

Product Guide 2011

# Centrifuges

*For your safety and convenience during sample preparation*



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# ScanSpeed Product Range

➤ SCANSPEED



# The ScanSpeed Centrifuges

## ✓ *The Best Functional Quality*

- Manufactured and tested to IEC standard
- Stable spinning operation within  $\pm 0.2\%$  variation
- Steady and soft deceleration with dynamic brake technology
- Automatic detection and alarms for imbalance, excess speed and heating
- Many models have automatic rotor identification functions
- Unique internal air flow design protects samples from heating up
- Temperature setting of refrigerated model down to  $-20^{\circ}\text{C}$  and Fast Cool function

## ✓ *Convenience in Operation*

- Easy to follow display and controls
- Easy recognizable, bright white letter on the blue LCD of display panel
- Time control of pulse, timed, and continuous
- Automatic RPM/RCF conversion
- Program memory for up to 100
- Easy to check actual rpm on the top window of door
- Rotors with symmetrical numbering



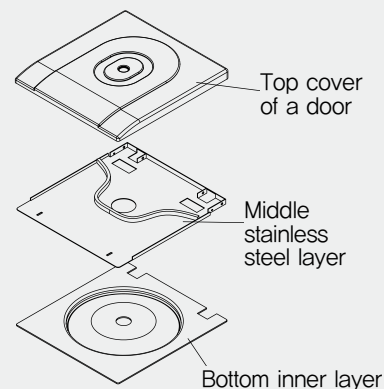
## ✓ *Environment Friendly Manufacturing*

- No hazardous dust by manufacturing with high torque AC induction motor
- Environmentally safe refrigerant is used



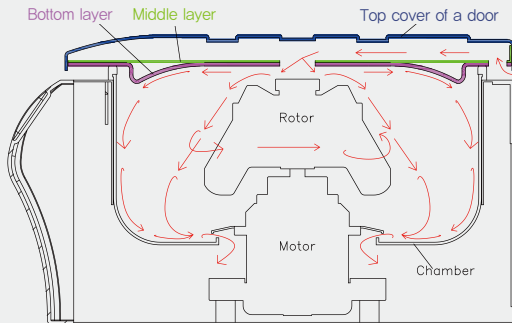
## ✓ *Safety and Robustness*

- Triple or double layered door structure decreases noise and heat and improves safety; The top layer is made of ABS and the middle is of strong steel.
- The safety door-lock system, which keeps the door closed for spinning, is assured by the repeated destruction test.
- Every centrifuge has unique door-drop protection scheme to keep operators and samples safe
- The automatic door-open function maintains safety level of aperture depth not to damage operators and samples
- Emergency door-lock release helps to open the instrument when power blackout or sudden stoppage occurs
- High capacity, strong compressor make enables fast cooling of chamber and samples
- The compressor-off function during door-open minimizes frost and rust
- Autoclavable and corrosion resistant rotors protect samples, operators, and lab environments from contamination
- High-quality cabinets with scratch resistant power coated finish





✓ *Low Background Noise*



**Noise minimizing air-cooling structure**

The unique patented internal design drives efficient air flow inside the instrument and reduces spinning frictions so that motor temperature and noise within the centrifuge are minimized.














✓ *Customization*

- Any rotors, sample loading containers, and adaptors can be manufactured according to customer's specification.
- We are ready to help you if any additional functions or programs are in need.

SCANSPEED



# ScanSpeed Centrifuge Product Guide

Centrifuges	Microcentrifuges			High Speed	Multi-Purpose Centrifuges					Low-Speed	
	 mini	 1524	 1730R	 2236R	 1736R	 1580	 1580R	 1236	 1236R	 416	 406
Refrigeration			●	●	●		●		●		
Max. Force											
Fixed Angle Rotors	Max. 2,000 x g										●
	Max. 2,700 x g									●	
	Max. 12,300 x g	●									
	Max. 16,500 x g							●	●		
	Max. 21,200 x g		●				●				
	Max. 25,900 x g						●				
	Max. 27,200 x g			●							
	Max. 32,300 x g					●					
Swing Rotors	Max. 54,111 x g			●							
	Max. 2,800 x g									●	
	Max. 3,100 x g				●	●					
	Max. 3,600 x g					●	●				
Max. 5,300 x g							●	●			
Sample Containers											
Microtubes	PCR Strips(x8)	●	●	●							
	0.2/0.5 ml	●	●	●	●	●	●	●	●		
	1.5/2.0 ml	●	●	●	●	●	●	●	●		
Tubes	3/4/5/10/15 ml				●	●	●	●	●	●	●
	50 ml				●	●	●	●	●	●	
	85 ml				●	●	●	●	●		
	250 ml				●	●	●	●	●		
	500 ml				●	●	●				
	750 ml					●	●				
1,000 ml				●							
Microplates	PCR plate				●	●	●	●	●	●	
	Micro titer				●	●	●	●	●	●	
	Cell culture				●	●	●	●	●	●	
	Deep well				●	●	●	●	●	●	

# Selection Guide of Micro Rotors for Microcentrifuges




























		for Microtubes				
Micro Centrifuges	mini	Cat. No.	7,600,111,090	7,600,111,130		
		Max Capacity	32 x 0.2 ml	12 x 2.0 ml		
		Shape				
		Max. RPM/RCF	6,000/1,850	13,500/12,300		
		Hole diameter / (mm)	6.5	11.1		
	Max height for tube fit (mm)		42			
	1524	Cat. No.	7,605,314,110		7,605,111,160	
		Max Capacity	32 x 0.2 ml		24 x 2.0 ml	
		Shape				
		Max. RPM/RCF	15,000/14,187		15,000/21,206	
		Hole diameter / (mm)	6.5		11.1	
	Max height for tube fit (mm)	16		46		
	1730R	Cat. No.	7,605,111,010	7,602,111,290	7,602,111,130	7,602,111,140
		Max Capacity	32 x 0.2 ml	64 x 0.2 ml	24 x 2.0 ml	30 x 2.0 ml
		Shape				
Max. RPM/RCF		15,000/14,187	12,500/11,722	17,000/27,237	14,000/21,124	
Hole diameter / (mm)		6.5	6.5	11.1	11.1	
Max height for tube fit (mm)	16	16	46	46		

SCAN



# Selection Guide of Fixed Angle Rotors

		for Microtubes		for 15 ml tubes				
High-speed	2236R	Cat. No.	7,622,319,203	7,622,319,204				
		Max Capacity	24 x 2.0 ml	30 x 2.0 ml				
		Shape						
		Max. RPM/RCF	22,000/45,616	18,000/34,919				
		Hole diameter / (mm)	11,1	11,1				
		Max height for tube fit (mm)	46	46				
Multi-purpose	1736R	Cat. No.	7,622,319,203	7,622,319,204				
		Max Capacity	24 x 2.0 ml	30 x 2.0 ml				
		Shape						
		Max. RPM/RCF	17,000/27,237	15,000/24,249				
		Hole diameter / (mm)	11,1	11,1				
		Max height for tube fit (mm)	46	46				
	1580R	Cat. No.	7,604,111,170	7,604,111,200	7,604,111,230			
		Max Capacity	24 x 2.0 ml	30 x 2.0 ml	24 x 15 ml	15 ml		
		Shape					7,601,111,040 Loading Sleeve	
		Max. RPM/RCF	15,000/21,206	14,000/21,124	4,000/3,134	18		
		Hole diameter / (mm)	11,1	11,1	19,5	135 (125 for conical)		
		Max height for tube fit (mm)	46	46				
		1580	Cat. No.	7,604,111,170	7,604,111,200	7,604,111,230		
			Max Capacity	24 x 2.0 ml	30 x 2.0 ml	24 x 15 ml	15 ml	
			Shape					7,601,111,040 Loading Sleeve
			Max. RPM/RCF	15,000/21,206	12,000/15,520	4,000/3,134	18	
			Hole diameter / (mm)	11,1	11,1	19,5	135 (125 for conical)	
			Max height for tube fit (mm)	46	46	135 (125 for conical)	135 (125 for conical)	
	1236R	Cat. No.	7,638,111,010	7,638,111,500	7,638,111,754			
		Max Capacity	24 x 2.0 ml	30 x 2.0 ml	24 x 15 ml	15 ml		
		Shape					7,601,111,040 Loading Sleeve	
		Max. RPM/RCF	12,000/13,572	12,000/15,520	4,000/3,134	18		
		Hole diameter / (mm)	11,1	11,1	19,5	17,5		
		Max height for tube fit (mm)	46	46	135 (125 for conical)	135 (125 for conical)	113	
1236		Cat. No.	7,603,111,010	7,603,111,500	7,603,111,090			
		Max Capacity	24 x 2.0 ml	30 x 2.0 ml	24 x 15 ml	15 ml		
		Shape					7,601,111,040 Loading Sleeve	
		Max. RPM/RCF	12,000/13,572	12,000/15,520	4,000/3,134	18		
		Hole diameter / (mm)	11,1	11,1	19,5	135 (125 for conical)		
		Max height for tube fit (mm)	46	46	135 (125 for conical)	135 (125 for conical)		
Low-Speed	416	Cat. No.	7,601,111,130					
		Max Capacity	16 x 15 ml		15 ml			
		Shape						
		Max. RPM/RCF	4,000/2,700		18			
		Hole diameter / (mm)	19,5		135 (125 for conical)			
		Max height for tube fit (mm)	135 (125 for conical)		135 (125 for conical)			
	406	Cat. No.	7,601,111,070					
		Max Capacity	6 x 15 ml		15 ml			
		Shape						
		Max. RPM/RCF	4,000/2,075		18			
		Hole diameter / (mm)	19,5		135 (125 for conical)			
		Max height for tube fit (mm)	135 (125 for conical)		135 (125 for conical)			


































for 50 ml tubes			for 85 ml tubes	for 250 ml tubes	for 500 ml tubes	for 1,000 ml tubes	
<b>7,622,319,205</b>	<b>7,622,319,206</b>	<b>7,622,319,207</b>	<b>7,622,319,208</b>	<b>7,622,319,209</b>	7,622,319,210	7,622,319,325	7,622,319,225
6 x 50 ml	6 x 50 ml Conical	8 x 50 ml	6 x 85 ml	6 x 250 ml	6 x 500 ml	4 x 1,000 ml	6 x 1,000 ml
22,000/54,111	17,000/31,793	20,000/46,062	20,000/44,496	12,000/21,573	9,000/14,308	8,000/12,071	7,000/10,825
29.5	29.5	29.5	38.3	62	70	97	97
125	125	120	125	130	170	175	175

for 50 ml tubes			for 85 ml tubes	for 250 ml tubes
<b>7,622,319,205</b>	<b>7,622,319,206</b>	<b>7,622,319,207</b>	<b>7,622,319,208</b>	<b>7,622,319,209</b>
6 x 50 ml	6 x 50 ml Conical	8 x 50 ml	6 x 85 ml	6 x 250 ml
17,000/32,310	15,000/24,753	15,000/25,910	15,000/25,029	10,000/14,981
29.5	29.5	29.5	38.3	62
125	125	120	125	130

