

Swing-out rotor, 4-place









↗ 90°

n = 4,500 min⁻¹
max. RCF 5,705

illustrated with carriers 4591-A
and inserts 4592-B

Cat. No. (without carriers) **4174**

capacity in ml	450	500	750
blood bags	triple	quadruple	single
Cat. No.	-	-	-
 carrier Cat. No. 4591-A			
Cat. No.	4598	4592-B	
boring Ø x L in mm	-		
blood bag systems per rotor	12 8		
max. RCF	6,498 5,705		
radius in mm	287 252		
run-up in sec	125 125		
run-down in sec, braked	197 197		
temperature in °C ¹⁾	+16 +10		

capacity in ml	100	2,000
	thrombocyte plate	180x150x100
Cat. No.	4597	0550
 carrier Cat. No. 4595-C ³⁵⁾		
Cat. No.	4596-A	-
boring Ø x L in mm	-	
qty. per rotor	24 16	6 4
max. RCF	312 272	3,848 3,369
radius in mm	279 243	281 246
run-up in sec	29 29	95 95
run-down in sec, braked	41 41	131 131
temperature in °C ¹⁾	+16 -8	+16 -8



carrier 4591-A
with insert 4592-B






carrier 4595-C, insert 4596-A
and 4 thrombocyte plates 4597




³⁰⁾ When using inserts 4529-AO, 4529-AM, 4529-AU at lower speeds (e.g. for processing thrombocytes), the blood bags may be hung up to avoid accumulation of erythrocytes. Hooks at three different heights (4529-AO upper position, 4529-AM middle position, 4529-AU low position) allow to meet specific customer requirements. Suspended blood bags, however, may not be exposed to a RCF exceeding 1,000.

³⁵⁾ Adapter for accommodating sample tubes and blood collection tubes in carrier 4595-C on request.

In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.

Swing-out rotors 4176/4174

capacity in ml	500	750	1,000
blood bags	quadruple	single	single
Cat. No.	-		-
 carrier Cat. No. 4523-A			
Cat. No.	4516-A		-
boring Ø x L in mm	-		-
blood bag systems per rotor	6 4		6 4
max. RCF	6,452 5,637		6,520 5,705
radius in mm	285 249		288 252
run-up in sec		125 125	
run-down in sec, braked		197 197	
temperature in °C ¹⁾		+9 +3	

capacity in ml	500	450
blood bags	quadruple	triple
Cat. No.	-	
 carrier Cat. No. 4547-B	 lid Cat. No. 5621	
Cat. No.	4548	
boring Ø x L in mm	-	
blood bag systems per rotor	6 4	
max. RCF	6,316 5,501	
radius in mm	279 243	
run-up in sec	125 125	
run-down in sec, braked	197 197	
temperature in °C ¹⁾	+9 -9	



carrier 4523-A
with insert 4516-A



carrier 4547-B
with insert 4548
and lid 5621






















¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

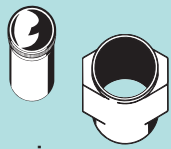






















In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



carrier 4579-A, illustrated with bucket 4255 with lid

Swing-out rotors 4176/4174

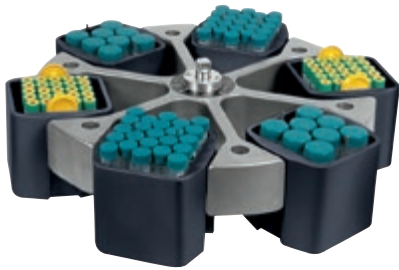
capacity in ml	5	7	9	10	15	25	50	100	2.6–3.4	2.7–3
Ø x L in mm	12x75	12x100	14x100	17x70	17x100	24x100	34x100	44x100	13x65	11x66
Cat. No.	0553²⁾	0578²⁾	0500²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾	blood collection tubes	
bucket Cat. No. 4255 										
carrier Cat. No. 4579-A										
Cat. No.	4433	4434	4434	4434	4438	4439	4442	4435	4435	4433
boring Ø x L in mm	13x58	13x58	17.5x53	17.5x53	26x72	36x79	45x78	13.5x58	13.5x58	13x58
tubes per rotor	180 120	180 120	114 76	114 76	42 28	24 16	12 8	126 84	126 84	180 120
max. RCF ²⁾	5,750 4,935	5,750 4,935	5,886 5,094	5,886 5,094	5,615 4,845	5,705 4,890	5,683 4,867	5,750 4,935	5,750 4,935	5,750 4,935
radius in mm	254 218	254 218	260 225	260 225	248 214	252 216	251 215	254 218	254 218	254 218
run-up in sec	125 125									
run-down in sec, braked	197 197									
temperature in °C ¹⁾	+4 -11									

