



GYROZEN[®]

Product Guide 2018

GYROZEN®

Experts in Laboratory Equipment

We are,

At GYROZEN, we stand for high-quality laboratory instruments defined by their clean aesthetics and high quality. Designed, manufactured, and assembled all under one roof, we provide a wide range of laboratory and medical use centrifuges, and other sample preparation instruments as well. Instead of relying on third party manufacturers, we proudly fabricate and manufacture the key parts for our products such as motors and rotors, in order to ensure the consistent delivery of excellence based on an effective in-house quality management system that exceeds our customer expectations.

Facility / Product Certification,

ISO9001, ISO13485, KGMP / CE, CE MDD, MFDS

Sales and Distribution,

GYROZEN products are distributed in more than 50 countries internationally through retail channels or via our strategic partnerships with respected local distributors.

Locations,

Daejeon, Gimpo, and Seoul

Proudly made in Korea





Centrifuges

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Designed to perfectly meet your needs.



- ✓ Manufactured and tested to IEC standards, stable spinning operation within +/-1% 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
- ✓ Fine control of time counting by selection of “at set speed” or from starting



- ✓ 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 variety of laboratory applications



CONVENIENCE IN OPERATION

- ✓ Soft touch buttons and display 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 window 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 devices (MD406 and MD416 only)

Product Selection Guide by Max Speed & Sample Container

Centrifuges		Micro Centrifuges			Multi-Purpose, High-Speed Centrifuges							Low-Speed, Clinical Centrifuges		
					Benchtop			Floor Stand						
					Mid Capacity			Large Capacity						
		mini	1536	1730R	1248	1248R	1580	1580R	1236R	1736R	2236R	1096R	406	416
p18~20		p21~24	p25~29	p30~45					p48~54	p55~62	p63~71	p74~76	p77~81	p82~90
Refrigeration				●		●		●	●	●	●	●		●
Max. Force														
Fixed Angle Rotor	Max. 2,000 xg												●	
	Max. 2,700 xg												●	
	Max. 3,800 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			●										
Swing-Out Rotor	Max. 32,300 xg									●				
	Max. 54,111 xg										●			
	Max. 2,800 xg									●			●	
	Max. 3,100 xg									●	●			
	Max. 3,500 xg													
	Max. 3,600 xg													
	Max. 3,800 xg													●
	Max. 4,410 xg													
	Max. 5,300 xg				●	●	●	●	●		●			
	Max. 16,300 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	5.0 ml		●	●										
	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						●	●			●			
	Plate	1,000 ml									●			
PCR plate					●	●	●	●	●	●	●		●	●
Micro assay plate					●	●	●	●	●	●	●		●	●
Tissue culture plate					●	●	●	●	●	●	●		●	●
Deep well plate					●	●	●	●	●	●	●		●	●
Syringe	Filter set plate										●			
	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 (Micro Centrifuges)

mini

p18~20

Rotor Cat. No.
Max. Capacity

GRA-s0.2-32
32 x 0.2 ml

GRF-m1.8-10
10 x 1.8 ml cryotube

GRF-m2.0-12
12 x 2.0 ml

Shape

Max. RPM/RCF
Hole Diameter (mm)
Max. Height for Tube fit (mm)

6,000/1,554(1 row), 1,850(2 row)
6.5
16

13,500/12,300
12.8
50

13,500/12,300
11.1
42

1536

p21~24

Rotor Cat. No.
Max. Capacity

GRE-s0.2-32
32 x 0.2 ml

GRE-m2.0-24
24 x 2.0 ml

GRE-m2.0-36
36 x 2.0 ml

GRE-m5.0-10
10 x 5.0 ml

Shape

Max. RPM/RCF
Hole Diameter (mm)
Max. Height for Tube fit (mm)

15,000/14,187
6.5
16

15,000/21,206
11.1
52

15,000/21,206
11.1
52

15,000/21,583
17
68

1730R

p25~29

Rotor Cat. No.
Bucket Cat. No.
Max. Capacity

GRE-M-s0.2-64
-
64 x 0.2 ml

GRE-M-m2.0-18
-
18 x 2.0 ml filter tube

GRE-M-m2.0-24
-
24 x 2.0 ml

GRE-M-m2.0-30
-
30 x 2.0 ml

GRE-M-m5.0-12
-

GRD-M-m2.0-8
GLB-m2.0-8

GRD-M-m2.0-16
GLB-m2.0-4(16)

Shape

Max. RPM/RCF
Hole Diameter (mm)
Max. Height for Tube fit (mm)

12,500/10,237(inner), 11,723(outer)
6.5
16

15,000/18,891
11.1
65

17,000/27,237
11.1
52

14,000/21,124
11.1
52

15,000/22,967
17
68

13,000/16,343
11.1
48

13,000/15,682
11.1
43

Fixed Angle Rotors

Swing-Out Rotors

- The fixed angle rotors are supplied with...
- The open style angle rotors are supplied with...
- The swing-out rotor may be ordered to...
- The colors of the rotors, buckets and a...

 Fixed Angle Rotors

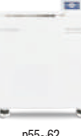
A Adaptors available for smaller tubes

 Swing-Out Rotors

R 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.

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

Large Capacity, High-Speed	1736R  p48-54	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(inner), 10,803(outer)	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(250), 17(15)	70				
		Max. Height for Tube fit (mm)	16	52	125	125	120	125	120	125	130(250), 120(15)	170				
		2236R  p55-62	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	GRF-L-1000-4	GRF-L-1000-6	
			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	4 x 1,000 ml	6 x 1,000 ml	
Shape																
Max. RPM/RCF	12,000/9,434(inner), 10,803(outer)		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), 24,808(15)	10,000/17,664	8,000/12,071	7,000/10,825			
Hole Diameter (mm)	6.5		11.1	17	17	29.5	29.5	29.5	38.3	62(250), 17(15)	70	98	98			
Max. Height for Tube fit (mm)	16		52	125	125	120	125	120	125	130(250), 120(15)	170	175	175			
1096R  p63-71	Rotor Cat. No.		-	-	-	-	-	-	-	-	GRF-L-250-6	GRF-L-500-6	GRS-L-r250-4			
	Bucket Cat. No.		-	-	-	-	-	-	-	-	-	-	-	GLB-100(L)-r250		
	Max. Capacity		-	-	-	-	-	-	-	-	-	6 x (250 & 15 ml)	6 x 500 ml	4 x 100 ml		
	Shape	-	-	-	-	-	-	-	-	-						
	Max. RPM/RCF	-	-	-	-	-	-	-	-	-	10,000/14,981(250), 14,679(15)	8,000/11,305	4,000/4,358			
	Hole Diameter (mm)	-	-	-	-	-	-	-	-	-	62(250), 17(15)	70	35.5			
	Max. Height for Tube fit (mm)	-	-	-	-	-	-	-	-	-	130(250), 120(15)	170	207			
	1236R 1248R / 1248  p30-45	Rotor Cat. No.	GRF-G-s0.2-64	GRF-G-m2.0-30	GRA-G-15-24A	GRF-G-15-24	GRF-G-c15-12	GRF-G-50-8	GRF-G-c50-6	GRF-G-85-6	GRS-G-100-6					
		Bucket Cat. No.	-	-	GLB-15A-FA	-	-	-	-	-	-	GLB-b100-100				
		Max. Capacity	64 x 0.2 ml	30 x 2.0 ml	24 x 15 ml	24 x 15 ml	12 x 15 ml conical	8 x 50 ml	6 x 50 ml conical	6 x 85 ml	6 x 100 ml					
Shape																
Max. RPM/RCF		12,000/9,434(inner), 10,803(outer)	12,000/15,520	4,000/3,134	8,000/7,370(inner), 8,872(outer)	12,000/16,582	12,000/16,582	10,000/11,101	10,000/12,298	4,000/3,105						
Hole Diameter (mm)		6.5	11.1	18	17.5	17	29.5	29.5	38.5	47						
Max. Height for Tube fit (mm)		16	52	125	115	125	120	125	122	120						
1580 / 1580R  p30-45		Rotor Cat. No.	GRF-G-s0.2-64	GRF-G-m2.0-30	GRA-G-15-24A	GRF-G-15-24	GRF-G-c15-12	GRF-G-50-8	GRF-G-c50-6	GRF-G-85-6	GRF-G-250-6	GRS-G-100-6				
		Bucket Cat. No.	-	-	GLB-15A-FA	-	-	-	-	-	-	GLB-b100-100	GLB-b50-100			
		Max. Capacity	64 x 0.2 ml	30 x 2.0 ml	24 x 15 ml	24 x 15 ml	12 x 15 ml conical	8 x 50 ml	6 x 50 ml conical	6 x 85 ml	6 x (250 & 15 ml)	6 x 100 ml	6 x 50 ml			
	Shape															
	Max. RPM/RCF	12,000/9,434(inner), 10,803(outer)	15,000/24,249	4,000/3,134	8,000/7,370(inner), 8,872(outer)	12,000/16,582	12,000/16,582	10,000/11,101	10,000/12,298	8,000/9,588(250), 9,395(15)	4,000/3,105					
	Hole Diameter (mm)	6.5	11.1	18	17.5	17	29.5	29.5	38.5	62(250), 17(15)	47					
	Max. Height for Tube fit (mm)	16	52	125	115	125	120	125	122	130(250), 120(15)	120					
	406 / 416 / 624R  p74-81 p82-90	Rotor Cat. No.	GRF-SR-m2.0-24	GRA-15-6A	GRA-S-15-16A	GRA-SR-15-24	GRF-SR-50-6	GRF-SR-c50-6	GRS-S-15-6							
		Bucket Cat. No.	-	GLB-15A-FA	GLB-15A-FA	GLB-15A-FA	-	-	-	GLB-15-15						
		Max. Capacity	24 x 2.0 ml	6 x 15 ml	16 x 15 ml	24 x 15 ml	6 x 50 ml	6 x 50 ml conical	6 x 15 ml	6 x 15 ml						
Shape																
Max. RPM/RCF		6,000/3,393	4,000/2,075	4,000/2,700	4,000/2,469(inner), 2,773(outer)	6,000/3,824	6,000/3,960	4,000/2,826	4,400/3,420							
Hole Diameter (mm)		11.1	18	18	18	29.5	29.5	17	30.5							
Max. Height for Tube fit (mm)		52	125	125	125	120	125	125	125							

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
130	80

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
130	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				GRS-L-750-6			GRS-L-1400-4W	GRS-L-mw-4W
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	GLB-750-750	GLB-500-750	GLP-mw-750	GLB-1400-1400	GLP-mw-1400
4 x 100 ml	4 x 250 ml	4 x 4 MTPs	4 x 500 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	6 x 750 ml	6 x 500 ml	6 x 4 MTPs	4 x 1,400/4 blood bags	4 x 4 MTPs
														
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	4,000/3,982	4,000/4,248	4,000/3,384	4,000/3,982	5,000/5,324
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	99 x 101.5	69.2 x 135	88 x 128.5	134 x 115	86.1 x 128.1
190	130	80	135	165	80	142	130	165	80	142	165	80	150	57.1

GRS-G-100-6			GRS-G-250-4			GRS-G-r250-4		
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 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	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
16	17	17	62	60.5	31.5	22.5 (20), 16 (10)	86 x 70.3	88 x 128.5
120	123	120	153	153	165	125 (20), 132 (10)	130	80

GRS-G-100-6			GRS-G-250-4			GRS-G-r250-4			GRS-G-r750-4			GRS-G-750-4		
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	GLB-500-r750	GLP-mw-r750	GLB-750-750	GLB-b750-750	GLB-500-750
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 x 500 ml	4 x 4 MTPs	4 x 750 ml	4 x 750 ml	4 x 500 ml
														
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	3,600/3,159	3,600/2,485	4,000/3,667	99	4,000/3,900
16	17	17	62	60.5	31.5	22.5 (20), 16 (10)	86 x 70.3	88 x 128.5	99 x 99	69.2	88 x 128.5	99	99	69.2
120	123	120	153	153	165	132 (20), 125 (10)	130	80	135	165	80	142	130	165

GRS-S-50-4 (only for 416) / GRS-SR-50-4 (only for 624R)			GRS-S-100-4 (only for 416) / GRS-SR-100-4 (only for 624R)					GRS-S-mw-2	GRS-SR-mw-2
GLB-c15-50	GLB-d15-50	GLB-dc15-50	GLB-b100-100	GLB-b50-100	GLB-10-8-100	GLB-bd15-100	GLB-bdc15-100	-	-
4 x 15 ml conical	4 x 2 x 15 ml	4 x 2 x 15 ml conical	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	1 x 2 MTPs	1 x 2 MTPs
									
4,000/2,700 (416), 4,800/3,888 (624R)			4,000/2,774 (416), 4,200/3,059 (624R)	4,000/2,700 (416), 4,200/2,976 (624R)	4,000/2,774 (416), 4,200/3,059 (624R)	4,000/2,700 (416), 4,200/2,976 (624R)	4,000/2,774 (416), 4,200/3,059 (624R)	4,000/1,986	4,000/1,986
17		17	47	30.5	16	17		88.5 x 130.3	88.5 x 130.3
120	120	120	120	115	120	123	120	35	35

Fixed Angle Rotor Selection Guide by Sample Container

Tube Shape & Volume													
	PCR strip or 0.2 ml 4 or 8 (PCR strip) / 32 or 64	1.8 ml cryotube 10	2.0 ml 12 24		2.0 ml 30 36		2.0 ml filter tube 18	5.0ml 12	10 ml or 15 ml 12 24 (only 15 ml)		15 ml conical 6 or 16 or 24 12		
Rotor	GRA-s0.2-32 GRE-s0.2-32 GRE-M-s0.2-64 GRF-G-s0.2-64 GRF-L-s0.2-64	GRF-m1.8-10	GRF-m2.0-12	GRE-m2.0-24 GRE-M-m2.0-24 GRF-SR-m2.0-24	GRE-M-m2.0-30 GRF-G-m2.0-30 GRF-L-m2.0-30	GRE-m2.0-36	GRE-M-m2.0-18	GRE-m5.0-10 GRE-M-m5.0-12	GRA-15-6A GRA-S-15-16A GRA-SR-15-24 GRA-G-15-24A	GRF-L-15-12	GRF-G-15-24	GRA-15-6A GRA-S-15-16A GRA-SR-15-24 GRA-G-15-24A	GRF-G-c15-12 GRF-L-c15-12
Bucket	-	-	-	-	-	-	-	-	GLB-15A-FA	-	-	GLB-15A-FA GLB-15-FA	-
Shape													
Hole diameter (mm)	6.5	12.8	11.1	11.1	11.1	11.1	11.1	17	18	17	17.5	18	17
Max. height for tube fit (mm)	16	50	42	52	52	52	65	68	125	125	115	125	125
Optional Adaptors	-	-	GAS-m0.2(2) 0.2 ml GAS-m0.5(2) 0.5 ml	GAS-m0.2(2) 0.2 ml GAS-m0.5(2) 0.5 ml	GAS-m0.2(2) 0.2 ml GAS-m0.5(2) 0.5 ml	GAS-m0.2(2) 0.2 ml GAS-m0.5(2) 0.5 ml	GAS-m0.2(2) 0.2 ml GAS-m0.5(2) 0.5 ml	-	GAS-3(15) 3 ml GAS-4(15) 4 ml GAS-5(15) 5 ml	-	-	GAS-3(15) 3 ml GAS-4(15) 4 ml GAS-5(15) 5 ml	-
mini (RPM / RCF)	6,000 / 1,850	13,500 / 12,300	13,500 / 12,300	-	-	-	-	-	-	-	-	-	-
1536 (RPM / RCF)	15,000 / 14,187	-	-	15,000 / 21,206	-	15,000 / 16,150	-	15,000 / 21,583	-	-	-	-	-
1730R (RPM / RCF)	12,500 / 11,722	-	-	17,000 / 27,237	14,000 / 21,124	-	15,000 / 16,150	15,000 / 22,967	-	-	-	-	-
406 (RPM / RCF)	-	-	-	-	-	-	-	-	4,000 / 2,075	-	-	4,000 / 2,003	-
416 (RPM / RCF)	-	-	-	-	-	-	-	-	4,000 / 2,700	-	-	4,000 / 2,638	-
624R (RPM / RCF)	-	-	-	6,000 / 3,393	-	-	-	-	4,000 / 2,773	-	-	4,000 / 2,665	-
1248 (RPM / RCF)	-	-	-	-	-	-	-	-	-	-	-	-	-
1248R (RPM / RCF)	-	-	-	-	12,000 / 15,520	-	-	-	-	-	8,000 / 8,872	4,000 / 3,068	12,000 / 16,582
1236R (RPM / RCF)	12,000 / 10,803	-	-	-	-	-	-	-	4,000 / 3,134	-	-	-	-
1580 (RPM / RCF)	-	-	-	-	-	-	-	-	-	-	-	-	-
1580R (RPM / RCF)	-	-	-	-	15,000 / 24,249	-	-	-	-	-	8,000 / 8,872	-	15,000 / 25,910
1736R (RPM / RCF)	-	-	-	-	17,000 / 31,147	-	-	-	-	17,000 / 32,310	-	-	15,000 / 25,910
2236R (RPM / RCF)	12,000 / 10,803	-	-	-	22,000 / 52,163	-	-	-	-	20,000 / 44,720	-	-	20,000 / 46,062
1096R (RPM / RCF)	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Swing-Out Rotor Selection Guide by Sample Container