<b>7,604,111,410</b>	<b>7,604,111,110</b>	<b>7,604,111,090</b>
8 x 50 ml	6 x 85 ml	6 x 250 ml
15,000/25,910	12,000/17,709	10,000/15,876
29.5	38.5	62
120	125	130
<b>7,604,111,410</b>	<b>7,604,111,110</b>	<b>7,604,111,090</b>
8 x 50 ml	6 x 85 ml	6 x 250 ml
12,000/16,582	10,000/12,298	8,000/10,160
29.5	38.5	62
120	125	130
<b>7,638,111,095</b>	<b>7,638,111,550</b>	
8 x 50 ml	6 x 85 ml	
12,000/16,582	10,000/12,298	
29.5	38.5	
120	125	
	<b>7,603,111,550</b>	
	6 x 85 ml	
	10,000/12,298	
	38.5	
	125	
















# Selection Guide of Swing Rotors and Loading Holders

		Swing Rotors & Buckets							
High-speed	2236R	Swing Rotor Cat. No.	7,622,319,201						
		Bucket Cat. No.	7,800,500,022	7,800,500,015					
		Max Capacity	4 x 250 ml	4 x 4 MTP					
		Shape							
		Max. RPM/RCF	4,000/3,134	4,000/2,737					
		Hole diameter / (mm)	86 x 70,3	88 x 128,5					
Max height for tube fit (mm)	125	80							
Multi-purpose	1736R	Swing Rotor Cat. No.	7,622,319,201						
		Bucket Cat. No.	7,800,500,022	7,800,500,015					
		Max Capacity	4 x 250 ml	4 x 4 MTP					
		Shape							
		Max. RPM/RCF	4,000/3,134	4,000/2,737					
		Hole diameter / (mm)	86 x 70,3	88 x 128,5					
	Max height for tube fit (mm)	125	80						
	1580R	Swing Rotor Cat. No.	7,604,111,070			7,604,111,010			
		Bucket Cat. No.	7,604,111,120	7,604,111,550	7,604,111,030	7,604,111,860	7,604,111,760	7,604,111,560	
		Max Capacity	4 x 250 ml	4 x 4 MTP	4 x 250 ml / 4 x 20 x 15 ml	4 x 500 ml	4 blood bags	4 x 4 MTPs	
		Shape							
		Max. RPM/RCF	4,000/3,134	4,000/2,737	3,600/2,898			3,600/2,485	
		Hole diameter / (mm)	86 x 70,3	88 x 128,5	99 x 99	70	95	88 x 128,5	
	Max height for tube fit (mm)	125	80	135	165	145	80		
	1580	Swing Rotor Cat. No.	7,604,111,070			7,604,111,010			
		Bucket Cat. No.	7,604,111,120	7,604,111,550	7,604,111,030	7,604,111,860	7,604,111,760	7,604,111,560	
		Max Capacity	4 x 250 ml	4 x 4 MTP	4 x 250 ml / 4 x 20 x 15 ml	4 x 500 ml	4 blood bags	4 x 4 MTPs	
		Shape							
Max. RPM/RCF		4,000/3,134	4,000/2,737	3,600/2,898			3,600/2,485		
Hole diameter / (mm)		86 x 70,3	88 x 128,5	99 x 99	70	95	88 x 128,5		
Max height for tube fit (mm)	125	80	135	165	145	80			
1236R	Swing Rotor Cat. No.	7,638,111,050		7,638,111,255					
	Bucket Cat. No.	7,800,500,022	7,800,500,015	7,800,500,082					
	Max Capacity	4 x 250 ml	4 x 4 MTP	4 x 250 ml					
	Shape								
	Max. RPM/RCF	4,000/3,134	4,000/2,737	5,000/5,394					
	Hole diameter / (mm)	86 x 70,3	88 x 128,5	60,5					
Max height for tube fit (mm)	125	80	130						
1236	Swing Rotor Cat. No.	7,603,111,050		7,603,111,255					
	Bucket Cat. No.	7,603,111,120	7,604,111,060	7,603,111,720					
	Max Capacity	4 x 250 ml	4 x 4 MTP	4 x 250 ml					
	Shape								
	Max. RPM/RCF	4,000/3,134	4,000/2,737	5,000/5,394					
	Hole diameter / (mm)	86 x 70,3	88 x 128,5	60,5					
Max height for tube fit (mm)	125	80	130						
Low-Speed	416	Swing Rotor Cat. No.	7,601,111,170	7,601,111,140					
		Bucket Cat. No.	7,601,111,172	7,601,111,102	7,601,111,103	7,601,111,171	7,601,111,100	7,601,111,101	
		Max Capacity	6 x 15 ml	4 x 15 ml	4 x 15 ml conical	4 x 2 x 15 ml	4 x 50 ml	4 x 50 ml conical	
		Shape							
		Max. RPM/RCF	4,000/2,826	4,000/2,700					
		Hole diameter / (mm)	17	17	17	17	30,5	29,5	
Max height for tube fit (mm)	125	125	125	125	125	125			

\* This figure inside the parenthesis of the max. height for tube fit is the actual height of the relevant bucket.

Swing Rotors & Buckets

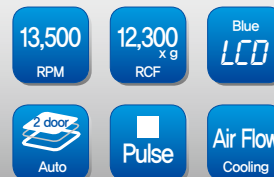
7,604,111,750				
7,604,111,850	7,604,111,870	7,604,111,880	7,604,111,009	7,604,111,570
4 x 750 ml	4 x 750 ml	4 x 500 ml	4 blood bags	4 x 4 MTPs
				
4,000/3,667				4,000/3,068
99	99	70	95	88 x 128,5
142	130	165	145	80
7,604,111,750				
7,604,111,850	7,604,111,870	7,604,111,880	7,604,111,009	7,604,111,570
4 x 750 ml	4 x 750 ml	4 x 500 ml	4 blood bags	4 x 4 MTPs
				
4,000/3,667				4,000/3,068
99	99	70	95	88 x 128,5
142	130	165	145	80
7,601,111,190		7,601,111,180		
7,601,111,191	7,601,111,192	-		
4 x 2 x 15 ml	4 x 50 ml	2 MTPs		
				
4,000/1,986	4,000/1,986	4,000/1,986		
17	30,5	86,3 x 130,3		
115	115	35		



**mini**

**Personal Microcentrifuge for up to 13,500 rpm**

Guarantee speedy centrifugation of simple spin-down or filtered precipitation



- The smallest, quiet, high-speed microcentrifuge
- Compact design with automatic door release
- Max. 13,500 rpm/12,300 g, Time setting to 30 min
- Rapid acceleration and deceleration
- LCD display of speed and remaining time
- "Pulse" key for quick runs
- Automatic RPM/RCF conversion
- Alarms for over-speed and over-heat
- Patented unique air-flow design
- Strong steel layered door with auto-lock function
- Snap-fit, autoclavable rotor
- Complete with autoclavable 12-place fixed angle micro-rotor, plastic rotor lid, and 12 adaptors for 0.2 ml PCR tube
- Optional PCR rotor for 4 strips
- Adaptors available for 0.5 ml microtubes

**Technical Specifications**

Max. RPM	13,500 rpm
Max. RCF	12,300 x g
Max. capacity	12 x 1.5/2.0 ml, 4 PCR strips
Time control	Pulse or timed ≤30 min
RCF/RPM conversion	Yes
Noise level (dependent on rotor)	≤60 dB
Acc. time to max. speed	≤12 sec
Dec. time from max. speed	≤16 sec
Display	Blue LCD

Safety lid lock	Yes
Lid drop protection	Yes
Automatic door release at completion	Yes
Power supply	220V/50~60 Hz (110V optional)
Power requirement	110 VA
Dimension (W x D x H)	208 x 245 x 145 mm
Weight without rotor	4.4 kg
CE mark	Yes
Cat. No.	7,601,314,101



Display and Control Interface



Rotors & Accessories



Fixed angle rotor, 7,600,111,130  
 12 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11,1  
 Max. height for tube fit (mm) : 42

Tube			
Tube capacity(ml)	1,5/2,0	0,2	0,5
Adaptor	None		
Cat. No.	—	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	—	6,5 x 23	8 x 31
Max.rpm	13,500		
Max.rcf(g-force)	12,300	8,863	10,290
Radius(mm)	60,4	43,5	50,5



PCR rotor, 7,600,111,090  
 4 x 8-tube strip PCR tubes  
 Angle : 45°  
 Hole diameter (Φ, mm) : 6,5

Tube		
Tube capacity(ml)	8-tube strip	0,2
Max.rpm	6,000	
Max.rcf(g-force)	1,850	
Radius(mm)	45	

SCANSPEED



# 1524 High Speed Microcentrifuge for up to 15,000 rpm

24-place microcentrifuge for simple precipitation and NA preparation



- Robust design with automatic door release
- Max. 15,000 rpm/21,206 g, Time setting to 99 min 59 sec or continuous
- 5 acceleration ramps and 5 deceleration ramps
- LCD display of speed, remaining time, and ACC/DEC ramp
- “Pulse” key for quick runs
- Automatic RPM/RCF conversion
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Program memory for up to 100
- Unique air-flow cooling internal design
- Strong steel layered door with auto-lock function
- 24-place, snap-fit, autoclavable rotor with plastic lid and 12 adaptors of 0.2 mL PCR tube
- Optional PCR rotor for 4 strips
- Adaptors available for 0.5 mL microtubes

