

ROTINA 420/420 R

Benchtop Centrifuges

classic/cooled

Hettich
ZENTRIFUGEN

ROTINA 420/420 R

Developed for large volumes, yet not overly large in size. High performance when it counts, yet cost-effective and fair to your budget. The ROTINA 420 centrifuges offer these benefits and more.

The new, compact benchtop centrifuges are conceived for high sample throughput as well as for high sample volumes. With a maximum capacity of 4 x 600 ml, 140 blood collection tubes or 16 microtitre plates they are ideal for applications in clinical chemistry, in biotechnology and in life science research facilities.



ROTINA 420 classic

Cat. No. 4701

PERFORMANCE

- High capacity
  · max. 4 x 600 ml
- High RCF
  · up to 16,504 for 94 ml tubes
  · up to 12,007 for 250 ml bottles
  · up to 24,400 for reaction tubes

DESIGN

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

USER-FRIENDLINESS

- Automatic lid locking
- Ergonomic control and information panel
- Easy rotor changing
- 99 program storage spaces

COOLING (ROTINA 420 R)

- Infinitely variable adjustment
  from - 20 °C to + 40 °C (or - 4 °F to + 104 °F)
- Stand-by cooling

SAFETY

- Lid locking and holding
- Emergency lid lock release
- Lid dropping protection
- Automatic rotor recognition
- Imbalance switch-off
- Motor overheating protection
- Chamber overheating protection (ROTINA 420 R)

OPTIONS

The following are available as options, the ROTINA 420 R

- with connection for nitrogen flushing
  Cat. No. **4706-20**
  for centrifugation of reactive substances or substances which are unstable in aerial oxygen. As required, a monitoring control system should be available to measure oxygen concentration.
- as heating/cooling version up to + 90 °C (or + 194 °F)
  Cat. No. **4706-50**
  for applications calling for temperatures over + 40 °C.

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.

9 braking and acceleration ramps, unbraked run-down, or a cut-off speed can be selected. Ramp 9 represents the shortest braking and acceleration time.

98 program memory positions are available. Additional program position “PREC” (PRECOOLING) is reserved for the pre-cooling program.

The temperature in the ROTINA 420 R refrigerated centrifuge can be set in either Celsius (°C) or Fahrenheit (°F) degrees.

DIGITAL DISPLAY AND CONTROL PANEL

KEYBOARD

START	Start centrifugation run / short centrifuging runs / save entries and changes
❄	Start pre-cooling program **PREC**
STOP OPEN	Manually end centrifugation run / Open lid

PARAMETER INPUT

PROG	Input / recall program number 98 programs can be stored
T/°C	Input temperature in increments of 1 from - 20 °C to + 40 °C or - 4 °F to + 104 °F (ROTINA 420 R)
⎍	Input of acceleration levels 1 – 9 Input of braking levels 1 – 9 Input brake force cut-off
RCF	Input relative centrifugal force (RCF) in increments of 1 Enter centrifuging radius (RAD) in mm
RPM	Input speed in increments of 10
TIME	Input length of centrifugation (max. 99 h : 59 min : 59 sec) or continuous operation



ROTINA 420 R keypad (C control panel)



ROTINA 420 R cooled

Cat. No. 4706

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

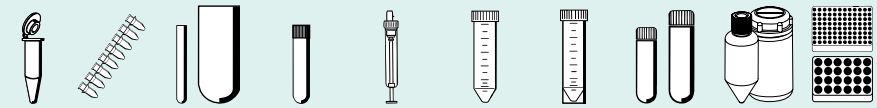


Some accessories with bio-containment[4)]

Swing-out rotor 4-place

◁ 90°
n = 4,800 min^{-1}
max. RCF 4,740

Cat. No. 4784-A



→ P.5-6



Some accessories with bio-containment[4)]

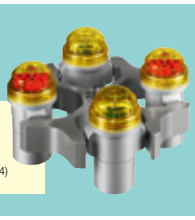
Swing-out rotor 4-place

◁ 90°
n = 4,000 min^{-1}
max. RCF 3,095

Cat. No. 4753



→ P.7-9



Some accessories with bio-containment[4)]

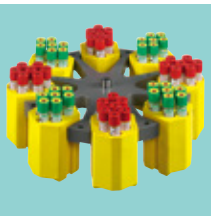
Swing-out rotor 4-place

◁ 90°
n = 4,600 min^{-1}
max. RCF 3,832

Cat. No. 4754



→ P.9-12



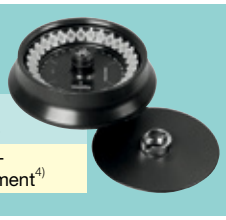
Swing-out rotor 8-place

◁ 90°
n = 3,800 min^{-1}
max. RCF 2,906

Cat. No. 4758



→ P. 13-14



auto-clavable
with bio-containment[4)]

Angle rotor 30-place

◁ 45°
n = 15,000 min^{-1}
max. RCF 24,400

Cat. No. 4790-A



→ P.14



Angle rotor 4-place

◁ 25°
n = 9,500 min^{-1}
max. RCF 12,007

Cat. No. 4795



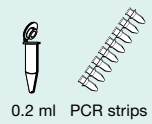
→ P.14



Angle rotor 6-place

◁ 45°
n = 14,000 min^{-1}
max. RCF 18,845

Cat. No. 4760



→ P.15

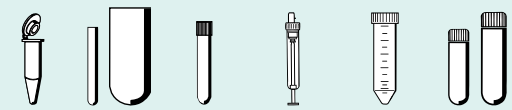


auto-clavable
with bio-containment[4)]

