

**ALL AROUND
TALENT**



UNIVERSAL 320/320 R
Benchtop Centrifuges
classic/cooled

Hettich
ZENTRIFUGEN

There are good reasons why we have called these centrifuges UNIVERSAL. Their excellent performance and comprehensive range of accessories enable them to carry out virtually any centrifuging task. In the low speed range, the UNIVERSAL 320 and 320 R process standard tubes up to a volume of 100 ml, microtitre plates, conical tubes with screw cap, blood collection tubes and cyto accessories.

Microlitre tubes can be accelerated to an RCF of 21,382. Centrifuge tubes taking higher volumes (up to 85 ml) also profit from the extraordinary motor power of the UNIVERSAL 320 / 320 R. At an RCF of 9,509, bacteria and yeast sediment quickly and easily.



UNIVERSAL 320 classic

Cat. No. 1401

PERFORMANCE

- High RCF
 - 85 ml tubes up to 9,509
 - 15 ml tubes up to 16,582
 - Microlitre tubes up to 21,382
- Extremely short run-up and run-down times

DESIGN

- Metal housing
- Metal lid
- Stainless steel centrifuging chamber
- Viewing port in the lid

USER-FRIENDLINESS

- Powered lid-locking
- Quick-entry foil keypad
- Easily exchangeable rotors
- 10 programmable memories

REFRIGERATION (UNIVERSAL 320 R)

- Infinitely variable setting from – 20 °C to + 40 °C
- Fast cool function

SAFETY

- Lid locking and holding during rotor run
- Emergency lid-lock release
- Motor-overheating protection
- Chamber-overheating protection (with the UNIVERSAL 320 R)
- Imbalance switch-off
- Automatic rotor recognition
- Lid dropping protection

OPTIONS

As an option, the UNIVERSAL 320 R is also available

- with connection to an external refrigerated/heating circulator (provided by the customer) – **Cat. No. 1406-50** (without internal cooling unit). Depending on circulator performance, the centrifuge can heat or cool within a range of 0 °C to 90 °C,
- with connection for flushing with nitrogen – **Cat. No. 1406-20** (without monitoring and controlling system).

Die Bedien- und Anzeigeelemente der UNIVERSAL 320 / 320 R sind nach ergonomischen Gesichtspunkten gestaltet. Auf dem großen, gut ablesbaren Display wird während des Laufs der IST-Zustand aller Parameter angezeigt.


9 Brems- und Anlaufstufen sowie ungebremster Auslauf sind wählbar. Stufe 9 entspricht der jeweils kürzesten Brems- und Anlaufzeit.

Die gespeicherten Parameterkombinationen bleiben auch nach dem Abschalten der Zentrifuge erhalten.


Bei Eingabe des Rotorradius r/mm kann mittels der Umschaltfunktion zwischen der Anzeige der Drehzahl RPM oder der relativen Zentrifugalbeschleunigung RCF gewählt werden. Mit dem Drehknopf werden die Parameter schnell und bequem eingestellt oder verändert.

DIGITALANZEIGE- UND BEDIENFELD

TASTATUR

	Vorkühlung (UNIVERSAL 320 R)
RCF	Umschaltung RPM-/RCF-Anzeige
SELECT	Auswahl der einzelnen Parameter
START IMPULS	Zentrifugationslauf starten / Kurzzeitzentrifugation
STOP	Zentrifugationslauf manuell beenden /
OPEN	Deckel öffnen

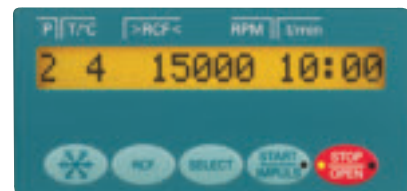
EINGABE DER PARAMETER

P	Eingabe der Programmnummer, 10 Programmspeicherplätze belegbar
T/°C	Eingabe der Temperatur in 1er-Schritten von -20 °C bis +40 °C (UNIVERSAL 320 R)
RCF	Eingabe in 10er Schritten
RPM	Eingabe in 10er Schritten
r/mm	Eingabe des Radius in mm
t/min	Eingabe der Zentrifugierdauer (max. 99 min : 59 s)
	Eingabe der Anlaufstufe 1-9 Eingabe der Bremsstufe 1-9



UNIVERSAL 320 R cooled

Bestell-Nr. 1406



Bedienfeld der gekühlten UNIVERSAL 320 R
(N Plus-Steuerung)


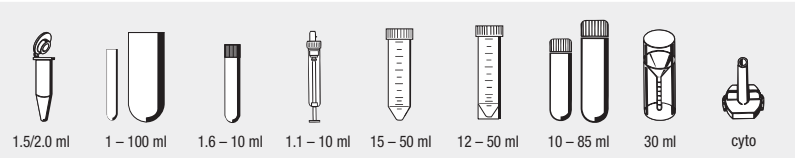

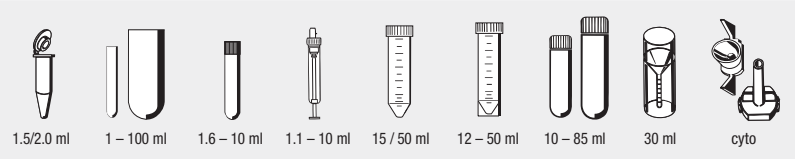

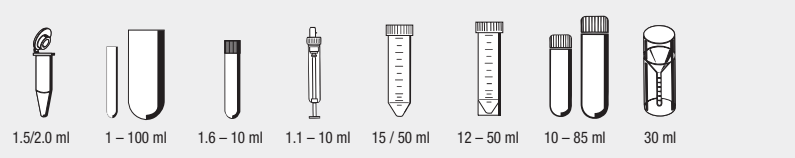




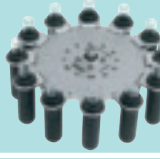
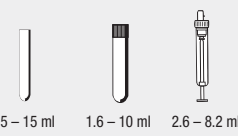

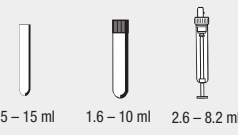
ROTORS AND ACCESSORIES

UNIVERSAL 320 / 320 R centrifuges accommodate rotors and accessories for virtually every centrifuging task required in industrial, research and clinical laboratories.