Display and Control Interface



Technical Specifications

Max. RPM	15,000 rpm
Max. RCF	21,206 x g
Max. capacity	24 x 1.5/2.0 mL, 4 PCR strips
Time control	Pulse, timed < 100 min, or continuous
RCF/RPM conversion	Yes
Noise level (dependent on rotor)	≤60 dB
Acceleration ramp	5
Deceleration ramp	5
Program memory	100
Imbalance cutout	Yes

Display	Blue LCD
Safety lid lock	Yes
Lid drop protection	Yes
Automatic door release at completion	Yes
Power supply	220V/50~60 Hz (110V optional)
Power requirement	440 VA
Dimension (W x D x H)	249 x 368 x 240 mm
Weight without rotor	18 kg
CE mark	Yes
Cat. No.	7,651,314,201

Rotors & Accessories



Plastic lid

Fixed angle rotor, 7,605,111,160  
 24 x 1.5/2.0 mL  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max. height for tube fit (mm) : 46

Tube			
Tube capacity(mL)	1.5/2.0	0.2	0.5
Adaptor	None		
Cat. No.	-	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	-	6.5 x 23	8 x 31
Max.rpm	15,000		
Max.rcf(g-force)	21,206	16,854	18,363
Radius(mm)	84.3	67	73



PCR rotor, 7,605,314,110  
 4 x 8-tube strip PCR tube  
 Angle : 45°  
 Hole diameter (Φ, mm) : 6.5  
 Max. height for tube fit (mm) : 16

Tube		
Tube capacity(mL)	8-tube strip	0.2
Max.rpm	15,000	
Max.rcf(g-force)	14,187	
Radius(mm)	56.4	



❄️ Refrigerated

# 1730R

Refrigerated, High Speed Microcentrifuge for up to 17,000 rpm

30-place microcentrifuge for most molecular biology experiments



- Robust design with automatic door release
- Max. 17,000 rpm/27,237 g, Time setting to 99 min 59 sec or continuous, Temp set to  $-20^{\circ}\text{C}$
- Fast Cool function (reach  $4^{\circ}\text{C}$  within 5 min)
- 5 acceleration ramps and 5 deceleration ramps
- LCD display of speed, remaining time, and temperature
- “Pulse” key for quick runs
- Automatic RPM/RCF conversion
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Program memory for up to 100
- Three layered safe door with auto-lock function
- Compressor-off when the door is open to minimize frosting and rust
- Environment friendly R404a refrigerant
- 24-place snap-fit, autoclavable rotor with O-ring inserted lid for biosafety issued application
- 30-place rotor, 8 strip PCR rotor, 4 strip PCR rotor available



Display and Control Interface



Technical Specifications

Max. RPM	17,000 rpm
Max. RCF	27,237 x g
Max. capacity	30 x 1.5/2.0 ml, 8 PCR strips
Temp. range	-20°C to 40°C
FAST cool button	Yes
Time control	Pulse, timed < 100 min, or continuous
RCF/RPM conversion	Yes
Noise level (dependent on rotor)	≤60 dB
Acceleration ramp	5
Deceleration ramp	5
Program memory	100

Rotor Identification	Automatic
Imbalance cutout	Yes
Display	Blue LCD
Safety lid lock	Yes
Lid drop protection	Yes
Power supply	220V/50~60Hz (110V optional)
Power requirement	2.0 KVA
Dimension (W x D x H)	310 x 620 x 265 mm
Weight without rotor	43 kg
CE mark	Yes
Cat. No.	7,621,318,101

Rotors & Accessories



Fixed angle rotor, [7,602,111,130](#)  
24  
Angle : 45°  
Hole diameter (Φ, mm) : 11.1  
Max. height for tube fit (mm) : 46



Fixed angle rotor, [7,602,111,140](#)  
30 x 1.5/2.0 ml  
Angle : 45°  
Hole diameter (Φ, mm) : 11.1  
Max. height for tube fit (mm) : 46

Tube			
Tube capacity(ml)	1.5/2.0	0.2	0.5
Adaptor	None		
Cat. No.	-	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	-	6.5 x 23	8 x 31
Max.rpm (24/30)	17,000/14,000		
Max.rcf(g-force) (24/30)	27,237/21,124	21,648/17,311	23,910/18,845
Radius(mm) (24/30)	84.3/96.4	67/79	73/86



PCR rotor, [7,602,111,290](#)  
8 x 8-tube strip PCR tube  
Angle : 45°  
Hole diameter (Φ, mm) : 6.5  
Max. height for tube fit (mm) : 16



PCR rotor, [7,605,111,010](#)  
4 x 8-tube strip PCR tube  
Angle : 45°  
Hole diameter (Φ, mm) : 6.5  
Max. height for tube fit (mm) : 16

Tube		
Tube capacity(ml)	8-tube strip	0.2
Max.rpm (64/32)	12,500/15,000	
Max.rcf(g-force) (64/32)	11,722/14,187	
Radius(mm) (64/32)	67.1/56.4	

❄️ Refrigerated

# 2236R High Speed Refrigerated Centrifuge for up to 54,000 g

Ideal for high volume (6 x 1,000 ml) centrifugation at high-speed



22,000 RPM	54,111 x g RCF	WinCE
7" LCD Touch	3 door	Compressor Cooling
Imbalance	100 Programs	Rotor ID Auto
10 ACC 10 DEC	Radius Correction	



- Floor type, high capacity centrifuge with 7" LCD touch screen
- Max. 22,000 rpm/ 54,111 g, Time setting to 99 hr, 59 min 59 sec or continuous, Temp setting to -20°C
- Useful for a wide range of tubes from microtubes to 1,000 ml bottles
- Easy Editing and programming with user friendly Window based operation and 7" LCD display
- Incremental and decrement setting of speed, time and temperature
- Run-time control at set rpm or simple count-down
- 10 acceleration and 10 deceleration ramps
- Easy calculation of rpm and rcf on the same screen
- "Hold" or changing of time and temperature possible while running
- Program memory for up to 100
- USB connection available for PC control
- Automatic rotor identification when spinning starts to avoid unacceptable operation
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Three layered safe door with auto-lock function and automatic door release
- Compressor-off when the door is open to minimize frosting and rust
- Environment friendly R404a refrigerant
- Mounted on four-wheel canister for easy movement and lock-up
- Diverse fixed angle rotors, swing rotors and buckets, and adaptors for many kinds of tubes

Technical Specifications

	Fixed Angle Rotor	Swing Rotor
Max. capacity	30 x 1.5/2.0 ml	
	8 x 15 ml	4 x 12 x 15 ml
	8 x 50 ml	4 x 4 x 50 ml
	6 x 85 ml	4 x 2 x 85 ml
	6 x 250 ml	4 x 250 ml
	6 x 500 ml	4 x 4 x MTP
	6 x 1,000 ml	
Max. RPM/RCF	22,000/54,111	4,000/3,134
Temp. range	-20°C to 40°C	
Time control	timed < 100 hr, or continuous	
RCF/RPM conversion	Yes	
Noise level (dependent on rotor)	≤60 dB	
OS	Windows CE	

Acceleration ramp	9
Deceleration ramp	10
Display	7" LCD
Rotor Identification	Automatic
Imbalance cutout	Yes
Safety lid lock	Yes
Lid drop protection	Yes
Power supply	220V/50~60Hz (110V optional)
Power requirement	4.0 KVA
Dimension (W x D x H)	824 x 634 x 1,049 mm
Weight without rotor	240 kg
Cat. No.	7,700,100,101

Advanced Features in the Control and Display Interface of 2236R

**Logo and Model Name**

**Date and Time**

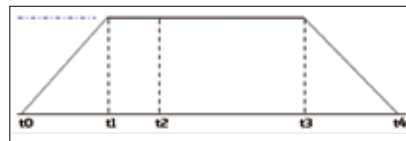
**Operation Status Icon**

**Hold button**  
for temporary stop or change of time and temp

**MENU**  
for History tracking, Program Editing, Radius Correction, Information Call, and etc

User Friendly Touch Screen and Easy Programming

The WinCE based program and display help operators to edit and confirm the centrifuge conditions very easily. All features of both set and actual value of rpm, rcf, running time, temperature, acceleration/deceleration ramp are presented on the same screen.



- Normal Time Counting : From t0 to t3
- Section Time Counting : From t1 to t3

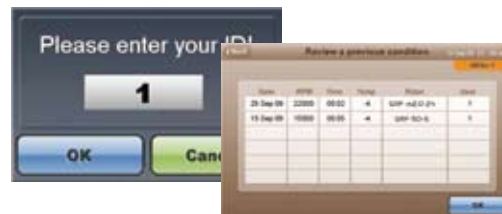
Accurate Time Counting

The Normal function of time setting is for simple count-down of set time while the Section function is for setting the exact time count at set rpm. It helps operators to deal more accurate with delicate experiments.



Combination of 10 Different Running Conditions in a Single Run up

The Shift programming function helps operators to manage complicated experiments in a single run by combining different conditions of speed, temperature, and time.



User ID and Protocol Tracking Function

Valuable for laboratory security and instrument management



Easy to Change Display Options

The color of display screen, the keyboard sound volume, the calibration of touch position, and the selection of input methods can be changed to operator's preference.

