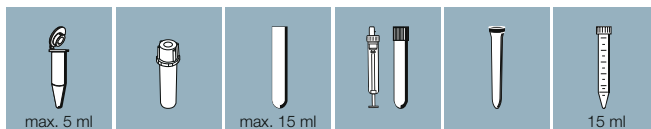




Benchtop performance in a compact footprint

SMALL



# EBA 200 / 200 S

## Small and practical centrifuges for small sample volumes

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

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



TECHNOLOGY	EBA 200		EBA 200S	
<b>Small centrifuge, with rotor</b>				
Power supply <sup>1)</sup>	200–240 V 1 ~	100–127 V 1 ~	200–240 V 1 ~	100–127 V 1 ~
Frequency	50–60 Hz			
Consumption	100 VA	100 VA	160 VA	160 VA
Emission, Immunity	EN/IEC 61326-1, class B	FCC class B	EN/IEC 61326-1, class B	FCC class B
Max. capacity	8x15 ml			
Max. RPM	6,000 min <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 key)			
Dimensions (H x W x D)	228x261x353 mm			
Weight	approx. 9 kg		approx. 11 kg	
<b>Cat. No.</b>	<b>1800</b>	<b>1800-01</b>	<b>1802</b>	<b>1802-01</b>

























<sup>1)</sup> Other voltages on request.





















# ROTOR

Angle rotor EBA 200 / EBA 200 S, 8-place, for commercial tubes up to 15 ml  
 Angle rotor illustrated with different blood collection tubes



∠ 33° n = 6,000 min<sup>-1</sup> / 8,000 min<sup>-1</sup> max. RCF 3,461 / 6,153

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

capacity in ml	7.5–8.5	9–10	10	1.6–5	4–7	8	8.5–10	12	5	15
Ø x L in mm	15x92	16x92	15x102	13x75	13x100	16x125	16x100	17x102	17x59	17x120
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>								<b>0509</b>	
 rotor incl.										
										
<b>Cat. No.</b>	<b>-</b>		<b>1054-A</b>	<b>1058</b>	<b>-</b>			<b>1064</b>	<b>-</b>	
boring Ø x L in mm	17.7x88		13.5x60	13.5x79	17.7x88			17x25	17.7x88	
tubes per rotor	8				4	8	4	12	4	
max. RCF <sup>2)</sup> EBA 200	3,461		2,697	3,461			2,576	3,461		
max. RCF <sup>2)</sup> EBA 200S	6,153		4,794	6,153			4,579	6,153		
radius in mm	86		67	86			64	86		
run-up in sec	17 (EBA 200) / 12 (EBA 200S)									
run-down in sec, braked	37 (EBA 200) / 17 (EBA 200S)									

<sup>2)</sup> Please note that the RCF values indicated refer only to 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 <sup>2)</sup> is 4,000.

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

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

light alloy chamber  
 air cooling  
 cooling (-20 °C to +40 °C)  
 heating (to +90 °C)  
 automatic rotor recognition  
 rapid rotor change system  
 brushless drive  
 control panel  
 error display  
 imbalance detection  
 data report system (option)  
 also available in 115 V / 60 Hz

•	•					•	E plus	•	•	•	EBA 200 / 200 S
	•					•	E	•	•	•	EBA 270
	•			•	•	•	M	•	•	•	EBA 280 / 280 S
•	•					•	E plus	•	•	•	HAEMATOKRIT 200

•	•					•	E plus	•	•	•	MIKRO 185
	•					•	N plus	•	•	•	MIKRO 200
		• <sup>#)</sup>				•	N plus	•	•	•	MIKRO 200 R
	•			•		•	N plus	•	•	•	MIKRO 220
		•		•		•	N plus	•	•	•	MIKRO 220 R

	•			•		•	E	•	•	•	ROTOFIX 32 A
	•			•		•	N plus	•	•	•	UNIVERSAL 320
		•		•		•	N plus	•	•	•	UNIVERSAL 320 R
	•			•		•	C	•	•	•	ROTINA 380
		•		•		•	C	•	•	•	ROTINA 380 R
	•			•		•	C	•	•	•	ROTINA 420
		•		•		•	C	•	•	•	ROTINA 420 R
	• 460	• 460 R		•		•	C	•	•	•	ROTANTA 460 / 460 R
		•		•		•	C	•	•	•	ROTANTA 460 RC / 460 RF
	•			•		•	N plus	•	•	•	ROTOFIX 46
			•	•		•	N plus	•	•	•	ROTOFIX 46 H
		•		•		•	S	•	•	•	ROTIAX 500 RS
		•		•		•	S	•	•	•	ROTO SILENTA 630 RS











ROTANTA 460 Robotic are given on pages 177 to 181.