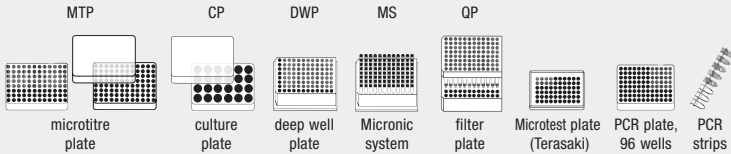

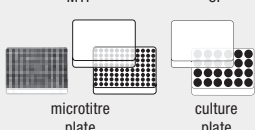





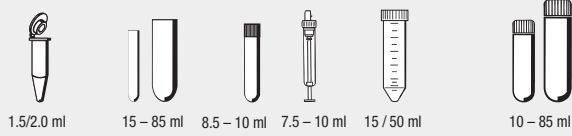







Quick overview of rotors and suitable accessories. The figures highlighted under the arrows refer to the pages where technical and ordering details are listed.

Tubes / plates	Max. capacity
standard tubes	32 x 15 ml or 4 x 100 ml
hematocrit capillaries	24
conical tubes with screw cap	32 x 15 ml or 8 x 50 ml
microtitre plates	10
filter plates	2
cyto suspensions	8
blood collection tubes	48
round-bottom tubes with screw cap	6 x 85 ml
microlitre tubes	30 x 1.5/ 2.0 ml

Rotors	Max. RCF
swing-out rotor with bio-containment carriers	4,193
swing-out rotor for conical tubes with screw cap	3,857
swing-out rotor for microtitre and culture plates	2,218
swing-out rotor for 8 cyto suspensions	2,218
angle rotor for round-bottom tubes with screw cap (6 x 85 ml)	9,509
angle rotors (12-, 24- or 30-place) for microlitre tubes (0.2 – 2.0 ml)	21,382

<p>some accessories with bio-containment</p>  <p>Swing-out rotor 4-place n = 5,000 min⁻¹ max. RCF 4,193 Cat. No. 1494</p>	 <p>1.5/2.0 ml 1 – 100 ml 1.6 – 10 ml 1.1 – 10 ml 15 – 50 ml 12 – 50 ml 10 – 85 ml 30 ml cyto</p>	<p>→ Page 6-8</p>
<p>some accessories with bio-containment</p>  <p>Swing-out rotor 4-place n = 4,000 min⁻¹ max. RCF 2,665 Cat. No. 1624</p>	 <p>1.5/2.0 ml 1 – 100 ml 1.6 – 10 ml 1.1 – 10 ml 15 / 50 ml 12 – 50 ml 10 – 85 ml 30 ml cyto</p>	<p>→ Page 9-10</p>
<p>some accessories with bio-containment</p>  <p>Swing-out rotor 4-place n = 4,500 min⁻¹ max. RCF 3,328 Cat. No. 1324</p>	 <p>1.5/2.0 ml 1 – 100 ml 1.6 – 10 ml 1.1 – 10 ml 15 / 50 ml 12 – 50 ml 10 – 85 ml 30 ml</p>	<p>→ Page 11-12</p>
 <p>Swing-out rotor 8-place n = 5,000 min⁻¹ max. RCF 3,857 Cat. No. 1617</p>	 <p>15 / 50 ml</p>	<p>→ Page 13</p>
 <p>Swing-out rotor 6-place n = 4,000 min⁻¹ max. RCF 2,701 Cat. No. 1619</p>	 <p>15 / 50 ml</p>	<p>→ Page 13</p>
 <p>Swing-out rotor 12-place n = 5,000 min⁻¹ max. RCF 4,193 Cat. No. 1628</p>	 <p>5 – 15 ml 1.6 – 10 ml 2.6 – 8.2 ml</p>	<p>→ Page 13</p>
 <p>Swing-out rotor 8-place n = 4,000 min⁻¹ max. RCF 2,415 Cat. No. 1611</p>	 <p>5 – 15 ml 1.6 – 10 ml 2.6 – 8.2 ml</p>	<p>→ Page 14</p>

ROTORS AND ACCESSORIES

 <p>Swing-out rotor 2-place n = 4,000 min⁻¹ max. RCF 2,218 Cat. No. 1460</p>	<p>MTP CP DWP MS QP</p>  <p>microtitre plate culture plate deep well plate Micronic system filter plate Microtest plate (Terasaki) PCR plate, 96 wells PCR strips</p>	<p>→ Page 14</p>
 <p>Swing-out rotor 4-place n = 4,000 min⁻¹ max. RCF 1,896 Cat. No. 1645</p>	<p>MTP CP</p>  <p>microtitre plate culture plate</p>	<p>→ Page 15</p>
 <p>Angle rotor 12-place n = 15,000 min⁻¹ max. RCF 16,602 Cat. No. 1612</p>	 <p>0.2 – 2.0 ml</p>	<p>→ Page 15</p>
<p>auto-clavable optional with biocontainment</p>  <p>Angle rotor 24-place n = 15,000 min⁻¹ max. RCF 21,382 Cat. No. 1420</p>	 <p>0.2 – 2.0 ml</p>	<p>→ Page 15</p>
<p>auto-clavable with bio-containment</p>  <p>Angle rotor 30-place n = 14,000 min⁻¹ RCF 21,255 Cat. No. 1689</p>	 <p>0.2 – 2.0 ml</p>	<p>→ Page 16</p>
 <p>Angle rotor 6-place n = 9,000 min⁻¹ max. RCF 9,509 Cat. No. 1620 A</p>	 <p>1.5/2.0 ml 15 – 85 ml 8.5 – 10 ml 7.5 – 10 ml 15 / 50 ml 10 – 85 ml</p>	<p>→ Page 16</p>
 <p>Angle rotor 8-place n = 4,500 min⁻¹ max. RCF 3,283 Cat. No. 1418</p>	 <p>15 ml 15 / 50 ml 12 / 50 ml 50 ml</p>	<p>→ Page 16</p>
 <p>Angle rotor 12-place n = 6,000 min⁻¹ max. RCF 4,146 Cat. No. 1613</p>	 <p>4 – 15 ml 1.6 – 10 ml 1.1 – 10 ml 15 ml</p>	<p>→ Page 17</p>
 <p>Angle rotor 12-place n = 12,000 min⁻¹ max. RCF 16,582 Cat. No. 1615</p>	 <p>4 – 15 ml 1.6 – 10 ml 1.1 – 10 ml 15 ml</p>	<p>→ Page 17</p>
 <p>Hematocrit rotor 24-place n = 15,000 min⁻¹ max. RCF 21,382 Cat. No. 1650</p>	 <p>capillary</p>	<p>→ Page 18</p>
 <p>Cyto rotor 6-place n = 4,000 min⁻¹ max. RCF 2,039 Cat. No. 1626</p>	 <p>cyto</p>	<p>→ Page 18</p>
 <p>Cyto rotor 8-place n = 4,000 min⁻¹ max. RCF 2,218 Cat. No. 1648</p>	 <p>cyto</p>	<p>→ Page 18</p>