Angle rotor 6-place

◁ 45°
n = 11,000 min^{-1}
max. RCF 16,504

Cat. No. 4794



→ P.15

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

Swing-out rotor, 4-place

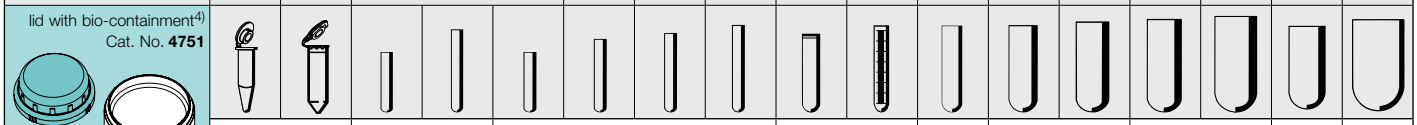
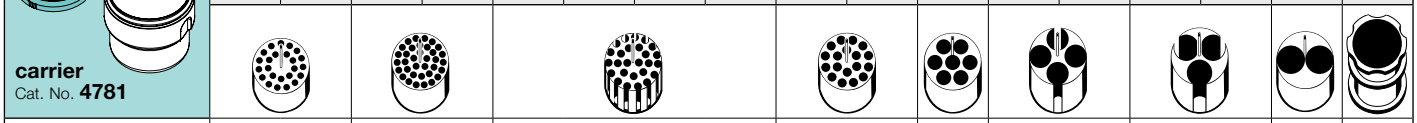


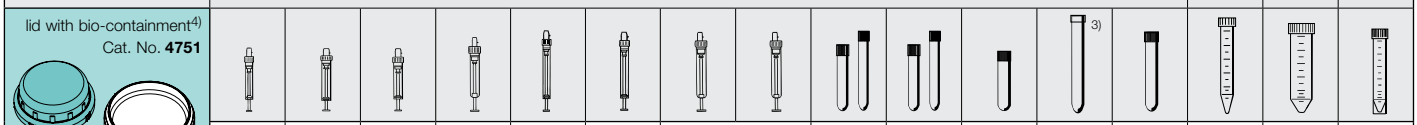
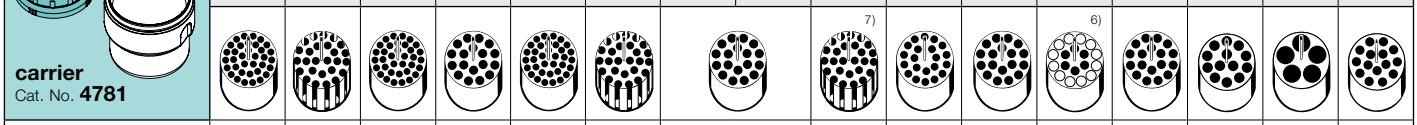
⊀90°

n = 4,800 min^{-1}
max. RCF 4,740

illustrated with carriers 4781 and lids 4751
with bio-containment[4)]

Cat. No. (without carriers) **4784-A**

capacity in ml	1.5	2.0	3	4	4	5	6	7	10	15	25	50	75	85	100	100	250
Ø x L in mm	11x38		10x60	10x88	12x60	12x75	12x82	12x100	17x70	17x100	24x100	34x100	35x105	38x101	40x115	44x100	65x115
Cat. No.	**2078**	**0536**	**-**			**0553**[2)]	**0501**[2)]	**0578**[2)]	**2079**	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0548**	**0549**	**0523**[2)]	**0526**[2)]	**0530**[2)]
lid with bio-containment[4)] Cat. No. **4751**																	
carrier Cat. No. **4781**																	
Cat. No.	**4773**		**4761**			**4762**			**4763**		**4764**	**4765**		**4766**		**4767**	**4768**
boring Ø x L in mm	11.2x38		11.2x54			13.4x55			17.5x62		26.5x69	36x77		42x76.5		46x76.5	66x103
tubes per rotor	96		140			104			72		28	16		12		8	4
max. RCF [2)]	4,585											4,559					4,534
radius in mm	178											177					176
run-up in sec	54																
run-down in sec, braked	38																
temperature in °C[1)]	+4																

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	1.6–7	1.6–7	4–7	8	8.5–10	15	50	12
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	13x75/100	13x75/100	16x75	16x125	16x100	17x120	29x115	17x100
Cat. No.	**blood collection / urine tubes**													**0509**	**0513**	**-**
lid with bio-containment[4)] Cat. No. **4751**												[3)]				
carrier Cat. No. **4781**									[7)]			[6)]				
Cat. No.	**4761**	**4762**	**4761**	**4763**	**4761**	**4762**	**4763**		**4762**	**4775**	**4763**	**4763**	**4763**	**4769**	**4770**	**4774**
boring Ø x L in mm	11.2x54	13.4x55	11.2x54	17.5x62	11.2x54	13.4x55	17.5x62		13.4x55	13.7x54	17.5x62			17x84	30x82.5	17.2x82.5
tubes per rotor	140	104	140	72	140	104	72		104	84	72	24	72	52	20	60
max. RCF [2)]	4,585													4,740	4,688	
radius in mm	178													184	182	
run-up in sec	54															
run-down in sec, braked	38															
temperature in °C[1)]	+4															

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2)] is 4,000.
3) When using these tubes, carrier 4781 cannot be closed with lid 4751.
6) Carrier must be loaded as illustrated.
7) For blood collection tubes with a cap, of diameter greater than 17 mm.