Robotic centrifuges

	•					•	Touch	•	•	•	ROTOLAVIT II
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<sup>#)</sup> Adjustable temperature range MIKRO 200 R: -10 °C to +40 °C

# HETTICH | CAPACITY OF THE CENTRIFUGES

Important tubes at a glance										
Volume in ml	0.2-2	8x0.2	0.5	15	50	100	250	1.6-7	4-10	15
H x W x D in mm										
Ø x L in mm	6-11x38	-	11x36	17x100	34x100	40x115	65x115	13x75/100	16x75/100	17x120

CENTRIFUGE MODELS	Maximum number of tubes per centrifuge										
<b>HANDZENTRIFUGE</b>	-	-	-	4	-	-	-	4	4	4	
<b>EBA 200/EBA 200 S</b>	-	-	8	8	-	-	-	8	- / 8	4	
<b>EBA 270</b>	-	-	6	6	-	-	-	6	6	-	
<b>EBA 280/EBA 280 S</b>	-	-	12	12	6	-	-	12	8 / 12	6	
<b>MIKRO 185</b>	24	-	12	-	-	-	-	-	-	-	
<b>MIKRO 200/200 R</b>	30	4x8	15	-	-	-	-	-	-	-	
<b>MIKRO 220/220 R</b>	48 (60)	6x8	15	12	6	-	-	12	8* / 12	6	
<b>ROTOFIX 32 A</b>	(36)	-	24	32	6	4 (44x100 mm)	-	40/32	28/32	32	
<b>UNIVERSAL 320/320 R</b>	30	24x8	15	32	6	4 (44x100 mm)	-	40/32	28/32	32	
<b>ROTINA 380/380 R</b>	30 (60)	24x8	15	52	12	4 (44x100 mm)	4	64/76	52	36	
<b>ROTINA 420/420 R</b>	30 (160)	48x8	15	72	16	12	4	104	72	52	
<b>ROTANTA 460/460 R ROTANTA 460 RC/460 RF</b>	30 (240)	48x8	15	148	16	12	6	196	148	96	
<b>ROTOFIX 46</b>	-	-	-	48	8	4	4	-	-	28	
<b>ROTIXA 500 RS</b>	(336)	48x8	-	168	24	16	6	200	168	112	
<b>ROTO SILENTA 630 RS</b>	-	-	-	180	36	24	-	180	180	138	
<b>MIKRO 220 Robotic</b>	 /  24 / 12	-	-	-	-	-	-	-	-	-	
<b>ROTINA 380/380 R/380 RC Robotic</b>	on request							48	48	on request	
<b>ROTANTA 460 Robotic</b>	on request							80	80	on request	
<b>ROTOLAVIT II</b>	-	-	-	24x5 ml	-	-	-	-	-	-	

<sup>1)</sup> Tubes are only accommodated by the MIKRO 220 R.

											Maximum performance of the centrifuge
50	250/500	250/290	650/750	1,000	2,000	MTP	500	-	-		
29x115/115	60x162/96x147	61x122/62x137	97x139/152	96x176	180x150x100	86x128x15	quadruple	-	-		

Maximum number of tubes per centrifuge											max. RCF	max. RPM min <sup>-1</sup>
-	-	-	-	-	-	-	-	-	-	-	1,298	3,000
-	-	-	-	-	-	-	-	-	-	-	3,461/6,153	6,000/8,000
-	-	-	-	-	-	-	-	-	-	-	2,254	4,000
3/-	-	-	-	-	-	-	-	-	-	-	4,146/5,071	6,000
-	-	-	-	-	-	-	-	-	-	-	17,008	13,300
-	-	-	-	-	-	-	-	-	-	-	21,382	15,000
3/-	-	-	-	-	-	-	-	-	-	-	31,514	18,000
8	-	-	-	-	-	-	-	-	6	12	4,226	6,000
8	-	4 x 200 ml	-	-	-	-	10	-	6	12	21,382	15,000
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	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
16	on request						6	on request			4,696	5,100
24	on request						12	on request			6,446	6,200
-	-	-	-	-	-	-	-	-	-	-	1,438	3,500