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

ROTORS AND ACCESSORIES

Swing-out rotor, 4-place












































↻ 90°

n = 5,000 min⁻¹
max. RCF 4,193

illustrated with carriers 1425

Cat. No. (without carriers) 1494

capacity in ml	1.5	2.0	1	3	5	6	7	9	15	25	50	100	suspension for cyto accessories
Ø x L in mm	11 x 38		6 x 45	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	
Cat. No.	2078	0536	Rhesus	-	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	cyto chambers⁹⁾
 carrier Cat. No. 1425													
													
Cat. No.	1444	1432	1433	1438	1434	1431	1435	1436	1437	1437	1437	1437	1452
boring Ø x L in mm	11.5 x 38		6.5 x 34	10.5 x 40	13.4 x 50	12.7 x 60	17.5 x 84		25.5 x 84	35.5 x 84	45.5 x 86	-	-
tubes per rotor	36		144	56	28	48	28		8	4	4	4	4
max. RCF ²⁾	3,885		3,969	3,913				3,801		2,739		2,739	2,739
radius in mm	139		142	140				136		98		98	98
run-up in sec	30												
run-down in sec	☐ 32 ○ 600												
temperature in °C ¹⁾	-10												

capacity in ml	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	4–7	8.5–10	50	50
Ø x L in mm	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 100	29 x 115	29 x 115
Cat. No.	blood collection/urine tubes											0513	-
 carrier Cat. No. 1425													
Cat. No.	1438	1441	1438	1441	1441	1439	1438	1441	1441	1443	1737	1443	1737
boring Ø x L in mm	13.4 x 50	16.5 x 50	13.4 x 50	16.5 x 50	17 x 45	13.4 x 50	16.5 x 50	30 x 90	30 x 90	30 x 90	30 x 90	30 x 90	30 x 90
tubes per rotor	28					16	28					4	4
max. RCF ²⁾	3,913						4,081						
radius in mm	140						146						
run-up in sec	30												
run-down in sec	☐ 32 ○ 600												
temperature in °C ¹⁾	-10												

1) Lowest attainable temperature in precooled refrigerated centrifuges at 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.

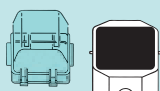






























3) When using these tubes, carrier 1427 cannot be closed with lid 1421.




























ROTORS AND ACCESSORIES



illustrated with carriers 1427

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

capacity in ml	1.5/2.0		1	3	5	6	7	9	15	25	50	1.1–1.4	2.6–2.9	2.7–3	4–5.5
Ø x L in mm	11 x 38		6 x 45	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	8 x 66	13 x 65	11 x 66	15 x 75
Cat. No.	2078/0536	-	Rhesus	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	0500 ²⁾	0518 ²⁾	0519 ²⁾	0521 ²⁾	blood collection/urine tubes			
 carrier Cat. No. 1427															
															
Cat. No.	5277	5273	1357	1327	1732	5229	5230	5237	5231	5232	5233	5278	1732	5229	5279
boring Ø x L in mm	11.5 x 38	13.7 x 38	6.5 x 23	10.5 x 23	13.4 x 58	12.5 x 44	12.4 x 87	15 x 73	17.8 x 87	25.5 x 87	35.5 x 87	9 x 41	13.4 x 58	12.5 x 44	15.6 x 41
tubes per rotor	36	48	120	48	32	48	48	24		8	4	48	32	48	20
max. RCF ²⁾	4,109	4,053	4,081	4,053	4,025	4,053	3,941					4,109	4,025	4,053	4,109
radius in mm	147	145	146	145	144	145	141					147	144	145	147
run-up in sec	30														
run-down in sec	☐ 32 ◻ 600														
temperature in °C ¹⁾	-7														

capacity in ml	4.5–5	4.9	7.5–8.2	9–10	1.6–5	4–7		8.5–10	15	50	25	30	50
Ø x L in mm	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 100	17 x 120	29 x 115	25 x 90	25 x 110	29 x 115
Cat. No.	blood collection/urine tubes								0509	0513	-	-	-
 carrier Cat. No. 1427													
													
Cat. No.	5230	1732	5279	5271 ⁴⁾	1732	5271	5231	5275	5276	1731	5272	5233 ⁴⁾	
boring Ø x L in mm	12.4 x 87	13.4 x 58	15.6 x 41	17 x 66	13.4 x 58	17 x 66	17.8 x 87	17 x 90	30 x 90	25.5 x 72	25.5 x 85	35.5 x 87	
tubes per rotor	48	32	20		32	20	24	4		8	4	4	
max. RCF ²⁾	3,941	4,025	4,109	3,969	4,025	3,969	3,941	4,165	4,053	3,969	4,025	4,053	
radius in mm	141	144	147	142	144	142	141	149	145	142	144	145	
run-up in sec	30												
run-down in sec	☐ 32 ◻ 600												
temperature in °C ¹⁾	-7												

⁴⁾ Please remove the inserts.

⁹⁾ Please ask for our detailed cyto brochure.

