



GYROZEN[®]

Product Guide 2015



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Centrifuges

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GYROZEN®

Designed to perfectly meet your needs.

GYROZEN[®]



THE BEST FUNCTIONAL QUALITY

- ✓ Manufactured and tested to IEC standards, stable spinning operation within +/-2% variation
- ✓ Steady and soft deceleration with dynamic brake technology
- ✓ Unique internal air flow design preventing from sample heating
- ✓ High-capacity, strong compressor ensures fast cooling of chamber and samples
- ✓ Fast cooling function to 4°C in 5 minutes for fast start up of cooled samples
- ✓ Automatic rotor identification
- ✓ Automatic RPM/RCF conversion



SAFETY and ROBUSTNESS

- ✓ Sturdy structured, two or three layered lid for noise-minimized and safe operation
- ✓ Safety lid lock scheme for safe and reliable work environment
- ✓ Lid-drop protection protecting the operator and samples
- ✓ Automatic rotor identification for safe operation
- ✓ Automatic detection and warning for imbalance, excess speed and over-heating
- ✓ Emergency lid-lock release for power blackout or sudden stoppage
- ✓ The eco-friendly compressor-off function on when lid is open
- ✓ The aerosol tight buckets and rotors to prevent contamination
- ✓ Autoclavable and corrosion-free rotors

Wide range of modern centrifuges for a wide variety of laboratory applications



CONVENIENCE IN OPERATION

- ✓ Soft touch button/screen with intuitive controls
- ✓ Highly legible blue and white LCD display
- ✓ Time control functions of pulse, timed and continuous
- ✓ Automatic RPM/RCF conversion
- ✓ Easy to check actual rotation through the viewing port in the lid
- ✓ Program memory up to 100 (or 10) programs
- ✓ Automatic rotor identification
- ✓ Automatic lid release at the completion of spinning
- ✓ A large assortment of rotors, buckets and adaptors for diverse applications



EASY CUSTOMIZATION

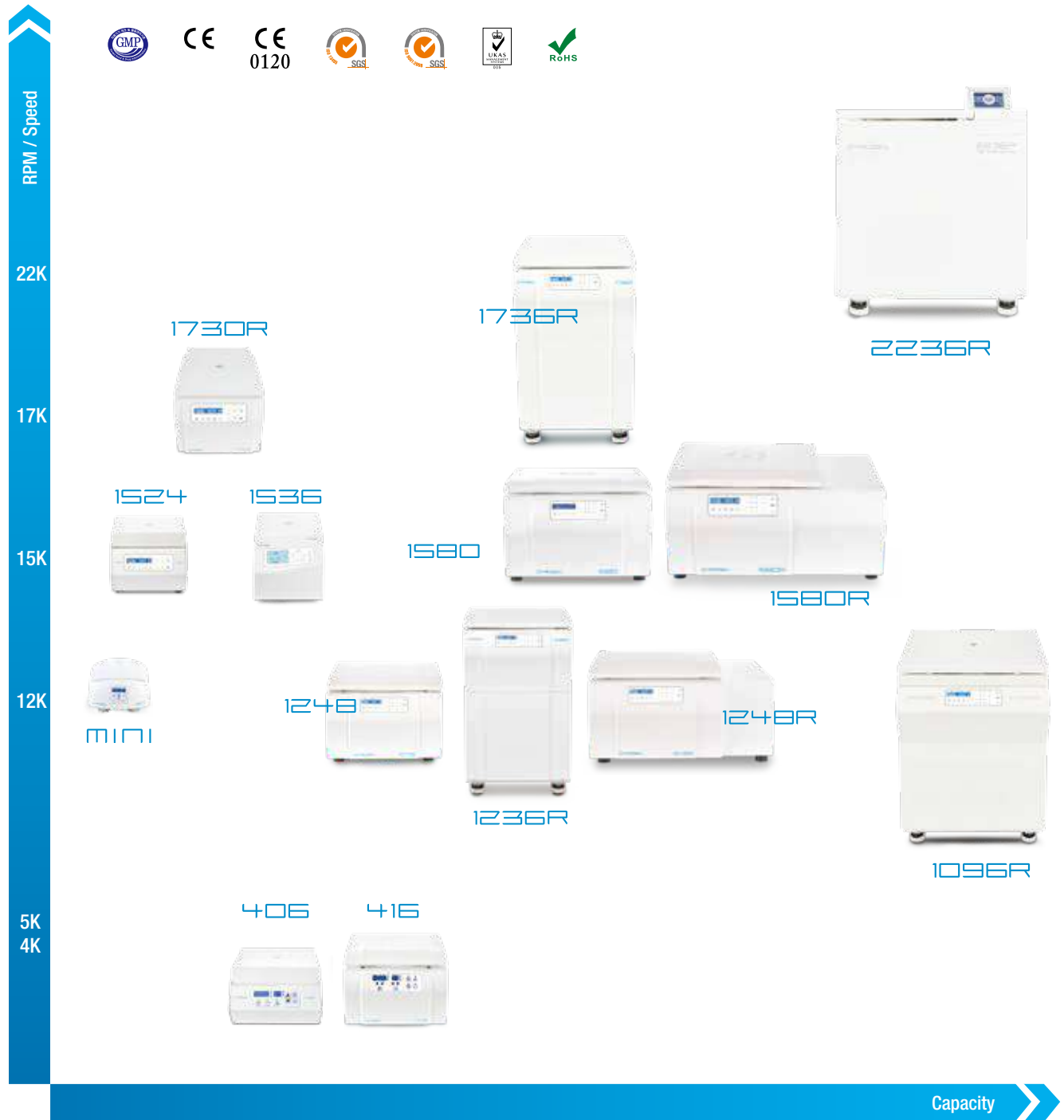
- ✓ Any rotors, sample containers and adaptors can be customized upon specified requirement
- ✓ High flexibility of structural & functional modifications



CERTIFICATES AND REGISTRATIONS

- ✓ Accredited with ISO 9001, ISO 13485, and KGMP
- ✓ Comply with CE conformity
- ✓ Approved as Class IIa medical products (MD406 and MD416 only)

Product Range



Product Selection Guide by Max Speed & Sample Container

Centrifuges		Micro Centrifuges				Multi-Purpose, High-Speed Centrifuges							Clinical, Low-Speed Centrifuges		
						Benchtop			Floor Stand						
						Mid Capacity				Large Capacity					
		mini	1524	1536	1730R	1248	1248R	1580	1580R	1236R	1736R	2236R	1096R	406	416
		p15~16	p17~18	p19~20	p21~24	p25~36					p37~42	p43~50	p51~60	p61~62	p63~68
Refrigeration					●		●		●	●	●	●	●		
Max. Force															
Fixed Angle Rotor	Max. 2,000 xg													●	
	Max. 2,700 xg														●
	Max. 12,300 xg	●													
	Max. 14,980 xg												●		
	Max. 15,520 xg					●									
	Max. 16,500 xg						●			●					
	Max. 21,200 xg		●	●				●							
	Max. 25,900 xg								●						
	Max. 27,200 xg				●										
	Max. 32,300 xg										●				
Swing-Out Rotor	Max. 54,111 xg											●			
	Max. 2,800 xg												●		●
	Max. 3,100 xg										●	●			
	Max. 3,600 xg														
	Max. 4,410 xg														
Max. 5,300 xg						●	●	●	●	●			●		
Sample Container / Max. Force															
Micro Tube	PCR strip	○	○	○	○										
	0.2/0.5 ml	○	○	○	○	○	○	○	○	○	○	○			
	1.5/2.0 ml	○	○	○	○	●	●	●	●	●	○	○			○
	Micro filter tube		○	○	○	○	○	○	○	○	○	○			
	1.8 ml cryotube	○													
Tube	3/4/5 ml			○	○	●	●	●	●	●	○	○	○	○	○
	7 ml					○	○	○	○	○					○
	10/15 ml					●	●	●	●	●	●	●	○	○	●
	15 ml conical					●	●	●	●	●	●	●	○	○	●
	50 ml					●	●	●	●	●	●	●	○		○
	50 ml conical					●	●	●	●	●	●	●	○		○
	85 ml					●	●	●	●	●	●	●	○		○
	100 ml					○	○	○	○	○					○
	100 ml conical glass												○		
	250 ml					○	○	○	●	○	●	●	●		
	250 ml conical					○	○	○	○	○					
	500 ml							○	○		○	○	●		
	500 ml conical							○	○				○		
	750 ml							○	○				○		
	1,000 ml											○			
Plate	PCR plate					○	○	○	○	○	○	○	○		○
	Micro assay plate					○	○	○	○	○	○	○	○		○
	Tissue culture plate					○	○	○	○	○	○	○	○		○
	Deep well plate					○	○	○	○	○	○	○	○		○
	Filter set plate												○		
Syringe	10 / 20 / 60 ml					○	○	○	○	○					
Blood Bag	Double 200 / 400 ml												○		

● Only for fixed angle rotors ● Only for swing-out rotors ● Both for fixed angle and swing-out rotors

Rotor Availability (Large Capacity / Multi-Purpose / Clinical, Low-Speed Centrifuges)

Large Capacity, High-Speed	1736R  p35-40	Rotor Cat. No.	GRF-L-s0.2-64	GRF-L-m2.0-30	GRF-L-15-12	GRF-L-c15-12	GRF-L-50-6	GRF-L-c50-6	GRF-L-50-8	GRF-L-85-6	GRF-L-250-6	GRF-L-500-6	
		Bucket Cat. No.	-	-	-	-	-	-	-	-	-	-	-
		Max. Capacity	64 x 0.2 ml	30 x 2.0 ml	12 x 15 ml	12 x 15 ml conical	6 x 50 ml	6 x 50 ml conical	8 x 50 ml	6 x 85 ml	6 x (250 & 15 ml)	6 x 500 ml	
		Shape											
		Max. RPM/RCF	12,000/9,434(max), 10,803(output)	17,000/31,147	17,000/32,310	15,000/25,910	17,000/32,310	15,000/24,753	15,000/25,910	15,000/25,029	10,000/14,981(250, 14,679(15)	8,000/11,305	
		Hole Diameter (mm)	6.5	11.1	17	17	29.5	29.5	29.5	38.3	62 (17)	70	
		Max. Height for Tube fit (mm)	16	52	125	125	120	125	120	125	130 (15 ml : 120)	167	
	2236R  p41-48	Rotor Cat. No.	GRF-L-s0.2-64	GRF-L-m2.0-30	GRF-L-15-12	GRF-L-c15-12	GRF-L-50-6	GRF-L-c50-6	GRF-L-50-8	GRF-L-85-6	GRF-L-250-6	GRF-L-500-6	
		Bucket Cat. No.	-	-	-	-	-	-	-	-	-	-	-
		Max. Capacity	64 x 0.2 ml	30 x 2.0 ml	12 x 15 ml	12 x 15 ml conical	6 x 50 ml	6 x 50 ml conical	8 x 50 ml	6 x 85 ml	6 x (250 & 15 ml)	6 x 500 ml	
		Shape											
		Max. RPM/RCF	12,000/9,434(max), 10,803(output)	22,000/52,163	20,000/44,720	20,000/46,062	22,000/54,111	17,000/31,793	20,000/46,062	20,000/44,496	13,000/25,318(250, 24,888(15)	10,000/17,664	
		Hole Diameter (mm)	6.5	11.1	17	17	29.5	29.5	29.5	38.3	62 (17)	70	
		Max. Height for Tube fit (mm)	16	52	125	125	120	125	120	125	130 (15 ml : 120)	167	
	1096R  p49-58	Rotor Cat. No.										GRF-L-250-6	GRF-L-500-6
Bucket Cat. No.											-	-	
Max. Capacity											6 x (250 & 15 ml)	6 x 500 ml	
Shape													
Max. RPM/RCF											10,000/14,981(250, 14,679(15)	8,000/11,305	
Hole Diameter (mm)											62(17)	70	
Max. Height for Tube fit (mm)											125(110)	167	
Multi-Purpose, High-Speed	1236R 1248R / 1248  p23-34	Rotor Cat. No.	GRF-G-s0.2-64	GRF-G-m2.0-30	GRA-G-15-24A	GRF-G-15-24	GRF-G-50-8	GRF-G-85-6					
		Bucket Cat. No.	-	-	GLB-15A-FA	-	-	-					
		Max. Capacity	64 x 0.2 ml	30 x 2.0 ml	24 x 15 ml	24 x 15 ml	8 x 50 ml	6 x 85 ml					
		Shape											
		Max. RPM/RCF	12,000/9,434(max), 10,803(output)	12,000/15,520	4,000/3,134	8,000/8,872	12,000/16,582	10,000/12,298					
		Hole Diameter (mm)	6.5	11.1	18	17.5	29.5	38.5					
		Max. Height for Tube fit (mm)	16	52	125	115	120	122					
	1580 / 1580R  p23-34	Rotor Cat. No.	GRF-G-s0.2-64	GRF-G-m2.0-30	GRA-G-15-24A	GRF-G-15-24	GRF-G-50-8	GRF-G-85-6	GRF-G-250-6				
		Bucket Cat. No.	-	-	GLB-15A-FA	-	-	-	-				
		Max. Capacity	64 x 0.2 ml	30 x 2.0 ml	24 x 15 ml	24 x 15 ml	8 x 50 ml	6 x 85 ml	6 x (250 & 15 ml)				
		Shape											
		Max. RPM/RCF	12,000/9,434(max), 10,803(output)	15,000/24,249	4,000/3,134	8,000/8,872	15,000/25,910 12,000/16,582	12,000/17,709 10,000/12,298	8,000/ 9,588(250), 9,395(15)				
		Hole Diameter (mm)	6.5	11.1	18	17.5	29.5	38.5	62(17)				
		Max. Height for Tube fit (mm)	16	52	130	115	120	122	130(120)				
Clinical, Low-Speed	406 / 416  p59-60  p61-66	Rotor Cat. No.	GRA-15-6A	GRA-S-15-16A	GRS-S-15-6								
		Bucket Cat. No.	GLB-15A-FA	GLB-15A-FA	GRS-S-50-4								
		Max. Capacity	6 x 15 ml	16 x 15 ml	GLB-15-15	GLB-50-50	GLB-c50-50	GLB-15-50	GLB-c15-50	GLB-d15-50	GLB-dc15-50		
		Shape											
		Max. RPM/RCF	4,000/2,075	4,000/2,700	4,000/2,826	4,000/2,700							
		Hole Diameter (mm)	18	18	17	30.5	29.5	17	17	17	17		
		Max. Height for Tube fit (mm)	125	125	93.8	125	125	125	120	120	120		

GRS-L-r250-4			
GLB-r250-r250		GLP-mw-r250	
4 x 250 ml		4 x 4 MTPs	
			
4,000/3,134		4,000/2,737	
86 x 70.3		88 x 128.5	
102.5		80	

GRF-L-1000-4	GRF-L-1000-6	GRS-L-r250-4	
-	-	GLB-r250-r250	GLP-mw-r250
4 x 1,000 ml	6 x 1,000 ml	4 x 250 ml	4 x 4 MTPs
			
8,000/12,071	7,000/10,825	4,000/3,134	4,000/2,737
98	98	86 x 70.3	88 x 128.5
175	175	102.5	80

 Fixed Angle Rotors

 Adaptors available for smaller tubes

 Swing-Out Rotors

 Refrigerated models

- The fixed angle rotors are supplied with rotor lid (except PCR strip rotors).
- The open style angle rotors are supplied with tube sleeves.
- The swing-out rotor may be ordered together with compatible buckets and adaptors.
- The colors of the rotors, buckets and adaptors may be different and changeable without notification.

