3 inch touchscreen



Shelf (HTS-Set) with telescopic rails



Access port on rear panel  
Ø 42 mm

### 4.3 inch touchscreen:

- Target / actual display
- Setting accuracy 0.1 ° C
- Real-time calendar
- Timer
- Language options (English, German, French and Spanish)
- Temperature diagram in 3 zoom levels (up to 4 weeks)
- Power failure scenarios
- Door alarm individually adjustable
- Log (door openings, alarms and operating hours)
- PIN lock
- Up to 99 program functions (Start/Stop, Period, Timer at start, Timer at temperature, ...)
- Temperature selection monitor class 3.1 for all models

### Additionally with refrigerated devices

- Temperature reduction with holiday function
- Temperature selection monitor class 3.2 for all refrigerated models
- Programming external devices via switchboard (option)

Control panel and door lockable simultaneously

USB service interface

Bushing on rear panel Ø 42 mm

Potential-free alarm output

Interior of high-quality stainless steel (W-St 1.4301 (ASTM 304))

### In addition you get for free ...

[Up to 3 Shelf standard shelves of stainless steel \(depending on model size\)](#)

[HTS shelf of stainless steel with telescopic rails](#)

[Factory certificate \(HettCert\) – 9 points measurement analog to DIN 12880: 2007-05](#)

[Rebates available for unused shelves\\*](#)

\* Choose other shelves / drawers as standard, we credit you the price of unused standard inserts.



— EVERYTHING UNDER CONTROL



### INTUITIVE OPERATION WITH TOUCHSCREEN

Get clear and concise information on your incubation process – at a glance! With the new 4.3 inch touchscreen and intuitive menu dashboard, you can easily view the status of the device, as well as any alarms and events in the past 4 weeks. Any event or irregularity (such as door openings, tolerance band violations or power failures) are electronically documented in the logbook.

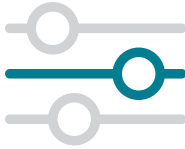


### EASY WEEKLY PROGRAMMING

The user-friendly touchscreen allows for uncomplicated adjustment of weekly programming without additional software – directly on the device. The holiday function allows you to define additional temperature drops for your days off already months in advance. Easily determine the start time or the time period as well as the frequency of your Temperature reduction in a real-time calendar.



## — SAFETY FOR YOUR SAMPLES



### FLEXIBLE SETTINGS

Various events and alarm functions are individually adjustable. For example: Deviations from the interior temperature can be limited individually over tolerance range limits or fixed via independent temperature safety device of Classes 3.1 and 3.2. Class 3.2 is already included in the standard version of all refrigerated HettCubes.



### PROCESS RELIABILITY EVEN IN THE EVENT OF A POWER FAILURE

With the new HettCube generation, you can keep control over your samples even in the event of a power failure. Define by yourself two different settings options how your HettCube's should behave in the event of a power failure.

#### Setting the period

By default, the device automatically restarts at the point where the power failed. But Users can also define the acceptable length of time in the event of a power failure. Once power is restored, the HettCube will verify whether this pre-set period has been exceeded. Should this be the case, the settings will be paused and the incubator will automatically move to a Standstill (Safe) Mode. Otherwise, the unit will continue with normal operation and user settings.

#### Setting the tolerance band

Tolerance band limits and holding temperature are individually configurable. After a power failure, the HettCube checks whether there is a tolerance band violation. The HettCube then automatically adjusts to the previous configured holding temperature. If there is no violation of the tolerance band the HettCube resumes its work.



### PERFECT CONDITIONS

HettCube incubators combine the advantages of natural and forced convection to provide a stable and uniform environment for cultures. The fan is housed outside of usable space, providing higher throughputs and limiting airflow inside the incubator. Temperature is primarily maintained by radiated heat to ensure even temperature distribution and to prevent hot spots. This yields optimum growth conditions and considerably reduces the potential of samples drying out.

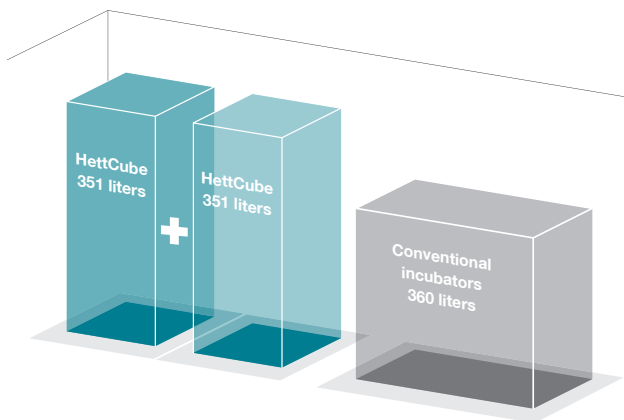
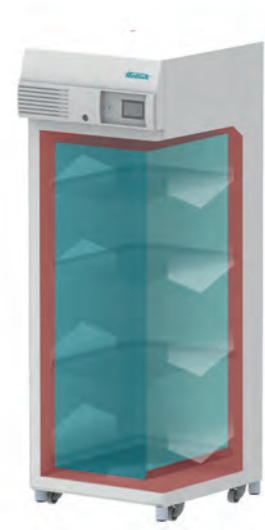
## MAXIMUM USABLE SPACE – SMALLEST FOOTPRINT