ROTORS AND ACCESSORIES



illustrated with carriers 1430 and lids 1382
with bio-containment⁵⁾

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

capacity in ml	1.5	2.0	1	3	5/6/7	9	15	25	50	100	1.1–1.4	2.7–5	2.6–4.9	4–8.2
Ø x L in mm	11 x 38		6 x 45	10 x 60	12 x 75/82/100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	8 x 66	11 x 66/92	13 x 65/90	15 x 75/92
Cat. No.	2078	0536	Rhesus	-	0553²⁾/0501²⁾/0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	blood/urine tubes			
lid with bio-containment ⁵⁾ Cat. No. 1382														
carrier Cat. No. 1430														
Cat. No.	1351	1339	1343	1383	1329	1330	1331	0761	1457	1383	1459			
boring Ø x L in mm	11.2 x 38	6.5 x 34	10.5 x 43	13.4 x 48	17.6 x 91	25.2 x 87	35.2 x 87	45.6 x 98	9 x 47	13.4 x 48	15.6 x 47			
tubes per rotor	20	108	36	20	16	4			28	20	16			
max. RCF ²⁾	3,857	4,081	4,137	4,025	3,997	3,829	3,801	4,025	4,053	4,025	4,053			
radius in mm	138	146	148	144	143	137	136	144	145	144	145			
run-up in sec	30													
run-down in sec	☐ 32 ○ 600													
temperature in °C ¹⁾	-10													

capacity in ml	9–10	10	1.6–7	4–10	15	30	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	16 x 92	15 x 102	13 x 75/100	16 x 75/100	17 x 120	25 x 110	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	44 x 105
Cat. No.	blood/urine tubes				0509	-	0513	-	-	-	-	-	0545	0546	0547	0534⁶⁾
lid with bio-containment ⁵⁾ Cat. No. 1382																
carrier Cat. No. 1430																
Cat. No.	1329	1329⁴⁾	1383	1348	1347	1365	1384	6311	1363	1365	6318	1348	4417	4416	1396	0765
boring Ø x L in mm	17.6 x 91		13.4 x 48	16.5 x 56	17 x 90	26 x 80	30 x 90	17 x 80	26 x 72	26 x 80	29.5 x 80	16.5 x 56	26 x 83	29 x 93	38.5 x 92	45.6 x 98
tubes per rotor	16		20	16	4				16		4		4		4	
max. RCF ²⁾	3,997	4,193	4,025		4,193			3,689		4,193	4,025	3,857	4,137	4,109	3,997	
radius in mm	143	150	144		150			132		150	144	138	148	147	143	
run-up in sec	30															
run-down in sec	☐ 32 ○ 600															
temperature in °C ¹⁾	-10															

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed.

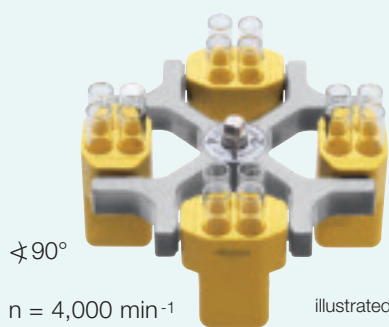
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

4) Please remove the inserts.

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

ROTORS AND ACCESSORIES

Swing-out rotor, 4-place

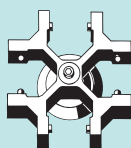













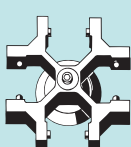






↻90°







n = 4,000 min⁻¹
max. RCF 2,665

illustrated with carriers 1369

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

capacity in ml	5	6	7	9	15	20	25	45	50	1.1–1.4	4–5.5			
Ø x L in mm	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	21 x 100	24 x 100	31 x 100	34 x 100	8 x 66	15 x 75			
Cat. No.	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	-	0519²⁾	-	0521²⁾	blood/urine tubes				
 rotor Cat. No. 1624														
Cat. No.	1369-91	1372	1369-92	1370	1741	1369	1742	1346	1745	1345	1308	1746	1741	1742
boring Ø x L in mm	11.5 x 64.4	13.5 x 65	11.5 x 71.5	14.6 x 74	14.6 x 78	17.6 x 74	17.6 x 78	21.5 x 74	26 x 78	32 x 74	35.7 x 88.2	35 x 78	14.6 x 78	17.6 x 78
tubes per rotor	16	68	16	20	40	16	28	8		4		40	28	
max. RCF ²⁾	2,057	2,164	2,308		2,415	2,308	2,451	2,361	2,451	2,361	2,290	2,451	2,415	2,325
radius in mm	115	121	129		135	129	137	132	137	132	128	137	135	130
run-up in sec	20													
run-down in sec	☐ 25 ○ 390													
temperature in °C ¹⁾	-17				-15	-17	-15	-17	-15	-17	-15		-15	

capacity in ml	4.9	1.6–5	4–7	8.5–10	30	suspensions for cyto accessories
Ø x L in mm	13 x 90	13 x 75	16 x 75	16 x 100	26 x 95	
Cat. No.	blood collection/urine tubes				0545	cyto chambers⁹⁾
 rotor Cat. No. 1624						
Cat. No.	1741	1742	1369	1745	1660	1680
boring Ø x L in mm	14.6 x 78	17.6 x 78	17.6 x 74	26 x 78	-	
tubes per rotor	40	28	16	8	4	
max. RCF ²⁾	2,451	2,325	2,308	2,451	1,556	
radius in mm	137	130	129	137	87	
run-up in sec	20					
run-down in sec	☐ 25 ○ 390					
temperature in °C ¹⁾	-15		-17	-15	-16	

capacity in ml	1.5	2.0	1	3	4
Ø x L in mm	11 x 38		6 x 45	10 x 60	12 x 60
Cat. No.	2078	0536	Rhesus	-	-
 carrier Cat. No. 1366					
Cat. No.	5277	1357	1327	1326	
boring Ø x L in mm	11.5 x 38	6.5 x 23	10.5 x 23	12.5 x 44	
tubes per rotor	36	120	48		
max. RCF ²⁾	1,968	1,950	1,932		
radius in mm	110	109	108		
run-up in sec	20				
run-down in sec	☐ 25 ○ 390				
temperature in °C ¹⁾	-17				

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

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

⁹⁾ Please ask for our detailed cyto brochure.

