

BENCHTOP CENTRIFUGES

# — ROTANTA 460 | 460 R

## SUPERIOR BENCHTOP FOR MUTLI-PURPOSE USE

This powerful unit is capable of virtually any application you choose. It is able to spin high sample volumes of blood tubes, conical tubes, plates and bottles. Speciality buckets are able to accommodate 450 ml blood bags.

This unit is available with refrigeration and a temperature range from -20 °C to +40 °C (ROTANTA 460 R).



## — HIGHLIGHTS

- RPM: 50 - 15,000 min<sup>-1</sup>  
Adjustable in increments of 10
- RCF: 50 - 24,400  
Adjustable in increments of 1
- max. Capacity: 4 x 1,000 ml
- choice of 8 rotors
- Medical Device according to directive 93/42/EC
- 28 individual acceleration and deceleration stages
- easy operation with keypad and control knob
- 98 program memories for more individuality
- model 460 R coolable from -20 to +40 °C with pre-cooling function

## — FEATURES

- metal housing and lid
- viewing port in the lid
- powered one-hand lid lock
- lid dropping protection
- emergency lid lock release
- stainless steel chamber
- automatic rotor recognition
- brushless drive
- error display
- display in °C and °F possible
- imbalance monitoring and switch-off
- backlit panel with actual values of all parameters
- auditory message after completion of the centrifugation run


## TECHNICAL DATA

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

\*) Other voltages on request.

## AVAILABLE ROTORS

### SWING-OUT ROTORS

	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 4-place	90°	4,600 min <sup>-1</sup>	4x750 ml	<b>5699-R</b>	3
 swing-out rotor, 4-place	90°	3,800 min <sup>-1</sup>	4x1,000 ml	<b>5654</b>	10
 swing-out rotor, 6-place	90°	4,000 min <sup>-1</sup>	6x290 ml	<b>4446</b>	12
 swing-out rotor, 4-place	90°	2,000 min <sup>-1</sup>	4x100 ml	<b>4474</b>	14
 swing-out rotor, 2-place	90°	5,900 min <sup>-1</sup> / 6,200 min <sup>-1</sup>	12 plates	<b>5622</b>	14

### ANGLE ROTORS

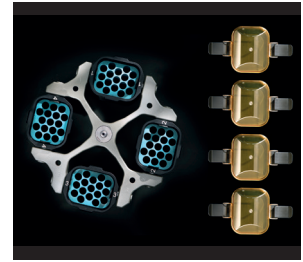
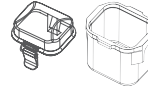
 angle rotor, 30-place	45°	15,000 min <sup>-1</sup>	30x2 ml	<b>4489-A</b>	15
 angle rotor, 6-place	25°	8,500 min <sup>-1</sup> / 9,500 min <sup>-1</sup>	6x250 ml	<b>5645</b>	15
 angle rotor, 6-place	35°	11,500 min <sup>-1</sup>	6x94 ml	<b>5615</b>	16

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



<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   5,063
max. capacity	4x250 ml
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>

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



<b>Vessels</b>															
capacity in ml	1.5	2.0	3	4	4	5	6	7	15	25	50	94	100	100	250
Ø x L in mm	11 x 38	11 x 38	10 x 60	10 x 88	12 x 60	12 x 75	12 x 82	12 x 100	17 x 100	24 x 100	34 x 100	38 x 102	44 x 100	40 x 115	65 x 100
max. RCF <sup>2)</sup>	3,572	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,495	4,495	4,637	4,495	4,495
radius in mm	151	196	196	196	196	196	196	196	196	196	190	190	196	190	190
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>											

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

<b>Vessels</b>															
capacity in ml	1.1-1.4	2.6-3.4	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	14	15
Ø x L in mm	8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100	16.5 x 106	17 x 120
max. RCF <sup>2)</sup>	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637
radius in mm	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>												<b>tubes with screw cap</b>		


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

<b>Vessels</b>										
capacity in ml	50	12	25	30	50	10	30	50	85	94
Ø x L in mm	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	38 x 102
max. RCF <sup>2)</sup>	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,495
radius in mm	196	196	196	196	196	196	196	196	196	190
<b>Cat. No.</b>	<b>tubes with screw cap</b>									

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

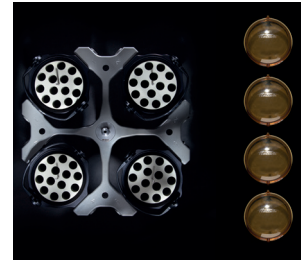
- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
- 4) Please remove the spacer.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

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



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

<b>Bucket with clamp lock</b>	
lid bioseal <sup>5)</sup>	4883
<b>Cat. No.</b>	<b>4880</b>
<b>Bucket without clamp lock<sup>14)</sup></b>	
<b>Cat. No.</b>	<b>4885</b>



<b>Vessels</b>															
capacity in ml	1.5	2.0	3	4	4	5	6	7	15	25	45	50	94	100	100
Ø x L in mm	11 x 38	11 x 38	10 x 60	10 x 88	12 x 60	12 x 75	12 x 82	12 x 100	17 x 100	24 x 100	31 x 100	34 x 100	38 x 102	40 x 115	44 x 100
max. RCF <sup>2)</sup>	3,572	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,637	4,495	4,495	4,495	4,495	4,637
radius in mm	151	196	196	196	196	196	196	196	196	196	190	190	190	190	196
<b>Cat. No.</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>											

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

<b>Vessels</b>															
capacity in ml	250	1.1–1.4	2.6–3.4	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	4.9	7.5–8.5	9–10	9–10	10	1.6–5	1.6–5
Ø x L in mm	65 x 100	8 x 66	13 x 65	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	13 x 90	15 x 92	16 x 92	16 x 92	13 x 90	13 x 75	13 x 75
max. RCF <sup>2)</sup>	4,495	4,637	4,116	4,637	4,637	4,637	4,637	4,637	4,684	4,637	4,684	4,637	4,637	4,116	4,637
radius in mm	190	196	174	196	196	196	196	196	198	196	198	196	196	174	196
<b>Cat. No.</b>	<b>- 2)</b>	<b>blood collection / urine vessels</b>													