capacity in ml	4–5.5	4.5–5	4.9	9–10	10	1.6–5	4–7	4–7	8.5–10	15	50
Ø x L in mm	15x75	11x92	13x90	16x92	15x102	13x75	13x100	16x75	16x100	17x120	29x115
Cat. No.	blood collection/urine tubes									0509	0513
bucket Cat. No. 4255 											
carrier Cat. No. 4579-A											
Cat. No.	4434	4433	4435	4434	4434	4435	4434	4434	4437	4437	4441
boring Ø x L in mm	17.5x53	13x58	13.5x58	17.5x53	17.5x53	13.5x58	17.5x53	17.5x53	17x88	17x88	30x87
tubes per rotor	114 76	180 120	126 84	114 76	114 76	126 84	114 76	114 76	72 48	72 48	30 20
max. RCF ²⁾	5,886 5,094	5,750 4,935	5,750 4,935	5,886 5,094	5,886 5,094	5,750 4,935	5,886 5,094	5,886 5,094	6,022 5,207	6,022 5,207	5,999 5,207
radius in mm	260 225	254 218	254 218	260 225	260 225	254 218	260 225	260 225	266 230	266 230	265 230
run-up in sec	125 125										
run-down in sec, braked	197 197										
temperature in °C ¹⁾	+4 -11										

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

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

³⁾ When using these tubes, bucket 4255 cannot be closed with its lid.



rotor 4176, illustrated with carriers 4522-A

Swing-out rotors 4176/4174

capacity in ml	25	30	10	250	290	650	750	1,000	1,000	175	175	
Ø x L in mm	25x90	25x110	16x80	61x122	62x137	97x139	97x152	96x176	98x138	61x118	61x144	
Cat. No.	-	-	-	5127^{2B)}	- ^{2B)}	0554^{2B)}	0512^{2B)}	4239^{2B)}	4255	Falcon®	Nalgene®	
bucket Cat. No. 4255												
carrier Cat. No. 4579-A												
Cat. No.	4438		4434	4443					-	4440	4430	
boring Ø x L in mm	26x72		17.5x53	62x92		98x138			-	-		
tubes per rotor	42 28		114 76	6 4		6 4						
max. RCF ²⁾	5,818 5,026		5,886 5,094	6,113 5,320	6,113 5,320	6,294 5,501						
radius in mm	257 222		260 225	270 235	270 235	278 243						
run-up in sec						125 125						
run-down in sec, braked						197 197						
temperature in °C ¹⁾						+4 -11						

capacity in ml	200	225	250	500
Ø x L in mm	60x130	61x137	60x162	96x147
Cat. No.	Nunc®	Falcon®	Corning®	
bucket Cat. No. 4255				
carrier Cat. No. 4579-A				
Cat. No.	4430	4440	4430	4449
boring Ø x L in mm	-			
tubes per rotor	6 4			
max. RCF ²⁾	6,294 5,501			
radius in mm	278 243			
run-up in sec	125 125			
run-down in sec, braked	197 197			
temperature in °C ¹⁾	+4 -11			


























^{2B)} At temperatures of over +40 °C and/or when not filled to capacity, bottles may warp during centrifugation.
























In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



carrier 4522-A with adapters for Falcon® tubes, blood collection tubes and bottles

Swing-out rotors 4176/4174

capacity in ml	4	5	6	7	12	15	25	50	100	2.6–3.4	2.7–3	4–5.5
Ø x L in mm	10x88	12x75	12x82	12x100	16x101	17x100	24x100	34x100	40x115	13x65	11x66	15x75
Cat. No.	-	0553 ²⁾	0501 ²⁾	0578 ²⁾	-	0518 ²⁾	0519 ²⁾	0521 ²⁾	0523 ²⁾	blood collection tubes		
 carrier Cat. No. 4522-A												
												