Tube Shape & Volume																		
	1 x 2	4 x 4	4 x 4 or 4 x 6	4 x 4	1 x 4	1 x 8	4 x 4	1 x 6	8 x 4 or 8 x 6	1 x 4	2 x 4	1 x 6	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
Bucket	-	GLP-mw-r250	GLP-mw-r750	GLP-mw-r750	GLP-mw-1400	GLB-m2.0(8)	GLB-m2.0-4(16)	GLB-15-15	GLB-10-8-100	GLB-15-50	GLB-d15-50	GLB-15-15	GLB-bd15-100	GLB-c15-50	GLB-dc15-50	GLB-bdc15-100	GLB-d20/10-250 with GAS-20s(20) GAS-10s(10)	GLB-60-250 with GAS-60s(60)
Rotor	GRS-S-mw-2 GRS-SR-mw-2	GRS-G-r250-4 GRS-L-r250-4	GRS-G-750-4 GRS-L-750-4 GRS-L-750-6	GRS-G-r750-4 GRS-L-r750-4	GRS-L-mw-4W	GRD-M-m2.0-8	GRD-M-m2.0-16	GRS-S-15-6 GRS-SR-15-6	GRS-S-100-4 GRS-SR-100-4 GRS-G-100-6	GRS-S-50-4 GRS-SR-50-4	GRS-S-50-4 GRS-SR-50-4	GRS-S-15-6 GRS-SR-15-6	GRS-S-100-4 GRS-SR-100-4 GRS-G-100-6	GRS-S-50-4 GRS-SR-50-4	GRS-S-50-4 GRS-SR-50-4	GRS-S-100-4 GRS-SR-100-4 GRS-G-100-6	GRS-G-250-4	
Shape																		
Max. height for tube fit (mm)	35	80	80	80	57.1	48	43	125	120	125	120	125	123/127 (w/o cap)	120	120	120	125/20/132(10)	165
Optional Tube Rack & Adaptor	-	-	-	-	-	GAS-m0.2(2) 0.2 ml GAS-m0.5(2) 0.5 ml	GAS-m0.2(2) 0.2 ml GAS-m0.5(2) 0.5 ml	-	GAS-3(10) 3 ml GAS-5(10) 5 ml	-	-	-	-	-	-	-	-	-
1730R (RPM / RCF)	-	-	-	-	-	13,000/16,343	13,000/15,682	-	-	-	-	-	-	-	-	-	-	-
416 (RPM / RCF)	4,000 / 1,986	-	-	-	-	-	-	4,000 / 2,826	4,000 / 2,774	4,000 / 2,700	4,000 / 2,700	4,000 / 2,826	4,000 / 2,700	4,000 / 2,700	4,000 / 2,700	4,000 / 2,774	-	-
624R (RPM / RCF)	4,000 / 1,986	-	-	-	-	-	-	4,400 / 3,420	4,000 / 3,059	4,800 / 3,888	4,800 / 3,888	4,400 / 3,420	4,200 / 2,976	4,800 / 3,888	4,800 / 3,888	4,200 / 3,059	-	-
1248 (RPM / RCF)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1248R (RPM / RCF)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1236R (RPM / RCF)	-	4,000 / 2,737	-	-	-	-	-	-	4,000 / 3,105	-	-	-	4,000 / 3,032	-	-	-	4,000 / 3,105	5,000 / 4,752(20) 4,472(10)
1580 (RPM / RCF)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1580R (RPM / RCF)	-	-	4,000 / 3,068	3,600 / 2,485	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1736R (RPM / RCF)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2236R (RPM / RCF)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1096R (RPM / RCF)	-	4,000 / 2,737	4,000 / 3,068 4,000 / 3,384	3,600 / 2,485	5,000 / 5,324	-	-	-	-	-	-	-	-	-	-	-	-	-

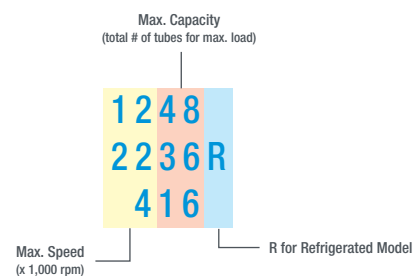
- | 
50 ml | | 
50 ml conical | | 
100 ml | | 
100 ml glass | | 
250 ml | | 
250 ml conical | | 
400 ml blood bag | | 
500 ml | | 
500 ml conical | | 
750 ml | | | | |
|---|--|---|---|---|--|---|--|---|--|--|--|---|---|---|--|---|---|---|---|---|---|---|
| 1x4 | 1x4 or 1x6 | 1x4 | 1x4 or 1x6 | 1x4 | 1x4 | 1x4 or 1x6 | 1x4 | 1x4 | 1x4 or 1x6 | 1x4 | 2x4 | 1x4 or 1x6 | 1x4 | 1x4 or 1x6 | 1x4 | 1x4 | 1x4 | 1x6 | | | | |
| GLB-50-50 | GLB-50-100 | GLB-c50-50 | GLB-b100-100
(with GAS-100b100) | GLB-100(L)-250
GLB-100(S)-250 | GLB-250-250 
(with GAS-250(250)) | GLB-750-750 
GLB-b750-750 
(with GAS-S-250(750)) | GLB-r750-750
(with GAS-250(750)) | GLB-c250-250 | GLB-750-750 
GLB-b750-750 
(with GAS-c250(750)) | GLB-r750-750 | GLB-L1400-1400
(with GAM-400-2(1400)) | GLB-500-750 | GLB-500-r750 | GLB-750-750 
GLB-b750-750 
(with GAS-c500(750)) | GLB-r750-750
(with GAS-c500(750)) | GLB-750-750 | GLB-750-750 | | | | | |
| GRS-S-50-4 
GRS-SR-50-4  | GRS-S-100-4 
GRS-SR-100-4 
GRS-G-100-6 | GRS-S-50-4 
GRS-SR-50-4  | GRS-S-100-4 
GRS-SR-100-4 
GRS-G-100-6 | GRS-L-250-4 | GRS-G-250-4 
GRS-G-r250-4 
GRS-L-250-4  | GRS-G-750-4 
GRS-L-750-4 
GRS-L-750-6  | 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-r750-4 
GRS-L-r750-4  | 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-L-750-6  | GRS-G-750-4 
GRS-L-750-4 
GRS-L-750-6  | GRS-G-r750-4 
GRS-L-r750-4  | GRS-G-750-4 
GRS-L-750-4 
GRS-L-750-6  | GRS-G-750-4 
GRS-L-750-4 
GRS-L-750-6  | GRS-L-750-6 | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| | | 125 | 120/130 (w/o cap) | 207 (L) 190(S, C) | 153  / 130  | 130 / 142(w/o cap) | 135 | 153 | 130 / 142(w/o cap) | 135 | 150 | 165 | 165 | 130 / 142 (w/o cap) | 135 | 130 / 142 (w/o cap) | 142 | | | | | |
| | | | GAM-m2.0(6100) 2.0 ml
GAM-7.5(6100) 7 ml
GAM-15.0(6100) 10 ml
GAM-15.3(100) 15 ml
GAM-c15-3(100) 15 ml (c)
GAS-c15(100) 15 ml (c)
GAS-50(100) 50 ml
GAS-c50(100) 50 ml (c)
GAS-50b(100) 85 ml
GAS-100b(100) 100 ml | | GAM-m2.0(250) 2.0 ml
GAM-5-12(250) 5 ml
GAM-15-12(250) 15 ml
GAM-c15-3(250) 15 | | | | | | | | | | | | | | | | | |

Catalog Numbering Rule of Centrifuges and Accessories

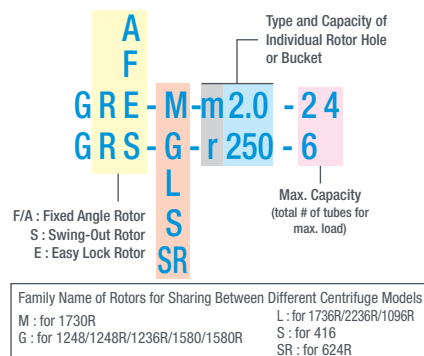
No symbol : round type
r : rectangular type
c : conical type
d : dual hole type

m: for micro tube
b : for bioseal application
u : universal for both
round & conical tube
mw : for multiwell plate

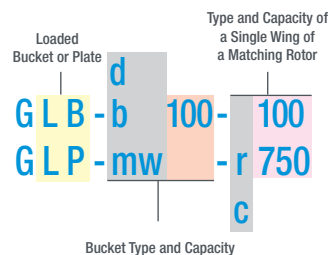
Main Body



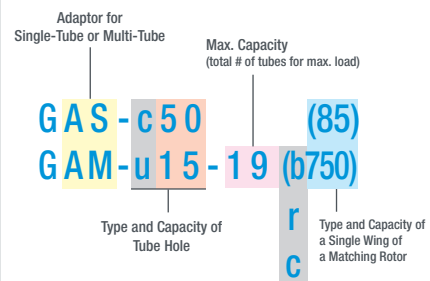
Rotors



Buckets



Adaptors & Multi-Tube Racks



Featured Functions



Fast Cooling

Cooling down to 4°C within 5 minutes



ACC/DEC Rate Control

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



Rotor ID

Automatic rotor identification for safe operation



Up to 100 or 10 Program Memory

for convenient operation of the routine protocols



Short Spin (Pulse)

One-touch key for quick spin



Imbalance Cut-Off

and accompanied warning keep the instrument protected from unsuitable operation.



Selectable Time Mode of "At Set Speed"

for counting running time only when reached the set speed



Soft Start/Stop Function of 416

to achieve gentle run-up and down



Motorized Lid Mechanics

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



Adjustable End Alarm

alerts completion of the 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.



Lid Drop Protection Design

allows operator's convenience and safety.



User ID and Password Function

ideal for core laboratory or multi-user environments



Automatic Lid Release

at the completion of the operation



Automatic RPM/RCF Conversion

for easy detection of g-value forced to samples

Micro Centrifuges



Powder White



Rose Pink



Steel Blue

mini

13,500 / 12,300 xg
12 x 1.5/2.0 ml



1536

15,000 / 21,583 xg
36 x 1.5/2.0 ml



1730R

17,000 / 27,237 xg
30 x 1.5/2.0 ml

* All tubes showed in this catalog are not included in GYROZEN products.

mini



GYROZEN mini centrifuge is designed to offer maximum performance in a small footprint of every experimental workstation. Compact product design, user-friendly and intuitive interface are easy and comfortable for the operation. mini has a fully-functioning safety architecture of patented air-cooling and anti-vibration. Three colors of powder white, rose pink and steel blue are optionally available and it will liven up any laboratory environment.

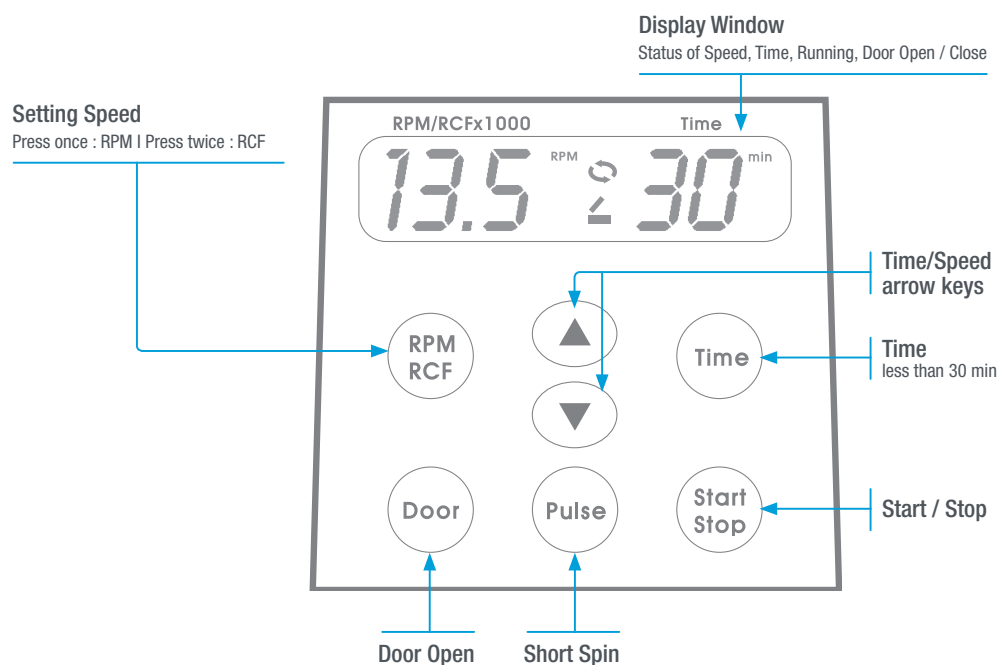
► Features

- 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

► 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	Chamber material	PC/ABS
RPM/RCF conversion	Yes	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
Noise level (dB)	~ 56	Power requirement (VA)	110
ACC / DEC (sec)	≤ 12 / ≤ 16	Dimension (W x D x H, mm)	208 x 245 x 145
Parameters on display window	RPM (RCF), Oper Status, Lid Open/Close, Min(sec)	Weight without rotor (kg)	4.4
Display	Blue LCD	CE mark	Yes
		Cat. No.	GZ-1312

► Control Panel



► Applications

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



Fixed Angle Rotor, GRF-m2.0-12

12 x 1.5/2.0 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 11.1
 Max. height for tube fit (mm) : 42

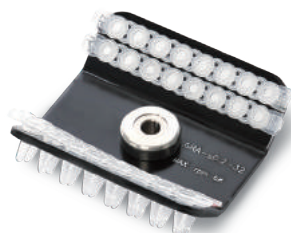
Tube			
Tube capacity (ml)	0.2	0.5	1.5/2.0
Adaptor			None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore ($\Phi \times L$, mm)	6.5 x 23	8 x 31	-
Radius (mm)	43.5	50.5	60.4
Max.RPM	13,500		
Max.RCF (g-force)	8,863	10,290	12,300



Fixed Angle Rotor, GRF-m1.8-10

10 x 1.8 ml Cryotube
 $\angle 45^\circ$
 Hole diameter (mm) : 12.8
 Max. height for tube fit (mm) : 50

Tube	
Tube capacity (ml)	1.8 cryotube
Adaptor	None
Cat No.	-
Adaptor bore ($\Phi \times L$, mm)	-
Radius (mm)	60.4
Max.RPM	13,500
Max.RCF (g-force)	12,300



PCR Rotor GRA-s0.2-32

4 x 8-tube PCR strips, 32 x 0.2 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 6.5

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

1536



GYROZEN 1536 will be the new standard micro centrifuge in the laboratory. 1536 boasts a smooth curve design and a unique ergonomic user interface in its class. As many as 36 microtubes and 12 0.2 ml-tubes can be operated simultaneously at up to 15,000 rpm. It is suitable for all molecular biology applications as it can accommodate from 0.2 ml tube containing PCR strip to 5.0 ml tube. 1536 has an intuitive and user-friendly interface with a wide LCD display to check the operation status and the setting parameters simultaneously. It provides easy and sophisticated controls such as "At Set Speed" for timed runs at the set speed, 100 programs saving and adjustability of parameters during operation. The new "Easy-Lock" rotors deliver operators the highest easiness and comfort to handle frequent routine works. You can enjoy not only artistic design but also convenient operational experiences with our 1536.

► Applications

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

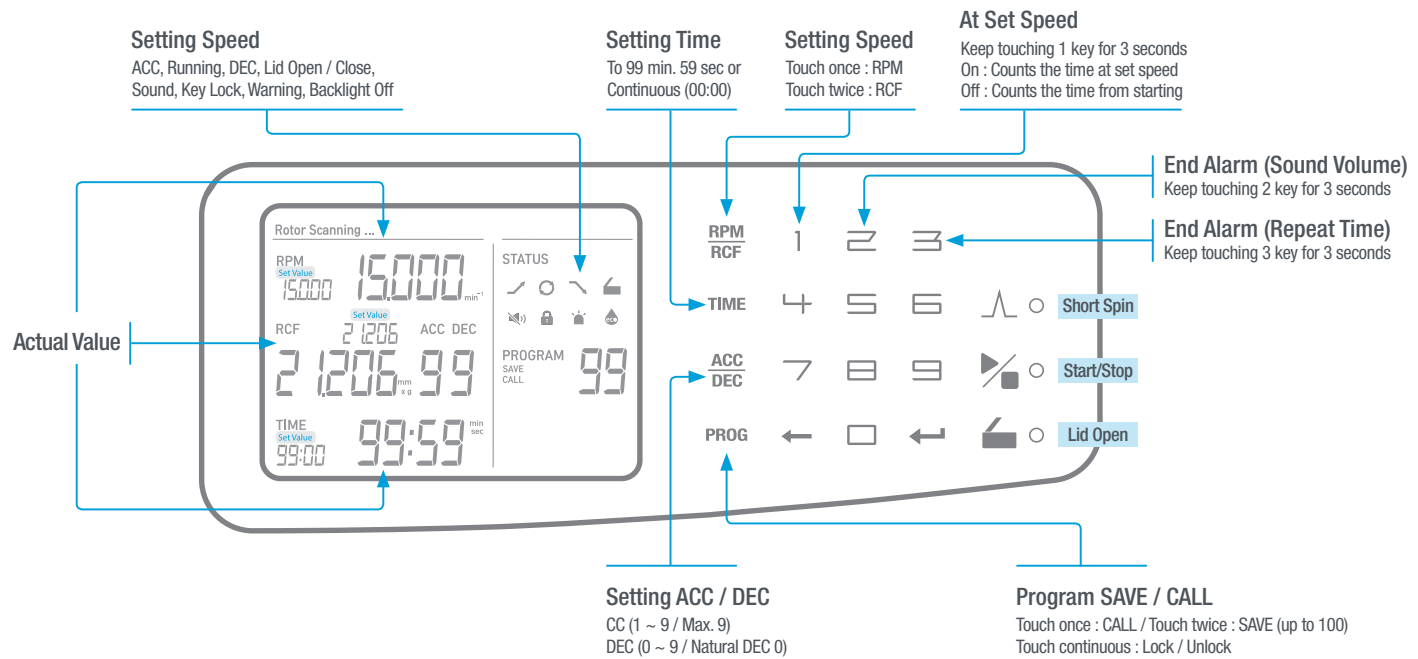
► Technical Specifications

Max. RPM/RCF	15,000 / 21,583 xg	Imbalance cut-off	Yes
Max. capacity	36 x 1.5/2.0 ml, 10 x 5.0 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	Motorized lid open & close	Yes
RPM/RCF conversion	Yes	Automatic lid release at completion	Yes
Noise level (dB)	~ 60	Chamber material	Aluminum/Anodizing
ACC/DEC (step or time)	9 / 10 steps (15 / 15 sec)	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
Program memory	100	Power requirement (VA)	450
Parameters on display window	Simultaneous display of all parameters of set and actual figures	Dimension (W x D x H, mm)	240 x 378 x 240
Display	3.5" LCD	Weight without rotor (kg)	11.9
		CE mark	Yes
		Cat. No.	GZ-1536

► Features

- Compact design built to accommodate PCR tubes, microtubes and filter tubes (0.2 to 5.0 ml)
- Soft touch control panel 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.
- Aerosol-tight, bio-seal Easy-Lock rotor with a set of O-rings

► Control Panel



1536



Fixed Angle Rotor, GRE-m2.0-24

24 x 1.5/2.0 ml
 $\angle 45^\circ$
 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 ($\Phi \times L$, 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, GRE-m2.0-36

36 x 1.5/2.0 ml (12 x 0.2 ml)
 $\angle 45^\circ$
 Hole diameter (mm) : 11.1
 Max. height for tube fit (mm) : 52

Tube					
Tube capacity (ml)	0.2	0.5	0.2	1.5/2.0	2 ml filter tube
Adaptor			None	None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-	-
Adaptor bore ($\Phi \times L$, mm)	6.5 x 23	8 x 31	-	-	-
Radius (mm)	53.5/67	60.5/73	58.2	70.9/84.3	59.1
Max.RPM	15,000				
Max.RCF (g-force)	13,458/16,854	15,219/18,363	14,640	17,835/21,206	14,867

* It can accommodate only 12 x 2 ml filter tubes in the inner line.