### 30 % MORE VALIDATED USABLE SPACE

Due to their gentle air flow and edge-to-edge temperature uniformity, HettCube incubators provide up to 30 % more validated usable space\* than a traditional incubator with the same internal volume.

\*in accordance with DIN 12880:2007-05

- 520 liters of interior space
- 351 liters of validated usable space\*



### 50 % SMALLER FOOTPRINT

The HettCube's upright design requires up to 50 % less floor space than a traditional incubator with similar capacity. The space saving footprint allows you to nearly double your capacity by accommodating two HettCube incubators within the same footprint as one conventional incubator.

- HettCube**  
702 liters of validated usable space with the same footprint
- Conventional incubators**  
360 liters of validated usable space

HettCube	Conventional incubators
Gentle air flow + High-performance insulation + Small footprint =	Strong air flow + Bulky insulation + Large footprint =
Maximum loading capacity + Cost savings per m <sup>2</sup> laboratory space	Low loading capacity + Higher costs per m <sup>2</sup> laboratory space

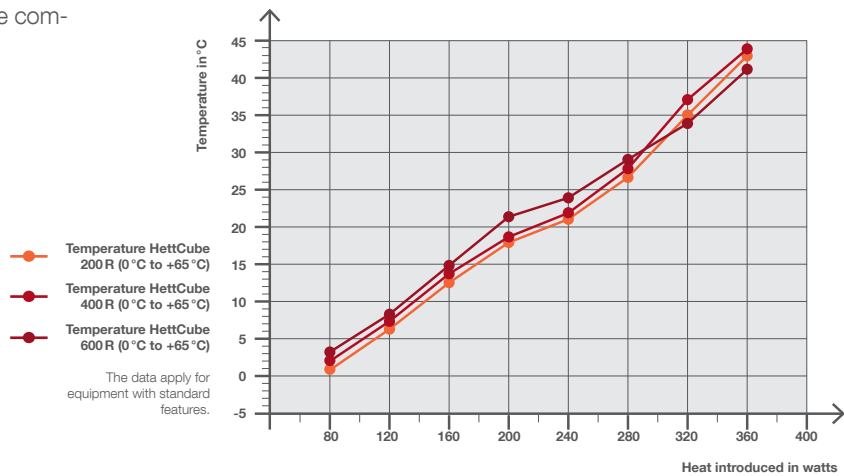
## HEAT COMPENSATION

### RELIABLE COMPENSATION OF TEMPERATURE DIFFERENCES BETWEEN THE INSIDE AND OUTSIDE

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.

Heat compensation of the HettCube 200 R | 400 R | 600 R

Lowest attainable temperature values upon introduction of equipment with different heat outputs.

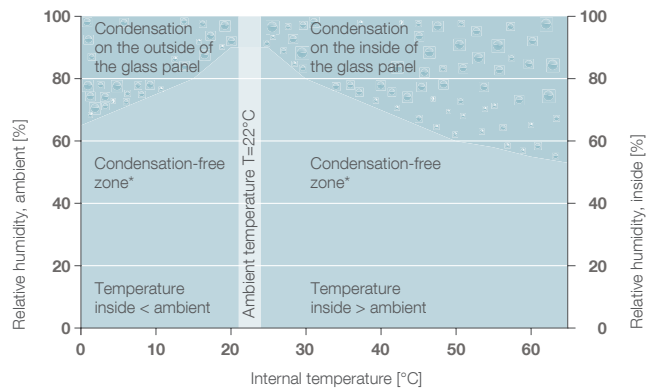


## HETTCUBES WITH GLASS DOOR

The optional glass door enables users to check on their cultures without opening the door.



Condensation diagram for HettCubes size 200 R | 400 R | 600 R with glass door at an ambient temperature of +22°C



## — LOW ENVIRONMENTAL IMPACT



### Minimal operating costs

Our HettCubes heat or cool only when needed. At an operating temperature of 37 °C a HettCube incubator consumes less than 0.056 kWh/h. This brings average savings of up to 450 Euro annually\*. Therefore, investment costs are recouped within shorter time. The use of a HettCube incubator saves on average up to 940 kg of CO<sub>2</sub> emissions annually\*. Additionally: The insulation of the HettCubes consists of water-driven foam, which contains no fluorinated hydrocarbons. Their GWP value (Global Warming Potential) is a thousand times lower than that of conventional insulating foams.