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

<b>Vessels</b>															
capacity in ml	4–7	4–7	4–7	4–7	8	8.5–10	8.5–10	5	14	15	50	50	12	25	30
Ø x L in mm	13 x 100	13 x 100	16 x 75	16 x 75	16 x 125	16 x 100	16 x 100	17 x 59	16.5 x 106	17 x 120	29 x 115	29 x 115	17 x 100	25 x 90	25 x 110
max. RCF <sup>2)</sup>	4,684	4,637	4,637	4,684	4,637	4,637	4,684	4,637	4,637	4,637	4,708	4,637	4,637	4,566	4,566
radius in mm	198	196	196	198	196	196	198	196	196	196	199	196	196	193	193
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>							<b>-</b>	<b>tubes with screw cap</b>						

<b>Adapter</b>															
boring Ø x L in mm	13.2 x 61	13.5 x 84	17.5 x 84	17.5 x 61	17.5 x 84	17.5 x 84	17.5 x 61	17 x 80	17 x 80	17 x 80	30 x 96.5	30 x 80	17 x 80	26.5 x 84	26.5 x 84
vessels per rotor	108	76	76	88	76	76	88	56	56	56	28	20	56	28	28
<b>Cat. No.</b>	<b>4847<sup>4)</sup></b>	<b>4832</b>	<b>4833</b>	<b>4848</b>	<b>4833</b>	<b>4833</b>	<b>4848</b>	<b>4839</b>	<b>4839<sup>4)</sup></b>	<b>4839</b>	<b>5647</b>	<b>4840</b>	<b>4839<sup>4)</sup></b>	<b>4834</b>	<b>4834</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 4) Please remove the spacer.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.  
 14) With the E3905 add-on kit and the 4783 lid, the 4785 carrier can be converted at a later time to a 4780 carrier with single-hand clamp lock.

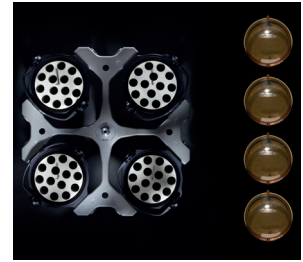
## SWING-OUT ROTOR, 4-PLACE | 5699-R



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

<b>Bucket with clamp lock</b>	
lid bioseal <sup>5)</sup>	4883
<b>Cat. No.</b>	<b>4880</b>

<b>Bucket without clamp lock<sup>14)</sup></b>	
<b>Cat. No.</b>	<b>4885</b>



<b>Vessels</b>																	
capacity in ml		50	50	10	10	30	50	50	85	94	250	290	500	600	650	750	
Ø x L in mm		29 x 115	29 x 115	16 x 80	16 x 80	26 x 95	29 x 107	29 x 107	38 x 106	38 x 102	61 x 122	62 x 137	96 x 147	93 x 134	97 x 139	97 x 152	
max. RCF <sup>2)</sup>		4,708	4,637	4,637	4,684	4,637	4,637	4,708	4,495	4,495	4,779	4,779	4,779	4,779	4,779	4,779	
radius in mm		199	196	196	198	196	196	199	190	190	202	202	202	202	202	202	
<b>Cat. No.</b>		<b>tubes with screw cap</b>										<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>Corning<sup>®</sup></b>	<b>0551<sup>24)</sup></b>	<b>0554<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>

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

<b>Vessels</b>										
capacity in ml		450	750	30	50	40	160	200	200	200
Ø x L in mm		97 x 110	93 x 135	-	-	-	-	-	-	-
max. RCF <sup>2)</sup>		4,779	4,779	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>	4,613 <sup>27)</sup>
radius in mm		202	202	195	195	195	195	195	195	195
<b>Cat. No.</b>		<b>4447</b>	<b>4234-A</b>	<b>Falcon<sup>®</sup></b>	<b>Corning<sup>®</sup></b>	<b>Nunc<sup>®</sup></b>	<b>Nunc<sup>®</sup></b>	<b>Falcon<sup>®</sup></b>	<b>Greiner<sup>®</sup></b>	<b>Nunc<sup>®</sup></b>

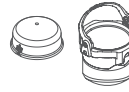
<b>Adapter</b>										
boring Ø x L in mm		98 x 100	98 x 100	-	-	-	-	-	-	-
vessels per rotor		4	4	8	8	4	8	4	4	4
<b>Cat. No.</b>		<b>4845</b>	<b>4845</b>	<b>4849</b>	<b>4849</b>	<b>4852</b>	<b>4851</b>	<b>4831</b>	<b>4831</b>	<b>4831</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3.8) When using these tubes, bucket 4880 cannot be closed with lid 4883.  
 3.9) When using these tubes, bucket 4890 cannot be closed with lid 4883.  
 4) Please remove the spacer.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.  
 14) With the E3905 add-on kit and the 4783 lid, the 4785 carrier can be converted at a later time to a 4780 carrier with single-hand clamp lock.  
 21) Adapter must be loaded as illustrated.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.  
 27) RCF values indicated refer only to rotor performance. The max. RCF for the accommodated cell culture flasks is 2,300.  
 28) We recommend the use of the refrigerated ROTANTA 460 R, 460 RC, or 460 RF to ensure that the temperature of the blood is maintained during centrifugation.

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



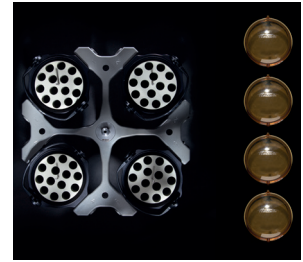
<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   5,063
max. capacity	4 x 750 ml
run-up   run-down, braked in sec	90   95
angle	90°
temperature in °C <sup>1)</sup>	+7
<b>Cat. No.</b>	<b>5699-R</b>



<b>Bucket with clamp lock</b>	
lid bioseal <sup>5)</sup>	4883
<b>Cat. No.</b>	<b>4890</b>



