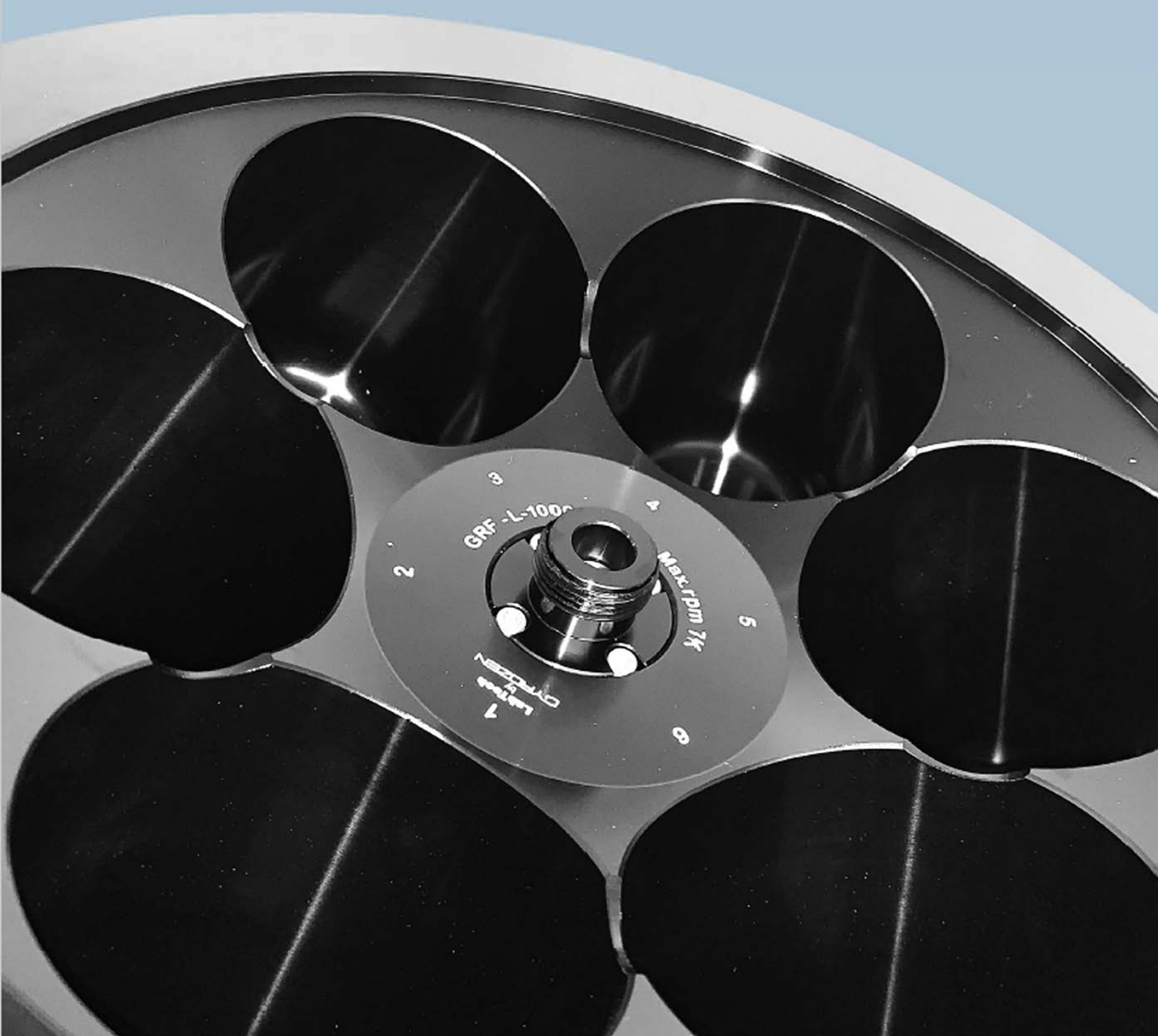


# CENTRIFUGE SOLUTION



**LabTech**

[WWW.LABTECHSRL.COM](http://WWW.LABTECHSRL.COM)



# ABOUT US

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LabTech is a leading manufacturing company with skill and passion devoted to provide advanced laboratory solutions to the analytical community. We are located in Sorisole, northern Italy, with facilities in USA and China. Incorporated with global branches, LabTech is organized into R&D, production, marketing & sales and customer support. Major LabTech products include organic/inorganic sample preparation systems, laboratory cooling/heating/temperature control equipments, analytical instruments, gas generators and laboratory centrifuges. With knowledgeable scientists and experienced engineers, our R&D team has developed and released a series of new lab equipments and instruments dedicated to the modern analytical laboratories. With all of these accomplishments and our endless research and development efforts, we are proud to be your professional partner.

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## QUALITY OF THE PRODUCTS

We are one of the few centrifuge companies in the world that still fabricates all of its own rotors in-house, and this is how we can assure the same high quality result every time.

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## PRODUCTS WITH SOUL

All centrifuge products are hand-made and assembled with passion and pride at the Gimpo facility, where the rotors are being cut, and the motors are being hand-wired.

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# KEY POINTS FOR USER'S SATISFACTION

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## STABLE QUALITY



- . Manufactured and tested to IEC standards
- . Steady and soft deceleration with dynamic brake technology
- . Anti-vibration and air-cooling system to minimize noise and heat dissipation
- . Eco-friendly Compressor-off function to minimize unnecessary cooling and frosting when lid is open
- . Fast cooling function allowing a temperature drop to 4°C within 5 minutes for quick start of cooled samples
- . Fine control of time counting by a selection of "At Set Speed" or "From Starting"
- . CE IVD-certified centrifuge versions for medical purpose

## SAFETY AND ROBUSTNESS



- . Sturdy structured, two to three layered lid for noise reduction and safe operation
- . Lid drop protection for easiness and safety for loading or unloading sample
- . Emergency lid-lock release for power blackout or sudden stoppage
- . Key lock function to prevent unintentional parameter modification during operation
- . Automatic rotor detection and warning for imbalance, excess speed and over-heating
- . Autoclavable and corrosion-free rotors
- . Imbalance detection and counting of imbalance error

## EASY CUSTOMIZATION



- . In house customization upon specific requirement for rotors, sample containers and adaptors
  - . High flexibility of structural & functional modifications
-

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## CONVENIENCE IN OPERATION



- . Windows CE based 7" LCD Touch Screen and simultaneous display of all parameters
- . Intuitive control interface with numeric input buttons displaying graphic pictograms for the setting and editing of running conditions
- . Reversible parameters during operation
- . Program memory up to 100 (or 10) programs
- . Time control functions of pulse for quick spin
- . Automatic RPM/RCF conversion
- . "Easy-Lock" lid allowing easy and convenient lid opening and closure (Micro rotors)
- . Automatic lid release and vivid end alarm at spinning completion
- . Easy observation of actual rotation through the viewing window on the lid
- . Large assortment of rotors, buckets and adaptors for diverse applications
- . Floor standing centrifuges equipped with 4 casters allowing easy movement and user's convenience
- . Multipurpose centrifuge with high capacity buckets up to 1,000mL

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## CERTIFICATE AND REGISTRATIONS



- . Accredited with ISO 9001, ISO 13485, and KGMP
  - . Comply with CE conformity
  - . Approved as Class IIa medical devices (IVD)
-

# NEW PRODUCTS



## 1848R Table-top High-speed Centrifuge

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1848R is the fastest refrigerated micro-centrifuge and one of its kind to hold 50mL conical tubes. With nine fixed angle rotors and two wind-shield swing-out rotors, 1848R can hold a various type and size of tubes for molecular and cellular biology works. Sample safety is assured by tightly sealed rotors with two V-shape rubber rings preventing any leakage. 1848R is a very quiet and efficient tool thanks to its adapted inverter compressor.

p.41

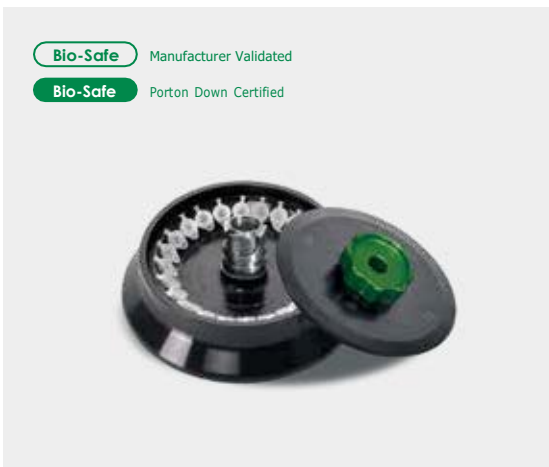


## mini 6 / mini 6 RC Microcentrifuge

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The mini 6 table-top centrifuge runs up to 6,500 rpm with fast acceleration and deceleration, 4 seconds and 2 seconds respectively. It starts to spin when the lid is closed and stops when the lid is open. Simple action of "Lid Open Button" makes its operation much easier. The magnetic sensor, located between the lid and the body, recognizes the status of the lid therefore keeping a safe operation.

p.28



## Bio-safe Easy Lock Rotor for Micro centrifuges

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The bio-safe easy lock rotor is a fully enclosed rotor equipped with two v-rings and one o-ring, which have the ability to prevent any leakage of internal liquids or gases. This rotor has been certified by the Public Health England Porton Down.

The micro centrifuge rotors GREB-m2.0-24 & GREB-M-m2.0-24 together with buckets GLBB-b100-100 & GLBB-bdc15-100 for low speed and GLBB-b100-100, GLBB-bdc15-100, GLBB-750-750 for multi-purpose centrifuges have all been certified by the Public Health England Porton Down.

# CONTENTS

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## Centrifuge

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416	112
624R	124

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# Centrifuge



# Product Selection Guide by Max. Speed & Sample Container

	Micro					Table-top, High-speed	
	mini 6 / mini 6 RC p. 30	mini p. 32	1536 p. 35	1730R p. 38	1848R p. 43	1248 p. 52	1248R p. 52
Max. RPM / Fixed angle	6,500 rpm	13,500 rpm	15,000 rpm	17,000 rpm	18,000 rpm	12,000 rpm	12,000 rpm
Max. RPM / Swing-out	-	-	-	13,000 rpm	13,000 rpm	5,000 rpm	5,000 rpm
Max. RCF / Fixed angle	2,234 xg	12,300 xg	21,583 xg	27,237 xg	30,536 xg	16,582 xg	16,582 xg
Max. RCF / Swing-out	-	-	-	16,343 xg	16,438 xg	5,394 xg	5,394 xg
Max. Capacity / Fixed angle	6 x 1.5/2.0 mL 2 PCR strips	12 x 1.5/2.0 mL 4 PCR strips	36 x 1.5/2.0 mL 10 x 5.0 mL 4 PCR strips	36 x 1.5/2.0 mL 12 x 5.0 mL 8 PCR strips	8 x c50 mL 20 x 5.0 mL 48 x 2.0 mL	6 x 85 mL, 8 x c50 mL, 30 x 1.5/2.0 mL	6 x 85 mL, 8 x c50 mL, 30 x 1.5/2.0 mL
Max. Capacity / Swing-out	-	-	-	4 x 4 x 1.5/2.0 mL	6 x 4 x 2.0 mL 2 x 2 MTPs	4 x 250 mL, 6 x 2 x c50 mL, 6 x 8 x 15 mL, 4 x 4 MTPs	4 x 250 mL, 6 x 2 x c50 mL, 6 x 8 x 15 mL, 4 x 4 MTPs
Rotors Available*	2 (F)	4 (F)	4 (F)	6 (F) / 2 (S)	7 (F) / 2 (S)	7 (F) / 3 (S)	8 (F) / 3 (S)
Temperature Control Range(°C)		-	-	-20°C to 40°C	-12°C to 40°C	-	-20°C to 40°C
Power Requirement(VA)	110 VA	110 VA	450 VA	2KVA	2KVA	900 VA	2.5 kVA
Dimension (W x D x H, mm)	150 x 150 x 90	208 x 245 x 145	240 x 378 x 240	310 x 620 x 290	380 x 654 x 312	475 x 561 x 330	655 x 620 x 357
Net Weight	650 g	4.4 kg	11.9 kg	43 kg	53.5 kg	40 kg	78 kg
Cat. No.	AC-mini 6	mini(GZ-1312)	GZ-1536	GZ-1730R	GZ-1848R	GZ-1248	GZ-1248R

Micro Tube	PCR strip (8-tube)	F	F	F	F	F	F	F
	1.5/2.0 mL	F	F	F	F / S	F / S	F / S	F / S
	Micro filter tube	-	-	F	F	F	-	-
	1.8 mL cryotube	-	F	-	-	-	-	-
	2.0 mL screw cap	F	F	F	F / S	F / S	F / S	F / S
	5.0 mL	-	-	F	F	F	F / S	F / S
Tube	2 ~ 4 mL (VT)	-	-	-	-	-	F / S	F / S
	4 ~ 7 mL (VT)	-	-	-	-	-	F / S	F / S
	8 ~ 10 mL (VT)	-	-	-	-	-	F / S	F / S
	10 mL	-	-	-	-	-	-	-
	14 mL	-	-	-	-	F	F / S	F / S
	15 mL	-	-	-	-	-	F / S	F / S
	15 mL conical	-	-	-	-	F	F / S	F / S
	15 mL glass / opentop tube	-	-	-	-	-	S	S
	25 mL conical (CAP)	-	-	-	-	F	F / S	F / S
	25 mL conical (snap CAP)	-	-	-	-	F	F / S	F / S
	30 mL	-	-	-	-	F	F / S	F / S
	50 mL	-	-	-	-	F	F / S	F / S
	50 mL conical	-	-	-	-	F	F / S	F / S
	50 mL skirted conical	-	-	-	-	F	S	S
	85 mL	-	-	-	-	-	F / S	F / S
	100 mL	-	-	-	-	-	S	S
Bottle	250 mL	-	-	-	-	-	S	S
	250 mL conical	-	-	-	-	-	S	S
	500 mL	-	-	-	-	-	-	-
	500 mL conical	-	-	-	-	-	-	-
	750 mL	-	-	-	-	-	-	-
	1,000 mL	-	-	-	-	-	-	-
Plate	PCR plate / MTP	-	-	-	-	S	S	S
	Deep-well plate	-	-	-	-	-	S	S
	Filter set plate	-	-	-	-	-	-	-
Syringe	10/20mL	-	-	-	-	-	S	S
	60mL	-	-	-	-	-	S	S

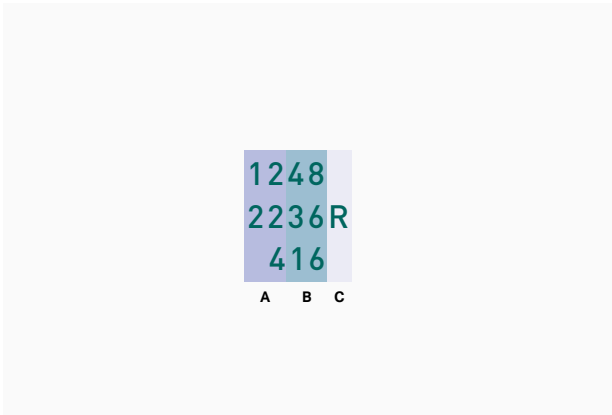
Table-top, High-speed			Floor Standing, High-speed			Low-speed		
1580 p. 52	1580R p. 52	1696R p. 71	1236R p. 96	1736R p. 96	2236R p. 96	406 p. 116	416 p. 118	624R p. 129
15,000 rpm	15,000 rpm	16,000 rpm	12,000 rpm	17,000 rpm	22,000 rpm	4,000 rpm	4,000 rpm	6,000 rpm
5,000 rpm	5,000 rpm	5,000 rpm	5,000 rpm	5,000 rpm	5,000 rpm	-	4,000 rpm	4,800 rpm
24,249 xg	25,910 xg	27,590 xg	16,582 xg	32,310 xg	54,111 xg	2,075 xg	2,700 xg	3,960 xg
5,394 xg	5,394 xg	5,394 xg	5,394 xg	5,394 xg	5,394 xg	-	2,826 xg	3,888 xg
6 x 85 mL, 8 x c50 mL, 30 x 1.5/2.0 mL	6 x (250 & 15) mL, 8 x c50 mL, 30 x 1.5/2.0 mL	6 x 250 & 15 mL, 8 x c50 mL, 20 x 5.0 mL, 48 x 1.5/2.0 mL	6 x 85 mL, 8 x c50 mL, 30 x 1.5/2.0 mL	6 x 500 mL, 8 x c50 mL, 30 x 1.5/2.0 mL	6 x 1,000 mL, 8 x c50 mL, 30 x 1.5/2.0 mL	12 x 15 mL	10 x 50/c50 mL 16 x 15 mL	10 x 50/c50 mL, 24 x 2.0 mL
4 x 750 mL, 4 x 5 x c50 mL, 4 x 20 x 15 mL, 4 x 4 MTPs	4 x 750 mL, 4 x 5 x c50 mL, 4 x 20 x 15 mL, 4 x 4 MTPs	4 x 1,000 mL, 4 x 750 mL, 6 x 2 x c50 mL, 6 x 8 x 15 mL, 4 x 4 MTPs	4 x 250 mL, 48 x 15 mL, 16 MTPs	4 x 250 mL, 4 x 3 x c50 mL, 4 x 12 x 15 mL, 4 x 4 MTPs	4 x 250 mL, 4 x 3 x c50 mL, 4 x 12 x 15 mL, 4 x 4 MTPs	-	4 x 100 mL, 32 vacutainer tubes, 2 x 2 MTPs	4 x 100 mL, 32 vacutainer tubes, 2 x 2 MTPs
7(F)/5(S)	9(F)/5(S)	10(F)/6(S)	8(F)/3(S)	10(F)/2(S)	12(F)/2(S)	2(F)	3(F)/4(S)	6(F)/4(S)
-	-20°C to 40°C	-11°C to 40°C	-20°C to 40°C	-20°C to 40°C	-20°C to 40°C	-	-	-10°C to 40°C
1.5 kVA	2.5 kVA	2 kVA	2.5 kVA	2.5 kVA	4 kVA	140 VA	340 VA	900 VA
540 x 650 x 380	770 x 650 x 390	775 x 695 x 395	473 x 620 x 830	473 x 620 x 830	824 x 634 x 1,049	296 x 412 x 206	375 x 480 x 260	584 x 535 x 317
57 kg	93 kg	116 kg	110 kg	110 kg	240 kg	17.5 kg	23 kg	65 kg
GZ-1580	GZ-1580R	GZ-1696R	GZ-1236R	GZ-1730R	GZ-2236R	GZ-0406	GZ-0416	GZ-624R

F	F	F	F	F	F	-	-	-
F/S	F/S	F/S	F/S	F/S	F/S	-	S	F/S
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
F/S	F/S	F/S	F/S	F/S	F/S	-	S	F/S
F/S	F/S	F/S	F/S	F/S	F/S	F	F/S	F/S
F/S	F/S	S	F/S	S	S	F	F/S	F/S
F/S	F/S	S	F/S	S	S	F	F/S	F/S
F/S	F/S	S	F/S	S	S	F	F/S	F/S
-	-	-	-	-	-	-	-	-
F/S	F/S	S	F/S	S	S	F	F/S	F/S
F/S	F/S	F/S	F/S	F/S	F/S	F	F/S	F/S
F/S	F/S	F/S	F/S	F/S	F/S	F	F/S	F/S
S	S	S	S	-	-	-	S	S
F/S	F/S	F/S	F/S	F/S	F/S	-	F/S	F/S
F/S	F/S	F/S	F/S	F/S	F/S	-	F/S	F/S
F/S	F/S	F/S	F/S	F/S	F/S	-	F/S	F/S
F/S	F/S	S	F/S	F/S	F/S	-	F/S	F/S
F/S	F/S	F/S	F/S	F/S	F/S	-	F/S	F/S
S	S	S	F/S	S	S	-	F/S	F/S
F/S	F/S	F/S	F/S	F/S	F/S	-	S	S
S	S	S	S	S	S	-	S	S
S	F/S	F/S	F/S	F/S	F/S	-	-	-
S	S	S	S	S	S	-	-	-
S	S	S	-	F	F	-	-	-
S	S	S	-	-	-	-	-	-
S	S	S	-	-	-	-	-	-
-	-	S	-	-	F	-	-	-
S	S	S	S	S	S	-	S	S
S	S	S	S	S	S	-	-	-
-	-	-	-	-	-	-	-	-
S	S	-	S	-	-	-	-	-
S	S	-	S	-	-	-	-	-

# Catalog Numbering Rule of Centrifuge and Accessories

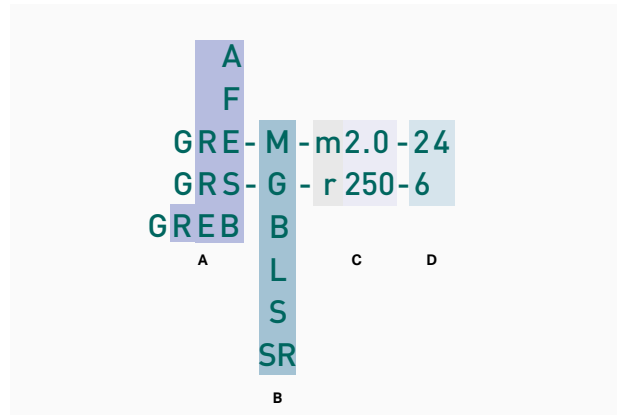
No symbol	round type
r	rectangular type
c	conical type
d	dual hole type

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



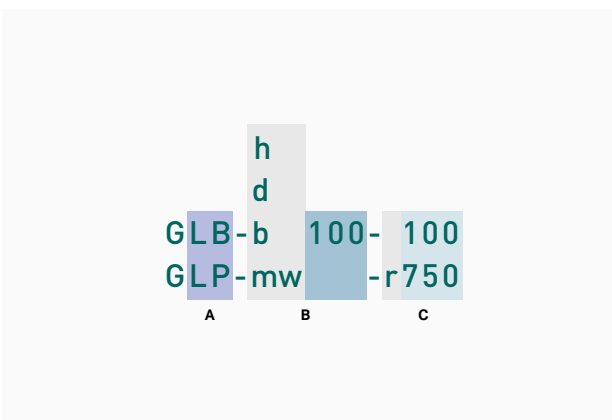
Catalog Numbering of Main Body

A	Max. Speed (x 1,000 rpm)
B	Max. Capacity (total # of tubes for max. load)
C	R for Refrigerated Model