\*Assuming 24h operation 365 days a year. The basis for calculation is € 0.29 per kWh/h – the average price of electricity in Germany in 2018 and 0.6 kg CO<sub>2</sub> per kWh/h.

### First-class isolation

The advanced control system and insulation mean that the incubator will maintain a set temperature even if there is only a difference of 1 K (°C) from the ambient temperature. This allows an uncooled HettCube incubator to be used in situations in which a comparable incubator would require cooling.

## — PROVEN QUALITY



### Certifications

Hettich products comply with all applicable safety regulations, carry the TÜV seal and are compliant with IVDR. Hettich manufactures according to the applicable quality and environmental management systems, including ISO 9001, ISO 13485 and ISO 14001.

Each HettCube is temperature validated before delivery by means of the 9 point measurement and receives a HettCert factory certificate, included free of charge. All temperature data are determined according to DIN 12880: 2007-5.

### PRODUCT VIDEOS

Would you like to learn more about this product? Scan the QR Code to visit our YouTube channel:

[www.youtube.com/hettichlabtechnology](http://www.youtube.com/hettichlabtechnology)





# SMALL INCUBATORS

More compact, just as efficient.



HettCube incubators are known for their large usable space within a small footprint. These two factors are crucial in laboratories with lower throughput and where every square meter is precious. Our small HettCubes fit perfectly as a compact benchtop unit for this purpose. The slim design combined with a wide range of functions makes the HettCube 60 and HettCube 120 desirable in terms of quality and price.

## — INTUITIVE OPERATION WITH TOUCHSCREEN



Get clear and concise information – at a glance! With the 4.3-inch touchscreen and intuitive dashboard, you can easily view the device's status, alarms, and events. Every event or irregularity such as door opening or tolerance band violations are electronically documented in the logbook. Tolerance band limits can be fixed via the Class 2.0 and 3.1 temperature selector/monitor and saved as a program with up to 6 segments with different time-temperature profiles.

## — TWO VARIANTS FOR THE PERFECT TEMPERATURE CONTROL



The HettCubes 60 and 120 are available in two variants, natural or forced convection. The advantages of natural convection is gentle temperature control and lower energy consumption. It is particularly suitable for samples sensitive to desiccation. Compared to natural convection, forced convection is significantly faster and more effective in heat generation as well as in heat regeneration after door opening. Both systems combine sophisticated technology for air guidance and thus guarantee reproducible results of your samples' best growth conditions.

## TECHNICAL DATA



**HettCube 60**  
natural convection

**HettCube 60**  
forced convection

**HettCube 120**  
natural convection

**HettCube 120**  
forced convection

Temperature range	5 K above ambient temp. up to +65 °C	7,5 K above ambient temp. up to +65 °C	5 K above ambient temp. up to +65 °C	6,3 K above ambient temp. up to +65 °C
Exterior dimensions W x D x H in mm	590 x 620 x 710	590 x 620 x 710	660 x 710 x 850	660 x 710 x 850
Interior dimensions W x D x H in mm	400 x 360 x 390	400 x 360 x 390	460 x 450 x 540	460 x 450 x 540
Internal volume in liters	56	56	112	112
Footprint in m <sup>2</sup>	0,36	0,36	0,46	0,46
Weight in kg	62	62	82	82
Number of shelves (scope of delivery)	2	2	2	2
Maximum number of shelves	5	5	7	7
Maximum load in kg	40	40	60	60
Temperature fluctuation at (+37°C)	± 0,7 K	± 0,1 K	± 0,4 K	± 0,1 K
Temperature uniformity at (+37°C)	± 0,8 K	± 0,3 K	± 0,8 K	± 0,3 K
Power supply	220-240 V 1 ~ / 50 – 60 Hz	220-240 V 1 ~ / 50 – 60 Hz	220-240 V 1 ~ / 50 – 60 Hz	220-240 V 1 ~ / 50 – 60 Hz
<b>Cat. No.</b>	<b>69601-10</b>	<b>69601-20</b>	<b>61201-10</b>	<b>61201-20</b>
100-127 V 1 ~ / 50 – 60 Hz	69601-11	69601-21	61201-11	61201-21



## EXTENSIVE STANDARD EQUIPMENT



Standard wire shelf



Door lock



Access port

### 4.3 inch touchscreen:

- Dashboard with target / actual display, program status, events, settings, languages (DE, EN, FR, ES)
- Logbook (door openings, events, alarms)
- Class 2.0 and Class 3.1 temperature selector with visual and audible temperature alarm
- Internal memory for programs and data
- Optical and acoustic alarm in case of open door