<b>Bucket without clamp lock<sup>14)</sup></b>	
<b>Cat. No.</b>	<b>4895</b>



<b>Vessels</b>																
capacity in ml		1.5	2.0	5	7	8	9	15	25	50	100	2.6-3.4	2.7-3	4-5.5	4.5-5	4.9
Ø x L in mm		11 x 38	11 x 38	12 x 75	12 x 100	16 x 81	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90
max. RCF <sup>2)</sup>	top / bottom	3,407 / 4,542	3,407 / 4,542	4,471	4,471	4,637	4,637	4,637	4,353	4,424	4,400	4,471	4,471	4,637	4,471	4,471
radius in mm	top / bottom	144 / 192	144 / 192	189	189	196	196	196	184	187	186	189	189	196	189	189
<b>Cat. No.</b>		<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>							<b>blood collection / urine vessels</b>				

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

<b>Vessels</b>																
capacity in ml		7.5-8.5	9-10	10	1.6-5	4-7	4-7	8	8.5-10	10	15	50	25	30	50	50
Ø x L in mm		15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 125	16 x 100	16 x 80	17 x 120	29 x 115	25 x 90	25 x 110	29 x 115	29 x 107
max. RCF <sup>2)</sup>		4,637	4,637	4,637	4,471	4,471	4,637	4,637	4,637	4,637	4,755	4,613	4,566	4,566	4,613	4,613
radius in mm		196	196	196	189	189	196	196	196	196	201	195	193	193	195	195
<b>Cat. No.</b>		<b>blood collection / urine vessels</b>										<b>tubes with screw cap</b>				

<b>Adapter</b>																		
boring Ø x L in mm		17.5 x 53	17.5 x 53	17.5 x 53	13.5 x 58	13.5 x 58	17.5 x 53	17.5 x 53	17.5 x 53	17.5 x 53	17.5 x 53	17 x 93.1	31 x 96	26 x 72	26 x 72	31 x 96	31 x 96	
vessels per rotor		76	76	76	84	84	76	76	76	76	76	56	28	28	28	28	28	
<b>Cat. No.</b>		<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4435</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4434</b>	<b>4469</b>	<b>4468</b>	<b>4438</b>	<b>4438</b>	<b>4468<sup>4)</sup></b>	<b>4468</b>	

<b>Vessels</b>														
capacity in ml		250	290	650	750	175	175	200	225	250	500	450	750	450
Ø x L in mm		61 x 122	62 x 137	97 x 139	97 x 152	61 x 118	62 x 144	60 x 130	61 x 137	60 x 162	96 x 147	97 x 110	93 x 135	3-place-system without filter
max. RCF <sup>2)</sup>		4,873	4,873	4,873	4,873	5,063	5,063	5,063	5,063	5,063	5,063	5,063	5,063	5,063
radius in mm		206	206	206	206	214	214	214	214	214	214	214	214	214
<b>Cat. No.</b>		<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>0554<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	<b>Falcon®</b>	<b>Nalgene®</b>	<b>Nunc®</b>	<b>Falcon®</b>	<b>Corning®</b>	<b>Corning®</b>	<b>4447</b>	<b>4234-A</b>	<b>blood bags<sup>28)</sup></b>

<b>Adapter</b>														
boring Ø x L in mm		62 x 92	62 x 92	98.4 x 116	98.4 x 116	-	-	-	-	-	-	98.4 x 116	98.4 x 116	-
vessels per rotor		8	6	4	4	4	4	4	4	4	4	4	4	4
<b>Cat. No.</b>		<b>4443</b>	<b>4443</b>	<b>4451</b>	<b>4451</b>	<b>4440</b>	<b>4430</b>	<b>4430</b>	<b>4440</b>	<b>4430</b>	<b>4449</b>	<b>4451</b>	<b>4451</b>	-

1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3.8) When using these tubes, bucket 4880 cannot be closed with lid 4883.  
 3.9) When using these tubes, bucket 4890 cannot be closed with lid 4883.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.  
 14) With the E3905 add-on kit and the 4783 lid, the 4785 carrier can be converted at a later time to a 4780 carrier with single-hand clamp lock.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.  
 28) We recommend the use of the refrigerated ROTANTA 460 R, 460 RC, or 460 RF to ensure that the temperature of the blood is maintained during centrifugation.

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



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



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



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



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

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

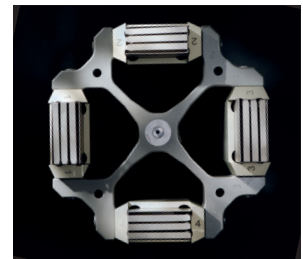
## — SWING-OUT ROTOR, 4-PLACE | 5699-R



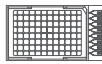
<b>Rotor</b>	
max. RPM   max. RCF <sup>2)</sup>	4,600 min <sup>-1</sup>   4,921
max. capacity	12 Arrays
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>



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



TagMan Array



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

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

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

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



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

<b>Bucket</b>	
<b>Cat. No.</b>	<b>5628<sup>9)</sup></b>
<b>Adapter</b>	
<b>Cat. No.</b>	<b>5220-A</b>



<b>Vessels</b>																	
capacity in ml		1.5	2.0	3	5	6	7	9	25	50	100	100	250	1.1-1.4	2.6-3.4	2.7-3	
Ø x L in mm		11 x 38	11 x 38	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	24 x 100	34 x 100	44 x 100	44 x 115	65 x 115	8 x 66	13 x 65	11 x 66	
max. RCF <sup>2)</sup>		4,164	4,164	4,069	4,164	4,164	4,164	4,116	4,093	4,093	4,069	4,069	4,045	4,069	4,164	4,116	
radius in mm		176	176	172	176	176	176	174	173	173	172	172	171	172	176	174	
<b>Cat. No.</b>		<b>microliter tubes</b>				<b>tubes<sup>2)</sup></b>							<b>blood collection / urine vessels</b>				
		+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	
<b>Adapter</b>																	
boring Ø x L in mm		11.5 x 50	11.5 x 50	11 x 44	13.5 x 52	13.5 x 52	13.5 x 52	16 x 50	26 x 86	36 x 86	45.5 x 86	42 x 86	66 x 87	11 x 44	13.5 x 52	12.5 x 42	
vessels per rotor		128	128	160	96	96	96	96	40	16	8	8	4	160	96	160	
<b>Cat. No.<sup>19)</sup></b>		<b>5281</b>	<b>5281</b>	<b>5267</b>	<b>5268</b>	<b>5268</b>	<b>5268</b>	<b>5264</b>	<b>5242</b>	<b>5243</b>	<b>5262</b>	<b>5249</b>	<b>5263-A</b>	<b>5267</b>	<b>5268</b>	<b>5227</b>	