Rotors & Accessories



Swing rotor, **7,622,319,201**  
 4 loadings  
 Angle : 90°  
 Area dimension (mm) : 86 x 70.3  
 Max height for tube fit (mm) : 125



Rectangular bucket,  
**7,800,500,022**  
 Bucket bore(wxdh)mm : 86 x 70.3 x 125



Microplate holder,  
**7,800,500,015**  
 Bucket bore(wxdh)mm : 88 x 128.5 x 80

Tube														
Tube capacity(ml)	5	3	15	10	15 ml conical	50	50 ml conical	250	85	15	MTP	DWP		
Tube rack											None	None		
Cat. No.	7,603,111,110		7,603,111,140		7,603,111,170		7,603,111,200		7,603,111,230		7,603,111,260		-	-
Rack Φ x L(mm)	13.5 x 80	13.5 x 58	17.5 x 90		17.5 x 90		30.2 x 90		30.5 x 90		62.5 x 90		38.5 x 90	17 x 90
Rack capacity(ea/4)	12/48	12/48	12/48		9/36		4/16		3/12		1/4		2/8	4/16
Max.rpm	4,000													
Max.rcf(g-force)	3,134										2,737			
Radius(mm)	175.2										153			



Fixed angle rotor,  
**7,622,319,225**  
 6 x 1,000 ml  
 Angle : 25°  
 Hole diameter (Φ, mm) : 97  
 Max height for tube fit (mm) : 175

Tube	
Tube capacity(ml)	1,000
Max. RPM	7,000
Max. RCF(g-force)	10,825
Radius(mm)	197.6



Fixed angle rotor,  
**7,622,319,325**  
 4 x 1,000 ml  
 Angle : 25°  
 Hole diameter (Φ, mm) : 97  
 Max height for tube fit (mm) : 175

Tube	
Tube capacity(ml)	1,000
Max. RPM	8,000
Max. RCF(g-force)	12,071
Radius(mm)	168.7



Fixed angle rotor,  
**7,622,319,210**  
 6 x 500 ml  
 Angle : 25°  
 Hole diameter (Φ, mm) : 70  
 Max height for tube fit (mm) : 170

Tube	
Tube capacity(ml)	500
Max. RPM	9,000
Max. RCF(g-force)	14,308
Radius(mm)	158



Fixed angle rotor,  
**7,622,319,209**  
 6 x 250 ml  
 Angle : 25°  
 Hole diameter (Φ, mm) : 62  
 Max height for tube fit (mm) : 134

Tube	
Tube capacity(ml)	250
Max. RPM	12,000
Max. RCF(g-force)	21,573
Radius(mm)	134



Fixed angle rotor, **7,662,319,208**  
 6 x 85 ml  
 Angle : 25°  
 Hole diameter (Φ, mm) : 38.3  
 Max height for tube fit (mm) : 125

Tube						
Tube capacity(ml)	15	10	15 ml conical	50	50 ml conical	85
Adaptor						None
Cat. No.	7,604,113,010	7,604,113,020	7,604,113,030	7,604,113,040	-	-
Adaptor Φ x L(mm)	16.2 x 97		17 x 105	29 x 90	29.5 x 100	-
Max. RPM	20,000					
Max. RCF(g-force)	41,366	40,919	40,472	41,813	40,919	44,496
Radius(mm)	92.5	91.5	90.5	93.5	91.5	99.5



Fixed angle rotor, **7,622,319,205**  
 6 x 50 ml  
 Angle : 34°  
 Hole diameter (Φ, mm) : 29.5  
 Max height for tube fit (mm) : 125



Fixed angle rotor, **7,622,319,207**  
 8 x 50 ml  
 Angle : 34°  
 Hole diameter (Φ, mm) : 29.5  
 Max height for tube fit (mm) : 120

Tube				
Tube capacity(ml)	50	15	10	15 ml conical
Adaptor	None			
Cat. No.	-	7,601,113,041		7,601,113,042
Adaptor Φ x L(mm)	-	17 x 97		17 x 105
Max. RPM (6/8)	22,000/20,000			
Max. RCF(g-force) (6/8)	54,111/46,062	50,594/41,813	50,053/41,366	51,947/42,931
Radius(mm) (6/8)	100/103	90.5/93.5	89.5/92.5	93/96



Fixed angle rotor, **7,622,319,203**  
 24 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 46



Fixed angle rotor, **7,622,319,204**  
 30 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 46



Fixed angle rotor, **7,622,319,206**  
 6 x 50 ml conical  
 Angle : 34°  
 Hole diameter (Φ, mm) : 29.5  
 Max height for tube fit (mm) : 125

Tube	
Tube capacity(ml)	50 ml conical
Adaptor	None
Max. RPM	17,000
Max. RCF(g-force)	31,793
Radius(mm)	98.4

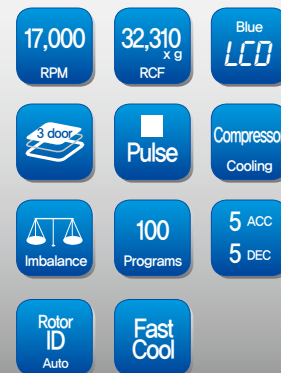
Tube			
Tube capacity(ml)	1.5/2.0	0.2	0.5
Adaptor	None		
Cat. No.	-	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	-	6.5 x 23	8 x 31
Max. RPM (24/30)	22,000/18,000		
Max. RCF(g-force) (24/30)	45,616/34,919	36,255/28,616	39,501/31,152
Radius(mm) (24/30)	84.3/96.4	67/79	73/86



❄️ Refrigerated

# 1736R High Speed Refrigerated Centrifuge for up to 17,000 rpm

Ideal for multi-purpose centrifugation at high-speed



- Floor type, compact high speed centrifuge
- Max. 17,000 rpm/ 32,310 g, Time setting to 9hr 59min or continuous, Temp setting to -20°C
- Useful for a wide range of tubes from microtubes to 250 ml bottles at high speed
- Fast Cool function (reach 4°C within 5 min)
- “Pulse” key for quick runs
- Automatic conversion of RPM/RCF value
- 5 acceleration ramps and 5 deceleration ramps
- LCD display of speed, remaining time, and temperature
- Program memory for up to 100
- Automatic rotor identification when spinning starts to avoid unacceptable operation
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Three layered safe door with auto-lock function
- Compressor-off when the door is open to minimize frosting and rust
- Environment friendly R404a refrigerant
- Mounted on four-wheel canister for easy movement and lock-up
- Many fixed angle rotors, swing rotors and buckets, and adaptors available

## Display and Control Interface



## Technical Specifications

	Fixed Angle Rotor	Swing Rotor		
Max. capacity	30 x 1.5/2.0 ml	4 x 12 x 15 ml	Program memory	100
	8 x 15 ml	4 x 4 x 50 ml	Rotor Identification	Automatic
	8 x 50 ml	4 x 2 x 85 ml	Imbalance cutout	Yes
	6 x 85 ml	4 x 250 ml	Display	Blue LCD
	4 x 250 ml	4 x 4 x MTP	Safety lid lock	Yes
Max. RPM/RCF	17,000/32,310	4,000 / 3,134	Lid drop protection	Yes
Temp. range	-20°C to 40°C		Power supply	220V/50~60Hz (110V optional)
FAST cool button	Yes		Power requirement	2.5 KVA
Time control	Pulse, timed < 10 hr, or continuous		Dimension (W x D x H)	473 x 600 x 840 mm
RCF/RPM conversion	Yes		Weight without rotor	110 kg
Noise level (dependent on rotor)	≤60 dB		CE mark	Yes
Acceleration ramp	5		Cat. No.	7,622,319,101
Deceleration ramp	5			

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Rotors & Accessories



Swing rotor, **7,622,319,201**  
 4 loadings  
 Angle : 90°  
 Area dimension (mm) : 86 x 70.3  
 Max height for tube fit (mm) : 125



Rectangular bucket,  
**7,800,500,022**  
 Bucket bore(wxdxh)mm : 86 x 70.3 x 125



Microplate holder,  
**7,800,500,015**  
 Bucket bore(wxdxh)mm : 88 x 128.5 x 80

Tube												
Tube capacity(mL)	5	3	15	10	15 mL conical	50	50 mL conical	250	85	15	MTP	DWP
Tube rack											None	None
Cat. No.	7,603,111,110		7,603,111,140		7,603,111,170	7,603,111,200	7,603,111,230	7,603,111,260	7,604,111,852		-	-
Rack Φ x L(mm)	13.5 x 80	13.5 x 58	17.5 x 90		17.5 x 90	30.2 x 90	30.5 x 90	62.5 x 90	38.5 x 90	17 x 90	-	-
Rack capacity(ea/4)	12/48	12/48	12/48		9/36	4/16	3/12	1/4	2/8		4/16	1/4
Max.rpm	4,000											
Max.rcf(g-force)	3,134										2,737	
Radius(mm)	175.2										153	



Fixed angle rotor,  
**7,622,319,209**  
 6 x 250 mL  
 Angle : 25°  
 Hole diameter (Φ, mm) : 62  
 Max height for tube fit (mm) : 130

Tube	
Tube capacity(mL)	250
Max. RPM	10,000
Max. RCF(g-force)	14,981
Radius(mm)	134



Fixed angle rotor, **7,622,319,208**  
 6 x 85 mL  
 Angle : 25°  
 Hole diameter (Φ, mm) : 38.3  
 Max height for tube fit (mm) : 125

Tube						
Tube capacity(mL)	15	10	15 mL conical	50	50 mL conical	85
Adaptor						None
Cat. No.	7,604,113,010		7,604,113,020	7,604,113,030	7,604,113,040	-
Adaptor Φ x L(mm)	16.2 x 97		17 x 105	29 x 90	29.5 x 100	-
Max. RPM	15,000					
Max. RCF(g-force)	23,268	23,017	22,765	23,520	23,017	25,029
Radius(mm)	92.5	91.5	90.5	93.5	91.5	99.5



Fixed angle rotor, **7,622,319,205**  
6 x 50 ml  
Angle : 34°  
Hole diameter (Φ, mm) : 29.5  
Max height for tube fit (mm) : 125



Fixed angle rotor, **7,622,319,207**  
8 x 50 ml  
Angle : 34°  
Hole diameter (Φ, mm) : 29.5  
Max height for tube fit (mm) : 120

Tube				
Tube capacity(ml)	50	15	10	15 ml conical
Adaptor	None			
Cat. No.	-	7,601,113,041		7,601,113,042
Adaptor Φ x L(mm)	-	17 x 97		17 x 105
Max. RPM (6/8)	17,000/15,000			
Max. RCF(g-force) (6/8)	32,310/25,910	29,241/23,520	28,918/23,268	30,048/24,149
Radius(mm) (6/8)	100/103	90.5/93.5	89.5/92.5	93/96



Fixed angle rotor, **7,622,319,206**  
6 x 50 ml conical  
Angle : 25°  
Hole diameter (Φ, mm) : 29.5  
Max height for tube fit (mm) : 125

Tube	
Tube capacity(ml)	50 ml conical
Adaptor	None
Max. RPM	15,000
Max. RCF(g-force)	24,753
Radius(mm)	98.4