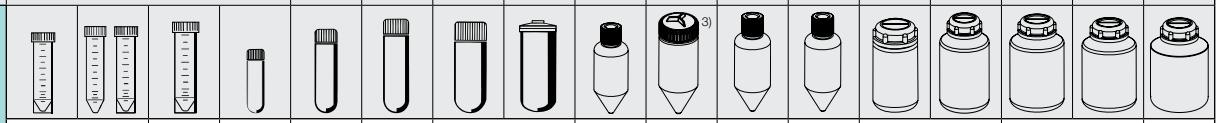
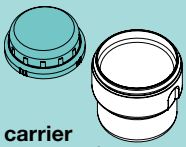
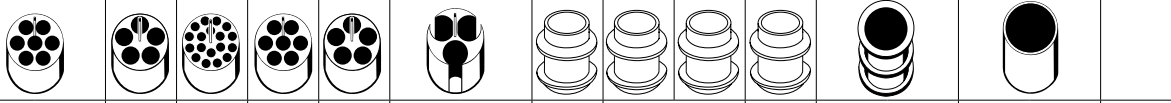


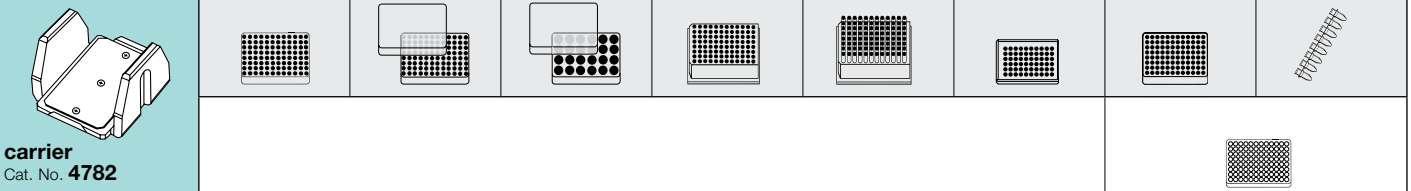
illustrated with carriers 4781
and lids 4751
with bio-containment[4]



illustrated with
carriers 4782

Swing-out rotor Cat. No. (without carriers) 4784-A

capacity in ml	25	30	50	10	30	50	85	94	175	175	200	225	250	290	400	400	600
Ø x L in mm	25x90	25x110	29x115	16x80	26x95	29x107	38x106	38x102	61x118	62x144	60x130	61x137	61x122	62x137	81x136	84x134	93x134
Cat. No.	-				**0545**	**0546**	**0547**	**0538**[8]	**Falcon®**	**Nalgene®**[3]	**Nunc®**	**Falcon®**	**5127**[11]	**-**[11]	**-**[11]	**-**[11]	**0551**[11]
lid with bio-containment[4] Cat. No. **4751**																	
carrier Cat. No. **4781**																	
Cat. No.	**4764**		**4770**[5]	**4763**	**4764**	**4770**[5]	**4766**		**4776**	**4777**		**4776**	**4771**		**4772**		**-**
boring Ø x L in mm	26.5x69		30x82.5	17.5x62	26.5x69	30x82.5	42x76.5		61x105	61.5x110		61x105	62x100		85x100		94x99
tubes per rotor	28		20	72	28	20	12		4								
max. RCF [2]	4,585		4.688	4,585		4,688	4,534		4,740								
radius in mm	178		182	178		182	176		184								
run-up in sec	54																
run-down in sec, braked	38																
temperature in °C[1]	+4																

D x W x H in mm	86x128x15	86x128x17.5	86x128x22	86x128x44.5	86x128x46	59x84x11	82x124x20	-
capacity in ml	-							0.2
Cat. No.	**MTP**		**CP**	**DWP**	**MS**	**Microtest plate (Terasaki)**	**PCR plate, 96-place**	**PCR strips**
carrier Cat. No. **4782**								
Cat. No.	-						**1485**	
boring Ø x L in mm	-							
plates/strips per rotor	16	16	12	4	4	8	4	48x8
max. RCF [2]	4,096							
radius in mm	159							
run-up in sec	54							
run-down in sec, braked	38							
temperature in °C[1]	+4							

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 4781 resp. 5051 cannot be closed with lid 4751 resp. 5053.
4) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

Swing-out rotor, 4-place

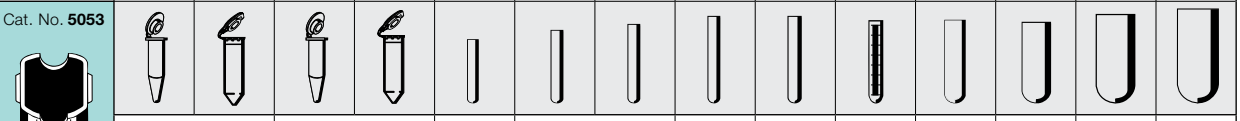
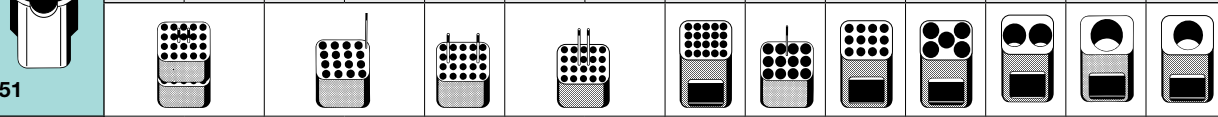


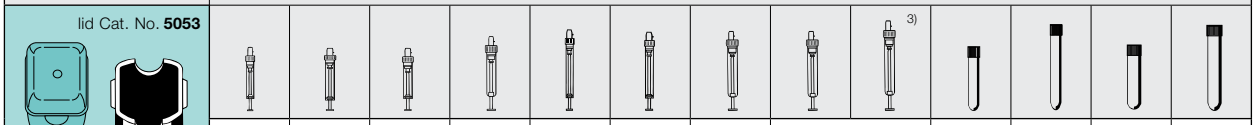
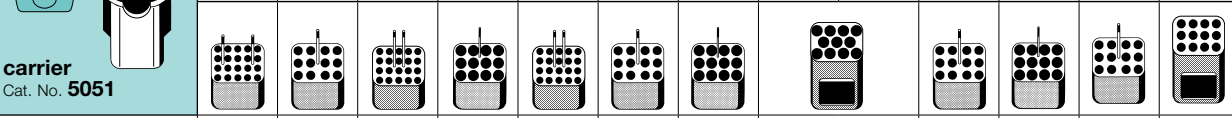
∢90°