<b>Vessels</b>																																
capacity in ml		4-5.5	4.5-5	4.9	7.5-8.5	9-10	1.6-5	4-7	4-7	8.5-10	15	30	50	50	250																	
Ø x L in mm		15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	13 x 75	16 x 75	13 x 100	16 x 100	17 x 120	25 x 110	29 x 115	29 x 115	61 x 122																	
max. RCF <sup>2)</sup>		4,116	4,116	4,164	4,116	4,093	4,164	4,116	4,164	4,093	4,258	4,187	4,258	4,187	3,196																	
radius in mm		174	174	176	174	173	176	174	176	173	180	177	180	177	177																	
<b>Cat. No.</b>		<b>blood collection / urine vessels</b>							<b>tubes with screw cap</b>					<b>5127<sup>24)</sup></b>																		
		+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 5220-A	+ 6319																	
<b>Adapter</b>														<table border="1"> <tr> <td colspan="2"><b>Vessels</b></td> <td></td> </tr> <tr> <td>capacity in ml</td> <td></td> <td>1-8</td> </tr> <tr> <td>Ø x L in mm</td> <td></td> <td>simple / multiple</td> </tr> <tr> <td>max. RCF<sup>2)</sup></td> <td></td> <td>2,744 / 4,069</td> </tr> <tr> <td>radius in mm</td> <td></td> <td>116 / 172</td> </tr> <tr> <td><b>Cat. No.</b></td> <td></td> <td><b>cyto chambers</b></td> </tr> </table>	<b>Vessels</b>			capacity in ml		1-8	Ø x L in mm		simple / multiple	max. RCF <sup>2)</sup>		2,744 / 4,069	radius in mm		116 / 172	<b>Cat. No.</b>		<b>cyto chambers</b>
<b>Vessels</b>																																
capacity in ml		1-8																														
Ø x L in mm		simple / multiple																														
max. RCF <sup>2)</sup>		2,744 / 4,069																														
radius in mm		116 / 172																														
<b>Cat. No.</b>		<b>cyto chambers</b>																														

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

- For cooled versions: Lowest temperature achievable with precooling and max. speed.
- Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
- Please remove the spacer.
- Max. permissible loading weight of carrier 5628: 800 g. The loading weight is the sum of the weight of the respective adapters, frames, the tubes and their contents.
- Two adapters can be placed on each bucket.
- At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



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



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



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



<b>Vessels</b>						
capacity in ml		40	160	200	200	200
Ø x L in mm		-	-	-	-	-
max. RCF <sup>2)</sup>		3,785 <sup>2)</sup>	3,785 <sup>2)</sup>	3,785 <sup>2)</sup>	3,785 <sup>2)</sup>	3,785 <sup>2)</sup>
radius in mm		160	160	160	160	160
<b>Cat. No.</b>		<b>Nunc®</b>	<b>Nunc®</b>	<b>Falcon®</b>	<b>Greiner®</b>	<b>Nunc®</b>

**Accommodated cell culture flask:**

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

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

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

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

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



<b>Rotor</b>	
max. RPM   max. RCF	4,600 min <sup>-1</sup>   3,832
max. capacity	20 plates
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>



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



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

<b>Removal frame</b>										
boring Ø x L in mm		-	-	-	-	-	-	-	-	-
plates / strips per rotor		20	16	12	4	4	4	8	4	48 x 8
<b>Cat. No.</b>		<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626 + 1485</b>	<b>4626 + 1485</b>

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

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



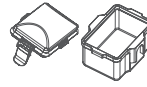
### Rotor

max. RPM   max. RCF	4,600 min <sup>-1</sup>   4,211
max. capacity	24 plates
run-up   run-down, braked in sec	90   95
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5699-R</b>



### Bucket

lid bioseal <sup>2)</sup>	5629
<b>Cat. No.</b>	<b>5628<sup>3)</sup></b>



### Plates

W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>	4,211	4,211	4,211	4,211	4,211	4,211	4,211	4,211	4,211
radius in mm	max. 178	max. 178	max. 178	max. 178	max. 178	max. 178	max. 178	max. 178	max. 178
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plate</b>	<b>PCR plate</b>	<b>PCR strips</b>



### Removal frame

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

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



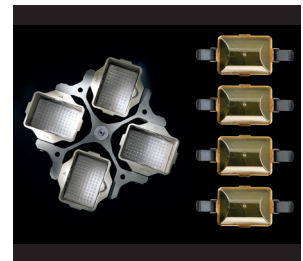
### Rotor

max. RPM   max. RCF	3,800 min <sup>-1</sup>   2,890
max. capacity	24 plates
run-up   run-down, braked in sec	61   57
angle   max. noise level	90°   57 dB (A)
temperature in °C <sup>1)</sup>	-4
<b>Cat. No.</b>	<b>5654</b>



### Bucket

lid bioseal <sup>2)</sup>	5629
<b>Cat. No.</b>	<b>5653</b>



### Plates

W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup>	2,890	2,890	2,890	2,890	2,890	2,890	2,890	2,890	2,890
radius in mm	max. 179	max. 179	max. 179	max. 179	max. 179	max. 179	max. 179	max. 179	max. 179
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plate</b>	<b>PCR plate</b>	<b>PCR strips</b>



### Removal frame

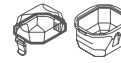
boring Ø x L in mm	-	-	-	-	-	-	-	-	-
plates / strips per rotor	24	20	16	4	4	4	8	4	48 x 8
<b>Cat. No.</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626 + 1485</b>	<b>4626 + 1485</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 5) Tested by TÜV in conformity with DIN EN 61010, section 2 - 020.  
 27) RCF values indicated refer only to rotor performance. The max. RCF for the accommodated cell culture flasks is 2,300.