Fixed angle rotor, **7,622,319,203**  
24 x 1.5/2.0 ml  
Angle : 45°  
Hole diameter (Φ, mm) : 11.1  
Max height for tube fit (mm) : 46



Fixed angle rotor, **7,622,319,204**  
30 x 1.5/2.0 ml  
Angle : 45°  
Hole diameter (Φ, mm) : 11.1  
Max height for tube fit (mm) : 46

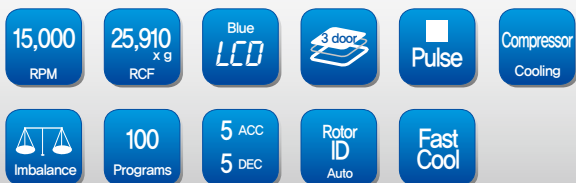
Tube			
Tube capacity(ml)	1.5/2.0	0.2	0.5
Adaptor	None		
Cat. No.	-	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	-	6.5 x 23	8 x 31
Max. RPM (24/30)	17,000/15,000		
Max. RCF(g-force) (24/30)	27,237/24,249	21,648/19,872	23,910/21,633
Radius(mm) (24/30)	84.3/96.4	67/79	73/86

❄️ Refrigerated

# 1580R

## High Speed, Multi-Purpose Refrigerated Centrifuge for up to 15,000 g

Ideal for the centrifugation with various sample containers from microtubes to 750 mL bottles, blood bags, and microplates



- Bench top, high capacity multi-purpose centrifuge with automatic door release
- Max. 15,000 rpm/ 25,910 g, Time setting to 9 hr 59 min or continuous, Temp setting to  $-20^{\circ}\text{C}$
- Useful for a wide range of sample containers from microtubes to 750ml bottles, blood bags, and microplates
- Fast Cool function (reach  $4^{\circ}\text{C}$  within 5 min)
- “Pulse” key for quick runs
- Automatic conversion of RPM/RCF value
- 5 acceleration ramps and 5 deceleration ramps
- LCD display of speed, remaining time, and temperature
- Program memory for up to 100
- Automatic rotor identification when spinning starts to avoid unacceptable operation
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Three layered safe door with auto-lock function
- Compressor-off when the door is open to minimize frosting and rust
- Environment friendly R404a refrigerant
- Many fixed angle rotors, swing rotors and buckets, and adaptors available

## Display and Control Interface



## Technical Specifications

	Fixed Angle Rotor	Swing Rotor
Max. capacity	30 x 1,5/2,0 ml	4 x 20 x 15 ml
	24 x 15 ml	4 x 8 x 50 ml
	8 x 50 ml	4 x 2 x 85 ml
	6 x 85 ml	4 x 250 ml
	6 x 250 ml	4 x 400 ml blood bag
		4 x 500 ml / 4 x 750 ml
Max. RPM/RCF	15,000/25,910	4,000/3,667
Temp. range	-20°C to 40°C	
FAST cool button	Yes	
Time control	Pulse, timed < 10 hr, or continuous	
RCF/RPM conversion	Yes	
Noise level (dependent on rotor)	≤60 dB	
Acceleration ramp	5	
Deceleration ramp	5	

Program memory	100
Rotor Identification	Automatic
Imbalance cutout	Yes
Display	Blue LCD
Safety lid lock	Yes
Lid drop protection	Yes
Power supply	220V/50~60Hz (110V optional)
Power requirement	2,5 KVA
Dimension (W x D x H)	770 x 650 x 390 mm
Weight without rotor	93 kg
CE mark	Yes
Cat. No.	7,647,518,201

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Rotors & Accessories



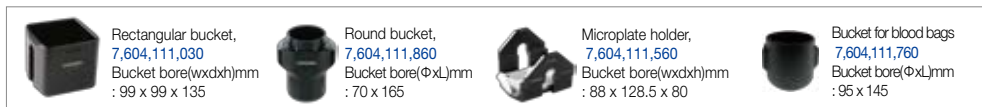
Swing rotors, **7,604,111,750**  
 4 loadings  
 Angle : 90°  
 Hole diameter (Φ, mm) : 99  
 Max height for tube fit (mm) : 142



Tube												
Tube capacity(mL)	5	3	15	10	15 mL conical	50	50 mL conical	250	500	400	MTP	DWP
Tube rack									None	None	None	None
Cat. No.	7,604,112,090		7,604,112,150	7,604,112,120	7,604,112,180	7,604,112,210	7,604,112,250	7,604,112,270	-	-	-	-
Rack Φ x L(mm)	13 x 85	13 x 58	17 x 85	16 x 85	17 x 85	29 x 87	29 x 88	62 x 87	-	-	-	-
Rack capacity(ea/4)	24/96		19/76	21/84	14/56	7/28	5/20	1/4	1/4	-	4/16	1/4
Max. RPM	4,000											
Max. RCF(g-force)	3,667										3,068	
Radius(mm)	205										171.5	



Swing rotors, **7,604,111,010**  
 4 loadings  
 Angle : 90°  
 Area dimension (mm) : 99 x 99  
 Max height for tube fit (mm) : 135



Tube												
Tube capacity(mL)	5	3	15	10	15 mL conical	50	50 mL conical	250	500	400	MTP	DWP
Tube rack									None	None	None	None
Cat. No.	7,604,111,400		7,604,111,430	7,604,111,460	7,604,111,490	7,604,111,520	7,604,111,550	-	-	-	-	-
Rack Φ x L(mm)	13 x 85	13 x 56.5	17.2 x 85	17.5 x 85	29.5 x 85		62.5 x 90	-	-	-	-	-
Rack capacity(ea/4)	30/120		20/80	16/64	8/32	5/20	1/4	1/4	-	-	4/16	1/4
Max. RPM	3,600											
Max. RCF(g-force)	2,898										2,485	
Radius(mm)	200										171.5	



Swing rotor, **7,604,111,070**  
 4 loadings  
 Angle : 90°  
 Area dimension (mm) : 86 x 70.3  
 Max height for tube fit (mm) : 125



Rectangular bucket,  
**7,604,111,120**  
 Bucket bore(wxdh)mm : 86 x 70.3 x 125



Microplate holder,  
**7,604,111,550**  
 Bucket bore(wxdh)mm : 88 x 128.5 x 80

Tube												
Tube capacity(ml)	5	3	15	10	15 ml conical	50	50 ml conical	250	85	15	MTP	DWP
Tube rack											None	None
Cat. No.	7,603,111,110		7,603,111,140		7,603,111,170	7,603,111,200	7,603,111,230	7,603,111,260	7,604,111,852		-	-
Rack Φ x L(mm)	13.5 x 80	13.5 x 58	17.5 x 90		17.5 x 90	30.2 x 90	30.5 x 90	62.5 x 90	38.5 x 90	17 x 90	-	-
Rack capacity(ea/4)	12/48	12/48	12/48		9/36	4/16	3/12	1/4	2/8		4/16	1/4
Max.rpm	4,000											
Max.rcf(g-force)							3,134			2,737		
Radius(mm)							175.2			153		



Fixed angle rotor,  
**7,604,111,110**  
 6 x 85 ml  
 Angle : 34°  
 Hole diameter (Φ, mm) : 38.5  
 Max height for tube fit (mm) : 125

Tube						
Tube capacity(ml)	15	10	15 ml conical	50	50 ml conical	85
Adaptor						None
Cat. No.	7,604,113,010		7,604,113,020	7,604,113,030	7,604,113,040	-
Adaptor Φ x L(mm)	17 x 94		17 x 98	29 x 95	29.5 x 98	-
Max.rpm	12,000					
Max.rcf(g-force)	16,582	16,421	16,260	16,743	16,421	17,709
Radius(mm)	103	102	101	104	102	110



Fixed angle rotor,  
**7,604,111,410**  
 8 x 50 ml  
 Angle : 34°  
 Hole diameter (Φ, mm) : 29.5  
 Max height for tube fit (mm) : 120

Tube				
Tube capacity(ml)	50	15	10	15 ml conical
Adaptor	None			
Cat. No.	-	7,604,113,050		7,604,113,060
Adaptor Φ x L(mm)	-	17 x 97		17 x 105
Max. RPM	15,000			
Max. RCF(g-force)	25,910	23,520	23,268	24,149
Radius(mm)	103	93.5	92.5	96

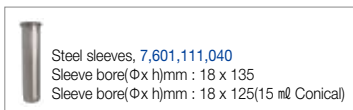


Fixed angle rotor,  
**7,604,111,090**  
 6 x 250 mL  
 Angle : 25°  
 Hole diameter (Φ, mm) : 62  
 Max height for tube fit (mm) : 130

Tube	
Tube capacity(mL)	250
Max. RPM	10,000
Max. RCF(g-force)	15,876
Radius(mm)	142



Angle rotor, **7,604,111,230**  
 24 x 15 mL  
 Angle : 45°  
 Hole diameter (Φ, mm) : 18  
 Max height for tube fit (mm) : 135 (125 for conical)



Steel sleeves, **7,601,111,040**  
 Sleeve bore(Φ x h)mm : 18 x 135  
 Sleeve bore(Φ x h)mm : 18 x 125(15 mL Conical)

Tube						
Tube capacity(mL)	15	3	4	5	10	15 mL Conical
Adaptor	None				None	None
Cat. No.	-	7,601,113,030	7,601,113,035	7,601,113,040	-	-
Adaptor Φ x L(mm)	-	13 x 63	13 x 65	13 x 85	-	-
Max. RPM	4,000					
Max. RCF(g-force)	3,134	2,776	2,830	2,990	3,121	3,068
Radius(mm)	175.5	155.2	158.2	167.2	174.5	171.5



Fixed angle rotor,  
**7,604,111,170**  
 24 x 1.5/2.0 mL  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 56

Tube			
Tube capacity(mL)	1.5/2.0	0.2	0.5
Adaptor	None		
Cat. No.	-	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	-	6.5 x 23	8 x 31
Max. RPM (24/30)	15,000/14,000		
Max. RCF(g-force) (24/30)	21,206/21,124	16,854/17,311	18,363/18,845
Radius(mm) (24/30)	84.3/96.4	67/79	73/86



Fixed angle rotor,  
**7,604,111,200**  
 30 x 1.5/2.0 mL  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 56