### Door lock

### LAN and USB ports

### Interior made of high quality stainless steel

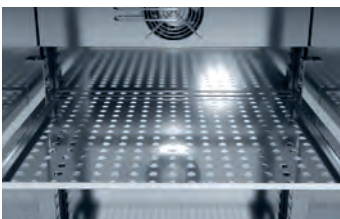
### 2 x standard wire shelves of stainless steel

### Access port on left panel Ø 30 mm

### Electric air flap with variable opening degree

### 2 x PT 100 temperature sensors

## ACCESSORIES



Perforated shelf



Reinforced wire shelf



Internal glass

	<b>Cat. No.</b>
<b>Standard wire shelf for HettCube 60</b>   Stainless steel, with standard rails, max. load (kg): 25	<b>60045</b>
<b>Perforated shelf for HettCube 60</b>   Stainless steel, with standard rails, max. load (kg): 25	<b>60046</b>
<b>Reinforced wire shelf for HettCube 60</b>   Stainless steel, with standard rails, max. load (kg): 50	<b>60047</b>
<b>Internal glass door for HettCube 60</b>	<b>60051</b>
<b>Standard wire shelf for HettCube 120</b>   Stainless steel, with standard rails, max. load (kg): 25	<b>60052</b>
<b>Perforated shelf for HettCube 120</b>   Stainless steel, with standard rails, max. load (kg): 25	<b>60053</b>
<b>Reinforced wire shelf for HettCube 120</b>   Stainless steel, with standard rails, max. load (kg): 50	<b>60054</b>
<b>Internal glass door for HettCube 120</b>	<b>60055</b>

# ENVIRONMENTAL PRODUCTS

Testing for Food, Agro, Pharma & Life Science

Are you looking for climate control equipment? We are specialized in the design, manufacture, installation and maintenance of such equipment. Hettich delivers standard equipment which can be adapted to your application. The product range includes all forms of simulation with the ability to control such variables as temperature, humidity and light.

For further information, please visit the website [www.hettichbenelux.com](http://www.hettichbenelux.com) or give us a call.



# 10

LAB TECHNOLOGY



PLANT GROWTH CABINETS



STABILITY CABINETS



# CONTROL PANELS

The 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.

## 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).

## 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).

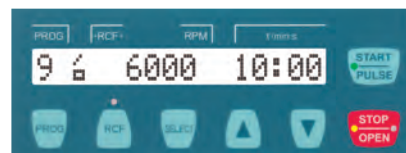
### DISPLAY

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.

## M CONTROL PANEL



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

### DISPLAY

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

### KEYPAD

PROG Selects the program menu to call up or store programs.  
RCF Switches from RPM to RCF display. Entry of the RCF in increments of 1. Entry of the centrifuging radius in mm.  
SELECT Guides the user through the menu options.  
▲ Increases the relevant value.  
▼ Decreases the relevant value.  
START Starts centrifugation.  
PULSE For short centrifugation steps.  
STOP Stops centrifugation manually.  
OPEN Opens the lid at standstill.

### A LED IN THE KEYBOARD LIGHTS UP:

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

## N PLUS CONTROL PANEL



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

### DISPLAY

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

### KEYPAD

	Pre-cools the rotor chamber (MIKRO 200 R, MIKRO 220 R and UNIVERSAL 320 R) to the required temperature.
	Heats the rotor chamber of the ROTOFIX 46 H to the required temperature.
RCF	Switches from RPM to RCF display. Entry of the RCF in increments of 10. Input of rotor radius in mm in RCF mode.
SELECT	Guides the user through the menu options.
START	Starts centrifugation.
PULSE	For short centrifugation steps.
STOP	Stops centrifugation manually.
OPEN	Opens the lid at standstill.

## 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 R 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

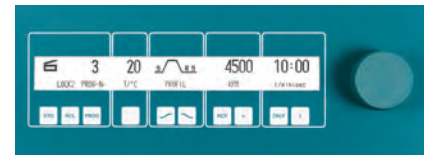
START	Starts centrifugation.
	Starts short centrifugation.
	Starts pre-cooling program PREC.
STOP	Stops centrifugation manually.
OPEN	Opens the lid at standstill.

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.

## 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.

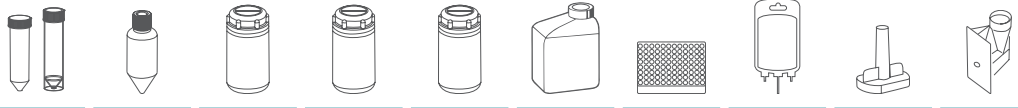
### OPTIONS

**PROGRAM INTERLOCKING:**  
to combine several centrifugation runs.

**DATA REPORT SYSTEM:**  
For detailed information on this subject, please refer to the HettInfo section on pages 162-163.