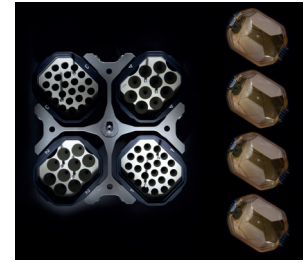
## SWING-OUT ROTOR, 4-PLACE | 5654



<b>Rotor</b>	
max. RPM   max. RCF	3,800 min <sup>-1</sup>   3,196
max. capacity	4 x 1,000 ml
run-up   run-down, braked in sec	61   57
angle   max. noise level	90°   58 dB (A)
temperature in °C <sup>1)</sup>	+3
<b>Cat. No.</b>	<b>5654</b>



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



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

<b>Adapter</b>															
boring Ø x L in mm	12.5x40	12.5x40	12.5x40	12.5x40	12.5x40	12.5x40	13.2x42.4	13.2x42.4	17.2x46.5	12.5x40	13.2x42.4	12.5x40	12.5x40	17.2x46.5	13.2x42.4
vessels per rotor	292	292	292	292	292	292	196	188	148	292	196	292	292	148	196
<b>Cat. No.</b>	<b>5684</b>	<b>5684</b>	<b>5684</b>	<b>5684</b>	<b>5684</b>	<b>5684</b>	<b>5674</b>	<b>5685</b>	<b>5682</b>	<b>5684</b>	<b>5674</b>	<b>5684</b>	<b>5684</b>	<b>5682</b>	<b>5674</b>

<b>Vessels</b>															
capacity in ml	7.5-8.5	9-10	10	1.6-5	4-7	4-7	4-7	8.5-10	10	5	15	50	175	175	200
Ø x L in mm	15x92	16x92	15x102	13x75	16x75	13x100	13x100	16x100	16x80	17x59	17x120	29x115	61x118	62x144	60x130
max. RCF <sup>2)</sup>	2,970	2,970	2,970	2,906	2,970	2,906	2,906	2,970	2,970	3,196	3,196	3,196	3,196	3,196	3,196
radius in mm	184	184	184	180	184	180	180	184	184	198	198	198	198	198	198
<b>Cat. No.</b>	<b>blood collection / urine vessels</b>										<b>-</b>	<b>tubes with screw cap</b>	<b>Falcon®</b>	<b>Nalgene®</b>	<b>Nunc®</b>

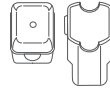
<b>Adapter</b>															
boring Ø x L in mm	17.2x46.5	17.2x46.5	17.2x46.5	13.2x42.4	17.2x46.5	13.2x42.4	13.2x42.4	17.2x46.5	17.2x46.5	17x42	17x60	30x60	62 x 100	62 x 100	62 x 100
vessels per rotor	148	148	148	196	148	196	188	148	148	80	96	40	8	8	8
<b>Cat. No.</b>	<b>5682</b>	<b>5682</b>	<b>5682</b>	<b>5674</b>	<b>5682</b>	<b>5674</b>	<b>5685</b>	<b>5682</b>	<b>5682</b>	<b>5688</b>	<b>5683</b>	<b>5686</b>	<b>5681</b>	<b>5681</b>	<b>5681</b>

<b>Vessels</b>									
capacity in ml	225	250	290	450	500	600	650	750	1,000
Ø x L in mm	61 x 137	61 x 122	62 x 137	97 x 110	96 x 147	93 x 134	97 x 139	97 x 152	99/126x140
max. RCF <sup>2)</sup>	3,196	3,196	3,196	3,196	3,196	3,196	3,196	3,196	3,196
radius in mm	198	198	198	198	198	198	198	198	198
<b>Cat. No.</b>	<b>Falcon®</b>	<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>	<b>4447</b>	<b>Corning®</b>	<b>0551<sup>24)</sup></b>	<b>0554<sup>24)</sup></b>	<b>0512<sup>24)</sup></b>	<b>-</b>

<b>Adapter</b>									
boring Ø x L in mm	62 x 100	62 x 100	62 x 100	98 x 100	98 x 100	98 x 100	98 x 100	98 x 100	100/127x68
vessels per rotor	8	8	8	4	4	4	4	4	4
<b>Cat. No.</b>	<b>5681</b>	<b>5681</b>	<b>5681</b>	<b>5687</b>	<b>5687</b>	<b>5687</b>	<b>5687</b>	<b>5687</b>	<b>5669</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3.10) When using this tubes, bucket 5651-A cannot be closed with lid 5652.  
 5) Tested by TÜV in conformity with DIN EN 61010, section 2 - 020.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

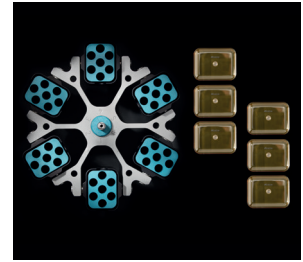
## SWING-OUT ROTOR, 6-PLACE | 4446



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



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



<b>Vessels</b>															
capacity in ml		1.5	2	1.5	2	3	5	6	7	9	15	25	50	100	100
Ø x L in mm		11 x 38	11 x 38	11 x 38	11 x 38	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	44 x 100	40 x 115
max. RCF <sup>2)</sup>	top / bottom	2,486 / 3,363	2,486 / 3,363	3,363	3,363	3,274	3,309	3,309	3,291	3,309	3,291	3,291	3,291	3,291	3,291
radius in mm	top / bottom	139 / 188	139 / 188	188	188	183	185	185	184	185	184	184	184	184	184
<b>Cat. No.</b>		<b>microliter tubes</b>				<b>tubes<sup>2)</sup></b>									

<b>Adapter</b>															
boring Ø x L in mm		12.5 x 42	12.5 x 42	11.5 x 50	11.5 x 50	11 x 44	12.5 x 42	12.5 x 42	12.5 x 86	16 x 50	17.5 x 86	26 x 86	36 x 86	45.5 x 86	42 x 86
vessels per rotor		240	240	96	96	120	120	120	120	72	72	30	12	6	6
<b>Cat. No.</b>		<b>5257</b>	<b>5257</b>	<b>5281</b>	<b>5281</b>	<b>5267</b>	<b>5227</b>	<b>5227</b>	<b>5247<sup>15)</sup></b>	<b>5264</b>	<b>5248<sup>15)</sup></b>	<b>5242</b>	<b>5243</b>	<b>5262</b>	<b>5249</b>