Fixed Angle Rotor, GRE-s0.2-32

8 x 8-Tube PCR strips, 32 x 0.2 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 6.5
 Max. height for tube fit (mm) : 16

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



Fixed Angle Rotor, GRE-m5.0-10

10 x 5.0 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 68

Tube	
Tube capacity (ml)	5.0
Adaptor	None
Cat No.	-
Adaptor bore ($\Phi \times L$, mm)	-
Radius (mm)	85.8
Max.RPM	15,000
Max.RCF (g-force)	21,583

1730R



GYROZEN refrigerated high-speed micro centrifuge, 1730R is a must-have for the experiments in molecular and cellular biology. It can accommodate up to 30 microtubes or 12 x 5 ml-tubes. With the most popular 24 hole micro-rotor, maximum 17,000 rpm (27,237 x g) can be reached even at 4 °C. Its powerful refrigeration system specifies the temperature range from -20 °C to + 40 °C and offers "FASTCOOL" function of cooling down to 4 °C in 5 minutes. All rotor types have been extended to the new "Easy-Lock" lid, allowing easy and convenient rotor lid opening and closing. The Teflon-coated chamber of 1730R is more resistant to organic solvents, reactive or corrosive chemicals. The powerful and compact refrigerated micro centrifuge 1730R is one of the best products in the GYROZEN portfolio. It will be a perfect tool to get the results you want in your laboratory.

► Applications

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

1730R

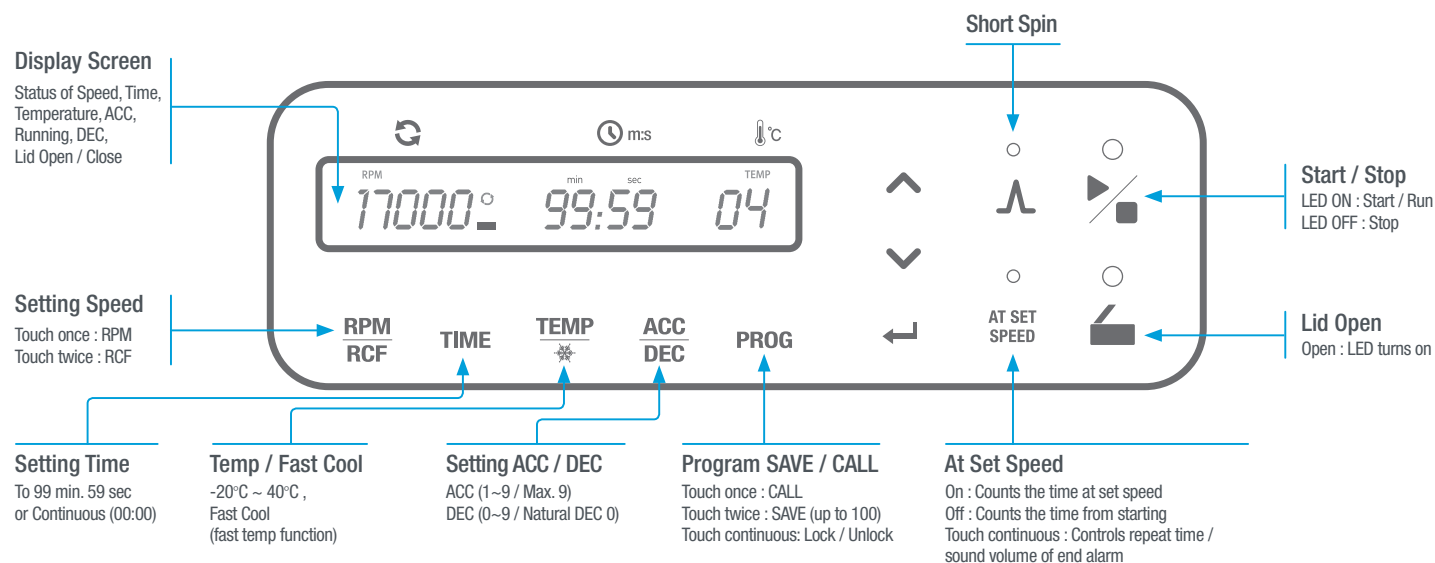
► Technical Specifications

Max. RPM/RCF	Fixed angle	17,000 / 27,237 xg	Parameters on display window	RPM (RCF), Oper Status, Lid Open/Close, Min:Sec, Temp, ACC, DEC
	Swing-out	13,000 / 16,343 xg	Display	Blue LCD
Max. capacity	Fixed angle	30 x 1.5/2.0 ml, 12 x 5.0 ml, 8 x 8-tube PCR strips	Automatic rotor identification	Yes
	Swing-out	16 x 1.5/2.0 ml	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 < 100 min or continuous	Chamber material	SUS304/Teflon-coated
Time counting modes		Selectable, at set speed or from starting	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V 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 290
ACC/DEC (step or time)		9/10 steps (17/17 sec)	Weight without rotor (kg)	43
Program memory		100	CE mark	Yes
			Cat. No.	GZ-1730R

► Features

- 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 12 x 5 ml tubes or 30 x 1.5/2.0 ml tubes 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.
- Aerosol-tight, bio-seal Easy-Lock rotor with a set of O-rings

► Control Panel





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

24 x 1.5/2.0 ml
 $\angle 45^\circ$
 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	17,000		
Max.RCF (g-force)	21,648	23,910	27,237



Fixed Angle Rotor, GRE-M-m2.0-30

30 x 1.5/2.0 ml
 $\angle 45^\circ$
 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)	79	86	96.4
Max.RPM	14,000		
Max.RCF (g-force)	17,311	18,845	21,124



Fixed Angle Rotor, GRE-M-m2.0-18

18 x 1.5/2.0 ml
 $\angle 45^\circ$
 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 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, GRE-M-s0.2-64

8 x 8-Tube PCR strips, 64 x 0.2 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 6.5
 Max. height for tube fit (mm) : 16

Tube		
Tube capacity (ml)	0.2	8-Strip tube
Radius (mm)	1st : 58.6 / 2nd : 67.1	
Max.RPM	12,500	
Max.RCF (g-force)	1st : 10,237 / 2nd : 11,722	



Fixed Angle Rotor, GRE-M-m5.0-12

12 x 5.0 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 68

Tube	
Tube capacity (ml)	5.0
Adaptor	None
Cat No.	-
Adaptor bore ($\Phi \times L$, mm)	-
Radius (mm)	91.3
Max.RPM	15,000
Max.RCF (g-force)	22,967



Bucket,
GLB-m2.0(8)



Swing-out Rotor, GRD-M-m2.0-8

8 x 1.5/2.0 ml
 $\angle 90^\circ$
 Hole diameter (mm) : 11.1
 Max. height for tube fit (mm) : 48

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 ($\Phi \times L$, 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



Bucket,
GLB-m2.0-4(16)



Swing-out Rotor, GRD-M-m2.0-16

16 x 1.5/2.0 ml
 $\angle 90^\circ$
 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)	-
Adaptor bore ($\Phi \times L$, 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

Multi-Purpose, High-Speed Centrifuges



1580R

15,000 / 25,910 xg



1580

15,000 / 24,249 xg



1248R

12,000 / 16,582 xg



1248

12,000 / 15,520 xg



1236R

12,000 / 16,582 xg

* All tubes showed in this catalog are not included in GYROZEN products.

1248 · 1248R · 1236R 1580 · 1580R



GYROZEN multi-purpose, high-speed centrifuges - 1248, 1248R, 1236R, 1580 and 1580R - share rotors (G-family), buckets and accessories so as to offer a cost-efficient solution and save laboratory space. 1248, 1248R and 1236R with max. 12,000 rpm can accommodate up to four of 250 ml capacity with a compact footprint and can be used for medium throughput applications. 1580 and 1580R multi-purpose centrifuges are designed for daily-working laboratories with large-volumes and quantities samples up to 3 Liters (4 x 750 ml). These two go up to 15,000 rpm and offer a great variety of rotors, buckets and tube adaptors for diverse applications. The 'R' models are equipped with a powerful refrigeration system that allows the temperature to cool down to 4 °C from room temperature within 5 minutes. Therefore, you can save your time and your precious samples at a proper temperature. 1248, 1248R, 1580 and 1580R are bench-top centrifuges whereas the 1236R is a floor standing. The space-saving, compact 1236R has 4 casters at the bottom of the body so that it can be easily moved, positioned and safely locked. Also, its perfect height allows you to easily load and unload samples. GYROZEN's multi-purpose centrifuges are ideal for cellular and molecular biology work, clinical preparations, nano-particles separations, industrial applications and food science, etc.



► Features

- 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 83 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.

1248 · 1248R · 1236R · 1580 · 1580R

► 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	-
Chamber material		Aluminum/Anodizing	SUS304	SUS304	Aluminum/Anodizing	SUS304
Power supply		230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V 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 591 x 330	655 x 610 x 355	475 x 610 x 830	540 x 650 x 380	770 x 650 x 390
Weight without rotor (kg)		40	78	110	57	93
CE mark		Yes				
Cat. No.		GZ-1248	GZ-1248R	GZ-1236R	GZ-1580	GZ-1580R

► Applications

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

► Control Panel

1248 • 1580

Display Screen

Status of Speed, Time, ACC, DEC, Running, Lid Open / Close

Setting Speed

Touch once : RPM
Touch twice : RCF

Setting Time

To 99 min. 59 sec
or Continuous (00:00)

Setting ACC

ACC (1 ~ 9 / Max. 9)

Setting DEC

DEC (0~9 / Natural DEC 0)

Program SAVE / CALL

Touch once : CALL
Touch twice : SAVE (up to 100)

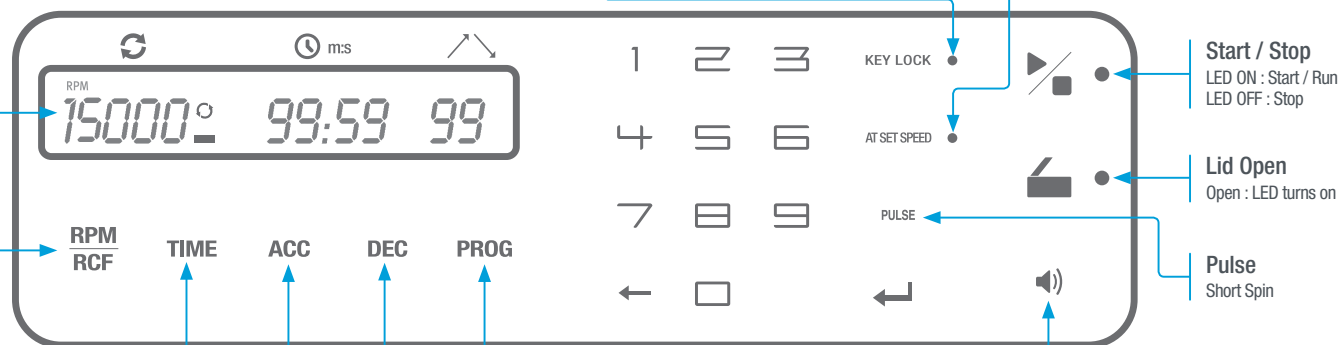
End Alarm

Sound volume
(level : 0 ~ 10, 0 : silent)

Key Lock / UnLock

At Set Speed

On : Counts the time at set speed / Off : Counts the time from starting
Touch more than 2 sec : Repeat time of end alarm (time : 0 ~ 99, 0 : silent)



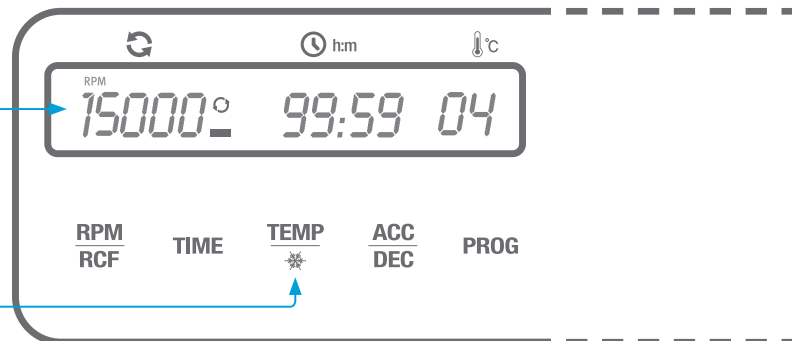
1248R • 1236R • 1580R

Display Screen

Status of Speed, Time, Temperature, ACC, Running, DEC, Lid Open / Close

Temp / Fast Cool

-20°C ~ 40°C
Fast Cool
(fast temp function)



1248 · 1248R · 1236R · 1580 · 1580R

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

4 loadings
≤ 90°

Only for 1580, 1580R



Round 750 ml Bucket with Cap GLB-b750-750/ GLB-750-750

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

* GLB-b750-750 includes cap.



Round 500 ml Bucket GLB-500-750

Bucket bore (Φ x L, mm) : 69.2 x 135
Radius (mm) : 218
Max. RPM : 4,000
Max. RCF (g-force) : 3,900
Max. height for tube fit (mm) : 165

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



Microplate Holder GLP-mw-750

Holder bore (w x d x h, mm)
: 88 x 128.5 x 80
Radius (mm) : 171.5
Max. RPM : 4,000
Max. RCF (g-force) : 3,068

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

Swing-out Rotor, GRS-G-r750-4

4 loadings
 $\angle 90^\circ$

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 (g-force) : 2,898
 Max.height for tube fit(mm) : 135

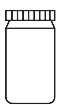
Tube										
Tube capacity (ml)	3	5	10	15	15 ml conical	50	50 ml conical	250	250 ml conical	500 ml conical
Tube rack										
Cat. No.	GAM-5-30(r750)		GAM-15-20(r750)		GAM-c15-16(r750)	GAM-50-8(r750)	GAM-c50-5(r750)	GAS-250(r750)	GAS-c250(r750)	GAS-c500(r750)
Rack capacity (ea/4)	30/120		20/80		16/64	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	29.5 x 85	62.5 x 87	61 x 93	98 x 94



Round 500 ml Bucket

GLB-500-r750

Bucket bore (Φ x L, mm) : 69.2 x 135
 Radius (mm) : 218
 Max.RPM : 3,600
 Max.RCF (g-force) : 3,159
 Max.height for tube fit (mm) : 165

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



Microplate Holder GLP-mw-r750

Holder bore (w x d x h, mm) : 88 x 128.5 x 80
 Radius (mm) : 171.5
 Max.RPM : 3,600
 Max.RCF (g-force) : 2,485

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

1248 · 1248R · 1236R · 1580 · 1580R

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

4 loadings
 $\angle 90^\circ$



Round 250 ml Bucket GLB-250-250

Bucket bore ($\Phi \times L$, mm) : 62 x 109
 Radius (mm) : 193
 Max.RPM : 5,000
 Max.RCF (g-force) : 5,394
 Max.height for tube fit (mm) : 153

Tube



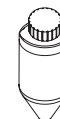
Tube capacity (ml)	250
Bucket capacity (ea/4)	1/4



Conical 250 ml Bucket GLB-c250-250

Bucket bore ($\Phi \times L$, mm) : 60.5 x 130.2
 Radius (mm) : 193
 Max.RPM : 5,000
 Max.RCF (g-force) : 5,394
 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 ($\Phi \times L$, mm) : 31.5 x 130.2
 Radius (mm) : 193
 Max.RPM : 5,000
 Max.RCF (g-force) : 5,394
 Max.height for tube fit (mm) : 165

Tube



Tube capacity (ml)	60 ml syringe
Bucket capacity (ea/4)	1/4

Adaptor



Cat. No.	GAS-60s(60)
Adaptor bore ($\Phi \times L$, mm)	Custom-made



Dual Syringe Bucket GLB-d20/10-250

Bucket bore ($\Phi \times L$, mm) :
 22.5 x 100 (20) / 16 x 90 (10)
 Radius (mm) : 170 / 160
 Max.RPM : 5,000
 Max.RCF (g-force) : 4,752 / 4,472
 Max.height for tube fit (mm) : 132 / 125

Tube



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

Adaptor



Cat. No.	GAS-10s(10)	GAS-20s(20)
Adaptor bore ($\Phi \times L$, mm)	Custom-made	Custom-made

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

4 loadings
 $\angle 90^\circ$



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 (g-force) : 3,134
 Max.height for tube fit (mm) : 130

Tube											
Tube capacity (ml)	1.5/2.0	3	5	10	15	15 ml conical	50	50 ml conical	15	85	250
Tube rack											
Cat. No.	GAM-m2.0-20 (r250)	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)	20/80	12/48		12/48		9/36	4/16	3/12	2/8		1/4
Hole dimension (Φ x L, mm)	11.3 x 39	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

Holder Dimension (w x d x h, mm)
 : 88 x 128.5 x 80
 Radius (mm) : 153
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,737

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

1248 · 1248R · 1236R · 1580 · 1580R

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

6 loadings
≤ 90°



Round 100 ml Bucket with Cap GLB-b100-100

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

* GLB-b100-100 includes cap.
* (b100) adaptors work fine with cap but (100) adaptors not.

