




# ROTO SILENTA 630 RS

## Blood bags and much more

Now even safer and with smoother, quieter operation. Thanks to its improved running performance, the ROTO SILENTA 630 RS guarantees best separating results with blood bags, bottles up to 2,000 ml, tubes and blood collection tubes. Every commercial blood bag system can be accommodated.

Loading the carriers and inserts is convenient and easy. Wind shielding the rotor is not necessary.



TECHNOLOGY		ROTO SILENTA 630 RS <sup>&gt;1</sup>	
Floorstanding centrifuge, without rotor		cooled	
Power supply*)	400 V 3~ + N	208 – 220 V +6 / -10 % 3~ (+ N) + PE, with internal transformer	
Frequency	50 – 60 Hz	50 – 60 Hz	
Consumption	9,700 VA	9,000 VA	
Emission, Immunity	EN / IEC 61326-1, class B		
 Max. capacity	6 x 2.000 ml		
 Max. RPM (speed)	6,000 min <sup>-1</sup>		
 Max. RCF	6,520		
Running time	1 sec – 999 min : 59 sec, ∞ continuous run		
Dimensions (H x W x D)	973 x 813 x 1,015 mm		
Weight	approx. 355 kg	approx. 401 kg	
<b>Refrigeration</b>			
Temperature control, infinitely variable	from -20 to +40 °C		
<b>Cat. No.</b>	<b>5005</b>	<b>5005-08</b>	

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

<sup>>)</sup> For a list of further versions of this model, please refer to page 12.

# ROTORS

Swing-out rotor, 6-place











illustrated with carriers 4591-A and inserts 4592-B

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

∠ 90° n = 4,500 min<sup>-1</sup> max. RCF 6,520

**Cat. No. (without carriers) 4176**

capacity in ml	500	500	500	750
<b>blood bags</b>	quadruple	quadruple	quadruple	single
<b>Cat. No.</b>	-	-	-	-
				
<b>Carrier</b> Cat. No. <b>4524-A</b>				
<b>Cat. No.</b>	<b>4525-A</b>	<b>4529<sup>30)</sup>-AO,-AM,-AU</b>	<b>4592-B</b>	
boring Ø x L in mm	-			
blood bag systems per rotor	12   8			
max. RCF	6,498   5,683			
max. RCF <sup>30)</sup>	1,000   1,000			
radius in mm	287   251			
run-up in sec	125   125			
run-down in sec, braked	197   197			
temperature in °C <sup>1)</sup>	+16   +10			

capacity in ml	450
<b>blood bags</b>	quadruple
<b>Cat. No.</b>	-
	
<b>Carrier</b> Cat. No. <b>4546-A</b>	
<b>Cat. No.</b>	<b>4559-A</b>
boring Ø x L in mm	-
blood bag systems per rotor	12   8
max. RCF	6,271   5,479
radius in mm	277   242
run-up in sec	125   125
run-down in sec, braked	197   197
temperature in °C <sup>1)</sup>	+13   0



carrier 4524-A with insert 4525-A



insert 4529-A in 4529-AM version (hooks for suspending the blood bags are fixed in middle position)



carrier 4546-A with insert 4559-A

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

<sup>30)</sup> 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.






## Swing-out rotor, 4-place






illustrated with carriers 4591-A  
and inserts 4592-B

∠ 90° n = 4,500 min<sup>-1</sup> max. RCF 5,705

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

capacity in ml	450	500	750
<b>blood bags</b>	triple	quadruple	single
<b>Cat. No.</b>	-	-	-
 <b>Carrier</b> Cat. No. <b>4591-A</b>	 	 	
<b>Cat. No.</b>	<b>4598</b>	<b>4592-B</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 <sup>1)</sup>	+16	+10	

capacity in ml	max. 1,600 <sup>40)</sup>	2,000
H x W x D in mm	-	180 x 150 x 100
<b>Cat. No.</b>	-	<b>0550</b>
 <b>Carrier</b> Cat. No. <b>4595-C</b> <sup>35)</sup>		
<b>Cat. No.</b>	<b>4596-A</b>	-
H x W x D in mm	146 x 145 x 91	-
blood bag systems per rotor	6   4	6   4
max. RCF	3,821   3,328	3,848   3,369
radius in mm	279   243	281   246
run-up in sec	125   125	29   95
run-down in sec, braked	197   197	41   131
temperature in °C <sup>1)</sup>	+16   -8	+16   -8



carrier 4591-A  
with insert 4592-B



carrier 4595-C with insert 4596-A





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




<sup>40)</sup> Dependent on the material to be centrifuged.