## CENTRIFUGE CAPACITY GUIDE

Commonly-used tubes at a glance											
	Volume in ml	0.2-2	8x0.2	0.5	15	50	100	250	1.6-7	4-10	15
WxDxH in mm											
Ø x L in mm	6-11x38	-	11x36	17x100	34x100	40x115	65x115	13x75/100	16x75/100	17x120	
Centrifuge models	Maximum number of tubes per centrifuge										
MANUAL CENTRIFUGE	-	-	-	4	-	-	-	4	4	4	
EBA 200   EBA 200 S	-	-	8	8	-	-	-	8	- / 8	4	
EBA 200 MD	-	-	-	-	-	-	-	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	-	15	-	-	-	-	-	-	-	
MIKRO 220   220 R	48 (60)	-	15	12	6	-	-	12	12	6	
ROTOFIX 32 A	(36)	-	24	32	6	4 (44 x 100 mm)	-	40/32	28/32	32	
ROTOFIX 32 A MD	-	-	-	-	-	-	-	40/32	28/32	32	
UNIVERSAL 320   320 R	30	24 x 8	15	32	6	4 (44 x 100 mm)	-	40/32	28/32	32	
ROTINA 380   380 R	30	-	15	52	12	4 (44 x 100 mm)	4	64/76	52	36	
ROTINA 420   420 R	30 (96)	-	15	72	16	12	4	104/84	72	52	
ROTANTA 460   460 R	30 (224)	-	15	148	16	12	6	196	148	96	
ROTOFIX 46	-	-	-	48	8	4	4	-	-	28	
ROTANTA 460 RC   460 RF	30 (224)	-	15	148	16	12	6	196	148	96	
ROTIXA 500 RS	(336)	-	-	168	24	16	6	200	168	112	
ROTO SILENTA 630 RS	-	-	-	180	36	24	-	180	180	138	
MIKRO 220 Robotic	 24 /  12	-	-	-	-	-	-	-	-	-	
SBS 300 Robotic	-	-	-	-	-	-	-	-	-	-	
ROTINA 380   380 RI   380 RC Robotic	on request							48	48	on request	
ROTANTA 460 Robotic	on request							80	80	on request	
ROTOLAVIT II	-	-	-	24 x 5 ml	-	-	-	-	-	-	



50	250/500	250/290	650/750	1,000	2,000	MTP	500	-	-	Maximum performance of the centrifuges	max. RCF	max. RPM min <sup>-1</sup>
29x 115/115	60x162/ 96x147	61x122/ 62x137	97x 139/152	96x176	150x100 x180	128x15 x86	4-place	-	-			
Maximum number of tubes per centrifuge												
-	-	-	-	-	-	-	-	-	-	1,298	3,000	
-	-	-	-	-	-	-	-	-	-	3,461	16,153	6,000
-	-	-	-	-	-	-	-	-	-	3,461	6,000	
-	-	-	-	-	-	-	-	-	-	2,254	4,000	
3 / -	-	-	-	-	-	-	-	-	-	4,146	15,071	6,000
-	-	-	-	-	-	-	-	-	-	18,845	14,000	
-	-	-	-	-	-	-	-	-	-	21,382	15,000	
3 / -	-	-	-	-	-	-	-	-	-	31,514	18,000	
8	-	-	-	-	-	-	-	6	12	4,226	6,000	
8	-	-	-	-	-	-	-	-	-	4,226	6,000	
8	-	4 x 200 ml	-	-	-	10	-	6	12	24,900	16,000	
16	-	4	-	-	-	12	-	8	-	24,400	15,000	
20	-	4	4x600 ml	-	-	16	-	8	-	24,400	15,000	
40/28	4	8	4	-	-	24	4x450 ml	16	-	24,400	15,000	
8	-	4	-	-	-	-	-	-	-	3,095	4,000	
40/28	4	8	4	-	-	24	4x450 ml	16	-	24,400	15,000	
40	4	6	4	4	-	24	4	12	-	18,038	11,500	
48/36	6	6	6	6	6	-	12	-	-	6,520	6,000	
-	-	-	-	-	-	-	-	-	-	18,516	13,000	
-	-	-	-	-	-	2	-	-	-	4,593	6,300	
16	-	-	on request	-	-	6	-	on request	-	4,696	5,100	
24	-	-	on request	-	-	12	-	on request	-	6,446	6,200	
-	-	-	-	-	-	-	-	-	-	1,438	3,500	

## CENTRIFUGE CONFIGURATOR

Scan the QR code or visit our configurator website at: [www.mycentrifuge.com](http://www.mycentrifuge.com)