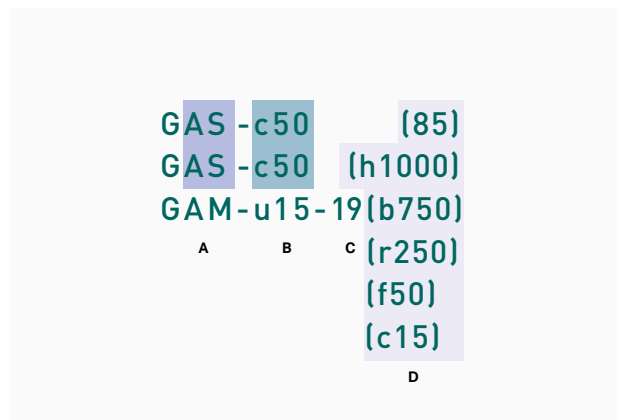
Catalog Numbering of Rotors

A	F/A : Fixed Angle, S : Swing-Out, E : Easy Lock, B : Bio-Safe
B	Family Name of Rotors b/w Different Models M : 1730R    G : 1248/1248R/1236R/1580/1580R    S : 416 B : 1696R    L : 1736R/2236R    SR : 624R
C	Type and Capacity of Individual Rotor Hole or Bucket
D	Max. Capacity (total # of tubes for max. load)



Catalog Numbering of Buckets

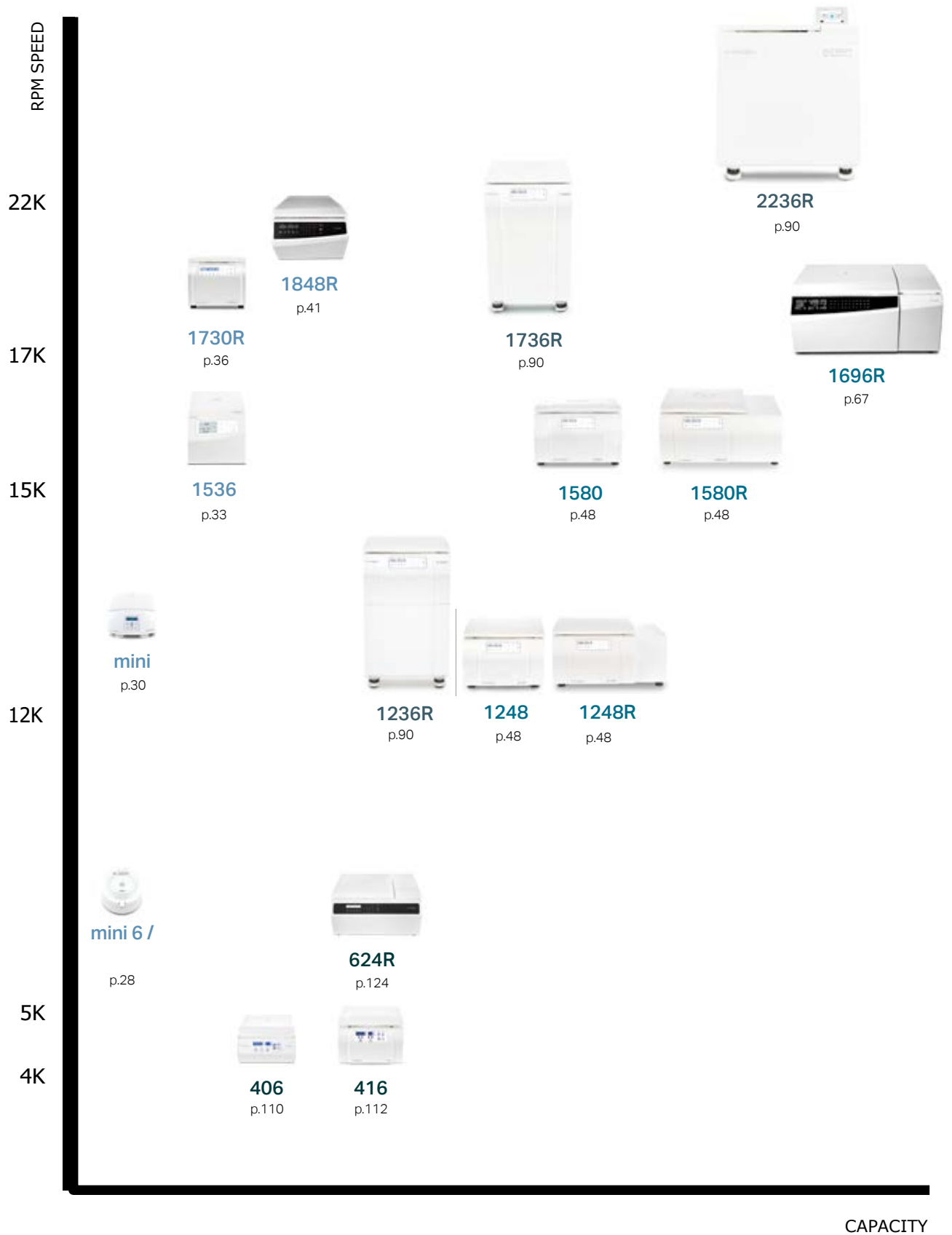
A	Loaded Bucket or Plate
B	Bucket Type and Capacity
C	Type and Capacity of a Single Wing of a Matching Rotor



Catalog Numbering of Adaptors & Multi-Tube Racks

A	Adaptor for Single-Tube or Multi-Tube
B	Type and Capacity of Tube Hole
C	Max. Capacity (total # of tubes for max. load)
D	Type and Capacity of a Single Wing of a Matching Rotor




# Product Range








# Rotor Selection Guide






- Bio-Safe Manufacturer Validated
- Bio-Safe Porton Down Certified
- Adaptors available for smaller tubes










## Micro











<b>mini 6 / mini 6 RC</b> p.28 	RotorCat. No.	GRA-m2.0-6	GRA-s0.2-16
	Max. Capacity	6 x 2.0 mL	16 x 0.2 mL
	Product		
	Max. RPM/RCF	6,500/2,234	6,500/1,850
	Hole Diameter(mm)	11.1	6.5
Max. Height for Tube fit(mm)	39	10	

- The fixed angle rotors are supplied with rotor lid (exc. 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.

<b>mini</b> p.30 	RotorCat. No.	GRA-s0.2-32	GRF-m1.8-10	GRF-m2.0-12b	GRF-m2.0-12
	Max. Capacity	32 x 0.2 mL	10 x 1.8 mL cryotube	12 x 2.0 mL	12 x 2.0 mL
	Product				
	Max. RPM/RCF	6,000/ Inner 1,554 Outer 1,850	13,500/12,300	13,500/12,300	13,500/12,300
	Hole Diameter(mm)	6.5	12.8	11.1	11.1
Max. Height for Tube fit(mm)	10	50	50	50	




<b>1536</b> p.33 	RotorCat. No.	GREB-s0.2-32	GREB-m2.0-24	GRE-m2.0-36	GRE-m5.0-10
	Max. Capacity	32 x 0.2 mL	24 x 2.0 mL	36 x 2.0 mL	10 x 5.0 mL
	Product				
	Max. RPM/RCF	15,000/14,187	15,000/21,206	15,000/ inner 17,835 outer 21,206	15,000/21,583
	Hole Diameter(mm)	6.7	11.1	11.1	17
Max. Height for Tube fit(mm)	25	52	52	68	






















<b>1730R</b> p.36 	RotorCat. No.	GRE-M-s0.2-64	GRE-M-m2.0-18	GREB-M-m2.0-24	GREB-M-m2.0-30	GRE-M-m2.0-36	GRE-M-m5.0-12	GRD-M-m2.0-8	GRD-M-m2.0-16
	Max. Capacity	64 x 0.2 mL	18 x 2.0 mL	24 x 2.0 mL	30 x 2.0 mL	36 x 2.0 mL	12 x 5.0 mL	8 x 2.0 mL	16 x 2.0 mL
	Product								
	Max. RPM/RCF	12,500/ inner 10,237 outer 11,722	15,000/18,891	17,000/27,237	15,000/24,249	15,000/ inner 17,835 outer 21,206	15,000/22,967	13,000/16,343	13,000/15,682
	Hole Diameter(mm)	6.5	11.1	11.1	11.1	11.1	17	11.1 X 39	11.1 X 19
Max. Height for Tube fit(mm)	25	65	52	52	52	68	48	50	

<b>1848R</b> p.41 	RotorCat. No.	GRE-M-s0.2-64	GREB-M-m2.0-24	GRE-M-m2.0-48	GRE-M-m5.0-20	GRF-M-c15-12	GRF-M-c50-8	GRF-M-50/ c15-4-4	GRD-M-m2.0-24	GRD-M-mw-2
	Max. Capacity	64 x 0.2 mL	24 x 2.0 mL	48 x 2.0 mL	20 x 5.0 mL	12 x 15 mL	8 x 50 mL conical	4 x 50 mL/ 4 x 15 mL conical	24 x 2.0 mL	2 x 2 MTPs
	Product									
	Max. RPM/RCF	12,500/ inner 10,237 outer 11,722	18,000/30,536	13,000/ inner 15,928 outer 18,479	13,000/20,595	8,500/8,611	8,000/8,893	8,500 9,144 (50) 8,293 (15)	13,000/16,438	5,750/3,050
	Hole Diameter(mm)	6.5	11.1	11.1	17	17.2	29.8	29.8(50)17.2(15)	11.1 x 19	86.5 x 128.5
Max. Height for Tube fit(mm)	25	52	52	68	125	123	123	50	36	

- Bio-Safe Manufacturer Validated
- Bio-Safe Porton Down Certified
- Adaptors available for smaller tubes

**Low-speed**

<b>406</b> p. 110 	RotorCat.No.	GRA-15-6A	GRA-15/10-12
	BucketCat.No.	GLB-15/10A	GLB-15/10A
	Max.Capacity	6 x 15 mL	6 x 15 mL 12 x 10 mL
	Product	 ■	 ■
	Max.RPM/RCF	4,000/2,075	4,000/2,057
	Hole Diameter(mm)	18	18
	Max.Heightfor Tubefit(mm)	125	125

<b>416</b> p. 112 	RotorCat.No.	GRA-S-15-16A	GRA-S-50-10	GRA-S-c50-10	GRS-S-mw-2	GRS-S-15-6		GRS-S-50-4			
	BucketCat.No.	GLB-15/10A	GLB-50s-50A	GLB-c50s-50A	-	GLB-d15-15	GLB-15-15	GLB-50-50	GLB-c50-50	GLB-15-50	GLB-c15-50
	Max.Capacity	16 x 15 mL	10 x 50 mL	10 x 50 mL conical	2 x 2 MTPs	6 x 2 x 15 mL open top tube	6 x 15 mL	4 x 50 mL	4 x 50 mL conical	4 x 15 mL	4 x 15 mL conical
	Product	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■
	Max.RPM/RCF	4,000/2,700	4,000/2,549	4,000/2,508	4,000/2,000	4,000/2,737	4,000/2,826	4,000/2,700	4,000/2,700	4,000/2,700	4,000/2,700
	Hole Diameter(mm)	18	30	31	86.5 x 128.5	17	17	30.5	29.5	17	17
	Max.Heightfor Tubefit(mm)	125	130	130	35	122	125	125	125	125	125
	RotorCat.No.	GRS-S-50-4			GRS-S-100-4						
	BucketCat.No.	GLB-d15-50	GLB-dc15-50	GLBB-b100-100	GLB-b50-100	GLB-dc50-100	GLB-15-8-100	GLB-bd15-100	GLBB-bdc15-100		
	Max.Capacity	4 x 2 x 15 mL	4 x 2 x 15 mL conical	4 x 100 mL	4 x 50 mL	4 x 2 x 50 mL conical	4 x 8 x 15 mL open top tube	4 x 2 x 15 mL	4 x 2 x 15 mL conical		
	Product	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■
	Max.RPM/RCF	4,000/2,700	4,000/2,700	4,000/2,774	4,000/2,700	4,000/2,774	4,000/2,719	4,000/2,700	4,000/2,774		
	Hole Diameter(mm)	17	17	47	30.5	30	17	17	17		
	Max.Heightfor Tubefit(mm)	125	120	120 (w/ cap) 130 (w/o cap)	120 (w/ cap) 125 (w/o cap)	125	115	123 (w/ cap) 127 (w/o cap)	120 (w/ cap) 125 (w/o cap)		

<b>624R</b> p. 124 	RotorCat.No.	GRF-SR-m2.0-24	GRF-SR-50-6	GRF-SR-c50-6	GRA-SR-15-24	GRA-SR-50-10	GRA-SR-c50-10	GRS-S-mw-2	GRS-SR-15-6		GRS-SR-50-4		
	BucketCat.No.	-	-	-	GLB-15A	GLB-50s-50A	GLB-c50s-50A	GLP-mw	GLB-d15-15	GLB-15-15	GLB-50-50	GLB-c50-50	
	Max.Capacity	24 x 2.0 mL	6 x 50 mL	6 x 50 mL conical	24 x 15 mL	10 x 50 mL	10 x 50 mL conical	2 x 2 MTPs	6 x 2 x 15 mL open top tube	6 x 15 mL	4 x 50 mL	4 x 50 mL conical	
	Product	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	
	Max.RPM/RCF	6,000/3,393	6,000/3,824	6,000/3,960	4,000/inner 2,469 outer 2,773	4,000/2,549	4,000/2,508	4,000/2,000	4,400/3,312	4,400/3,420	4,800/3,888	4,800/3,888	
	Hole Diameter(mm)	11.1	29.5	30	18	30	31	86.5 x 128.5	17	17	30.5	29.5	
	Max.Heightfor Tubefit(mm)	52	120	125	125	130	130	35	122	125	125	125	
	RotorCat.No.	GRS-SR-50-4					GRS-SR-100-4						
	BucketCat.No.	GLB-15-50	GLB-c15-50	GLB-d15-50	GLB-dc15-50	GLBB-b100-100	GLB-b50-100	GLB-dc50-100	GLB-15-8-100	GLB-bd15-100	GLBB-bdc15-100		
	Max.Capacity	4 x 15 mL	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 2 x 50 mL conical	4 x 8 x 15 mL vacutainer	4 x 2 x 15 mL	4 x 2 x 15 mL conical		
	Product	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	 ■	
	Max.RPM/RCF	4,800/3,888	4,800/3,888	4,800/3,888	4,800/3,888	4,200/3,059	4,200/2,976	4,200/3,059	4,200/2,998	4,200/2,976	4,200/3,059		
	Hole Diameter(mm)	17	17	17	17	47	30.5	30	17	17	17		
	Max.Heightfor Tubefit(mm)	125	125	125	120	120 (w/ cap) 130 (w/o cap)	120 (w/ cap) 125 (w/o cap)	125	115	123 (w/ cap) 127 (w/o cap)	120 (w/ cap) 125 (w/o cap)		
























































# Rotor Selection Guide

- Bio-Safe Manufacturer Validated
- Bio-Safe Porton Down Certified
- Adaptors available for smaller tubes

## Floor Standing, High-speed

1236R p. 90	RotorCat. No.	GRF-G-s0.2-64	GRF-G-m2.0-30	GRF-G-c15-12	GRF-G-15-24	GRF-G-50-8	GRF-G-c50-8	GRF-G-85-6	GRA-G-15-24	GRS-G-100-6						
	BucketCat. No.	-	-	-	-	-	-	-	GLB-15/10A	GLBB-b100-100	GLB-b50-100	GLB-dc50-100	GLB-15-8-100	GLB-bd15-100	GLBB-bdc15-100	
	Max. Capacity	64 x 0.2 mL	30 x 2.0 mL	12 x 15 mL conical	24 x 15 mL	8 x 50 mL	8 x 50 mL conical	6 x 85 mL	24 x 15 mL	6 x 100 mL	6 x 50 mL	6 x 2 x 50 mL conical	6 x 8 x 15 mL open top tube	6 x 2 x 15 mL	6 x 2 x 15 mL conical	
	Product															
	Max. RPM/RCF	12,000/ inner 9,434 outer 10,803	12,000/15,520	12,000/16,582	8,000/ inner 7,370 outer 8,872	12,000/16,582	10,000 / 12,298	10,000/12,298	4,000/3,134	4,000/3,105	4,000/3,032	4,000/3,105	4,000/3,059	4,000/3,032	4,000/3,105	
	Hole Diameter(mm)	6.5	11.1	17.2	17.1	29.5	29.8	38.5	18	47	30.5	30	17	17	17	
	Max. Height for Tube fit(mm)	25	52	125	120	120	130	122	125	120 (w/ cap) 130 (w/o cap)	120 (w/ cap) 125 (w/o cap)	125	115	123 (w/ cap) 127 (w/o cap)	120 (w/ cap) 125 (w/o cap)	
	RotorCat. No.	GRS-G-250-4				GRS-G-r250-4										
	BucketCat. No.	GLB-250-250	GLB-60-250	GLB-d20/10-250 4 x 2 x (20 & 10 mL)	GLB-r250-250	GLP-mw-r250										
	Max. Capacity	4 x 250 mL	4 x 60 mL	4 x 2 x (20 & 10 mL)	4 x 250 mL	4 x 4 MTPs										
Shape																
Max. RPM/RCF	5,000/5,394	5,000/5,394	5,000/ 4,752 (20) 4,472 (10)	4,000/3,134	4,000/2,737											
Hole Diameter(mm)	62	31.9	22.5 (20)/16 (10)	86 x 70.3	86.5 x 128.5											
Max. Height for Tube fit(mm)	153	162	132 (20) 125 (10)	130	80											
1736R p. 90	RotorCat. No.	GRF-L-s0.2-64	GRF-L-m2.0-30	GRF-L-c15-12	GRF-L-50-6	GRF-L-c50-8	GRF-L-50-8	GRF-L-85-6	GRF-L-250-6	GRF-L-500-6	GRS-L-250-4	GRS-L-r250-4				
	BucketCat. No.	-	-	-	-	-	-	-	-	-	GLB-250-250	GLB-r250-250	GLB-mw-r250			
	Max. Capacity	64 x 0.2 mL	30 x 2.0 mL	12 x 15 mL conical	6 x 50 mL	8 x 50 mL conical	8 x 50 mL	6 x 85 mL	6 x (250 & 15 mL)	6 x 500 mL	4 x 250 mL	4 x 250 mL	4 x 4 MTPs			
	Product															
	Max. RPM/RCF	12,000/ 9,434 (inner) 10,803 (outer)	17,000/31,147	15,000/25,910	17,000/32,310	15,000/27,671	15,000/25,910	15,000/25,029	10,000/ 14,981(250) 14,679 (15)	8,000/11,305	5,000/5,394	4,000/3,134	4,000/2,737			
	Hole Diameter(mm)	6.5	11.1	17.2	29.5	29.8	29.5	38.5	62 (250)/17.1 (15)	70	62	86 x 70.3	86.5 x 128.5			
	Max. Height for Tube fit(mm)	25	52	125	113	130	120	125	130 (250)/120 (15)	170	153	130	80			
2236R p. 90	RotorCat. No.	GRF-L-s0.2-64	GRF-L-m2.0-30	GRF-L-c15-12	GRF-L-50-6	GRF-L-c50-8	GRF-L-50-8	GRF-L-85-6	GRF-L-250-6	GRF-L-500-6	GRF-L-1000-4	GRF-L-1000-6	GRS-L-250-4	GRS-L-r250-4		
	BucketCat. No.	-	-	-	-	-	-	-	-	-	-	-	GLB-250-250	GLB-r250-250	GLB-mw-r250	
	Max. Capacity	64 x 0.2 mL	30 x 2.0 mL	12 x 15 mL conical	6 x 50 mL	8 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	4 x 250 mL	4 x 250 mL	4 x 4 MTPs	
	Product															
	Max. RPM/RCF	12,000/ inner 9,434 outer 10,803	22,000/52,163	20,000/46,062	22,000/54,111	17,000 / 35,541	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	5,000/5,394	4,000/3,134	4,000/2,737	
	Hole Diameter (mm)	6.5	11.1	17.2	29.5	29.8	29.5	38.5	62 (250)/17.1 (15)	70	98	98	62	86 x 70.3	86.5 x 128.5	
Max. Height for Tube fit (mm)	25	52	125	113	130	120	125	130 (250)/120 (15)	170	175	175	153	130	80		

# Function Icons



**Automatic RPM/RCF Conversion**  
for easy detection of g-value to be applied on samples



**Fast Cooling**  
Cooling down to 4°C within 5 minutes



**Rotor ID**  
Automatic rotor identification for safe operation



**Imbalance Cut-Off**  
Sound warning keep the instrument protected from unsuitable operation.



**Up to 100 or 10 Program Memory**  
for convenient operation of the routine protocols



**Motorized Lid Mechanics**  
Only a gentle touch is sufficient to close and open the lid.



**Short Spin (Pulse)**  
One-touch key for quick spin



**Lid Drop Protection Design**  
allows operator's convenience and safety.



**Selectable Time Mode of "At Set Speed"**  
for counting running time starting when is reached the set speed



**Automatic Lid Release**  
at the completion of the operation (only for non refrigerated model)



**ACC/DEC Rate Control**  
Setting run-up (9 steps) / down (10 steps) rates



**Bio-Safe Rotors Available**



**Soft Start/Stop Function**  
to achieve gentle run-up and down (416 only)



**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 / Finger print loss



**User ID and Password Function**  
ideal for core laboratory or multi-user environments (2236R only)

# Micro Centrifuges

## Technical Specifications

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**mini 6 / mini 6 RC**

p. 28



**mini**

p. 30

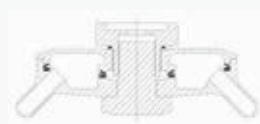
<b>Max. RPM / Fixed angle</b>	6,500 rpm	13,500 rpm
<b>Max. RPM / Swing-out</b>	-	-
<b>Max. RCF / Fixed angle</b>	2,234 xg (1.5/2.0 mL tube) 1,850 xg (PCR strip)	12,300 xg
<b>Max. RCF / Swing-out</b>	-	-
<b>Max. capacity / Fixed angle</b>	6 x 1.5/2.0 mL 2 PCR strips	12 x 1.5/2.0 mL 4 PCR strips
<b>Max. capacity / Swing-out</b>	-	-
<b>RCF/RPM conversion</b>	-	Yes
<b>Temperature range</b>	-	-
<b>FAST cool button</b>	-	-
<b>CE mark</b>	-	Yes
<b>Cat. No.</b>	AC-mini6 / AC-mini6-RC	GZ-1312

## Function Features



### Pulse Key

Time control functions of pulse for quick spin



### Easy-Lock rotor with a set of V-rings

Tightly sealed rotor with two V-rings and an O-ring

**Bio-Safe** Manufacturer Validated

**Bio-Safe** Porton Down Certified



### Bio-safe & Easy Rock Rotor

Containment of samples provided by a combination of physical seals and a design to prevent any sample leakage within the rotor.