ROTORS AND ACCESSORIES



illustrated with carriers 1381 and lids 1382 with bio-containment⁵⁾

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

capacity in ml	1.5	2.0	1	3	5/6/7	9	15	25	50	100	1.1–1.4	2.7–5	2.6–4.9	4–8.2
Ø x L in mm	11 x 38		6 x 45	10 x 60	12 x 75/82/100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	8 x 66	11 x 66/92	13 x 65/90	15 x 75/92
Cat. No.	2078	0536	Rhesus	-	0553²⁾/0501²⁾/0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0526²⁾	blood/urine tubes			
lid with bio-containment ⁵⁾ Cat. No. 1382														
carrier Cat. No. 1381														
Cat. No.	1351	1339	1343	1383	1329	1330	1331	0761	1457	1383	1459			
boring Ø x L in mm	11.2 x 38	6.5 x 34	10.5 x 43	13.4 x 48	17.6 x 91	25.2 x 87	35.2 x 87	45.6 x 98	9 x 47	13.4 x 48	15.6 x 47			
tubes per rotor	20	108	36	20	16	4			28	20	16			
max. RCF ²⁾	2,451	2,594	2,630	2,558	2,540	2,433	2,415	2,558	2,576	2,558	2,576			
radius in mm	137	145	147	143	142	136	135	143	144	143	144			
run-up in sec	20													
run-down in sec	☐ 25 ○ 390													
temperature in °C ¹⁾	-15													

capacity in ml	9–10	10	1.6–7	4–10	15	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	16 x 92	15 x 102	13 x 75/100	16 x 75/100	17 x 120	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	44 x 105
Cat. No.	blood/urine tubes				0509	0513	-	-	-	-	-	0545	0546	0547	0534⁶⁾
lid with bio-containment ⁵⁾ Cat. No. 1382															
carrier Cat. No. 1381															
Cat. No.	1329	1329⁴⁾	1383	1348	1347	1384	6311	1363	1365	6318	1348	4417	4416	1396	0765
boring Ø x L in mm	17.6 x 91	17.6 x 91	13.4 x 48	16.5 x 56	17 x 90	30 x 90	17 x 80	26 x 72	26 x 80	29.5 x 80	16.5 x 56	26 x 83	29 x 93	38.5 x 92	45.6 x 98
tubes per rotor	16	16	20	16	4				16			4			
max. RCF ²⁾	2,540	2,665	2,558	2,522	2,665		2,343		2,665		2,522	2,451	2,630	2,612	2,540
radius in mm	142	149	143	141	149		131		149		141	137	147	146	142
run-up in sec	20														
run-down in sec	☐ 25 ○ 390														
temperature in °C ¹⁾	-15														

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at 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.

ROTORS AND ACCESSORIES

Swing-out rotor, 4-place



↻ 90°

n = 4,500 min⁻¹
max. RCF 3,328

illustrated with carriers 1398

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

capacity in ml	1.5	2.0	1	3	4	5	6	7	9	15	25	50	85	100
Ø x L in mm	11 x 38		6 x 45	10 x 60	10 x 88	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	38 x 106	44 x 100
Cat. No.	2078	0536	Rhesus	-	-	0553²⁾	0501²⁾	0578²⁾	0500²⁾	0518²⁾	0519²⁾	0521²⁾	0549	0526²⁾
lid with bio-containment ⁵⁾ Cat. No. 1382														
carrier Cat. No. 1390														
Cat. No.	1351	1339	1343			1383			1329	1330	1331	1396	0761	
boring Ø x L in mm	11.2 x 38		6.5 x 34		10.5 x 43		13.4 x 48		17.6 x 91		25.2 x 87	35.2 x 87	38.5 x 92	45.6 x 100.5
tubes per rotor	20		108		36		20		16		4			
max. RCF ²⁾	3,056		3,237		3,283		3,192		3,170		3,034	3,011	3,260	3,192
radius in mm	135		143		145		141		140		134	133	144	141
run-up in sec	30													
run-down in sec	☐ 30 ○ 220													
temperature in °C ¹⁾	-6													

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
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	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100
Cat. No.	blood collection/urine tubes												
lid with bio-containment ⁵⁾ Cat. No. 1382													
carrier Cat. No. 1390													
Cat. No.	1457		1383			1459	1329	1329⁴⁾		1383		1348	
boring Ø x L in mm	9 x 47		13.4 x 48			15.6 x 47		17.6 x 91		13.4 x 48		16.5 x 56	
tubes per rotor	28		20			16			20		16		
max. RCF ²⁾	3,215		3,192			3,215		3,170	3,328	3,192		3,147	
radius in mm	142		141			142		140	147	141		139	
run-up in sec	30												
run-down in sec	☐ 30 ○ 220												
temperature in °C ¹⁾	-6												

⁴⁾ Please remove the inserts.

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

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

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

ROTOREN UND ZUBEHÖR



Gehänge 1398 mit Einsatz 1483
und konischen 15 ml Röhrchen mit Schraubverschluss 0509

Ausschwingrotor 1324

Kapazität 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							
Bestell-Nr.	0509	0513	-	-	-	-	-	0545	0546	0547	0534⁶⁾							
Deckel mit Bioabdichtung ⁵⁾ Bestell-Nr. 1382																		
Gehänge Bestell-Nr. 1390																		
Bestell-Nr.	1347	1356	1384	6311	1363	1365	6318	1348	4417	4416	1396	0765						
Bohrung Ø x L in mm	17 x 90	17 x 107	30 x 90	17 x 80	26 x 72	26 x 80	29,5 x 80	16,5 x 56	26 x 83	29 x 93	38,5 x 92	45,6 x 100,5						
Röhrchen pro Rotor	4	12	4				16		4									
max. RCF ²⁾	3.328		3.328		2.920		3.328		3.147		3.056		3.283		3.260		3.170	
Radius in mm	147		147		129		147		139		135		145		144		140	
Anlaufzeit in s	30																	
Auslaufzeit in s	☐ 30 ☐ 220																	
Temperatur in °C ¹⁾	- 6																	

Kapazität in ml	9	15	2,6–2,9	4–5,5	9–10	10	4–7	15	50	12	50			
Ø x L in mm	14 x 100	17 x 100	13 x 65	15 x 75	16 x 92	15 x 102	16 x 75	17 x 120	29 x 115	17 x 100	29 x 115			
Bestell-Nr.	0500²⁾	0518²⁾	Blutabnahmegefäße/Urineröhrchen				0509	0513	-	-	-			
Gehänge Bestell-Nr. 1398														
Bestell-Nr.			1482				1483	1484	1482	1484⁴⁾				
Bohrung Ø x L in mm			17,5 x 81				17 x 100		30 x 98		17,5 x 81		30 x 98	
Röhrchen pro Rotor			16				16		4		16		4	
max. RCF ²⁾			3.192				3.305		3.260		3.192		3.260	
Radius in mm			141				146		144		141		144	
Anlaufzeit in s	30													
Auslaufzeit in s	☐ 30 ☐ 220													
Temperatur in °C ¹⁾	- 6													

1) Bei Kühlzentrifugen niedrigste Temperatur bei Vorkühlung und max. Drehzahl.