GRS-L-r250-4					GRS-L-r750-4			GRS-L-750-4			
GLB-100(L)-r250	GLB-100(S)-r250	GLB-100(C)-r250	GLB-r250-r250	GLP-mw-r250	GLB-r750-r750	GLB-500-r750	GLP-mw-r750	GLB-750-750	GLB-b750-750	GLB-500-750	GLP-mw-750
4 x 100 ml	4 x 100 ml	4 x 100 ml	4 x 250 ml	4 x 4 MTPs	4x500 ml conical	4 x 500 ml	4 x 4 MTPs	4 x 750 ml	4 x 750 ml	4 x 500 ml	4 x 4 MTPs
											
4,000/4,358	4,000/4,155	4,000/4,191	4,000/3,134	4,000/2,737	3,600/2,898	3,600/3,159	3,600/2,485	4,000/3,667		4,000/3,900	4,000/3,068
35.5	44.6	61.5	86 x 70.3	88 x 128.5	99 x 99	69.2	88 x 128.5	99	99	69.2	88 x 128.5
207	190	190	102.5	80	135	165	80	142	130	165	80

GRS-G-100-6					GRS-G-250-4				GRS-G-r250-4	
GLB-b100-100	GLB-b50-100	GLB-10-8-100	GLB-bd15-100	GLB-bdc15-100	GLB-250-250	GLB-c250-250	GLB-60-250	GLB-d20/10-250	GLB-r250-r250	GLP-mw-r250
6 x 100 ml	6 x 50 ml	6 x 8 x 10 ml vacutainer	6 x 2 x 15 ml	6 x 2 x 15 ml conical	4 x 250 ml	4 x 250 ml conical	4 x 60 ml	4 x 2 x (20 & 10 ml)	4 x 250 ml	4 x 4 MTPs
										
4,000/3,105	4,000/3,032	4,000/3,105	4,000/3,032	4,000/3,105	5,000/5,394	5,000/5,394	5,000/5,394	5,000/4,752 (20), 4,472 (10)	4,000/3,134	4,000/2,737
47	30.5	16	17	17	62	60.5	31.5	22.5 (20), 16 (10)	86 x 70.3	88 x 128.5
130	125	120	120	127	153	153	165	132 (20), 125 (10)	130	80

GRS-G-100-6					GRS-G-250-4				GRS-G-r250-4		GLB-r750-r750
GLB-b100-100	GLB-b50-100	GLB-10-8-100	GLB-bd15-100	GLB-bdc15-100	GLB-250-250	GLB-c250-250	GLB-60-250	GLB-d20/10-250	GLB-r250-r250	GLP-mw-r250	GLB-r750-r750
6 x 100 ml	6 x 50 ml	6 x 8 x 10 ml vacutainer	6 x 2 x 15 ml	6 x 2 x 15 ml conical	4 x 250 ml	4 x 250 ml conical	4 x 60 ml	4 x 2 x (20 & 10 ml)	4 x 250 ml	4 x 4 MTPs	4 x 500 ml conical
											
4,000/3,105	4,000/3,032	4,000/3,105	4,000/3,032	4,000/3,105	5,000/5,394	5,000/5,394	5,000/5,394	5,000/4,752 (20), 4,472 (10)	4,000/3,134	4,000/2,737	3,600/2,898
47	30.5	16	17	17	62	60.5	31.5	22.5 (20), 16 (10)	86 x 70.3	88 x 128.5	99 x 99
130	125	120	120	127	153	153	165	132 (20), 125 (10)	130	80	135

GRS-S-100-4					GRS-S-mw-2
GLB-b100-100	GLB-b50-100	GLB-10-8-100	GLB-bd15-100	GLB-bdc15-100	-
4 x 100 ml	4 x 50 ml	4 x 8 x 10 ml vacutainer	4 x 2 x 15 ml	4 x 2 x 15 ml conical	2 x 2 MTPs
					
4,000/2,774	4,000/2,700	4,000/2,774	4,000/2,700	4,000/2,774	4,000/1,986
47	30.5	16	17	17	88.5 x 130.3
130	130	120	115	120	35

GRS-L-750-6			GRS-L-1400-4W	GRS-L-mw-4W
GLB-750-750	GLB-500-750	GLB-mw-750	GLB-1400-1400	GLP-mw-1400
6 x 750 ml	6 x 500 ml	6 x 6 MTPs	4 x 1,400/4 blood bags	4 x 4 MTPs
				
4,000/3,982	4,000/4,248	4,000/3,384	4,000/3,982	5,000/5,324
99 x 101.5	69.2 x 135	88 x 128.5	134 x 115	88 x 128
142	165	80	150	57

GRS-G-r750-4		GRS-G-750-4			
GLB-500-r750	GLP-mw-r750	GLB-750-750	GLB-b750-750	GLB-500-750	GLP-mw-750
4 x 500 ml	4 x 4 MTPs	4 x 750 ml	4 x 750 ml	4 x 500 ml	4 x 4 MTPs
					
3,600/3,159	3,600/2,485	4,000/3,667		4,000/3,900	4,000/3,068
69.2	88 x 128.5	99	99	69.2	88 x 128.5
165	80	142	130	165	80

Rotor Availability (Micro Centrifuges)

Fixed Angle Rotor Selection

Micro

mini



Rotor Cat. No.

GRA-s0.2-32

Max. Capacity

32 x 0.2 ml

Shape





Max. RPM/RCF

6,000/1,554(1 row), 1,850(2 row)

Hole Diameter (mm)

6.5

Max. Height for Tube fit (mm)

-

p15-16

Rotor Cat. No.

GRF-s0.2-32

Max. Capacity

32 x 0.2 ml

Shape





Max. RPM/RCF

15,000/14,187

Hole Diameter (mm)

6.5

Max. Height for Tube fit (mm)

16

1524

Rotor Cat. No.

GRF-m2.0-18

Max. Capacity

18 x 2.0 ml filter tube

Shape





Max. RPM/RCF

15,000/18,891

Hole Diameter (mm)

11.1

Max. Height for Tube fit (mm)

65

p17-18

Rotor Cat. No.

GRF-m2.0-24

Max. Capacity

24 x 2.0 ml

Shape





Max. RPM/RCF

15,000/21,206

Hole Diameter (mm)

11.1

Max. Height for Tube fit (mm)

52

1536

Rotor Cat. No.

GRF-s0.2-32

Max. Capacity

32 x 0.2 ml

Shape





Max. RPM/RCF

15,000/14,187

Hole Diameter (mm)

6.5

Max. Height for Tube fit (mm)

16

p19-20

Rotor Cat. No.

GRF-m2.0-24A

Max. Capacity

24 x 2.0 ml

Shape





Max. RPM/RCF

15,000/21,206

Hole Diameter (mm)

11.1

Max. Height for Tube fit (mm)

56

1730R

Rotor Cat. No.

GRF-M-m2.0-30

Max. Capacity

30 x 2.0 ml

Shape





Max. RPM/RCF

14,000/21,124

Hole Diameter (mm)

11.1

Max. Height for Tube fit (mm)

52

p21-22

Rotor Cat. No.

GRD-M-m2.0-8

Max. Capacity

8 x 2.0 ml

Shape





Max. RPM/RCF

13,000/16,343

Hole Diameter (mm)

11.1

Max. Height for Tube fit (mm)

50

1730R

Rotor Cat. No.

GRF-M-m2.0-16

Max. Capacity

16 x 2.0 ml

Shape





Max. RPM/RCF

13,000/15,682

Hole Diameter (mm)

11.1

Max. Height for Tube fit (mm)

43

1730R

Rotor Cat. No.

GRF-M-m5.0-12

Max. Capacity

12 x 5.0 ml

Shape





Max. RPM/RCF

15,000/21,583

Hole Diameter (mm)

17

Max. Height for Tube fit (mm)

70

Tube Shape & Volume	PCR strip or 0.2 ml
Max. Capacity (ea)	4 or 8 (PCR strip) / 32 or 64
Rotor	GRA-s0.2-32 ● GRF-s0.2-32 ● GRF-M-s0.2-64 ● GRF-G-s0.2-64 ● GRF-L-s0.2-64 ●
Bucket	-
Shape	
Hole diameter (mm)	6.5
Max. height for tube fit (mm)	16
Optional Adaptors	-
mini (RPM / RCF)	6,000 / 1,850 ●
1524 (RPM / RCF)	15,000 / 14,187 ●
1536 (RPM / RCF)	
1730R (RPM / RCF)	12,500 / 11,722 ●
406 (RPM / RCF)	-
416 (RPM / RCF)	-
1248 (RPM / RCF)	12,000 / 10,803 ●
1248R (RPM / RCF)	
1236R (RPM / RCF)	
1580 (RPM / RCF)	
1580R (RPM / RCF)	12,000 / 10,803 ●
1736R (RPM / RCF)	
2236R (RPM / RCF)	
1096R (RPM / RCF)	-

Swing-Out Rotor Selection Guide by Sample Container

Tube Shape & Volume	 Microplate, deep-well plate, tissue culture / PCR plate, filter plate (only GLP-mw-1400)					 10 ml	 10 ml vacutainer	 15 ml		
Max. Capacity (ea)	2 x 2	4 x 4	4 x 4 or 4 x 6	4 x 4	1 x 4	1 x 6	8 x 4 or 8 x 6	1 x 4	2 x 4	1 x 6
Bucket	-	GLP-mw-250	GLP-mw-750	GLP-mw-750	GLP-mw-1400	GLB-15-15	GLB-10-8-100	GLB-15-50	GLB-d15-50	GLB-15-15
Rotor	GRS-S-mw-2	GRS-G-r250-4 GRS-L-r250-4	GRS-G-750-4 GRS-L-750-4 GRS-L-750-6	GRS-G-750-4 GRS-L-750-4	GRS-L-mw-4W	GRS-S-15-6	GRS-S-100-4 GRS-G-100-6	GRS-S-50-4	GRS-S-50-4	GRS-S-15-6
Shape										
Max. height for tube fit (mm)	-	-	-	-	-	125	120	125	120	125
Optional Tube Rack & Adaptor		-	-	-	-	-	-	-	-	-
416 (RPM / RCF)	4,000 / 1,986	-	-	-	-	4,000 / 2,826	4,000 / 2,774 (S model)	4,000 / 2,700	4,000 / 2,700	4,000 / 2,826
1248 (RPM / RCF)	-	4,000 / 2,737 (G model)	-	-	-	-	4,000 / 3,161 (G model)	-	-	-
1248R (RPM / RCF)	-		-	-	-	-		-	-	
1236R (RPM / RCF)	-		-	-	-	-		-	-	
1580 (RPM / RCF)	-		4,000 / 3,068 (G model)	3,600 / 2,485 (G model)	-	-		-	-	
1580R (RPM / RCF)	-	4,000 / 2,737 (L model)	-	-	-	-	-	-	-	-
1736R (RPM / RCF)	-		-	-	-	-	-	-	-	
2236R (RPM / RCF)	-		-	-	-	-	-	-	-	
1096R (RPM / RCF)	-		4,000 / 3,068 (L model)	3,600 / 2,485 (L model)	5,000 / 5,324	-	-	-	-	-

tion Guide by Sample Container

1.8 ml cryotube	2.0 ml						2.0 ml filter tube	5.0 ml	10 ml or 15 ml			15 ml conical
10	8	12	16	24	30	36	18	12	6 or 16 or 24	12	24 (only 15 ml)	6 or 16 or 24
GRF-m1.8-10	GRD-M-m2.0-8	GRF-m2.0-12	GRD-M-m2.0-16	GRF-m2.0-24 GRF-m2.0-24A GRF-M-m2.0-24	GRF-M-m2.0-30 GRF-G-m2.0-30 GRF-L-m2.0-30	GRF-m2.0-36	GRF-m2.0-18 GRF-M-m2.0-18	GRF-m5.0-12	GRA-15-6A GRA-S-15-16A GRA-G-15-24	GRF-L-15-12	GRF-G-15-24	GRA-15-6A GRA-S-15-16A GRA-G-15-24
-	GLB-m2.0	-	GLB-m2.0-4	-	-	-	-	-	GLB-15A-FA GLB-15-FA	-	-	GLB-15A-FA GLB-15-FA
												
12.8 50	11.1 50	11.1 42	11.1 43	11.1 52	11.1 52	11.1 52	11.1 65	11.1 85.8	18 125	17 125	17.5 115	18 125
GAS-m0.2(2) 0.2ml GAS-m0.5(2) 0.5ml	GAS-m0.2(2) 0.2ml GAS-m0.5(2) 0.5ml	GAS-m0.2(2) 0.2ml GAS-m0.5(2) 0.5ml	GAS-m0.2(2) 0.2ml GAS-m0.5(2) 0.5ml	GAS-m0.2(2) 0.2ml GAS-m0.5(2) 0.5ml	GAS-m0.2(2) 0.2ml GAS-m0.5(2) 0.5ml	GAS-m0.2(2) 0.2ml GAS-m0.5(2) 0.5ml	GAS-m0.2(2) 0.2ml GAS-m0.5(2) 0.5ml		GAS-3(15) 3ml GAS-4(15) 4ml GAS-5(15) 5ml	-	-	GAS-3(15) 3ml GAS-4(15) 4ml GAS-5(15) 5ml
13,500 / 12,300	-	13,500 / 12,300	-	-	-	-	-	-	-	-	-	-
-	-	-	-	15,000 / 21,206	-	-	15,000 / 18,891	-	-	-	-	-
-	-	-	-	15,000 / 21,206	-	15,000 / 21,206	-	-	-	-	-	-
-	13,000/16,343	-	13,000/15,682	17,000 / 27,237	14,000 / 21,124	-	15,000 / 18,891	15,000 / 21,206	-	-	-	-
-	-	-	-	-	-	-	-	-	4,000 / 2,075	-	-	4,000 / 2,075
-	-	-	-	-	-	-	-	-	4,000 / 2,700	-	-	4,000 / 2,700
-	-	-	-	-	12,000 / 15,520	-	-	-	4,000 / 3,134	-	-	4,000 / 3,134
-	-	-	-	-		-	-	-		-	8,000 / 8,872	
-	-	-	-	-	15,000 / 24,249	-	-	-		-	-	
-	-	-	-	-		-	-	-		-	8,000 / 8,872	
-	-	-	-	-	17,000 / 31,147	-	-	-	-	17,000 / 32,310	-	-
-	-	-	-	-	22,000 / 52,163	-	-	-	-	20,000 / 44,720	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

	15 ml conical tube			 10, 20 ml syringe tube	 60 ml syringe tube	 50 ml		 50 ml conical tube	 100 ml	 100 ml glass tube	 250 ml	
2 x 4 or 2 x 6	1 x 4	2 x 4	2 x 4 or 2 x 6	2 x 4	1 x 4	1 x 4	1 x 4 or 1 x 6	1 x 4	1 x 4 or 1 x 6	1 x 4	1 x 4	1 x 4
GLB-bd15-100	GLB-cl15-50	GLB-dc15-50	GLB-bdc15-100	GLB-cl20/ 10-250	GLB-60-250	GLB-50-50	GLB-b50-100	GLB-c50-50	GLB-b100-100 (with GAS-100b100)	GLB-100(L)-250 GLB-100(S)-250 GLB-100(C)-250	GLB-250-250 ● GLB-r250+250 ● (with GAS-250+250)	GLB-750-750 ● GLB-b750-750 ● (with GAS-250+750)
GRS-S-100-4 GRS-G-100-6	GRS-S-50-4	GRS-S-50-4	GRS-S-100-4 GRS-G-100-6	GRS-G-250-4		GRS-S-50-4	GRS-S-100-4 GRS-G-100-6	GRS-S-50-4	GRS-S-100-4 GRS-G-100-6	GRS-G-r250-4	GRS-G-250-4 ● GRS-G-r250-4 ● GRS-L-250-4 ●	GRS-G-750-4 ●● GRS-L-750-4 ● GRS-L-750-6 ●
						 A	 A		 A		 A	 A
123/127 (w/o cap)	120	120	123/127 (w/o cap)	132/125	165	125	115/125 (w/o cap)	125	120/130 (w/o cap)	207 (L) 190(S, C)	153 ●/130 ●	142 ●/130 ●
-	-	-	-	-	-	GAS-u15(50) 15 ml GAS-c50(50) 50 ml conical		-	GAM-m2.0-6(b100) 2.0 ml GAM-7-5(b100) 7 ml GAM-10-5(b100) 10 ml GAM-15-3(100) 15 ml GAM-c15-3(100) 15 ml (c) GAS-c15(b100) 15 ml (c) GAS-50(b100) 50 ml GAS-c50(b100) 50 ml (c) GAS-85(b100) 85 ml GAS-100(b100) 100 ml	-	for r250 bucket GAM-5-12(250) 5 ml GAM-15-12(250) 15 ml GAM-c15-9(250) 15 ml (c) GAM-50-4(250) 50 ml GAM-c50-3(250) 50 ml (c) GAM-85-2(250) 85 ml GAS-250(250) 250 ml	GAM-5-24(750) 5 ml GAM-10-21(750) 10 ml GAM-15-19(750) 15 ml GAM-c15-14(750) 15 ml (c) GAM-50-7(750) 50 ml GAM-c50-5(750) 50 ml (c) GAS-250(750) 250 ml
4,000/2,700 (S model)	4,000/2,700	4,000/2,700	4,000/2,774 (S model)	-	-	4,000/2,700	4,000/2,700 (S model)	4,000/2,700	4,000/2,774 (S model)	-	-	-
4,000/3,032 (G model)	-	-	4,000/3,105 (G model)	5,000/4,752	5,000/5,394	-	4,000/3,032 (G model)	-	4,000/3,105 (G model)	-	5,000/5,394 (GRS-G-250-4)	-
	-	-				-		-		-	-	
	-	-				-		-		4,000/3,134 (GRS-G-r250-4)	4,000/3,667 (G model)	
	-	-				-		-		-	-	
-	-	-	-	-	-	-	-	-	-	-	4,000/3,134 (L model)	-
-	-	-	-	-	-	-	-	-	-	4,000/4,358 (L) 4,000/ 4,155 (S) 4,000/4,191 (C)	-	4,000/3,667 (L model)

al tube	50 ml		50 ml conical tube	85 ml	250 ml tube	500 ml	1,000 ml	
12	6	8	6	6	6	6	4	6
GRF-L-c15-12	GRF-L-50-6	GRF-G-50-8 GRF-L-50-8	GRF-L-c50-6	GRF-G-85-6 GRF-L-85-6	GRF-G-250-6 GRF-L-250-6	GRF-L-500-6	GRF-L-1000-4	GRF-L-1000-6
-	-	-	-	-	-	-	-	-
								
17 125	29.5 120	29.5 120	29.5 125	38.5 125	62 (250 ml) / 17 (15 ml) 130 (250 ml) / 120 (15 ml)	70 170	98 175	98 175
-	GAS-15(50) 15 ml GAS-c15(50) 15 ml conical		-	GAS-15(85) 15 ml GAS-c15(85) 15 ml conical GAS-50(85) 50 ml GAS-c50(85) 50 ml conical	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	12,000 / 16,582	-	10,000 / 12,298	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	15,000 / 25,910	-	12,000 / 17,709	8,000 / 9,588	-	-	-
15,000 / 25,910	17,000 / 32,310	15,000 / 25,910	15,000 / 24,753	15,000 / 25,029	10,000 / 14,981	8,000 / 11,305	-	-
20,000 / 46,062	22,000 / 54,111	20,000 / 46,062	17,000 / 31,793	20,000 / 44,496	13,000 / 25,318	10,000 / 17,664	8,000 / 12,071	7,000 / 10,825
-	-	-	-	-	10,000 / 14,981	8,000 / 11,305	-	-

- **A** : Adaptor available for smaller tubes
- (C) : conical tube
- The fixed angle rotors are supplied with rotor lid (except PCR strip rotors).
- The open style angle rotors are supplied with tube sleeves.
- The swing-out rotor may be ordered together with compatible buckets and adaptors.
- The colors of the rotors, buckets and adaptors may be different and changeable without notification.