Tube										
Tube capacity (ml)	1.5~2.0	2.6~7	4~10	9~15	15 ml conical	15 ml conical	50 ml	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	17.5 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



Round 50 ml Bucket with Cap GLB-b50-100

Bucket bore (Φ x L, mm) : 30.5 x 97
Radius (mm) : 169.5
Max.RPM : 4,000
Max.RCF (g-force) : 3,032
Max.height for tube fit (mm)
: 115(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)	17.3 x 87		29.5 x 17.5	



Dual Round 15 ml Bucket with Cap GLB-bd15-100

Bucket bore (Φ x L, mm) : 17 x 98
Radius (mm) : 169.5
Max.RPM : 4,000
Max.RCF (g-force) : 3,032
Max.height for tube fit (mm)
: 123(w/ cap) / 127(w/o cap)

Tube	
Tube capacity (ml)	15
Bucket capacity (ea/4)	2/12



Dual Conical 15 ml Bucket with Cap GLB-bdc15-100

Bucket bore (Φ x L) : 17 x 102.5
Radius (mm) : 173.6
Max.RPM : 4,000
Max.RCF (g-force) : 3,105
Max.height for tube fit (mm) : 120

Tube	
Tube capacity (ml)	15 ml conical
Bucket capacity (ea/4)	2/12



Vacutainer 10 ml Bucket GLB-10-8-100

Bucket bore (Φ x L, mm) : 16 x 89
Radius (mm) : 173.6
Max.RPM : 4,000
Max.RCF (g-force) : 3,105
Max.height for tube fit (mm) : 120

Tube			
Tube capacity (ml)	3	5	10
Bucket capacity (ea/6)	8/48	8/48	8/48
Adaptor			None
Cat No.	GAS-3(10)	GAS-5(10)	-
Adaptor bore (Φ x L, mm)	13 x 57	13 x 82	-
Radius (mm)	142.6	167.6	173.6
Max. RPM	4,000		
Max. RCF (g-force)	2,551	2,998	3,105

1248 · 1248R · 1236R · 1580 · 1580R



Fixed Angle Rotor, GRF-G-250-6

6 x (250 & 15 ml)
 $\angle 25^\circ$
 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 (1580R)	8,000	
Max.RCF (g-force)	9,395	9,588



Fixed Angle Rotor, GRF-G-85-6

6 x 85 ml
 $\angle 34^\circ$
 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 (ΦxL, 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)	16,424	16,582	16,260	16,743	16,421	17,709
Max.RPM (1248/1248R/1236R/1580)	10,000					
Max.RCF (g-force)	11,404	11,515	11,292	11,627	11,404	12,298



Fixed Angle Rotor, GRF-G-50-8

8 x 50 ml
 $\angle 30^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 120

Not applicable for 1248

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



Fixed Angle Rotor, GRF-G-c50-6

6 x 50 ml conical
 $\angle 25^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 125

Not applicable for 1248

Tube		
Tube capacity (ml)	15 ml conical	50 ml conical
Adaptor		None
Cat. No.	GAS-c15(c50)	-
Adaptor bore ($\Phi \times L$, mm)	17 x 105	-
Radius (mm)	93.6	98.4
Max.RPM (1580R)	13,000	
Max.RCF (g-force)	17,685	18,592
Max.RPM (1236R/1248R/1580)	10,000	
Max.RCF (g-force)	10,464	11,101

1248 · 1248R · 1236R · 1580 · 1580R



Fixed Angle Rotor, GRF-G-15-24

24 x 15 ml
 $\angle 30^\circ$
 Hole diameter (mm) : 17.5
 Max. height for tube fit (mm) : 115



Fixed Angle Rotor, GRF-G-c15-12

12 x 15 ml conical
 $\angle 25^\circ$
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125



Angle Rotor, GRA-G-15-24A

24 x 15 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 18
 Max. height for tube fit (mm) : 125
 (120 for conical tube)



Aluminum 15 ml Sleeve **GLB-15A-FA**

Sleeve bore ($\Phi \times L$, mm) : 18 x 90
 Radius (mm) : 175.2
 Max. RPM : 4,000
 Max.RCF(g-force) : 3,134

Only for R models

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

Not applicable for 1248

Tube	
Tube capacity(ml)	15 ml conical
Radius(mm)	103
Max.RPM (1580R)	15,000
Max.RCF (g-force)	25,910
Max.RPM (1236R/1248R/1580)	12,000
Max.RCF (g-force)	16,582

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 ($\Phi \times L$, 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-m2.0-30

30 x 1.5/2.0 ml
 $\angle 45^\circ$
 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 ($\Phi \times L$, mm)	6.5 x 23	8 x 31	-
Radius (mm)	79	86	96.4
Max.RPM (1580/1580R)	15,000		
Max.RCF (g-force)	19,872	21,633	24,249
Max.RPM (1248/1248R/1236R)	12,000		
Max.RCF (g-force)	12,718	13,835	15,520



Fixed Angle Rotor, GRF-G-s0.2-64

8 x 8-tube PCR strips, 64 x 0.2 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 6.5
 Max. height for tube fit (mm) : 16

Tube		
Tube capacity(ml)	0.2	8-Strip tube
Radius(mm)	1st : 58.6 / 2nd : 67.1	
Max.RPM	12,000	
Max.RCF(g-force)	1st : 9,434 / 2nd : 10,803	

Large Capacity, High-Speed Centrifuges



1736R

17,000 / 32,310 xg



2236R

22,000 / 54,111 xg



1096R

10,000 / 14,981 xg

* All tubes showed in this catalog are not included in GYROZEN products.

1736R



GYROZEN 1736R is a multi-purpose, large capacity and floor-standing centrifuge that can process samples at speeds up to 17,000 rpm (32,310 x g) and so enables efficient centrifugation in research and laboratory experiments. PCR tubes and micro tubes can be run at 12,000 rpm (10,803 x g) and 17,000 rpm (31,147 x g) respectively and up to six of 500 ml capacity can go to 8,000 rpm (11,305 x g). Even though the most common usage of this model comes with fixed angle rotors for high speed, the swing-out rotor with a capacity of four 250 ml extends the flexibility of this multi-purpose centrifuge. 1736R operates very quietly and fits well in a very crowded laboratory with its compact footprint.

► Applications

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

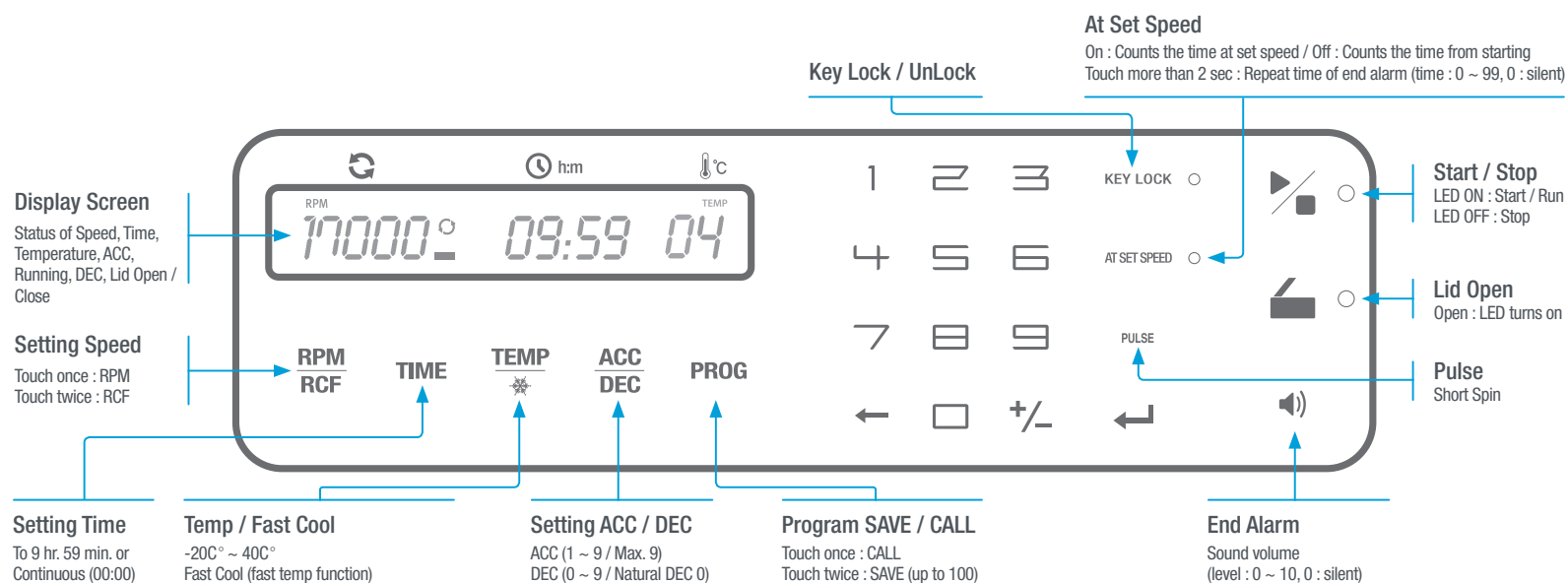
► Technical Specifications

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	Chamber material	SUS304
RPM/RCF conversion		Yes	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
Noise level (dB)		~ 60	Power requirement (kVA)	2.5
ACC/DEC		9 / 10 steps	Dimension (W x D x H, mm)	473 x 610 x 830
Parameters on display window		RPM (RCF), Oper Status, Lid Open/Close, Hr:Min, Temp, ACC, DEC	Weight without rotor (kg)	110
			CE mark	Yes
			Cat. No.	GZ-1736R

► Features

- 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
- 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.

► Control Panel



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

4 loadings
 $\angle 90^\circ$



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 (g-force) : 3,134
 Max.height for tube fit (mm) : 130

Tube											
Tube capacity (ml)	1.5/2.0	3	5	10	15	15 ml conical	50	50 ml conical	15	85	250
Tube rack											
Cat. No.	GAM-m2.0-20 (r250)	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)	20/80	12/48		12/48		9/36	4/16	3/12	2/8		1/4
Hole dimension (Φ x L, mm)	11.3 x 39	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

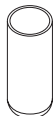
Holder (w x d x h, mm)
 : 88 x 128.5 x 80
 Radius (mm) : 153
 Max.RPM : 4,000
 Max.RCF (g-force) : 2,737

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
 $\angle 25^\circ$
 Hole diameter (mm) : 70
 Max. height for tube fit (mm) : 170

Tube		
Tube capacity (ml)	250	500
Adaptor		None
Cat No.	GAS-250(500)	-
Adaptor bore ($\Phi \times L$, mm)	69 x 100	-
Radius (mm)	138.3	158
Max.RPM	8,000	
Max.RCF (g-force)	9,896	11,305



Fixed Angle Rotor, GRF-L-250-6

6 x 250 ml (6 x 15 ml)
 $\angle 25^\circ$
 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
 $\angle 25^\circ$
 Hole diameter (mm) : 38.3
 Max. height for tube fit (mm) : 125

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 ($\Phi \times L$, 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
 $\angle 30^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 120

Tube				
Tube capacity (ml)	10	15	15 ml conical	50
Adaptor				None
Cat. No.	GAS-15(50)		GAS-c15(50)	-
Adaptor bore ($\Phi \times L$, 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
 $\angle 30^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 120

Tube	
Tube capacity (ml)	50
Adaptor	None
Cat. No.	-
Adaptor bore ($\Phi \times L$, 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
 $\angle 25^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 125

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

1736R



Fixed Angle Rotor, GRF-L-15-12

12 x 15 ml
 $\angle 30^\circ$
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125

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
 $\angle 25^\circ$
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125

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
 $\angle 45^\circ$
 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 ($\Phi \times L$, 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



Fixed Angle Rotor, GRF-L-s0.2-64

8 x 8-tube PCR strips, 64 x 0.2 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 6.5
 Max.height for tube fit(mm) : 16

Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	1st : 58.6 / 2nd : 67.1	
Max. RPM	12,000	
Max. RCF (g-force)	1st : 9,434 / 2nd : 10,803	

2236R



GYROZEN 2236R centrifuge is designed for large capacity and high-speed daily working laboratories to save time with a streamlining process. This model goes up to 22,000 rpm (54,111 x g) with six of 50 ml tubes and 7,000 rpm (10,825 x g) with six of one-liter bottles. It covers down to PCR-tube and micro tubes and up to 1 L tubes. The beauty of this model is graphical display on a 7" touch screen with intuitive controls. All the setting conditions are shown in a numerical way and the actual operating status in a graphic. It also provides high flexibility in manipulations of sophisticated protocols such as multi-step centrifugation or step-wise continuous operation. 2236R is the best choice for the multi-users environment like a core facility with functions of ID and password control and tracking. It is widely used not only research laboratories but industrial production facilities too. With the lift-up lid and the small footprint of 2236R, you will love the freedom of space organization.

► 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

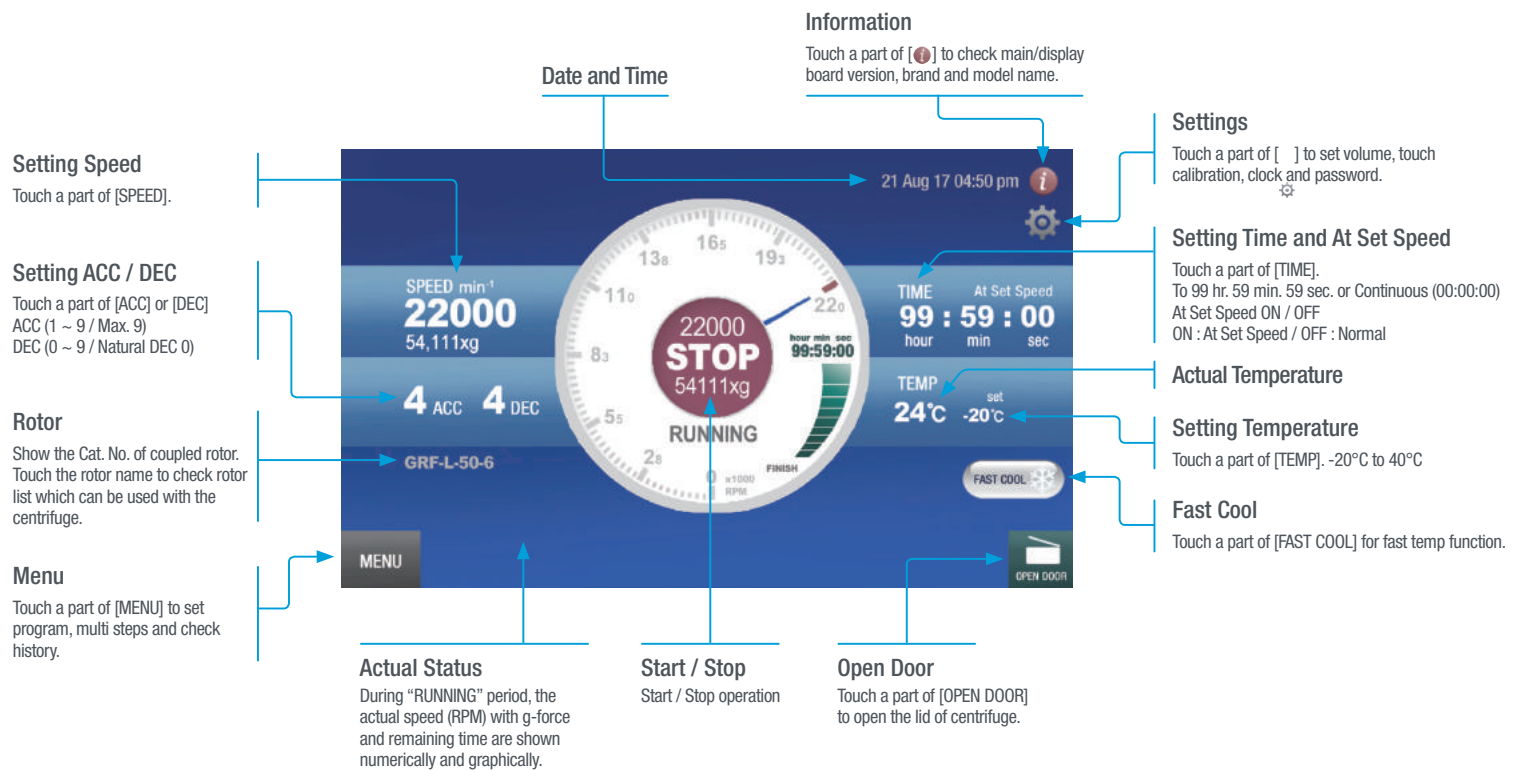
► Technical Specifications

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	Automatic rotor identification	Yes
Max. capacity	Fixed angle	6 x 1,000 ml, 30 x 1.5/2.0 ml	Imbalance cut-off	Yes
	Swing-out	4 x 250 ml, 48 x 15 ml, 16 MTPs	Safety lid lock	Yes
Temp. range (°C)		-20 to +40	Lid drop protection	Yes
FAST cool button		Yes	Motorized lid open & close	Yes
Time control		Timed < 100 hr or continuous	Automatic lid release at completion	Yes
Time counting modes		Selectable, at set speed or from starting	Chamber material	SUS304
			Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V 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)		~ 60	Weight without rotor (kg)	240
ACC/DEC		9/10 steps	CE mark	Yes
Program memory		100	Cat. No.	GZ-2236R

► Features

- 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.