# FEATURES OF THE CENTRIFUGES

	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 drooping protection	emergency lid lock release	stainless steel chamber	light alloy chamber
EBA 200 I 200 S		•	•	•	•	•			•	•		•
EBA 200 MD		•	•	•	•	•			•	•		•
EBA 270		•	•	•	•	•			•	•	•	
EBA 280 I 280 S		•	•	•	•	•			•	•	•	
HAEMATOKRIT 200		•	•	•	•	•			•	•		•
MIKRO 185		•	•	•	•	•			•	•		•
MIKRO 200	•		•	•	•	•		•	•	•	•	
MIKRO 200 R	•		•	•	•	•		•	•	•	•	
MIKRO 220	•		•	•	•	•		•	•	•	•	
MIKRO 220 R	•		•	•	•	•		•	•	•	•	
ROTOFIX 32A	•		•	•	•	•			•	•	•	
ROTOFIX 32A MD	•		•	•	•	•			•	•	•	
UNIVERSAL 320	•		•	•	•	•		•	•	•	•	
UNIVERSAL 320 R	•		•	•	•	•		•	•	•	•	
ROTINA 380	•		•	•	•	•		•	•	•	•	
ROTINA 380 R	•		•	•	•	•		•	•	•	•	
ROTINA 420	•		•	•	•	•		•	•	•	•	
ROTINA 420 R	•		•	•	•	•		•	•	•	•	
ROTANTA 460 I 460 R	•		•	•	•	•		•	•	•	•	
ROTOFIX 46	•		•	•	•		•		•	•	•	
ROTOFIX 46H	•		•	•	•		•		•	•	•	
ROTANTA 460 RC I 460 RF	•		•	•	•	•		•	•	•	•	
ROTIXA 500 RS	•		•	•	•	•		•	•	•	•	
ROTO SILENTA 630 RS	•		•	•	•	•		•	•	•	•	
ROTO LAVIT II	•		•	•	•	•			•	•		
Robotic centrifuges	Details on our models MIKRO 220 Robotic, SBS 300 Robotic, ROTINA 380, 380 R, 380 RC Robotic and ROTANTA 460 Robotic											

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



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 switch-off	data report system (option)	also available in 115 V / 60 Hz	
•					•	E plus	•	•		•	EBA 200   200 S
•					•	E plus	•	•		•	EBA 200 MD
•					•	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 32A
•			•		•	E	•	•		•	ROTOFIX 32A MD
•			•		•	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
•			•		•	N plus	•	•		•	ROTOFIX 46
		•	•		•	N plus	•	•		•	ROTOFIX 46 H
	•		•		•	C	•	•		•	ROTANTA 460 RC   460 RF
	•		•		•	S	•	•	•		ROTIXA 500 RS
	•		•		•	S	•	•	•		ROTO SILENTA 630 RS
•					•	Touch	•	•		•	ROTOLAVIT II
are available on our website <a href="http://www.hettichlab.com">www.hettichlab.com</a>											Robotic centrifuges

## 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 (N<sub>2</sub>) 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 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 <sub>2</sub> flushing	200–240 V	50 Hz	1406-20
		240 V	60 Hz	
UNIVERSAL 320 R	N <sub>2</sub> flushing	115–127 V	60 Hz	1406-21
ROTINA 380 R	H/C to +90 °C	200–240 V	50–60 Hz	1706-50
ROTINA 420 R	N <sub>2</sub> 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 <sub>2</sub> flushing	200–240 V	50 Hz	5660-20
ROTANTA 460 R	H/C to +90 °C	200–240 V	50 Hz	5660-50
		100–127 V	60 Hz	
ROTANTA 460 R	H/C to +90 °C	100 V	50 Hz	5660-51
		200–240 V	50 Hz	
ROTANTA 460 R	H/C to +90 °C plus N <sub>2</sub> 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	H/C to +90 °C	400 V 3~ +N	50–60 Hz	5005-50
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.

## AVAILABLE TUBES

	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
	2,000	150 x 100 x 180 WxDxH	bottle, PP, with screw cap	0550
	30	44 x 105	chrome bath tube	0534
		-	rubber stopper for 0534	0535
	100	37 x 200	ASTM tube (petroleum tester), glass, calibrated	0531 conical
	100	58 x 161		0528 pear-shaped

	Capacity in ml	Area in mm <sup>2</sup> / (L x W) in mm	Description	Cat. No.
	0.5	28.3	cyto chambers, disposable	1531 (50 pcs.)
	0.2	28.3		1532 (50 pcs.)
	0.5	28.3	cyto chambers (re-useable)	1538 (12 pcs.)
	6	13.4 x 22		1532 (12 pcs.)
	1	30	cyto chambers, single (re-useable)	1663
	2	60		1664
	4	120		1665
	8	240		1666
	3 x 2	3 x 60	cyto chambers, multiple (re-useable)	1667
	4 x 1	4 x 30		1668
	1	30	cyto chambers	1671
	2	60		1672
	4	120		1673

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.