* The PCR tube rack should be necessary for non-skirted PCR plate.

	250 ml conical				400 ml blood bag	500 ml		500 ml conical	750 ml	
	1 x 4	1 x 4	1 x 4	1 x 4	2 x 4	1 x 4 or 1 x 6	1 x 4	1 x 4	1 x 4	1 x 6
GLB-750-750 (with GAS-250/750)	GLB-c250-250	GLB-750-750 GLB-b750-750 (with GAS-c250/750)	GLB-750-750 (with GAS-c250/750)	GLB-1400-1400 (with GAM-400-2(1400))	GLB-500-750	GLB-500-750	GLB-750-750 GLB-b750-750 (with GAS-c500/750)	GLB-750-750 (with GAS-c500/750)	GLB-750-750	GLB-750-750
GRS-G-750-4 GRS-L-750-4	GRS-G-250-4	GRS-G-750-4 GRS-L-750-4 GRS-L-750-6	GRS-G-750-4 GRS-L-750-4	GRS-L-1400-4W	GRS-G-750-4 GRS-L-750-4 GRS-L-750-6	GRS-G-750-4 GRS-L-750-4	GRS-G-750-4 GRS-L-750-4 GRS-L-750-6	GRS-G-750-4 GRS-L-750-4	GRS-G-750-4 GRS-L-750-4	GRS-L-750-6
										
135	153	142 / 130	135	150	165	165	142 / 130	135	142	142
GAM-5-30(750) 5 ml GAM-15-20(750) 15 ml GAM-c15-16(750) 15 ml (c) GAM-50-8(750) 50 ml GAM-c50-5(750) 50 ml (c) GAS-250(750) 250 ml	-	GAM-5-24(750) 5 ml GAM-10-21(750) 10 ml GAM-15-19(750) 15 ml GAM-c15-14(750) 15 ml (c) GAM-50-7(750) 50 ml GAM-c50-5(750) 50 ml (c) GAS-250(750) 250 ml	GAM-5-30(750) 5 ml GAM-15-20(750) 15 ml GAM-c15-16(750) 15 ml (c) GAM-50-8(750) 50 ml GAM-c50-5(750) 50 ml (c) GAS-250(750) 250 ml	GAM-400-2(1400) 400 ml GAM-200-3(1400) 200 ml double bag GAM-15-24(1400) 15 ml GAM-50-12(1400) 50 ml GAM-c50-9(1400) 50 ml (c)	-	-	GAM-5-24(750) 5 ml GAM-10-21(750) 10 ml GAM-15-19(750) 15 ml GAM-c15-14(750) 15 ml (c) GAM-50-7(750) 50 ml GAM-c50-5(750) 50 ml (c) GAS-250(750) 250 ml	GAM-5-30(750) 5 ml GAM-15-20(750) 15 ml GAM-c15-16(750) 15 ml (c) GAM-50-8(750) 50 ml GAM-c50-5(750) 50 ml (c) GAS-250(750) 250 ml	-	-
-	-	-	-	-	-	-	-	-	-	-
-	5,000 / 5,394	-	-	-	-	-	-	-	4,000 / 3,667 (G model)	-
-		-	-	-	-	-	-	-	-	-
-		-	-	-	-	-	-	-	-	-
3,600 / 2,898 (G model)	-	4,000 / 3,667 (G model)	3,600 / 2,898 (G model)	-	4,000 / 3,900 (G model)	3,600 / 3,159 (G model)	4,000 / 3,667 (G model)	3,600 / 2,898 (G model)	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
3,600 / 2,898 (L model)	-	-	-	4,000 / 3,982	4,000 / 3,900 (L model)	3,600 / 3,159 (L model)	-	-	4,000 / 3,667 (L model)	4,000 / 3,982

Catalog Numbering Rule of Centrifuges and Accessories

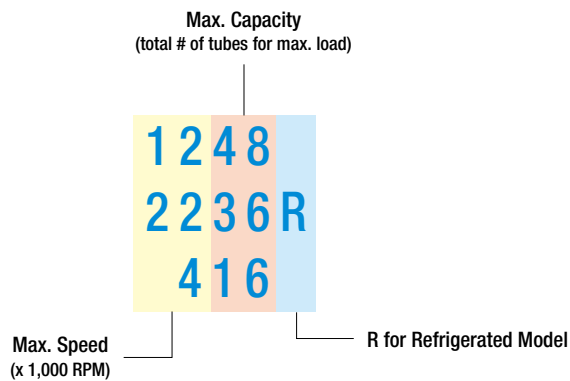


Type of Tube or Bucket

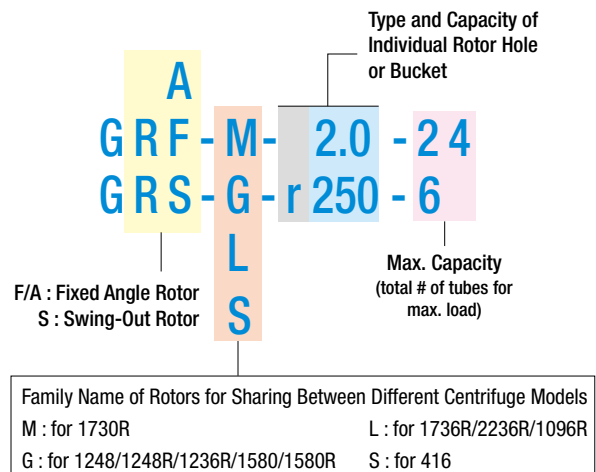
No symbol : round type
r : rectangular type
c : conical type
d : dual hole type

b : for O-ring sealed bucket
u : universal for both
round & conical tube
mw : for multiwell plate

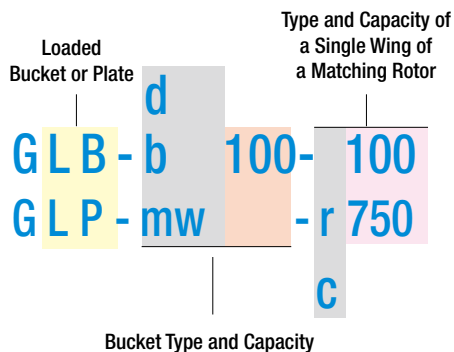
Main Body



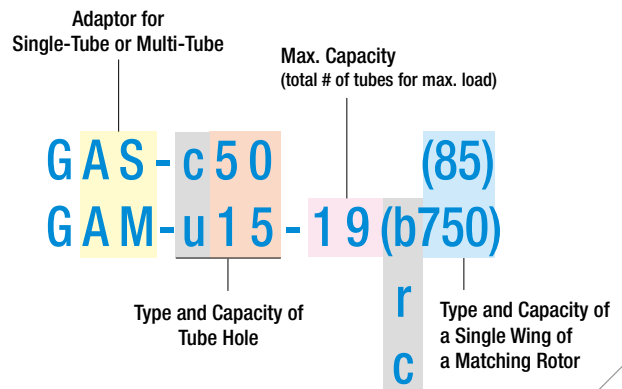
Rotors



Buckets



Adaptors & Multi-Tube Racks



| Function Icons



Fast Cooling

Cooling down to 4°C within 5 minutes



Motorized Lid Mechanics

Only a gentle touch is sufficient to close and open the lid.



ACC/DEC Rate Control

Setting run-up (9 steps) / down (10 steps) rates



Adjustable End Alarm

alerts completion of the operation.



Rotor ID

Automatic rotor identification for safe operation



A Large Assortment of Rotors, Buckets and Adaptors

support diverse applications doable with one instrument.



Glove-Friendly, Soft Touch Buttons

allows easy setting of running conditions.



Short Spin (Pulse)

One-touch key for quick spin



Lid Drop Protection Design

allows operator's convenience and safety.



Imbalance Cut-Off

and accompanied warning keep the instrument protected from unsuitable operation.



User ID and Password Function

ideal for core laboratory or multi-user environments



Selectable Time Mode of "At Set Speed"

for counting running time only when reached the set speed



Automatic Lid Release

at the completion of the operation



Soft Start/Stop Function of 416

to achieve gentle run-up and down



Automatic RPM/RCF Conversion

for easy detection of g-value forced to samples

Up to 100 or 10 Program Memory

for convenient operation of the routine protocols



Personal Micro Centrifuge



- | 12 microtubes or 10 cryotubes can be run up to 13,500 rpm (12,300 xg).
- | Compact design built to accommodate PCR tubes, microtubes and cryotubes (0.2 to 2.0 ml)
- | Patented air-cooling to minimize noise and heat generation
- | A separate "PULSE" key for quick spin
- | Very quiet operation at less than 56 dB allows for comfortable laboratory environment.
- | Supplied with autoclavable 12-place fixed angle micro-rotor, snap-fit plastic rotor lid and 12 adaptors for 0.2 ml PCR tubes



Applications

Molecular works of cell collection, phenol extraction, simple spin-down, etc.

Technical Specifications

Max. RPM/RCF	13,500 / 12,300 xg	Safety lid lock	Yes
Max. capacity	12 x 1.5/2.0 ml, 4 x 8-tube PCR strips	Automatic lid release at completion	Yes
Time control	Pulse or timed ≤ 30 min	Power supply (V/Hz)	220/50~60 (110V optional)
RPM/RCF conversion	Yes	Power requirement (VA)	110
Noise level (dB)	≤ 56	Dimension (W x D x H, mm)	208 x 245 x 145
ACC / DEC (sec)	≤ 12 / ≤ 16	Weight without rotor (kg)	4.4
Parameters on display window	RPM (RCF), Oper Status, Lid Open/Close, Min(sec)	CE mark	Yes
Display	Blue LCD	Cat. No.	GZ-1312



Fixed Angle Rotor, GRF-m2.0-12

12 x 1.5/2.0 ml
└ 45°
Hole diameter (mm) : 11.1
Max. height for tube fit (mm) : 42

Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φx L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	43.5	50.5	60.4
Max. RPM	13,500		
Max. RCF (g-force)	8,863	10,290	12,300



Fixed Angle Rotor, GRF-m1.8-10

10 x 1.8 ml Cryotube
└ 45°
Hole diameter (mm) : 12.8
Max. height for tube fit (mm) : 50

Tube			
Tube capacity (ml)	0.2	0.5	1.8 ml Cryotube
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φx L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	43.5	50.5	60.4
Max. RPM	13,500		
Max. RCF (g-force)	8,863	10,290	12,300



PCR Rotor, GRA-s0.2-32

4 x 8-tube PCR strips, 32 x 0.2 ml
└ 45°
Hole diameter (mm) : 6.5

Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	1st : 38.6 / 2nd : 46	
Max. RPM	6,000	
Max. RCF (g-force)	1st : 1,554 / 2nd : 1,850	

1524

High-Speed Micro Centrifuge



- | Compact design built to accommodate PCR tubes, microtubes and cryotubes (0.2 to 2.0 ml)
- | A separate "PULSE" key for quick spin
- | Selectable time mode of "at set SPEED" for counting running time only when reached the set speed
- | Parameters can be changed during operation.
- | Key lock function helps the set parameters secured during operation.
- | Autoclavable and corrosion-free rotors ensure safety and long life.



Applications Molecular works of cell collection, phenol extraction, simple spin-down, filter tube separation, etc.

Technical Specifications

Max. RPM/RCF	15,000 / 21,206 xg	Imbalance cut-off	Yes
Max. capacity	24 x 1.5/2.0 ml, 4 x 8-tube PCR strips	Safety lid lock	Yes
Time control	Pulse, timed < 100 min or continuous	Lid drop protection	Yes
Time counting modes	Selectable, at set speed or from starting	Automatic lid release at completion	Yes
RPM/RCF conversion	Yes	Power supply (V/Hz)	220/50~60 (110V optional)
Noise level (dB)	≤ 60	Power requirement (VA)	440
ACC/DEC (step or time)	9/10 steps (15/15 sec)	Dimension (W x D x H, mm)	249 x 368 x 240
Program memory	100	Weight without rotor (kg)	18
Parameters on display window	RPM (RCF), Oper Status, Lid Open/Close, Min:Sec, ACC, DEC	CE mark	Yes
Display	Blue LCD	Cat. No.	GZ-1524



Fixed Angle Rotor, GRF-m2.0-24

24 x 1.5/2.0 ml

└ 45°

Hole diameter (mm) : 11.1

Max. height for tube fit (mm) : 52

Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	67	73	84.3
Max. RPM	15,000		
Max. RCF (g-force)	16,854	18,363	21,206



Fixed Angle Rotor, GRF-m2.0-18

18 x 1.5/2.0 ml Filter tube

└ 45°

Hole diameter (mm) : 11.1

Max. height for tube fit (mm) : 65

Tube				
Tube capacity (ml)	0.2	0.5	1.5/2.0	2.0 ml filter tube
Adaptor			None	None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-	-
Radius (mm)	57.8	63.8	75.1	64.2
Max. RPM	15,000			
Max. RCF (g-force)	14,540	16,049	18,891	16,150



PCR Rotor, GRF-s0.2-32

4 x 8-tube PCR strips, 32 x 0.2 ml

└ 45°

Hole diameter (mm) : 6.5

Max. height for tube fit (mm) : 16

Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	56.4	
Max. RPM	15,000	
Max. RCF (g-force)	14,187	

1536

High-Speed Micro Centrifuge



- Compact design built to accommodate PCR tubes, microtubes and cryotubes (0.2 to 2.0 ml)
- Soft touch control panel and trendy touch wheel is highly sensitive and intuitive to input parameters.
- 3.5" LCD window with simultaneous display of all operational parameters of set and actual figures
- Selectable time mode of "at set SPEED" for counting running time only when reached the set speed
- A separate "PULSE" key for quick spin
- Parameters can be changed during operation.
- Key lock function helps the set-parameters secured during operation.
- Lid drop protection design allows easiness and safety when loading or unloading sample.
- With motorized lid mechanics, only a gentle touch is sufficient to close and open the lid.



- Applications** Molecular works of cell collection, phenol extraction, simple spin-down, filter tube separation, etc.

Technical Specifications

Max. RPM/RCF	15,000 / 21,206 xg	Imbalance cut-off	Yes
Max. capacity	36 x 1.5/2.0 ml, 4 x 8-tube PCR strips	Safety lid lock	Yes
Time control	Pulse, timed < 99min or continuous	Lid drop protection	Yes
Time counting modes	Selectable, at set speed or from starting	Motorized lid open & close	Yes
RPM/RCF conversion	Yes	Automatic lid release at completion	Yes
Noise level (dB)	≤ 60	Power supply (V/Hz)	220/50~60 (110V optional)
ACC/DEC (step or time)	9 / 10 steps (15 / 15 sec)	Power requirement (VA)	400
Program memory	100	Dimension (W x D x H, mm)	240 x 378 x 240
Parameters on display window	Simultaneous display of all parameters of set and actual figures	Weight without rotor (kg)	11.9
Display	3.5" LCD	CE mark	-
		Cat. No.	GZ-1536 GZ-1536N

Fixed Angle Rotor, GRF-m2.0-36

36 x 1.5/2.0 ml
 (12 x 0.2 ml and 12 x 2.0 ml filter tube)
 ∟ 45°
 Hole diameter (mm) : 11.1
 Max. height for tube fit (mm) : 52
Supplied with O-ring sealed



Tube					
Tube capacity (ml)	0.2	0.5	0.2	1.5/2.0	2.0 ml filter tube
Adaptor			None	None	None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-	-
Adaptor bore (Φx L, mm)	6.5 x 23	8 x 31	-	-	-
Radius (mm) (inner/outer)	53.5/69	60.5/73	58.2	70.9/84.3	59.1
Max. RPM	15,000				
Max. RCF (g-force) (inner/outer)	13,458/16,854	15,219/18,363	14,640	17,835/21,206	14,867



PCR Rotor, GRF-s0.2-32

4 x 8-tube PCR strips, 32 x 0.2 ml
 ∟ 45°
 Hole diameter (mm) : 6.5
 Max. height for tube fit (mm) : 16

Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	56.4	
Max. RPM	15,000	
Max. RCF (g-force)	14,187	

Fixed Angle Rotor, GRF-m2.0-24A

24 x 1.5/2.0 ml
 ∟ 45°
 Hole diameter (mm) : 11.1
 Max. height for tube fit (mm) : 56
Supplied with O-ring sealed



Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φx L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	67	73	84.3
Max. RPM	15,000		
Max. RCF (g-force)	16,854	18,363	21,206

1730R

Refrigerated, High-Speed Micro Centrifuge



- | The refrigerated microcentrifuge, 1730R is a "must-have" item for molecular and cellular lab works with max speed of 17,000 rpm (27,237 xg).
- | Maximum capacity for 30 microtubes or 18 microfilter tubes or 64 PCR tubes
- | Fast cooling function to 4°C in 5 minutes for fast start up of cooled samples
- | The compressor-off function when lid is open minimizes unnecessary cooling and frosting.
- | Teflon coated rust-free chamber
- | Very quiet operation at less than 56 dB allows for comfortable laboratory environment.
- | Selectable time mode of "at set SPEED" for counting running time only when reached the set speed
- | A separate "PULSE" key for quick spin
- | Parameters can be changed during operation.
- | Key lock function helps the set parameters secured during operation.