► Control Panel



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

4 loadings
 $\angle 90^\circ$



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 (g-force) : 3,134
 Max.height for tube fit (mm) : 130

Tube											
Tube capacity (ml)	1.5/2.0	3	5	10	15	15 ml conical	50	50 ml conical	15	85	250
Tube rack											
Cat. No.	GAM-m2.0-20 (r250)	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)	20/80	12/48		12/48		9/36	4/16	3/12	2/8		1/4
Hole dimension (Φ x L, mm)	11.3 x 39	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

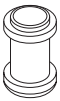
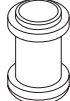
Holder (w x d x h, mm)
 : 88 x 128.5 x 80
 Radius (mm) : 153
 Max.RPM:4,000
 Max.RCF(g-force):2,737

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



Fixed Angle Rotor, GRF-L-1000-6

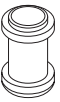
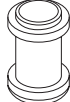
6 x 1000 ml
 $\angle 25^\circ$
 Hole diameter (mm) : 98
 Max. height for tube fit (mm) : 175

Tube			
Tube capacity (ml)	250	500	1000
Adaptor			None
Cat No.	GAS-250(1000)	GAS-500(1000)	-
Adaptor bore ($\Phi \times L$, mm)	62 x 109	69 x 149	-
Radius (mm)	164.1	183.4	197.6
Max.RPM	7,000		
Max.RCF (g-force)	8,990	10,047	10,825



Fixed Angle Rotor, GRF-L-1000-4

4 x 1000 ml
 $\angle 25^\circ$
 Hole diameter (mm) : 98
 Max. height for tube fit (mm) : 175

Tube			
Tube capacity (ml)	250	500	1000
Adaptor			None
Cat No.	GAS-250(1000)	GAS-500(1000)	-
Adaptor bore ($\Phi \times L$, mm)	62 x 109	69 x 149	-
Radius (mm)	135.2	154.5	168.7
Max.RPM	8,000		
Max.RCF (g-force)	9,674	11,055	12,071



Fixed Angle Rotor, GRF-L-500-6

6 x 500 ml
 $\angle 25^\circ$
 Hole diameter (mm) : 70
 Max. height for tube fit (mm) : 170

Tube		
Tube capacity (ml)	250	500
Adaptor		None
Cat No.	GAS-250(500)	
Adaptor bore ($\Phi \times L$, mm)	69 x 100	
Radius (mm)	138.3	158
Max.RPM	10,000	
Max.RCF (g-force)	15,462	17,664



Fixed Angle Rotor, GRF-L-250-6

6 x 250 ml (6 x 15ml)
 $\angle 25^\circ$
 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
 $\angle 25^\circ$
 Hole diameter (mm) : 38.3
 Max. height for tube fit (mm) : 125

Tube						
Tube capacity (ml)	10	15	15ml conical	50	50ml conical	85
Adaptor						None
Cat. No.	GAS-15(85)		GAS-c15(85)	GAS-50(85)	GAS-c50(85)	-
Adaptor bore ($\Phi \times L$, 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
 $\angle 30^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 120

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
 $\angle 30^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 120

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
 $\angle 25^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 125

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

2236R



Fixed Angle Rotor, GRF-L-15-12

12 x 15 ml
 $\angle 30^\circ$
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125

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
 $\angle 25^\circ$
 Hole diameter (mm) : 17
 Max. height for tube fit (mm) : 125

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
 $\angle 45^\circ$
 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 (ΦxL, 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



Fixed Angle Rotor, GRF-L-s0.2-64

8 x 8-tube PCR strips, 64 x 0.2 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 6.5
 Max. height for tube fit (mm) : 16

Tube		
Tube capacity (ml)	0.2	8-tube PCR strip
Radius (mm)	1st : 58.6 / 2nd : 67.1	
Max.RPM	12,000	
Max.RCF (g-force)	1st : 9,434 / 2nd : 10,803	

1096R



GYROZEN 1096R is a large capacity centrifuge for large-volume daily-working processes such as high-throughput sample preparation. This model offers a performance of up to 10,000 rpm (14,981 x g) with six of 250 ml tubes and 5,000 rpm (5,324 x g) with 96-well filter plate set. The capacity of eight 400 ml blood bags or 144 vacutainer tubes per single run makes 1096R ideal for blood fractionation and collection in blood banks, clinics and commercial laboratories. The two-step deceleration profile supports the separated blood phases being kept as it is. In addition, this model can be operated in a variety of applications like oil analysis, milk fat measurement, impurity investigation, etc. with many different shapes of 100 ml glass tubes. A wide range of accessories of six swing-out rotors and two fixed-angle rotors make it possible for versatile and high-throughput operations. The cooling function can set the temperature in the range from -10 °C to + 40 °C. Same as other GYROZEN refrigerated centrifuges, 1096R has a powerful cooling system that reaches 4 °C within 5 minutes at room temperature through the "Fast Cool" function. With GYROZEN 1096R centrifuge, you can enjoy the high-quality performance to retain the valuable samples at desired temperature and conditions.

► 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

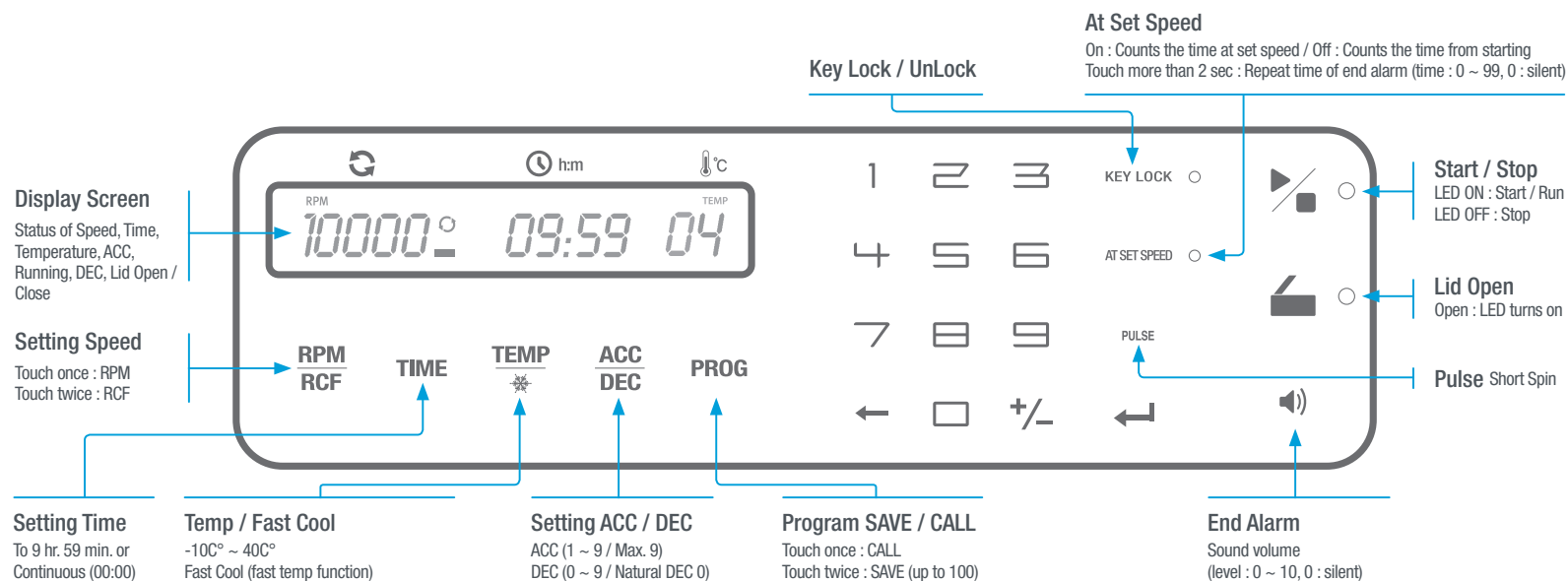
► Technical Specifications

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	Display	Blue LCD
Max. capacity	Fixed angle	6 x 500 ml	Automatic rotor identification	Yes
	Swing-out	4 x 1,400 ml, 6 x 750 ml, 4 FTPs	Imbalance cut-off	Yes
Temp. range (°C)		-10 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	Chamber material	SUS304
RPM/RCF conversion		Yes	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
Noise level (dB)		~ 60	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
			CE mark	Yes
			Cat. No.	GZ-1096R

► Features

- For up to 10,000 rpm (14,981 xg) with 6 x 250 ml tubes and 5,000 rpm (5,324 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.
- 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

► Control Panel



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

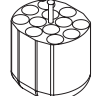
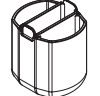
4 loadings
 $\angle 90^\circ$



Oval Bucket

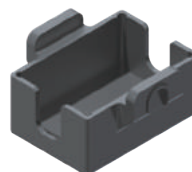
GLB-1400-1400

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
 Max.height for tube fit (mm) : 150

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

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

4 loadings
 $\angle 90^\circ$



Microplate Holder

GLP-mw-1400

Holder bore (w x d x h, mm)
 86.1 x 128.1 x 57.1
 Radius (mm) : 190.5
 Max.RPM : 5,000
 Max.RCF(g-force) : 5,324

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

6 loadings
 $\angle 90^\circ$



Round 750 ml Bucket GLB-750-750

Bucket bore ($\Phi \times L$, mm) : 99 x 101.5
 Radius (mm) : 222.6
 Max.RPM : 4,000
 Max.RCF(g-force) : 3,982
 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/6)	24/144		21/126	19/114	14/84	7/42	5/30	1/6	1/6	1/6	1/6
Hole dimension ($\Phi \times L$, 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	-



Round 500ml Bucket GLB-500-750

Bucket bore ($\Phi \times L$, mm) : 69.2 x 135
 Radius (mm) : 237.5
 Max.RPM : 4,000
 Max.RCF(g-force) : 4,248
 Max.height for tube fit (mm) : 165

Tube	
Tube capacity (ml)	500
Bucket capacity (ea/6)	1/6



Microplate Holder GLP-mw-750

Holder bore (w x d x h, mm)
 : 88 x 128.5 x 80
 Radius (mm) : 189.2
 Max.RPM : 4,000
 Max.RCF (g-force) : 3,384

Plate		
Plate capacity (ml)	MTP	DWP
Holder capacity (ea/6)	4/24	1/6

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

4 loadings
 $\angle 90^\circ$



Round 750 ml Bucket with Cap GLB-b750-750/ GLB-750-750

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

* GLB-b750-750 includes 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 (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	-



Round 500 ml Bucket GLB-500-750

Bucket bore (Φ x L, mm) : 69.2 x 135
 Radius (mm) : 218
 Max.RPM : 4,000
 Max.RCF (g-force) : 3,900
 Max.height for tube fit (mm) : 165

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



Microplate Holder GLP-mw-750

Holder bore (w x d x h, mm)
 : 88 x 128.5 x 80
 Radius (mm) : 171.5
 Max.RPM : 4,000
 Max.RCF (g-force) : 3,068

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

Swing-out Rotor, GRS-L-r750-4

4 loadings
 $\angle 90^\circ$



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 (g-force) : 2,898
 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	29.5 x 85	62.5 x 87	61 x 93	98 x 94



Round 500 ml Bucket GLB-500-r750

Bucket bore (Φ x L, mm) : 69.2 x 135
 Radius (mm) : 218
 Max.RPM : 3,600
 Max.RCF (g-force) : 3,159
 Max.height for tube fit (mm) : 165

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



Microplate Holder GLP-mw-r750

Holder bore (w x d x h, mm)
 :88 x 128.5 x 80
 Radius(mm):171.5
 Max.RPM:3,600
 Max.RCF(g-force):2,485

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

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

4 loadings
 $\angle 90^\circ$



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 (g-force) : 3,134
 Max.height for tube fit (mm) : 130

Tube											
Tube capacity (ml)	1.5/2.0	3	5	10	15	15 ml conical	50	50 ml conical	15	85	250
Tube rack											
Cat. No.	GAM-m2.0-20 (r250)	GAM-5-12(r250)	GAM-5-12(r250)	GAM-15-12(r250)	GAM-15-12(r250)	GAM-c15-9 (r250)	GAM-50-4 (r250)	GAM-c50-3 (r250)	GAM-85-2(r250)	GAM-85-2(r250)	GAS-250(r250)
Rack capacity (ea/4)	20/80	12/48	12/48	12/48	12/48	9/36	4/16	3/12	2/8	2/8	1/4
Hole dimension (Φ x L, mm)	11.3 x 39	13.5 x 58	13.5 x 80	17.5 x 90	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

Holder bore (w x d x h, mm)
 : 88 x 128.5 x 80
 Radius (mm) : 153
 Max.RPM : 4,000
 Max.RCF (g-force) : 2,737

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
 $\angle 25^\circ$
 Hole diameter (mm) : 70
 Max. height for tube fit (mm) : 170

Tube		
Tube capacity (ml)	250	500
Adaptor		None
Cat No.	GAS-250(500)	-
Adaptor bore ($\Phi \times L$, mm)	69 x 100	-
Radius (mm)	138.3	158
Max.RPM	8,000	
Max.RCF (g-force)	9,896	11,305



Fixed Angle Rotor, GRF-L-250-6

6 x 250 ml (6 x 15 ml)
 $\angle 25^\circ$
 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

Low-Speed, Clinical Centrifuges



406

4,000 / 2,075 xg



416

4,000 / 2,826 xg



624R

6,000 / 3,824 xg

* All tubes showed in this catalog are not included in GYROZEN products.

406



The compact and robust low-speed model, 406 is well suited for routine work with small sample sizes less than 15 ml tubes. It has an open style of 15 ml angle rotor that can spin at max. 4,000 rpm (2,075 x g). The product is basically supplied together with an angle rotor and six 15 ml aluminum sleeves, which can be spun immediately upon receipt. Optional tube adaptors for 3 ml, 4 ml and 5 ml tubes are available for easy separation of the small tubes including vacutainers. It features maximized simplicity in operation and highest safety in everyday work. It is commonly used in bio-banks, clinical and commercial laboratories for the fractionation of blood samples and simple precipitation of clinical and biological samples.

► Features

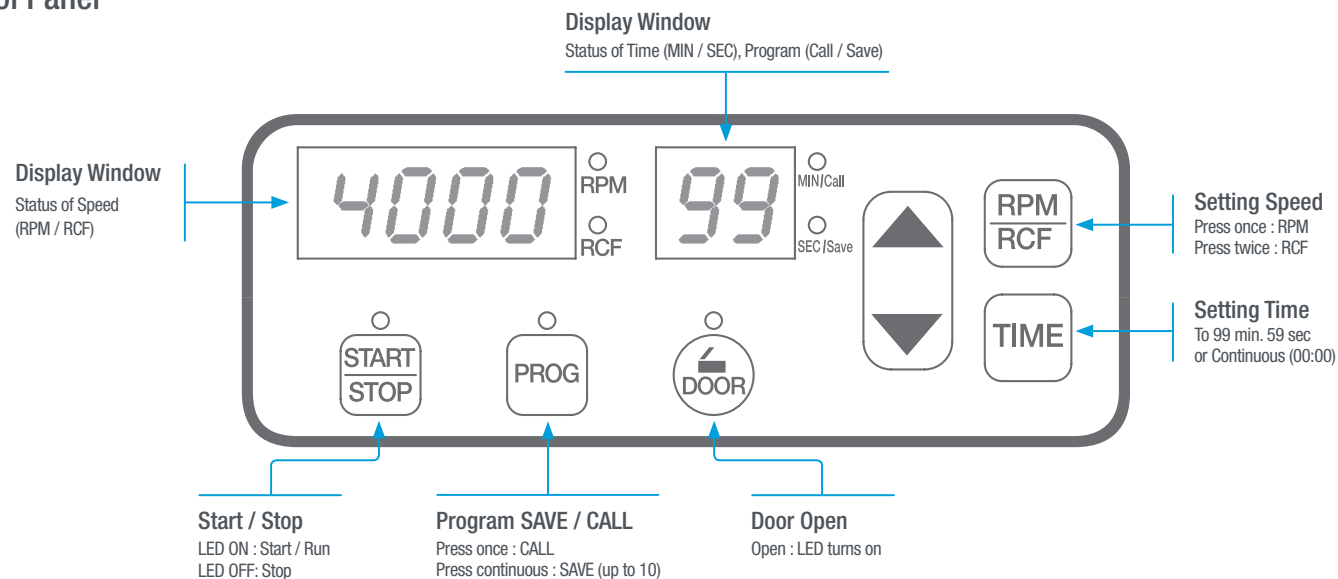
- Commonly used in the fractionation of blood samples and simple precipitation of biological samples
- Automatic lid release and vivid end alarm for easy retrieval of samples
- Supplied with an angle rotor including 6 of aluminum sleeves for 15 ml tubes
- CE MDD-certified version, MD406, is also available (if required)

CE
0120

► 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	Chamber material	Aluminum/Anodizing
Noise level (dB)	~ 56	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
ACC/DEC (sec)	≤ 20 / ≤ 20	Power requirement (VA)	140
Program memory	10	Dimension (W x D x H, mm)	296 x 412 x 206
Parameters on display window	RPM (RCF), Min (Sec)	Weight without rotor (kg)	17.5
Imbalance cut-off	Yes	CE mark	Yes
		Cat. No.	GZ-0406

► Control Panel



► Applications

- Routine separation of blood, urine or cells


Aluminum 15ml Sleeve GLB-15A-FA

Sleeve bore (ΦxL) : 18 x 90
 Radius (mm) : 116
 Max.RPM : 4,000
 Max.RCF (g-force) : 2,075


**Angle Rotor,
 GRA-15-6A**

6 x 15 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 18
 Max. height for tube fit (mm) : 125
 (120 for conical tube)

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 (ΦxL, 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



GYROZEN 416 is a compact bench-top centrifuge with a maximum capacity of 400 ml at a time. It has five versatile rotors, so you can choose the desired rotor, buckets and adaptors according to your application. With GRS-S-100-4 rotor and universal 100 ml buckets and diverse adaptors, you can enjoy everyday laboratory work to its fullest. The immediate separation of 32 vacutainer samples or small tubes is also feasible with unique vacutainer buckets. An additional offering of microplate rotor extends the 416's application. It is furnished with unique air flow structure and anti-vibration structure. Its ergonomic design with intuitive control panel offers easiness in operation. The SOFT START/STOP function of 416 enables gentle acceleration and deceleration, which is effective for vibration-sensitive sample separation such as blood fractionation. GYROZEN 416 centrifuge guarantees the highest test standards that you need for your daily work with industry-leading safety and quality.