# 1580 High Speed, Multi-Purpose Centrifuge for up to 15,000 g

Ideal for the centrifugation with various sample containers from microtubes to 750 mL bottles, blood bags, and microplates



- Bench top, high capacity multi-purpose centrifuge with automatic door release
- Max. 15,000 rpm/21,206 g, Time setting to 99 min 59 sec or continuous
- Useful for a wide range of sample containers from microtubes to 750ml bottles, blood bags, and microplates
- “Pulse” key for quick runs
- Automatic conversion of RPM/RCF value
- 5 acceleration ramps and 5 deceleration ramps
- Radius correction function for the correct force calculation applied to sample
- LCD display of speed, remaining time, and ACC/DEC ramps
- Program memory for up to 100
- Automatic rotor identification when spinning starts to avoid unacceptable operation
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Three layered safe door with auto-lock function
- Unique air-flow cooling internal design
- Many fixed angle rotors, swing rotors and buckets, and adaptors available

Display and Control Interface



Technical Specifications

Max. capacity	Fixed Angle Rotor	Swing Rotor	Program memory	100
	30 x 1,5/2,0 ml	4 x 20 x 15 ml	Rotor Identification	Automatic
	24 x 15 ml	4 x 8 x 50 ml	Imbalance cutout	Yes
	8 x 50 ml	4 x 2 x 85 ml	Display	Blue LCD
	6 x 85 ml	4 x 250 ml	Safety lid lock	Yes
	6 x 250 ml	4 x 400 ml blood bag	Lid drop protection	Yes
		4 x 500 ml / 4 x 750 ml	Automatic door release at completion	Yes
		4 x 4 x MTP	Power supply	220V/50~60Hz (110V optional)
Max. RPM/RCF	15,000/21,206	4,000/3,667	Power requirement	1,5 KVA
Time control	Pulse, timed < 100 min or continuous		Dimension (W x D x H)	540 x 650 x 380 mm
RCF/RPM conversion	Yes		Weight without rotor	57 kg
Noise level (dependent on rotor)	≤60 dB		CE mark	Yes
Acceleration ramp	5		Cat. No.	7,648,519,201
Deceleration ramp	5			



SCANSPEED

Rotors & Accessories



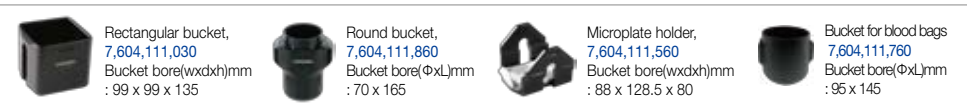
Swing rotors, **7,604,111,750**  
 4 loadings / Angle : 90°  
 Hole diameter (Φ, mm) : 99  
 Max height for tube fit (mm) : 142



Tube												
Tube capacity(mL)	5	3	15	10	15 mL conical	50	50 mL conical	250	500	400	MTP	DWP
Tube rack									None	None	None	None
Cat. No.	7,604,112,090	7,604,112,150	7,604,112,120	7,604,112,180	7,604,112,210	7,604,112,250	7,604,112,270	-	-	-	-	-
Rack Φ x L(mm)	13 x 85	13 x 58	17 x 85	16 x 85	17 x 85	29 x 87	29 x 88	62 x 87	-	-	-	-
Rack capacity(ea/4)	24/96		19/76	21/84	14/56	7/28	5/20	1/4	1/4	-	4/16	1/4
Max. RPM	4,000											
Max. RCF(g-force)	3,667										3,068	
Radius(mm)	205										171.5	



Swing rotors, **7,604,111,010**  
 4 loadings  
 Angle : 90°  
 Area dimension (mm) : 99 x 99  
 Max height for tube fit (mm) : 135



Tube												
Tube capacity(mL)	5	3	15	10	15 mL conical	50	50 mL conical	250	500	400	MTP	DWP
Tube rack									None	None	None	None
Cat. No.	7,604,111,400		7,604,111,430	7,604,111,460	7,604,111,490	7,604,111,520		7,604,111,550	-	-	-	-
Rack Φ x L(mm)	13 x 85	13 x 56.5	17.2 x 85	17.5 x 85	29.5 x 85		62.5 x 90		-	-	-	-
Rack capacity(ea/4)	30/120		20/80	16/64	8/32	5/20		1/4	1/4	-	4/16	1/4
Max. RPM	3,600											
Max. RCF(g-force)	2,898										2,485	
Radius(mm)	200										171.5	





Swing rotor, **7,604,111,070**  
 4 loadings  
 Angle : 90°  
 Area dimension (mm) : 86 x 70.3  
 Max height for tube fit (mm) : 125



Rectangular bucket,  
**7,604,111,120**  
 Bucket bore(wx dxh)mm : 86 x 70.3 x 125



Microplate holder,  
**7,604,111,550**  
 Bucket bore(wx dxh)mm : 88 x 128.5 x 80

Tube												
Tube capacity(mL)	5	3	15	10	15 mL conical	50	50 mL conical	250	85	15	MTP	DWP
Tube rack											None	None
Cat. No.	7,603,111,110		7,603,111,140		7,603,111,170	7,603,111,200	7,603,111,230	7,603,111,260	7,604,111,852			
Rack Φ x L(mm)	13.5 x 80	13.5 x 58	17.5 x 90		17.5 x 90	30.2 x 90	30.5 x 90	62.5 x 90	38.5 x 90	17 x 90	-	-
Rack capacity(ea/4)	12/48	12/48	12/48		9/36	4/16	3/12	1/4	2/8		4/16	1/4
Max.rpm	4,000											
Max.rcf(g-force)	3,134						2,737					
Radius(mm)	175.2						153					



Fixed angle rotor,  
**7,604,111,110**  
 6 x 85 mL  
 Angle : 34°  
 Hole diameter (Φ, mm) : 38.5  
 Max height for tube fit (mm) : 125

Tube						
Tube capacity(mL)	15	10	15 mL conical	50	50 mL conical	85
Adaptor						None
Cat. No.	7,604,113,010		7,604,113,020	7,604,113,030	7,604,113,040	-
Adaptor Φ x L(mm)	17 x 94		17 x 98	29 x 95	29.5 x 98	-
Max.rpm	10,000					
Max.rcf(g-force)	11,515	11,404	11,292	11,627	11,404	12,298
Radius(mm)	103	102	101	104	102	110



Fixed angle rotor,  
**7,604,111,410**  
 8 x 50 mL  
 Angle : 34°  
 Hole diameter (Φ, mm) : 29.5  
 Max height for tube fit (mm) : 120

Tube				
Tube capacity(mL)	50	15	10	15 mL conical
Adaptor	None			
Cat. No.	-	7,601,113,041		7,601,113,042
Adaptor Φ x L(mm)	-	17 x 97		17 x 105
Max. RPM	12,000			
Max. RCF(g-force)	16,582	10,453	10,342	10,733
Radius(mm)	103	93.5	92.5	96



Fixed angle rotor,  
**7,604,111,090**  
 6 x 250 ml  
 Angle : 25°  
 Hole diameter (Φ, mm) : 62  
 Max height for tube fit (mm) : 130

Tube	
Tube capacity(ml)	250
Max. RPM	8,000
Max. RCF(g-force)	10,160
Radius(mm)	142



Angle rotor, **7,604,111,230**  
 24 x 15 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 18  
 Max height for tube fit (mm) : 135 (125 for conical)

	Steel sleeves, <b>7,601,111,040</b> Sleeve bore(Φ x h)mm : 18 x 135 Sleeve bore(Φ x h)mm : 18 x 125(15 ml Conical)
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Tube						
Tube capacity(ml)	15	3	4	5	10	15 ml Conical
Adaptor	None				None	None
Cat. No.	-	7,601,113,030	7,601,113,035	7,601,113,040	-	-
Adaptor Φ x L(mm)	-	13 x 63	13 x 65	13 x 85	-	-
Max. RPM	4,000					
Max. RCF(g-force)	3,134	2,776	2,830	2,990	3,121	3,068
Radius(mm)	175.5	155.2	158.2	167.2	174.5	171.5



Fixed angle rotor,  
**7,604,111,170**  
 24 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 56

Tube			
Tube capacity(ml)	1.5/2.0	0.2	0.5
Adaptor	None		
Cat. No.	-	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	-	6.5 x 23	8 x 31
Max. RPM (24/30)	15,000/12,000		
Max. RCF(g-force) (24/30)	21,206/15,520	16,854/12,718	18,363/13,385
Radius(mm) (24/30)	84.3/96.4	67/79	73/86



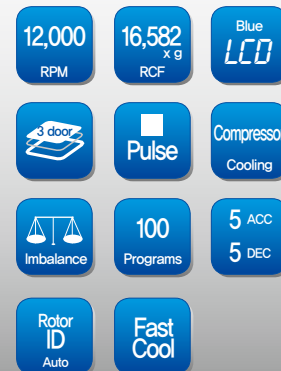
Fixed angle rotor,  
**7,604,111,200**  
 30 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 56

Refrigerated

# 1236R

Multi-Purpose Refrigerated Centrifuge for up to 12,000 rpm

Ideal for multi-purpose centrifugation at refrigerated condition



- Floor type, compact, multi-purpose centrifuge
- Max. 12,000 rpm/ 16,582 g, Time setting to 9 hr 59 min or continuous, Temp setting to  $-20^{\circ}\text{C}$
- Useful for a wide range of tubes from microtubes to 250 ml bottles and microplates
- Fast Cool function (reach  $4^{\circ}\text{C}$  within 5 min)
- “Pulse” key for quick runs
- Automatic conversion of RPM/RCF value
- 5 acceleration ramps and 5 deceleration ramps
- LCD display of speed, remaining time, and temperature
- Program memory for up to 100
- Automatic rotor identification when spinning starts to avoid unacceptable operation
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Three layered safe door with auto-lock function
- Compressor-off when the door is open to minimize frosting and rust
- Environment friendly R404a refrigerant
- Mounted on four-wheel canister for easy movement and lock-up
- Many fixed angle rotors, swing rotors and buckets, and adaptors available