- | **Applications** Molecular works of ethanol precipitation, phenol extraction, NA preparation, cell collection, spin-down of temperature sensitive reaction mixtures, etc.

Technical Specifications

Max. RPM/RCF	17,000 / 27,237 xg	Display	Blue LCD
Max. capacity	30 x 1.5/2.0 ml, 8 x 8-tube PCR strips	Automatic rotor identification	Yes
Temp. range (°C)	-20 to +40	Imbalance cut-off	Yes
FAST cool button	Yes	Safety lid lock	Yes
Time control	Pulse, timed < 100 min or continuous	Lid drop protection	Yes
Time counting modes	Selectable, at set speed or from starting	Power supply (V/Hz)	220/50~60 (110V optional)
RPM/RCF conversion	Yes	Power requirement (kVA)	2.0
Noise level (dB)	≤ 56	Dimension (W x D x H, mm)	310 x 620 x 265
ACC/DEC (step or time)	9/10 steps (17/17 sec)	Weight without rotor (kg)	43
Program memory	100	CE mark	Yes
Parameters on display window	RPM (RCF), Oper Status, Lid Open/Close, Min:Sec, Temp, ACC, DEC	Cat. No.	GZ-1730R

Fixed Angle Rotor, GRF-M-m2.0-24

24 x 1.5/2.0 ml

└ 45°

Hole diameter (mm) : 11.1

Max. height for tube fit (mm) : 52

Supplied with O-ring sealed**Fixed Angle Rotor, GRF-M-m2.0-30**

30 x 1.5/2.0 ml

└ 45°

Hole diameter (mm) : 11.1

Max. height for tube fit (mm) : 52

Supplied with O-ring sealed

Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	67/79	73/86	84.3/96.4
Max. RPM (24/30)	17,000/14,000		
Max. RCF (g-force) (24/30)	21,648/17,311	23,910/18,845	27,237/21,124

**Fixed Angle Rotor, GRF-M-m2.0-18**

18 x 1.5/2.0 ml filter tube

└ 45°

Hole diameter (mm) : 11.1

Max. height for tube fit (mm) : 65

Supplied with O-ring sealed

Tube				
Tube capacity (ml)	0.2	0.5	1.5/2.0	2.0 ml filter tube
Adaptor			None	None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-	-
Radius (mm)	57.8	63.8	75.1	64.2
Max. RPM	15,000			
Max. RCF (g-force)	14,540	16,049	18,891	16,150



Fixed Angle Rotor, GRD-M-m2.0-16

16 x 1.5/2.0 ml

└ 90°

Hole diameter (mm) : 11.1

Max. height for tube fit (mm) : 43

Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Bucket Capacity(ea/4)	4/16		
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	66	74	83
Max. RPM	13,000		
Max. RCF (g-force)	12,470	13,982	15,682



Fixed Angle Rotor, GRD-M-m2.0-8

8 x 1.5/2.0 ml

└ 90°

Hole diameter (mm) : 11.1

Max. height for tube fit (mm) : 50

Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	68.5	76.5	86.5
Max. RPM	13,000		
Max. RCF (g-force)	12,943	14,454	16,343



PCR Rotor, GRF-M-s0.2-64

8 x 8-tube PCR strips, 64 x 0.2 ml

└ 45°

Hole diameter (mm) : 6.5

Max. height for tube fit (mm) : 16

Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	58.6 (inner) / 67.1 (outer)	
Max. RPM	12,500	
Max. RCF (g-force)	10,237 (inner) / 11,722 (outer)	



1248 · 1248R · 1236R 1580 · 1580R

Multi-Purpose, High-Speed Centrifuges



- | The multi-purpose large capacity centrifuges designed for large-volume daily-working laboratories
- | Max. speed of 12,000 rpm or 15,000 rpm with high capacity and a large assortment of rotor
- | Fast cooling function to 4°C in 5 minutes for fast startup of cooled samples (only for "R" models)
- | The compressor-off function when lid is open minimizes unnecessary cooling and frosting (only for "R" models).
- | Intuitive control interface with numeric input buttons allows easy setting and editing of running conditions.
- | Selectable time mode of "at set SPEED" for counting running time only when reached the set speed
- | A separate "PULSE" key for quick spin
- | Parameters can be changed during operation.
- | Key lock function helps the set parameters secured during operation.
- | With motorized lid mechanics, only a gentle touch is sufficient to close and open the lid.
- | Lid drop protection design allows easiness and safety when loading or unloading samples.
- | The short working height of 84 cm (33 inches) ensures easy loading and unloading (only for 1236R).
- | A large assortment of rotors, buckets and adaptors support diverse application doable with one instrument.

| Applications

Ideal for cellular and molecular biology work, clinical preparations, industrial applications, etc.

| Technical Specifications

		1248	1248R	1236R	1580	1580R
Max. RPM/RCF	Fixed angle	12,000 / 15,520 xg	12,000 / 16,582 xg	12,000 / 16,582 xg	15,000 / 24,249 xg	15,000 / 25,910 xg
	Swing-out	5,000 / 5,394 xg				
Max. capacity	Fixed angle	6 x 85 ml, 30 x 1.5/2.0 ml				6 x (250 & 15) ml, 30 x 1.5/2.0 ml
	Swing-out	4 x 250 ml, 48 x 15 ml, 16 MTPs			4 x 750 ml, 80 x 15 ml, 16 MTPs	
Temp. range (°C)		-	-20 to +40	-20 to +40	-	-20 to +40
FAST cool button		-	Yes	Yes	-	Yes
Time control		Pulse, timed < 100 min or continuous	Pulse, timed < 10 hr or continuous	Pulse, timed < 10 hr or continuous	Pulse, timed < 100 min or continuous	Pulse, timed < 10 hr or continuous
Time counting modes		Selectable, at set speed or from starting				
RPM/RCF conversion		Yes				
Noise level (dB)		≤ 60				
ACC/DEC		9/10 steps				
Program memory		100				
Parameters on display window		RPM (RCF), Oper Status, Lid Open/Close, Min:Sec, ACC, DEC	RPM (RCF), Oper Status, Lid Open/Close, Hr:Min, Temp, ACC, DEC		RPM (RCF), Oper Status, Lid Open/Close, Min:Sec, ACC, DEC	RPM (RCF), Oper Status, Lid Open/Close, Hr:Min, Temp, ACC, DEC
Display		Blue LCD				
Automatic rotor identification		Yes				
Imbalance cut-off		Yes				
Safety lid lock		Yes				
Lid drop protection		Yes				
Motorized lid open & close		Yes				
Automatic lid release at completion		Yes	-		Yes	-
Power supply (V/Hz)		220/50~60 (110V optional)				
Power requirement		900 VA	2.5 kVA	2.5 kVA	1.5 kVA	2.5 kVA
Dimension (W x D x H, mm)		475 x 561 x 330	655 x 620 x 375	473 x 600 x 840	540 x 650 x 380	770 x 650 x 390
Weight without rotor (kg)		40	78	110	57	93
CE mark		Yes	-	Yes	Yes	Yes
Cat. No.		GZ-1248	GZ-1248R	GZ-1236R	GZ-1580	GZ-1580R

| Rotors Overview

GRS-G-750-4

GLB-750-750	GLB-b750-750	GLB-500-750	GLP-mw-750
			
4 x 750 ml 4,000/3,667 xg	4 x 750 ml 4,000/3,667 xg	4 x 500 ml 4,000/3,900 xg	4 x 4 MTP 4,000/3,068 xg

only for 1580/1580R

GRS-G-r750-4

GLB-r750-r750	GLB-500-r750	GLP-mw-r750
		
4 x 500 ml (C) 3,600/2,898 xg	4 x 500 ml 3,600/3,159 xg	4 x 4 MTP 3,600/2,485 xg

only for 1580/1580R

GRS-G-250-4

GLB-250-250	GLB-c250-250	GLB-60-250	GLB-d20/10-250
			
4 x 250 ml 5,000/5,394 xg	4 x 250 ml 5,000/5,394 xg	4 x 60 ml 5,000/5,394 xg	4 x 2 x (20 & 10 ml) 5,000/4,752 xg (20) 5,000/4,472 xg (10)

GRS-G-r250-4

GLB-r250-r250	GLP-mw-r250
	
4 x 250 ml 4,000/3,134 xg	4 x 4 MTPs 4,000/2,737 xg

GRS-G-100-6

GLB-b100-100	GLB-10-8-100	GLB-bd15-100	GLB-bdc15-100	GLB-b50-100
				
6 x 100 ml 4,000/3,105 xg	6 x 8 x 10 ml 4,000/3,105 xg	6 x 2 x 15 ml 4,000/3,032 xg	6 x 2 x 15 ml (C) 4,000/3,105 xg	6 x 50 ml 4,000/3,032 xg

GRF-G-250-6



6 x (250 & 15 ml)
8,000/9,588 xg (15ml: 9,395 xg)
only for 1580R

GRF-G-85-6



6 x 85 ml
12,000/17,709 xg (1580R)
10,000/12,298 xg
(1248R, 1248, 1236R, 1580)

GRF-G-50-8



8 x 50 ml
15,000/25,910 xg (1580R)
12,000/16,582 xg
(1248R, 1236R, 1580)

GRA-G-15-24A

GLB-15A-FA



24 x 15 ml
4,000/3,134 xg

GRF-G-15-24



24 x 15 ml
8,000/
7,370 xg (inner) / 8,872 xg (outer)
only for R models

GRF-G-m2.0-30



30 x 2.0 ml
15,000/24,249 xg
(1580R, 1580)
12,000/15,520 xg
(1248R, 1248, 1236R)

GRF-G-s0.2-64



8 x PCR strip (8-tube)
12,000
9,434 xg (inner) / 10,803 xg (outer)

Swing-Out Rotor, GRS-G-750-4

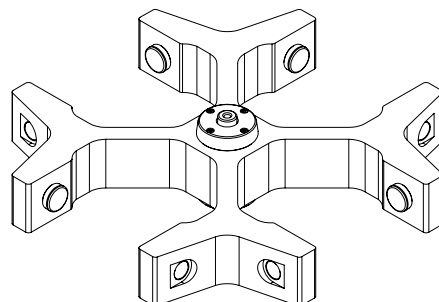
4 loadings

└ 90°

only for 1580, 1580R



O-ring Sealed Bucket



O-ring Sealed 750 ml Round Bucket
GLB-b750-750 / GLB-750-750

Bucket bore (ΦxL, mm) : 99 x 101.5

Radius (mm) : 205

Max. RPM : 4,000

Max. RCF : 3,667 xg

Max. height for tube fit (mm) : 130 (w/ cap) / 142 (w/o cap)

* GLB-b750-750 includes O-ring sealed cap.

Tube											
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	250	250 ml conical	500 ml conical	750
Tube rack											None
Cat. No.	GAM-5-24(750)		GAM-10-21(750)	GAM-15-19(750)	GAM-c15-14(750)	GAM-50-7(750)	GAM-c50-5(750)	GAS-250(750)	GAS-c250(750)	GAS-c500(750)	-
Rack capacity (ea/4)	24/96		21/84	19/76	14/56	7/28	5/20	1/4	1/4	1/4	1/4
Hole dimension (ΦxL, mm)	13.2 x 58	13.2 x 85	16 x 85	17.2 x 85	17 x 85	29.2 x 87	29.2 x 88	62.3 x 87	60.5 x 125	95.6 x 58	-



500 ml Round Bucket
GLB-500-750

Bucket bore (ΦxL, mm) : 69.2 x 135

Radius (mm) : 218

Max. RPM : 4,000

Max. RCF : 3,900 xg

Max. height for tube fit (mm) : 165

Tube

Tube capacity (ml)



Bucket capacity (ea/4)

1/4

Microplate Holder
GLP-mw-750

Bucket bore (w x d x h, mm)

: 88 x 128.5 x 80

Radius (mm) : 171.5

Max. RPM : 4,000

Max. RCF : 3,068 xg

Plate

Plate capacity (ml)



MTP

Holder capacity (ea/4)

4/16



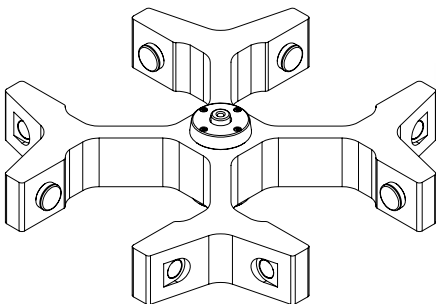
DWP

1/4

Swing-Out Rotor, **GRS-G-r750-4**

4 loadings
└ 90°

only for 1580, 1580R



Rectangular 750 ml Bucket
GLB-r750-r750
Bucket bore (w x d x h, mm) : 99 x 99 x 98
Radius (mm) : 200
Max. RPM : 3,600
Max. RCF : 2,898 xg
Max. height for tube fit (mm) : 135

Tube										
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	250	250 ml conical	500 ml conical
Tube rack										
Cat. No.	GAM-5-30(r750)		GAM-15-20(r750)		GAM-c15-16(r750)	GAM-50-8(r750)	GAM-c50-5(r750)	GAS-250(r750)	GAS-c250(r750)	GAS-c500(r750)
Rack capacity (ea/4)	30/120		20/80		16/64	8/32	5/20	1/4	1/4	1/4
Hole dimension (Φ x L, mm)	13 x 56.5	13 x 85	17.2 x 85		17.5 x 85	29.5 x 85		62.5 x 87	61 x 93	98 x 94



500 ml Round Bucket
GLB-500-r750
Bucket bore (Φ x L, mm) : 69.2 x 135
Radius (mm) : 218
Max. RPM : 3,600
Max. RCF : 3,159 xg
Max. height for tube fit (mm) : 165

Tube	
Tube capacity (ml)	500
Bucket capacity (ea/4)	1/4



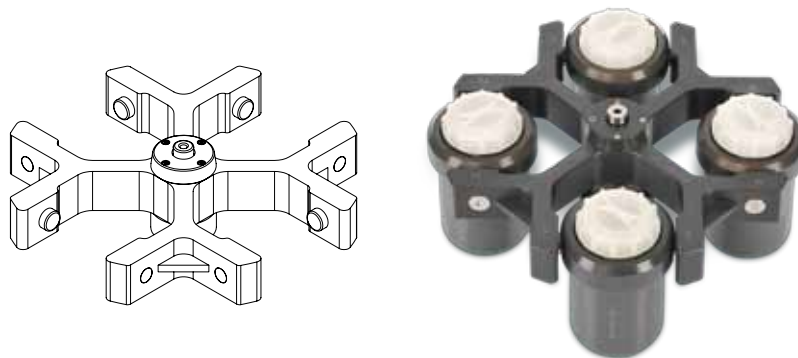
Microplate Holder
GLP-mw-r750
Bucket bore (w x d x h, mm) : 88 x 128.5 x 80
Radius (mm) : 171.5
Max. RPM : 3,600
Max. RCF : 2,485 xg

Plate		
Plate capacity (ml)	MTP	DWP
Holder capacity (ea/4)	4/16	1/4

Swing-Out Rotor, GRS-G-250-4

4 loadings

└ 90°



250 ml Round Bucket
GLB-250-250

Bucket bore (Φ x L, mm) : 62 x 109
Radius (mm) : 193
Max. RPM : 5,000
Max. RCF : 5,394 xg
Max. height for tube fit (mm) : 153

Tube	
Tube capacity (ml)	250
Bucket Capacity (ea/4)	1/4



250 ml Conical Bucket
GLB-c250-250

Bucket bore (Φ x L, mm) : 60.5 x 130.2
Radius (mm) : 193
Max. RPM : 5,000
Max. RCF : 5,394 xg
Max. height for tube fit (mm) : 153

Tube	
Tube capacity (ml)	250 ml Conical
Bucket Capacity (ea/4)	1/4



60 ml Syringe Bucket
GLB-60-250

Bucket bore (Φ x L, mm) : 31.5 x 130.2
Radius (mm) : 193
Max. RPM : 5,000
Max. RCF : 5,394 xg
Max. height for tube fit (mm) : 165

Tube	
Tube capacity (ml)	60 ml Syringe
Bucket Capacity (ea/4)	1/4



Dual Syringe Bucket
GLB-d20/10-250

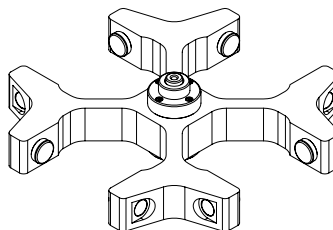
Bucket bore (Φ x L, mm) :
22.5 x 100 (20) / 16 x 90 (10)
Radius (mm) : 160 / 170
Max. RPM : 5,000
Max. RCF : 4,472 xg / 4,752 xg
Max. height for tube fit (mm) : 132/125

Tube	
Tube capacity (ml)	20/10 ml Syringe
Bucket Capacity (ea/4)	2/8

Swing-Out Rotor, GRS-G-r250-4

4 loadings

└ 90°

**Rectangular 250 ml Bucket
GLB-r250-r250**

Bucket bore (w x d x h, mm)
86 x 70.3 x 102.5
Radius (mm) : 175.2
Max. RPM : 4,000
Max. RCF : 3,134 xg
Max. height for tube fit (mm) : 130