### Fast Cooling System

Fast cooling allows a temperature drop to 4°C within 5minutes; function for quick start of cooled samples



### 1536

p. 33

15,000 rpm

-

21,583 xg

-

10 x 5.0 mL  
36 x 1.5/2.0 mL  
4 PCR strips

-

Yes

-

-

Yes

GZ-1536



### 1730R

p. 36

17,000 rpm

13,000 rpm

27,237 xg

16,343 xg

12 x 5.0 mL  
36 x 1.5/2.0 mL  
8 PCR strips

4 x 4 x 1.5/2.0 mL

Yes

-20°C to 40°C

Yes

Yes

GZ-1730R



### 1848R

p. 41

18,000 rpm

13,000 rpm

30,356 xg

16,438 xg

8 x c50 mL  
20 x 5.0 mL  
48 x 2.0 mL

6 x 4 x 2.0 mL  
2 x 2 MTPs




Yes

-12°C to 40°C

Yes

Yes

GZ-1848R

		
<b>1536</b>	<b>1730R</b>	<b>1848R</b>
p. 33	p. 36	p. 41
15,000 rpm	17,000 rpm	18,000 rpm
-	13,000 rpm	13,000 rpm
21,583 xg	27,237 xg	30,356 xg
-	16,343 xg	16,438 xg
10 x 5.0 mL 36 x 1.5/2.0 mL 4 PCR strips	12 x 5.0 mL 36 x 1.5/2.0 mL 8 PCR strips	8 x c50 mL 20 x 5.0 mL 48 x 2.0 mL
-	4 x 4 x 1.5/2.0 mL	6 x 4 x 2.0 mL 2 x 2 MTPs
Yes	Yes	Yes
-	-20°C to 40°C	-12°C to 40°C
-	Yes	Yes
Yes	Yes	Yes
GZ-1536	GZ-1730R	GZ-1848R

# mini 6 / mini 6 RC Micro Centrifuge



## Features

- Speed : 6,500 rpm (2,234 xg ; 1,850 xg (PCR))
- Capacity : 6 x 1.5/2.0 mL; 2 x 8 PCR strips
- Selectable operation models between short spin and continuous 15 minutes
- One spin action simply by closing the lid
- Safety stop when lid is promptly opened
- Interchangeable rotors for 6 micro tubes and 2 PCR strips
- Electro sensitive lid sensor
- Useful when there are not enough power lines in BSCs, refrigerators incubators, Etc by running on rechargeable Li-battery. (M6-RC only)
- Can be used immediately for outdoor or on-site experiments. (M6-RC only)

## Technical Specifications






<b>Max. RPM/PCF for Fixed Angle</b>	6,500 rpm / 2,234 xg
<b>Max. Capacity for Fixed Angle</b>	6 x 1.5/2.0 mL 2 x 8 tube PCR strips
<b>Acc. Time to Max. Speed</b>	≤3 sec
<b>Dec. Time from Max. Speed</b>	≤4 sec
<b>Noise Level (dependent on rotor)</b>	≤50 dB
<b>Power Supply (V/Hz)</b>	100~240 V, 50/60 Hz

<b>Power input</b>	OUTPUT DC 12V 2A ,INPUT AC100~240V, 50/60Hz; (110V optional)
<b>Power Requirement</b>	7 W
<b>Dimension (W x D x H)</b>	150 x 150 x 90 mm
<b>Net Weight</b>	mini 6 : 650 g / mini 6 RC : 790 g
<b>Cat. No.</b>	AC-mini6 / AC-mini6-RC

## Fixed Angle Rotor, GRF-m2.0-6

- Capacity : 6 x 1.5/2.0 mL
- Max. RPM / RCF : 6,500 / 2,234
- Hole angle from axis during rotation :  $\leq 45^\circ$
- Hole dimension ( $\Phi \times L$ ,mm) : 11.1 x 3
- Hole bottom type : Open
- Max. height for tube fit (Up) : 13
- Max. height for tube fit (Down) : 39





				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
			None	None
Adapter				
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)*	29.2	36.2	47.3	47.3
Max. RCF (g-force)*	1,379	1,710	2,234	2,234

## Fixed Angle Rotor, GRF-0.2-16

- Capacity : 2 x 8-Tube PCR strips, 16 x 0.2 mL
- Max. RPM / RCF : 6,500 / 1,850
- Hole angle from axis during rotation :  $\leq 45^\circ$
- Hole dimension ( $\Phi \times L$ ,mm) : 6.5 x 3
- Hole bottom type : Open
- Max. height for tube fit (Up) : 10
- Max. height for tube fit (Down) : 15



		
Tube		
Tube capacity (mL)	0.2	8-Strip tube
Tube dimension ( $\Phi \times L$ , mm)	6 x 8	6 x 8
Max. radius (mm)	29.9	29.9
Max. RCF (g-force)	1,412	1,412

# mini Micro Centrifuge



## Features

- Speed : 13,500 rpm (12,300 xg) ; 6,000 rpm (1,850 xg)
- Capacity : 12 x 1.5/2.0 mL ; 10 x 18 mL cryotube, 4 x 8 PCR strips
- Patented anti-vibration system and air-cooling to minimize noise and heat generation
- Very quiet operation at less than 56 dB
- "PULSE" key available for quick spin
- Autoclavable rotor, lid and adaptors

## Technical Specifications

<b>Max. RPM/PCF for Fixed Angle</b>	13,500 rpm / 12,300 x g
<b>Max. Capacity for Fixed Angle</b>	12 x 1.5/2.0 mL, 4 PCR strips
<b>Time Control</b>	Pulse, timed < 30 min or continuous
<b>RCF/RPM Conversion</b>	Yes
<b>Acc. Time to Max. Speed</b>	≤12 sec
<b>Dec. Time from Max. Speed</b>	≤16 sec
<b>Noise Level (dependent on rotor)</b>	≤56 dB







<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)
<b>Power Requirement</b>	110 VA
<b>Dimension (W x D x H)</b>	208 x 245 x 145 mm
<b>Net Weight</b>	4.4 kg
<b>CE MARK</b>	Yes
<b>Cat No.</b>	GZ-1312



## Fixed Angle Rotor, GRF-m2.0-12

- Capacity : 12 x 1.5/2.0 mL
- Max. RPM / RCF : 13,500 / 12,300
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ ,mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 50
- Supplied with a plastic snap fit lid, No ID ring









				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
Adapter			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)*	43.5	50.5	60.4	60.4
Max. RCF (g-force)*	8,863	10,290	12,300	12,300

## Fixed Angle Rotor, GRF-m2.0-12-b

- Capacity : 12 x 1.5/2.0 mL
- Max. RPM / RCF : 13,500 / 12,300
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ ,mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 50
- Supplied with a anodized aluminum lid and two O-rings inserted, No ID ring



				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
Adapter			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)*	43.5	50.5	60.4	60.4
Max. RCF (g-force)*	8,863	10,290	12,300	12,300

## Fixed Angle Rotor, GRF-m1.8-10

- Capacity : 10 x 1.8 mL Cryotube
- Max. RPM / RCF : 13,500 / 12,300
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 12.8 x 32
- Hole bottom type : Flat
- Max. height for tube fit (mm) : 50
- Supplied with a plastic snap fit lid, No ID ring



### Tube

Tube capacity (mL)	1.8 mL cryotube
Tube dimension ( $\Phi \times L$ , mm)	12.5 x 45
Max. radius (mm)	60.4
Max. RCF (g-force)	12,300

## Fixed Angle Rotor, GRA-s0.2-32

- Capacity : 4 x 8-Tube PCR strips, 32 x 0.2 mL
- Max. RPM / RCF : 6,000 / 1,850
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 6.5 x 3
- Hole bottom type : Open
- Max. height for tube fit (Up) : 10
- Max. height for tube fit (Down) : 12



### Tube

Tube capacity (mL)	0.2	8-Strip tube
Tube dimension ( $\Phi \times L$ , mm)	6 x 8	6 x 8
Max. radius (mm)	Inner : 36.8	Inner : 36.8
	Outer : 46	Outer : 46
Max. RCF (g-force)	Inner : 1,554 /	Inner : 1,554 /
	Outer : 1,850	Outer : 1,850

# 1536 Micro Centrifuge



## Features

- Speed : 15,000 rpm (21,583 xg)
- Capacity : 10 x 5.0 mL conical ; 36 x 1.5/2.0 mL ; 4 x 8 PCR strips
- Selectable time mode of "from starting" and "At Set SPEED" to enable time counting when set speed is reached
- "PULSE" key available for quick spin
- Simultaneous display of all parameters : set and actual values
- 9 steps of ACC (15 sec) & 10 steps of DEC (15 sec)

## Technical Specifications



<b>Max. RPM/RCF for Fixed Angle</b>	15,000 rpm / 21,583 xg
<b>Max. Capacity for Fixed Angle</b>	36 x 1.5/2.0 mL, 10 x 5.0 mL, 4 PCR strips
<b>Acc. Time to Max. Speed</b>	≤15 sec
<b>Dec. Time from Max. Speed</b>	≤15 sec
<b>Time Control</b>	Pulse, timed <100 min or continuous
<b>Time Counting Range</b>	Selectable, at set speed or from starting
<b>RCF/RPM Conversion</b>	Yes
<b>Noise Level (dependent on rotor)</b>	≤60 dB

<b>ACC/DEC Ramps</b>	9/10
<b>Program Memory</b>	100
<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)
<b>Power Requirement</b>	450 VA
<b>Dimension (W x D x H)</b>	240 x 378 x 240 mm
<b>Net Weight</b>	11.9 kg
<b>CE MARK</b>	Yes
<b>Cat No.</b>	GZ-1536

## Fixed Angle Rotor, GRE-m5.0-10

- Capacity : 10 x 5.0 mL
- Max. RPM / RCF : 15,000 / 21,583
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ ,mm) : 17 x 53
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 68
- Supplied with a lid and two V-rings inserted, No ID ring











Tube		
Tube capacity (mL)	5.0	5.0
Tube Dimension ( $\Phi \times L$ ,mm)	16 x 59	16 x 67
Max. radius (mm)	85.8	85.8
Max. RCF (g-force)	21,583	21,583

## Fixed Angle Rotor, GREB-m2.0-36

**Bio-Safe** Manufacturer Validated

- Capacity : 36 x 1.5/2.0 mL (24 outer, 12 inner) plus 12 x 0.2 mL (inner)
- Max. RPM / RCF : 15,000 / 21,206
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ ,mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid and two V-rings inserted, No ID ring



Tube						
Tube capacity (mL)	0.2	0.2	0.5	1.5/2.0	2.0 mL filter tube	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	6 x 8	8 x 30	11 x 38	11 x 38	10.1 x 46
Adapter	None			None	None	None
Cat No.	-	GAS-m0.2(2)	GAS-m0.5(2)	-	-	-
Adaptor hole dimension ( $\Phi \times L$ ,mm)	-	6.5 x 23	8 x 31	-	-	-
Adaptor hole bottom type	-	Open	Open	-	-	-
Max. radius (mm)*	Inner 58.2	Inner 53.5 Outer 67	Inner 60.5 Outer 73	Inner 70.9 Outer 84.3	Inner 70.9	Inner 70.9 Outer 84.3
Max. RCF (g-force)*	Inner 14,640	Inner 13,458 Outer 16,854	Inner 15,219 Outer 18,363	Inner 17,835 Outer 21,206	Inner 17,835	Inner 17,835 Outer 21,206







## Fixed Angle Rotor, GREB-m2.0-24

Bio-Safe

Manufacturer Validated

- Capacity : 24 x 1.5/2.0 mL
- Max. RPM / RCF : 15,000 / 21,206
- Hole angle from axis during rotation :  $\leq 45^\circ$
- Hole dimension ( $\varnothing \times L$ ,mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid and two V-rings inserted, No ID ring



				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
Adapter			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)*	67	73	84.3	84.3
Max. RCF (g-force)*	16,854	18,363	21,206	21,206



## Fixed Angle Rotor, GREB-s0.2-32

Bio-Safe

Manufacturer Validated

- Capacity : 4 x 8-Tube PCR strips, 32 x 0.2 mL
- Max. RPM / RCF : 15,000 / 14,187
- Hole angle from axis during rotation :  $\leq 45^\circ$
- Hole dimension ( $\varnothing \times L$ ,mm) : 6.5 x 16
- Hole bottom type : Round
- Max. height for tube fit (mm) : 25
- Supplied with a lid and two V-rings inserted, No ID ring



		
Tube		
Tube capacity (mL)	0.2	8-Strip tube
Tube dimension ( $\Phi \times L$ , mm)	6 x 8	6 x 8
Max. radius (mm)	56.4	56.4
Max. RCF (g-force)	14,187	14,187

# 1730R Micro Centrifuge



## Features

- Speed : 17,000 rpm (27,237 xg)
- Capacity : 12 x c5.0 mL; 36 x1.5/2.0 mL; 8 x 8 PCR strips
- Fast cooling function for cooled samples
- Selectable time mode of “from starting” and “At Set SPEED”
- “PULSE” key for quick spin
- Time & Temperature can be modified during operation : Key lock function
- All Rotors equipped with “Easy-Lock” Lid
- Swing-out rotor for 1.5/2.0 mL extends application

## Technical Specifications



<b>Max. RPM/PCF for Fixed Angle</b>	17,000 rpm / 27,237 xg
<b>Max. RPM/PCF for Swing-out</b>	13,000 rpm / 16,343 xg
<b>Max. Capacity for Fixed Angle</b>	36 x 1.5/2.0 mL, 12 x 5.0 mL, 8 PCR strips
<b>Max. Capacity for Swing-out</b>	4 x 4 x 1.5/2.0 mL
<b>Temp. Range (°C)</b>	-20°C to 40°C
<b>Fast Cool Button</b>	Yes
<b>Time Control</b>	Pulse, timed <100 min or continuous
<b>Time Counting Range</b>	Selectable, at set speed or from starting
<b>Noise Level (dependent on rotor)</b>	≤56 dB

<b>RCF/RPM Conversion</b>	Yes
<b>ACC/DEC Ramps</b>	9/10
<b>Program Memory</b>	100
<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)
<b>Power Requirement</b>	2.0 kVA
<b>Dimension (W x D x H)</b>	310 x 620 x 265 mm
<b>Net Weight</b>	43 kg
<b>CE MARK</b>	Yes
<b>Cat No.</b>	GZ-1730R

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

- Capacity : 12 x 5.0 mL
- Max. RPM / RCF : 15,000 / 22,967
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing$  x L,mm) : 17 x 53
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 68
- Supplied with a lid and two V-rings inserted











Tube		
Tube capacity (mL)	5.0	5.0
Tube Dimension ( $\Phi$ x L,mm)	16 x 59	16 x 67
Max. radius (mm)	91.3	91.3
Max. RCF (g-force)	22,967	22,967

## Fixed Angle Rotor, GREB-M-m2.0-36

**Bio-Safe** Manufacturer Validated

- Capacity : 36 x 1.5/2.0 mL (24 outer, 12 inner) plus 12 x 0.2 mL(inner)
- Max. RPM / RCF : 15,000 / 21,206
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing$  x L,mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid and two V-rings inserted



Tube						
Tube capacity (mL)	0.2	0.2	0.5	1.5/2.0	2.0 mL filter tube	2.0 mL screw cap
Tube Dimension ( $\Phi$ x L, mm)	6 x 8	6 x 8	8 x 30	11 x 38	11 x 38	10.1 x 46
Adapter	None			None	None	None
Cat No.	-	GAS-m0.2(2)	GAS-m0.5(2)	-	-	-
Adaptorholedimension ( $\Phi$ x L,mm)	-	6.5 x 23	8 x 31	-	-	-
Adaptor hole bottom type	-	Open	Open	-	-	-
Max. radius (mm)*	Inner 58.2	Inner 53.5 Outer 67	Inner 60.5 Outer 73	Inner 70.9 Outer 84.3	70.9	Inner 70.9 Outer 84.3
Max. RCF (g-force)*	Inner 14,640	Inner 13,458 Outer 16,854	Inner 15,219 Outer 18,363	Inner 17,835 Outer 21,206	17,835	Inner 17,835 Outer 21,206







## Fixed Angle Rotor, GREB-M-m2.0-30

Bio-Safe

Manufacturer Validated

- Capacity : 30 x 1.5/2.0 mL
- Max. RPM / RCF : 15,000 / 24,249
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ ,mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid and two V-rings inserted



				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
Adapter			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptorholedimension( $\Phi \times L$ ,mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)*	79	86	96.4	96.4
Max. RCF (g-force)*	19,872	21,633	24,249	24,249







## Fixed Angle Rotor, GREB-M-m2.0-24

Bio-Safe

Porton Down Certified

- Capacity : 24 x 1.5/2.0 mL
- Max. RPM / RCF : 17,000 / 27,237
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ ,mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid and two V-rings inserted










				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
Adapter			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptorholedimension( $\Phi \times L$ ,mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)*	67	73	84.3	84.3
Max. RCF (g-force)*	21,648	23,910	27,237	27,237



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

- Capacity : 18 x 1.5/2.0 mL
- Max. RPM / RCF : 15,000 / 18,891
- Hole angle from axis during rotation :  $\angle 40^\circ$
- Hole dimension ( $\varnothing$  x L,mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 65
- Supplied with a lid and two V-rings inserted





Tube					
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL filter tube	2.0 mL screw cap
Tube Dimension ( $\varnothing$ x L, mm)	6 x 8	8 x 30	11 x 38	11 x 38	10.1 x 46
Adapter			None	None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-	-
Adaptorhole dimension ( $\varnothing$ x L,mm)	6.5 x 23	8 x 31	-	-	-
Adaptor hole bottom type	Open	Open	-	-	-
Max. radius (mm)*	57.8	63.8	75.1	75.1	75.1
Max. RCF (g-force)*	14,540	16,049	18,891	18,891	18,891

## Fixed Angle Rotor, GRE-M-s0.2-64

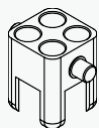
- Capacity : 8 x 8-Tube PCR strips, 64 x 0.2 mL
- Max. RPM / RCF : 12,500 / 11,722
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing$  x L,mm) : 6.5 x 16
- Hole bottom type : Round
- Max. height for tube fit (mm) : 25
- Supplied with a lid and two V-rings inserted



Tube		
Tube capacity (mL)	0.2	8-Strip tube
Tube dimension ( $\varnothing$ x L, mm)	6 x 8	6 x 8
Max. radius (mm)	Inner 58.6 Outer 67.1	Inner 58.6 Outer 67.1
Max. RCF (g-force)	Inner 10,237 Outer 11,722	Inner 10,237 Outer 11,722







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

- 4 loadings | Capacity : 16 x 1.5/2.0 mL
- Max. RPM / RCF : 13,000 / 15,682 | Hole angle from axis during rotation :  $\angle 90^\circ$
- Supplied with two V-rings inserted incl. four buckets and a lid



Microtube 1.5/2.0 mL  
Quaduple Bucket  
GLB-m2.0-4(16)

Hole dimension ( $\emptyset$  x L,mm) : 11.1 x 19  
Hole bottom type : Open  
Max. height for tube fit (mm) : 50  
Bucket material : Aluminum alloy, anodized, autoclavable

				
<b>Tube</b>				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi$ x L, mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
<b>Adapter</b>			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi$ x L, mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)*	66	74	83	83
Max. RCF (g-force)*	12,470	13,982	15,682	15,682

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

# 1848R Micro Centrifuge



## Features

- Speed : 18,000 rpm (30,536 xg); 13,000 rpm (16,438 xg)
- Capacity / Swing-out : 6 x 4 x 2.0 mL; 2 x 2 MTPs
- Capacity/FixedAngle: 8xc50mL; 20x5.0mL; 48x1.5/2.0mL
- Highly visible display screen, numeric keys with integrated touch buttons for easy operation and quick setting
- “PULSE” key for quick spin
- Fast cooling for cooled samples
- Key lock function

## Technical Specifications












<b>Max. RPM/PCF for Fixed Angle</b>	18,000 rpm / 30,536 xg
<b>Max. RPM/PCF for Swing-out</b>	13,000 rpm / 16,438 xg
<b>Max. Capacity for Fixed Angle</b>	8 x c50 mL, 20 x 5.0 mL, 48 x 2.0 mL
<b>Max. Capacity for Swing-out</b>	6 x 4 x 2.0 mL, 2 x 2 MTPs
<b>Temp. Range (°C)</b>	-12°C to 40°C
<b>Fast Cool Button</b>	Yes
<b>Time Control</b>	Timed < 10 hr or Continuous
<b>Time Counting Range</b>	Selectable, at set speed or from starting
<b>Noise Level (dependent on rotor)</b>	< 60dB

<b>ACC/DEC Ramps</b>	9/10
<b>Program Memory</b>	100
<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)
<b>Power Requirement</b>	2.0 kVA
<b>Dimension (W x D x H)</b>	380 x 654 x 312 mm
<b>Net Weight</b>	53.5kg
<b>CE MARK</b>	Yes
<b>Cat No.</b>	GZ-1848R

## Fixed Angle Rotor, GRF-M-c50-8

- Capacity : 8 x 50 mL Conical | Max. RPM / RCF : 8,500 / 8,893
- Hole angle from axis during rotation :  $\angle 30^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 29.8 x 94 | Hole bottom type : Conical
- Max. height for tube fit (mm) : 123
- Supplied with a lid and an O-ring inserted










Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)*	106.9	93.4	93.4	106.4	107.1	110.1
Max. RCF (g-force)*	8,635	7,544	7,544	8,595	8,651	8,893

## Fixed Angle Rotor, GRF-M-c15-12

- Capacity : 12 x 15 mL Conical | Max. RPM / RCF : 8,500 / 8,611
- Hole angle from axis during rotation :  $\angle 30^\circ$  | Hole dimension ( $\varnothing \times L$ , mm) : 17.2 x 96.5
- Hole bottom type : Conical | Max. height for tube fit (mm) : 125
- Supplied with a lid and an O-ring inserted





Tube				
Tube capacity (mL)	5	5	14 mL	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	16 x 59	16 x 67	15.7 x 96	17 x 120
Adapter				None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	GAS-14(c15)	-
Adaptorholedimension( $\Phi \times L$ ,mm)	14.8 x 20	14.8 x 20	16 x 7.8	-
Adaptor hole bottom type	Conical	Conical	Round	-
Max. radius (mm)*	84.7	84.7	97.1	106.6
Max. RCF (g-force)*	6,842	6,842	7,843	8,611

## Fixed Angle Rotor, GRE-M-m5.0-20

- Capacity : 20 x 5.0 mL | Max. RPM / RCF : 13,000 / 20,595
- Hole angle from axis during rotation :  $\angle 45^\circ$  | Hole dimension ( $\varnothing \times L$ , mm) : 17 x 53
- Hole bottom type : Conical | Max. height for tube fit (mm) : 68
- Supplied with a lid and two V-rings inserted