# ROTORS

Swing-out rotors 4176 / 4174

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

capacity in ml	500	750	1,000
<b>blood bags</b>	quadruple	single	single
<b>Cat. No.</b>	-		-
 <b>Carrier</b> Cat. No. <b>4523-A</b>			
<b>Cat. No.</b>	<b>4516-A</b>		-
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 <sup>1)</sup>		+9	+3

capacity in ml	500	450
<b>blood bags</b>	quadruple	triple
<b>Cat. No.</b>	-	
lid Cat. No. <b>5621</b>  <b>Carrier</b> Cat. No. <b>4547-B</b>		
<b>Cat. No.</b>	<b>4548</b>	
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 <sup>1)</sup>	+9	-9



carrier 4523-A  
with insert 4516-A



carrier 4547-B with insert 4548  
and lid 5621

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

## 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)

# ROTORS

Swing-out rotors 4176 / 4174



carrier 4579-A, illustrated with bucket 4255 with lid

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

capacity in ml	5	7	9	15	25	50	100	2.6–3.4	2.7–3					
Ø x L in mm	12x75	12x100	14x100	17x100	24x100	34x100	44x100	13x65	11x66					
Cat. No.	0553 <sup>2)</sup>	0578 <sup>2)</sup>	0500 <sup>2)</sup>	0518 <sup>2)</sup>	0519 <sup>2)</sup>	0521 <sup>2)</sup>	0526 <sup>2)</sup>	blood collection tubes						
bucket Cat. No. 4255														
Carrier Cat. No. 4579-A														
Cat. No.	4433		4434		4438	4439	4442	4435		4433				
boring Ø x L in mm	13x58		17.5x53		26x72	36x79	45x78	13.5x58		13x58				
tubes per rotor	180	120	114	76	42	28	24	16	12	8	126	84	180	120
max. RCF <sup>2)</sup>	5,750	4,935	5,886	5,094	5,615	4,845	5,705	4,890	5,683	4,867	5,750	4,935	5,750	4,935
radius in mm	254	218	260	225	248	214	252	216	251	215	254	218	254	218
run-up in sec							125	125						
run-down in sec, braked							197	197						
temperature in °C <sup>1)</sup>							+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		4435		4434	4437	4441					
boring Ø x L in mm	17.5x53		13x58	13.5x58	17.5x53		13.5x58		17.5x53	17x88	30x87					
tubes per rotor	114	76	180	120	126	184	114	76	126	84	114	76	72	48	30	20
max. RCF <sup>2)</sup>	5,886	5,094	5,750	4,935	5,886	5,094	5,750	4,935	5,886	5,094	6,022	5,207	5,999	5,207	5,999	5,207
radius in mm	260	225	254	218	260	225	254	218	260	225	266	230	266	230	265	230
run-up in sec							125	125								
run-down in sec, braked							197	197								
temperature in °C <sup>1)</sup>							+4	-11								

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

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

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

## Swing-out rotors 4176 / 4174



rotor 4176, illustrated with carriers 4522-A

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 <sup>2B)</sup>	- <sup>2B)</sup>	0554 <sup>2B)</sup>	0512 <sup>2B)</sup>	4239 <sup>2B)</sup>	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	6   4	6   4	6   4				
max. RCF <sup>2)</sup>	5,818   5,026	5,886   5,094	6,113   5,320	6,113   5,320	6,294   5,501	6,294   5,501	6,294   5,501				
radius in mm	257   222	260   225	270   235	270   235	278   243	278   243	278   243				
run-up in sec			125   125	125   125							
run-down in sec, braked			197   197	197   197							
temperature in °C <sup>1)</sup>			+4   -11	+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	6   4	
max. RCF <sup>2)</sup>		6,294   5,501	6,294   5,501	
radius in mm		278   243	278   243	
run-up in sec		125   125	125   125	
run-down in sec, braked		197   197	197   197	
temperature in °C <sup>1)</sup>		+4   -11	+4   -11	

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

# ROTORS

Swing-out rotors 4176 / 4174



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

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
























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 <sup>2)</sup>	0501 <sup>2)</sup>	0578 <sup>2)</sup>	-	0518 <sup>2)</sup>	0519 <sup>2)</sup>	0521 <sup>2)</sup>	0523 <sup>2)</sup>	blood collection tubes		
 <b>Carrier</b> 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 <sup>2)</sup>					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 <sup>1)</sup>					+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
 <b>Carrier</b> 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 <sup>2)</sup>					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 <sup>1)</sup>					+14	-1					

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.  
<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.  
<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.  
<sup>2B)</sup> 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	
<b>Cat. No.</b>	-	-	-	-	-	5127 <sup>28)</sup>	- <sup>28)</sup>	0551 <sup>28)</sup>	0554 <sup>28)</sup>	0512 <sup>28)</sup>	4234-A
 <b>Carrier</b> Cat. No. 4522-A											
											