Tube										
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	15	85	250
Tube rack										
Cat. No.	GAM-5-12(r250)		GAM-15-12(r250)		GAM-c15-9(r250)	GAM-50-4(r250)	GAM-c50-3(r250)	GAM-85-2(r250)		GAS-250(r250)
Rack capacity (ea/4)	12/48		12/48		9/36	4/16	3/12	2/8		1/4
Hole dimension (Φ x L, mm)	13.5 x 58	13.5 x 80	17.5 x 90		17.5 x 90	30.2 x 90	30.5 x 90	17 x 86.5	38.5 x 86.5	62.5 x 87

**Microplate Holder
GLP-mw-r250**

Bucket bore (w x d x h, mm)
: 88 x 128.5 x 80
Radius (mm) : 153
Max. RPM : 4,000
Max. RCF : 2,737 xg

Plate		
Plate capacity (ml)	MTP	DWP
Holder capacity (ea/4)	4/16	1/4

Swing-Out Rotor, GRS-G-100-6

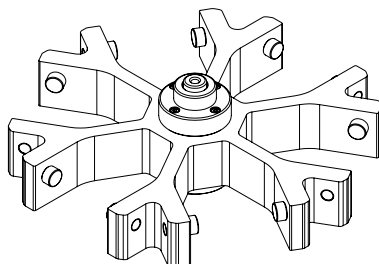
6 loadings
 ↗ 90°



O-ring Sealed Bucket

**O-ring Sealed 100 ml Bucket
GLB-b100-100**

Bucket bore (Φ x L, mm) : 47 x 99
 Radius (mm) : 173.6
 Max. RPM : 4,000
 Max. RCF : 3,105 xg
 Max. height for tube fit (mm)
 : 120 (w/ cap) / 130 (w/o cap)



Tube										
Tube capacity (ml)	1.5~2.0	2.6~7	4~10	9~15	15 ml conical	15 ml conical	50	50 ml conical	85	100
Tube rack										
Cat. No.	GAM-m2.0-6 (b100)	GAM-7-5 (b100)	GAM-10-5 (b100)	GAM-15-3 (100)	GAM-c15-3 (100)	GAS-c15 (b100)	GAS-50 (b100)	GAS-c50 (b100)	GAS-85 (b100)	GAS-100 (b100)
Rack capacity (ea/6)	6/36	5/30	5/30	3/18	3/18	1/6	1/6	1/6	1/6	1/6
Hole dimension (Φ x L, mm)	11 x 39	13.5 x 60	16 x 60	17.2 x 105	17.2 x 106.5	17.2 x 106.5	29.5 x 95.9	30 x 100	38.5 x 96.4	44.2 x 93

* (b100) adaptors work fine with O-ring sealed capping but [100] adaptors not.

**Vacutainer 10 ml Bucket
GLB-10-8-100**

Bucket capacity : 8/ea
 Bucket bore (Φ x L, mm) : 16 x 89
 Radius (mm) : 173.6
 Max. RPM : 4,000
 Max. RCF : 3,105 xg
 Max. height for tube fit (mm) : 125

**O-ring Sealed Dual 15 ml Round Bucket
GLB-bd15-100**

Bucket capacity : 2/ea
 Bucket bore (Φ x L, mm) : 17 x 96
 Radius (mm) : 169.5
 Max. RPM : 4,000
 Max. RCF : 3,032 xg
 Max. height for tube fit (mm) : 120

**O-ring Sealed Dual 15 ml Conical Bucket
GLB-bdc15-100**

Bucket capacity : 2/ea
 Bucket bore (Φ x L, mm) : 17 x 102.5
 Radius (mm) : 173.6
 Max. RPM : 4,000
 Max. RCF : 3,105 xg
 Max. height for tube fit (mm)
 : 120 (w/ cap) / 125 (w/o cap)

**O-ring Sealed 50 ml Bucket
GLB-b50-100**

Bucket capacity : 1/ea
 Bucket bore (Φ x L, mm) : 30.5 x 97
 Radius (mm) : 169.5
 Max. RPM : 4,000
 Max. RCF : 3,032 xg
 Max. height for tube fit (mm)
 : 120 (w/ cap) / 125 (w/o cap)

Tube	
Tube capacity (ml)	10
Bucket capacity (ea/6)	8/48

Tube	
Tube capacity (ml)	15
Bucket capacity (ea/6)	2/12

Tube	
Tube capacity (ml)	15 ml conical
Bucket capacity (ea/6)	2/12

Tube				
Tube capacity (ml)	15	15 ml conical	50 ml conical	50
Adaptor				None
Cat. No.	GAS-u15(50)	GAS-c50(50)	-	-
Adaptor bore (Φ x L, mm)	17.3 x 87	29.5 x 17.5	-	-

Fixed Angle Rotor, GRF-G-250-6

6 x (250 & 15 ml)

└ 25°

Hole diameter (250/15) (mm) : 62/17

Max height for tube fit (250/15) (mm) : 130/120



only for 1580R

Tube		
Tube capacity (ml)	15	250
Radius (mm)	131.3	134
Max. RPM	8,000	
Max. RCF (g-force)	9,395	9,588

Fixed Angle Rotor, GRF-G-85-6

6 x 85 ml

└ 34°

Hole diameter (mm) : 38.5

Max. height for tube fit (mm) : 122



Tube						
Tube capacity (ml)	10	15	15 ml conical	50	50 ml conical	85
Adaptor						None
Cat. No.	GAS-15(85)		GAS-c15(85)	GAS-50(85)	GAS-c50(85)	-
Adaptor bore (Φ x L, mm)	17 x 94		17 x 98	29 x 95	29.5 x 98	-
Radius (mm)	102	103	101	104	102	110
Max. RPM (1580R)	12,000					
Max. RCF (g-force) (1580R)	16,424	16,582	16,260	16,743	16,421	17,709
Max. RPM (1248/1248R/1236R/1580)	10,000					
Max. RCF (g-force) (1248/1248R/1236R/1580)	11,404	11,515	11,292	11,627	11,404	12,298

Fixed Angle Rotor, GRF-G-50-8

8 x 50 ml

∠ 30°

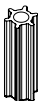
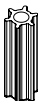
Hole diameter (mm) : 29.5

Max. height for tube fit (mm) : 120

Supplied with O-ring Sealed



for 1248R, 1236R, 1580, 1580R

Tube				
Tube capacity (ml)	10	15	15 ml conical	50
Adaptor				None
Cat. No.	GAS-15(50)		GAS-c15(50)	-
Adaptor bore (Φx L, mm)	17 x 94		17 x 105	-
Radius (mm)	92.5	93.5	96	103
Max. RPM (1580R)	15,000			
Max. RCF (g-force) (1580R)	23,268	23,520	24,149	25,910
Max. RPM (1248R/1236R/1580)	12,000			
Max. RCF (g-force) (1248R/1236R/1580)	14,892	15,053	15,455	16,582

Angle Rotor, GRA-G-15-24A

24 x 15 ml

∠ 45°

Hole diameter (mm) : 18

Max. height for tube fit (mm) : 125 (120 for conical tube)

Stainless Steel 15 ml Sleeve
GLB-15A-FASleeve bore (Φx L, mm) : 17.8 x 86.5
Radius (mm) : 175.2
Max. RPM : 4,000
Max. RCF : 3,134 xg

Tube						
Tube capacity (ml)	3	4	5	10	15	15 ml conical
Adaptor				None	None	None
Cat. No.	GAS-3(15)	GAS-4(15)	GAS-5(15)	-	-	-
Adaptor bore (Φx L, mm)	13.5 x 61	13.5 x 65	13.5 x 85	-	-	-
Radius (mm)	155.2	158.2	167.2	174.5	175.5	171.5
Max. RPM	4,000					
Max. RCF (g-force)	2,776	2,830	2,990	3,121	3,134	3,068

Fixed Angle Rotor, GRF-G-15-24

24 x 15 ml
└ 30°
Hole diameter (mm) : 17.5
Max. height for tube fit (mm) : 115
Supplied with O-ring Sealed



Tube	
Tube capacity (ml)	15
Radius (mm)	103 (inner) /124 (outer)
Max. RPM	8,000
Max. RCF (g-force)	7,370 (inner) /8,872 (outer)

for 1248R, 1236R, 1580R

Fixed Angle Rotor, GRF-G-m2.0-30

30 x 1.5/2.0 ml
└ 45°
Hole diameter (mm) : 11.1
Max. height for tube fit (mm) : 52
Supplied with O-ring Sealed



Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φx L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	79	86	96.4
Max. RPM (1580R/1580)	15,000		
Max. RCF (g-force) (1580R/1580)	19,872	21,633	24,249
Max. RPM (1248/1248R/1236R)	12,000		
Max. RCF (g-force) (1248/1248R/1236R)	12,718	13,835	15,520

PCR Rotor, GRF-G-s0.2-64

8 x 8-tube PCR strips, 64 x 0.2 ml
└ 45°
Hole diameter (mm) : 6.5
Max. height for tube fit (mm) : 16



Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	58.6 (inner) / 67.1 (outer)	
Max. RPM	12,000	
Max. RCF (g-force)	9,434 (inner) / 10,803 (outer)	

1736R

High-Speed, Refrigerated Floor Centrifuge with space-saving compact design



- | The 1736R, a multi-purpose, large capacity, floor-standing centrifuge designed for large-volume daily-working laboratories
- | For up to 17,000 rpm (32,310 x g) with 6 x 50 ml tubes and 8,000 rpm (11,305 x g) with 6 x 500 ml tubes
- | The short working height of 84 cm (33 inches) ensures easy loading and unloading.
- | With motorized lid mechanics, only a gentle touch is sufficient to close and open the lid.
- | Lid drop protection design allows easiness and safety when loading or unloading samples.
- | A large assortment of rotors, buckets and adaptors support diverse applications doable with one instrument.
- | Fast cooling function to 4°C in 5 minutes for fast startup of cooled samples
- | The compressor-off function when lid is open minimizes unnecessary cooling and frosting.
- | Intuitive control interface with numeric input buttons allows easy setting and editing of running conditions.
- | Selectable time mode of "at set SPEED" for counting running time only when reached the set speed
- | A separate "PULSE" key for quick spin
- | Parameters can be changed during operation.
- | Key lock function helps the set parameters secured during operation.



Applications

Ideal for all kinds of basic and analytical experiments such as phenol extraction, NA preparation, cell harvest, precipitation, density gradient separation, etc

Technical Specifications

Max. RPM/RCF	Fixed angle	17,000 / 32,310 xg	Program memory	100
	Swing-out	4,000 / 3,134 xg	Display	Blue LCD
Max. capacity	Fixed angle	6 x 500 ml, 30 x 1.5/2.0 ml	Automatic rotor identification	Yes
	Swing-out	4 x 250 ml, 48 x 15 ml, 16 MTPs	Imbalance cut-off	Yes
Temp. range (°C)		-20 to +40	Safety lid lock	Yes
FAST cool button		Yes	Lid drop protection	Yes
Time control		Pulse, timed < 10 hr or continuous	Motorized lid open & close	Yes
Time counting modes		Selectable, at set speed or from starting	Power supply (V/Hz)	220/50~60 (110V optional)
RPM/RCF conversion		Yes	Power requirement (kVA)	2.5
Noise level (dB)		≤ 56	Dimension (W x D x H, mm)	473 x 600 x 840
ACC/DEC		9 / 10 steps	Weight without rotor (kg)	110
Parameters on display window		RPM (RCF), Oper Status, Lid Open/Close, Hr:Min, Temp, ACC, DEC	CE mark	Yes
			Cat. No.	GZ-1736R

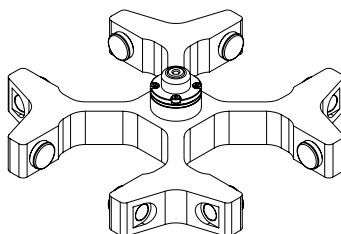
Rotors Overview

GRS-L-r250-4  4 x 250 ml 4,000/3,134 xg		GRF-L-500-6  6 x 500 ml 8,000/11,305 xg		GRF-L-250-6  6 x (250 & 15 ml) 10,000/14,981 xg (15 ml: 14,679 xg)		GRF-L-85-6  6 x 85 ml 15,000/25,029 xg		GRF-L-50-8  8 x 50 ml 15,000/25,910 xg	
GRF-L-50-6  6 x 50 ml 17,000/32,310 xg		GRF-L-c50-6  6 x 50 ml (C) 15,000/24,753 xg		GRF-L-15-12  12 x 15 ml 17,000/32,310 xg		GRF-L-c15-12  12 x 15 ml (C) 15,000/25,910 xg		GRF-L-m2.0-30  30 x 2.0 ml 17,000/31,147 xg	
						GRF-L-s0.2-64  8 x PCR strip (8-tube) 12,000 9,434 xg (inner) / 10,803 xg (outer)			

Swing-Out Rotor, GRS-L-r250-4

4 loadings

└ 90°



Rectangular 250 ml Bucket
GLB-r250-r250

Bucket bore (w x d x h, mm)
: 86 x 70.3 x 102.5
Radius (mm) : 175.2
Max. RPM : 4,000
Max. RCF : 3,134 xg
Max. height for tube fit (mm) : 130

Tube										
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	15	85	250
Tube rack										
Cat. No.	GAM-5-12(r250)		GAM-15-12(r250)		GAM-c15-9(r250)	GAM-50-4(r250)	GAM-c50-3(r250)	GAM-85-2(r250)		GAS-250(r250)
Rack capacity (ea/4)	12/48		12/48		9/36	4/16	3/12	2/8		1/4
Hole dimension (Φ x L, mm)	13.5 x 58	13.5 x 80	17.5 x 90		17.5 x 90	30.2 x 90	30.5 x 90	17 x 86.5	38.5 x 86.5	62.5 x 87



Microplate Holder
GLP-mw-r250

Bucket bore (w x d x h, mm)
: 88 x 128.5 x 80
Radius (mm) : 153
Max. RPM : 4,000
Max. RCF : 2,737 xg

Plate		
Plate capacity (ml)	MTP	DWP
Holder capacity (ea/4)	4/16	1/4

Fixed Angle Rotor, GRF-L-500-6

6 x 500 ml

└ 25°

Hole diameter (mm) : 70

Max. height for tube fit (mm) : 170

Tube	
Tube capacity (ml)	500
Radius (mm)	158
Max. RPM	8,000
Max. RCF (g-force)	11,305



Fixed Angle Rotor, GRF-L-250-6

6 x (250 & 15 ml)

└ 25°

Hole diameter (250/15) (mm) : 62/17

Max. height for tube fit (250/15) (mm) : 130/120

Tube		
Tube capacity (ml)	15	250
Radius (mm)	131.3	134
Max. RPM	10,000	
Max. RCF (g-force)	14,679	14,981

**Fixed Angle Rotor, GRF-L-85-6**

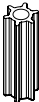
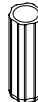
6 x 85 ml

└ 25°

Hole diameter (mm) : 38.3

Max. height for tube fit (mm) : 125

Supplied with O-ring Sealed

Tube						
Tube capacity (ml)	10	15	15 ml conical	50	50 ml conical	85
Adaptor						None
Cat. No.	GAS-15(85)		GAS-c15(85)	GAS-50(85)	GAS-c50(85)	-
Adaptor bore (Φ x L, mm)	17 x 94		17 x 98	29 x 95	29.5 x 98	-
Radius (mm)	91.5	92.5	90.5	93.5	91.5	99.5
Max. RPM	15,000					
Max. RCF (g-force)	23,017	23,268	22,765	23,520	23,017	25,029

**Fixed Angle Rotor, GRF-L-50-8**

8 x 50 ml

└ 30°

Hole diameter (mm) : 29.5

Max. height for tube fit (mm) : 120

Supplied with O-ring Sealed

Tube				
Tube capacity (ml)	10	15	15 ml conical	50
Adaptor				None
Cat. No.	GAS-15(50)		GAS-c15(50)	-
Adaptor bore (Φ x L, mm)	17 x 94		17 x 105	-
Radius (mm)	92.5	93.5	96	103
Max. RPM	15,000			
Max. RCF (g-force)	23,268	23,520	24,149	25,910

**Fixed Angle Rotor, GRF-L-50-6**

6 x 50 ml

└ 30°

Hole diameter (mm) : 29.5

Max. height for tube fit (mm) : 120

Supplied with O-ring Sealed

Tube	
Tube capacity (ml)	50
Adaptor	None
Cat. No.	-
Adaptor bore (Φ x L, mm)	-
Radius (mm)	100
Max. RPM	17,000
Max. RCF (g-force)	32,310

Fixed Angle Rotor, GRF-L-c50-6

6 x 50 ml conical

└ 25°

Hole diameter (mm) : 29.5

Max. height for tube fit (mm) : 125

Supplied with O-ring Sealed

Tube		
Tube capacity (ml)	15 ml conical	50 ml conical
Adaptor		None
Cat. No.	GAS-c15(c50)	-
Adaptor bore (Φ x L, mm)	17 x 105	-
Radius (mm)	93.6	98.4
Max. RPM	15,000	
Max. RCF (g-force)	23,545	24,753

**Fixed Angle Rotor, GRF-L-15-12**

12 x 15 ml
 ∟ 30°
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125
Supplied with O-ring Sealed

Tube		
Tube capacity (ml)	10	15
Radius (mm)	100	
Max. RPM	17,000	
Max. RCF (g-force)	32,310	