Tube		
Tube capacity (mL)	5	5
Tube Dimension ( $\Phi \times L$ ,mm)	16 x 59	16 x 67
Max. radius (mm)	109	109
Max. RCF (g-force)	20,595	20,595

## Fixed Angle Rotor, GRE-M-m2.0-48

- Capacity : 48 x 1.5/2.0 mL (24 outer, 24 inner) | Max. RPM / RCF : 13,000 / 18,479
- Hole angle from axis during rotation :  $\angle 45^\circ$  | Hole dimension ( $\varnothing \times L$ ,mm) : 11.1 x 39
- Hole bottom type : Round | Max. height for tube fit (mm) : 52
- Supplied with a lid and two V-rings inserted



Tube					
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL filter tube	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	11 x 38	10.1 x 46
Adapter			None	None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-	-
Adaptorholedimension( $\Phi \times L$ ,mm)	6.5 x 23	8 x 31	-	-	-
Adaptor hole bottom type	Open	Open	-	-	-
Max. radius (mm)*	Inner : 67 Outer : 80.5	Inner : 73 Outer : 87.5	Inner : 84.3 Outer : 97.8	Inner : 84.3	Inner : 84.3 Outer : 97.8
Max. RCF (g-force)*	Inner : 12,659 Outer : 15,210	Inner : 13,793 Outer : 16,532	Inner : 15,928 Outer : 18,479	Inner : 15,928	Inner : 15,928 Outer : 18,479







## Fixed Angle Rotor, GREB-M-m2.0-24

Bio-Safe

Porton Down Certified

- Capacity : 24 x 1.5/2.0 mL
- Max. RPM / RCF : 18,000 / 30,536
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid and two V-rings inserted





				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi$ x L, mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
Adapter			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi$ x L, mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)*	67	73	84.3	84.3
Max. RCF (g-force)*	24,270	26,443	30,536	30,536

## Fixed Angle Rotor, GRE-M-s0.2-64

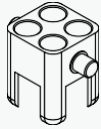
- Capacity : 8 x 8-Tube PCR strips, 64 x 0.2 mL
- Max. RPM / RCF : 12,500 / 11,722
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 6.5 x 16
- Hole bottom type : Round
- Max. height for tube fit (mm) : 25
- Supplied with a lid and two V-rings inserted



		
Tube		
Tube capacity (mL)	0.2	8-Strip tube
Tube dimension ( $\Phi$ x L, mm)	6 x 8	6 x 8
Max. radius (mm)	Inner 58.6 Outer 67.1	Inner 58.6 Outer 67.1
Max. RCF (g-force)	Inner 10,237 Outer 11,722	Inner 10,237 Outer 11,722







## Windshield Swing-out Rotor, GRD-M-m2.0-24

- 6 loadings | Max. Capacity : 6 x 4 x 1.5/2.0 mL
- Max. RPM / RCF : 13,000 / 16,438
- Hole angle from axis during rotation :  $\angle 90^\circ$
- Supplied with two V-rings inserted six buckets and a lid included



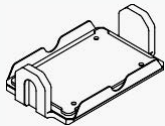
Microtube 1.5/2.0 mL  
Quadruple Bucket,  
GLB-m2.0-4(16)

Max. Capacity : 4 x 1.5/2.0 mL  
Max. RPM / RCF : 13,000 / 16,438  
Hole dimension ( $\Phi$  x L,mm) : 11.1 x 19  
Hole bottom type : Open  
Max. height for tube fit (mm) : 50

				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi$ x L, mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
Adapter			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi$ x L, mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)	70	78	87	87
Max. RCF (g-force)	13,226	14,737	16,438	16,438


## Windshield Swing-out Rotor, GRD-M-mw-2

- 2 loadings | Capacity : 2 MTP
- Max. RPM / RCF : 5,750 / 3,050
- Angle from axis during rotation :  $\angle 90^\circ$
- Two plate holders and a lid



Microplate Holder Bucket,  
GLP-mw(mw-2)

Max. RPM / RCF : 5,750 / 3,050  
Max. Radius (mm) : 82.5  
Hole dimension (w x d x h, mm) : 86.5 x 128.5  
Max. height for tube fit (mm) : 36

	
Tube	
Tube capacity (mL)	MTP
Tube Dimension ( $\Phi$ x L, mm)	86 x 128 x 15
Bucket capacity (ea / 2)	2 / 4
Max. radius (mm)	82.5
Max. RCF (g-force)	3,050

# Table-top Multi Purpos High-speed Centrifuges

## Technical Specifications



### 1248

p. 48

### 1248R

p. 48

<b>Max. RPM / Fixed angle</b>	12,000 rpm	12,000 rpm
<b>Max. RPM / Swing-out</b>	5,000 rpm	5,000 rpm
<b>Max. RCF / Fixed angle</b>	16,582 xg	16,582 xg
<b>Max. RCF / Swing-out</b>	5,394 xg	5,394 xg
<b>Max. capacity / Fixed angle</b>	6 x 85 mL, 8 x c50 mL, 30 x 1.5/2.0 mL	6 x 85 mL, 8 x c50 mL, 30 x 1.5/2.0 mL
<b>Max. capacity / Swing-out</b>	4 x 250 mL, 6 x 2 x c50 mL, 6 x 8 x 15 mL, 4 x 4 MTPs	4 x 250 mL, 6 x 2 x c50 mL, 6 x 8 x 15 mL, 4 x 4 MTPs
<b>Temperature range</b>	-	-20°C to 40°C
<b>FAST cool button</b>	-	Yes
<b>Time control</b>	Pulse, Timed < 100 min or Continuous	Pulse, Timed < 10 hr, or Continuous
<b>CE mark</b>	Yes	Yes
<b>Cat. No.</b>	GZ-1248	GZ-1248R



## Function Features



### Fingerprint-less

Soft glove-friendly easy-to-input touch buttons



### G-family

Cost-efficient solution for Multi-purpose centrifuges sharing the same rotors, buckets and accessories.  
(Also compatible with 1236R) p. 90

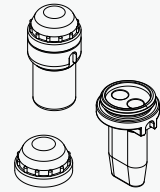


### Motorized Lid




with motorized lid mechanics, only a gentle touch is sufficient to close and open the lid

### NEW Bucket, GLBB Model

Containment of samples provided by a combination of physical seals and a design to prevent any sample leakage within the buckets.



- GLBB-b100-100 / GLBB-bdc15-100
- GLBB-750-750

		
<p><b>1580</b> p. 48</p>	<p><b>1580R</b> p. 48</p>	<p><b>1696R</b> p. 67</p>
<p>15,000 rpm</p>	<p>15,000 rpm</p>	<p>16,000 rpm</p>
<p>5,000 rpm</p>	<p>5,000 rpm</p>	<p>5,000 rpm</p>
<p>24,249 xg</p>	<p>25,910 xg</p>	<p>27,590 xg</p>
<p>5,394 xg</p>	<p>5,394 xg</p>	<p>5,394 xg</p>
<p>6 x 85 mL, 8 x c50 mL, 30 x 1.5/2.0 mL</p>	<p>6 x (250 &amp; 15) mL, 8 x c50 mL, 30 x 1.5/2.0 mL</p>	<p>6 x 250 &amp; 15 mL 8 x c50 mL, 20 x 5.0 mL, 48 x 1.5/2.0 mL</p>
<p>4 x 750 mL, 4 x 5 x c50 mL, 4 x 20 x 15 mL, 4 x 4 MTPs</p>	<p>4 x 750 mL, 4 x 5 x c50 mL, 4 x 20 x 15 mL, 4 x 4 MTPs</p>	<p>4 x 1,000 mL, 4 x 750 mL, 6 x 2 x c50 mL, 6 x 8 x 15 mL, 4 x 4 MTPs</p>
<p>-</p>	<p>-20°C to 40°C</p>	<p>-11°C ~ 40°C</p>
<p>Yes</p>	<p>Yes</p>	<p>Yes</p>
<p>Pulse, Timed &lt; 10 hr, or Continuous</p>	<p>Pulse, Timed &lt; 10 hr, Continuous</p>	<p>Pulse, Timed &lt; 10 hr, or Continuous</p>
<p>Yes</p>	<p>Yes</p>	<p>Yes</p>
<p>GZ-1580</p>	<p>GZ-1580R</p>	<p>GZ-1696R</p>

# 1248, 1248R, 1580, 1580R

## Table-top, High-speed Centrifuges



R model 1248 / 1580

## Features

- Max. speed of 12,000 rpm or 15,000 rpm with high capacity and a large assortment of rotors
- Intuitive control interface with numeric input buttons allowing 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.
- The compressor's off-function when the lid is open minimizes unnecessary cooling and frosting. (only for "R" models).
- Fast cooling function to 4°C in 5 minutes for fast startup of cooled samples (only for "R" models).
- 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.

## Technical Specifications



	1248	1248R	1580	1580R
<b>Max. RPM/PCF for Fixed Angle</b>	12,000 rpm / 16,582 xg	12,000 rpm / 16,582 xg	15,000 rpm / 24,249 xg	15,000 rpm / 25,910 xg
<b>Max. RPM/PCF for Swing-out</b>	5,000 rpm / 5,394 xg	5,000 rpm / 5,394 xg	5,000 rpm / 5,394 xg	5,000 rpm / 5,394 xg
<b>Max. Capacity for Fixed Angle</b>	6 x 85 mL, 30 x 1.5/2.0 mL	6 x 85 mL, 30 x 1.5/2.0 mL	6 x 85 mL, 30 x 1.5/2.0 mL	6 x (250 & 15) mL, 30 x 1.5/2.0 mL
<b>Max. Capacity for Swing-out</b>	4 x 250 mL, 48 x 15 mL, 4 x 4 MTPs	4 x 250 mL, 48 x 15 mL, 4 x 4 MTPs	4 x 750 mL, 80 x 15 mL, 4 x 4 MTPs	4 x 750 mL, 80 x 15 mL, 4 x 4 MTPs
<b>Temp. Range (°C)</b>	-	-20°C to 40°C	-	-20°C to 40°C
<b>Fast Cool Button</b>	-	Yes	-	Yes
<b>Time Control</b>	Pulse, timed <100 min or continuous	Pulse, timed <10 min or continuous	Pulse, timed <100 min or continuous	Pulse, timed <10 hr or continuous
<b>Time Counting Range</b>	Selectable, at set speed or from starting			
<b>RCF/RPM Conversion</b>	Yes			
<b>Noise Level (dependent on rotor)</b>	≤60 dB			
<b>ACC/DEC Ramps</b>	9/10			
<b>Program Memory</b>	100			
<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230 , 60/50Hz; 110V optional)			
<b>Power Requirement</b>	900 VA	2.5 kVA	1.5 kVA	2.5 kVA
<b>Dimension (W x D x H)</b>	475 x 561 x 330 mm	655 x 620 x 357 mm	540 x 650 x 380 mm	770 x 650 x 390 mm
<b>Net Weight</b>	40 kg	78 kg	57 kg	93 kg
<b>CE MARK</b>	Yes			
<b>Cat No.</b>	GZ-1248	GZ-1248R	GZ-1580	GZ-1580R

## Fixed Angle Rotor, GRF-G-250-6

- Capacity : 6 x 250 mL + 6 x 15 mL
- Max. RPM / RCF : 8,000 (9,588; 9,395)
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 62 x 100 (250 mL) / 17.1 x 94 (15 mL)
- Hole bottom type : Flat (250 mL) / Round (15 mL)
- Max. height for tube fit (mm) : 130 (250 mL) / 120 (15 mL)
- Supplied with a lid


















\* Only for 1580R

Tube		
Tube capacity (mL)	15	250
Tube Dimension ( $\Phi$ x L, mm)	16 x 120	61.5 x 128
Max. radius (mm)	131.3	134
Max. RCF (g-force)	9,395	9,588

## Fixed Angle Rotor, GRF-G-85-6

- Capacity : 6 x 85 mL
- Max. RPM / RCF (1580R) : 12,000 / 17,709
- Max. RPM / RCF (1248 / 1248R / 1580) : 10,000 / 12,298
- Hole angle from axis during rotation :  $\angle 34^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 38.5 x 100
- Hole bottom type : Round | Max. height for tube fit (mm) : 122
- Supplied with a lid










Tube								
Tube capacity (mL)	15	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical	85 mL
Tube Dimension ( $\Phi$ x L, mm)	16 x 120	17 x 120	28.8x83	28.8x78.5	25.7 x 101.4	29 x 108	29.5 x 118	38 x 106
Adapter								None
Cat No.	GAS-15(85)	GAS-c15(85)	GAS-c25(85)	GAS-c25(85)	GAS-30(85)	GAS-50(85)	GAS-c50(85)	-
Adaptor hole dimension ( $\Phi$ x L, mm)	17 x 94	17 x 98	29.5 x 62.5	29.5 x 62.5	26 x 85.4	29 x 95	29.5 x 98	-
Adaptor hole bottom type	Round	Conical	Conical	Conical	Round	Round	Conical	-
Max. radius (mm)	103	101	87	87	102.5	104	102	110
Max. RPM (1580R)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Max. RCF (g-force)	16,582	16,260	14,006	14,006	16,502	16,743	16,421	17,709
Max. RPM (1248 / 1248R / 1580)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Max. RCF (g-force)	11,515	11,292	9,727	9,727	11,460	11,627	11,404	12,298

## Fixed Angle Rotor, GRF-G-50-8

- Capacity : 8 x 50 mL | Max. RPM / RCF (1580R) : 15,000 / 25,910
- Max. RPM / RCF (1248 / 1248R / 1580) : 12,000 / 16,582
- Hole angle from axis during rotation :  $\angle 30^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 29.5 x 93.2
- Hole bottom type : Round | Max. height for tube fit (mm) : 120
- Supplied with a lid and O-ring inserted














				
Tube capacity (mL)	15	15 mL conical	30	50
Tube Dimension ( $\Phi \times L$ , mm)	16 x 120	17 x 120	25.7 x 101.4	29 x 108
Adapter				None
Cat No.	GAS-15(50)	GAS-c15(50)	GAS-30(50)	-
Adaptorholedimension( $\Phi \times L$ , mm)	17 x 94	17 x 105	26 x 83.8	-
Adaptorholebottomtype	Round	Conical	Round	-
Max. radius (mm)	93.5	96	96.4	103
Max. RPM (1580R)	15,000	15,000	15,000	15,000
Max. RCF (g-force)	23,520	24,149	24,249	25,910
Max. RPM (1248 / 1248R / 1580)	12,000	12,000	12,000	12,000
Max. RCF (g-force)	15,053	15,455	15,520	16,582

## Fixed Angle Rotor, GRF-G-c50-8

- Capacity : 8 x 50 mL Conical | Max. RPM / RCF (1580R) : 13,000 / 20,784
- Max. RPM / RCF (1248 / 1248R / 1580) : 10,000 / 12,298
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 29.8 x 108.6
- Hole bottom type : Conical | Max. height for tube fit (mm) : 130
- Supplied with a lid and O-ring inserted








						
Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Adaptorholedimension( $\Phi \times L$ , mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptorholebottomtype	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	105.2	94.1	94.1	106.4	107.3	110
Max. RPM (1580R)	13,000	13,000	13,000	13,000	13,000	13,000
Max. RCF (g-force)	19,877	17,779	17,779	20,103	20,273	20,784
Max. RPM (1248 / 1248R / 1580)	10,000	10,000	10,000	10,000	10,000	10,000
Max. RCF (g-force)	11,761	10,520	10,520	11,896	11,996	12,298

## Fixed Angle Rotor, GRA-G-15-24

## Fixed Angle Rotor, GRF-G-c15-12

- Capacity : 12 x 15 mL Conical
- Max. RPM / RCF (1580R) : 15,000 / 25,910
- Max. RPM / RCF (1248 / 1248R / 1580) : 12,000 / 16,582
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\Phi \times L$ , mm) : 17.2 x 107.2
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 125
- Supplied with a lid and O-ring inserted









			
Tube			
Tube capacity (mL)	5 mL conical	5 mL conical	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	16 x 59	16 x 67	17 x 120
Adapter			None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	14.8 x 20	14.8 x 20	-
Adaptor hole bottom type	Conical	Conical	-
Max. radius (mm)	75.8	75.8	103
Max. RPM (1580R)	15,000	15,000	15,000
Max. RCF (g-force)	19,067	19,067	25,910
Max. RPM (1248 / 1248R / 1580)	12,000	12,000	12,000
Max. RCF (g-force)	12,203	12,203	16,582

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

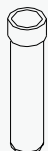
- Capacity : 30 x 1.5/2.0 mL
- Max. RPM / RCF (1580, 1580R) : 15,000 / 24,249
- Max. RPM / RCF (1248, 1248R) : 12,000 / 15,520
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid and two V-rings inserted



				
Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
Adapter			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)	79	86	96.4	96.4
Max. RPM (1580R / 1580)	15,000	15,000	15,000	15,000
Max. RCF (g-force)	19,872	21,633	24,249	24,249
Max. RPM (1248 / 1248R)	12,000	12,000	12,000	12,000
Max. RCF (g-force)	12,718	13,835	15,520	15,520














## Angle Rotor, GRA-G-15-24

- Capacity : 24 x 15 mL
- Max. RPM / RCF : 4,000 / 3,134
- Hole angle rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 20.4 x 14
- Supplied with 24 sleeves



15 mL Sleeve,  
GLS-15

Hole dimension ( $\varnothing \times L$ , mm) : 18 x 87  
 Max. height for tube fit (mm) : 125 (120 for conical / wider cap)  
 Hole bottom type : Flat bottom with rubber pad  
 Supplied with 3.0 mm thick NBR pad

Tube								
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 120	17 x 120
Adapter						None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-
Adaptorhole dimension( $\Phi \times L$ ,mm)	13.5 x 61	13.5x85	14 x 20	14 x 20	16.5 x 7	-	-	-
Adaptorhole bottom type	Round	Open	Conical	Conical	Round	-	-	-
Max. radius (mm)*	155.2	167.2	139.9	139.9	161.1	175.2	175.2	175.2
Max. RCF (g-force)*	2,776	2,990	2,503	2,503	2,882	3,134	3,134	3,134



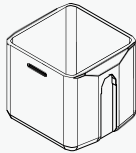


## Swing Rotor, GRS-G-r750-4

- 4 loadings
- Max. RPM : 3,600
- Angle from axis during rotation :  $\angle 90^\circ$
- Supplied with a lubricant





































\* Only for 1580 and 1580R

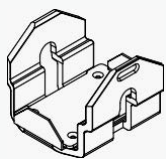


750 mL Rectangular Bucket,  
GLB-r750-r750

Max. RPM / RCF : 3,600 / 2,898  
 Max. Radius (mm) : 175.2  
 Hole dimension (w x d x h, mm) : 99 x 99 x 98  
 Max. height for tube fit (mm) : 165  
 Hole bottom type : Flat

Tube									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	14 mL	8 ~ 10 mL VT	15	5 mL conical	5 mL conical	15 mL conical	50
Tube Dimension ( $\Phi$ x L, mm)	13 x 75	13 x 100	15.7 x 96	16 x 100	16 x 120	16 x 59	16 x 67	17 x 120	29 x 108
Adapter									
Cat. No.	GAM-5-30(r750)	GAM-5-30(r750)	GAM-15-20(r750)	GAM-15-20(r750)	GAM-15-20(r750)	GAM-c15-16(r750)	GAM-c15-16(r750)	GAM-c15-16(r750)	GAM-50-8(r750)
Rack capacity (ea / 4)	30 / 120	30 / 120	8 / 32	20 / 80	20 / 80	16 / 64	16 / 64	16 / 64	8 / 32
Rack hole dimension ( $\Phi$ x L,mm)	13 x 56.5	13 x 85	17.2 x 57	17.2 x 85	17.2 x 85	17.5 x 32	17.5 x 32	17.5 x 85	29.5 x 85
Rack hole bottom type	Round	Round	Round	Round	Round	Conical	Conical	Conical	Round
Max. height tube fit (mm)	136	136	136	136	136	139	139	139	136
Max. radius (mm)*	197	197	197	197	197	200	200	200	197
Max. RCF (g-force)*	2,894	2,894	2,894	2,894	2,894	2,898	2,898	2,898	2,854

Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	50 mL conical	50 mL conical (skirted)	250 mL	250 mL conical	500 mL conical	500
Tube Dimension ( $\Phi$ x L, mm)	28.5 x 83	28.5 x 78.5	29.5 x 118	29.5 x 118	29.5 x 118	60 x 163	96.2 x 147	73.5 x 142
Adapter				 with GAS-sc50(c50)				
Cat. No.	GAM-c50-5(r750)	GAM-c50-5(r750)	GAM-c50-5(r750)	GAM-c50-5(r750)	GAS-250(r750)	GAS-c250(r750)	GAS-c500(r750)	GAS-500(r750)
Rack capacity (ea / 4)	5 / 20	5 / 20	5 / 20	5 / 20	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension ( $\Phi$ x L,mm)	29.5 x 58.5	29.5 x 58.5	29.5 x 85	29.5 x 67.5	62.5 x 87	61 x 93	98 x 94	74.1 x 92.5
Rack hole bottom type	Conical	Conical	Conical	Flat	Flat	Conical	Conical	Flat
Max. height tube fit (mm)	139	139	139	147.5	147	165	165	155
Max. radius (mm)*	200	200	200	151.6	197	200	200	196.5
Max. RCF (g-force)*	2,898	2,898	2,898	2,712	2,854	2,898	2,898	2,847



Microplate Holder Bucket,  
**GLP-mw-r750**

Max. RPM / RCF : 3,600 / 2,485  
 Max. Radius (mm) : 171.5  
 Hole dimension (w x d x h,mm) : 86.5 x 128.5 x 80  
 Max. height for tube fit (mm) : 80  
 Hole bottom type : Flat bottom with Stainless steel & ABS pad



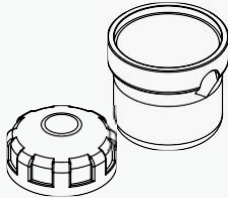
Tube	MTP	DWP
Tube capacity (mL)		
Tube Dimension (Φ x L,mm)	86 x 128 x 15	86 x 128 x 60
Bucket capacity(ea / 4)	4 / 16	1 / 4

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

- 4 loadings
- Max. RPM : 4,000
- Angle from axis during rotation :  $\angle 90^\circ$
- Supplied with a lubricant



\* Only for 1580 and 1580R



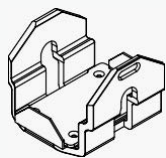
750 mL Round Bucket,  
GLB-750-750 /  
GLB-b750-750 (with a cap)

Max. RPM / RCF : 4,000 / 3,667  
Max. Radius (mm) : 205  
Hole dimension ( $\varnothing$  x L, mm) : 99 x 107  
Max. height for tube fit (mm) : 140 (w / cap), 165 (w / o cap)  
Hole bottom type : Flat  
Supplied with a cap and O-ring, No cap version is available

Tube									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	8 ~ 10 mL VT	14 mL	15	5 mL conical	5 mL conical	15 mL conical	50
Tube Dimension ( $\Phi$ x L, mm)	13 x 75	13 x 100	16 x 100	15.7 x 96	16 x 120	16 x 59	16 x 67	17 x 120	29 x 108
Adapter									
Cat. No.	GAM-5- 24(750)	GAM-5- 24(750)	GAM-10- 21(750)	GAM-15- 19(750)	GAM-15- 19(750)	GAM-c15- 14(750)	GAM-c15- 14(750)	GAM-c15- 14(750)	GAM-50- 7(750)
Rack capacity (ea / 4)	24 / 96	24 / 96	21 / 84	7 / 28	19 / 76	10 / 40	10 / 40	14 / 56	7 / 28
Rack hole dimension ( $\Phi$ x L, mm)	13.2 x 58	13.2 x 85	16 x 85	17.2 x 59	17.2 x 85	17 x 37	17 x 37	17 x 85	29.2 x 87
Rack hole bottom type	Round	Round	Round	Round	Round	Conical	Conical	Conical	Round
Max. height tube fit (mm)	136	136	136	136	136	140	140	140	136
Max. radius (mm)*	201	201	201	201	201	205	205	205	201
Max. RCF (g-force)*	3,595	3,595	3,595	3,595	3,595	3,667	3,667	3,667	3,595

Tube							
Tube capacity (mL)	50 mL conical	50 mL conical (skirted)	250	250 mL conical	500 mL conical	500	750
Tube Dimension ( $\Phi$ x L, mm)	29.5 x 118	29.5 x 118	61.5 x 128	60 x 163	96.2 x 147	73.5 x 142	97 x 152
Adapter							None
Cat. No.	GAM-c50- 5(750)	GAM-c50- 5(750)	GAS- 250(750)	GAS- c250(750)	GAS- c500(750)	GAS- 500(750)	-
Rack capacity (ea / 4)	5 / 20	5 / 20	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension ( $\Phi$ x L, mm)	29.2 x 88	29.2 x 70	62.3 x 87	60.5 x 125	95.6 x 58	75.5 x 98.7	-
Rack hole bottom type	Conical	Flat	Flat	Conical	Conical	Flat	-
Max. height tube fit (mm)	140	122	136	165	165	155	165
Max. radius (mm)*	205	190.7	201	205	205	201.5	205
Max. RCF (g-force)*	3,667	3,411	3,595	3,667	3,667	3,604	3,667

\* Depending on the size of cap, there is a possibility of not fit-in.