<b>Vessels</b>															
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		8 x 66	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100	
max. RCF <sup>2)</sup>		3,274	3,345	3,309	3,309	3,309	3,345	3,309	3,291	3,291	3,345	3,345	3,309	3,291	
radius in mm		183	187	185	185	185	187	185	184	184	187	187	185	184	
<b>Cat. No.</b>		<b>blood collection / urine vessels</b>													

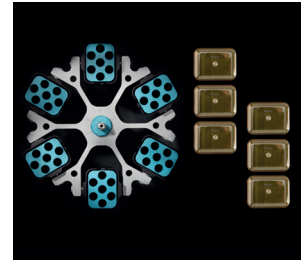
<b>Adapter</b>															
boring Ø x L in mm		11 x 44	13.5 x 52	12.5 x 42	16 x 50	12.5 x 42	13.5 x 52	16 x 50	17.6 x 86	17.6 x 86	13.5 x 52	13.5 x 52	16 x 50	17.5 x 86	
vessels per rotor		120	72	120	72	120	72	72	66	66	72	72	72	72	
<b>Cat. No.</b>		<b>5267</b>	<b>5268</b>	<b>5227</b>	<b>5264</b>	<b>5227</b>	<b>5268</b>	<b>5264</b>	<b>5258</b>	<b>5258</b>	<b>5268</b>	<b>5268</b>	<b>5264</b>	<b>5248</b>	

<b>Vessels</b>								
capacity in ml		15	30	50	12	30	50	1–8
Ø x L in mm		17 x 120	25 x 110	29 x 115	17 x 100	25 x 110	29 x 115	simple / multiple
max. RCF <sup>2)</sup>	top / bottom	3,434	3,291	3,291	3,434	3,291	3,291	2,290 / 3,291
radius in mm	top / bottom	192	184	184	192	184	184	128 / 184
<b>Cat. No.</b>		<b>tubes with screw cap</b>						<b>cyto chambers</b>

<b>Adapter</b>								
boring Ø x L in mm		17 x 90	26 x 86	30 x 86	17 x 90	26 x 86	36 x 86	-
vessels per rotor		42	30	12	42	30	12	12
<b>Cat. No.</b>		<b>6306</b>	<b>5266</b>	<b>5259</b>	<b>6306</b>	<b>5266</b>	<b>5243</b>	<b>5280</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.  
The max. RCF for glass tubes annotated with footnote 2) is 4,000.
- 3.11) When using these tubes, bucket 5051 cannot be closed with lid 5053.
- 15) With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

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



<b>Rotor</b>	
max. RPM   max. RCF	4,000 min <sup>-1</sup>   3,631
max. capacity	6 x 290 ml
run-up   run-down, braked in sec	45   55
angle   temperature in °C <sup>1)</sup>	90°   -3
<b>Cat. No.</b>	<b>4446</b>

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

<b>Vessels</b>																
capacity in ml		5	6	7	15	25	50	100	100	250	1.1-1.4	1.1-1.4	2.6-3.4	2.6-3.4	2.7-3	2.7-3
Ø x L in mm		12x75	12x82	12x100	17x100	24x100	34x100	44x100	40x115	65x115	8 x 66	8 x 66	13 x 65	13 x 65	11x66	11x66
max. RCF <sup>2)</sup>		3,542	3,542	3,542	3,488	3,434	3,488	3,488	3,488	3,631	3,488	3,077	3,488	3,077	3,488	3,077
radius in mm		198	198	198	195	192	195	195	195	203	195	172	195	172	195	172
<b>Cat. No.</b>		<b>tubes<sup>2)</sup></b>									<b>blood collection tubes / urine tubes</b>					

<b>Adapter</b>																
boring Ø x L in mm		12.8x45	12.8x45	13.2x82	17.5x60.7	25.5x82	35.5x82.5	45.5x85	42x85	66x103	13.5x60.7	13.2x54.5	13.5x60.7	13.2x54.5	13.5x60.7	13.2x54.5
vessels per rotor		72	72	72	48	24	6	6	6	6	48	72	48	72	48	72
<b>Cat. No.</b>		<b>5128</b>	<b>5128</b>	<b>5120</b>	<b>5136</b>	<b>5122</b>	<b>5124</b>	<b>5125</b>	<b>5126</b>	<b>1791</b>	<b>5137</b>	<b>5138</b>	<b>5137</b>	<b>5138</b>	<b>5137</b>	<b>5138</b>

<b>Vessels</b>																
capacity in ml		4.9	4-5.5	4.5-5	7.5-8.5	9-10	10	1.6-5	1.6-5	4-7	4-7	8	8.5-10	10	15	30
Ø x L in mm		13x90	15x75	11x92	15x92	16x92	15x102	13x75	13x75	16x75	13x100	16x125	16x100	16x80	17x120	25 x 110
max. RCF <sup>2)</sup>		3,488	3,488	3,542	3,488	3,488	3,488	3,488	3,077	3,488	3,542	3,542	3,488	3,488	3,631	3,434
radius in mm		195	195	198	195	195	195	195	172	195	198	198	195	195	203	192
<b>Cat. No.</b>		<b>blood collection tubes / urine tubes</b>											<b>tubes with screw cap</b>			

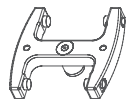
<b>Adapter</b>																
boring Ø x L in mm		13.5x60.7	17.5x60.7	13.2x82	17.5x60.7	17.5x60.7	13.5x60.7	13.2x54.5	12.8x60.7	13.2x82	17.5x82	17.5x60.7	17.5x60.7	17x85	25.5x82	
vessels per rotor		48	48	72	48	48	48	72	48	72	42	48	48	42	24	
<b>Cat. No.</b>		<b>5137</b>	<b>5136</b>	<b>5120</b>	<b>5136</b>	<b>5136</b>	<b>5136</b>	<b>5137</b>	<b>5138</b>	<b>5136</b>	<b>5120</b>	<b>5121</b>	<b>5136</b>	<b>5136</b>	<b>5129</b>	<b>5122</b>

<b>Vessels</b>								
capacity in ml		50	50	12	25	30	250	290
Ø x L in mm		29x115	29x115	17x100	25x90	25x110	61 x 122	62 x 137
max. RCF <sup>2)</sup>		3,631	3,560	3,542	3,363	3,434	3,631	3,631
radius in mm		203	199	198	188	192	203	203
<b>Cat. No.</b>		<b>tubes with screw cap</b>					<b>5127<sup>24)</sup></b>	<b>-<sup>24)</sup></b>