**Fixed Angle Rotor, GRF-L-c15-12**

12 x 15 ml conical
 ∟ 25°
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125
Supplied with O-ring Sealed

Tube	
Tube capacity (ml)	15 ml conical
Radius (mm)	103
Max. RPM	15,000
Max. RCF (g-force)	25,910

**Fixed Angle Rotor, GRF-L-m2.0-30**

30 x 1.5/2.0 ml
 ∟ 45°
 Hole diameter (mm) : 11.1
 Max. height for tube fit (mm) : 52
Supplied with O-ring Sealed

Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	79	86	96.4
Max. RPM	17,000		
Max. RCF (g-force)	25,525	27,787	31,147

PCR Rotor, GRF-L-s0.2-64

8 x 8-tube PCR strips, 64 x 0.2 ml
 ∟ 45°
 Hole diameter (mm) : 6.5
 Max. height for tube fit (mm) : 16



Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	58.6 (inner) / 67.1 (outer)	
Max. RPM	12,000	
Max. RCF (g-force)	9,434 (inner) / 10,803 (outer)	

2236R

Large Capacity and High-Speed Refrigerated Floor Centrifuge



| Applications

- Ideal for a wide range of experiments from simple precipitation and separation to filtering, concentration, precipitations, density gradient separation, etc.
- Clinical, industrial, academic and scientific separation applications



- | The 2236R, a large capacity, high-speed, floor-standing centrifuge designed for multi-user environment
- | Ideal for large volume harvesting in cellular and molecular biology works, clinical preparations, industrial applications, etc.
- | For up to 22,000 rpm (54,111 xg) with 6 x 50 ml tubes and 7,000 rpm (10,825 xg) with 6 x 1 L bottles
- | Instrument lock/unlock by password control and protocol management by user ID is ideal for core lab facility or multi-user environment
- | A large assortment of rotors, buckets and adaptors support diverse applications doable with one instrument.
- | Fast cooling function to 4°C in 5 minutes for fast startup of cooled samples
- | The compressor-off function when lid is open minimizes unnecessary cooling and frosting.
- | With motorized lid mechanics, only a gentle touch is sufficient to close and open the lid.
- | Lid drop protection design allows easiness and safety when loading or unloading samples.
- | Intuitive control interface with numeric input buttons and graphic pictograms for easy setting and editing of running conditions.
- | Windows CE based 7" LCD Touch Screen with simultaneous display of all the parameters of set and actual values.
- | Selectable time mode of "at set SPEED" for counting running time only when reached the set speed
- | Up to 5 protocols per run can be combined for convenient operation of complicated experiments.
- | The parameters of TIME, TEMP, ACC and DEC are allowed to be changed during operation.

Technical Specifications

Max. RPM/RCF	Fixed angle	22,000 / 54,111 xg	Parameters on display window	Simultaneous display of all parameters of set and actual figures
	Swing-out	4,000 / 3,134 xg		
Max. capacity	Fixed angle	6 x 1,000 ml, 30 x 1.5/2.0 ml	Automatic rotor identification	Yes
	Swing-out	4 x 250 ml, 48 x 15 ml, 16 MTPs	Imbalance cut-off	Yes
Temp. range (°C)		-20 to +40	Safety lid lock	Yes
FAST cool button		Yes	Lid drop protection	Yes
Time control		Timed < 100 hr or continuous	Motorized lid open & close	Yes
Time counting modes		Selectable, at set speed or from starting	Power supply (V/Hz)	220/50~60 (110V optional)
OS / Control Display		Windows CE / 7" touch screen	Power requirement (kVA)	4.0
RPM/RCF conversion		Yes	Dimension (W x D x H, mm)	824 x 634 x 1,049
Noise level (dB)		≤ 56	Weight without rotor (kg)	240
ACC/DEC		9/10 steps	CE mark	Yes
Program memory		100	Cat. No.	GZ-2236R

| Rotors Overview

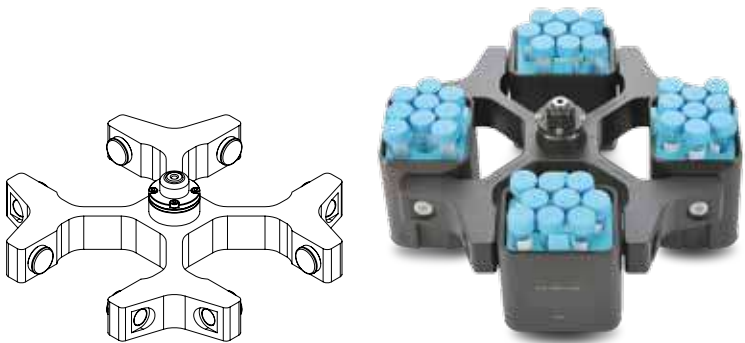
GRS-L-r250-4		GRF-L-1000-6	GRF-L-1000-4	GRF-L-500-6	GRF-L-250-6	GRF-L-85-6
GLB-r250-r250	GLP-mw-r250					
						
4 x 250 ml 4,000/3,134 xg	4 x 4 MTPs 4,000/2,737 xg	6 x 1,000 ml 7,000/10,825 xg	4 x 1,000 ml 8,000/12,071 xg	6 x 500 ml 10,000/17,664 xg	6 x (250 & 15 ml) 13,000/25,318 xg (15 ml: 24,808 xg)	6 x 85 ml 20,000/44,496 xg
GRF-L-50-8	GRF-L-50-6	GRF-L-c50-6	GRF-L-15-12	GRF-L-c15-12	GRF-L-m2.0-30	GRF-L-s0.2-64
						
8 x 50 ml 20,000/46,062 xg	6 x 50 ml 22,000/54,111 xg	6 x 50 ml (C) 17,000/31,793 xg	12 x 15 ml 20,000/44,720 xg	12 x 15 ml (C) 20,000/46,062 xg	30 x 2.0 ml 22,000/52,163 xg	8 x PCR strip (8-tube) 12,000 9,434 xg (inner) / 10,803 xg (outer)

| Intuitive Control Interfaces



Swing-Out Rotor, GRS-L-r250-4

4 loadings
└ 90°



Rectangular 250 ml Bucket
GLB-r250-r250

Bucket bore (w x d x h, mm)
: 86 x 70.3 x 102.5
Radius (mm) : 175.2
Max. RPM : 4,000
Max. RCF : 3,134 xg
Max. height for tube fit (mm) : 130

Tube										
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	15	85	250
Tube rack										
Cat. No.	GAM-5-12(r250)		GAM-15-12(r250)		GAM-c15-9(r250)	GAM-50-4(r250)	GAM-c50-3(r250)	GAM-85-2(r250)		GAS-250(r250)
Rack capacity (ea/4)	12/48		12/48		9/36	4/16	3/12	2/8		1/4
Hole dimension (Φ x L, mm)	13.5 x 58	13.5 x 80	17.5 x 90		17.5 x 90	30.2 x 90	30.5 x 90	17 x 86.5	38.5 x 86.5	62.5 x 87



Microplate Holder
GLP-mw-r250

Bucket bore (w x d x h, mm)
: 88 x 128.5 x 80
Radius (mm) : 153
Max. RPM : 4,000
Max. RCF : 2,737 xg

Plate		
Plate capacity (ml)	MTP	DWP
Holder capacity (ea/4)	4/16	1/4

Fixed Angle Rotor, GRF-L-1000-6

6 x 1000 ml
└ 25°
Hole diameter (mm) : 98
Max. height for tube fit (mm) : 175

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



Fixed Angle Rotor, GRF-L-1000-4

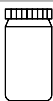
4 x 1000 ml
└ 25°
Hole diameter (mm) : 98
Max. height for tube fit (mm) : 175

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



Fixed Angle Rotor, GRF-L-500-6

6 x 500 ml
└ 25°
Hole diameter (mm) : 70
Max. height for tube fit (mm) : 170

Tube	
Tube capacity (ml)	500
Radius (mm)	158
Max. RPM	10,000
Max. RCF (g-force)	17,664



Fixed Angle Rotor, **GRF-L-250-6**

6 x (250 & 15 ml)
└ 25°
Hole diameter (250/15) (mm) : 62/17
Max. height for tube fit (250/15) (mm) : 130/120

Tube		
Tube capacity (ml)	15	250
Radius (mm)	131.3	134
Max. RPM	13,000	
Max. RCF (g-force)	24,808	25,318



Fixed Angle Rotor, **GRF-L-85-6**

6 x 85 ml
└ 25°
Hole diameter (mm) : 38.3
Max. height for tube fit (mm) : 125
Supplied with O-ring Sealed



Tube						
Tube capacity (ml)	10	15	15 ml conical	50	50 ml conical	85
Adaptor						None
Cat. No.	GAS-15(85)		GAS-c15(85)	GAS-50(85)	GAS-c50(85)	-
Adaptor bore (Φ x L, mm)	17 x 94		17 x 98	29 x 95	29.5 x 98	-
Radius (mm)	91.5	92.5	90.5	93.5	91.5	99.5
Max. RPM	20,000					
Max. RCF (g-force)	40,919	41,366	40,472	41,813	40,919	44,496



Fixed Angle Rotor, GRF-L-50-8

8 x 50 ml

∠ 30°

Hole diameter (mm) : 29.5

Max. height for tube fit (mm) : 120

Supplied with O-ring Sealed

Tube				
Tube capacity (ml)	10	15	15 ml conical	50
Adaptor				None
Cat. No.	GAS-15(50)		GAS-c15(50)	-
Adaptor bore (Φ x L, mm)	17 x 94		17 x 105	-
Radius (mm)	92.5	93.5	96	103
Max. RPM	20,000			
Max. RCF (g-force)	41,366	41,813	42,931	46,062



Fixed Angle Rotor, GRF-L-50-6

6 x 50 ml

∠ 30°

Hole diameter (mm) : 29.5

Max. height for tube fit (mm) : 120

Supplied with O-ring Sealed

Tube	
Tube capacity (ml)	50
Adaptor	None
Cat. No.	-
Adaptor bore (Φ x L, mm)	-
Radius (mm)	100
Max. RPM	22,000
Max. RCF (g-force)	54,111

Fixed Angle Rotor, GRF-L-c50-6

6 x 50 ml conical

∠ 25°

Hole diameter (mm) : 29.5

Max. height for tube fit (mm) : 125

Supplied with O-ring Sealed



Tube		
Tube capacity (ml)	15 ml conical	50 ml conical
Adaptor		None
Cat. No.	GAS-c15(c50)	-
Adaptor bore (Φ x L, mm)	17 x 105	-
Radius (mm)	93.6	98.4
Max. RPM	17,000	
Max. RCF (g-force)	30,242	31,793

**Fixed Angle Rotor, GRF-L-15-12**

12 x 15 ml
 ∟ 30°
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125
Supplied with O-ring Sealed

Tube		
Tube capacity (ml)	10	15
Radius (mm)	100	
Max. RPM	20,000	
Max. RCF (g-force)	44,720	

**Fixed Angle Rotor, GRF-L-c15-12**

12 x 15 ml conical
 ∟ 25°
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125
Supplied with O-ring Sealed

Tube	
Tube capacity (ml)	15 ml conical
Radius (mm)	103
Max. RPM	20,000
Max. RCF (g-force)	46,062

**Fixed Angle Rotor, GRF-L-m2.0-30**

30 x 1.5/2.0 ml
 ∟ 45°
 Hole diameter (mm) : 11.1
 Max. height for tube fit (mm) : 52
Supplied with O-ring Sealed

Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	79	86	96.4
Max. RPM	22,000		
Max. RCF (g-force)	42,748	46,536	52,163

**PCR Rotor, GRF-L-s0.2-64**

8 x 8-tube PCR strips, 64 x 0.2 ml
 ∟ 45°
 Hole diameter (mm) : 6.5
 Max. height for tube fit (mm) : 16



Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	58.6 (inner) / 67.1 (outer)	
Max. RPM	12,000	
Max. RCF (g-force)	9,434 (inner) / 10,803 (outer)	

1096R

Large Capacity Refrigerated Floor Centrifuge



| Applications

- Ideal for diverse clinical, industrial, academic and scientific applications
- Specially designed buckets available for 100 ml glass tubes to analyze oil, milk fat, toxic components, impurities, etc.
- Adaptors available for blood separation in 500 ml & 250 ml blood bags or variable sizes of blood collection tubes



- | The 1096R, large capacity centrifuge designed for large-volume daily-working processes such as high-throughput sample preparation
- | For up to 10,000 rpm (14,981 xg) with 6 x 250 ml tubes and 5,000 rpm (5,009 xg) with filter plate set
- | Temperature setting from -10°C to 40°C
- | Fast cooling function to 4°C in 5 minutes for fast startup of cooled samples
- | The compressor-off function when lid is open minimizes unnecessary cooling and frosting.
- | With motorized lid mechanics, only a gentle touch is sufficient to close and open the lid.
- | Lid drop protection design allows easiness and safety when loading or unloading samples.
- | The short working height of 84 cm (33 inches) ensures easy loading and unloading.
- | Intuitive control interface with numeric input buttons allows easy setting and editing of running conditions.
- | Selectable time mode of "at set SPEED" for counting running time only when reached the set speed
- | A separate "PULSE" key for quick spin
- | Parameters can be changed during operation.
- | Key lock function helps the set-parameters secured during operation.
- | A large assortment of rotors, buckets and adaptors support diverse applications doable with one instrument.
- | Windshield rotor with lid available for large capacity swing-out centrifugation
- | Adaptors are available for blood fractionation of variable sizes for blood bags or blood collection tubes.
- | Specially designed buckets are available for 100 ml glass tubes to analyze oil, milk fat, toxic components, impurities, etc.



Technical Specifications

Max. RPM/RCF	Fixed angle	10,000 / 14,981 xg	Parameters on display window	RPM (RCF), Oper Status, Lid Open / Close, Hr:Min, Temp, ACC, DEC
	Swing-out	5,000 / 5,324 xg		
Max. capacity	Fixed angle	6 x 500 ml	Display	Blue LCD
	Swing-out	4 x 1,400 ml, 6 x 750 ml, 4 FTPs	Automatic rotor identification	Yes
Temp. range (°C)		-10 to +40	Imbalance cut-off	Yes
FAST cool button		Yes	Safety lid lock	Yes
Time control		Pulse, timed < 10 hr or continuous	Lid drop protection	Yes
Time counting modes		Selectable, at set speed or from starting	Motorized lid open & close	Yes
RPM/RCF conversion		Yes	Power supply (V/Hz)	220 / 50~60 (110V optional)
Noise level (dB)		≤ 56	Power requirement (kVA)	3.0
ACC/DEC		9/10 steps	Dimension (W x D x H, mm)	643 x 762 x 850
Program memory		100	Weight without rotor (kg)	180
			Cat. No.	GZ-1096R

Rotors Overview

GRS-L-1400-4W GLB-1400-1400  4 blood bags 4,000/3,982 xg		GRS-L-mw-4W GLP-mw-1400  4 x 4 MTPs 5,000/5,324 xg		GRS-L-750-6 GLB-750-750  6 x 250 ml 4,000/3,982 xg			GLB-500-750  6 x 500 ml 4,000/4,248 xg		GLB-mw-750  6 x 4 MTPs 4,000/3,384 xg													
GRS-L-750-4 GLB-750-750  4 x 750 ml 4,000/3,667 xg										GLB-b750-750  4 x 750 ml 4,000/3,667 xg		GLB-500-750  4 x 500 ml 4,000/3,900 xg		GLP-mw-750  4 x 4 MTP 4,000/3,068 xg		GRS-L-r750-4 GLB-r750-r750  4 x 500(c500) ml 3,600/2,898 xg			GLB-500-r750  4 x 500 ml 3,600/3,159 xg		GLP-mw-r750  4 x 4 MTP 3,600/2,485 xg	
GRS-L-r250-4 GLB-r250-r250  4 x 250 ml 4,000/3,134 xg					GLP-mw-r250  4 x 4 MTPs 4,000/2,737 xg		GLB-100(L)-r250  4 x 100 ml 4,000/4,358 xg		GLB-100(S)-r250  4 x 100 ml 4,000/4,155 xg		GLB-100(C)-r250  4 x 100 ml 4,000/4,191 xg		GRF-L-500-6  6 x 500 ml 8,000/11,305 xg		GRF-L-250-6  6 x (250 & 15 ml) 10,000/14,981 xg (15 ml: 14,679 xg)							

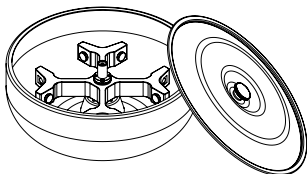


Swing-Out Rotor, GRS-L-1400-4W

4 loadings
└ 90°
Include windshield set



Oval Bucket GLB-1400-1400
Bucket bore (w x d x h, mm) : 134 x 115 x 135
Radius (mm) : 222.6
Max. RPM : 4,000
Max. RCF (g-force) : 3,982 xg
Max. height for tube fit (mm) : 150



Tube							
Tube capacity (ml)	400	200	50 ml conical	50	15	15 ml conical	10
Tube Rack							
Cat. No.	GAM-400-2(1400)	GAM-200-3(1400)	GAM-c50-9(1400)	GAM-50-12(1400)	GAM-15-24(1400)	GAM-c15-24(1400)	GAM-10-38(1400)
Hole dimension (Φx L, mm)	104 x 58 x 135	104 x 39 x 135	29.5 x 100	29 x 93	17.2 x 100	17 x 98	16 x 88
Rack capacity (ea/4)	2/8	1/4	9/36	12/48	24/96	24/96	38/152
Radius (mm)	222.6	222.6	187.6	180.6	197.6	197.6	197.6
Max. RPM	4,000						
Max. RCF (g-force)	3,982	3,982	3,356	3,231	3,535	3,631	3,631