Microplate Holder Bucket,  
**GLP-mw-750**

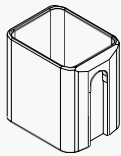
Max. RPM / RCF : 4,000 / 3,068  
 Max. Radius (mm) : 171.5  
 Hole dimension (w x d x h, mm) : 86.5 x 128.5 x 80  
 Max. height for tube fit (mm) : 80  
 Hole bottom type : Flat bottom with Stainless steel & ABS pad



Tube	MTP	DWP
Tube capacity (mL)		
Tube Dimension (Φ x L,mm)	86 x 128 x 15	86 x 128 x 60
Bucket capacity(ea / 4)	4 / 16	1 / 4

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

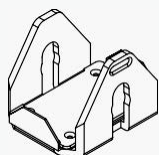
- 4 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant



250 mL Rectangular Bucket,  
GLB-r250-r250

Max. RPM / RCF : 4,000 / 3,134  
 Max. Radius (mm) : 175.2  
 Hole dimension (w x d x h, mm) : 86 x 70.3 x 98.5  
 Max. height for tube fit (mm) : 130  
 Hole bottom type : Flat

Tube								
Tube capacity (mL)	1.5/2.0	2.0 ~ 4 mL VT	4 ~ 7 mL VT	14 mL	8 ~ 10 mL VT	15	15 mL conical	50
Tube Dimension (Φ x L, mm)	11 x 38	13 x 75	13 x 100	15.7 x 96	16 x 100	16 x 120	17 x 120	29 x 108
Adapter								
Cat. No.	GAM-m2.0- 20(r250)	GAM-5- 12(r250)	GAM-5- 12(r250)	GAM-15- 12(r250)	GAM-15- 12(r250)	GAM-15- 12(r250)	GAM-c15- 9(r250)	GAM-50- 4(r250)
Rack capacity (ea / 4)	20 / 80	12 / 48	12 / 48	6 / 24	12 / 48	12 / 48	9 / 36	4 / 16
Rack hole dimension (Φ x L,mm)	11.3 x 39	13.5 x 58	13.5 x 80	17.5 x 59	17.5 x 90	17.5 x 90	17.5 x 90	30.2 x 90
Rack hole bottom type	Round	Round	Round	Round	Round	Round	Conical	Round
Max. height tube fit (mm)	115	120	120	120	120	120	120	120
Max. radius (mm)*	170	173.2	173.2	173.2	173.2	173.2	175.2	173.2
Max. RCF (g-force)*	3,041	3,095	3,095	3,095	3,095	3,095	3,134	3,095
Tube								
Tube capacity (mL)	25mL conical	25mL conical	50 mL conical	50 mL conical (skirted)	15	85	250 mL	
Tube Dimension (Φ x L, mm)	28.5 x 83	28.5 x 78.5	29.5 x 118	29.5 x 118	16 x 120	38 x 106	61.5 x 128	
Adapter								
Cat. No.	GAM-c50- 3(r250)	GAM-c50- 3(r250)	GAM-c50- 3(r250)	GAM- sc50(r250)	GAM-85- 2(r250)	GAM-85- 2(r250)	GAS- 250(r250)	
Rack capacity (ea / 4)	3 / 12	3 / 12	3 / 12	4/16	2 / 8	2 / 8	1 / 4	
Rack hole dimension (Φ x L,mm)	30.5 x 60	30.5 x 60	30.5 x 90	29.8 x 93.5	17 x 86.5	38.5 x 86.5	62.5 x 87	
Rack hole bottom type	Conical	Conical	Conical	Flat	Round	Round	Flat	
Max. height tube fit (mm)	120	120	120	126	120	120	130	
Max. radius (mm)*	175.2	175.2	175.2	172	172.5	172.5	173	
Max. RCF (g-force)*	3,134	3,134	3,134	3,077	3,086	3,086	3,095	



Microplate Holder Bucket,  
GLP-mw-r250

Max. RPM / RCF : 4,000 / 2,737  
 Max. Radius (mm) : 153  
 Hole dimension (w x d x h,mm) : 86.5 x 128.5 x 80  
 Max. height for tube fit (mm) : 80  
 Hole bottom type : Flat bottom with Stainless steel & ABS pad



Tube	MTP	DWP
Tube capacity (mL)		
Tube Dimension (Φ x L,mm)	86 x 128 x 15	86 x 128 x 60
Bucket capacity(ea / 4)	4 / 16	1 / 4



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

- 4 loadings
- Max. RPM : 5,000
- Angle from axis during rotation :  $\angle 90^\circ$
- Supplied with a lubricant



250 mL Round Bucket,  
GLB-250-250

Max. RPM / RCF : 5,000 / 5,394  
 Max. Radius (mm) : 193  
 Hole dimension ( $\Phi \times L$ , mm) : 62 x 109  
 Max. height for tube fit (mm) : 153  
 Hole bottom type : Flat

Tube									
Tube capacity (mL)	1.5 ~ 2.0	2.0 mL screw cap	5 mL conical	5 mL conical	4 ~ 7 mL VT	8 ~ 10 mL VT	15	15 mL conical	25 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	11 x 38	10.1x46	16 x 59	16 x 67	13 x 75	16 x 100	16 x 120	17 x 120	28.5 x 83
Adapter									
Cat. No.	GAM-m2.0-9(250)	GAM-m2.0-9(250)	GAM-c5-4(250)	GAM-c5-4(250)	GAM-7-8(250)	GAM-10-7(250)	GAM-15-4(250)	GAM-c15-4(250)	GAS-c25(250)
Rack capacity (ea / 4)	9 / 36	9 / 36	4/16	4/16	8 / 32	7 / 28	4 / 16	4 / 16	1 / 4
Rack hole dimension ( $\Phi \times L$ ,mm)	11 x 39	11 x 39	17.2 x 52	17.2 x 52	13.5 x 60	16 x 80	17.5 x 103.5	17.2 x 106.5	29.5 x 61.5
Rack hole bottom type	Round	Round	Conical	Conical	Round	Round	Round	Conical	Conical
Max. height tube fit (mm)	150	150	153	153	150	150	150	153	153
Max. radius (mm)*	190	190	193	193	190	190	190	193	193
Max. RCF (g-force)*	5,311	5,311	5,394	5,394	5,311	5,311	5,311	5,394	5,394
Tube									
Tube capacity (mL)	25mL conical	30	50	50 mL conical	50mLconical (Skirted)	85	100	250 mL conical	250
Tube Dimension ( $\Phi \times L$ , mm)	28.5 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115	60 x 163	61.5 x 128
Adapter									None
Cat. No.	GAS-c25(250)	GAM-30-3(250)	GAM-50-2(250)	GAS-c50(250)	GAS-sc50(250)	GAS-85(250)	GAS-100(250)	GAS-c250(250)	-
Rack capacity (ea / 4)	1 / 4	3 / 12	2 / 8	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension ( $\Phi \times L$ ,mm)	29.5 x 61.5	26 x 85	29.5 x 90	29.8 x 98	29.8 x 93	38.5 x 96	44.2 x 93	61.5 x 44.5	-
Rack hole bottom type	Conical	Round	Round	Conical	Flat	Round	Round	Conical	-
Max. height tube fit (mm)	153	148	148	153	148	148	148	153	153
Max. radius (mm)*	193	188	188	193	188	188	188	193	193
Max. RCF (g-force)*	5,394	5,255	5,255	5,394	5,255	5,255	5,255	5,394	5,394



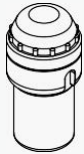


## Swing Rotor, GRS-G-100-6

- 6 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant



**Bio-Safe** Porton Down Certified

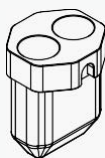


100 mL Bucket with a Cap,  
**GLBB-b100-100**

Max. RPM / RCF : 4,000 / 3,105  
 Max. Radius (mm) : 173.6  
 Hole dimension ( $\varnothing$  x L, mm) : 47 x 99  
 Max. height for tube fit (mm) : 120 (w/ cap) / 130 (w/o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and O-ring. No cap version is available












<b>Tube</b>									
Tube capacity (mL)	1.5 ~ 2.0	2.0 mL screw cap	5 mL conical	5 mL conical	2.6 ~ 7	4 ~ 10	15	15 mL conical	15 mL conical
Tube Dimension ( $\Phi$ x L, mm)	11 x 38	10.1x46	16 x 59	16 x 67	13 x 75	16 x 100	16 x 120	17 x 120	17 x 120
<b>Adapter</b>									
Cat. No.	GAM-m2.0-6 (b100)	GAM-m2.0-6 (b100)	GAM-c5-3(b100)	GAM-c5-3(b100)	GAM-7-5(b100)	GAM-10-5(b100)	GAM-15-3(100)	GAM-c15-3 (100)	GAS-c15(b100)
Rack capacity (ea / 6)	6 / 36	6 / 36	3 / 18	3 / 18	5 / 30	5 / 30	3 / 18	3 / 18	1 / 6
Rack hole dimension ( $\Phi$ x L,mm)	11 x 39	11 x 39	17.2 x 52	17.2 x 52	13.5 x 60	16 x 60	17.5 x 105	17.2 x 106.5	17.2 x 106.5
Rack hole bottom type	Round	Round	Conical	Conical	Flat	Flat	Flat	Conical	Conical
Max. height tube fit (mm)	115	115	75	75	115	115	120	120	120
Max. radius (mm)*	168.6	168.6	110.1	110.1	168.6	168.6	170.6	173.6	173.6
Max. RCF (g-force)*	3,016	3,016	1,969	1,969	3,016	3,016	3,052	3,105	3,105

<b>Tube</b>								
Tube capacity (mL)	25 mL conical	25 mL conical	30	50	50 mL conical	50 mL conical (Skirted)	85	100
Tube Dimension ( $\Phi$ x L, mm)	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115
<b>Adapter</b>								
Cat. No.	GAS-c25(b100)	GAS-c25(b100)	GAS-30(b100)	GAS-50(b100)	GAS-c50(b100)	GAS-sc50(b100)	GAS-85(b100)	GAS-100(100)
Rack capacity (ea / 6)	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6
Rack hole dimension ( $\Phi$ x L,mm)	17.2x52	17.2x52	26x86	29.5 x 95.9	30 x 100	29.8x100	38.5 x 96.4	44.2 x 93
Rack hole bottom type	Conical	Conical	Round	Conical	Conical	Flat	Round	Round
Max. height tube fit (mm)	118	118	118	118	120	120	118	118
Max. radius (mm)*	172.1	172.1	172.1	171.6	171.6	171.6	172.1	168.6
Max. RCF (g-force)*	3,079	3,079	3,079	2,737	2,737	2,737	3,079	3,016

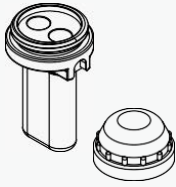


50 mL Conical Bucket,  
GLB-dc50-100

Max. RPM / RCF : 4,000 / 3,105  
 Max. Radius (mm) : 173.6  
 Hole dimension (Ø x L, mm) : 30 x 89  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Conical




Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension (Φ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Bucket capacity(ea / 6)	2/12	2/12	2/12	2/12	2/12	2/12
Adaptorholedimension(ΦxL,mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	171	137	137	162.4	162.6	173.6
Max. RCF (g-force)	3,059	2,451	2,451	2,905	2,909	3,105

**Bio-Safe** Manufacturer Validated

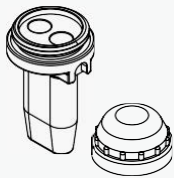


15 mL Dual Round Bucket  
with a Cap,  
**GLBB-bd15-100**

Max. RPM / RCF : 4,000 / 3,032  
Max. Radius (mm) : 169.5  
Hole dimension (Ø x L, mm) : 17 x 87  
Max. height for tube fit (mm) : 123 (w/ cap) / 127 (w/o cap)  
Hole bottom type : Round  
Supplied with a cap and O-ring





Tube			
Tube capacity (mL)	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L,mm)	16 x 100	16 x 114	16 x 120
Bucket capacity (ea / 6)	2 / 12	2 / 12	2 / 12
Max. height tube fit (mm)	123	123	123
Max.radius(mm)	169.5	169.5	169.5
Max. RCF (g-force)	3,032	3,032	3,032

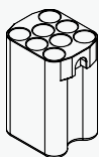
**Bio-Safe** Porton Down Certified



15 mL Dual Conical Bucket  
with a Cap,  
**GLBB-bdc15-100**

Max. RPM / RCF : 4,000 / 3,105  
Max. Radius (mm) : 173.6  
Hole dimension (Ø x L, mm) : 17 x 97.5  
Max. height for tube fit (mm) : 120 (w/ cap) / 125 (w/o cap)  
Hole bottom type : Conical  
Supplied with a cap and O-ring, No cap version is available

Tube				
Tube capacity (mL)	15 mL glass	15 mL open top	15	15
Tube Dimension (Φ x L,mm)	16 x 100	16 x 114	16 x 120	17 x 97.5
Bucket capacity (ea / 6)	2 / 12	2 / 12	2 / 12	2 / 12
Max. height tube fit (mm)	123	123	123	120
Max.radius(mm)	169.5	169.5	169.5	173.6
Max. RCF (g-force)	3,032	3,032	3,032	3,105
Hole bottom type	Round	Round	Round	Conical



Vacutainer 10 mL Bucket,  
GLB-15-8-100

Max. RPM / RCF : 4,000 / 3,059  
 Max. Radius (mm) : 171  
 Hole dimension (Ø x L, mm) : 17 x 86  
 Hole bottom type : Flat with rubber pad  
 Max. height for tube fit (mm) : 115  
 Supplied with 3.0 mm thick NBR rubber pad

Tube									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 100	16 x 114	16 x 120
Adapter						None	None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-	-
Bucket capacity (ea / 6)	8 / 48	8 / 48	4 / 24	4 / 24	4 / 24	8 / 48	8 / 48	8 / 48	2 / 12
Adaptor hole dimension (Φ x L, mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-	-
Adaptor hole bottom type	Round	Open	Conical	Conical	Round	-	-	-	-
Max. height tube fit (mm)	88	115	75	75	103.5	115	115	115	125(center)
Max. radius (mm)*	144	171	130	130	159.5	171	171	171	171
Max. RCF (g-force)*	2,576	3,059	2,325	2,325	2,853	3,059	3,059	3,059	3,059



# 1696R Table-top High-speed Centrifuge



## Features

- Speed : 16,000 rpm (27,590 xg); 5,000 rpm (5,374 xg)
- Motorized lid mechanics enabling a gentle touch for the lid's opening and closure
- Single action fastening of fixed angle rotor to motor shaft with lid coupling.
- Highly visible display screen and numeric keys with integrated soft touch buttons for easy maintenance and quick setting
- Fast cooling allowing a temperature drop to 4°C within 5 minutes : function for quick start of cooled samples
- Equipped with a side tool box



## Technical Specifications

<b>Max. RPM/PCF for Fixed Angle</b>	16,000 rpm / 27,590 xg	<b>RCF/RPM Conversion</b>	Yes
<b>Max. RPM/PCF for Swing-out</b>	5,000 rpm / 5,394 xg	<b>ACC/DEC Ramps</b>	9/10
<b>Max. Capacity for Fixed Angle</b>	6 x 250 mL, 24 x 15 mL, 48 x 1.5/2.0 mL, 20 x 5.0 mL	<b>Program Memory</b>	100, 4 easy program save/call
<b>Max. Capacity for Swing-out</b>	4 x 1,000 mL, 4 x 2 x 250 mL, 4 x 29 x 15 mL	<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)
<b>Temp. Range (°C)</b>	-11°C to 40°C	<b>Power Requirement</b>	2.0 kVA
<b>Fast Cool Button</b>	Yes	<b>Dimension (W x D x H)</b>	775 x 695 x 395 mm
<b>Time Control</b>	Pulse, timed <10 hr or continuous	<b>Net Weight</b>	116 kg
<b>Time Counting Range</b>	Selectable, at set speed or from starting	<b>CE MARK</b>	Yes
<b>Noise Level (dependent on rotor)</b>	≤60 dB (GRS-B-750-4 : ≤70 dB)	<b>Cat No.</b>	GZ-1696R

## Fixed Angle Rotor, GRF-B-250-6

- Capacity : 6 x 250 mL plus 6 x 15 mL
- Max. RPM / RCF 8.500 / (9,144; 8,293)
- Hole angle from axis during rotation :  $\leq 25^\circ$
- Hole dimension ( $\varnothing$  x L,mm) : 62 x 100 (250 mL) / 17.1 x 94 (15 mL)
- Hole bottom type : Flat (250 mL) / Round (15 mL)
- Max. height for tube fit (mm) : 130 (250 mL) / 120 (15 mL)
- Supplied with a lid with protruding screw for coupling into motor shaft


















Tube		
Tube capacity (mL)	15	250
Tube Dimension ( $\Phi$ x L,mm)	16 x 120	61.5 x 128
Max. radius (mm)	131.3	134
Max. RCF (g-force)	9,395	9,588

## Fixed Angle Rotor, GRF-B-85-6

- Capacity : 6 x 85 mL
- Max. RPM / RCF : 12,000 / 16,019
- Hole angle from axis during rotation :  $\leq 25^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 38.5 x 100
- Hole bottom type : Round
- Max. height for tube fit (mm) : 125
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted














Tube								
Tube capacity (mL)	15	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical	85 mL
Tube Dimension ( $\Phi$ x L, mm)	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	38 x 106
Adapter								None
Cat No.	GAS-15(85)	GAS-c15(85)	GAS-c25(85)	GAS-c25(85)	GAS-30(85)	GAS-50(85)	GAS-c50(85)	-
Adaptorholedimension( $\Phi$ xL,mm)	17 x 94	17 x 98	29.5 x 62.5	29.5 x 62.5	26 x 85.4	29 x 95	29.5 x 98	-
Adaptor hole bottom type	Round	Conical	Conical	Conical	Round	Round	Conical	-
Max. radius (mm)*	92.5	90.5	80.9	80.9	92.2	93.5	91.5	99.5
Max. RCF (g-force)*	14,843	14,570	13,024	13,024	14,843	15,053	14,731	16,019

## Fixed Angle Rotor, GRF-B-50-8

- Capacity : 8 x 50 mL
- Max. RPM / RCF : 15,000 / 25,910
- Hole angle from axis during rotation :  $\angle 30^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 29.5 x 93.2
- Hole bottom type : Round
- Max. height for tube fit (mm) : 120
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted














Tube						
Tube capacity (mL)	15	15 mL conical	25 mL conical	25 mL conical	30	50
Tube Dimension ( $\Phi \times L$ , mm)	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108
Adapter						None
Cat No.	GAS-15(50)	GAS-c15(50)	GAS-c25(50)	GAS-c25(50)	GAS-30(50)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	17 x 94	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	-
Adaptor hole bottom type	Round	Conical	Conical	Conical	Round	-
Max. radius (mm)	93.5	96	81	81	96.5	103
Max. RCF (g-force)	23,520	24,149	20,376	20,376	24,275	25,910

## Fixed Angle Rotor, GRF-B-c50-8

- Capacity : 8 x 50 mL Conical
- Max. RPM / RCF : 13,000 / 20,784
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 29.8 x 108.6
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 130
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted








Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	Round
Max. radius (mm)	105.2	94.1	94.1	106.4	107.3	110
Max. RCF (g-force)	19,877	17,779	17,779	20,103	20,273	20,784

## Fixed Angle Rotor, GRF-B-c15-12

- Capacity : 12 x 15 mL Conical
- Max. RPM / RCF : 15,000 / 25,910
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\Phi \times L$ , mm) : 17.2 x 107.2
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 125
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted





Tube			
Tube capacity (mL)	5 mL conical	5 mL conical	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	16 x 59	16 x 67	17 x 120
Adapter			None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	14.8 x 20	14.8 x 20	-
Adaptor hole bottom type	Conical	Conical	-
Max. radius (mm)	75.8	75.8	103
Max. RCF (g-force)	19,067	19,067	25,910



## Fixed Angle Rotor, GRF-B-m5.0-20

- Capacity : 20 x 5.0 mL
- Max. RPM / RCF : 13,500 / 22,209
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 17 x 53
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 68
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted










Tube		
Tube capacity (mL)	5.0	5.0
Tube Dimension ( $\Phi \times L$ , mm)	16 x 59	16 x 67
Max. radius (mm)	109	109
Max. RCF (g-force)	22,209	22,209

## Fixed Angle Rotor, GRF-B-m2.0-48

- Capacity : 48 x 1.5/2.0 mL (24 outer, 24 inner)
- Max. RPM / RCF : 15,000 / 24,602
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted









Tube					
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL filter tube	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	11 x 38	10.1 x 46
Adapter			None	None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	6.5 x 23	8 x 31	8 x 31	-	-
Adaptor hole bottom type	Open	Open	Open	-	-
Max. radius (mm)*	Inner : 67 Outer : 80.5	Inner : 74 Outer : 87.5	Inner : 84.3 Outer : 97.8	Inner : 84.3	Inner : 84.3 Outer : 97.8
Max. RCF (g-force)*	Inner : 16,854 Outer : 20,250	Inner : 18,615 Outer : 22,011	Inner : 21,206 Outer : 24,602	Inner : 21,206	Inner : 21,206 Outer : 24,602

## Fixed Angle Rotor, GRF-B-m2.0-30

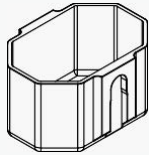
- Capacity : 30 x 1.5/2.0 mL
- Max. RPM / RCF : 16,000 / 27,590
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 11.1 x 39
- Hole bottom type : Round
- Max. height for tube fit (mm) : 52
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted



				
<b>Tube</b>				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi \times L$ , mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
<b>Adapter</b>			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)	79	86	96.4	96.4
Max. RCF (g-force)	22,610	24,614	27,590	27,590















## Swing Rotor, GRS-B-1000-4







- 4 loadings
- Max. RPM : 3,700
- Angle from axis during rotation :  $\angle 90^\circ$
- Rotor dimension / weight ( $\varnothing \times L$ , mm / g) : 337 x 83 / 5,120
- Supplied with a lubricant

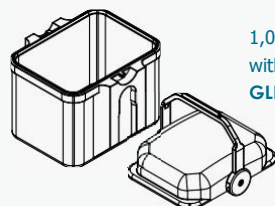


1,000 mL Hi-capacity Bucket,  
GLB-h1000-1000

Max. RPM / RCF : 3,700 / 3,092  
 Max. Radius (mm) : 202  
 Hole dimension (w x d x h, mm) : 110 x 168.7 x 95  
 Max. height for tube fit (mm) : 160  
 Hole bottom type : Flat















Tube							
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	8 ~ 10 mL VT	14 mL	15	15 mL conical	50
Tube Dimension ( $\Phi \times L$ , mm)	13 x 75	13 x 100	16 x 100	15.7 x 96	16 x 120	17 x 120	29 x 108
Adapter							
Cat. No.	GAM-5-48(h1000)	GAM-5-48(h1000)	GAM-10-38(h1000)	GAM-10-38(h1000)	GAM-15-29(h1000)	GAM-c15-29(h1000)	GAM-50-13(h1000)
Rack capacity (ea / 4)	48 / 192	48 / 192	38 / 152	18 / 72	29 / 116	29 / 116	13 / 52
Rack hole dimension ( $\Phi \times L$ , mm)	13.2 x 50	13.2 x 85	16 x 85	16 x 40	17.2 x 85	17 x 90	29.2 x 87
Rack hole bottom type	Round	Round	Round	Round	Round	Conical	Round
Max. height tube fit (mm)	125	125	125	125	130	130	130
Max. radius (mm)*	192	192	192	192	198	202	198
Max. RCF (g-force)*	2,939	2,939	2,939	2,939	3,030	3,092	3,030







Tube			
Tube capacity (mL)	50 mL conical	50 mL conical (skirted)	250
Tube Dimension ( $\Phi \times L$ , mm)	29.5 x 118	29.5 x 118	61.5 x 128
Adapter		 with GAS-sc50(c50)	
Cat. No.	GAM-c50-13(h1000)	GAM-c50-13(h1000)	GAM-250-2(h1000)
Rack capacity (ea / 4)	13 / 52	9 / 36	2 / 8
Rack hole dimension ( $\Phi \times L$ , mm)	29.5 x 92.5	29.5 x 78	62 x 87
Rack hole bottom type	Conical	Flat	Flat
Max. height tube fit (mm)	130	143	155
Max. radius (mm)*	202	184.5	198
Max. RCF (g-force)*	3,092	2,824	3,030

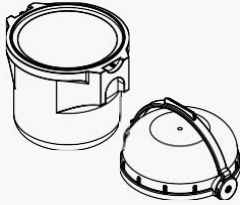


1,000 mL Rectangular Bucket  
with a Click seal cap,  
GLB- br1000-1000

Max. RPM / RCF : 3,700 / 3,084  
 Max. Radius (mm) : 201.5  
 Hole dimension (w x d x h, mm) : 97 x 134 x 98  
 Max. height for tube fit (mm) : 125 (w / cap), 143 (w / o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and O-ring, No cap version is also available



















Tube							
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	8 ~ 10 mL VT	15	15 mL conical	50	50 mL conical
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	16 x 100	16 x 120	17 x 120	29 x 108	29.5 x 118
Adapter							
Cat. No.	GAM-5-40(r1000)	GAM-5-40(r1000)	GAM-10-35(r1000)	GAM-15-20(r1000)	GAM-c15-20(r1000)	GAM-50-10(r1000)	GAM-c50-8(r1000)
Rack capacity (ea / 4)	40 / 160	40 / 160	35 / 140	20 / 80	20 / 80	10 / 40	8 / 32
Rack hole dimension (Φ x L,mm)	13.2 x 55	13.2 x 80	16 x 80	17.2 x 85	17 x 90	29.2 x 87	29.5 x 92.5
Rack hole bottom type	Round	Round	Round	Round	Conical	Round	Conical
Max. height tube fit (mm)	116	116	118	120	120	118	120
Max. radius (mm)*	193	193	198.5	198.5	201.5	198.5	201.5
Max. RCF (g-force)*	2,954	2,954	3,038	3,038	3,084	3,038	3,084















Tube			
Tube capacity (mL)	50 mL conical (skirted)	MTP	DWP
Tube Dimension (Φ x L, mm)	29.5 x 118	86 x 128 x 15	86 x 128 x 60
Adapter	 with GAS-sc50(c50)		
Cat. No.	GAM-c50-8(r1000)	GLP-mw-r1000	GLP-mw-r1000
Rack capacity (ea / 4)	8 / 32	6 / 24	1 / 4
Rack hole dimension (Φ x L,mm)	29.5 x 75	86 x 128.5	86 x 128.5
Rack hole bottom type	Flat	Flat	Flat
Max. height tube fit (mm)	120	92	92
Max. radius (mm)*	184	196.5	196.5
Max. RCF (g-force)*	2,816	3,008	3,008



1000 mL Round Bucket  
with a Click seal cap,  
GLB-b1000-1000

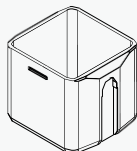
Max. RPM / RCF : 3,700 / 3,337  
 Max. Radius (mm) : 218  
 Hole dimension (Ø x L, mm) : 99 x 120  
 Max. height for tube fit (mm) : 155 (w / cap), 170 (w / o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and O-ring, No cap version is also available

Tube									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	8 ~ 10 mL VT	14 mL	15	5 mL conical	5 mL conical	15 mL conical	50
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	16 x 100	15.7 x 96	16 x 120	16 x 59	16 x 67	17 x 120	29 x 108
Adapter									
Cat. No.	GAM-5-24(750)	GAM-5-24(750)	GAM-10-21(750)	GAM-15-19(750)	GAM-15-19(750)	GAM-c15-14(750)	GAM-c15-14(750)	GAM-c15-14(750)	GAM-50-7(750)
Rack capacity (ea / 4)	24 / 96	24 / 96	21 / 84	7 / 28	19 / 76	10 / 40	10 / 40	14 / 56	7 / 28
Rack hole dimension (Φ x L,mm)	13.2 x 58	13.2 x 85	16 x 85	17.2 x 59	17.2 x 85	17 x 37	17 x 37	17 x 85	29.2 x 87
Rack hole bottom type	Round	Round	Round	Round	Round	Conical	Conical	Conical	Round
Max. height tube fit (mm)	144	144	144	144	144	148	148	148	144
Max. radius (mm)*	214	214	214	214	214	218	218	218	214
Max. RCF (g-force)*	3,275	3,275	3,275	3,275	3,275	3,337	3,337	3,337	3,275

Tube								
Tube capacity (mL)	50 mL conical	50 mL conical (skirted)	250	250 mL conical	500 mL conical	500	750	1000
Tube Dimension (Φ x L, mm)	29.5 x 118	29.5 x 118	61.5 x 128	60 x 163	96.2 x 147	73.5 x 142	97 x 152	97 x 168
Adapter							None	None
Cat. No.	GAM-c50-5(750)	GAM-c50-5(750)	GAS-250(750)	GAS-c250(750)	GAS-c500(750)	GAS-500(750)	-	-
Rack capacity (ea / 4)	5 / 20	5 / 20	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension (Φ x L,mm)	29.2 x 88	29.2 x 70	62.3 x 87	60.5 x 125	95.6 x 58	75.5 x 98.7	-	-
Rack hole bottom type	Conical	Flat	Flat	Conical	Conical	Flat	-	-
Max. height tube fit (mm)	148	122	155	170	170	160	170	170
Max. radius (mm)*	218	190.7	214	218	218	214.5	218	218
Max. RCF (g-force)*	3,337	2,919	3,275	3,337	3,337	3,283	3,337	3,337

## Swing Rotor, GRS-B-r750-4

- 4 loadings
- Max. RPM : 3,600
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant

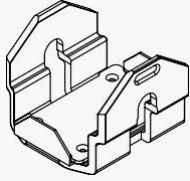


750 mL Rectangular Bucket,  
GLB-r750-r750

Max. RPM / RCF : 3,600 / 2,898  
 Max. Radius (mm) : 175.2  
 Hole dimension (w x d x h, mm) : 99 x 99 x 98  
 Max. height for tube fit (mm) : 165  
 Hole bottom type : Flat

Tube									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	14 mL	8 ~ 10 mL VT	15	5 mL conical	5 mL conical	15 mL conical	50
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	15.7 x 96	16 x 100	16 x 120	16 x 59	16 x 67	17 x 120	29 x 108
Adapter									
Cat. No.	GAM-5-30(r750)	GAM-5-30(r750)	GAM-15-20(r750)	GAM-15-20(r750)	GAM-15-20(r750)	GAM-c15-16(r750)	GAM-c15-16(r750)	GAM-c15-16(r750)	GAM-50-8(r750)
Rack capacity (ea / 4)	30 / 120	30 / 120	8 / 32	20 / 80	20 / 80	16 / 64	16 / 64	16 / 64	8 / 32
Rack hole dimension (Φ x L,mm)	13 x 56.5	13 x 85	17.2 x 57	17.2 x 85	17.2 x 85	17.5 x 32	17.5 x 32	17.5 x 85	29.5 x 85
Rack hole bottom type	Round	Round	Round	Round	Round	Conical	Conical	Conical	Round
Max. height tube fit (mm)	136	136	136	136	136	139	139	139	136
Max. radius (mm)*	197	197	197	197	197	200	200	200	197
Max. RCF (g-force)*	2,854	2,854	2,854	2,854	2,854	2,898	2,898	2,898	2,854



Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	50 mL conical	50 mL conical (skirted)	250	250 mL conical	500 mL conical	500
Tube Dimension (Φ x L, mm)	28.5 x 83	28.5 x 78.5	29.5 x 118	29.5 x 118	61.5 x 128	60 x 163	96.2 x 147	73.5 x 142
Adapter								None
Cat. No.	GAM-c50-5(r750)	GAM-c50-5(r750)	GAM-c50-5(r750)	GAM-c50-5(r750) with GAS-sc50(c50)	GAS-250(r750)	GAS-c250(r750)	GAS-c500(r750)	GAS-500(r750)
Rack capacity (ea / 4)	5 / 20	5 / 20	5 / 20	5 / 20	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension (Φ x L,mm)	29.5 x 58.5	29.5 x 58.5	29.5 x 85	29.5 x 67.5	62.5 x 87	61 x 93	98 x 94	74.1 x 92.5
Rack hole bottom type	Conical	Conical	Conical	Flat	Flat	Conical	Conical	Flat
Max. height tube fit (mm)	139	139	139	147.5	147	165	165	155
Max. radius (mm)*	200	200	200	151.6	197	200	200	196.5
Max. RCF (g-force)*	2,898	2,898	2,898	2,712	2,854	2,898	2,898	2,847



Microplate Holder Bucket,  
GLP-mw-r750

Max. RPM / RCF : 3,600 / 2,485  
 Max. Radius (mm) : 171.5  
 Hole dimension (w x d x h, mm) : 86.5 x 128.5 x 80  
 Max. height for tube fit (mm) : 80  
 Hole bottom type : Flat bottom with Stainless steel & ABS pad

Tube

		
	MTP	DWP
Tube capacity (mL)		
Tube Dimension ( $\Phi$ x L,mm)	86 x 128 x 15	86 x 128 x 60
Bucket capacity (ea / 4)	4 / 16	1 / 4

## Swing Rotor, GRS-B-750-4

- 4 loadings
- Max. RPM : 4,600
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant



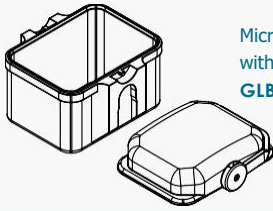
750 mL Round Bucket with a Click seal cap  
**GLB-b750-750 (Without cap)**  
**GLB-b750-750B**

Max. RPM / RCF : 4,600 / 4,850  
 Max. Radius (mm) : 205  
 Hole dimension ( $\Phi \times L$ , mm) : 99 x 107  
 Max. height for tube fit (mm) : 140 (w / cap), 165 (w / o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and O-ring, No cap version is also available

Tube	2.0 ~ 4 mL	4 ~ 7 mL	14 mL	8 ~ 10 mL	15	5 mL	5 mL	15 mL	50
Tube capacity (mL)	VT	VT		VT		conical	conical	conical	
Tube Dimension ( $\Phi \times L$ , mm)	13 x 75	13 x 100	15.7 x 96	16 x 100	16 x 120	16 x 59	16 x 67	17 x 120	29 x 108
Adapter									
Cat. No.	GAM-5- 24(750)	GAM-5- 24(750)	GAM-10-21 (750)	GAM-10-21 (750)	GAM-15-19 (750)	GAM- c15-14 (750)	GAM- c15-14 (750)	GAM- c15-14 (750)	GAM-50-7 (750)
Rack capacity (ea / 4)	24 / 96	24 / 96	7 / 28	21 / 84	19 / 76	10 / 40	10 / 40	14 / 56	7 / 28
Rack hole dimension ( $\Phi \times L$ ,mm)	13.2 x 58	13.2 x 85	17.2 x 59	16 x 85	17.2 x 85	17 x 37	17 x 37	17 x 85	29.2 x 87
Rack hole bottom type	Round	Round	Round	Round	Round	Conical	Conical	Conical	Round
Max. height tube fit (mm)	129	129	129	129	129	133	133	133	129
Max. radius (mm)*	201	201	201	201	201	205	205	205	201
Max. RCF (g-force)*	4,755	4,755	4,755	4,755	4,755	4,850	4,850	4,850	4,755





Tube	50 mL	50 mL conical	250	250 mL	500 mL	500	750
Tube capacity (mL)	conical	(skirted)		conical	conical		
Tube Dimension ( $\Phi \times L$ , mm)	29.5 x 118	29.5 x 118	61.5 x 128	60 x 163	96.2 x 147	73.5 x 142	97 x 152
Adapter							None
Cat. No.	GAM-c50-5 (750)	GAM-c50-5 (750)	GAS-250 (750)	GAS-c250 (750)	GAS-c500 (750)	GAS-500 (750)	-
Rack capacity (ea / 4)	5 / 20	5 / 20	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension ( $\Phi \times L$ ,mm)	29.2 x 88	29.2 x 70	62.3 x 87	60.5 x 125	95.6 x 58	75.5 x 98.7	-
Rack hole bottom type	Conical	Flat	Flat	Conical	Conical	Flat	-
Max. height tube fit (mm)	133	122	136	165	165	155	165
Max. radius (mm)*	205	190.7	201	205	205	201.5	205
Max. RCF (g-force)*	4,850	4,511	4,755	4,850	4,850	4,767	4,850





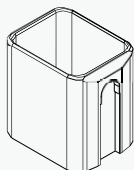
Microplate Holder Bucket  
with a Click seal cap,  
**GLB-mw-750B**

Max. RPM / RCF : 4,600 / 4,033  
 Max. Radius (mm) : 170.5  
 Hole dimension (w x d x h ,mm) : 86.5 x 128.5 x 63  
 Max. height for tube fit (mm) : 63(w / cap), 110(w / o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and an O-ring, No cap version is also available

		
Tube		
Tube capacity (mL)	MTP	DWP
Tube Dimension (Φ x L,mm)	86 x 128 x 15	86 x 128 x 60
Plate Holder		
Cat. No.	GLP-mw-750B	GLP-mw-750B
Holder capacity (ea / 4)	4 / 16	1 / 4
Holder dimension (w x d x h, mm)	86.5 x 128.5	86.5 x 128.5
Rack hole bottom type	Flat	Flat
Max. height tube fit (mm)	63 w/cap(100 w/o cap)	63 w/cap(100 w/o cap)
Max. radius (mm)*	170.5	170.5
Max. RCF (g-force)*	4,033	4,033

## Swing Rotor, GRS-B-r250-4

- 4 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant

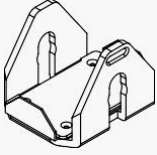


250 mL Rectangular Bucket,  
GLB-r250-r250

Max. RPM / RCF : 4,000 / 3,134  
 Max. Radius (mm) : 175.2  
 Hole dimension (w x d x h, mm) : 86 x 70.3 x 98.5  
 Max. height for tube fit (mm) : 130  
 Hole bottom type : Flat



Tube								
Tube capacity (mL)	1.5/2.0	2.0~4 mL VT	4~7 mL VT	14 mL	8~10 mL VT	15	15 mL conical	50
Tube Dimension (Φ x L, mm)	11 x 38	13 x 75	13 x 100	15.7 x 96	16 x 100	16 x 120	17 x 120	29 x 108
Adapter								
Cat. No.	GAM-m2.0- 20(r250)	GAM-5- 12(r250)	GAM-5- 12(r250)	GAM-15- 12(r250)	GAM-15- 12(r250)	GAM-15- 12(r250)	GAM-c15- 9(r250)	GAM-50- 4(r250)
Rack capacity (ea / 4)	20 / 80	12 / 48	12 / 48	6 / 24	12 / 48	12 / 48	9 / 36	4 / 16
Rack hole dimension (Φ x L,mm)	11.3 x 39	13.5 x 58	13.5 x 80	17.5 x 59	17.5 x 90	17.5 x 90	17.5 x 90	30.2 x 90
Rack hole bottom type	Round	Round	Round	Round	Round	Round	Conical	Round
Max. height tube fit (mm)	115	120	120	120	120	120	120	120
Max. radius (mm)	170	173.2	173.2	173.2	173.2	173.2	175.2	173.2
Max. RCF (g-force)	3,041	3,095	3,095	3,095	3,095	3,095	3,134	3,095

Tube							
Tube capacity (mL)	25mL conical	25mL conical	50 mL conical	50 mL conical (skirted)	15	85	250 mL
Tube Dimension (Φ x L, mm)	28.5 x 83	28.5 x 78.5	29.5 x 118	29.5 x 118	16 x 120	38 x 106	61.5 x 128
Adapter							
Cat. No.	GAM-c50- 3(r250)	GAM-c50- 3(r250)	GAM-c50- 3(r250)	GAM- sc50(r250)	GAM-85- 2(r250)	GAM-85- 2(r250)	GAS- 250(r250)
Rack capacity (ea / 4)	3 / 12	3 / 12	3 / 12	4/16	2 / 8	2 / 8	1 / 4
Rack hole dimension (Φ x L,mm)	30.5 x 60	30.5 x 60	30.5 x 90	29.8 x 93.5	17 x 86.5	38.5 x 86.5	62.5 x 87
Rack hole bottom type	Conical	Conical	Conical	Flat	Round	Round	Flat
Max. height tube fit (mm)	120	120	120	126	120	120	130
Max. radius (mm)	175.2	175.2	175.2	172	172.5	172.5	173
Max. RCF (g-force)	3,134	3,134	3,134	3,077	3,086	3,086	3,095



Microplate Holder Bucket,  
GLP-mw-r250

Max. RPM / RCF : 4,000 / 2,737  
 Max. Radius (mm) : 153  
 Hole dimension (w x d x h, mm) : 86.5 x 128.5 x 80  
 Max. height for tube fit (mm) : 80  
 Hole bottom type : Flat bottom with Stainless steel & ABS pad

Tube		
Tube capacity (mL)	MTP	DWP
Tube Dimension (Φ x L,mm)	86 x 128 x 15	86 x 128 x 60
Bucket capacity(ea / 4)	4 / 16	1 / 4

## Swing Rotor, GRS-B-250-4

- 4 loadings
- Max. RPM : 5,000
- Angle from axis during rotation :  $\angle 90^\circ$
- Supplied with a lubricant



250 mL Round Bucket,  
GLB-250-250

Max. RPM / RCF : 5,000 / 5,394  
 Max. Radius (mm) : 193  
 Hole dimension ( $\Phi \times L$ , mm) : 62 x 109  
 Max. height for tube fit (mm) : 153  
 Hole bottom type : Flat

<b>Tube</b>									
Tube capacity (mL)	1.5 ~ 2.0	2.0 mL screw cap	5 mL conical	5 mL conical	4 ~ 7 mL VT	8 ~ 10 mL VT	15	15 mL conical	25 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	11 x 38	10.1x46	16 x 59	16 x 67	13 x 75	16 x 100	16 x 120	17 x 120	28.5 x 83
<b>Adapter</b>									
Cat. No.	GAM-m2.0-9(250)	GAM-m2.0-9(250)	GAM-c5-4(250)	GAM-c5-4(250)	GAM-7-8(250)	GAM-10-7(250)	GAM-15-4(250)	GAM-c15-4(250)	GAS-c25(250)
Rack capacity (ea / 4)	9 / 36	9 / 36	4/16	4/16	8 / 32	7 / 28	4 / 16	4 / 16	1 / 4
Rack hole dimension ( $\Phi \times L$ ,mm)	11 x 39	11 x 39	17.2 x 52	17.2 x 52	13.5 x 60	16 x 80	17.5 x 103.5	17.2 x 106.5	29.5 x 61.5
Rack hole bottom type	Round	Round	Conical	Conical	Round	Round	Round	Conical	Conical
Max. height tube fit (mm)	150	150	153	153	150	150	150	153	153
Max. radius (mm)*	190	190	193	193	190	190	190	193	193
Max. RCF (g-force)*	5,311	5,311	5,394	5,394	5,311	5,311	5,311	5,394	5,394