<b>Adapter</b>							
boring Ø x L in mm		30x85	30x99	17.5x82	26x73	25.5x82	66x103
vessels per rotor		12	12	42	18	24	6
<b>Cat. No.</b>		<b>5123</b>	<b>5135</b>	<b>5121</b>	<b>5134</b>	<b>5122</b>	<b>6319</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3.5) When using these tubes, bucket 5092 cannot be closed with lid 5053.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

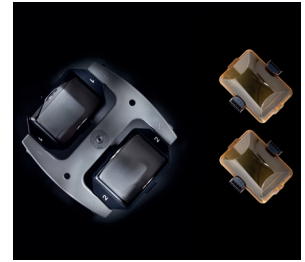
## SWING-OUT ROTOR, 2-PLACE | 5622



<b>Rotor</b>	
max. RPM ROTANTA 460   460 R	5,900 min <sup>-1</sup>   6,200 min <sup>-1</sup>
max. RCF	5,838   6,446
max. capacity	12 plates
run-up   run-down, braked in sec	50   52   32   39
angle   temperature in °C <sup>1)</sup>	90°   +10
<b>Cat. No.</b>	<b>5622</b>




<b>Bucket</b>	
lid bioseal <sup>5)</sup>	4627
<b>Cat. No.</b>	<b>5631</b>



<b>Plates</b>									
W x D x H in mm	128x86x15	128x86x17.5	128x86x22	128x86x44.5	128x86x46	128x86x83	84x59x11	124x82x20	-
capacity in ml	-	-	-	-	-	-	-	-	0.2
max. RCF <sup>2)</sup> ROTANTA 460   460 R	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446	5,838   6,446
radius in mm	150	150	150	150	150	150	150	150	150
<b>Cat. No.</b>	<b>MTP</b>	<b>MTP</b>	<b>CP</b>	<b>DWP</b>	<b>MS</b>	<b>QP</b>	<b>Microtest plate</b>	<b>PCR plate 96 wells</b>	<b>PCR strips</b>
<b>+</b>									
<b>Removal frame</b>									
boring Ø x L in mm	-	-	-	-	-	-	-	-	-
vessels per rotor	12	10	8	2	2	2	4	2	24 x 8
<b>Cat. No.</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626</b>	<b>4626 + 1485</b>	<b>4626 + 1485</b>

## SWING-OUT ROTOR, 4-PLACE | 4474



<b>Rotor</b>	
max. RPM   max. RCF	2,000 min <sup>-1</sup>   984
max. capacity	4 x 100 ml
run-up   run-down, braked in sec	17   20
angle   max. noise level	90°   46 dB (A)
temperature in °C <sup>1)</sup>	-8
<b>Cat. No.</b>	<b>4474</b>



<b>Bucket</b>	
<b>Cat. No.</b>	<b>4275</b>



<b>Vessels</b>					
capacity in ml	50	100	100	100	50
Ø x L in mm	45 x 130	58 x 161	44 x 168	37 x 200	36.5 x 185
max. RCF <sup>2)</sup>	984	984	961	961	912
radius in mm	220	220	215	215	204
<b>Cat. No.</b>	<b>ASTM 2.1)</b>	<b>ASTM 0528 2.1)</b>	<b>ASTM 2.1)</b>	<b>ASTM 0531 2.1)</b>	<b>Babcock</b>
<b>+</b>					
<b>Adapter</b>					
boring Ø x L in mm	-	-	-	-	-
vessels per rotor	4	4	4	4	4
<b>Cat. No.</b>	<b>4278-A</b>	<b>0771</b>	<b>4277</b>	<b>4276-B</b>	<b>0703-A</b>

1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2.1) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of vessels used should be verified with the individual manufacturers. The max. RCF for ASTM Tubes annotated with footnote 2) is 700.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

## — ANGLE ROTOR, 30-PLACE | 4489-A



### Rotor

max. RPM   max. RCF	15,000 min <sup>-1</sup>   24,400
max. capacity	30 x 2 ml
run-up   run-down, braked in sec	73   77
angle   temperature in °C <sup>1)</sup>	45°   +4
<b>Cat. No.</b>	<b>4489-A</b>

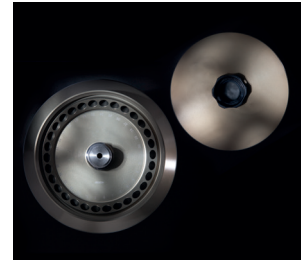


Lid bioseal<sup>5)</sup>  
and phenol-resistant

Cat. No.



**INCLUSIVE**



### Vessels

capacity in ml	0.2	0.4	0.5	0.8	1.5	2	0.5
Ø x L in mm	6x18	6x45	8x30	8x45	11x38	11x38	10.7x36
max. RCF <sup>2)</sup>	24,400	24,400	24,400	24,400	24,400	24,400	23,394
radius in mm	97	97	97	97	97	97	93
<b>Cat. No.</b>	<b>microliter tubes</b>						<b>Pediatric</b>



### Adapter

boring Ø x L in mm	6x40	6x40	8x40	8x40	10.2x19.3	11.2x40.1	11.2x40.1
vessels per rotor	30	30	30	30	30	30	15
<b>Cat. No.</b>	<b>2024</b>	<b>2024</b>	<b>2023</b>	<b>2023</b>	<b>2031<sup>7)</sup></b>	<b>-</b>	<b>0788</b>



## — ANGLE ROTOR, 6-PLACE | 5645



### Rotor

max. RPM	ROTANTA 460   460 R	8,500 min <sup>-1</sup>   9,500 min <sup>-1</sup>
max. RCF		11,228   14,025
max. capacity		6 x 250 ml
run-up   run-down, braked in sec		98 / 115   105 / 120
angle   temperature in °C <sup>1)</sup>		25°   +7
<b>Cat. No.</b>		<b>5645</b>



Lid bioseal<sup>5)</sup>

Cat. No.



