



**ROTO SILENTA 630 RS**  
Floorstanding Centrifuge  
cooled

# ROTO SILENTA 630 RS

The ROTO SILENTA 630 RS offers outstanding performance in fast, efficient centrifuging of blood bags and large sample volumes. It accommodates a maximum capacity of 6 x 2,000 ml or 12 x 750 ml blood bag systems.

Excellent stability even at high speeds makes the ROTO SILENTA 630 RS a rugged and reliable centrifuging partner. When in use, the cooled large-volume centrifuge rests on high-quality vibration dampers.

To ensure mobility, it is supplied with castors onto which the ROTO SILENTA 630 RS can be lowered, as required.

Optimal running performance guarantees best separation results. The low noise level makes agreeable working conditions. The extensive range of carriers and adapters for blood collection tubes, standard tubes, bottles and various blood bag systems can be centrifuged in one rotor – changing rotors is not necessary.

The Hettich data report system HettInfo as well as customised solutions enable GMP performance and meet the high standards of user safety and product quality in blood banks and transfusion centres.

## PERFORMANCE

- High RCF without windshield
  - up to 6,520 x g at 4,500 min<sup>-1</sup>.
- High capacity
  - max. 6 x 2,000 ml or 12 x 750 ml blood bag systems
- Efficient cooling
  - controllable from – 20 °C to + 40 °C (with model 5005-50 from – 20 °C to + 90 °C).
  - Precooling is effected by programming one of the 89 programmable memories.

## TECHNOLOGY

- Frequency-controlled drive, virtually maintenance-free
- Powered lid locking
- Ergonomic rail-grip for easy lid closing
- Large viewing port in the lid for optical speed control with a stroboscope

## SAFETY

- Imbalance switch-off
- Rotor recognition
- Key-operated switch for locking and protecting programs
- Lid locking and holding
- Lid dropping protection
- Motor and chamber overheating protection
- Torsion-free steel chassis
- Smooth, easy to clean surfaces

ROTO SILENTA 630 RS with bar code unit (option), dimensions (H x W x D):  
973 x 813 x 1,015 mm (without bar code unit),  
973 x 888 x 1,015 mm (with bar code unit).  
On request, the scanner can also be mounted on the left panel.

**Cat.-No. 5005**



## CONTROL PANEL

### ROTO SILENTA 630 RS with S control panel to satisfy the highest standards

Numerous functions  
with just a few user operations

Whether entering single parameters or chaining complete running programs, the clearly arranged display with its selector keys and adjusting knob provides for extreme user-friendliness. The controls and displays of the ROTO SILENTA 630 RS are arranged according to ergonomic aspects. The large display is clearly arranged and well readable. During centrifugation the actual values of all parameters are indicated.

**For special routine or scientific applications the ROTO SILENTA 630 RS can be fitted with the following optional equipment:**

**Centrifuging data report system HettlInfo**  
details on next page

#### **Visual indication when the rotor is stationary**

for additional information on the completion of a centrifuging cycle.

#### **Program interlocking**

to combine several centrifugation runs.

#### **Second independent tachometer system**

for calibrating the speed measuring instrument as required by quality management systems.



ROTO SILENTA 630 RS control panel: Entry of the parameters is exact, fast and easy with selector keys on the foil keypad and the adjusting knob.

## KEYPAD

**START** Starts centrifugation run, short-time centrifugation.

Pre-cooling can be assigned to one program location.

**STOP** Stops centrifugation manually.

**PROG** Selects the program.  
89 programmable memories are available.

**STO** Stores entries, changes and programmes.

**RCL** Calls up the selected program.

**JRCF** The integral over the RCF indicates the accumulated RCF acting on the centrifuged material up to that particular time.

## PARAMETER INPUT

 Entry of the temperature from  $-20\text{ °C}$  to  $+40\text{ °C}$  in increments of  $1\text{ °C}$ .  
Entry of the centrifuging radius in mm.