► Features

- 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

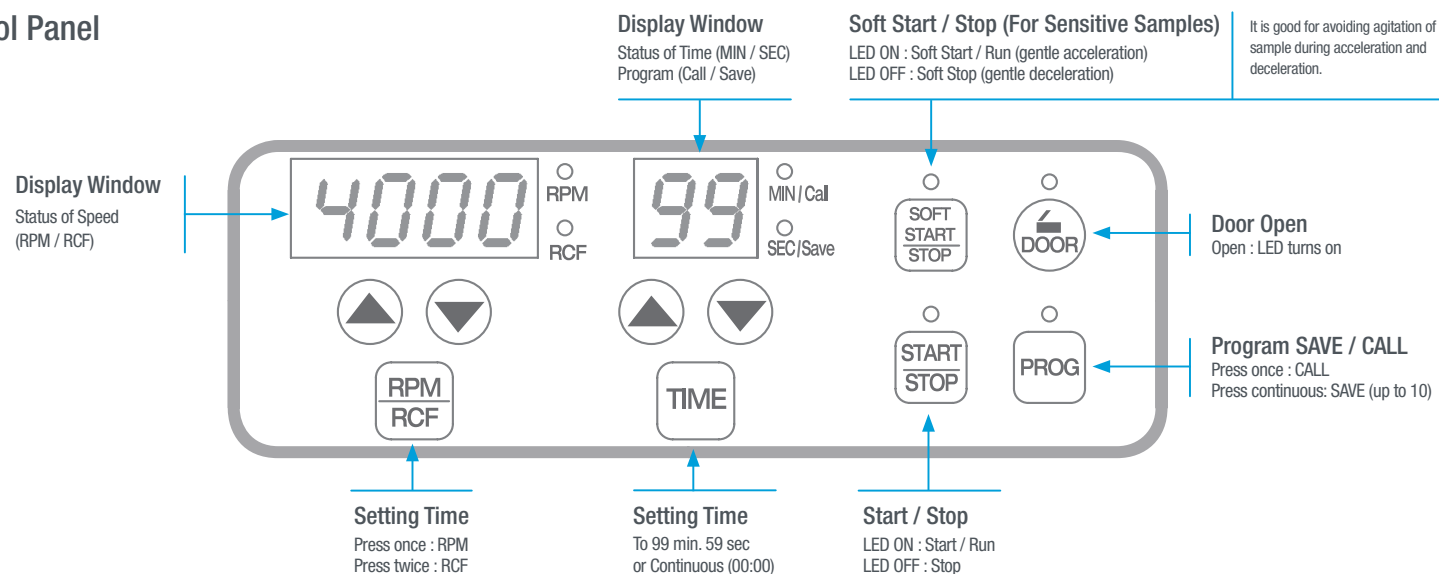
- CE MDD-certified version, MD416, is also available (if required)



► Technical Specifications

Max. RPM/RCF	Fixed angle	4,000 / 2,700 xg	Imbalance cut-off	Yes
	Swing-out	4,000 / 2,826 xg	Safety lid lock	Yes
Max. capacity	Fixed angle	16 x 15 ml	Lid drop protection	Yes
	Swing-out	4 x 100 ml, 32 vacutainer tube, 4 MTPs	Automatic lid release at completion	Yes
Time control		Timed < 100 min or continuous	Chamber material	Aluminum/Anodizing
RPM/RCF conversion		Yes	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
Noise level (dB)		~ 56	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)	23
Program memory		10	CE mark	Yes
Parameters on display window		RPM (RCF), Min (Sec)	Cat. No.	GZ-0416

► Control Panel



► 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

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

4 loadings
 $\angle 90^\circ$



Round 100 ml Bucket with Cap GLB-b100-100

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

* GLB-b100-100 includes cap. * (b100) adaptors work fine with cap but (100) adaptors not.

Tube										
Tube capacity (ml)	1.5~2.0	2.6~7	4~10	9~15	15 ml conical	15 ml conical	50 ml	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/4)	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



Round 50 ml Bucket with Cap GLB-b50-100

Bucket bore (Φ x L, mm)
 : 30.5 x 97
 Radius(mm) : 150.9
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,700
 Max.height for tube fit(mm)
 : 115(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)	17.3 x 87	29.5 x 17.5	-	



Dual Round 15 ml Bucket with Cap GLB-bd15-100

Bucket bore (Φ x L, mm) : 17 x 98
 Radius(mm) : 150.9
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,700
 Max.height for tube fit(mm)
 : 123(w/ cap) / 127(w/o cap)

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



Dual Conical 15 ml Bucket with Cap GLB-bdc15-100

Bucket bore (Φ x L, mm)
 : 17 x 102.5
 Radius(mm) : 155.1
 Max.RPM: 4,000
 Max.RCF(g-force) : 2,774
 Max.height for tube fit(mm) : 120

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



Vacutainer 10 ml Bucket GLB-10-8-100

Bucket bore (Φ x L, mm) : 16 x 89
 Radius(mm) : 155.1
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,774
 Max.height for tube fit(mm) : 120

Tube			
Tube capacity (ml)	3	5	10
Bucket capacity (ea/4)	8/32	8/32	8/32
Adaptor			None
Cat No.	GAS-3(10)	GAS-5(10)	-
Adaptor bore (Φ x L, mm)	13 x 57	13 x 82	-
Radius (mm)	121	146	115.1
Max. RPM		4,000	
Max. RCF (g-force)	2,164	2,612	2,774

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

4 loadings
 $\angle 90^\circ$



Round 50 ml Bucket
GLB-50-50

Bucket bore ($\Phi \times L$, mm) : 30.5 x 91
 Radius(mm) : 150.9
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,700
 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 ($\Phi \times L$, mm)	17.3 x 87		29.5 x 17.5	



Conical 50 ml Bucket
GLB-c50-50

Bucket bore ($\Phi \times L$, mm) : 29.5 x 91.5
 Radius(mm) : 150.9
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,700
 Max.height for tube fit(mm) : 125

Tube	
Tube capacity (ml)	50 ml conical



Round 15 ml Bucket
GLB-15-50

Bucket bore ($\Phi \times L$, mm) : 17 x 93
 Radius(mm) : 150.9
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,700
 Max.height for tube fit(mm) : 125

Tube	
Tube capacity (ml)	15



Conical 15 ml Bucket
GLB-c15-50

Bucket bore ($\Phi \times L$, mm) : 17 x 93
 Radius(mm) : 150.9
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,700
 Max.height for tube fit(mm) : 120

Tube	
Tube capacity (ml)	15 ml conical



Dual Round 15 ml Bucket
GLB-d15-50

Bucket bore ($\Phi \times L$, mm) : 17 x 91.5
 Radius(mm) : 150.9
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,700
 Max.height for tube fit(mm) : 120

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



Dual Conical 15 ml Bucket
GLB-dc15-50

Bucket bore ($\Phi \times L$, mm) : 17 x 91.5
 Radius(mm) : 150.9
 Max.RPM : 4,000
 Max.RCF(g-force) : 2,700
 Max.height for tube fit(mm) : 120

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

Angle Rotor, GRA-S-15-16A

16 x 15 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 18
 Max. height for tube fit (mm) :
 120 for conical tube



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

6 loadings
 $\angle 90^\circ$



Aluminum 15ml Sleeve

GLB-15A-FA

Sleeve bore (Φ x L, mm) : 18 x 90
 Radius (mm) : 151.5
 Max. RPM : 4,000
 Max. RCF (g-force) : 2,700

Tube						
Tube capacity (ml)	3	4	5	10	15	15ml conical
Adaptor				None	None	None
Cat. No.	GAS-3(15)	GAS-4(15)	GAS-5(15)	-	-	-
Adaptor bore (Φ x 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



Round 15ml Bucket GLB-15-15

Bucket bore(Φ x L): 17 x 93.8
 Radius(mm): 158
 Max. RPM: 4,000
 Max. RCF(g-force): 2,826
 Max. height for tube fit(mm): 125

Tube		
Tube capacity (ml)	10	15

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

2 loadings
 $\angle 90^\circ$
 Area dimension (mm) : 88.5 x 130.3
 Max. height for microplate fit (mm) : 35



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

624R



GYROZEN 624R is a compact bench-top refrigerated centrifuge with versatility, convenience, stability and sophisticated design and leads to reliable experimental results. It can spin samples up to a capacity of four 100 ml at 4,200 rpm (3,059 x g) and six 50 ml conical at max. 6,000 rpm (3,960 x g). This model provides three kinds of fixed-angle rotors for micro tubes, 15 ml and 50 ml tubes as well as four swing-out rotors. The comprehensive range of rotors and accessories makes it possible for efficient and versatile performances. The sleek, ergonomic design, vivid display and intuitive control will create a new laboratory environment that is never seen anywhere else. You can choose the color of the control panel between onyx black or clean white. GYROZEN 624R is used in general laboratories and clinical applications including sample separations of cellular materials and blood, and ideal for appropriate experiments for temperature-sensitive samples.

► Applications

- Ideal for cellular and molecular biology work, clinical preparations, industrial applications, etc.
- General laboratory applications including sample separations of cellular materials, blood, urine, sperm, etc.
- Clinical applications including PRP, PRF and stem cell isolation

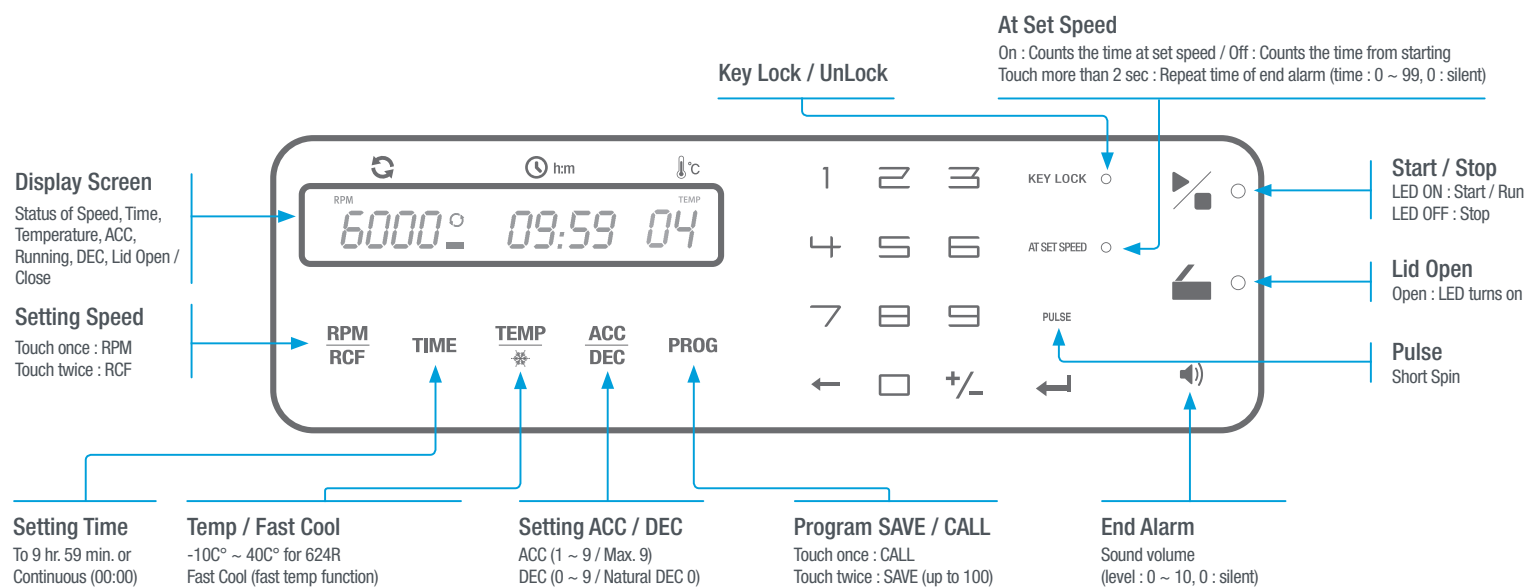
► Technical Specifications

Max. RPM/RCF	Fixed angle	6,000 / 3,960 xg	Parameters on display window	RPM (RCF), Oper Status, Lid Open/Close, Hr:Min, Temp, ACC, DEC
	Swing-out	4,800 / 3,888 xg		
Max. capacity	Fixed angle	6 x 50 ml, 24 x 15 ml	Display	White LCD
	Swing-out	4 x 100 ml, 32 vacutainer tube, 4 MTPs	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
			Motorized lid open & close	Yes
Time counting modes		Selectable, at set speed or from starting	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
			Power requirement (VA)	900
RPM/RCF conversion		Yes	Dimension (W x D x H, mm)	584 x 535 x 317
Noise level (dB)		~ 60	Weight without rotor (kg)	65
ACC/DEC		9/10 steps	CE mark	Yes
Program memory		100	Cat. No.	GZ-0624R-W (White display), GZ-0624R-B (Black display)

► Features

- For up to 6,000 rpm (3,960 xg) with 6 x 50 ml conical tubes and 4,800 rpm (3,888 xg) with 4 x 100 ml tubes
- Commonly used in the fractionation of blood samples and simple precipitation of biological samples
- 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.
- The control panel design can be selected according to user's preference. (The black or white control panel is optionally available.)
- 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.
- A large assortment of rotors, buckets and adaptors for microtubes and all sizes of tubes up to 100 ml

► Control Panel



Swing-out Rotor, GRS-SR-50-4

4 loadings
 $\angle 90^\circ$



Round 50 ml Bucket
GLB-50-50

Bucket bore(Φ x L, mm)
 : 30.5 x 91
 Radius(mm) : 150.9
 Max.RPM : 4,800
 Max.RCF(g-force) : 3,888
 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	-	



Conical 50 ml Bucket
GLB-c50-50

Bucket bore(Φ x L, mm)
 : 29.5 x 91.5
 Radius(mm) : 150.9
 Max.RPM : 4,800
 Max.RCF(g-force) : 3,888
 Max.height for tube fit(mm) : 125

Tube	
Tube capacity (ml)	50 ml conical



Round 15 ml Bucket
GLB-15-50

Bucket bore(Φ x L, mm)
 : 17 x 93
 Radius(mm) : 150.9
 Max.RPM : 4,800
 Max.RCF(g-force) : 3,888
 Max.height for tube fit(mm) : 125

Tube	
Tube capacity (ml)	15



Conical 15 ml Bucket
GLB-c15-50

Bucket bore(Φ x L, mm)
 : 17 x 93
 Radius(mm) : 150.9
 Max.RPM : 4,800
 Max.RCF(g-force) : 3,888
 Max.height for tube fit(mm) : 120

Tube	
Tube capacity (ml)	15 ml conical



Dual Round 15 ml Bucket
GLB-d15-50

Bucket bore(Φ x L, mm)
 : 17 x 91.5
 Radius(mm) : 150.9
 Max.RPM : 4,800
 Max.RCF(g-force) : 3,888
 Max.height for tube fit(mm) : 120

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



Dual Conical 15 ml Bucket
GLB-dc15-50

Bucket bore(Φ x L, mm)
 : 17 x 91.5
 Radius(mm) : 150.9
 Max.RPM : 4,800
 Max.RCF(g-force) : 3,888
 Max.height for tube fit(mm) : 120

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

Swing-out Rotor, GRS-SR-100-4

4 loadings
 $\angle 90^\circ$



Round 100 ml Bucket
with Cap

GLB-b100-100

Bucket bore (Φ x L, mm) : 47 x 99
 Radius (mm) : 155.1
 Max.RPM : 4,200
 Max.RCF(g-force) : 3,059
 Max.height for tube fit(mm)
 : 120(w/ cap) / 130(w/o cap)

* GLB-b100-100 includes cap. * (b100) adaptors work fine with cap but (100) adaptors not.