2) Bitte beachten Sie, dass sich die hier angegebenen RCF Werte nur auf die Leistung der Rotoren beziehen. Mit welcher RCF die einsetzbaren Zentrifugiergefäße maximal belastet werden dürfen, ist beim Hersteller der Röhrchen zu erfragen. Für die mit Fußnote 2) gekennzeichneten Glasröhrchen beträgt die max. RCF 4.000.

3) Bei Verwendung dieser Röhrchen ist Gehänge 1390 nicht mit Deckel 1382 verschließbar.

ROTORS AND ACCESSORIES

Swing-out rotor, 6-place



∠90°

n = 4,000 min⁻¹
max. RCF 2,701

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

Swing-out rotor, 8-place



∠45°

n = 5,000 min⁻¹
max. RCF 3,857

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







Swing-out rotor, 12-place









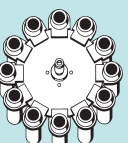






















∠55°
(with carriers 1127)
∠60°
(with carriers 1122)
∠80°
(with carriers 1621)

n = 5,000 min⁻¹
max. RCF 4,193

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

capacity in ml	15	50
∅ x L in mm	17x120	29x115
Cat. No.	0509	0513
		
rotor Cat. No. 1619		
Cat. No.	1462-A	-
boring ∅ x L in mm	17 x 84	30x87.5
tubes per rotor	6	
max. RCF ²⁾	2,701	
radius in mm	151	
run-up in sec	20	
run-down in sec	 22	 265
temperature in °C ¹⁾	-15	

capacity in ml	15	50
∅ x L in mm	17x120	29x115
Cat. No.	0509	0513
		
rotor Cat. No. 1617		
Cat. No.	1462-A	-
boring ∅ x L in mm	17 x 84	30x94.5
tubes per rotor	8	
max. RCF ²⁾	3,857	
radius in mm	138	
run-up in sec	20	
run-down in sec	 19	 380
temperature in °C ¹⁾	-10	

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
∅ x L in mm	12 x 75	17x70	17x100	13x65	11x66	15x75	15x92	13x75	16x75	16 x 100
Cat. No.	0553²⁾	2079	0518²⁾	blood collection/urine tubes						
										
rotor Cat. No. 1628										
Cat. No.	1127	1122	1621	1127	1122	1621	1127	1122	1621	1621
boring ∅ x L in mm	13.2 x 53	17.5 x 53	17.5 x 79	13.2 x 53	17.5 x 53	17.5 x 79	13.2 x 53	17.5 x 53	17.5 x 79	17.5 x 79
tubes per rotor	12									
max. RCF ²⁾	3,494	3,522	4,193	3,494	3,522	4,193	3,494	3,522	4,193	4,193
radius in mm	125	126	150	125	126	150	125	126	150	150
run-up in sec	16									
run-down in sec	 16  360									
temperature in °C ¹⁾	-15	-10	-10	-15	-15	-10	-15	-15	-15	-10

⁴⁾ Please remove the inserts.

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

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

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

ROTORS AND ACCESSORIES

Swing-out rotor, 8-place

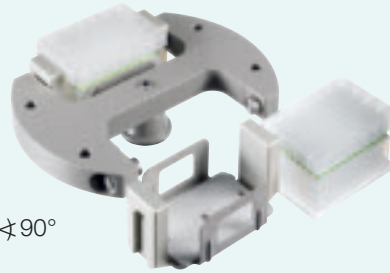
Swing-out rotor, 2-place



↻90°

n = 4,000 min⁻¹
max. RCF 2,415


















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

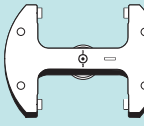

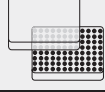
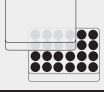








↻90°

n = 4,000 min⁻¹
max. RCF 2,218

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

capacity in ml	5	6	7	10	15	2.6–2.9	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 x 75	12 x 82	12 x 100	17 x 70	13 x 100	17 x 100	13 x 65	11 x 66	15 x 75	11 x 92	15 x 92	13 x 75	13 x 100	16 x 75	16 x 100	
Cat. No.	0553²⁾	0501²⁾	0578²⁾	2079	-	0518²⁾	blood collection/urine tubes									
 rotor Cat. No. 1611																
Cat. No.	1131	1643	1132	1643	1644	1131	1132	1643	1644	1131	1643	1644	1131	1643	1132	1644
boring Ø x L in mm	13 x 53	13.2 x 81	17.5 x 53	13.2 x 81	17.5 x 81	13 x 53	17.5 x 53	132 x 81	17.5 x 81	13 x 53	13.2 x 81	17.5 x 53	17.5 x 81			
tubes per rotor	8															
max. RCF ²⁾	1,914	2,415	1,914	2,415	2,415	1,914	2,415	2,415	1,914	2,415	1,914	2,415	1,914	2,415	2,415	
radius in mm	107	135	107	135	135	107	135	107	135	107	135	107	135	107	135	
run-up in sec	20															
run-down in sec	☐ 20 ○ 155															
temperature in °C ¹⁾	-16															

D x W x H in mm	86 x 128 x 15/17.5		86 x 128 x 22	86 x 128 x 44.5	86 x 128 x 46	86 x 128 x 83	59 x 84 x 11	82 x 124 x 20	-	
capacity in ml	-									0.2
Cat. No.	MTP		CP	DWP	MS	QP	Microtest plate (Terasaki)	PCR plate, 96 wells	PCR strips	
 rotor Cat. No. 1460										
Cat. No.	1453							1453 + 1469		
boring Ø x L in mm	-									
plates/strips per rotor	10	8	8	2	2	2	4	2	24 x 8	
max. RCF ²⁾	2,218									
radius in mm	124									
run-up in sec	40									
run-down in sec	☐ 45 ○ 1,130									
temperature in °C ¹⁾	-6									

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at 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.