n = 4,000 min^{-1}
max. RCF 3,095

illustrated with carriers 5051 and lids 5053

Cat. No. (without carriers) **4753**

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

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

→

5) Please remove the inserts.
8) The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.
10) With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.
11) At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



illustrated with
carriers 5051

Swing-out rotor 4753

capacity in ml	15	50	12	30	50	two-tier frame for cyto accessories
Ø x L in mm	17x120	29x115	17x100	25x110	29x115	
Cat. No.	**0509**	**0513**	**-**			**cyto chambers** [1,2]
lid Cat. No. **5053**	[3]	[3]		[3]	[3]	
carrier Cat. No. **5051**					+ 2 x 6316	
Cat. No.	**6306**	**5259**	**6306**	**5266**	**5243**	**5280**
boring Ø x L in mm	17x90	30x86	17x90	26x86	36x86	-
tubes per rotor	28	8	28	20	8	8
max. RCF [2] upper/lower	2,898	2,826	2,898	2,755		1,735/2,737
radius in mm upper/lower	162	158	162	154		97/153
run-up in sec	18					
run-down in sec, braked	16					
temperature in °C [1]	-1					

capacity in ml	5	6	7	10	15
Ø x L in mm	12x75	12x82	12x100	17x70	17x100
Cat. No.	**0553** [2]	**0501** [2]	**0578** [2]	**2079**	**0518** [2]
lid with bio-containment [4] Cat. No. **5093**					
carrier Cat. No. **5092**					
Cat. No.	**5128**		**5120**	**5136**	
boring Ø x L in mm	12.8x45		12.8x82	17.5x60.7	
tubes per rotor	48			32	
max. RCF [2]	3,005			2,952	
radius in mm	168			165	
run-up in sec	18				
run-down in sec, braked	16				
temperature in °C [1]	-1				

capacity in ml	25	50	100	100	250	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7
Ø x L in mm	24x100	34x100	44x100	40x115	65x115	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100
Cat. No.	**0519** [2]	**0521** [2]	**0526** [2]	**0523** [2]	**0530** [2]	**blood collection/urine tubes**										
lid with bio-containment [4] Cat. No. **5093**																
carrier Cat. No. **5092**																
Cat. No.	**5122**	**5124**	**5125**	**5126**	**1791**	**5138**			**5136**	**5120**	**5137**	**5136**			**5138**	**5120**
boring Ø x L in mm	25.5x82	35.5x82.5	45.5x85	42x85	66x103	12.8x54.5			17.5x60.7	12.8x82	13.5x60.7	17.5x60.7			12.8x54.5	12.8x82
tubes per rotor	16	4				48			32	48	32				48	48
max. RCF [2]	2,898	2,952			3,095	2,540			2,952	3,005	2,952				2,540	3,005
radius in mm	162	165			173	142			165	168	165				142	168
run-up in sec	18															
run-down in sec, braked	16															
temperature in °C [1]	-1															

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.
4) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

Swing-out rotor, 4-place

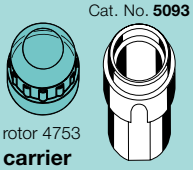
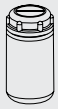
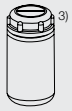


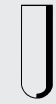
⊀90°

n = 4,600 min^{-1}
max. RCF 3,832

illustrated with carriers 1495 and lids 1492
with bio-containment [4]

Swing-out rotor 4753 — **Cat. No.** (without carriers) **4754**

capacity in ml	4–7	8.5–10	8	15	50	12	25	30	50	10	250	290
Ø x L in mm	16x75	16x100	16x125	17x120	29x115	17x100	25x90	25x110	29x115	16x80	61x122	62x137
Cat. No.	**blood/urine tubes**			**0509**	**0513**	**-**					**5127** [11]	**-** [11]
lid with bio-containment [4] Cat. No. **5093**			 [3]									 [3]
rotor 4753 **carrier** Cat. No. **5092**												
Cat. No.	**5136**		**5121** [5]	**5129**	**5123**	**5121**	**5134**	**5122**	**5135**	**5136**	**6319**	
boring Ø x L in mm	17.5x60.7		17.5x82	17x85	30x85	17.5x82	26x73	25.5x82	30x99	17.5x60.7	66x103	
tubes per rotor	32		28	28	8	28	12	16	8	32	4	
max. RCF [2]	2,952		3,059	3,095		3,005	2,826	2,898	3,023	2,952	3,095	
radius in mm	165		171	173		168	158	162	169	165	173	
run-up in sec	18											
run-down in sec, braked	16											
temperature in °C [1]	-1											

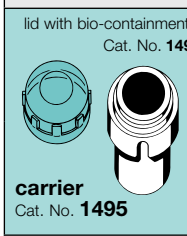
capacity in ml	1.5	2.0	1	3	4	5	6	7	8	9	15	25	50	85	100
Ø x L in mm	11x38	11x38	6x45	10x60	10x88	12x75	12x82	12x100	16x81	14x100	17x100	24x100	34x100	38x101	44x100
Cat. No.	**2078**	**0536**	**Rhesus**	**-**		**0553** [2]	**0501** [2]	**0578** [2]	**-**	**0500** [2]	**0518** [2]	**0519** [2]	**0521** [2]	**0549**	**0526** [2]
lid with bio-containment [4] Cat. No. **1492**															
rotor 4754 **carrier** Cat. No. **1495**															rubber insert
Cat. No.	**1351**		**1339**	**1343**		**1383**			**1348**	**1329**		**1330**	**1331**	**1396**	**0761**
boring Ø x L in mm	11.2x38		6.5x34	10.5x43		13.4x48			16.5x56	17.6x91		25.2x87	35.2x87	38.5x92	45.9x98
tubes per rotor	20		108	36		20			16	16		4			
max. RCF [2]	3,549		3,738	3,785		3,690			3,690	3,667		3,525	3,501	3,761	3,690
radius in mm	150		158	160		156			156	155		149	148	159	156
run-up in sec	14														
run-down in sec, braked	14														
temperature in °C [1]	0														

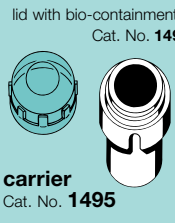
[5] Please remove the inserts.
[11] At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
[12] Please ask for our detailed cyto brochure.