Swing-Out Rotor, GRS-L-mw-4W

4 loadings
└ 90°
Include windshield set



Microplate Holder GLP-mw-1400
Bucket bore (w x d x h, mm) 88 x 128 x 57
Radius (mm) : 190.5
Max. RPM : 5,000
Max. RCF (g-force) : 5,324 xg

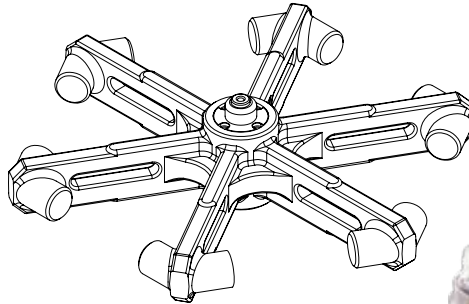
Plate			
Plate capacity (ml)	MTP	DWP	Filter Plate
Holder capacity (ea/4)	4/16	1/4	1/4



Swing-Out Rotor, GRS-L-750-6

4 loadings

└ 90°

**750 ml Round Bucket GLB-750-750**

Bucket bore (Φ x L, mm) : 99 x 101.5

Radius (mm) : 222.6

Max. RPM : 4,000

Max. RCF : 3,982 xg

Max. height for tube fit (mm) : 142

Tube											
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	250	250 ml conical	500 ml conical	750
Tube rack											None
Cat. No.	GAM-5-24(750)		GAM-10-21(750)	GAM-15-19(750)	GAM-c15-14(750)	GAM-50-7(750)	GAM-c50-5(750)	GAS-250(750)	GAS-c250(750)	GAS-c500(750)	-
Rack capacity (ea/4)	24/144		21/126	19/114	14/84	7/42	5/30	1/6	1/6	1/6	1/6
Hole dimension (Φ x L, mm)	13.2 x 58	13.2 x 85	16 x 85	17.2 x 85	17 x 85	29.2 x 87	29.2 x 88	62.3 x 87	60.5 x 125	95.6 x 58	-

**500 ml Round Bucket GLB-500-750**

Bucket bore (Φ x L, mm) : 69.2 x 135

Radius (mm) : 237.5

Max. RPM : 4,000

Max. RCF : 4,248 xg

Max. height for tube fit (mm) : 165

Tube



Tube capacity (ml)

500

Bucket capacity (ea/4)

1/6

**Microplate Holder GLP-mw-750**

Bucket bore (w x d x h, mm)

: 88 x 128.5 x 80

Radius (mm) : 171.5

Max. RPM : 4,000

Max. RCF : 3,384 xg

Plate



Plate capacity (ml)

MTP

DWP

Holder capacity (ea/6)

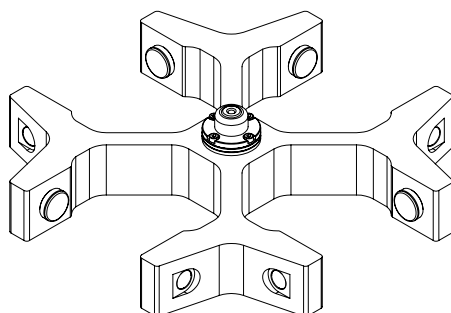
4/24

1/6

Swing-Out Rotor, GRS-L-750-4

4 loadings

↗ 90°



O-ring Sealed Bucket

O-ring Sealed 750 ml Round Bucket
GLB-b750-750 / GLB-750-750

Bucket bore (ΦxL, mm) : 99 x 101.5
Radius (mm) : 205
Max. RPM : 4,000
Max. RCF : 3,667 xg
Max. height for tube fit (mm) : 130 (w/ cap) / 142 (w/o cap)

* GLB-b750-750 includes O-ring Sealed cap.

Tube											
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	250	250 ml conical	500 ml conical	750
Tube rack											None
Cat. No.	GAM-5-24(750)		GAM-10-21(750)	GAM-15-19(750)	GAM-c15-14(750)	GAM-50-7(750)	GAM-c50-5(750)	GAS-250(750)	GAS-c250(750)	GAS-c500(750)	-
Rack capacity (ea/4)	24/96		21/84	19/76	14/56	7/28	5/20	1/4	1/4	1/4	1/4
Hole dimension (ΦxL, mm)	13.2 x 58	13.2 x 85	16 x 85	17.2 x 85	17 x 85	29.2 x 87	29.2 x 88	62.3 x 87	60.5 x 125	95.6 x 58	-

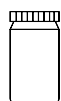


500 ml Round Bucket
GLB-500-750

Bucket bore (ΦxL, mm) : 69.2 x 135
Radius (mm) : 218
Max. RPM : 4,000
Max. RCF : 3,900 xg
Max. height for tube fit (mm) : 165

Tube

Tube capacity (ml)
Bucket capacity (ea/4)



500
1/4



Microplate Holder
GLP-mw-750

Bucket bore (ΦxL, mm) :
88 x 128.5 x 80
Radius (mm) : 171.5
Max. RPM : 4,000
Max. RCF : 3,068 xg

Plate

Plate capacity (ml)
Holder capacity (ea/4)



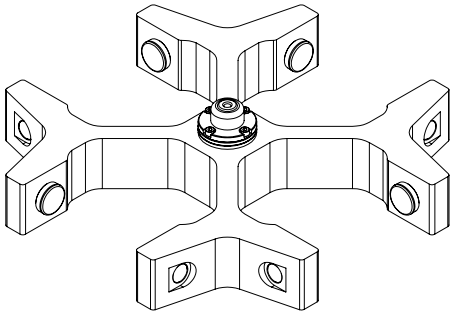
MTP
4/16



DWP
1/4

Swing-Out Rotor, **GRS-L-r750-4**

4 loadings
└ 90°



Rectangular 750 ml Bucket
GLB-r750-r750
Bucket bore (w x d x h, mm) : 99 x 99 x 98
Radius (mm) : 200
Max. RPM : 3,600
Max. RCF : 2,898 xg
Max. height for tube fit (mm) : 135

Tube										
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	250	250 ml conical	500 ml conical
Tube rack										
Cat. No.	GAM-5-30(r750)		GAM-15-20(r750)		GAM-c15-16(r750)	GAM-50-8(r750)	GAM-c50-5(r750)	GAS-250(r750)	GAS-c250(r750)	GAS-c500(r750)
Rack capacity (ea/4)	30/125		20/80		16/64	8/32	5/20	1/4	1/4	1/4
Hole dimension (Φ x L, mm)	13 x 56.5	13 x 85	17.2 x 85		17.5 x 85	29.5 x 85		62.5 x 87	61 x 93	98 x 94



500 ml Round Bucket
GLB-500-r750
Bucket bore (Φ x L, mm) : 69.2 x 135
Radius (mm) : 218
Max. RPM : 3,600
Max. RCF : 3,159 xg
Max. height for tube fit (mm) : 165

Tube	
Tube capacity (ml)	500
Bucket capacity (ea/4)	1/4

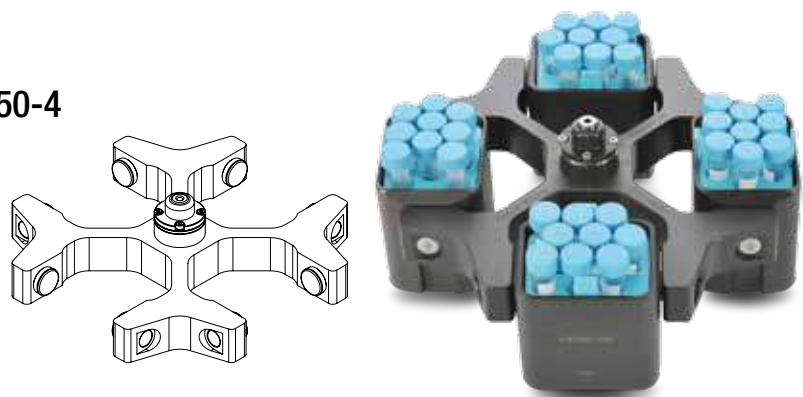


Microplate Holder
GLP-mw-r750
Bucket bore (w x d x h, mm) : 88 x 128.5 x 80
Radius (mm) : 171.5
Max. RPM : 3,600
Max. RCF : 2,485 xg

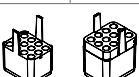
Plate		
Plate capacity (ml)	MTP	DWP
Holder capacity (ea/4)	4/16	1/4

Swing-Out Rotor, GRS-L-r250-4

4 loadings
 90°



**Rectangular 250 ml Bucket
 GLB-r250-r250**
 Bucket bore (w x d x h, mm)
 : 86 x 70.3 x 102.5
 Radius (mm) : 175.2
 Max. RPM : 4,000
 Max. RCF : 3,134 xg
 Max. height for tube fit (mm) : 130

Tube										
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	15	85	250
Tube rack										
Cat. No.	GAM-5-12(r250)		GAM-15-12(r250)		GAM-c15-9(r250)	GAM-50-4(r250)	GAM-c50-3(r250)	GAM-85-2(r250)		GAS-250(r250)
Rack capacity (ea/4)	12/48		12/48		9/36	4/16	3/12	2/8		1/4
Hole dimension (Φx L, mm)	13.5 x 58	13.5 x 80	17.5 x 90		17.5 x 90	30.2 x 90	30.5 x 90	17 x 86.5	38.5 x 86.5	62.5 x 87



**Microplate Holder
 GLP-mw-r250**
 Bucket bore (w x d x h, mm)
 : 88 x 128.5 x 80
 Radius (mm) : 153
 Max. RPM : 4,000
 Max. RCF : 2,737 xg

Plate		
Plate capacity (ml)	MTP	DWP
Holder capacity (ea/4)	4/16	1/4



**100 ml Bucket
 GLB-100(L)-r250**
 Bucket bore (Φ x L, mm) : 35.5 x 180.6
 Radius (mm) : 243.6
 Max. RPM : 4,000
 Max. RCF (g-force) : 4,358
 Max. height for tube fit (mm) : 207

Glass	
Glass capacity (ml)	100



**100 ml Bucket
 GLB-100(S)-r250**
 Bucket bore (Φ x L, mm) : 44.6 x 143.3
 Radius (mm) : 232.3
 Max. RPM : 4,000
 Max. RCF (g-force) : 4,155
 Max. height for tube fit (mm) : 190

Glass	
Glass capacity (ml)	100



**100 ml Bucket
 GLB-100(C)-r250**
 Bucket bore (Φ x L, mm) : 61.5 x 145.3
 Radius (mm) : 234.3
 Max. RPM : 4,000
 Max. RCF (g-force) : 4,191
 Max. height for tube fit (mm) : 190

Glass	
Glass capacity (ml)	100

Fixed Angle Rotor, GRF-L-500-6

6 x 500 ml
└ 25°
Hole diameter (mm) : 70
Max. height for tube fit (mm) : 170

Tube	
Tube capacity (ml)	500
Radius (mm)	158
Max. RPM	8,000
Max. RCF (g-force)	11,305



Fixed Angle Rotor, GRF-L-250-6

6 x (250 & 15 ml)
└ 25°
Hole diameter (250/15) (mm) : 62/17
Max. height for tube fit (250/15) (mm) : 130/120

Tube		
Tube capacity (ml)	15	250
Radius (mm)	131.3	134
Max. RPM	10,000	
Max. RCF (g-force)	14,679	14,981



406

Clinical, Low-Speed Centrifuge



- | Compact and robust small centrifuge 406 is ideal for routine low-speed centrifugation.
- | Commonly used in the fractionation of blood samples and simple precipitation of biological samples
- | Automatic lid release and vivid end alarm for easy retrieval of samples
- | Supplied with an angle rotor including 6 of aluminum sleeves for 15 ml tubes
- | CE MDD-certified version also available (inquire)

| Applications

Routine separation of blood, urine or cells

Technical Specifications

Max. RPM/RCF	4,000 / 2,075 xg	Safety lid lock	Yes
Max. capacity	6 x 15 ml	Lid drop protection	Yes
Time control	Timed < 100 min or continuous	Automatic lid release at completion	Yes
RPM/RCF conversion	Yes	Power supply (V/Hz)	220 / 50~60 (110V optional)
Noise level (dB)	≤ 52	Power requirement (VA)	140
ACC/DEC (sec)	≤ 20 / ≤ 20	Dimension (W x D x H, mm)	296 x 412 x 206
Program memory	10	Weight without rotor (kg)	17.5
Parameters on display window	RPM (RCF), Min (Sec)	CE mark	Yes
Imbalance cut-off	Yes	Cat. No.	GZ-0406



Angle Rotor, GRA-15-6A

6 x 15 ml
└ 45°
Hole diameter (mm) : 18
Max. height for tube fit (mm) : 125 (120 for conical)



15 ml Sleeve
GLB-15A -FA
Sleeve bore (Φx L, mm) : 18 x 97.5
Radius (mm) : 116
Max. RPM : 4,000
Max. RCF : 2,075 xg

Tube						
Tube capacity (ml)	3	4	5	10	15	15 conical
Adaptor				None	None	None
Cat. No.	GAS-3(15)	GAS-4(15)	GAS-5(15)	-	-	-
Adaptor bore (Φx L, mm)	13.5 x 61	13.5 x 65	13.5 x 85	-	-	-
Radius (mm)	95.5	98.5	111	115	116	112
Max. RPM	4,000					
Max. RCF (g-force)	1,703	1,762	1,986	2,057	2,075	2,003

416

Clinical, Low-Speed Centrifuge



- | The 416, compact bench top centrifuge with maximized capacity of 400 ml
- | Commonly used in the fractionation of blood samples and simple precipitation of biological samples
- | A separate button for "Soft" start/stop function to achieve very gentle acceleration and deceleration
- | Furnished with unique air flow design and anti-vibration structure to minimize heat and noise generation
- | Lid drop protection design allows easiness and safety when loading or unloading samples.
- | Automatic lid release and vivid end alarm for easy retrieval of sample
- | A large assortment of rotors, buckets and adaptors for microtubes and all sizes of tubes up to 100 ml
- | CE MDD-certified version also available (inquire)

| Applications

- General laboratory applications including sample separations of cellular materials, blood, urine, sperm, etc.
- Clinical applications including PRP, PRF and stem cell isolation
- Low-speed gentle centrifugation of microbead containing microplates
- Gentle and soft spin-down or washing of primary cells and cell lines

Technical Specifications

Max. RPM/RCF	Fixed angle	4,000 / 2,700 xg	Parameters on display window	RPM (RCF), Min (Sec)
	Swing-out	4,000 / 2,826 xg	Imbalance cut-off	Yes
Max. capacity	Fixed angle	16 x 15 ml	Safety lid lock	Yes
	Swing-out	4 x 100 ml, 32 vacutainer tube, 4 MTPs	Lid drop protection	Yes
Time control		Timed < 100 min or continuous	Automatic lid release at completion	Yes
RPM/RCF conversion		Yes	Power supply (V/Hz)	220 / 50~60 (110V optional)
Noise level (dB)		≤ 52	Power requirement (VA)	340
ACC/DEC (sec)		≤ 20 / ≤ 25	Dimension (W x D x H, mm)	375 x 480 x 260
SOFT start/stop		Yes	Weight without rotor (kg)	19.5
Program memory		10	CE mark	Yes
Parameters on display window		RPM (RCF), Min (Sec)	Cat. No.	GZ-0416

Rotors Overview

GRS-S-100-4

GLB-b100-100	GLB-b50-100	GLB-10-8-100	GLB-bd15-100	GLB-bdc15-100
				
4 x 100 ml 4,000/2,774 xg	4 x 50 ml 4,000/2,700 xg	4 x 8 x 10 ml vacutainer 4,000/2,774 xg	4 x 2 x 15 ml 4,000/2,700 xg	4 x 2 x 15 ml conical 4,000/2,774 xg

GRS-S-50-4

GLB-50-50	GLB-c50-50	GLB-15-50	GLB-c15-50	GLB-d15-50	GLB-dc15-50
					
4 x 50 ml 4,000/2,700 xg	4 x 50 ml conical 4,000/2,700 xg	4 x 15 ml 4,000/2,700 xg	4 x 15 ml conical 4,000/2,700 xg	4 x 2 x 15 ml 4,000/2,700 xg	4 x 2 x 15 ml conical 4,000/2,700 xg

GRS-S-15-6	GRA-S-15-16A	GRS-S-mw-2
GLB-15-15	GLB-15A-FA	
		
6 x 15 ml 4,000/2,826 xg	16 x 15 ml 4,000/2,700 xg	2 x MTP 4,000/1,986 xg

Swing-Out Rotor, GRS-S-100-4

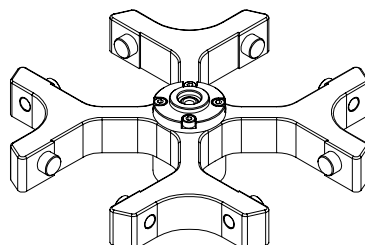
4 loadings
 ↗ 90°



O-ring Sealed Bucket

O-ring Sealed 100 ml Bucket GLB-b100-100

Bucket bore (Φ x L, mm) : 47 x 99
 Radius (mm) : 155.1
 Max. RPM : 4,000
 Max. RCF : 2,774 xg
 Max. height for tube fit (mm)
 : 120 (w/ cap) / 130 (w/o cap)



Tube										
Tube capacity (ml)	1.5~2.0	2.6~7	4~10	9~15	15 ml conical	15 ml conical	50	50 ml conical	85	100
Tube rack										
Cat. No.	GAM-m2.0-6 (b100)	GAM-7-5 (b100)	GAM-10-5 (b100)	GAM-15-3 (100)	GAM-c15-3 (100)	GAS-c15 (b100)	GAS-50 (b100)	GAS-c50 (b100)	GAS-85 (b100)	GAS-100 (b100)
Rack capacity (ea/6)	6/24	5/20	5/20	3/12	3/12	1/4	1/4	1/4	1/4	1/4
Hole dimension (Φ x L, mm)	11 x 39	13.5 x 60	16 x 60	17.5 x 105	17.2 x 106.5	17.2 x 106.5	29.5 x 95.9	30 x 100	38.5 x 96.4	44.2 x 93

* The O-ring sealed cap is compatible with (b100) but not with (100) adaptor.