**INCLUSIVE**



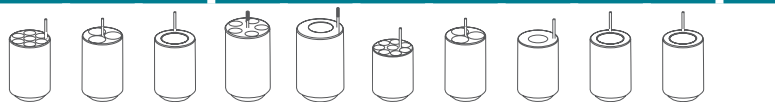
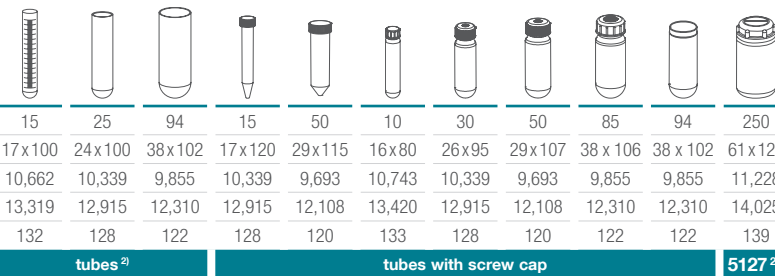
### Vessels

capacity in ml	15	25	94	15	50	10	30	50	85	94	250
Ø x L in mm	17x100	24x100	38x102	17x120	29x115	16x80	26x95	29x107	38 x 106	38 x 102	61x122
max. RCF <sup>2)</sup>	ROTANTA 460	10,662	10,339	9,855	10,339	9,693	10,743	10,339	9,693	9,855	11,228
max. RCF <sup>2)</sup>	ROTANTA 460 R	13,319	12,915	12,310	12,915	12,108	13,420	12,915	12,108	12,310	14,025
radius in mm	132	128	122	128	120	133	128	120	122	122	139
<b>Cat. No.</b>	<b>tubes<sup>2)</sup></b>			<b>tubes with screw cap</b>							<b>5127<sup>24)</sup></b>



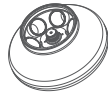
### Adapter

boring Ø x L in mm	17.6 x 83	26x80	38.6x88	17x106	30x100	16.6x70	26x80	29x90	38.6 x 88	38.6 x 88	61.5x109
vessels per rotor	42	18	6	30	6	48	18	6	6	6	6
<b>Cat. No.</b>	<b>5646</b>	<b>5642</b>	<b>5644</b>	<b>5637</b>	<b>5638</b>	<b>5641</b>	<b>5642</b>	<b>5643</b>	<b>5644</b>	<b>5644</b>	<b>-</b>



1) For cooled versions: Lowest temperature achievable with precooling and max. speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.  
 7) For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters. Cat. No. 2031.  
 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## — ANGLE ROTOR, 6-PLACE | 5615



### Rotor

max. RPM   max. RCF	11,500 min <sup>1</sup>   18,038
max. capacity	6x94 ml
run-up   run-down, braked in sec	66   68
angle   temperature in °C <sup>1)</sup>	45°   +6
<b>Cat. No.</b>	<b>5615</b>



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

<b>Cat. No.</b>	<b>INCLUSIVE</b>
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### Vessels

capacity in ml	0.5	1.5	2.0	3	15	25	50	94	7.5 – 8.5	9 – 10	10	8.5 – 10	5	15	50
Ø x L in mm	10.7x36	11x38	11x38	10x60	17x100	24x100	34x100	38x102	15x92	16x92	15x102	16x100	17x59	17x120	29x115
max. RCF <sup>2)</sup>	17,299	17,299	17,299	17,299	17,003	16,560	17,743	18,038	17,003	17,003	17,003	17,003	16,856	17,299	17,595
radius in mm	117	117	117	117	115	112	120	122	115	115	115	115	114	117	119
<b>Cat. No.</b>	<b>Pediatric</b>	<b>microliter tubes</b>			<b>tubes<sup>2)</sup></b>			<b>blood collection / urine tubes</b>			<b>-</b>	<b>tubes with screw cap</b>			



### Adapter

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

### Vessels

capacity in ml	10	30	50	85	94
Ø x L in mm	16x80	26x95	29x107	38 x 106	38 x 102
max. RCF <sup>2)</sup>	17,003	16,560	17,299	18,038	18,038
radius in mm	115	112	117	122	122
<b>Cat. No.</b>	<b>tubes with screw cap</b>				



### Adapter

boring Ø x L in mm	16.5x74	26x85	29x92	38.2x89.6	38.2x89.6
vessels per rotor	12	6	6	6	6
<b>Cat. No.</b>	<b>1448</b>	<b>1447</b>	<b>1446</b>	<b>-</b>	<b>-</b>

- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers.  
The max. RCF for glass tubes annotated with footnote 2) is 4,000.
- 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.
- 7) For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters. Cat. No. 2031.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



## CERTIFICATIONS / REGISTRATIONS

Product certification:



Product registration:



Company certifications:

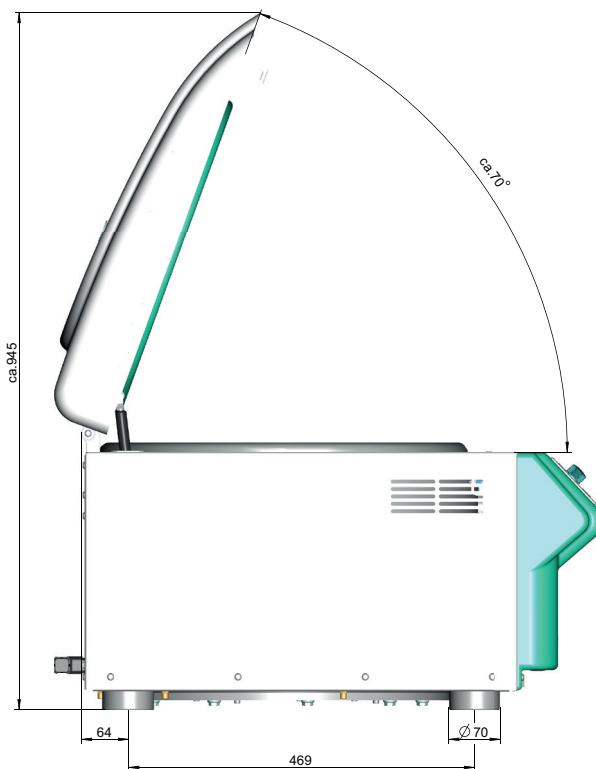


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## DIMENSIONS – ROTANTA 460



— DIMENSIONS – ROTANTA 460 R