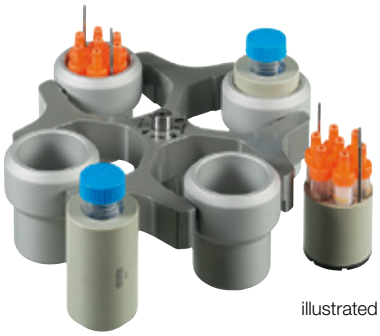
illustrated with carriers 1495

Swing-out rotor Cat. No. (without carriers) 4754

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8.5–10
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	15x102	13x75	13x100	16x75	16x100
Cat. No.	**blood collection/urine tubes**												
lid with bio-containment[4] Cat. No. **1492** **carrier** Cat. No. **1495**													
Cat. No.	**1457**	**1383**		**1459**	**1383**		**1459**	**1329**	**1329**[5]	**1383**		**1348**	
boring Ø x L in mm	9x47	13.4x48		15.6x47	13.4x48		15.6x47	17.6x91		13.4x48		16.5x56	
tubes per rotor	28	20		16	20		16	16		20		16	
max. RCF[2]	3,714	3,690		3,714	3,690		3,714	3,667	3,832	3,690			
radius in mm	157	156		157	156		157	155	162	156			
run-up in sec	14												
run-down in sec, braked	14												
temperature in °C[1]	0												

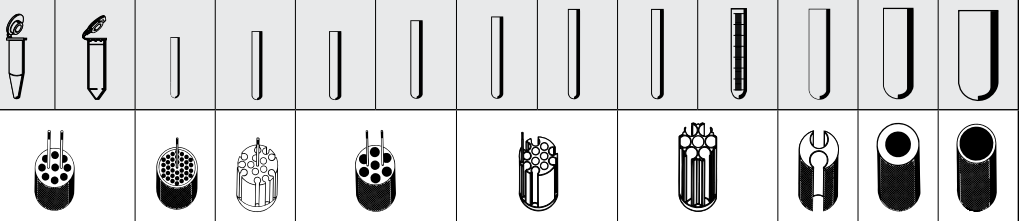
capacity in ml	15	15	50	12	25	30	50	10	30	50	85	30
Ø x L in mm	17x120	17x120	29x115	17x100	25x90	25x110	29x115	16x80	26x95	29x107	38x106	44x105
Cat. No.	**0509**	**0509**	**0513**	**-**					**0545**	**0546**	**0547**	**0534**[13]
lid with bio-containment[4] Cat. No. **1492** **carrier** Cat. No. **1495**		[3]										chrome bath tube
												rubber insert
Cat. No.	**1347**	**1356**	**1384**	**6311**	**1363**	**1365**	**6318**	**1348**	**4417**	**4416**	**1396**	**0765**
boring Ø x L in mm	17x90	17x107	30x90	17x80	26x72	26x80	29.5x80	16.5x56	26x83	29x93	38.5x92	45.9x98
tubes per rotor	4	12	4		4	4		16	4			
max. RCF[2]	3,832				3,407	3,832		3,690	3,549	3,785	3,761	3,667
radius in mm	162				144	162		156	150	160	159	155
run-up in sec	14											
run-down in sec, braked	14											
temperature in °C[1]	0											

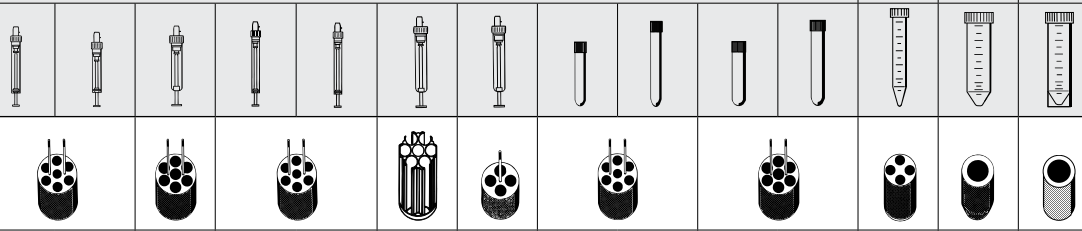
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
3) When using these tubes, carrier 1495 cannot be closed with lid 1492.



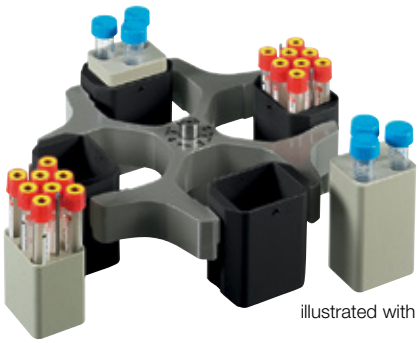
illustrated with carriers 1425

Swing-out rotor Cat. No. (without carriers) 4754

capacity in ml	1.5	2.0	1	3	4	5	6	7	9	15	25	50	100
Ø x L in mm	11 x 38	11 x 38	6 x 45	10 x 60	12 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100
Cat. No.	**2078**	**0536**	**Rhesus**	**-**		**0553** [2]	**0501** [2]	**0578** [2]	**0500** [2]	**0518** [2]	**0519** [2]	**0521** [2]	**0526** [2]
 **carrier** Cat. No. **1425**													
Cat. No.	**1444**		**1432**	**1433**	**1438**		**1434**		**1431**		**1435**	**1436**	**1437**
boring Ø x L in mm	11.5 x 38		6.5 x 34	10.5 x 40	13.4 x 50		12.7 x 60		17.5 x 84		25.5 x 84	35.5 x 84	45.5 x 86
tubes per rotor	36		144	56	28		48		28		8	4	4
max. RCF [2]	3,572		3,643	3,596									3,501
radius in mm	151		154	152									148
run-up in sec	14												
run-down in sec, braked	14												
temperature in °C [1]	0												