 Entry of the run-up time in ramps 1–9 or in min : sec.  
Entry of the run-down time in ramps R 1–9 and B 1–9 or in min : sec.  
Also unbraked run-down (setting 0), or a brake force cut-off speed can be selected.

**RCF** Entry of the RCF in increments of 1.

**n** Entry of the speed in increments of 10.

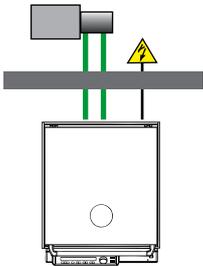
**t** Entry of the centrifugation time (max. 999 min : 59 sec) or continuous operation.

# OPTIONS

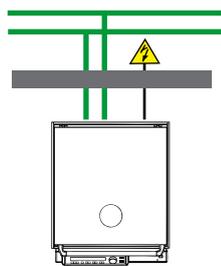
## Cool solutions under any conditions

The ROTO SILENTA 630 RS adapts to the most diverse local conditions and requirements. Depending on fittings, it can be connected to

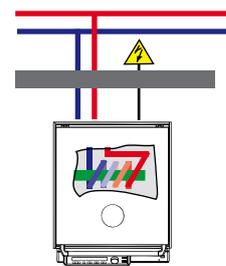
an external cooling unit



an external cooling medium circuit



an external coolant circuit, cooling unit integrated



green = cooling medium (R 404A), blue/red = coolant

Of course, a stand-alone model is also available: an air-cooled standard version supplied with an integrated cooling unit.

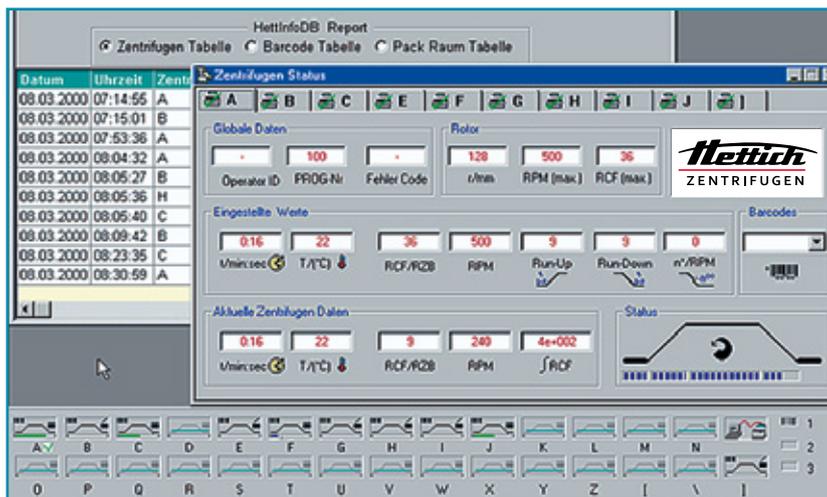
The housing of all versions can be insulated for use under clean-room conditions.

Additionally, the pedestal can be covered and sealed to the floor. External connections can also be mounted through the bottom of the centrifuge.

**In addition to the above mentioned centrifuge models, we also manufacture special versions and accessories tailored to customer requirements.**

## Transparent and reliable processes thanks to HettInfo

With the data documentation system HettInfo, up to 29 centrifuges can be controlled by a single PC. A light conducting cable connects the centrifuge to a BUS system. A PC with a RS 232 interface records the selected data of the centrifuge.



Packing room with external bar code unit



Barcode-Kit ROTO SILENTA 630 RS



Centrifugation programs and the operator code can also be scanned-in by barcode.

HettInfo registers all centrifugation data. In addition to the date, the end of the centrifugation run, the program number and the temperature, further parameters can be selected or deselected by the user. Detailed information is available in our HettInfo brochure. Please ask for it.