# CERTIFICATES / REGISTRATIONS

Hettich centrifuges and incubators fulfill all applicable European directives that apply to you. Every work step is subject to strict controls and documentation. The company is ISO 9001, ISO 13485 and ISO 14001 certified. Hettich products are manufactured with care and responsibility, giving them a worldwide reputation for safety and reliability.

## PRODUCT REGISTRATIONS



according to regulation (EU) 2017/746



### IVDR-conform

IVDR compliant according to Regulation (EU) 2017/746

### Medical device

Medical device according to Regulation (EU) 2017/745

### General laboratory equipment

General laboratory equipment according to Directive 2014/35/EU for electrical equipment

EBA 200   200 S	•		
EBA 200 (MD)		•	
EBA 270	•		
EBA 280   280 S	•		
HAEMATOKRIT 200	•*		
MIKRO 185	•		
MIKRO 200   200 R	•		
MIKRO 220   220 R	•		
ROTOFIX 32A	•		
ROTOFIX 32A (MD)		•	
UNIVERSAL 320   320 R	•		
ROTINA 380   380 R	•		
ROTINA 420   420 R	•		
ROTANTA 460   460 R		•	
ROTOFIX 46   46 H			•
ROTANTA 460 RC   460 RF		•	
ROTIXA 500 RS		•	
ROTO SILENTA 630 RS		•	
ROTO LAVIT II	•		
HETTCUBE 60			•
HETTCUBE 120			•
HETTCUBE 200   200 R	•		•
HETTCUBE 400   400 R	•		•
HETTCUBE 600   600 R	•		•

\*) IVD-conform according to directive 98/79/EC

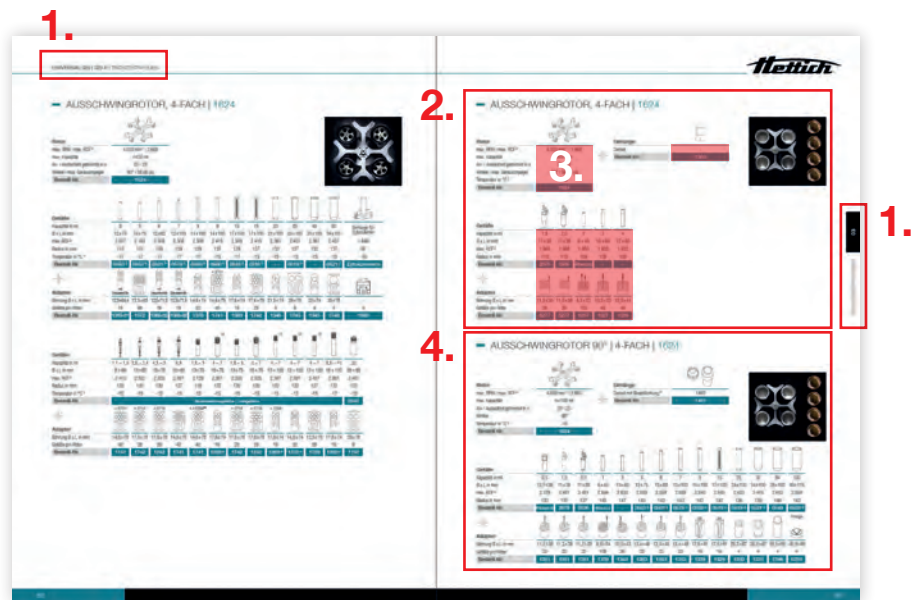




# CATALOG EXPLANATION

## Layout

1. Navigation:  
Header + sheet index
2. Rotor  
+ Bucket  
+ Lid  
+ Adapter  
+ Vessel  
+ Thumbnail
3. All specifications apply to the possible combinations shown
4. A maximum of two rotors is shown per page



## Shortcuts

Vessels:

- CP = Culture Plate
- DWP = Deep Well Platte
- MS = Micronic System
- MTP = Microtitre Plate
- QP = Filter Plate
- PA = Polyamide
- PC = Polycarbonate
- PE = Polyethylene
- PP = Polypropylene

Device name:

- 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 in the centrifuge. (Except EBA 200 S, EBA 280 S).



**Angle rotor** | Angle rotors are ideally suited for use at high speeds. Time can be saved by tilting the tubes and accelerating the separation.