capacity in ml	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	1.6–5	4–7	4–7	8.5–10	15	50	50
Ø x L in mm	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	13 x 100	16 x 75	16 x 100	17 x 120	29 x 115	29 x 115
Cat. No.	**blood collection/urine tubes**											**0509**	**0513**	**-**
 **carrier** Cat. No. **1425**														
Cat. No.	**1438**		**1441**	**1438**		**1431**	**1439**	**1438**		**1441**		**1736**	**1443**	**1737**
boring Ø x L in mm	13.4 x 50		16.5 x 50	13.4 x 50		17.5 x 84	17 x 45	13.4 x 50		16.5 x 50		17 x 90	30 x 90	
tubes per rotor	28						16	28				16	4	
max. RCF [2]	3,596						3,596	3,596				3,738	3,738	
radius in mm	152						152	152				158	158	
run-up in sec	14													
run-down in sec, braked	14													
temperature in °C [1]	0													

[4] Tested by the TÜV in conformity with DIN EN 61010, section 2-020.
[5] Please remove the inserts.
[13] A rubber stopper for closing the tube is available under Cat. No. 0535. The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

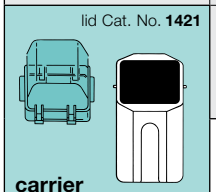


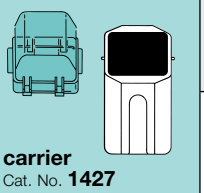
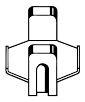
illustrated with carriers 1427



illustrated with carriers 1427 and lids 1421

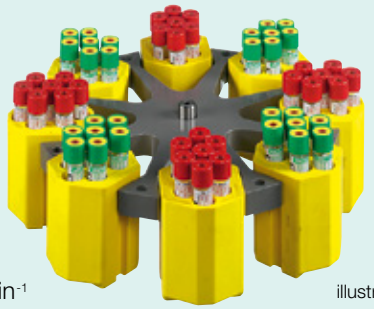
Swing-out rotor Cat. No. (without carriers) 4754

capacity in ml	1.5/2.0		1	3	4	5	6	7	9	15	25	50	15	50	50
Ø x L in mm	11x38		6x45	10x60	12x60	12x75	12x82	12x100	14x100	17x100	24x100	34x100	17x120	29x115	29x115
Cat. No.	**2078/0536**		**Rhesus**	**-**		**0553** [2]	**0501** [2]	**0578** [2]	**0500** [2]	**0518** [2]	**0519** [2]	**0521** [2]	**0509**	**0513**	**-**
lid Cat. No. **1421**															
carrier Cat. No. **1427**															
Cat. No.	**5277**	**5273**	**1357**	**1327**	**1326**	**1732**	**5229**	**5230**	**5237**	**5231**	**5232**	**5233**	**1733**	**5276**	**5233** [5]
boring Ø x L in mm	11.5x38	11.2x38	6.5x23	10.5x23	12.5x44	13.4x58	12.5x44	12.4x87	15x73	17.8x87	25.5x87	35.5x87	17x90	30x90	35.5x87
tubes per rotor	36	48	120	48		32	48	48	24	24	8	4	12	4	
max. RCF [2]	3,761	3,714	3,738	3,714		3,690	3,714	3,620					3,809	3,714	
radius in mm	159	157	158	157		156	157	153					161	157	
run-up in sec	14														
run-down in sec, braked	14														
temperature in °C [1]	0														

capacity in ml	1.1–1.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	7.5–8.5	9–10	1.6–5	4–7	4–7	8.5–10	suspension for cyto accessories
Ø x L in mm	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	13x75	13x100	16x75	16x100	
Cat. No.	**blood collection/urine tubes**												**cyto chambers** [12]
lid Cat. No. **1421**													
carrier Cat. No. **1427**													
Cat. No.	**5278**	**1732**	**5229**	**5279**	**5230**	**1732**	**5279**	**5271** [5]	**1732**		**5271**	**5231**	**1452**
boring Ø x L in mm	9x41	13.4x58	12.5x44	15.6x41	12.4x87	13.4x58	15.6x41	17x66	13.4x58		17x66	17.8x87	-
tubes per rotor	48	32	48	20	48	32	20		32		20	24	4
max. RCF [2]	3,761	3,690	3,714	3,761	3,620	3,690	3,761	3,643	3,690		3,643	3,620	2,721
radius in mm	159	156	157	159	153	156	159	154	156		154	153	115
run-up in sec	14												14
run-down in sec, braked	14												14
temperature in °C [1]	0												0

[1] Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
[2] Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote [2] is 4,000.
[3] When using these tubes, carrier 1427 cannot be closed with lid 1421.

Swing-out rotor, 8-place



⊀90°

n = 3,800 min^{-1}
max. RCF 2,906

illustrated with carriers 1742

Cat. No. (without carriers) **4758**

capacity in ml	5		6	7	9	15	20	45	50	1.1–1,4	2.6–3.4	4–5.5	4.5–5	4.9	7.5–8.5
Ø x L in mm	12 x 75		12 x 82	12 x 100	14 x 100	17 x 100	21 x 100	31 x 100	34 x 100	8 x 66	13 x 65	15 x 75	11 x 92	13 x 90	15 x 92
Cat. No.	**0553**[2]		**0501**[2]	**0578**[2]	**0500**[2]	**0518**[2]	**-**	**-**	**0521**[2]	**blood collection/urine tubes**					
rotor Cat. No. **4758**	with decanting aid		with decanting aid		+ 0701					+ 0701	+ 0716				
Cat. No.	**1369-91**	**1372**	**1369-92**		**1741**	**1742**	**1346**	**1345**	**1746**	**1741**	**1742**		**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 78	17.6 x 78	21.5 x 74	32 x 74	35 x 78	14.6 x 78	17.6 x 78		14.6 x 78		17.6 x 78
tubes per rotor	32	136	32		80	56	16	8		80	56		80		56
max. RCF [2]	2,551	2,648	2,777		2,874	2,906	2,825	2,825	2,906	2,874	2,793		2,906		
radius in mm	158	164	172		178	180	175	175	180	178	173		180		
run-up in sec	19														
run-down in sec, braked	16														
temperature in °C[1]	0														