Data log

## MODEL VARIANTS AND ROTORS

### Model variants ROTO SILENTA 630 RS

Variant	Power supply <sup>1)</sup>	Frequency	Cat. No.
With connection for nitrogen (N <sub>2</sub> ) flushing	400 V 3~ +N	50–60 Hz	<b>5005-20</b>
Heating/cooling version up to + 90 °C	400 V 3~ +N	50–60 Hz	<b>5005-50</b>
Brine cooling	400 V 3~ +N	50–60 Hz	<b>5005-60</b>
GMP, internal cooling unit with water-cooled condenser	400 V 3~ +N	50–60 Hz	<b>5005-80</b>
GMP, external cooling unit	400 V 3~ +N	50–60 Hz	<b>5005-90</b>

### Rotors

With the ROTO SILENTA 630 RS there is a choice between a 4-place and a 6-place swing-out rotor. Both rotors can hold blood bags, standard tubes, blood collection tubes and bottles with a capacity of up to 2,000 ml.

The ROTO SILENTA 630 RS generates a maximum RCF of 6,520 with the 6-place rotor 4176 and a maximum RCF of 5,705 with the 4-place rotor 4174 – in each case **without windshield**. This not only simplifies handling, it also enables optimal temperature distribution and precise temperature measurement.

Lower temperatures can be achieved with 4-place rotor 4174 than with rotor 4176 thanks to its lower air friction values.

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

### Swing-out rotor, 6-place, $\sphericalangle$ 90°



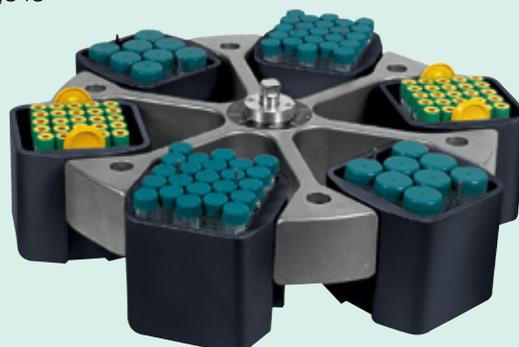
illustrated with carriers 4591-A and inserts 4592-B for max. 750 ml blood bag systems

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



illustrated with carriers 4595-C and bottles 0550 for 2,000 ml

n = 3,500 min<sup>-1</sup>,  
max. RCF 3,848



illustrated with carriers 4522-A and two each inserts 4245-A, 4232 and 4223

n = 4,500 min<sup>-1</sup>,  
max. RCF 5,999

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

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

# ROTORS AND ACCESSORIES

## Swing-out rotor, 6-place

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.



±90°

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

illustrated with carriers 4591-A and inserts 4592-B

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

capacity in ml	500	500	500	750
<b>holding system for blood bags</b>	-	-	-	-
<b>blood bags</b>	<b>quadruplicate</b>	<b>quadruplicate</b>	<b>quadruplicate</b>	<b>single</b>
<b>Cat. No.</b>	-	-	-	-
 <b>carrier</b> Cat. No. <b>4524-A</b>				
<b>Cat. No.</b>	<b>4525-A</b>	<b>4529<sup>4)</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>5)</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, quadruplicate</b>	
<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 reached by reducing the speed.

<sup>3)</sup> As well as Macopharma and Kawasumi.

<sup>4)</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.

# ROTORS AND ACCESSORIES

## Swing-out rotor, 4-place



± 90°

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

illustrated with carriers 4591-A  
and inserts 4592-B

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

capacity in ml	450	500	750
<b>blood bags</b>	<b>triplicate</b>	<b>quadruplicate</b>	<b>single</b>
<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>5)</sup>	2.000
	-	180x150x100
<b>Cat. No.</b>	-	<b>0550</b>
 <b>Carrier</b> Cat. No. <b>4595-C</b> <sup>6)</sup>		
<b>Cat. No.</b>	<b>4596-A</b>	-
(HxWxD) 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>5)</sup> Dependent on the material to be centrifuged.