<b>Cat. No.</b>	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 <sup>2)</sup>	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 <sup>1)</sup>					+14	-1					

capacity in ml	250	500
Ø x L in mm	60x162	96x147
<b>Cat. No.</b>	<b>Corning®</b>	<b>Corning®</b>
 <b>Carrier</b> Cat. No. 4522-A		
		
<b>Cat. No.</b>	6322	4258 + 4449
boring Ø x L in mm	61x125	97.5x105
tubes per rotor	6	4
max. RCF <sup>2)</sup>	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 <sup>1)</sup>	+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 containment<sup>5)</sup> 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

# ROTORS

Swing-out rotors 4176 / 4174



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

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

capacity in ml	5	7	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	12x75	12x100	14x100	17x100	24x100	34x100	44x100	13x65	11x66	15x75	11x92	13x90
<b>Cat. No.</b>	<b>0553<sup>2)</sup></b>	<b>0578<sup>2)</sup></b>	<b>0500<sup>2)</sup></b>	<b>0518<sup>2)</sup></b>	<b>0519<sup>2)</sup></b>	<b>0521<sup>2)</sup></b>	<b>0526<sup>2)</sup></b>	<b>blood collection / urine tubes</b>				
lid Cat. No. <b>5621</b>												
<b>Carrier</b> Cat. No. <b>4547-B</b>												
<b>Cat. No.</b>	<b>4433</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>		
boring Ø x L in mm	13x58	17.5x53	26x72	36x79	45x78	13.5x58	13x58	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	126   84		
max. RCF <sup>2)</sup>	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		
radius in mm	258   222	264   229	253   217	255   220	254   219	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 <sup>1)</sup>						+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
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>							<b>0509</b>	<b>0513</b>	-	-	-	-
lid Cat. No. <b>5621</b>													
<b>Carrier</b> Cat. No. <b>4547-B</b>													
<b>Cat. No.</b>	<b>4434</b>	<b>4435</b>	<b>4434</b>	<b>4437</b>	<b>4441</b>	<b>4438</b>	<b>4434</b>						
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 <sup>2)</sup>	5,977   5,184	5,841   5,026	5,977   5,184	6,090   5,298	5,909   5,117	5,977   5,184	5,977   5,184						
radius in mm	264   229	258   222	264   229	269   234	261   226	264   229	264   229						
run-up in sec							125   125						
run-down in sec, braked							197   197						
temperature in °C <sup>1)</sup>							+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 <sup>2)</sup> is 4,000.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2 - 020.

## Swing-out rotors 4176 / 4174



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

## Angle rotor, 6-place



with bio-containment<sup>5)</sup>

∠ 25° n = 6,000 min<sup>-1</sup>  
Cat. No. 4570

max. RCF 5,594

capacity in ml	250	290	650	750	1.000	175	175	200	225	250	500
Ø x L in mm	61x122	62x137	97x139	97x152	96x176	61x118	61x144	60x130	61x137	60x162	96x147
Cat. No.	5127 <sup>2B)</sup>	- <sup>2B)</sup>	0554 <sup>2B)</sup>	0512 <sup>2B)</sup>	4239 <sup>2B)</sup>	Falcon®	Nalgene®	Nunc®	Falcon®	Corning®	
lid Cat. No. 5621											
<b>Carrier</b> Cat. No. 4547-B											
Cat. No.	4443	-	-	-	-	4440	4430	4440	4430	4440	4449
boring Ø x L in mm	62x92		98x141								
tubes per rotor						6	4				
max. RCF <sup>2)</sup>	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 <sup>1)</sup>						+9	-9				

capacity in ml	15	25	15	50	94	10	30	50	85	94	250
Ø x L in mm	17x100	24 x 100	17 x 120	29 x 115	38 x 102	16 x 80	26 x 95	29 x 107	38 x 106	38 x 102	61 x 122
Cat. No.	0518 <sup>2)</sup>	0519 <sup>2)</sup>	0509	0513	0549	-	0545	0546	0547	0538 <sup>13)</sup>	5127 <sup>2B)</sup>
lid with bio-containment <sup>5)</sup> incl.											
<b>Rotor</b> Cat. No. 4570											
Cat. No.	5646	5642	5637	5638	5644	5641	5642	5643	5644	-	
boring Ø x L in mm	17,6 x 83	26 x 80	17 x 106	30 x 100	38,6 x 88	16,6 x 70	26 x 80	29 x 90	38,6 x 88	61,5 x 109	
tubes per rotor	42	18	30	6	6	48	18	6	6	6	
max. RCF <sup>2)</sup>	5.315	5.152	5.152	4.830	4.910	5.353	5.152	4.830	4.910	5.594	
radius in mm	132	128	128	120	122	133	128	120	122	139	
run-up in sec						64					
run-down in sec, braked						69					
temperature in °C <sup>1)</sup>						-16					

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 110 mm.

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