capacity in ml	9–10	10	1.6–5 / 4–7	4–7	8.5–10	15		50	30	suspension for cyto accessories	
Ø x L in mm	16 x 92	15 x 102	13 x 75/16 x 75	13 x 100	16 x 100	17 x 120		29 x 115	26 x 95		
Cat. No.	**blood collection/urine tubes**					**0509**		**0513**	**0545**	**cyto chambers** [12]	
rotor Cat. No. **4758**			+ 0716				+ 1462-A				
							+ 1641	+ 1641			
Cat. No.	**1742**	**1742**[14]	**1742**	**1741**[14]	**1742**	**1742**[14]	**1746**	**1746**	**1745**	**1660**	**1680**
boring Ø x L in mm	17.6 x 78	17.6 x 78	17.6 x 78	14.6 x 78	17.6 x 78	17.6 x 78	30 x 98	30 x 98	26 x 78	-	
tubes per rotor	56	24	56	32	56	24	8	8	16	8	
max. RCF [2]	2,906		2,793	2,906	2,906	2,906			2,906	2,179	
radius in mm	180		173	180	180	180			180	135	
run-up in sec	19										
run-down in sec, braked	16										
temperature in °C[1]	0										

[5] Please remove the inserts.
[12] Please ask for our detailed cyto brochure.
[14] Please load only the middle row.

Angle rotor, 30-place



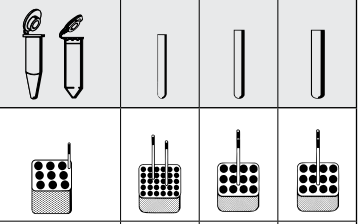
∢45°

n = 15,000 min^{-1}
max. RCF 24,400

with bio-containment[4]

Swing-out rotor 4758

Cat. No. 4790-A

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**	**–**	**–**
rotor 4758 **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	72	240	96	
max. RCF [2]	2,470	2,454	2,438	
radius in mm	153	152	151	
run-up in sec	19			
run-down in sec, braked	16			
temperature in °C[1]	0			

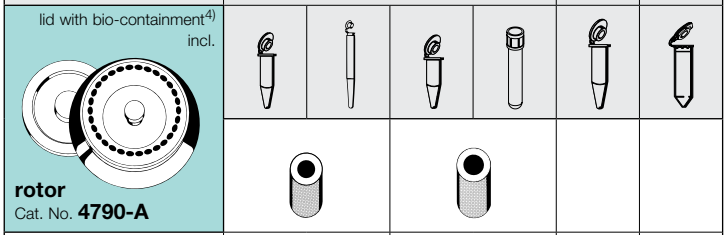
Angle rotor, 4-place

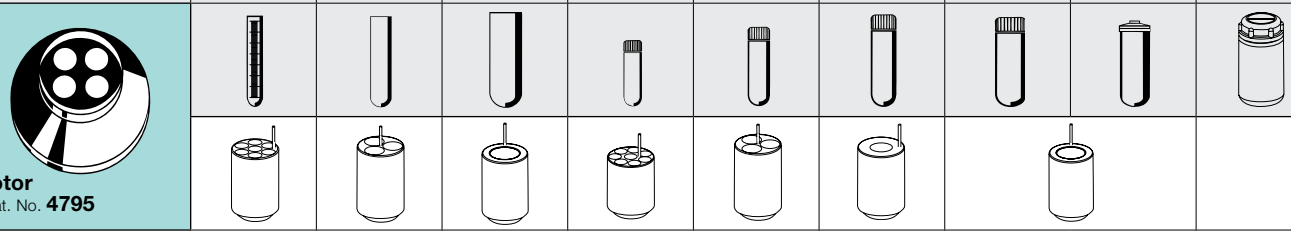


∢25°

n = 9,500 min^{-1}
max. RCF 12,007

Cat. No. 4795

capacity in ml	0.2	0.4	0.5	0.8	1.5	2.0
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	
Cat. No.	-				**2078**	**0536**
lid with bio-containment[4] incl. **rotor** Cat. No. **4790-A**						
Cat. No.	**2024**		**2023**		**2031**[13]	**-**
boring Ø x L in mm	6x40		8x40		10.2x19	11.2x40.9
tubes per rotor	30					
max. RCF [2]	24,400					
radius in mm	97					
run-up in sec	19					
run-down in sec, braked	24					
temperature in °C[1]	+4					

capacity in ml	15	25	85	10	30	50	85	94	250
Ø x L in mm	17x100	24x100	38x101	16x80	26x95	29x107	38x106	38x102	61x122
Cat. No.	**0518**[2]	**0519**[2]	**0549**	**-**	**0545**	**0546**	**0547**	**0538**[8]	**5127**[11]
rotor Cat. No. **4795**									
Cat. No.	**5646**	**5642**	**5644**	**5641**	**5642**	**5643**	**5644**		**-**
boring Ø x L in mm	17.6x83	26x80	38.6x88	16.6x70	26x80	29x90	38.6x88		61.5x109
tubes per rotor	28	12	4	32	12	4	4		4
max. RCF [2]	11,301	10,897	10,292	11,402	10,897	10,090	10,292		12,007
radius in mm	112	108	102	113	108	100	102		119
run-up in sec	45								
run-down in sec, braked	55								
temperature in °C[1]	+2								