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

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

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



# Symbols and Abbreviations

	reaction tubes up to 5.0 ml
	cryo tubes
	PCR strips
	standard tubes
	blood collection tubes urine tubes
	tubes with screw cap
	bottles
	plates filter plates
	racks
	blood bags
	special tubes
	hematocrit capillaries
	cyto accessories For detailed information on the Hettich cyto system, please refer to the pages 138-143.

	swing-out rotor
	angle rotor
	drum rotor
	hematocrit rotor, disk rotor

## ABBREVIATIONS

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

C	C after the model name stands for <b>underbench centrifuge</b> .
F	F after the model name stands for <b>floorstanding centrifuge</b> .
H	H after the model name stands for <b>heated centrifuge</b> .
R	R after the model name stands for <b>refrigerated centrifuge</b> .
S	S after the model name stands for <b>S control panel</b> (except EBA 200 S, EBA 280 S).
✦	max. angle the rotor swings out to

## Available tubes

	Capacity in ml	Dimensions Ø x L in mm	Description	Cat. No.		Capacity in ml	Dimensions Ø x L in mm	Description	Cat. No.	
	1.5	11x38	microlitre tube	<b>2078</b>		200	56 x 112	bottle, PP, with screw cap	<b>0555</b>	
	2.0	11x38		<b>0536</b>		250	61 x 122		<b>5127</b>	
5	12x75	tube, glass, cylindrical	<b>0553</b>	600		93x134	<b>0551</b>			
6	12x82		<b>0501</b>	650		97 x 139	<b>0554</b>			
7	12x100		<b>0578</b>	750		97 x 152	<b>0512</b>			
9	14x100		<b>0500</b>	1,000		96x176	<b>4239</b>			
12	17x100		tube, glass, conical, calibrated	<b>0503</b>			450		97 x 110	bucket, PP
15	17x100	tube, glass, cylindrical	<b>0507</b>	750			96 x 135		<b>4234-A</b>	
		tube, glass, cyl., calibrated	<b>0518</b>	1,000			98 x 138		bucket, stainless steel, with screw cap	<b>4255</b>
15	17x103	tube, glass, conical	<b>0502</b>			2,000	180x150x100 HxWxD		bottle, PP, with screw cap	<b>0550</b>
		tube, glass, conical	<b>0515</b>		30	24 x 151	chrome bath tube with stopper	<b>0508</b>		
	tube, glass, conical, calibrated	<b>0516</b>	<b>0529</b>							
25	24x100	tube, glass, cylindrical	<b>0519</b>		30	44 x 105	chrome bath tube	<b>0534</b>		
50	34x100		<b>0521</b>		-	rubber stopper for 0534	<b>0535</b>			
94	38x102	tube, PP, cylindrical	<b>0549</b>		25	24 x 146.5	Schlenk tube	<b>0532</b>		
100	40x115	tube, glass, cylindrical	<b>0523</b>		50	38 x 148.5		<b>0533</b>		
100	44x100		<b>0526</b>		100	37x200	ASTM tube (petroleum tester), glass, calibrated	<b>0531</b> conical		
250	56x147		<b>0525</b>		100	58x161	<b>0528</b> pear-shaped			
250	65x115		<b>0530</b>		3.3	-	disposable Pasteur pipette, PE	<b>0552</b>		
	30		26x95						<b>0545</b>	
	50	29x107	tube with screw cap, PC, cylindrical	<b>0546</b>						
	85	38x106	<b>0547</b>							
	94	38x102	tube, PC, with screw thread	<b>0538</b>						
-		screw cap for 0538	<b>0539</b>							
	15	17x120	tube with screw cap, PP, conical	<b>0509</b>						
	50	29x115	<b>0513</b>							

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.