## Display and Control Interface



## Technical Specifications

Max. capacity	Fixed Angle Rotor	Swing Rotor	Program memory	100
	30 x 1,5/2,0 ml	4 x 12 x 15 ml	Rotor Identification	Automatic
	24 x 15 ml	4 x 4 x 50 ml	Imbalance cutout	Yes
	8 x 50 ml	4 x 2 x 85 ml	Display	Blue LCD
	6 x 85 ml	4 x 250 ml	Safety lid lock	Yes
Max. RPM/RCF	12,000/16,582	4 x 4 x MTP	Lid drop protection	Yes
Control (?)	Microprocessor controlled		Power supply	220V/50~60Hz (110V optional)
Temp. range	-20°C to 40°C		Power requirement	2,5 KVA
FAST cool button	Yes		Dimension (W x D x H)	473 x 600 x 840 mm
Time control	Pulse, timed < 10 hr, or continuous		Weight without rotor	110 kg
RCF/RPM conversion	Yes		CE mark	Yes
Noise level (dependent on rotor)	≤60 dB		Cat. No.	7,638,515,301
Acceleration ramp	5			
Deceleration ramp	5			

# SCANSPEED



Rotors & Accessories



Swing rotor, **7,638,111,050**  
 4 loadings  
 Angle : 90°  
 Area dimension (mm) : 86 x 70.3  
 Max height for tube fit (mm) : 125



Rectangular bucket,  
**7,800,500,022**  
 Bucket bore(wxdxh)mm : 86 x 70.3 x 125



Microplate holder,  
**7,800,500,015**  
 Bucket bore(wxdxh)mm : 88 x 128.5 x 80

Tube												
Tube capacity(mL)	5	3	15	10	15 mL conical	50	50 mL conical	250	85	15	MTP	DWP
Tube rack											None	None
Cat. No.	7,603,111,110		7,603,111,140	7,603,111,170	7,603,111,200	7,603,111,230	7,603,111,260	7,604,111,852		-	-	
Rack Φ x L(mm)	13.5 x 80	13.5 x 58	17.5 x 90	17.5 x 90	30.2 x 90	30.5 x 90	62.5 x 90	38.5 x 90	17 x 90	-	-	
Rack capacity(ea/4)	12/48	12/48	12/48	9/36	4/16	3/12	1/4	2/8		4/16	1/4	
Max.rpm	4,000											
Max.rcf(g-force)	3,134										2,737	
Radius(mm)	175.2										153	



Swing rotor, **7,638,111,255**  
 4 loadings  
 Angle : 90°  
 Hole diameter (Φ, mm) : 60.5  
 Max height for tube fit (mm) : 130



Conical bucket,  
**7,800,500,082**  
 Bucket Bore(ΦxL)mm : 60.5 x 130

Tube	
Tube capacity(mL)	250 mL conical
Max.rpm	5,000
Max.rcf(g-force)	5,394
Radius(mm)	193



Angle rotor, **7,638,111,090**  
 24 x 15 mL/15 mL conical  
 Angle : 45°  
 Hole diameter (Φ, mm) : 18  
 Max height for tube fit (mm) : 135 (125 for conical)



Steel sleeves, **7,601,111,040**  
 Sleeve bore (Φ x h)mm : 18 x 135  
 Sleeve bore (Φ x h)mm : 18 x 125(Conical)

Tube						
Tube capacity(mL)	15	3	4	5	10	15 mL conical
Adaptor	None				None	None
Cat. No.	-	7,601,113,030	7,601,113,035	7,601,113,040	-	-
Adaptor Φ x L(mm)	-	13 x 63	13 x 65	13 x 85	-	-
Max.rpm	4,000					
Max.rcf(g-force)	3,134	2,776	2,830	2,990	3,121	3,068
Radius(mm)	175.5	155.2	158.2	167.2	174.5	171.5



Fixed angle rotor, **7,638,111,550**  
 6 x 85 ml  
 Angle : 34°  
 Hole diameter (Φ, mm) : 38.5  
 Max height for tube fit (mm) : 125

Tube						
Tube capacity(ml)	15	10	15 ml conical	50	50 ml conical	85
Adaptor						None
Cat. No.	7,604,113,010		7,604,113,020	7,604,113,030	7,604,113,040	-
Adaptor Φ x L(mm)	16.2 x 97		17 x 105	29 x 90	29.5 x 100	-
Max.rpm	10,000					
Max.rcf(g-force)	11,515	11,404	11,292	11,627	11,404	12,298
Radius(mm)	103	102	101	104	102	110



Fixed angle rotor,  
**7,638,111,090**  
 24 x 15 ml  
 Angle : 34°  
 Hole diameter (Φ, mm) : 17.5  
 Max height for tube fit (mm) : 113

Tube	
Tube capacity(ml)	15
Max.rpm	8,000
Max.rcf(g-force)	8,872
Radius(mm)	124



Fixed angle rotor,  
**7,638,111,095**  
 8 x 50 ml  
 Angle : 34°  
 Hole diameter (Φ, mm) : 29.5  
 Max height for tube fit (mm) : 120

Tube				
Tube capacity(ml)	50	15	10	15 ml conical
Adaptor	None			
Cat. No.	-	7,601,113,041	7,601,113,042	
Adaptor Φ x L(mm)	-	17 x 97	17 x 105	
Max. RPM	12,000			
Max. RCF(g-force)	16,582	10,453	10,342	10,733
Radius(mm)	103	93.5	92.5	96



Fixed angle rotor,  
**7,638,111,010**  
 24 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 56



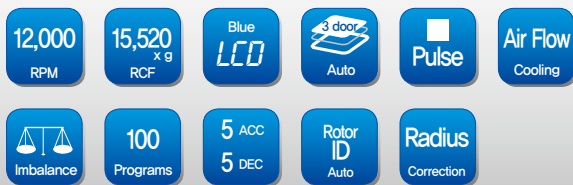
Fixed angle rotor,  
**7,638,111,500**  
 30 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 56

Tube			
Tube capacity(ml)	1.5/2.0	0.2	0.5
Adaptor	None		
Cat. No.	-	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	-	6.5 x 23	8 x 31
Max.rpm	12,000		
Max.rcf(g-force) of (24/30)	13,572/15,520	10,786/12,718	11,752/13,845
Radius(mm)of (24/30)	84.3/96.4	67/79	73/86



# 1236 Multi-Purpose Bench top Centrifuge for up to 12,000 g

Ideal for the centrifugation with various sample containers from microtubes to 250 mL bottles and microplates



- Bench top, multi-purpose centrifuge with automatic door release
- Max. 12,000 rpm/ 15,520 g, Time setting to 99 min 59 sec or continuous
- “Pulse” key for quick runs
- Automatic conversion of RPM/RCF value
- 5 acceleration ramps and 5 deceleration ramps
- Radius correction function for the correct force calculation applied to sample
- LCD display of speed, remaining time, and ACC/DEC ramp
- Program memory for up to 100
- Automatic rotor identification when spinning starts to avoid unacceptable operation
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Three layered safe door with auto-lock function
- Unique air-flow cooling internal design
- Many fixed angle rotors, swing rotors and buckets, and adaptors available

## Display and Control Interface



## Technical Specifications

	Fixed Angle Rotor	Swing Rotor		
Max. capacity	30 x 1.5/2.0 ml	4 x 12 x 15 ml	Rotor Identification	Automatic
	24 x 15 ml	4 x 4 x 50 ml	Imbalance cutout	Yes
	6 x 85 ml	4 x 2 x 85 ml	Display	Blue LCD
		4 x 250 ml	Safety lid lock	Yes
		4 x 4 x MTP	Lid drop protection	Yes
Max. RPM/RCF	12,000/15,520	5,000/5,394	Automatic door release at completion	Yes
Time control	Pulse, timed < 100 min, or continuous		Power supply	220V/50~60Hz (110V optional)
RCF/RPM conversion	Yes		Power requirement	900 VA
Noise level (dependent on rotor)	≤60 dB		Dimension (W x D x H)	475 x 561 x 330 mm
Acceleration ramp	5		Weight without rotor	40 kg
Deceleration ramp	5		CE mark	Yes
Program memory	100		Cat. No.	7,637,514,301

## Rotors &amp; Accessories



Swing rotor, 7,603,111,050  
4 loadings  
Angle : 90°  
Area dimension (mm) : 86 x 70.3  
Max height for tube fit (mm) : 125



Rectangular bucket,  
7,603,111,120  
Bucket bore(wxdxh)mm : 86 x 70.3 x 125



Microplate holder,  
7,604,111,060  
Bucket bore(wxdxh)mm : 88 x 128.5 x 80

Tube												
Tube capacity(ml)	5	3	15	10	15 ml conical	50	50 ml conical	250	85	15	MTP	DWP
Tube rack											None	None
Cat. No.	7,603,111,110		7,603,111,140		7,603,111,170	7,603,111,200	7,603,111,230	7,603,111,260	7,604,111,852		-	-
Rack Φ x L(mm)	13.5 x 80	13.5 x 58	17.5 x 90		17.5 x 90	30.2 x 90	30.5 x 90	62.5 x 90	38.5 x 90	17 x 90	-	-
Rack capacity(ea/4)	12/48	12/48	12/48		9/36	4/16	3/12	1/4	2/8		4/16	1/4
Max.rpm	4,000											
Max.rcf(g-force)							3,134			2,737		
Radius(mm)							175.2			153		

**Rotors & Accessories**



Swing rotor, **7,603,111,255**  
 4 loadings  
 Angle : 90°  
 Hole diameter (Φ, mm) : 60.5  
 Max height for tube fit (mm) : 130



Angle rotor, **7,603,111,090**  
 24 x 15 ml/15 ml conical  
 Angle : 45°  
 Hole diameter (Φ, mm) : 18  
 Max height for tube fit (mm) : 135 (125 for conical)



Conical bucket,  
**7,603,111,720**  
 Bucket Bore(ΦxL)mm : 60.5 x 130



Steel sleeves, **7,601,111,040**  
 Sleeve bore (Φ x h)mm : 18 x 135  
 Sleeve bore (Φ x h)mm : 18 x 125(Conical)

Tube	
Tube capacity(ml)	250 ml conical
Max.rpm	5,000
Max.rcf(g-force)	5,394
Radius(mm)	193