Cat. No.	4224	4213-93	4213	4223	4214	4215	4216	4218	4222-93	4213-93	4214-93	
boring Ø x L in mm	11x74	12.5x36	12.5x74	16x74	17.5x74	26x74	35x74	41.5x74	13.2x36	12.5x36	17.5x36	
tubes per rotor	378 252	288 192		150 100	180 120	66 44	36 24	24 16	180 120	288 192	180 120	
max. RCF ²⁾						5,818 5,003						
radius in mm						257 221						
run-up in sec						125 125						
run-down in sec, braked						197 197						
temperature in °C ¹⁾						+14 -1						

capacity in ml	4.5–5	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8	8.5–10	15	50	
Ø x L in mm	11x92	15x92	16x92	15x102	13x75	16x75	13x100	16x125	16x100	17x120	29x115	
Cat. No.	blood collection / urine tubes									0509	0513	
 carrier Cat. No. 4522-A												
												
Cat. No.	4213	4214	4220	4214	4222-93	4214-93	4222	4223	4214	4232	4245-A	
boring Ø x L in mm	12.5x74	17.5x74			13.2x36	17.5x36	13.2x74	16x74	17.5x74	17x70	30x70	
tubes per rotor	288 192	180 120	96 64	180 120			150 100	180 120	138 92	48 32		
max. RCF ²⁾						5,818 5,003					5,999 5,184	
radius in mm						257 221					265 229	
run-up in sec						125 125						
run-down in sec, braked						197 197						
temperature in °C ¹⁾						+14 -1						




















¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.






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

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

^{2b)} At temperatures of over +40 °C and/or when not filled to capacity, bottles may warp during centrifugation.

Swing-out rotors 4176/4174

capacity in ml	12	25	30		50	250	290	600	650	750	750	
Ø x L in mm	17x100	25x90	25x110		29x115	61x122	62x137	93x134	97x139	97x152	96x135	
Cat. No.	-	-	-	-	-	5127 ²⁸⁾	- ²⁸⁾	0551 ²⁸⁾	0554 ²⁸⁾	0512 ²⁸⁾	4234-A	
 carrier Cat. No. 4522-A												
												
Cat. No.	4220	4241	4215		4249	4238	4233	4258				
boring Ø x L in mm	17.5x74	26x73	26x74		30x96	62x90	94x105	97.5x105				
tubes per rotor	96 64	48 32	66 44		36 24	6 4						
max. RCF ²⁾	5,818 5,003				5,909 5,094	5,818 5,003		5,999 5,184				
radius in mm	257 221				261 225	257 221		265 229				
run-up in sec						125 125						
run-down in sec, braked						197 197						
temperature in °C ¹⁾						+14 -1						

capacity in ml	250	500
Ø x L in mm	60x162	96x147
Cat. No.	Corning®	Corning®
 carrier Cat. No. 4522-A		
		
Cat. No.	6322	4258 + 4449
boring Ø x L in mm	61x125	97.5x105
tubes per rotor	6 4	
max. RCF ²⁾	5,818 5,003	5,999 5,184
radius in mm	257 221	265 229
run-up in sec	125 125	
run-down in sec, braked	197 197	
temperature in °C ¹⁾	+14 -1	

Centrifugation of toxic or infectious samples:

Bucket 5052 with lid 5057 is available for use with hazardous samples. Lid 5057 provides aerosol-proof containment⁵⁾ and thus protects both the user and the environment against contamination.

Buckets 5052 and 4522-A have the same internal dimensions. This allows centrifugation of the adapters and sample tubes from the 4522-A bucket in bucket 5052 under the same conditions without the development of aerosols. Only if adapter 6322 is used will it not be possible to close bucket 5052 with lid 5057.



lid 5057

In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



rotor 4176, illustrated with carriers 4547-B and lids 5621

Swing-out rotors 4176/4174

capacity in ml	5	7	9	10	15	25	50	100	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9
Ø x L in mm	12x75	12x100	14x100	17x70	17x100	24x100	34x100	44x100	13x65	11x66	15x75	11x92	13x90
Cat. No.	0553²⁾	0578²⁾	0500²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0526²⁾	blood collection / urine tubes				
lid Cat. No. 5621													
carrier Cat. No. 4547-B													
Cat. No.	4433	4434	4438	4439	4442	4435	4433	4434	4433	4434	4433	4435	
boring Ø x L in mm	13x58	17.5x53	26x72	36x79	45x78	13.5x58	13x58	17.5x53	13x58	13.5x58	17.5x53	13x58	13.5x58
tubes per rotor	180 120	114 76	42 28	24 16	12 8	126 84	180 120	114 76	180 120	114 76	180 120	126 84	
max. RCF ²⁾	5,841 5,026	5,977 5,184	5,728 4,913	5,773 4,981	5,750 4,958	5,841 5,026	5,977 5,184	5,841 5,026	5,977 5,184	5,841 5,026	5,977 5,184	5,841 5,026	
radius in mm	258 222	264 229	253 217	255 220	254 219	258 222	264 229	258 222	264 229	258 222	264 229	258 222	
run-up in sec	125 125												
run-down in sec, braked	197 197												
temperature in °C ¹⁾	+9 -9												