**Calculation of centrifugal force** |  $RCF = (n/1000)^2 \times r \times 1,118$  |  $n =$  Rotation in  $\text{min}^{-1}$  (RPM) |  $r =$  Radius in mm

**Capacity of the centrifuge** | An overview of all capacities can be found [on page 204](#).

**Control panel** | Find an overview of all control panels [on page 202](#).



**Disk Rotor** | This type of angle rotor was specially developed for the centrifugation of capillaries. Significant results are generated in the  $90^\circ$  angle and can be displayed directly in the rotor. With the help of an evaluation cover the results can be read easily and safely.

**Download Center** | The Download Center on our website allows you to access the most up to date documents including catalogs, brochures, data sheets and certificates. Please visit: [www.hettichlab.com/downloadcenter](http://www.hettichlab.com/downloadcenter)



**Drum rotor** | A extended form of the angle rotor is the drum rotor. With high rotational speed and high capacity, it is the ideal choice to create sediment at the bottom of the vessel.

**Environment** | As an ISO 14001 certified company, sustainability and the protection of the environment are a foundation of our principles. Find out more on our website: [www.hettichlab.com](http://www.hettichlab.com)

**Footnotes** | All footnotes in the catalog can be found on the last page. The fold-out page allows you to always see the appropriate footnote.

**Hettich Packages** | No more searching for the right combination of accessories. Our packages include centrifuge, rotor, buckets and adapters – suitable for your specific application.

**Model variants** | Many of our devices have two different model variants, e.g. cooled and uncooled. In order to be able to distinguish between these two, we use a vertical hyphen (**Model x | Model y**)  
For special requirements you can find further versions of our centrifuges [on page 208](#).

**Product overview** | Find a quick product overview [on page 6-7](#).

**RCF** | The relative centrifugal force RCF (or often called g-value) is a characteristic value for centrifugation.

**Registrations** | Find a detailed overview of all registrations of our products [on page 210](#).

**RPM** | Is the measurement unit for the speed. It indicates the number of rotations of the rotor in a period of one minute.



**Swing-out rotor** | During centrifugation, the tubes are spin at a 90° horizontal angle. In the process, the sediment is deposited at the bottom of the tube, separations are formed horizontally. If higher capacities are required in the mid speed range, swing-out rotors are used. The wide variety of accessories is an additional feature of these rotors.

### Symbol



Reaction tubes up to 5 ml



Blood collection tubes, urine tubes



Plates, filter plates



Special tubes



PCR strips



Tubes with screw cap



Racks



Hematocrit capillaries



Tubes



Bottles



Blood bags



Cyto accessories

### IMPRINT

03.23 | We reserve the right to make technical changes to our products as well as printing errors and colour deviations in our printed matters we reserve ourselves.

Conception: dn.p Marketing + Werbeagentur GmbH, Wittingen | Photography: Jürgen Weisheitinger, Lörrach / Tom Pingel, Hamburg u. Stuttgart | Illustrations: Grafikbüro Christian Islinger, Regensburg | Printing: Typodruck GmbH & Co. KG, Rudolf-Diesel-Straße 9, 78532 Tuttlingen.

## HETTICH QUALITY WORLDWIDE

### BENELUX

#### Hettich Benelux B. V.

De Aaldor 9  
NL-4191 PC Geldermalsen  
Phone +31 (0)88 2 21 99 00  
Fax +31 (0)88 2 21 99 95  
info@hettichbenelux.com  
www.hettichbenelux.com

### FRANCE

#### Hettich France SÀRL

7, Place de la Gare  
F-57200 Sarreguemines  
Phone +33 (0)4 72 49 01 62  
Fax +33 (0)4 72 24 66 08  
info-fr@hettichlab.com  
www.hettichlab.com

### SWITZERLAND

#### Hettich AG

Seestr. 204a  
CH-8806 Bäch  
Phone +41 (0)44 / 786 80 20  
Fax +41 (0)44 / 786 80 21  
sales@hettich.ch  
www.hettich.ch

### SINGAPORE

#### Hettich

#### Asia Pacific Pte. Ltd.

3 Ang Mo Kio Street 62,  
#01-47 LINK@AMK  
Singapore 569139  
Phone +65 6358 3833  
Fax +65 6358 3558  
info@hettichlab.com.sg  
www.hettichlab.com.sg

### USA

#### Hettich Instruments LP

100 Cummings Center, Ste 136L  
Beverly, MA 01915  
Phone +1 (0)978 / 2 32 39 57  
Fax +1 (0)978 / 2 32 39 58  
info@hettweb.com  
www.hettweb.com

AS WELL AS SELECTED PARTNERS IN  
OVER 70 COUNTRIES WORLDWIDE



YOUR HETTICH PARTNER



VIRTUAL  
SHOWROOM

[www.hettichlab.com/showroom](http://www.hettichlab.com/showroom)



CENTRIFUGES  
CONFIGURATOR

[www.mycentrifuge.com](http://www.mycentrifuge.com)