<sup>6)</sup> 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
<b>blood bags</b>	<b>quadruplicate</b>	<b>single</b>	<b>single</b>
<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>	<b>quadruplicate</b>	<b>triplicate</b>
<b>Cat. No.</b>	-	-
 <b>Carrier</b> Cat No. <b>4547-B</b> lid Cat. No. <b>5621</b>		
<b>Cat. No.</b>	<b>4548</b>	-
boring Ø x L in mm	-	-
blood bag systems per rotor	6   4	6   4
max. RCF	6,316   5,501	6,316   5,501
radius in mm	279   243	279   243
run-up in sec	125   125	125   125
run-down in sec, braked	197   197	197   197
temperature in °C <sup>1)</sup>	+9   -9	+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 reached by reducing the speed.

## ACCESSORIES FOR CENTRIFUGING BLOOD BAG SYSTEMS



Quick and easy packing of blood bag systems with loading aid

**Cat. No. 4509**



### **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**



### **Balancing inserts**

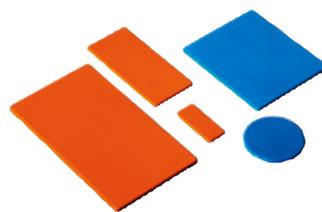
In case there are not enough blood bag systems to occupy every carrier of the rotor, empty carriers can be filled with balancing inserts. Taring weights supplied with the inserts may be used for fine balancing.

### **Cat. No.**

**4584-A** (for insert 4559-A)

**4587-A** (for insert 4592-B)

**4589-A** (for insert 4516-A)



### **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**

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	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	
<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 tubes</b>		
bucket Cat. No. 4255										
<b>Carrier</b> Cat. No. 4579-A										
<b>Cat. No.</b>	<b>4433</b>	<b>4434</b>	<b>4434</b>	<b>4438</b>	<b>4439</b>	<b>4442</b>	<b>4435</b>	<b>4435</b>	<b>4433</b>	
boring Ø x L in mm	13x58		17.5x53		26x72		36x79		45x78	
tubes per rotor	180   120	114   76	114   76	42   28	24   16	12   8	126   84	126   84	180   120	
max. RCF <sup>2)</sup>	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	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 <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	
<b>Cat. No.</b>	<b>blood collection / urine tubes</b>									<b>0509</b>	<b>0513</b>	
bucket Cat. No. 4255												
<b>Carrier</b> Cat. No. 4579-A												
<b>Cat. No.</b>	<b>4434</b>	<b>4433</b>	<b>4435</b>	<b>4434</b>	<b>4435</b>	<b>4435</b>	<b>4434</b>	<b>4434</b>	<b>4437</b>	<b>4441</b>		
boring Ø x L in mm	17.5x53	13x58	13.5x58	17.5x53	17.5x53	13.5x58	17.5x53	17.5x53	17x88	30x87		
tubes per rotor	114   76	180   120	126   84	114   76	114   76	126   84	114   76	114   76	72   48	30   20		
max. RCF <sup>2)</sup>	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	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	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 reached 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.

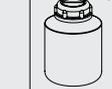
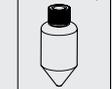
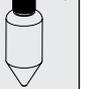
<sup>7)</sup> When using these tubes, bucket 4255 cannot be closed with its lid.

# ROTORS AND ACCESSORIES



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.	-	-	-	<b>5127<sup>8)</sup></b>	- <sup>8)</sup>	<b>0554<sup>8)</sup></b>	<b>0512<sup>8)</sup></b>	<b>4239<sup>8)</sup></b>	<b>4255</b>	<b>Falcon<sup>®</sup></b>	<b>Nalgene<sup>®</sup></b>
 <b>Carrier</b> Cat. No. <b>4579-A</b>											
											
Cat. No.	<b>4438</b>	<b>4434</b>	<b>4443</b>							<b>4440</b>	<b>4430</b>
boring Ø x L in mm	26x72	17.5x53	62x92			98x138					
tubes per rotor	42   28	114   76	6   4			6   4					
max. RCF <sup>2)</sup>	5,818   5,026	5,886   5,094	6,113   5,320	6,113   5,411		6,294   5,501					
radius in mm	257   222	260   225	270   235	270   239		278   243					
run-up in sec				125   125							
run-down in sec, braked				197   197							
temperature in °C <sup>1)</sup>				+4   -11							

capacity in ml	200	225	250	500
Ø x L in mm	60x130	61x137	60x162	96x147
Cat. No.	<b>Nunc<sup>®</sup></b>	<b>Falcon<sup>®</sup></b>	<b>Corning</b>	
 <b>Carrier</b> Cat. No. <b>4579-A</b>				
				