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.
2) Please note that the RCF values indicated refer only to rotor 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) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

Angle rotor, 6-place



∢45°

n = 11,000 min^{-1}
max. RCF 16,504

with bio-containment[4)]

Cat. No. 4794

Angle rotor, 6-place, for PCR strips

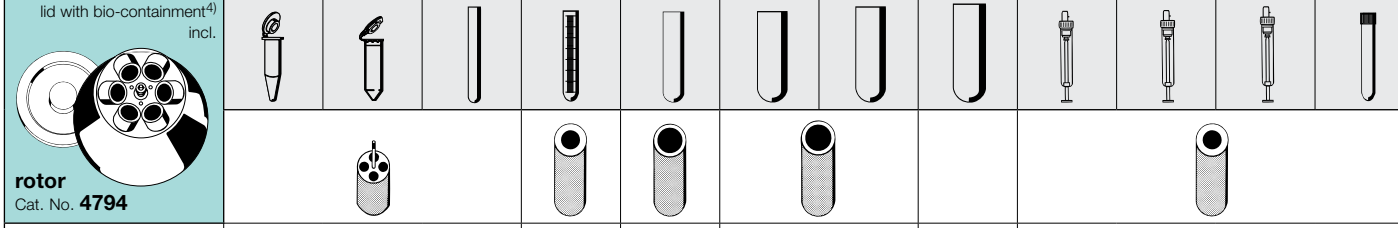


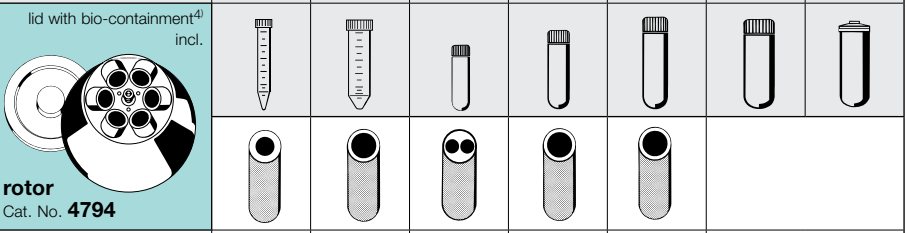
∢45°

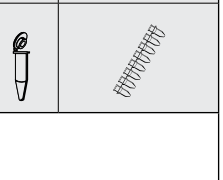
n = 14,000 min^{-1}
max. RCF 18,845

lid (optional)
Cat. No. **1162**

Cat. No. (without lid) **4760**

capacity in ml	1.5	2.0	3	15	25	50	75	85	7.5–8.5	9–10	10	8.5–10
Ø x L in mm	11 x 38		10 x 60	17 x 100	24 x 100	34 x 100	35 x 105	38 x 101	15 x 92	16 x 92	15 x 102	16 x 100
Cat. No.	**2078**	**0536**	**-**	**0518**[2)]	**0519**[2)]	**0521**[2)]	**0548**	**0549**	**blood collection/urine tubes**			
lid with bio-containment[4)] incl. **rotor** Cat. No. **4794**												
Cat. No.	**1449**			**1451**	**1447**	**1463**		**-**	**1451**			
boring Ø x L in mm	11.4 x 39			17.5 x 92	26 x 85	35 x 89		38.2 x 89.6	17.5 x 92			
tubes per rotor	24			6				6	6			
max. RCF[2)]	15,828			15,557	15,151	16,233		16,504	15,557			
radius in mm	117			115	112	120		122	115			
run-up in sec	40											
run-down in sec, braked	63											
temperature in °C[1)]	+4											

capacity in ml	15	50	10	30	50	85	94
Ø x L in mm	17 x 120	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	38 x 102
Cat. No.	**0509**	**0513**	**-**	**0545**	**0546**	**0547**	**0538**[8)]
lid with bio-containment[4)] incl. **rotor** Cat. No. **4794**							
Cat. No.	**1466**	**1454**	**1448**	**1447**	**1446**	**-**	
boring Ø x L in mm	17 x 106	29.8 x 97	16.5 x 74	26 x 85	29 x 92	38.2 x 89.6	
tubes per rotor	6	6	12	6			
max. RCF[2)]	15,828	16,098	15,557	15,151	15,828	16,504	
radius in mm	117	119	115	112	117	122	
run-up in sec	40						
run-down in sec, braked	63						
temperature in °C[1)]	+4						

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

8) The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.
11) At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
13) For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

ROTINA 420 / 420 R

TECHNOLOGY

	ROTINA 420		ROTINA 420 R	
Benchtop centrifuge, without rotor	**classic**		**cooled**	
Power supply*)	200 – 240 V 1 ~	100 – 127 V 1 ~	200 – 240 V 1 ~	100 – 127 V 1 ~ / 100 V 1 ~
Frequency	50 – 60 Hz		50 Hz	60 Hz / 50 Hz
Consumption	870 VA	800 VA	1,500 VA	1,750 VA
Emission, Immunity	EN / IEC 61326-1, class B	FCC class B	EN / IEC 61326-1, class B	FCC class B
Max. capacity	4 x 600 ml			
Max. RPM (speed)	15,000 min^{-1}			
Max. RCF	24,400			
Running time	1 sec – 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode			
Dimensions (H x W x D)	423 x 506 x 650 mm		423 x 713 x 654 mm	
Weight	approx. 75 kg	approx. 84 kg	approx. 108 kg	approx. 117 kg
Refrigeration				
Temperature control, infinitely variable	-		from -20 to +40 °C	
Cat. No.	**4701**	**4701-01**	**4706**	**4706-01**

*) Other voltages on request.

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, ISO 13485 and ISO 14001 certificates accredited to the company bear witness to the extreme care and responsibility Hettich puts into the manufacturing of centrifuges and their accessories.

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