Tube						
Tube capacity(ml)	15	3	4	5	10	15 ml conical
Adaptor	None				None	None
Cat. No.	-	7,601,113,030	7,601,113,035	7,601,113,040	-	-
Adaptor Φ x L(mm)	-	13 x 63	13 x 65	13 x 85	-	-
Max.rpm	4,000					
Max.rcf(g-force)	3,134	2,776	2,830	2,990	3,121	3,068
Radius(mm)	175.5	155.2	158.2	167.2	174.5	171.5



Fixed angle rotor, **7,603,111,550**  
 6 x 85 ml  
 Angle : 34°  
 Hole diameter (Φ, mm) : 38.5  
 Max height for tube fit (mm) : 125

Tube						
Tube capacity(ml)	15	10	15 ml conical	50	50 ml conical	85
Adaptor						None
Cat. No.	7,604,113,010	7,604,113,020	7,604,113,030	7,604,113,040	-	-
Adaptor Φ x L(mm)	16.2 x 97		17 x 105	29 x 90	29.5 x 100	-
Max.rpm	10,000					
Max.rcf(g-force)	11,515	11,404	11,292	11,627	11,404	12,298
Radius(mm)	103	102	101	104	102	110



Fixed angle rotor,  
**7,603,111,010**  
 24 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 56

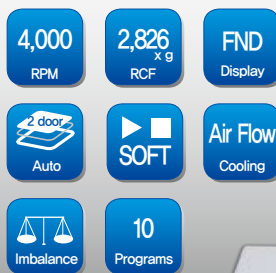


Fixed angle rotor,  
**7,603,111,500**  
 30 x 1.5/2.0 ml  
 Angle : 45°  
 Hole diameter (Φ, mm) : 11.1  
 Max height for tube fit (mm) : 56

Tube			
Tube capacity(ml)	1.5/2.0	0.2	0.5
Adaptor	None		
Cat. No.	-	7,600,113,010	7,600,113,020
Adaptor Φ x L(mm)	-	6.5 x 23	8 x 31
Max.rpm	12,000		
Max.rcf(g-force) of (24/30)	13,572/15,520	10,786/12,718	11,752/13,845
Radius(mm)of (24/30)	84.3/96.4	67/79	73/86

# 416 **Low Speed Centrifuge**

Ideal for biological sample separation of cells, bloods, urines, etc



- Compact design with automatic door release
- Max. 4,000 rpm/2,826 g, Time setting to 99 min 59 sec or continuous
- Rapid acceleration and deceleration
- “SOFT” start/stop function for gentle acceleration/deceleration
- Digital display of speed and remaining time
- Automatic RPM/RCF conversion
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Program memory for up to 10
- Unique air-flow cooling internal design
- Three layered safe door with auto-lock function
- Complete with autoclavable, fixed angle rotor (16 x 15 ml tubes) or swing-out rotor (4 wings or 6 wings) with buckets (50 ml, 15 ml, 2 x 15 ml, etc)
- A range of adaptors being available for both rotors for tubes from 3 ml to 15 ml

Display and Control Interface



Technical Specifications

	Fixed Angle Rotor	Swing Rotor		
Max. capacity	16 x 15 ml	4 x 2 x 15 ml 4 x 50 ml 2 x 2 x MTP	Program memory	10
Max. RPM/RCF	4,000/2,700	4,000/2,826	Imbalance cutout	Yes
Time control	Timed < 100 min, or continuous		Safety lid lock	Yes
RCF/RPM conversion	Yes		Lid drop protection	Yes
Noise level (dependent on rotor)	≤60 dB		Automatic door release at completion	Yes
Acc. time to max. speed	≤20 sec		Power supply	220V/50~60Hz (110V optional)
Dec. time from max. speed	≤25 sec		Power requirement	300 VA
SOFT start/stop	Yes		Dimension (W x D x H)	375 x 480 x 260 mm
			Weight without rotor	19,5 kg
			CE mark	Yes
			Cat. No.	7,617,514,201

Rotors & Accessories



Swing rotor, 7,601,111,140  
4 loadings  
Angle : 90°

	Round bucket 7,601,111,100 Sleeve bore (Φ x h)mm : 30.5 x 125		Conical bucket 7,601,111,101 Sleeve bore (Φ x h)mm : 29.5 x 125
	Conical bucket 7,601,111,103 Sleeve bore (Φ x h)mm : 17 x 125		Bucket for 2 x 15 ml tubes 7,601,111,171 Sleeve bore (Φ x h)mm : 17 x 125
	Bucket 7,601,111,102 Sleeve bore (Φ x h)mm : 17 x 125		

Tube					
Tube capacity(ml)	50	50 ml conical	15	15 ml conical	15
Adaptor	None			None	None
Cat. No.	-	7,617,113,030	7,601,113,045	-	-
Adaptor Φ x L (mm)	-	29.5 x 17.5	18.5 x 100	-	-
Max.rpm	4,000				
Max.rcf(g-force)	2,700				
Radius(mm)	151.5				



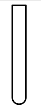
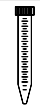
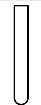

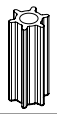
Rotors & Accessories



Swing rotor, **7,601,111,190**  
 4 loadings  
 Angle : 90°  
 Hole diameter (Φ, mm) : 30.5  
 Max height for tube fit (mm) : 120

 Buckets, **7,601,111,192**  
 Sleeve bore (Φx h)mm : 30.5 x 120

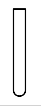
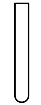
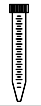
 Buckets, **7,601,111,191**  
 Sleeve bore (Φx h)mm : 17 x 120

Tube					
Tube capacity(mL)	50	50 mL conical	15	15 mL conical	15
Adaptor	None				None
Cat. No.	-	7,617,113,030	7,601,113,045	-	-
Adaptor Φ x L (mm)	-	29.5 x 17.5	18.5 x 100	-	-
Max.rpm	4,000				
Max.rcf(g-force)	2,700				
Radius(mm)	151.5				



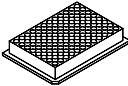
Swing rotor, **7,601,111,170**  
 6 loadings  
 Angle : 90°  
 Hole diameter (Φ, mm) : 17  
 Max height for tube fit (mm) : 125

 Buckets, **7,601,111,172**  
 Sleeve bore (Φx h)mm : 17 x 125

Tube			
Tube capacity(mL)	10	15	15 mL conical
Max.rpm	4,000		
Max.rcf(g-force)	2,826		
Radius(mm)	158		




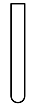
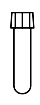
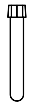
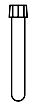
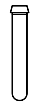
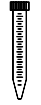

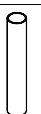
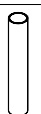
Swing rotor, **7,601,111,180**  
 2 loadings  
 Angle : 90°  
 Area dimension (mm) : 86.3 x 130.3  
 Max height for tube fit (mm) : 35

Tube	
Tube capacity(mL)	MTP
Rack capacity(ea/2)	2/4
Max.rpm	4,000
Max.rcf(g-force)	1,986
Radius(mm)	111



Angle rotor, **7,601,111,130**  
 16 x 15 mL/15 mL conical  
 Angle : 45°  
 Hole diameter (Φ, mm) : 18  
 Max height for tube fit (mm) : 135 (125 for conical)

 Steel sleeves, **7,601,111,040**  
 Sleeve bore(Φxh)mm : 18 x 135  
 Sleeve bore(Φxh)mm : 18 x 125 (15 mL Conical)

Tube						
Tube capacity(mL)	15	3	4	5	10	15 mL conical
Adaptor	None				None	None
Cat. No.	-	7,601,113,030	7,601,113,035	7,601,113,040	-	-
Adaptor Φ x L (mm)	-	13 x 63	13 x 65	13 x 85	-	-
Max.rpm	4,000					
Max.rcf(g-force)	2,700	2,397	2,433	2,692	2,638	2,700
Radius(mm)	151.5	134	136	146	150.5	147.5



# 406

## Low-Speed Centrifuge

Good for simple cell harvest and blood cell separation



4,000  
RPM

2,075  
x g  
RCF

FND  
Display

2 door  
Auto

Air Flow  
Cooling

Imbalance

10  
Programs

- Robust design with automatic door release
- Max. 4,000 rpm/2,075 g, Time setting to 99 min 59 sec or continuous
- Digital display of speed and remaining time
- Fast acceleration and deceleration
- Automatic RPM/RCF conversion
- Automatic recognition and alarms for imbalance, over-speed and over-heat
- Program memory for up to 10
- Unique air-flow cooling internal design
- Strong steel layered door with auto-lock function
- Complete with fixed angle rotor and stainless steel sleeves (6 x 15 ml tubes)
- Adaptors available for 3 ml and 5 ml tubes

## Display and Control Interface



## Technical Specifications

Max. RPM	4,000 rpm
Max. RCF	2,075 x g
Max. capacity	6 x 15 mL
Time control	Timed < 100 min or continuous
RCF/RPM conversion	Yes
Noise level (dependent on rotor)	≤60 dB
Acc. time to max. speed	≤20 sec
Dec. time from max. speed	≤20 sec
Program memory	10

Imbalance cutout	Yes
Safety lid lock	Yes
Lid drop protection	Yes
Automatic door release at completion	Yes
Power supply	220V/50~60Hz (110V optional)
Power requirement	120 VA
Dimension (W x D x H)	296 x 412 x 206 mm
Weight without rotor	17,5 kg
CE mark	Yes
Cat. No.	7,607,514,101

## Rotors &amp; Accessories



Angle rotor, **7,601,111,070**  
 6 x 15 mL/15 mL conical  
 Angle : 45°  
 Hole diameter (Φ, mm) : 18  
 Max height for tube fit (mm) : 135 (125 for conical)



Steel sleeves, **7,601,111,040**  
 Sleeve bore (Φ x h)mm : 18 x 125

Tube						
Tube capacity(mL)	15	3	4	5	10	15 mL conical
Adaptor	None				None	None
Cat. No.	-	7,601,113,030	7,601,113,035	7,601,113,040	-	-
Adaptor Φ x L(mm)	-	13 x 63	13 x 65	13 x 85	-	-
Max.rpm	4,000					
Max.rcf(g-force)	2,075	1,703	1,762	1,986	2,057	2,003
Radius(mm)	116	95.5	98.5	111	115	112



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