Cat. No.	<b>4430</b>	<b>4440</b>	<b>4430</b>	<b>4449</b>
boring Ø x L in mm				
tubes per rotor		6   4		
max. RCF <sup>2)</sup>		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 <sup>1)</sup>		+4   -11		

<sup>8)</sup> 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 <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 reached 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.

## 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.	-	-	-	-	-	<b>5127<sup>8)</sup></b>	-	<b>0551<sup>8)</sup></b>	<b>0554<sup>8)</sup></b>	<b>0512<sup>8)</sup></b>	<b>4234-A</b>
 <b>carrier</b> Cat. No. <b>4522-A</b>											
											
Cat. No.	<b>4220</b>	<b>4241</b>	<b>4215</b>		<b>4249</b>	<b>4238</b>	<b>4233</b>	<b>4258</b>			
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
Cat. No.	<b>Corning</b>	<b>Corning</b>
 <b>carrier</b> Cat. No. <b>4522-A</b>		
		 
Cat. No.	<b>6322</b>	<b>4258 + 4449</b>
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>9)</sup> and thus protects both the user and the environment against contamination.



lid 5057

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.

<sup>8)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

<sup>9)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

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	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. 5621												
carrier Cat. No. 4547-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. 5621													
carrier Cat. No. 4547-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												

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

# ROTORS AND ACCESSORIES



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

## Angle rotor, 6-place



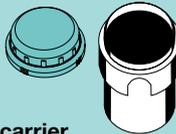
± 25°

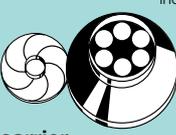
n = 6,000 min<sup>-1</sup>  
max. RCF 5,594

with bio-containment<sup>9)</sup>

**Cat. No. 4570**

## 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 <sup>8)</sup>	- <sup>8)</sup>	0554 <sup>8)</sup>	0512 <sup>8)</sup>	4239 <sup>8)</sup>	Falcon®	Nalgene®	Nunc®	Falcon®	Corning		
lid Cat. No. 5621  <b>carrier</b> 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 <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	94	10	30	50	85	94	250
Ø x L in mm	17 x 100	24 x 100	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>	0549	-	0545	0546	0547	0538 <sup>10)</sup>	5127 <sup>8)</sup>
lid with bio-containment <sup>9)</sup> incl.  <b>carrier</b> Cat. No. 4570									
									
Cat. No.	5646	5642	5644	5641	5642	5643	5644	-	
boring Ø x L in mm	17.6 x 83	26 x 80	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	6	48	18	6	6	6	
max. RCF <sup>2)</sup>	5,315	5,152	4,910	5,353	5,152	4,830	4,910	5,594	
radius in mm	132	128	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>8)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

<sup>9)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>10)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

# ROTO SILENTA 630 RS

## TECHNOLOGY

## ROTO SILENTA 630 RS

Floorstanding centrifuge, without rotor	cooled	
Power supply <sup>*)</sup>	400 V 3 ~ + N	208 – 220 V +6 / -10% 3 ~ (+ N), 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 (HxWxD)	973 x 813 x 1,015 mm	
Weight	approx. 355 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>\*)</sup> 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.



Our certification as an “Authorized Economic Operator” enables accelerated customs clearance.



### Andreas Hettich GmbH & Co. KG

Föhrenstr. 12  
D-78532 Tuttlingen  
Germany  
www.hettichlab.com  
info@hettichlab.com  
service@hettichlab.com

Phone +49 (0)7461 / 705 -0  
Fax +49 (0)7461 / 705 -1122

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