O-ring Sealed 50 ml Bucket GLB-b50-100

Bucket capacity : 1/ea
 Bucket bore (Φ x L, mm) : 30.5 x 93
 Radius (mm) : 150.9
 Max. RPM : 4,000
 Max. RCF : 2,700 xg
 Max. height for tube fit (mm) : 120 (w/ cap) / 125 (w/o cap)

Tube				
Tube capacity (ml)	15	15 ml conical	50 ml conical	50
Adaptor				None
Cat. No.	GAS-u15(50)	GAS-c50(50)	-	-
Adaptor bore (Φ x L, mm)	18.5 x 100	29.5 x 17.5	-	-



Vacuutainer 10 ml Bucket GLB-10-8-100

Bucket capacity : 8/ea
 Bucket bore (Φ x L, mm) : 16 x 89
 Radius (mm) : 155.1
 Max. RPM : 4,000
 Max. RCF : 2,774 xg
 Max. height for tube fit (mm) : 125

Tube	
Tube capacity (ml)	10
Bucket capacity (ea/4)	8/32



O-ring Sealed Dual 15 ml Round Bucket GLB-bd15-100

Bucket capacity : 2/ea
 Bucket bore (Φ x L, mm) : 17 x 96
 Radius (mm) : 150.9
 Max. RPM : 4,000
 Max. RCF : 2,700 xg
 Max. height for tube fit (mm) : 123 (w/ cap) / 127 (w/o cap)

Tube	
Tube capacity (ml)	15
Bucket capacity (ea/4)	2/8



O-ring Sealed Dual 15 ml Conical Bucket GLB-bdc15-100

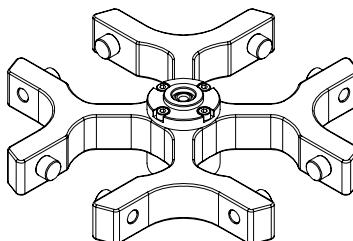
Bucket capacity : 2/ea
 Bucket bore (Φ x L, mm) : 17 x 102.5
 Radius (mm) : 155.1
 Max. RPM : 4,000
 Max. RCF : 2,774 xg
 Max. height for tube fit (mm) : 120 (w/ cap) / 125 (w/o cap)

Tube	
Tube capacity (ml)	15 ml conical
Bucket capacity (ea/4)	2/8

Swing-Out Rotor, GRS-S-50-4

4 loadings

└ 90°



50 ml Round Bucket
GLB-50-50

Bucket capacity : 1/ea
Bucket bore (Φ x L, mm) : 30.5 x 87
Radius (mm) : 150.9
Max. RPM : 4,000
Max. RCF : 2,700 xg
Max. height for tube fit (mm) : 125



50 ml Conical Bucket
GLB-c50-50

Bucket capacity : 1/ea
Bucket bore (Φ x L, mm) : 29.5 x 91.5
Radius (mm) : 150.9
Max. RPM : 4,000
Max. RCF : 2,700 xg
Max. height for tube fit (mm) : 125

Tube				
Tube capacity (ml)	15	15 ml conical	50 ml conical	50
Adaptor			None	
Cat. No.	GAS-u15(50)		GAS-c50(50)	
Adaptor bore (Φ x L, mm)	17.3 x 87		29.5 x 17.5	

Tube	
Tube capacity (ml)	50 ml conical
Bucket capacity (ea/4)	1/4



15 ml Round Bucket
GLB-15-50

Bucket capacity : 1/ea
Bucket bore (Φ x L, mm) : 17 x 93
Radius (mm) : 150.9
Max. RPM : 4,000
Max. RCF : 2,700 xg
Max. height for tube fit (mm) : 130



15 ml Conical Bucket
GLB-c15-50

Bucket capacity : 1/ea
Bucket bore (Φ x L, mm) : 17 x 93
Radius (mm) : 150.9
Max. RPM : 4,000
Max. RCF : 2,700 xg
Max. height for tube fit (mm) : 120



Dual 15 ml Round Bucket
GLB-d15-50

Bucket capacity : 2/ea
Bucket bore (Φ x L, mm) : 17 x 91.5
Radius (mm) : 150.9
Max. RPM : 4,000
Max. RCF : 2,700 xg
Max. height for tube fit (mm) : 130



Dual 15 ml Conical Bucket
GLB-dc15-50

Bucket capacity : 2/ea
Bucket bore (Φ x L, mm) : 17 x 91.5
Radius (mm) : 150.9
Max. RPM : 4,000
Max. RCF : 2,700 xg
Max. height for tube fit (mm) : 130

Tube	
Tube capacity (ml)	15
Bucket capacity (ea/4)	1/4

Tube	
Tube capacity (ml)	15 ml conical
Bucket capacity (ea/4)	1/4

Tube	
Tube capacity (ml)	15
Bucket capacity (ea/4)	2/8

Tube	
Tube capacity (ml)	15 ml conical
Bucket capacity (ea/4)	2/8

Swing-Out Rotor, **GRS-S-15-6**

6 loadings
└ 90°



15 ml Bucket GLB-15-15
Bucket capacity : 1/ea Bucket bore (Φx L, mm) : 17 x 93.8 Radius (mm) : 158 Max. RPM : 4,000 Max. RCF : 2,826 xg Max. height for tube fit (mm) : 125

Tube			
Tube capacity (ml)	10	15	15 ml conical
Bucket capacity (ea/6)	1/6	1/6	1/6

Angle Rotor, **GRA-S-15-16A**

16 x 15 ml
└ 45°
Hole diameter (mm) : 18
Max. height for tube fit (mm) : 125 (120 for conical)



15 ml Sleeve GLB-15A-FA
Sleeve bore (Φx L, mm) : 18 x 97.5 Radius (mm) : 150.9 Max. RPM : 4,000 Max. RCF : 2,700 xg

Tube						
Tube capacity (ml)	3	4	5	10	15	15 ml conical
Adaptor				None	None	None
Cat. No.	GAS-3(15)	GAS-4(15)	GAS-5(15)	-	-	-
Adaptor bore (Φx L, mm)	13.5 x 61	13.5 x 65	13.5 x 85	-	-	-
Radius (mm)	134	136	146	150.5	150.9	147.5
Max. RPM	4,000					
Max. RCF (g-force)	2,397	2,433	2,612	2,692	2,700	2,638

Swing-Out Rotor, **GRS-S-mw-2**

2 loadings
└ 90°
Area dimension (mm) : 88.5 x 130.3
Max. height for microplate fit (mm) : 35

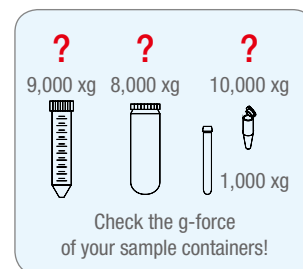


Plate	
Plate capacity (ml)	MTP
Holder capacity (ea/2)	2/4
Radius (mm)	111
Max. RPM	4,000
Max, RCF (g-force)	1,986

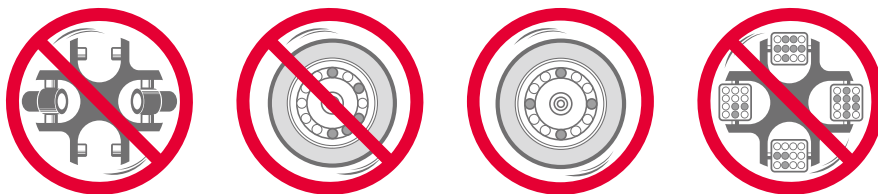


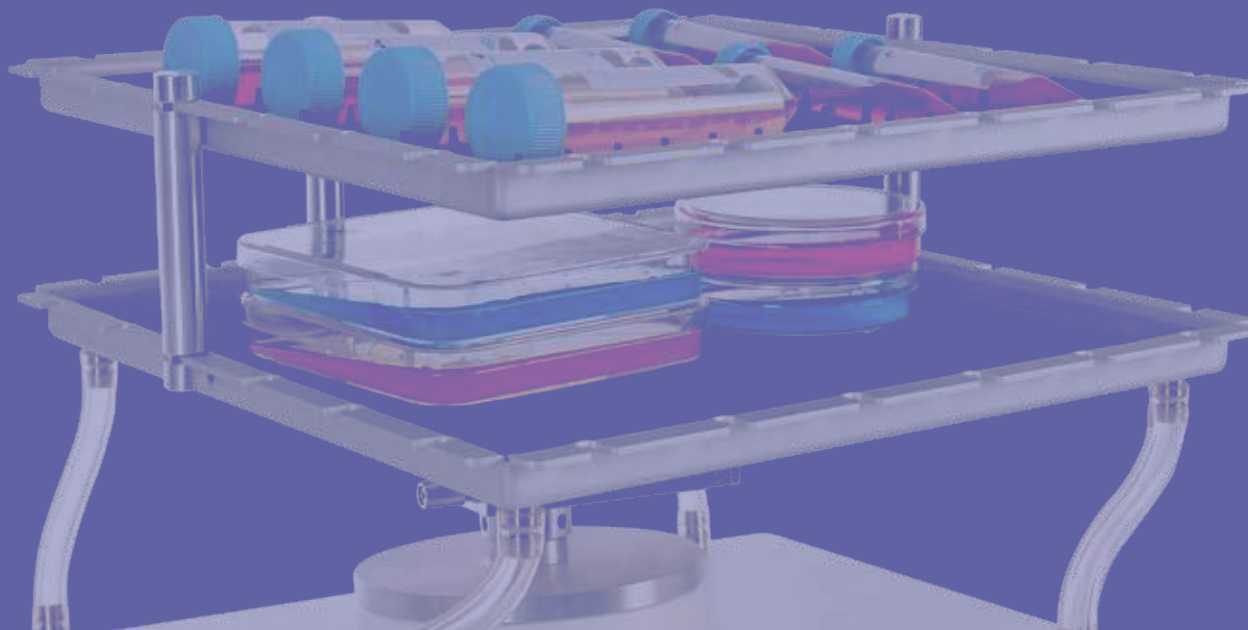
Centrifugation SAFETY

- | Before using centrifuge, the operation manual should be read carefully to ensure correct usage. Incorrect handling of centrifuges may possibly result in personal injury or physical damage on the unit or its accessories.
- | Should not use a power source other than the instrument designed to operate on.
- | Should not use unapproved rotors or any incompatible components.
- | Should operate the instrument with a rotor properly installed and secured to the motor shaft.
- | ALWAYS locate the instrument on a flat, level, rigid and stable floor capable of withstanding weight of the instrument and vibration.
- | ALWAYS mark a safety zone of 30 cm around the centrifuge to secure persons from any unexpected dangerous circumstances during operation, as safety regulations required.
- | ALWAYS keep free space on each side of the instrument to ensure proper ventilation.
- | ALWAYS install the instrument in a temperature and humidity controlled environment. (Permissible ambient temperature: +5 ~ +35°C, relative humidity : ≤ 85 %)
- | Should not centrifuge flammable, toxic, radioactive, explosive or corrosive materials.
- | Should not exceed the speed or specific gravity allowed. To run samples with greater cleaning than 1.2 g/ml, the maximum rotational speed should be lowered to avoid rotor failure.
- | ALWAYS load the rotor symmetrically with evenly weighted samples to avoid rotor imbalance. If necessary, use the water blank to counterbalance the unbalanced sample.
- | The rotors should be cleaned and kept dry after usage to increase the lifespan.
- | ALWAYS disconnect the power supply prior to maintenance and technical service to avoid electrical shock. Do not immerse.
- | ALWAYS use verified disinfection procedures when centrifuging biohazardous materials.



Correct Way of Sample Balancing





Laboratory Shakers

LaboShakers	69
D600	69
R100	71

GYROZEN®

LABOSHAKE D600

3D motion shaker ideal for gentle and effective mixing

The LaboShaker D600 has an elegant simple design, whose motion is smooth, undulating “8”-figure cycling. The unique pattern of the motion promotes optimal movement required for the multiple “staining” and “washing” procedures that are involved in gel staining and blotting. This shaker with its 3-dimensional action provides gentle agitation which is more effective than that of traditional orbital shakers. Its horizontal and vertical movement enables more rapid staining and de staining of gels.

Adjustable speed and pitch allow fine motion controls.

The “LaboShaker D600” creates a continuous figure of 8-motion by means of a platform supported by 4 undulating flexible pillars anchored at each corner. This type of agitation helps a more thorough mixing and even distribution of the suspension.

- | 30 x 30 cm platform with an “anti-slip” robust shaker
- | Max. load 3 kg
- | Adjustable up to 140 rpm with tilting up to 15°
- | Supplied with extra set of silicon pillar
- | Optional non-slip spiked mats for 50 ml and 15 ml tubes
- | Optional rubber bands for fixing containers

| Applications

- Gel staining and destaining
- Western blot and membrane washing
- Any type of ELISA reactions
- From simple mixing to catalytic reactions



* Not available in the USA



Manual adjustment of rotational angle



Strong and robust silicon pillar



Fastening rubber band tied through the platform edge holes



Regularly spaced spike embossing for securing 50 ml and 15 ml tubes

Technical Specifications

Speed range (RPM)	0~140
Shaking angle (°)	0~15
Max. load (kg)	3.0
Platform area (W x D, mm)	295 x 295
Mains voltage (V)	220
Mains frequency (Hz)	50/60
Power consumption (VA)	30
Dimensions (W x D x H, mm)	360 x 360 x 257
Time control	99 (h) : 59 (m) : 59 (s), continuous
Weight (kg)	8.2

Ordering Information

Cat. No.	Product	Specification
GS-D600	LaboShaker D600 including Basic Plain Mat and Additional Set of Silicon Pillar	220V, 50/60Hz
GSA-DS-M1	Basic Plain Rubber Mat of D600	294.5 x 294.5 x 3t
GSA-DS-M2	Non-Slip Spiked Rubber Mat of D600	294.5 x 294.5 x 10t
GSA-DS-B	Rubber Band Set for Fixing Tubes on the D600 (2ea/set)	Φ162 x 2.62t
GSA-DS-P	Silicon Pillar Set (4ea)	
GSA-DS-P2	Additional Platform for D600 (incl. three Stacking Supports and one Basic Plain Rubber Mat)	294.5 x 294.5
GSA-DS-P6	Stacking Support for D600 (1 each)	

LABOSHAKER R100

Seesaw type Shaker for mild agitation and mixing

The laboratory shaker, LaboShaker R100 assures gentle mixing of liquids through its seesaw motion. The LaboShaker R100 with 27 x 18 cm compact platform accommodates four microwell plates and is optimized for antigen-antibody reaction, washing procedure, gel staining and destaining. The digital control with the display of SET, RUN and remaining TIME enables exact time control.

- | 27 x 18 cm platform with an “anti-slip” robust shaker
- | Max. load 2 kg
- | Adjustable up to 60 rpm
- | Time control of < 100 hr or continuous
- | Digital display of SET, RUN and remaining TIME
- | Optional non-slip spiked mats for 50 ml and 15 ml tubes
- | Optional rubber bands for fixing containers

| Applications

- Gel staining and destaining
- Western blot and membrane washing
- Any type of ELISA reactions
- From simple mixing to catalytic reactions





Technical Specifications

Speed range (RPM)	0~60
Tilt angle (°)	±11
Max. load (kg)	2.0
Platform area (W x D, mm)	270 x 176
Mains voltage (V)	220
Mains frequency (Hz)	50/60
Power consumption (VA)	30
Dimensions (W x D x H, mm)	300 x 250 x 154
Time control	99 (h) : 59 (m) : 59 (s), continuous
Weight (kg)	5.8

Ordering Information

Cat. No.	Product	Specification
GS-R100	LaboShaker R100 including Basic Plain Mat	220V, 50/60Hz
GSA-R1-M1	Basic Plain Rubber Mat of R100	270 x 176 x 3t
GSA-R1-M2	Non-Slip Spiked Rubber Mat of R100	270 x 176 x 10t
GSA-R1-B	Rubber Band Set for Fixing Tubes on the R100(A Large & A Small Set)	Φ120 x 2.62t Φ158 x 2.62t
GSA-R1-P2	Additional Platform for R100 (incl. three Stacking Support and one Basic Plain Rubber Mat)	294.5 x 294.5
GSA-R1-P6	Stacking Support for R100 (1 each)	

Distribution

Contact Information

Web page | www.GYROZEN.com

TEL | +82-2-3452-7736

e-mail | info@gyrozen.com

GYROZEN®