ROTORS AND ACCESSORIES

Swing-out rotor, 4-place



↗ 90°

n = 4,000 min⁻¹
max. RCF 1,896

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

Angle rotor, 12-place



↘ 45°

n = 15,000 min⁻¹
max. RCF 16,602

Cat. No. **1612**

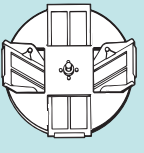
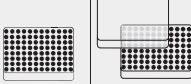

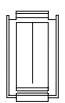
Angle rotor, 24-place

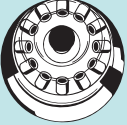






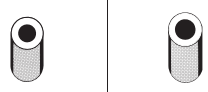


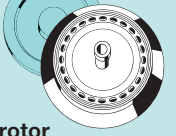






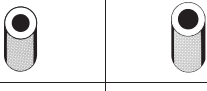
↘ 40°

n = 15,000 min⁻¹
max. RCF 21,382

Cat. No. **1420**

D x W x H in mm	86 x 128 x 15/17.5	86 x 128 x 22
Cat. No.	MTP	CP
		
rotor Cat. No. 1645		
Cat. No.	4345	
boring Ø x L in mm	-	
plates per rotor	4	
max. RCF ²⁾	1,896	
radius in mm	106	
run-up in sec	20	
run-down in sec	☐ 19 ○ 800	
temperature in °C ¹⁾	- 16	

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	
Cat. No.	-	-	-	-	2078	0536
 lid incl.						
rotor Cat. No. 1612						
Cat. No.	2024		2023		2031⁷⁾	-
boring Ø x L in mm	6 x 40		8 x 40		10.2 x 19	11.4 x 39
tubes per rotor			12			
max. RCF ²⁾			16,602			
radius in mm			66			
run-up in sec			25			
run-down in sec			☐ 23 ○ 240			
temperature in °C ¹⁾			- 10			

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	
Cat. No.	-	-	-	-	2078	0536
 lid incl.						
rotor Cat. No. 1420						
Cat. No.	2024		2023		2031⁷⁾	-
boring Ø x L in mm	6 x 40		8 x 40		10.2 x 19	11.2 x 42.6
tubes per rotor			24			
max. RCF ²⁾			21,382			
radius in mm			85			
run-up in sec			25			
run-down in sec			☐ 24 ○ 550			
temperature in °C ¹⁾			- 4			

Optional for rotor 1420:



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



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

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

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

ROTORS AND ACCESSORIES

Angle rotor, 30-place



∠45°

n = 14,000 min⁻¹
max. RCF 21,255

with bio-containment⁵⁾

Cat. No. 1689

Angle rotor, 8-place



∠45°

n = 4,500 min⁻¹
max. RCF 3,283

Cat. No. (without adapters) 1418

Angle rotor, 6-place



∠35°

n = 9,000 min⁻¹
max. RCF 9,509

Cat. No. 1620 A

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6 x 18	6 x 45	8 x 30	8 x 45	11 x 38	
Cat. No.	-	-	-	-	2078	0536
lid with bio-containment ⁵⁾ incl.						
rotor Cat. No. 1689						
Cat. No.	2024	2023	2031⁷⁾		-	
boring Ø x L in mm	6 x 40		8 x 40		10.2 x 19	11.2 x 40.9
tubes per rotor	30					
max. RCF ²⁾	21,255					
radius in mm	97					
run-up in sec	35					
run-down in sec	☐ 31 ○ 770					
temperature in °C ¹⁾	0					

capacity in ml	15	15	50	12	50	50
Ø x L in mm	17 x 100	17 x 120	29 x 115	17 x 100	29 x 115	29 x 107
Cat. No.	0518²⁾	0509	0513	-	-	0546
rotor Cat. No. 1418						
Cat. No.	1467	1467	1468	1467	1468	
boring Ø x L in mm	17.4 x 91		30.2 x 92	17.4 x 91		30.2 x 92
tubes per rotor	32		8	32		8
max. RCF ²⁾	3,215	3,283	3,147	3,215	3,147	
radius in mm	142	145	139	142	139	
run-up in sec	30					
run-down in sec	☐ 31 ○ 640					
temperature in °C ¹⁾	- 11					

capacity in ml	1.5	2.0	15	50	75	85	7.5-8.2	9-10	10	8.5-10	15	50	10	30	50	85	
Ø x L in mm	11 x 38		17 x 100	34 x 100	35 x 105	38 x 106	15 x 92	16 x 92	15 x 102	16 x 100	17 x 120	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	
Cat. No.	2078	0536	0518²⁾	0521²⁾	0548	0549	blood/urine tubes				0509	0513		-	0545	0546	0547
rotor Cat. No. 1620 A																	
Cat. No.	1449	1451	1463	-			1451				1466	1454	1646³⁾	1448	1447	1446	-
boring Ø x L in mm	11.4 x 39	17.5 x 92	35 x 89	38.6 x 90.2			17.5 x 92				17 x 106	29.8 x 97	-	16.5 x 74	26 x 85	29 x 92	38.6 x 90.2
tubes per rotor	24	6	6	6			6				6	3	6	12	6		
max. RCF ²⁾	9,146	8,784	9,327	9,509			8,784				8,965		8,784	8,603	9,056	9,509	
radius in mm	101	97	103	105			97				99		97	95	100	105	
run-up in sec	30																
run-down in sec	☐ 30 ○ 970																
temperature in °C ¹⁾	- 11																

1) Lowest attainable temperature in precooled refrigerated centrifuges at 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.