<b>Tube</b>									
Tube capacity (mL)	25mL conical	30	50	50 mL conical	50 mL conical (Skirted)	85	100	250 mL conical	250
Tube Dimension ( $\Phi \times L$ , mm)	28.5 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115	60 x 163	61.5 x 128
<b>Adapter</b>									None
Cat. No.	GAS-c25(250)	GAM-30-3(250)	GAM-50-2(250)	GAS-c50(250)	GAS-sc50(250)	GAS-85(250)	GAS-100(250)	GAS-c250(250)	-
Rack capacity (ea / 4)	1 / 4	3 / 12	2 / 8	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension ( $\Phi \times L$ ,mm)	29.5 x 61.5	26 x 85	29.5 x 90	29.8 x 98	29.8 x 93	38.5 x 96	44.2 x 93	61.5 x 44.5	-
Rack hole bottom type	Conical	Round	Round	Conical	Flat	Round	Round	Conical	-
Max. height tube fit (mm)	153	148	148	153	148	148	148	153	153
Max. radius (mm)*	193	188	188	193	188	188	188	193	193
Max. RCF (g-force)*	5,394	5,255	5,255	5,394	5,255	5,255	5,255	5,394	5,394

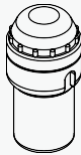
# Swing Rotor, GRS-B-100-6

- 6 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant



**Bio-Safe**

Porton Down Certified

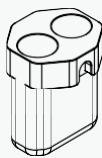


100 mL Bucket with a Cap,  
GLBB-b100-100

Max. RPM / RCF : 4,200 / 3,424  
 Max. Radius (mm) : 173.6  
 Hole dimension ( $\varnothing$  x L, mm) : 47 x 99  
 Max. height for tube fit (mm) : 120 (w/ cap) / 130 (w/o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and O-ring. No cap version is also available












<b>Tube</b>									
Tube capacity (mL)	1.5 ~ 2.0	2.0 mL screw cap	5 mL conical	5 mL conical	2.6 ~ 7	4 ~ 10	15	15 mL conical	15 mL conical
Tube Dimension ( $\Phi$ x L, mm)	11 x 38	10.1x46	16 x 59	16 x 67	13 x 75	16 x 100	16 x 120	17 x 120	17 x 120
<b>Adapter</b>									
Cat. No.	GAM-m2.0-6 (b100)	GAM-m2.0-6 (b100)	GAM-c5-3(b100)	GAM-c5-3(b100)	GAM-7-5(b100)	GAM-10-5(b100)	GAM-15-3(100)	GAM-c15-3(100)	GAS-c15(b100)
Rack capacity (ea / 4)	6 / 36	6 / 36	3 / 18	3 / 18	5 / 30	5 / 30	3 / 18	3 / 18	1 / 6
Rack hole dimension ( $\Phi$ x L,mm)	11 x 39	11 x 39	17.2 x 52	17.2 x 52	13.5 x 60	16 x 60	17.5 x 105	17.2 x 106.5	17.2 x 106.5
Rack hole bottom type	Round	Round	Conical	Conical	Round	Flat	Flat	Conical	Conical
Max. height tube fit (mm)	115	115	75	75	115	115	120	120	120
Max. radius (mm)*	168.6	168.6	110.1	110.1	168.6	168.6	170.6	173.6	173.6
Max. RCF (g-force)*	3,325	3,325	2,171	2,171	3,325	3,325	3,364	3,424	3,424

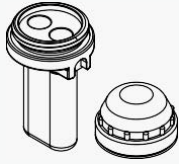
<b>Tube</b>								
Tube capacity (mL)	25 mL conical	25 mL conical	30	50	50 mL conical	50 mL conical (Skirted)	85	100
Tube Dimension ( $\Phi$ x L, mm)	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115
<b>Adapter</b>								
Cat. No.	GAS-c25(b100)	GAS-c25(b100)	GAS-30(b100)	GAS-50(b100)	GAS-c50(b100)	GAS-sc50(b100)	GAS-85(b100)	GAS-100(100)
Rack capacity (ea / 4)	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6
Rack hole dimension ( $\Phi$ x L,mm)	17.2 x 52	17.2 x 52	26 x 86	29.5 x 95.9	30 x 100	29.8x100	38.5 x 96.4	44.2 x 93
Rack hole bottom type	Conical	Conical	Round	Round	Conical	Flat	Round	Round
Max. height tube fit (mm)	118	118	118	118	120	120	118	118
Max. radius (mm)*	172.1	172.1	172.1	171.6	171.6	171.6	172.1	168.6
Max. RCF (g-force)*	3,394	3,394	3,394	3,384	3,384	3,384	3,394	3,325



50 mL Conical Bucket,  
GLB-dc50-100




Max. RPM / RCF : 4,200 / 3,424  
 Max. Radius (mm) : 173.6  
 Hole dimension (Ø x L, mm) : 30 x 89  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Conical

Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension (Φ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Bucket capacity (ea / 6)	2/12	2/12	2/12	2/12	2/12	2/12
Adaptor hole dimension (Φ x L, mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	171	137	137	162.4	162.6	173.6
Max. RCF (g-force)	3,372	2,702	2,702	3,203	3,207	3,424

**Bio-Safe** Manufacturer Validated

15 mL Dual Round Bucket  
with a Cap,  
**GLBB-bd15-100**








Max. RPM / RCF : 4,200 / 3,343  
 Max. Radius (mm) : 169.5  
 Hole dimension (Ø x L,mm) : 17 x 87  
 Max. height for tube fit (mm) : 123 (w/ cap) / 127 (w/o cap)  
 Hole bottom type : Round  
 Supplied with a cap and O-ring

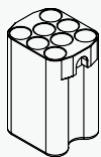
Tube			
Tube capacity (mL)	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L,mm)	16 x 100	16 x 114	16 x 120
Bucket capacity (ea / 6)	2 / 12	2 / 12	2 / 12
Max. height tube fit (mm)	123	123	123
Max.radius(mm)	169.5	169.5	169.5
Max. RCF (g-force)	3,343	3,343	3,343

**Bio-Safe** Porton Down Certified

15 mL Dual Conical Bucket  
with a Cap,  
**GLBB-bdc15-100**















Max. RPM / RCF : 4,200 / 3,424  
 Max. Radius (mm) : 173.6  
 Hole dimension (Ø x L,mm) : 17 x 97.5  
 Max. height for tube fit (mm) : 120 (w/ cap) / 125 (w/o cap)  
 Hole bottom type : Conical  
 Supplied with a cap and O-ring, No cap version is also available

Tube				
Tube capacity (mL)	5 mL conical	5 mL conical	14 mL	15 mL conical
Tube Dimension (Φ x L, mm)	16 x 59	16 x 67	15.7 x 96	17 x 120
Adapter				None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	GAS-14(c15)	-
Bucket capacity (ea / 6)	2 / 12	2 / 12	2 / 12	2 / 12
Adaptorholedimension(ΦxL,mm)	14.8 x 20	14.8 x 20	16 x 7.8	-
Adaptor hole bottom type	Conical	Conical	Round	-
Max. radius (mm)*	120.5	120.5	156.5	173.6
Max. RCF (g-force)*	2,376	2,376	3,086	3,424



Vacutainer 10 mL Bucket,  
GLB-15-8-100

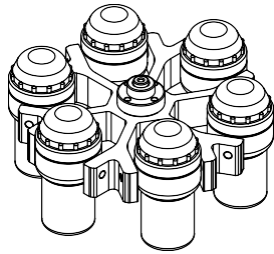
Max. RPM / RCF : 4,200 / 3,372  
 Max. Radius(mm) : 171  
 Hole dimension (Ø x L, mm) : 17 x 86  
 Hole bottom type : Flat with rubber pad  
 Max. height for tube fit (mm) : 115  
 Supplied with 3.0 mm thick NBR rubber pad

									
<b>Tube</b>									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 100	16 x 114	16 x 120
<b>Adapter</b>						None	None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-	-
Bucket capacity (ea / 6)	8 / 48	8 / 48	4 / 24	4 / 24	4 / 24	8 / 48	8 / 48	8 / 48	2 / 12
Adaptor hole dimension (Φ x L, mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-	-
Adaptor hole bottom type	Round	Open	Conical	Conical	Round	-	-	-	-
Max. height tube fit (mm)	88	115	75	75	103.5	115	115	115	125(center)
Max. radius (mm)*	144	171	130	130	159.5	171	171	171	171
Max. RCF (g-force)*	2,840	3,372	2,546	2,546	3,146	3,372	3,372	3,372	3,372

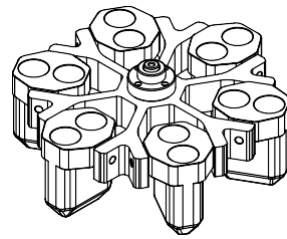
\* Depending on the size of cap, there is a possibility of not fit-in.



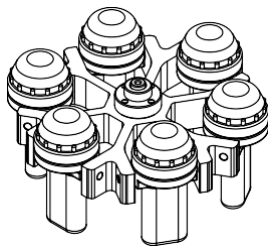
### Adaptable Buckets of Rotor, GRS-B-100-6



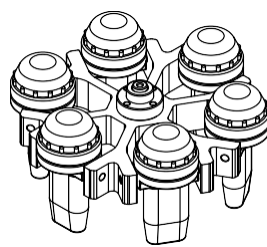
GLBB-b100-100



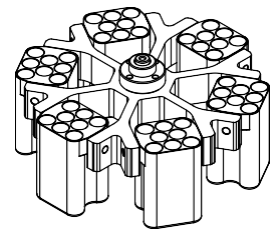
GLB-dc50-100



GLBB-bd15-100



GLBB-bdc15-100



GLB-15-8-100



# Floor Standing, High-speed Centrifuges




**1236R**

p. 90

<b>Max. RPM / Fixed angle</b>	12,000 rpm
<b>Max. RPM / Swing-out</b>	5,000 rpm
<b>Max. RCF / Fixed angle</b>	16,582 xg
<b>Max. RCF / Swing-out</b>	5,394 xg
<b>Max. capacity / Fixed angle</b>	6 x 85 mL, 8 x c50 mL, 30 x 1.5/2.0 mL
<b>Max. capacity / Swing-out</b>	4 x 250 mL, 48 x 15 mL, 16 MTPs
<b>RCF/RPM conversion</b>	Yes
<b>Temperature range</b>	-20°C to 40°C
<b>FAST cool button</b>	Yes
<b>Time control</b>	Pulse, Timed < 10 hr, or Continuous
<b>CE mark</b>	Yes
<b>Cat. No.</b>	GZ-1236R

## Function Features



**Multi-step Function**

Enables operation up to 5 protocols per run combined for complex experiments.



**User-friendly Height**

Floor standing wheel's height enables user operation comfort, safety, space saving and practical lid opening and closure.





**High Capacity Rotor for 2236R**

Fixed angle rotor up to 4 x 1,000 mL (8,000 RPM),  
6 x 1,000 mL (7,000 RPM)



**Four Lockable and Leveling Casters**

The wheels allow a better positioning and movement of the centrifuge to fit in the laboratory space.

	
<b>1736R</b> p. 90	<b>2236R</b> p. 90
17,000 rpm	22,000 rpm
5,000 rpm	5,000 rpm
32,310 xg	54,111 xg
5,394 xg	5,394 xg
6 x 500 mL, 8 x c50 mL, 30 x 1.5/2.0 mL	6 x 1,000 mL, 8 x c50 mL, 30 x 1.5/2.0 mL
4 x 250 mL, 4 x 3 x c50 mL, 4 x 12 x 15 mL, 4 x 4 MTPs	4 x 250 mL, 4 x 3 x c50 mL, 4 x 12 x 15 mL, 4 x 4 MTPs
Yes	Yes
-20°C to 40°C	-20°C to 40°C
Yes	Yes
Pulse, Timed < 10 hr, or Continuous	Timed < 100 hr, or Continuous
Yes	Yes
GZ-1736R	GZ-2236R

# 1236R, 1736R, 2236R

Floor Standing, High-speed Centrifuges



Bio  
(1236R)

🔒  
(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 (2236R)
- Instrument lock/unlock by password control and protocol management by user ID is ideal for core lab facility or multi-user environment (2236R)
- 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

## Technical Specifications






	1236R	1736R	2236R
<b>Max. RPM/PCF for Fixed Angle</b>	12,000 rpm / 16,582 xg	17,000 rpm / 32,310 xg	22,000 rpm / 54,111 xg
<b>Max. RPM/PCF for Swing-out</b>	5,000 rpm / 5,394 xg	5,000 rpm / 5,394 xg	5,000 rpm / 5,394 xg
<b>Max. Capacity for Fixed Angle</b>	6 x 85 mL, 30 x 1.5/2.0 mL	6 x 500 mL, 30 x 1.5/2.0 mL	6 x 1,000 mL, 30 x 1.5/2.0 mL
<b>Max. Capacity for Swing-out</b>	4 x 250 mL, 4 x 12 x 15 mL, 4 x 4 MTPs	4 x 250 mL, 4 x 12 x 15 mL, 4 x 4 MTPs	4 x 250 mL, 4 x 12 x 15 mL, 4 x 4 MTPs
<b>Temp. range (°C)</b>	-20°C to 40°C		
<b>FAST cool button</b>	Yes	Yes	Yes
<b>Time control</b>	Pulse, timed <10 hr or continuous	Pulse, timed <10 hr or continuous	Pulse, timed <100 hr or continuous
<b>Time counting range</b>	Selectable, at set speed or from starting		
<b>Noise level (dependent on rotor)</b>	≤60 dB	≤56 dB	≤56 dB
<b>RCF/RPM conversion</b>	Yes		
<b>ACC/DEC Ramps</b>	9/10		
<b>Program Memory</b>	100		
<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)		
<b>Power Requirement</b>	2.5 kVA	2.5 kVA	2.5 kVA
<b>Dimension (W x D x H)</b>	473 x 620 x 830 mm	473 x 620 x 830 mm	824 x 634 x 1,049 mm
<b>Net Weight</b>	110 kg	110 kg	240 kg
<b>CE MARK</b>	Yes	Yes	Yes
<b>Cat No.</b>	GZ-1236R	GZ-1736R	GZ-2236R

## Fixed Angle Rotor, GRF-L-1000-6

- Capacity : 6 x 1,000 mL
- Max. RPM / RCF : 7,000 / 10,825
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 98 x 144
- Max. height for tube fit (mm) : 175
- Hole bottom type : Flat
- Supplied with a lid



\* Only for 2236R






Tube			
Tube capacity (mL)	250	500	1000
Tube Dimension ( $\Phi \times L$ , mm)	61.5 x 128	69 x 168	97 x 168
Adapter			None
Cat No.	GAS-250(1000)	GAS-500(1000)	-
Adaptorholedimension( $\Phi \times L$ ,mm)	62 x 109	69 x 149	-
Adaptor hole bottom type	Flat	Flat	-
Max. radius (mm)	164.1	183.4	197.6
Max. RCF (g-force)	8,990	10,047	10,825

## Fixed Angle Rotor, GRF-L-1000-4

- Capacity : 4 x 1,000 mL
- Max. RPM / RCF : 8,000 / 12,071
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 98 x 144
- Max. height for tube fit (mm) : 175
- Hole bottom type : Flat
- Supplied with a lid



\* Only for 2236R




Tube			
Tube capacity (mL)	250	500	1000
Tube Dimension ( $\Phi \times L$ , mm)	61.5 x 128	69 x 168	97 x 168
Adapter			None
Cat No.	GAS-250(1000)	GAS-500(1000)	-
Adaptorholedimension( $\Phi \times L$ ,mm)	62 x 109	69 x 149	-
Adaptor hole bottom type	Flat	Flat	-
Max. radius (mm)	135.2	154.5	168.7
Max. RCF (g-force)	9,674	11,055	12,071

## Fixed Angle Rotor, GRF-L-500-6

- Capacity : 6 x 500 mL
- Max. RPM / RCF (1736R) : 8,000 / 11,305; (2236R) : 10,000 / 17,664
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 70 x 137
- Max. height for tube fit (mm) : 170
- Hole bottom type : Flat
- Supplied with a lid



\* Applicable 1736R / 2236R



Tube		
Tube capacity (mL)	250	500
Tube Dimension ( $\Phi$ x L, mm)	61.5 x 128	69 x 168
Adapter		None
Cat No.	GAS-250(500)	-
Adaptor hole dimension ( $\Phi$ x L, mm)	62 x 100	-
Adaptor hole bottom type	Flat	-
Max. radius (mm)	138.3	158
Max. RCF (g-force)(1736R/2236R)	9,869/15,462	11,305/17,664

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

- Capacity : 6 x 250 mL + 6 x 15 mL
- Max. RPM / RCF (1736R) : 10,000 / 14,981; (2236R) : 13,000 / 25,318
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 62 x 100 (250 mL) / 17.1 x 94 (15 mL)
- Hole bottom type : Flat (250 mL) / Round (15 mL)
- Max. height for tube fit (mm) : 130 (250 mL) / 120 (15 mL)
- Supplied with a lid



\* Applicable 1736R / 2236R
















Tube		
Tube capacity (mL)	15	250
Tube Dimension ( $\Phi$ x L, mm)	16 x 120	61.5 x 128
Max. radius (mm)	131.3	134
Max. RCF (g-force)(1736R/2236R)	14,679/24,808	14,981/25,318

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

- Capacity : 6 x 85 mL
- Max. RPM / RCF (1736R) : 15,000 / 25,029; (2236R) : 20,000 / 44,496
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 38.5 x 100
- Hole bottom type : Round | Max. height for tube fit (mm) : 125
- Supplied with a lid and O-ring inserted



\* Applicable 1736R / 2236R
















Tube								
Tube capacity (mL)	15	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical	85 mL
Tube Dimension ( $\Phi \times L$ , mm)	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	38 x 106
Adapter								None
Cat No.	GAS-15(85)	GAS-c15(85)	GAS-c25(85)	GAS-c25(85)	GAS-30(85)	GAS-50(85)	GAS-c50(85)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	17 x 94	17 x 98	29.5 x 62.5	29.5 x 62.5	26 x 85.4	29 x 95	29.5 x 98	-
Adaptor hole bottom type	Round	Conical	Conical	Conical	Round	Round	Conical	-
Max. radius (mm)	92.5	90.5	80.9	80.9	92.2	93.5	91.5	99.5
Max. RCF (g-force)	23,268/	22,765/	20,350/	20,350/	21,193/	23,520/	23,017/	25,029/
(1736R/2236R)	41,366	40,472	36,178	36,178	41,232	41,813	40,919	44,496

## Fixed Angle Rotor, GRF-G-85-6

- Capacity : 6 x 85 mL
- Max. RPM / RCF : 10,000 / 12,298
- Hole angle from axis during rotation :  $\angle 34^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 38.5 x 100
- Hole bottom type : Round | Max. height for tube fit (mm) : 122
- Supplied with a lid and O-ring inserted



\* Only for 1236R

Tube								
Tube capacity (mL)	15	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical	85 mL
Tube Dimension ( $\Phi \times L$ , mm)	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	38 x 106
Adapter								None
Cat No.	GAS-15(85)	GAS-c15(85)	GAS-c25(85)	GAS-c25(85)	GAS-30(85)	GAS-50(85)	GAS-c50(85)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	17 x 94	17 x 98	29.5 x 62.5	29.5 x 62.5	26 x 85.4	29 x 95	29.5 x 98	-
Adaptor hole bottom type	Round	Conical	Conical	Conical	Round	Round	Conical	-
Max. radius (mm)*	103	101	87	87	102.5	104	102	110
Max. RCF (g-force)*	11,515	11,292	9,727	9,727	11,460	11,627	11,404	12,298














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

- Capacity : 8 x 50 mL
- Max. RPM / RCF (1736R) : 15,000 / 25,910; (2236R) : 20,000 / 46,062
- Hole angle from axis during rotation :  $\angle 30^\circ$
- Hole dimension ( $\varnothing$  x L,mm) : 29.5 x 93.2
- Hole bottom type : Round | Max. height for tube fit (mm) : 120
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted



\* Applicable 1736R / 2236R












Tube						
Tube capacity (mL)	15	15 mL conical	25 mL conical	25 mL conical	30	50
Tube Dimension ( $\Phi$ x L, mm)	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108
Adapter						None
Cat No.	GAS-15(50)	GAS-c15(50)	GAS-c25(50)	GAS-c25(50)	GAS-30(50)	-
Adaptorholedimension( $\Phi$ xL,mm)	17 x 94	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	-
Adaptor hole bottom type	Round	Conical	Conical	Conical	Round	-
Max. radius (mm)	93.5	96	81	81	96.5	103
Max. RCF (g-force)(1736R/2236R)	23,520/41,813	24,149/42,931	20,376/36,223	20,376/36,223	24,275/43,155	25,910/46,062

## Fixed Angle Rotor, GRF-G-50-8

- Capacity : 8 x 50 mL
- Max. RPM / RCF : 12,000 / 16,582
- Hole angle from axis during rotation :  $\angle 30^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 29.5 x 93.2
- Hole bottom type : Round | Max. height for tube fit (mm) : 120
- Supplied with a lid and O-ring inserted



\* Only for 1236R












Tube						
Tube capacity (mL)	15	15 mL conical	25 mL conical	25 mL conical	30	50
Tube Dimension ( $\Phi$ x L, mm)	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108
Adapter						None
Cat No.	GAS-15(50)	GAS-c15(50)	GAS-c25(50)	GAS-c25(50)	GAS-30(50)	-
Adaptorholedimension( $\Phi$ xL,mm)	17 x 94	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	-
Adaptor hole bottom type	Round	Conical	Conical	Conical	Round	-
Max. radius (mm)	93.5	96			96.4	103
Max. RCF (g-force)	15,053	15,455			15,520	16,582

## Fixed Angle Rotor, GRF-L-c50-8

- Capacity : 8 x 50 mL Conical
- Max. RPM / RCF (1736R) : 15,000 / 27,671; (2236R) : 17,000 / 35,541
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 29.8 x 108.6
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 130
- Supplied with a lid with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted



\* Applicable 1736R / 2236R












Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Adaptorholedimension( $\Phi \times L$ , mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	105.2	94.1	94.1	106.4	107.3	110
Max. RCF (g-force)(1736R /2236R)	26,463/33,990	23,671/30,404	23,671/30,404	26,765/34,378	26,991/34,669	27,671/35,541