Tube										
Tube capacity (ml)	1.5~2.0	2.6~7	4~10	9~15	15 ml conical	15 ml conical	50 ml	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/4)	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 106.4	44.2 x 106.4



Round 50 ml Bucket
with Cap

GLB-b50-100

Bucket bore(Φ x L, mm)
30.5 x 97
Radius(mm) : 150.9
Max.RPM : 4,200
Max.RCF(g-force) : 2,976
Max.height for tube fit(mm)
: 115(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)	17.3 x 87		29.5 x 17.5	-



Dual Round 15 ml Bucket
with Cap

GLB-bd15-100

Bucket bore(Φ x L, mm) : 17 x 98
Radius(mm) : 150.9
Max.RPM : 4,200
Max.RCF(g-force) : 2,976
Max.height for tube fit(mm)
: 123(w/ cap) / 127(w/o cap)

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



Dual Conical 15 ml Bucket
with Cap

GLB-bdc15-100

Bucket bore(Φ x L, mm)
: 17 x 102.5
Radius(mm) : 155.1
Max.RPM : 4,200
Max.RCF(g-force) : 3,059
Max.height for tube fit(mm) : 120

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



Vacutainer 10 ml Bucket

GLB-10-8-100

Bucket bore(Φ x L, mm) : 16 x 89
Radius(mm) : 155.1
Max.RPM : 4,200
Max.RCF(g-force) : 3,059
Max.height for tube fit(mm) : 120

Tube			
Tube capacity (ml)	3	5	10
Bucket capacity (ea/4)	8/32	8/32	8/32
Adaptor			None
Cat No.	GAS-3(10)	GAS-5(10)	-
Adaptor bore (Φ x L, mm)	13 x 57	13 x 82	-
Radius (mm)	121	146	155.1
Max. RPM	4,200		
Max. RCF (g-force)	2,386	2,879	3,059



Dual Conical 50 ml Bucket

GLB-dc50-100

Bucket bore(Φ x L, mm) : 30 x 89
Radius(mm) : 155.1
Max.RPM : 4,200
Max.RCF(g-force) : 3,059
Max. height for tube fit(mm) : 125

Tube	
Tube capacity (ml)	50ml conical
Bucket capacity (ea/4)	2/8

Swing-Out Rotor,
GRS-SR-15-6

6 loadings
∠ 90°



Round 15ml Bucket
GLB-15-15
Bucket bore(Φ x L, mm) : 17 x 93.8
Radius(mm):158
Max.RPM:4,400
Max.RCF(g-force) : 3,420
Max.height for tube fit(mm) : 125

Tube		
Tube capacity (ml)	10	15

Swing-Out Rotor,
GRS-SR-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	DWP
Holder capacity (ea/2)	1/2	
Radius (mm)	111	
Max. RPM	4,000	
Max. RCF (g-force)	1,986	



Fixed Angle Rotor, GRF-SR-50-6

6 x 50 ml
 $\angle 25^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 120

Tube				
Tube capacity (ml)	10	15	15 ml conical	50
Adaptor				None
Cat. No.	GAS-15(50)		GAS-c15(50)	-
Adaptor bore ($\Phi \times L$, mm)	17 x 94		17 x 105	-
Radius (mm)	87.9	88.9	91	95
Max.RPM	6,000			
Max.RCF (g-force)	3,538	3,578	3,663	3,824



Fixed Angle Rotor, GRF-SR-c50-6

6 x 50 ml conical
 $\angle 25^\circ$
 Hole diameter (mm) : 29.5
 Max. height for tube fit (mm) : 125

Tube		
Tube capacity (ml)	15 ml conical	50 ml conical
Adaptor		None
Cat No.	GAS-c15(c50)	-
Adaptor bore ($\Phi \times L$, mm)	17 x 105	-
Radius (mm)	93.6	98.4
Max.RPM	6,000	
Max.RCF (g-force)	3,767	3,960



Aluminum 15 ml Sleeve **GLB-15A-FA**

Sleeve bore ($\Phi \times L$, mm) : 18 x 90
 Radius(mm) : 138/155
 Max. RPM : 4,000
 Max.RCF(g-force) : 2,469/2,773

Angle Rotor, **GRA-SR-15-24**

24 x 15 ml
 $\angle 45^\circ$
 Hole diameter (mm) : 18
 Max. height for tube fit (mm) : 125
 (120 for conical tube)

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 ($\Phi \times L$, mm)	13.5 x 61	13.5 x 65	13.5 x 85	-	-	-
Radius (mm)	116.3/132.3	117.7/133.7	136.8/152.8	137.5/154.5	138/155	133/149
Max.RPM	4,000					
Max.RCF (g-force)	2,080/2,367	2,105/2,463	2,447/2,733	2,460/2,764	2,469/2,773	2,379/2,665



Fixed Angle Rotor, **GRF-SR-m2.0-24**

24 x 1.5/2.0 ml
 $\angle 45^\circ$
 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 ($\Phi \times L$, mm)	6.5 x 23	8 x 31	-
Radius (mm)	67	73	84.3
Max.RPM	6,000		
Max.RCF (g-force)	2,697	2,938	3,393

Concentrators

HyperVAC™	94
HyperCOOL™	102
HyperVAP™	112



HyperVAC™

Centrifugal Vacuum Concentrator



HyperCOOL™

Freeze Dryer & Cooling Trap



HyperVAP™

Gas Purging Evaporation Concentrator

HyperVAC™

Centrifugal Vacuum Concentrator



HyperVAC is a centrifugal vacuum concentrator as general-purpose laboratory benchtop equipment. HyperVAC offers rapid, environmental friendly and efficient vacuum concentration or drying of samples like DNA/RNA, nucleotides, proteins and other liquid or wet samples with ease and reproducibility that maintain sample integrity. HyperVAC is ideal for routine work with your samples.

HyperVAC consists of two kinds of models depending on max. capacity - HyperVAC-LITE and HyperVAC-MAX. HyperVAC-LITE can accommodate from 48 x 2.0 ml & 76 x 0.5 ml microtubes to 6 x 50 ml tubes and microplates. HyperVAC-MAX can be used with 200 x 2.0 ml microtubes to 12 x 50 ml, microplates and deepwell plates. HyperVAC evaporates solvents at RT~80°C and low pressure without freezing. Easy to use automatic system includes timer, start/stop function, vacuum control, adjustable chamber temperature to 80°C, digital readout of vacuum and programming facility. Also, it has a modular design for easy upgrade. HyperVAC is used with a drip catcher and & an ice cube container unit, connectors including hoses and clips. The evaporation rate can be increased by employing ice cubes around the drip catcher. HyperVAC system also requires a diaphragm vacuum pump to generate 7 mbar (36 liter/minute), which is perfect for chemical solvent evaporation. Also, HyperVAC can be connected with HyperCOOL as a cold trap for more evaporation capacity.

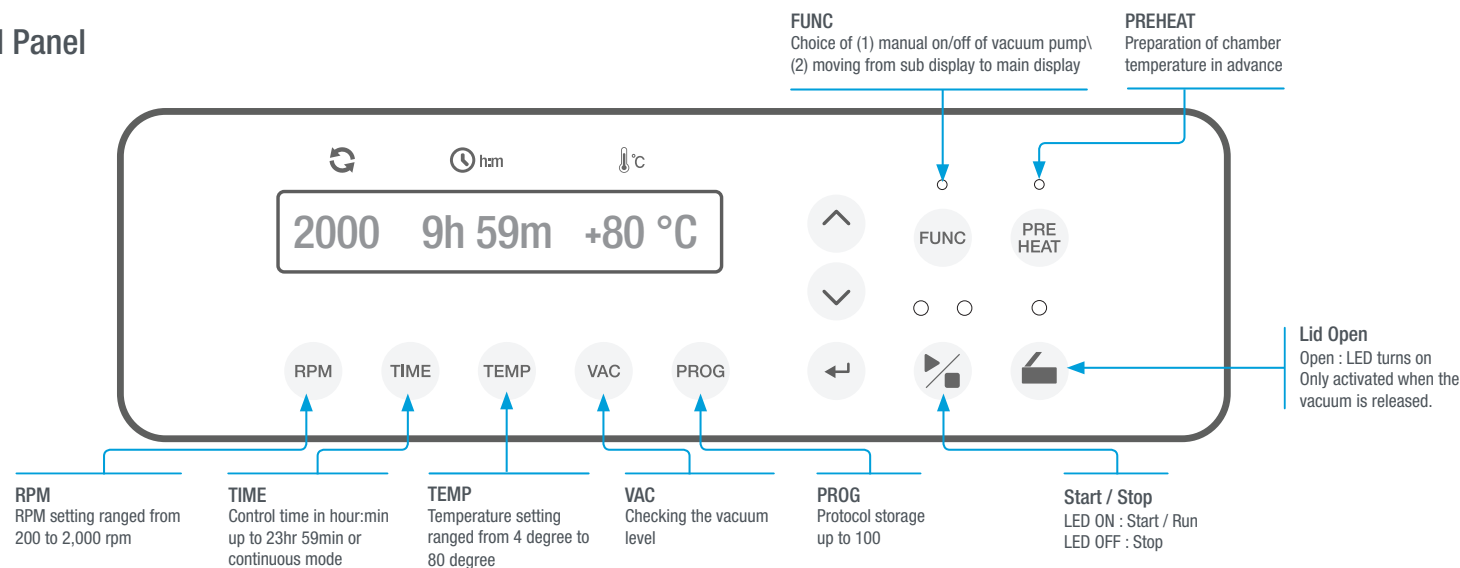
► Features

- Tabletop centrifugal concentrators with high space efficiency
- Compatible with a diaphragm pump (7 mbar) optimal for volatile chemical solvents
- Accommodates a wide range of sample containers: 0.5, 2.0, 15, 50-ml tubes and microplates
- Automatic control and digital readout of TIME, TEMP and VAC
- Efficient cold trapping by employing drip catcher kit with ice cold trap
- Effective concentration of nucleic acids or small volume of organic solvents

► Technical Specifications

Model Name		HyperVAC-LITE	HyperVAC-MAX
Max. RPM		2,000	
Max. capacity	Fixed angle	120 x 1.5 / 2.0 ml microtubes or 48 x 1.5 / 2.0 ml + 76 x 0.5 ml microtubes	200 x 1.5 / 2.0 ml microtubes
	Swing - out	2 loadings of MTP	4 loadings of MTP or DWP
Auto Start / Stop of Vacuum		Yes	
Chamber Heating Temperature Range		R.T ~ 80 °C	
Vacuum Pressure (mbar)		1 ~ 1,013	
Operating Time		< 23 hr 59 min or continuous	
		Default value: 0 h 0 m (continuous)	
Weight (kg)		22.5 (without Rotor)	37 (without Rotor)
Power Requirement (Centrifuge, VA)		350	700
Power supply(V/Hz)		230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)	
Centrifuge Dimension (W x D x H, mm)		375 x 445 x 252	475 x 560 x 350
Cat. No.		Hyper-VC2124 (Hyper-VC2124-110)	Hyper-VC2200 (Hyper-VC2200-110)

► Control Panel



► Applications

- Concentration for nucleic acids (DNA/RNA)
- Concentration for small and large volume of solvents

HyperVAC™

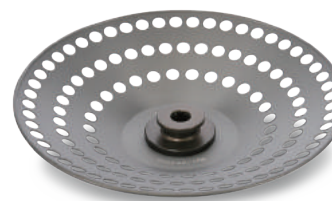
Centrifugal Vacuum Concentrator



Rotors & Sleeves for HyperVAC-LITE



Cat. No.	GRV-m0.5/2.0-124	
Tube/Plate Type	 	
	1.5/2.0 ml	0.5 ml
Max. tube capacity in mL	48 x 1.5/2.0 ml + 76 x 0.5 ml	
Hole diameter (mm)	11.1 (1.5/2.0 ml), 8 (0.5 ml)	



Cat. No.	GRV-m2.0-120	
Tube/Plate Type		
	1.5/2.0 ml	
Max. tube capacity in mL	120 x 1.5/2.0 ml	
Hole diameter (mm)	11.1	



Cat. No.	GRV-50-6	
Tube/Plate Type		
	50 ml	50 ml conical
Sleeve		
	GLV-50	GLV-c50
Max. tube capacity in mL	6 x 50 ml	6 x 50 ml conical
Hole diameter (mm)	30.4 x 101	30.4 x 101



Cat. No.	GRV-15-12	
Tube/Plate Type		
	15 ml	15 ml conical
Sleeve		
	GLV-15	
Max. tube capacity in mL	12 x 15 ml/15 ml conical	
Hole diameter (mm)	18 x 93	



Cat. No.	GRV-mw-2	
Tube/Plate Type		
	microplate	
Max. tube capacity in mL	2 loadings of microplate	
Hole diameter (mm)	130.3 x 88.5	

HyperVAC™

Centrifugal Vacuum Concentrator

Rotors & Sleeves for HyperVAC-MAX



Cat. No.	GRV-m2.0-200	
Tube/Plate Type		
	1.5/2.0 ml	
Max. tube capacity in mL	200 x 1.5/2.0 ml	
Hole diameter (mm)	11.1	



Cat. No.	GRV-50-12	
Tube/Plate Type		
	50 ml	50 ml conical
Sleeve		
	GLV-50	GLV-c50
Max. tube capacity in mL	12 x 50 ml	12 x 50 ml conical
Hole diameter (mm)	30.4 x 101	30.4 x 101



Cat. No.	GRV-mw-4	
Tube/Plate Type		
	MTP	DWP
Max. tube capacity in mL	4 loadings of MTP or DWP	
Hole diameter (mm)	86.3 x 128.3	



Cat. No.	GRV-15-48	
Tube/Plate Type		
	15 ml	15 ml conical
Sleeve		
	GLV-15	
Max. tube capacity in mL	48 x 15 ml/15 ml conical	
Hole diameter (mm)	18 x 93	

Drip Catcher, Pump, Table and Cooling Trap

Cat. No.	Description
GV-DC20a	Drip Catcher Kit a, Acrylic, ø20 cm, Height 16 cm incl. 500 ml Glass Bottle and Connections to Water Pump (a 50 cm Soft Hose/10 cm Vac Hose (ø12/25 mm) with 2 clamps to connect to HyperVAC centrifuge and a Y-Shape Soft Hose to Water Pump)
GV-DC20b	Drip Catcher Kit b, Acrylic, ø20 cm, Height 16 cm incl. 500 ml Glass Bottle and Connections to Diaphragm Pump (two 50 cm Soft Hose/10 cm Vac Hose (ø12/25 mm) with 2 clamps each to connect to HyperVAC centrifuge and Diaphragm Pump)
GVP-VE11	Water Pump, 18 L/min X 2, 0.0998 Mpa (998 mbar)
GVP-W2V20	High Vacuum Rotary Vane Pump, 0.4 kW (0.5 HP), 200 L/min, 1X10-3 torr (12 m³/h, 0.0013 mbar)
GVP-WOF150	Oil Mist Trap
GVCT-MA	Table A Type for HyperVAC-MAX with HyperCOOL Underneath and a Pump Back-sided
GVCT-MB	Table B Type for HyperVAC-MAX with a Pump Underneath
Hyper-HC3055	HyperCOOL -55 °C Cooling Trap 3 kg, Teflon Coated, w/ Digital Display and Time Control incl. a Vacuum Hose and Clamps (220 V, 50/60 Hz)
Hyper-HC3055-110	HyperCOOL -55 °C Cooling Trap 3 kg, Teflon Coated, w/ Digital Display and Time Control incl. a Vacuum Hose and Clamps (110 V, 50/60 Hz)
Hyper-HC3110	HyperCOOL -110 °C Cooling Trap 3 kg, Teflon Coated, w/ Digital Display and Time Control incl. a Vacuum Hose and Clamps (220 V, 50/60 Hz)
Hyper-HC3110-110	HyperCOOL -110 °C Cooling Trap 3 kg, Teflon Coated, w/ Digital Display and Time Control incl. a Vacuum Hose and Clamps (110 V, 50/60 Hz)
HC-CPP	HyperCOOL HC3055, HC3110 Trap Plate for Connection Vacuum Hose to Vacuum Concentrator
HC-CPP-A	HyperCOOL HC3055, HC3110 Trap Plate for Connection Vacuum Hose to Vacuum Concentrator with Table A (GVCT-MA)



GV-DC20a



GV-DC20b



GVP-VE11



GVP-W2V20



GVP-WOF150



GVCT-MA



GVCT-MB



Hyper-HC3055 / Hyper-HC3110

HyperVAC™

Centrifugal Vacuum Concentrator

HyperVAC Package Information



Cat. No.	Details
GZ-HVL-AWP	HyperVAC-LITE System Incl. a Drip Cather Kit a and a Water Pump (Hyper-VC2124 + GRV-m0.5/2.0-124 + GV-DC20a + GVP-VE11 Water Pump) Vacuum range: 998 mbar

Cat. No.	Details
GZ-HVL-BDP	HyperVAC-LITE System Incl. a Drip Cather Kit b (Hyper-VC2124 + GRV-m0.5/2.0-124 + GV-DC20b)

* Please use a diaphragm pump after purchasing locally.

Cat. No.	Details
GZ-HVM-BDP	HyperVAC-MAX System Incl. a Drip Cather Kit b (Hyper-VC2200 + GRV-m2.0-200 + GV-DC20b)

* Please use a diaphragm pump after purchasing locally.



Cat. No.	Details
GZ-HVM-HCA	HyperVAC-MAX System Incl. a HyperCOOL -55 °C/3 kg, a HC Trap Plate, a Vacuum Hose, Rotary Vane Pump, Oil Mist Trap, All Connections & a Table A (Hyper-VC2200 + GRV-m2.0-200 + Hyper-HC3055 + HC-CPP-A + HC-VH + GV-W2V20 + GVP-WOF150 + GVCT-MA) Vacuum range: 0.0013 mbar



Cat. No.	Details
GZ-HVM-HCB	HyperVAC-MAX System Incl. a HyperCOOL -110 °C/3 kg, a HC Trap Plate, a Vacuum Hose, Rotary Vane Pump, Oil Mist Trap, All Connections & a Table B (Hyper-VC2200 + GRV-m2.0-200 + Hyper-HC3110 + HC-CPP + HC-VH + GV-W2V20 + GVP-WOF150 + GVCT-MB) Vacuum range: 0.0013 mbar

HyperCOOL™

Freeze Dryer & Cooling Trap

HyperCOOL is a lab scale freeze dryer using the lyophilization phenomena. HyperCOOL is designed for safety, robustness and convenience for the successful freeze drying and cold trap. It is suitable for drying of aqueous products, various solvents and products with a low freezing point. HyperCOOL with stylish, modern and unique design will help you enjoy your daily laboratory work to the fullest!

Two models of 3 kg HyperCOOL, HC3055 and HC3110 can be selected depending on the ice condensing temperature, -55 °C and -110 °C. HyperCOOL empowers HyperVAC-LITE and HyperVAC-MAX to guarantee high-performance and capacity as a cooling trap as well as the freeze dryer. The digital screen indicated with actual temperature and operating time is simple and intuitive for user-friendly control. Also, AWB (Alarm-Wait-OK), keylock, vacuum, defrost, power indicators of the display provide useful information. HC3055, HC3110 basically has the condenser chamber with Teflon coating. It provides the chemical resistance against aggressive solvents and acids such as HCl, TFA, DMSO, etc. and ensures longevity, easy cleaning and decontamination.