ROTORS AND ACCESSORIES

Angle rotor, 12-place



∠35°

n = 6,000 min⁻¹
max. RCF 4,146

Cat. No. 1613





















Angle rotor, 12-place























∠35°

n = 12,000 min⁻¹
max. RCF 16,582

Cat. No. 1615

capacity in ml	4	5	6	15	1.1–1.4	2.6–2.9	2.7–3	4.5–5	4.9	7.5–10	10	1.6–5	4–7	8–10	15	
∅ x L in mm	10x88	12x75	12x82	17x100	8x66	13x65	11x66	11x92	13x90	15/16x92	15x102	13x75	13x100	16x100/125	17x120	
Cat. No.	-	0553 ²⁾	0501 ²⁾	0518 ²⁾	blood collection/urine tubes										0509	
 rotor Cat. No. 1613																
																
Cat. No.	6305	1054-A	-		1054-A								1054-A		-	
boring ∅ x L in mm	11.5x67.5	13.5x60	17.7x88		13.5x60					17.7x88		13.5x60		17.7x88		
tubes per rotor					12							12	12	12	6	6
max. RCF ²⁾	3,502	3,300	4,146		3,300					4,146		3,300		4,146		
radius in mm	87	82	103		82					103		82		103		
run-up in sec	15															
run-down in sec	☐ 15 ○ 570															
temperature in °C ¹⁾	- 16															

capacity in ml	4	5	6	15	1.1–1.4	2.6–2.9	2.7–3	4.5–5	4.9	7.5–10	10	1.6–5	4–7	8–10	15	
∅ x L in mm	10x88	12x75	12x82	17x100	8x66	13x65	11x66	11x92	13x90	15/16x92	15x102	13x75	13x100	16x100/125	17x120	
Cat. No.	-	0553 ²⁾	0501 ²⁾	0518 ²⁾	blood collection/urine tubes										0509	
 rotor Cat. No. 1615																
																
Cat. No.	6305	1054-A	-		1054-A								1054-A		-	
boring ∅ x L in mm	11.5x67.5	13.5x60	18x88		13.5x60					18x88		13.5x60		18x88		
tubes per rotor					12							12	12	12	6	6
max. RCF ²⁾	14,006	13,201	16,582		13,201					16,582		13,201		16,582		
radius in mm	87	82	103		82					103		82		103		
run-up in sec	40															
run-down in sec	☐ 40 ○ 840															
temperature in °C ¹⁾	- 2															

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

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

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

ROTORS AND ACCESSORIES

Hematocrit rotor

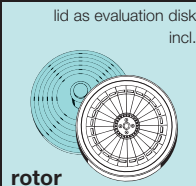



The hematocrit rotor enables centrifuging the capillaries in separate chambers. Each capillary is secured within its own chamber and supported by a holding tray. This holding tray serves to contain glass shards and any leakage, should a tube break. It is easy to clean and disposable in the case of glass breakage. Other capillaries will not be affected. The rotor lid is cover and evaluation disk in one. This ensures fast and easy determination of the hematocrit value.

Hematocrit rotor, 24-place



n = 15,000 min⁻¹
max. RCF 21,382

Cat. No. 1650

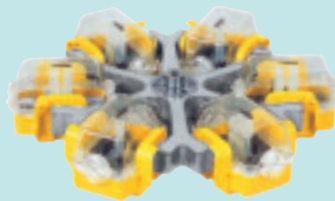
capillaries, heparinised	basic	mylar-coated	self-sealing and mylar-coated
Cat. No.	2074	1072	1071
 lid as evaluation disk incl. rotor Cat. No. 1650	 sealing putty		
	Cat. No.	2077	-
boring Ø x L in mm	-		
capillaries per rotor	24		
max. RCF ²⁾	21,382		
radius in mm	85		
run-up in sec	13		
run-down in sec	 9  180		
temperature in °C ¹⁾	-1		

Rotors for cytology

Detailed information on our comprehensive range of cyto accessories is provided in a separate brochure. We will be pleased to send one to you on request.

Application notes from our R&D department on the preparation of slides for the cytological examination of various body fluids can be obtained free of charge or downloaded from our homepage www.hettichlab.com

Cyto rotor, 6-place



n = 4,000 min⁻¹
max. RCF 2,039

illustrated with
suspensions 1660
and lids 1661
for cyto chambers

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

Cyto rotor, 8-place



n = 4,000 min⁻¹
max. RCF 2,218

illustrated with
suspensions 1680
for angle chambers

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

ROLLING CABINETS

Rolling cabinets for Hettich centrifuges save space on the laboratory bench while ensuring enhanced flexibility.

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

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

- ROTOFIX 32 A
- UNIVERSAL 320/320 R
- ROTINA 38/38 R
- ROTINA 420
- ROTANTA 460/460 S

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

- ROTINA 420 R
- ROTANTA 460 R/460 RS



Low and narrow,
with one drawer.
Depth 650 mm

Cat. No. 4612-K



Low and wide,
with one drawer.
Depth 650 mm

Cat. No. 4614-K



High and narrow,
with two drawers.
Depth 650 mm

Cat. No. 4613-K





High and wide,
with two drawers.
Depth 650 mm

Cat. No. 4615-K

UNIVERSAL 320/320 R

TECHNOLOGY

	UNIVERSAL 320		UNIVERSAL 320 R		
Benchtop centrifuge, without rotor	classic		cooled		
Power supply ^{*)}	200–240 V 1~	100–127 V 1~	200-240 V 1~	240 V 1~	115–127 V 1~
Frequency	50–60 Hz	50–60 Hz	50 Hz	60 Hz	60 Hz
Consumption	400 VA		800 VA		950 VA
Emission	EN 55011 group 1, class B, EN 61000-3-2, EN 61000-3-3	FCC class B	EN 55011 group 1, class B, EN 61000-3-2, EN 61000-3-3		FCC class B
Immunity	EN 61000-6-2	-	EN 61000-6-2		-
 Max. capacity	4 x 100 ml				
 Max. RPM (speed)	15,000 min ⁻¹				
Max. RCF	21,382				
Running time	1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key)				
Dimensions (HxWxD)	346 x 395 x 520 mm		346 x 401 x 695 mm		
Weight	approx. 29 kg		approx. 52 kg		
Refrigeration					
Temperature control, infinitely variable	-		from -20 to +40 °C		
Cat. No.	1401	1401-01	1406	1406-01	

^{*)} Other voltages on request.



Hettich centrifuges comply with all relevant EU standards in effect and conform to the European level of quality and safety for medical devices. Evidence is provided by national and international test marks such as IEC 61010 or the CE conformity. The ISO 9001:2000 and ISO 13485:2003 certificates accredited to the company bear witness to the extreme care and responsibility Hettich puts into the manufacturing of centrifuges and their accessories.

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