capacity in ml	7.5–8.5	9–10	10	1.6–5	4–7	4–7	8	8.5–10	15	50	25	30	10
Ø x L in mm	15x92	16x92	15x102	13x75	13x100	16x75	16x125	16x100	17x120	29x115	25x90	25x110	16x80
Cat. No.	blood collection / urine tubes								0509	0513	-	-	-
lid Cat. No. 5621													
carrier Cat. No. 4547-B													
Cat. No.	4434	4435	4434	4437	4441	4438	4434						
boring Ø x L in mm	17.5x53	13.5x58	17.5x53	17x88	30x87	26x72	17.5x53						
tubes per rotor	114 76	126 84	114 76	72 48	30 20	42 28	114 76						
max. RCF ²⁾	5,977 5,184	5,841 5,026	5,977 5,184	6,090 5,298	5,909 5,117	5,977 5,184							
radius in mm	264 229	258 222	264 229	269 234	261 226	264 229							
run-up in sec	125 125												
run-down in sec, braked	197 197												
temperature in °C ¹⁾	+9 -9												

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.




















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

^{2b)} At temperatures of over +40 °C and/or when not filled to capacity, bottles may warp during centrifugation.



rotor 4176, illustrated with carriers 4547-B and lids 5621

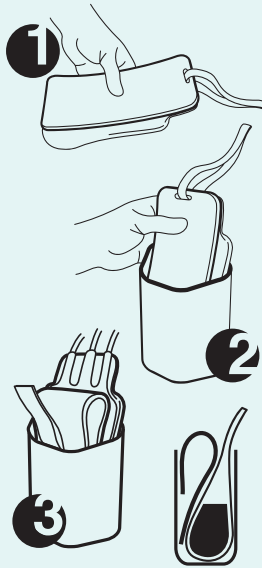
Swing-out rotors 4176/4174

capacity in ml	250	290	650	750	1,000	175	175	200	225	250	500
Ø x L in mm	61 x 122	62 x 137	97 x 139	97 x 152	96 x 176	61 x 118	61 x 144	60 x 130	61 x 137	60 x 162	96 x 147
Cat. No.	5127 ^{2B)}	- ^{2B)}	0554 ^{2B)}	0512 ^{2B)}	4239 ^{2B)}	Falcon [®]	Nalgene [®]	Nunc [®]	Falcon [®]	Corning [®]	
lid Cat. No. 5621   carrier Cat. No. 4547-B											
											
Cat. No.	4443	-				4440	4430	4440	4440	4430	4449
boring Ø x L in mm	62 x 92		98 x 141			-					
tubes per rotor						6 4					
max. RCF ²⁾	6,203 5,411		6,384 5,592								
radius in mm	274 239		282 247								
run-up in sec						125 125					
run-down in sec, braked						197 197					
temperature in °C ¹⁾						+9 -9					

Accessories for centrifuging blood bag systems

HettLiner

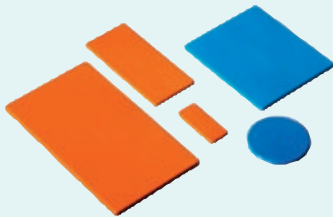
Blood bags can be secured in adapters using HettLiners. After centrifuging, they can be removed by their loops without disturbing the sediment.



Cat. No. 4564

Set of compensatory weights

If blood bag carriers are not filled to the same weight, then compensatory weights can be used to make up the difference.



Cat. No. 4566

40 balancing weights, 2 g each
20 balancing weights, 5 g each
10 balancing weights, 10 g each
5 balancing weights, 20 g each
5 balancing weights, 40 g each

Loading aid

Quick and easy packing of blood bag systems with loading aid



Cat. No. 4509

Balancing inserts

In case there are not enough blood bag systems to occupy every carrier of the rotor, empty carriers can be filled with balancing inserts. Taring weights supplied with the inserts may be used for fine balancing.



Cat. No. 4584-A (for insert 4559-A)

Cat. No. 4587-A (for insert 4592-B)

Cat. No. 4589-A (for insert 4516-A)