HyperCOOL with 8 kg ice capacity, HC8080 has a very large size cold trap that it can be used for prefreezer and it does not need the exclusive prefreezer system. In addition, HC8080 includes a high vacuum rotary vane pump in the body case without necessarily purchasing separate pump. It has the intuitive and easy control as a dial type to turn on cooling and vacuum and adjust the time. LCD display shows the vacuum pressure, trap temperatures and the other processing parameters.



► Features

- HyperVAC-MAX empowered by HyperCOOL guarantees capacity and performance at higher level.
- Extended applications for concentrating wider range or larger volume of solvents
- HyperCOOL by itself, when equipped with manifolds or chambers, becomes a versatile freeze dryer.
- The compatible vacuum rotary vane pump generates vacuum down inside the chamber.
- Effective for evaporating organic solvents as well as concentrating dissolved nucleic acids
- Up to 12 external bottles can be accommodated by the manifolds of HyperCOOL.
- Automatic De-Vac and De-Ice functions installed

► Technical Specifications

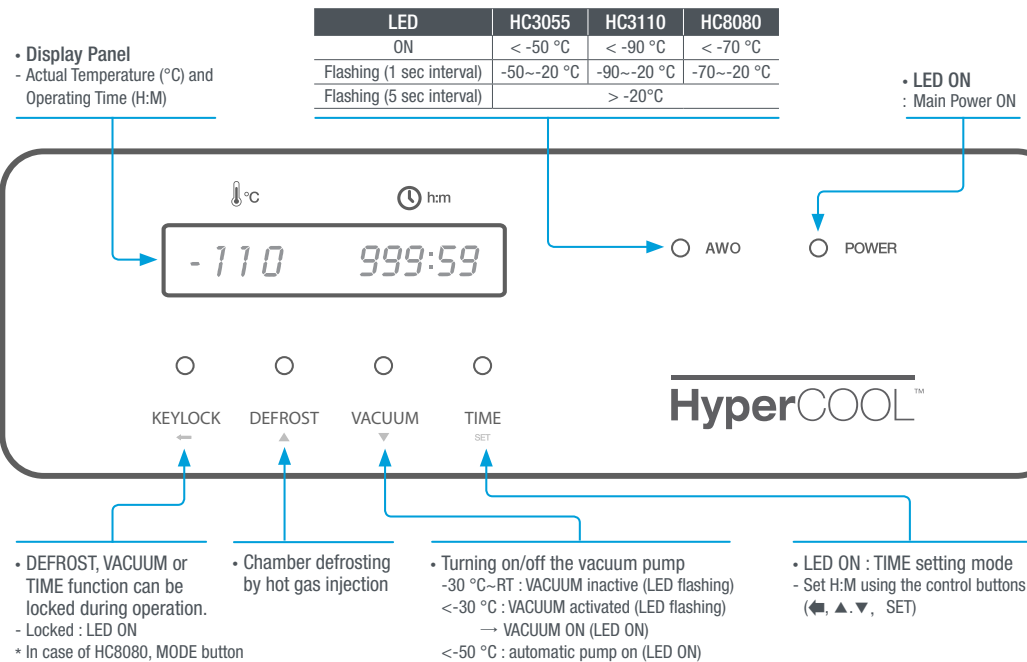
Model Name	HC3055	HC3110	HC8080
Ultimate Chamber Temp (at RT) (°C)	-55	-110	-80
Chamber Volume (L)	4		25
Trap (Chamber) Size (Ø x L)	165 x 202		305 x 355
ICE Condensing Capacity (kg)	3		8
ICE Condensing Performance (kg/day)	2.5		
Compressor	1/2 HP	1/2 HP x 2	1 HP x 2
Refrigerant	R507	R507/R1150	R507/R1150
Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)		
Power Requirement (Resting, VA)	642	819	1500
Dimension (W x D x H, mm)	400 x 660 x 570		710 x 610 x 960
Weight (kg)	58	72	186
Digital Readout	Temperature, Time		Temperature, Time, Vacuum Pressure
Function	KEYLOCK, DEFROST, VACUUM, TIME		MODE, DEFROST, VACUUM, TIME
Cat. No.	Hyper-HC3055 (Hyper-HC3055-110)	Hyper-HC3110 (Hyper-HC3110-110)	Hyper-HC8080 (Hyper-HC8080-110)

► Applications

- Study and QC of dried foods like dried fruits, meats, etc.
- Stock of bacteria, virus, fungi, etc.
- Seed preservation of plants or mushrooms
- Improved preservation of flowers and dry display study
- Pharmaceutical study and production
- Research and production of vaccine and antidote
- Tissue or cell preparation for EM analysis
- Medical research
- Archaeological finds like books, textiles, leather
- Restoration of wet documents

► Control Panel

[HC3055, HC3110, HC8080]



HyperCOOL™

Freeze Dryer & Cooling Trap



HyperCOOL Cover Plate



Cat. No.	HC-CPP
Details	HyperCOOL HC3055, HC3110 Trap Plate for Connection Vacuum Hose to Vacuum Concentrator



Cat. No.	HC-CPP-A
Details	HyperCOOL HC3055, HC3110 Trap Plate for Connection Vacuum Hose to Vacuum Concentrator with Table A (GVCT-MA)



Cat. No.	HC-CPB
Details	HyperCOOL HC3055, HC3110 Acrylic Base for Manifold or Chamber



Cat. No.	HC-CPB(8)
Details	HyperCOOL HC8080 Acrylic Base for Manifold or Chamber



Cat. No.	HC-CPP(8)
Details	HyperCOOL HC8080 Trap Plate for Connection Vacuum Hose to Vacuum Concentrator

Manifold



Cat. No.	HC-MFB-4V
Details	4-Valve Manifold Basic with four rubber valves on a stainless steel bar, 30 cm



Cat. No.	HC-MFB-6V
Details	6-Valve Manifold Basic with six rubber valves on a stainless steel bar, 30 cm



Cat. No.	HC-MFE-4V
Details	4-Valve Manifold Extension with four rubber valves on a stainless steel bar, 20 cm



Cat. No.	HC-MFE-6V
Details	6-Valve Manifold Extension with six rubber valves on a stainless steel bar, 20 cm



Cat. No.	HC-MFB-8V
Details	8-Valve Manifold Basic with 8 rubber valves on a stainless steel bar, 30 cm

Chamber and Rack



Cat. No.	HC-CH30P
Details	Acrylic Chamber Trunk and Plain Top, ø30 cm, height 40 cm



Cat. No.	HC-CH30-4V
Details	Acrylic Chamber Trunk and Top with 4 Rubber Valves, ø30 cm, height 40 cm



Cat. No.	HC-CR25
Details	Stainless Steel Rack with 3 Sets of SS Shelves and Trays, ø25cm (Trays can be inserted up to 5)
Cat. No.	HC-CR-TS
Details	A Set of a Tray and a Shelf



Cat. No.	HC-CH30-8V
Details	Acrylic Chamber Trunk and Top with 8 Rubber Valves, ø30 cm, height 40 cm

Flask and others

Cat. No.	Details
HC-GF40	Freeze Drying Glass Flask 40 ml with rubber lid and stainless steel connector
HC-GF80	Freeze Drying Glass Flask 80 ml with rubber lid and stainless steel connector
HC-GF120	Freeze Drying Glass Flask 120 ml with rubber lid and stainless steel connector
HC-GF150	Freeze Drying Glass Flask 150 ml with rubber lid and stainless steel connector
HC-GF300	Freeze Drying Glass Flask 300 ml with rubber lid and stainless steel connector
HC-GF600	Freeze Drying Glass Flask 600 ml with rubber lid and stainless steel connector
HC-GF900	Freeze Drying Glass Flask 900 ml with rubber lid and stainless steel connector
HC-GF1200	Freeze Drying Glass Flask 1200 ml with rubber lid and stainless steel connector
HC-GFT34	Rubber lid for 34 mm diameter Flask (Glass Flask 40 ~ 80 ml)
HC-GFT60	Rubber lid for 60 mm diameter Flask (Glass Flask 120 ~ 300 ml)
HC-GFT90	Rubber lid for 90 mm diameter Flask (Glass Flask 600 ~ 1200 ml)
V04CS12250-00	Stainless Steel connector
HC-AA	Acetal Adaptor for the connection Vacuum Hose to Rubber Valve
HC-VH	Vacuum Hose with 2 Clamps, 100 cm
GVP-W2V20	High Vacuum Rotary Vane Pump, 0.4 kW(0.5 HP), 200 L/min, 1X10-3 torr
GVP-WOF150	Oil Mist Trap

HyperCOOL™

Freeze Dryer & Cooling Trap

HyperCOOL Package Information



Cat. No.	Details
GZ-HC3055-M4B	Manifold Type Freeze Drying System -55 °C with 4 Valves Basic incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3055 + HC-CPB + HC-MFB-4V + HC-VH + GVP-W2V20 + GVP-WOF150)
GZ-HC3110-M4B	Manifold Type Freeze Drying System -110 °C with 4 Valves Basic incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3110 + HC-CPB + HC-MFB-4V + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
GZ-HC3110-CHR	Chamber Type Freeze Drying System -110 °C with 3 Shelves Rack incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3110 + HC-CPB + HC-CH30P + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
GZ-HC3110-CH4VR	Multi-Type Freeze Drying System -110 °C with 3 Shelves Rack & 4 Valves Chamber incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3110 + HC-CPB + HC-CH30-4V + HC-CR25 + HC-VH + GVP-W2V20 + GVP-WOF150)



Cat. No.	Details
GZ-HC3110-CH8VR	Multi-Type Freeze Drying System -110 °C with 3 Shelves Rack & 8 Valves Chamber incl. a Rotary Vane Pump, Oil Mist Trap & Connections (Hyper-HC3110 + HC-CPB + HC-CH30-8V + HC-CR25 + HC-VH + GVP-W2V20 + GVP- WOF150)



Cat. No.	Details
GZ-MHC3110-M4EC	Multi-Purpose, Vacuum Concentration and Freeze Drying System -110 °C with 8 Valves Manifold incl. a Rotary Vane Pump, Oil Mist Trap, Connections & a Table B (Hyper-VC2200 + GVCT-MB + Hyper- HC3110 + HC-CPB + HC-MFB-4V + HC- MFE-4V + HC-VH + GVP-W2V20 + GVP- WOF150)



Cat. No.	Details
GZ-MHC3110-CH8VRC	Multi-Purpose, Vacuum Concentration and Freeze Drying System -110 °C with 3 Shelves Rack & 8 Valves Chamber incl. a Rotary Vane Pump, Oil Mist Trap, Connections & a Table B (Hyper-VC2200 + GVCT-MB + Hyper- HC3110 + HC-CPB + HC-CH30-8V + HC- CR25 + HC-VH + GVP-W2V20 + GVP- WOF150)

HyperCOOL™

Freeze Dryer & Cooling Trap

HyperCOOL Package Information



Cat. No.	Details
GZ-HC8080-M4B	Manifold Type Freeze Drying System -80 °C with 4 Valves Basic (Hyper-HC8080 + HC-CPB(8) + HC-MFB-4V)



Cat. No.	Details
GZ-HC8080-M6B	Manifold Type Freeze Drying System -80 °C with 6 Valves Basic (Hyper-HC8080 + HC-CPB(8) + HC-MFB-6V)



Cat. No.	Details
GZ-HC8080-M8B	Manifold Type Freeze Drying System -80 °C with 8 Valves Basic (Hyper-HC8080 + HC-CPM(8) + HC-MFB-8V)



Cat. No.	Details
GZ-HC8080-CHR	Chamber Type Freeze Drying System -80 °C with 3 Shelves Rack (Hyper-HC8080 + HC-CPB(8) + HC-CH30P + HC-CR25)



Cat. No.	Details
GZ-HC8080-CH4VR	Multi-Type Freeze Drying System -80 °C with 3 Shelves Rack & 4 Valves Chamber (Hyper-HC8080 + HC-CPB(8) + HC-CH30-4V + HC-CR25)



Cat. No.	Details
GZ-HC8080-CH8VR	Multi-Type Freeze Drying System -80 °C with 3 Shelves Rack & 8 Valves Chamber (Hyper-HC8080 + HC-CPB(8) + HC-CH30-8V + HC-CR25)

HyperVAP™

Gas Purging Evaporation Concentrator



HyperVAP is an automated evaporative concentrator that efficiently evaporates organic solvents by injecting inert gas into a sample under constant temperature conditions. HyperVAP, HV-300, provides ideal sample concentration that meets both efficiency and convenience based on semi-helical gas flow. Inert gas is incorporated through the nozzles inside the lid and creates semi-helical gas flow in the sample tubes to maximize the surface area for efficient vaporization. Evaporated vapor is evacuated by a fan on the back of instrument. To speed up evaporation, hot temperature can be applied from the water bath where the sample tubes are immersed into. The initial gas (air) flow can be controlled separately to avoid abrupt bumping of samples and the time setting of four nozzle channels can be managed individually to afford simultaneous operation of different amount or diverse solvent samples. HV-300 accommodates max. 32 samples by changing the nozzles and tube racks properly depending on the volume of the samples. The max. sample volume 300 ml can be concentrated in HV-300. Also, the nozzle and tube rack can be customized according to various tube size customer uses. Not only the recovery rate and time saving but you can also enjoy the minimum hands-on time and convenience of clear visibility and monitor lights.

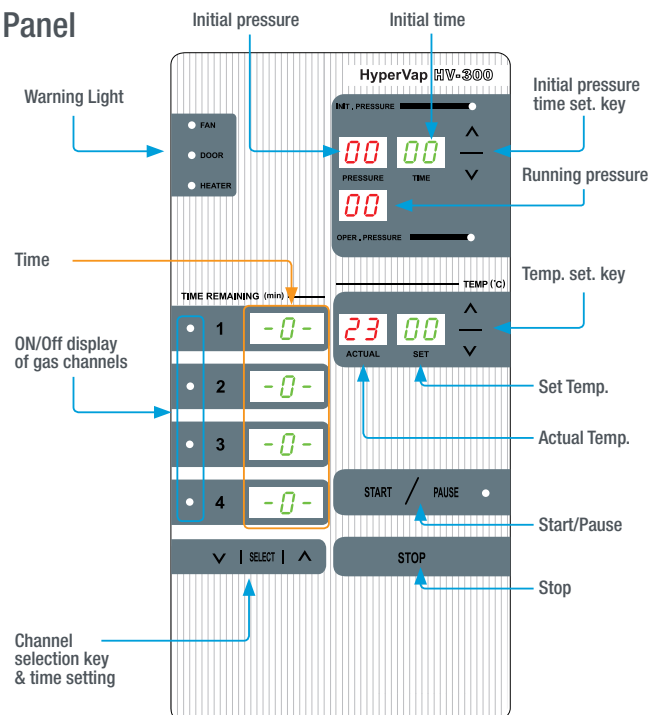
► Features

- Accelerated evaporation performance by gas purging mechanism
- Automated, programmable and reproducible
- Proprietary semi-helical gas flow mechanism to achieve the highest evaporation rate
- Diverse dimensions of nozzles and tube racks can be tailored upon customer needs
- Four independent timer settings for different solvents
- Dual-step control of gas pressure and time to prevent “bumping” of the sample on startup
- Differentiated monitoring functions: 3-side transparent glass panels, blue backlight (on/off switchable) and traffic lights
- Optimized for evaporating organic solvents including sample preparations for chromatography
- Safety features: tempered glass panels, automatic gas shutoff function, traffic lights (fan, door, heater)

► Technical Specifications

Model Name		HyperVap™ HV-300
Sample Capacity	Number of Samples	6 ~ 32
	Sample Volume (ml)	5 ~ 300 ml
Gas		Compressed air, Nitrogen, etc.
Pressure	Operating Gas Pressure (psi)	Max 50 psi
	Pressure Control	Automated dual-step control (initial & running pressure)
Max Time for Initial Pressure		~ 99 min
Max Time Control		~ 999 min (4 independent channels)
Individual Time Setting for Each Channel		Yes
Light On/Off		Yes
Water Bath Temperature		~ 99 °C
Forced Vapor Evacuation		Yes (by fan)
Power supply		230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
Power requirement (VA)		800
Dimension		590 x 340 x 320 (W x D x H, mm)
Weight		26.5 kg
Cat. No.		Hyper-HV300 (Hyper-HV300-110)

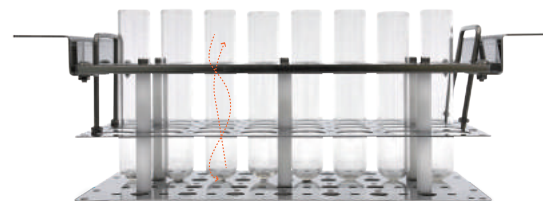
► Control Panel



► Application

- Evaporation of solvents after solid phase extraction clean-up for;
 - Pharmaceutical biotech compounds
 - Clinical samples
 - Environmental samples
 - Forensic and crime samples
 - Drugs of abuse samples
 - Food and beverage analysis
 - Agrochemical samples

Maximizing Efficiency



Proprietary semi-helical gas flow mechanism to achieve the highest evaporation rate.

HyperVAP™

Gas Purging Evaporation Concentrator



Rubber-Grip

The rubber-grip can be installed in tube rack to prevent movements of the tube samples during evaporation.

Tube Racks & Nozzles

980101	Tube Rack for 24 mm x 120 mm tubes (32 positions)
980102	Tube Rack for 15 mm x 70 mm tubes (32 positions)
980103	Tube Rack for 30 mm x 120 mm tubes (18 positions)
980105	Tube Rack for 38 mm x 140 mm tubes (15 Positions)
980109	Tube Rack for 16 mm x 100 mm tubes (32 Positions)
980110	Tube Rack for 72 mm x 140 mm tubes (6 Positions)
98010S	Customized Tube Rack
960201	Nozzle Assembly, 4 x 8 (32 positions)
960202	Nozzle Assembly, 3 x 6 (18 positions)
960205	Nozzle Assembly, 3 x 5 (15 position)
960206	Nozzle Assembly, 2 x 3 (6 position)
96020S	Customized Nozzles Assembly
V03VA08120-00	Nozzle cap

GYROZEN[®]