## Fixed Angle Rotor, GRF-G-c50-8

- Capacity : 8 x 50 mL Conical
- Max. RPM / RCF : 10,000 / 12,298
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 29.8 x 108.6
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 130
- Supplied with a lid and O-ring inserted



\* Only for 1236R




Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Adaptorholedimension( $\Phi \times L$ , mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptorholebottomtype	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	105.2	94.1	94.1	106.4	107.3	110
Max. RPM	10,000	10,000	10,000	10,000	10,000	10,000
Max. RCF (g-force)	11,761	10,520	10,520	11,896	11,996	12,298

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

- Capacity : 6 x 50 mL
- Max. RPM / RCF : (1736R) : 17,000 / 32,310; (2236R) : 22,000 / 54,111
- Hole angle from axis during rotation :  $\angle 30^\circ$
- Hole dimension ( $\Phi \times L$ ,mm) : 29.5 x 92.2
- Hole bottom type : Round
- Supplied with a lid and O-ring inserted



\* Applicable 1736R / 2236R






Tube		
Tube capacity (mL)	30	50
Tube Dimension ( $\Phi \times L$ , mm)	25.7 x 101.4	29 x 108
Adapter		None
Cat No.	GAS-30(50)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	26 x 83.8	-
Adaptor hole bottom type	Round	-
Max. radius (mm)	96.7	100
Max. RCF (g-force) (1736R/2236R)	31,244/52,326	32,310/54,111

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

- Capacity : 12 x 15 mL Conical
- Max. RPM / RCF (1736R) : 15,000 / 25,910; (2236R) : 20,000 / 46,062
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 17.2 x 107.2
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 125
- Supplied with a lid and O-ring inserted



\* Applicable 1736R / 2236R






Tube			
Tube capacity (mL)	5 mL conical	5 mL conical	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	16 x 59	16 x 67	17 x 120
Adapter			None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	-
Adaptorholedimension ( $\Phi \times L$ ,mm)	14.8 x 20	14.8 x 20	-
Adaptor hole bottom type	Conical	Conical	-
Max. radius (mm)	75.8	75.8	103
Max. RCF (g-force) (1736R/2236R)	19,067/33,898	19,067/33,898	25,910/46,062

## Fixed Angle Rotor, GRF-G-c15-12

- Capacity : 12 x 15 mL Conical
- Max. RPM / RCF : 12,000 / 16,582
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 17.2 x 107.2
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 125
- Supplied with a lid and O-ring inserted



\* Only for 1236R







Tube			
Tube capacity (mL)	5 mL conical	5 mL conical	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	16 x 59	16 x 67	17 x 120
Adapter			None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	-
Adaptorholedimension ( $\Phi \times L$ ,mm)	14.8 x 20	14.8 x 20	-
Adaptor hole bottom type	Conical	Conical	-
Max. radius (mm)	75.8	75.8	103
Max. RCF (g-force)	12,203	12,203	16,582

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

- Capacity : 30 x 1.5/2.0 mL
- Max. RPM / RCF(1736R) : 17,000 / 31,147; (2236R) : 22,000 / 52,163
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 11.1 x 39
- Hole bottom type : Round | Max. height for tube fit (mm) : 52
- Supplied with a lid



\* Applicable 1736R / 2236R







				
<b>Tube</b>				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi$ x L, mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
<b>Adapter</b>			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptorholedimension( $\Phi$ x L,mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)	79	86	96.4	96.4
Max. RCF (g-force) (1736R/2236R)	25,525/42,748	27,787/46,536	31,147/52,163	31,147/52,163

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

- Capacity : 30 x 1.5/2.0 mL
- Max. RPM / RCF : 12,000 / 15,520
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 11.1 x 39
- Hole bottom type : Round | Max. height for tube fit (mm) : 52
- Supplied with a lid



\* Only for 1236R

				
<b>Tube</b>				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\Phi$ x L, mm)	6 x 8	8 x 30	11 x 38	10.1 x 46
<b>Adapter</b>			None	None
Cat No.	GAS-m0.2(2)	GAS-m0.5(2)	-	-
Adaptorholedimension( $\Phi$ x L,mm)	6.5 x 23	8 x 31	-	-
Adaptor hole bottom type	Open	Open	-	-
Max. radius (mm)	79	86	96.4	96.4
Max. RCF (g-force)	12,718	13,835	15,520	15,520

## Angle Rotor, GRA-G-15-24

- Capacity : 24 x 15 mL
- Max. RPM / RCF : 4,000 / 3,134
- Hole angle rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 20.4 x 14
- Supplied with 24 sleeves
















\* Only for 1236R



15 mL Sleeve,  
GLS-15

Hole dimension ( $\varnothing \times L$ , mm) : 18 x 87  
 Max. height for tube fit (mm) : 125 (120 for conical / wider cap)  
 Hole bottom type : Flat bottom with rubber pad  
 Supplied with 3.0 mm thick NBR pad

								
Tube								
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 120	17 x 120
Adapter						None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-
Adaptorhole dimension ( $\Phi \times L$ , mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-
Adaptorhole bottom type	Round	Open	Conical	Conical	Round	-	-	-
Max. radius (mm)*	155.2	167.2	139.9	139.9	161.1	175.2	175.2	175.2
Max. RCF (g-force)*	2,776	2,990	2,503	2,503	2,882	3,134	3,134	3,134

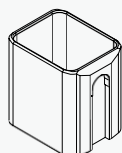
## Swing Rotor, GRS-L-r250-4\* / GRS-G-r250-4\*\*

- 4 loadings
- Max. RPM : 4,000
- Angle from axis during rotation :  $\angle 90^\circ$
- Supplied with lubricant



\* Applicable 1736R / 2236R

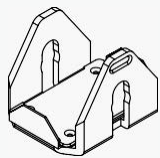
\*\* Applicable 1236R



250 mL Rectangular Bucket,  
GLB-r250-r250

Max. RPM / RCF : 4,000 / 3,134  
 Max. Radius (mm) : 175.2  
 Hole dimension (w x d x h, mm) : 86 x 70.3 x 98.5  
 Max. height for tube fit (mm) : 130  
 Hole bottom type : Flat

Tube								
Tube capacity (mL)	1.5/2.0	2.0 ~ 4 mL VT	4 ~ 7 mL VT	14 mL	8 ~ 10 mL VT	15	15 mL conical	50
Tube Dimension (Φ x L, mm)	11 x 38	13 x 75	13 x 100	15.7 x 96	16 x 100	16 x 120	17 x 120	29 x 108
Adapter								
Cat. No.	GAM-m2.0-20(r250)	GAM-5-12(r250)	GAM-5-12(r250)	GAM-15-12(r250)	GAM-15-12(r250)	GAM-15-12(r250)	GAM-c15-9(r250)	GAM-50-4(r250)
Rack capacity (ea / 4)	20 / 80	12 / 48	12 / 48	12 / 48	12 / 48	12 / 48	9 / 36	4 / 16
Rack hole dimension (Φ x L, mm)	11.3 x 39	13.5 x 58	13.5 x 80	17.5 x 59	17.5 x 90	17.5 x 90	17.5 x 90	30.2 x 90
Rack hole bottom type	Round	Round	Round	Round	Round	Round	Conical	Round
Max. height tube fit (mm)	115	120	120	120	120	120	120	120
Max. radius (mm)*	170	173.2	173.2	173.2	173.2	173.2	175.2	173.2
Max. RCF (g-force)*	3,041	3,095	3,095	3,095	3,095	3,095	3,134	3,095
Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	50 mL conical	50 mL conical (skirted)	15	85	250 mL	
Tube Dimension (Φ x L, mm)	28.5 x 83	28.5 x 78.5	29.5 x 118	29.5 x 118	16 x 120	38 x 106	61.5 x 128	
Adapter								
Cat. No.	GAM-c50-3(r250)	GAM-c50-3(r250)	GAM-c50-3(r250)	GAM-sc50(r250)	GAM-85-2(r250)		GAS-250(r250)	
Rack capacity (ea / 4)	3 / 12	3 / 12	3 / 12	4 / 16	2 / 8		1 / 4	
Rack hole dimension (Φ x L, mm)	30.5 x 60	30.5 x 60	30.5 x 90	29.8 x 93.5	17 x 86.5	38.5 x 86.5	62.5 x 87	
Rack hole bottom type	Conical	Conical	Conical	Flat	Round		Flat	
Max. height tube fit (mm)	120	120	120	126	120		130	
Max. radius (mm)*	175.2	175.2	175.2	172	172.5		173	
Max. RCF (g-force)*	3,134	3,134	3,134	3,077	3,086		3,095	



Microplate Holder Bucket,  
GLP-mw-r250

Max. RPM / RCF : 4,000 / 2,737  
 Max. Radius (mm) : 153  
 Hole dimension (w x d x h, mm) : 86.5 x 128.5 x 80  
 Max. height for tube fit (mm) : 80  
 Hole bottom type : Flat bottom with Stainless steel & ABS pad



Tube

	MTP	DWP
Tube capacity (mL)		
Tube Dimension (Φ x L,mm)	86 x 128 x 15	86 x 128 x 60
Bucket capacity(ea / 4)	4 / 16	1 / 4





## Swing Rotor, GRS-L-250-4\* / GRS-G-250-4\*\*

- 4 loadings
- Max. RPM : 5,000
- Angle from axis during rotation :  $\leq 90^\circ$
- Supplied with a lubricant



\* Applicable 1736R / 2236R

\*\* Applicable 1236R



250 mL Round Bucket,  
GLB-250-250

Max. RPM / RCF : 5,000 / 5,394  
 Max. Radius (mm) : 193  
 Hole dimension ( $\Phi \times L$ , mm) : 62 x 109  
 Max. height for tube fit (mm) : 153  
 Hole bottom type : Flat

<b>Tube</b>									
Tube capacity (mL)	1.5 ~ 2.0	2.0 mL screw cap	5 mL conical	5 mL conical	4 ~ 7 mL VT	8 ~ 10 mL VT	15	15 mL conical	25 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	11 x 38	10.1x46	16 x 59	16 x 67	13 x 75	16 x 100	16 x 120	17 x 120	28.5 x 83
<b>Adapter</b>									
Cat. No.	GAM-m2.0-9(250)	GAM-m2.0-9(250)	GAM-c5-4(250)	GAM-c5-4(250)	GAM-7-8(250)	GAM-10-7(250)	GAM-15-4(250)	GAM-c15-4(250)	GAS-c25(250)
Rack capacity (ea / 4)	9 / 36	9 / 36	4/16	4/16	8 / 32	7 / 28	4 / 16	4 / 16	1 / 4
Rack hole dimension ( $\Phi \times L$ ,mm)	11 x 39	11 x 39	17.2 x 52	17.2 x 52	13.5 x 60	16 x 80	17.5 x 103.5	17.2 x 106.5	29.5 x 61
Rack hole bottom type	Round	Round	Conical	Conical	Round	Round	Round	Conical	Conical
Max. height tube fit (mm)	150	150	153	153	150	150	150	153	153
Max. radius (mm)*	190	190	193	193	190	190	190	193	193
Max. RCF (g-force)*	5,311	5,311	5,394	5,394	5,311	5,311	5,311	5,394	5,394
<b>Tube</b>									
Tube capacity (mL)	25mL conical	30	50	50 mL conical	50mLconical (Skirted)	85	100	250 mL conical	250
Tube Dimension ( $\Phi \times L$ , mm)	28.5 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115	60 x 163	61.5 x 128
<b>Adapter</b>									None
Cat. No.	GAS-c25(250)	GAM-30-3(250)	GAM-50-2(250)	GAS-c50(250)	GAS-sc50(250)	GAS-85(250)	GAS-100(250)	GAS-c250(250)	-
Rack capacity (ea / 4)	1 / 4	3 / 12	2 / 8	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension ( $\Phi \times L$ ,mm)	29.5 x 61	26 x 85	29.5 x 90	29.8 x 98	29.8 x 93	38.5 x 96	44.2 x 93	61.5 x 44.5	-
Rack hole bottom type	Conical	Round	Round	Conical	Flat	Round	Round	Conical	-
Max. height tube fit (mm)	153	148	148	153	148	148	148	153	153
Max. radius (mm)*	193	188	188	193	188	188	188	193	193
Max. RCF (g-force)*	5,394	5,255	5,255	5,394	5,255	5,255	5,255	5,394	5,394

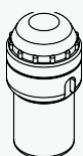
# Swing Rotor, GRS-G-100-6

- 6 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant



**Bio-Safe** Porton Down Certified

\* Only for 1236R

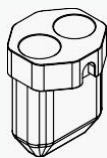


100 mL Bucket with a Cap,  
GLBB-b100-100

Max. RPM / RCF : 4,000 / 3,105  
 Max. Radius (mm) : 173.6  
 Hole dimension ( $\Phi \times L$ , mm) : 47 x 99  
 Max. height for tube fit (mm) : 120 (w/ cap) / 130 (w/o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and O-ring, No cap version is available












Tube									
Tube capacity (mL)	1.5 ~ 2.0	2.0 mL screw cap	5 mL conical	5 mL conical	2.6 ~ 7	4 ~ 10	15	15 mL conical	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	11 x 38	10.1x46	16 x 59	16 x 67	13 x 75	16 x 100	16 x 120	17 x 120	17 x 120
Adapter									
Cat. No.	GAM-m2.0-6 (b100)	GAM-m2.0-6 (b100)	GAM-c5-3(b100)	GAM-c5-3(b100)	GAM-7-5(b100)	GAM-10-5(b100)	GAM-15-3(100)	GAM-c15-3(100)	GAS-c15(b100)
Rack capacity (ea / 4)	6 / 36	6 / 36	3 / 18	3 / 18	5 / 30	5 / 30	3 / 18	3 / 18	1 / 6
Rack hole dimension ( $\Phi \times L$ ,mm)	11 x 39	11 x 39	17.2 x 52	17.2 x 52	13.5 x 60	16 x 60	17.5 x 105	17.2 x 106.5	17.2 x 106.5
Rack hole bottom type	Round	Round	Conical	Conical	Flat	Flat	Flat	Conical	Conical
Max. height tube fit (mm)	115	115	75	75	115	115	120	120	120
Max. radius (mm)*	168.6	168.6	110.1	110.1	168.6	168.6	170.6	173.6	173.6
Max. RCF (g-force)*	3,016	3,016	1,969	1,969	3,016	3,016	3,052	3,105	3,105

Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	30	50	50 mL conical	50 mL conical (Skirted)	85	100
Tube Dimension ( $\Phi \times L$ , mm)	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115
Adapter								
Cat. No.	GAS-c25(b100)	GAS-c25(b100)	GAS-30(b100)	GAS-50(b100)	GAS-c50(b100)	GAS-sc50(b100)	GAS-85(b100)	GAS-100(100)
Rack capacity (ea / 4)	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6
Rack hole dimension ( $\Phi \times L$ ,mm)	17.2x52	17.2x52	26x86	29.5 x 95.9	30 x 100	29.8x100	38.5 x 96.4	44.2 x 93
Rack hole bottom type	Conical	Conical	Round	Round	Conical	Flat	Round	Round
Max. height tube fit (mm)	118	118	118	118	120	120	118	118
Max. radius (mm)*	172.1	172.1	172.1	171.6	171.6	171.6	172.1	168.6
Max. RCF (g-force)*	3,079	3,079	3,079	2,737	2,737	2,737	3,079	3,016



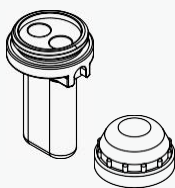
50 mL Conical Bucket,  
GLB-dc50-100

Max. RPM / RCF : 4,000 / 3,105  
 Max. Radius (mm) : 173.6  
 Hole dimension (Ø x L, mm) : 30 x 89  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Conical

Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension (Φ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Bucket capacity(ea / 6)	2/12	2/12	2/12	2/12	2/12	2/12
Adaptorholedimension (Φ x L,mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	171	137	137	162.4	162.6	173.6
Max. RCF (g-force)	3,059	2,451	2,451	2,905	2,909	3,105




**Bio-Safe**

Manufacturer Validated



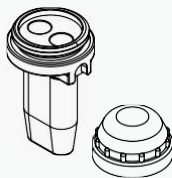
15 mL Dual Round Bucket  
with a Cap,  
**GLBB-bd15-100**

Max. RPM / RCF : 4,000 / 3,032  
Max. Radius (mm) : 169.5  
Hole dimension (Ø x L, mm) : 17 x 87  
Max. height for tube fit (mm) : 123 (w/ cap) / 127 (w/o cap)  
Hole bottom type : Round  
Supplied with a cap and O-ring

Tube			
Tube capacity (mL)	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L,mm)	16 x 100	16 x 114	16 x 120
Bucket capacity (ea / 6)	2 / 12	2 / 12	2 / 12
Max. height tube fit (mm)	123	123	123
Max.radius(mm)	169.5	169.5	169.5
Max. RCF (g-force)	3,032	3,032	3,032








**Bio-Safe**

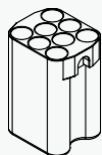
Porton Down Certified



15 mL Dual Conical Bucket  
with a Cap,  
**GLBB-bdc15-100**

Max. RPM / RCF : 4,000 / 3,105  
Max. Radius (mm) : 173.6  
Hole dimension (Ø x L, mm) : 17 x 97.5  
Max. height for tube fit (mm) : 120 (w/ cap) / 125 (w/o cap)  
Hole bottom type : Conical  
Supplied with a cap and O-ring, No cap version is available

Tube				
Tube capacity (mL)	5 mL conical	5 mL conical	14 mL	15 mL conical
Tube Dimension (Φ x L, mm)	16 x 59	16 x 67	15.7 x 96	17 x 120
Adapter				None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	GAS-14(c15)	-
Bucket capacity (ea / 6)	2 / 12	2 / 12	2 / 12	2 / 12
Adaptorholedimension(ΦxL,mm)	14.8 x 20	14.8 x 20	16 x 7.8	-
Adaptor hole bottom type	Conical	Conical	Round	-
Max. radius (mm)	120.5	120.5	156.5	173.6
Max. RCF (g-force)	2,156	2,156	2,799	3,105



Vacutainer 10 mL Bucket,  
GLB-15-8-100















Max. RPM / RCF : 4,000 / 3,059 | Max. Radius (mm) : 171

Hole dimension (Ø x L, mm) : 17 x 86

Hole bottom type : Flat with rubber pad Max.

height for tube fit (mm) : 115

Supplied with 3.0 mm thick NBR rubber pad

									
<b>Tube</b>									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 100	16 x 114	16 x 120
<b>Adapter</b>						None	None	None	None
Cat No.	GAS- 3(f15)	GAS- 5(f15)	GAS- c5(f15)	GAS- c5(f15)	GAS- 14(f15)	-	-	-	-
Bucket capacity (ea / 6)	8 / 48	8 / 48	4 / 24	4 / 24	4 / 24	8 / 48	8 / 48	8 / 48	2 / 12
Adaptor hole dimension (Φ x L, mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-	-
Adaptor hole bottom type	Round	Open	Conical	Conical	Round	-	-	-	-
Max. height tube fit (mm)	88	115	75	75	103.5	115	115	115	125(center)
Max. radius (mm)*	144	171	130	130	159.5	171	171	171	171
Max. RCF (g-force)*	2,576	3,059	2,325	2,325	2,853	3,059	3,059	3,059	3,059

# Low-speed Centrifuges

## Technical Specifications

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**406**

p. 110

Max. RPM / Fixed angle	4,000 rpm
Max. RPM / Swing-out	-
Max. RCF / Fixed angle	2,075 x g
Max. RCF / Swing-out	-
Max. capacity / Fixed angle	12 x 15 mL
Max. capacity / Swing-out	-
RCF/RPM conversion	Yes
Temperature range	-
FAST cool button	-
Time control	Timed < 100 min, or Continuous
CE mark	Yes
Cat. No.	GZ-0406

## Function Features

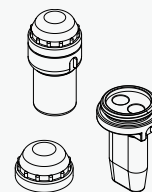


### Pulse Key

Time control functions of pulse for quick spin

### NEW Bucket, GLBB Model

Containment of samples provided by a combination of physical seals and a design to prevent any sample leakage within the buckets.



- GLBB-b100-100 / GLBB-bdc15-100
- GLBB-750-750



### SOFT / START / STOP Function, 416

The "SOFT START/STOP" function enables gentle acceleration and deceleration, which is effective for vibration-sensitive sample separation such as blood fractionation



### Low-speed Refrigerated Benchtop Model, 624R

It suits for general laboratory and clinical applications including sample separations of cellular materials, blood, urine and sperm. 624R also applies for molecular biology work, clinical preparations, PRP, PRF and stem cell isolation and industrial applications.



### 416

p. 112

4,000 rpm

4,000 rpm

2,700 x g

2,826 x g

10 x 50 mL / c50 mL  
16 x 15 mL

4 x 100 mL,  
4 x 8 vacutainer tubes,  
2 x 2 MTPs

Yes

-

-

Timed < 100 min, or Continuous

Yes

GZ-0416



### 624R

p. 124

6,000 rpm

4,800 rpm

3,960 x g

3,888 x g

10 x 50 mL / c50 mL,  
24 x 2.0 mL

4 x 100 mL,  
4 x 8 vacutainer tubes,  
2 x 2 MTPs

Yes

-10°C to 40°C

Yes

Pulse, Timed < 10 hr, or Continuous

Yes

GZ-0624R

# 406 Low-speed Centrifuge



## Features

- Capacity : 6 x 15 mL or 12 x 10 mL (all on a 12 x 15 mL rotor) Speed : 4,000 rpm (2,075 xg)
- Automatic lid release and vivid end alarm allows easy retrieval of sample
- Optional tube adaptors for 3 mL and 5 mL tubes are available for easy separation of the small tubes including vacutainers
- Very quiet operation at less than 56 dB allowing a comfortable laboratory environment
- In Vitro Diagnostic Medical Device

## Technical Specifications

<b>Max. RPM/PCF for Fixed Angle</b>	4,000 rpm / 2,075 xg
<b>Max. Capacity for Fixed Angle</b>	6 x 15 mL, 12 x 10 mL
<b>Time control</b>	Timed <100 min or continuous
<b>RCF/RPM conversion</b>	Yes
<b>Acc. time to Max. Speed</b>	≤20 sec
<b>Dec. time from Max. Speed</b>	≤25 sec
<b>Noise level (dependent on rotor)</b>	≤52 dB

<b>Program Memory</b>	10
<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)
<b>Power Requirement</b>	140 VA
<b>Dimension (W x D x H)</b>	296 x 412 x 206 mm
<b>Net Weight</b>	17.6 kg
<b>CE MARK</b>	Yes
<b>Cat No.</b>	GZ-0406
















## Angle Rotor, GRA-15-12, GRA-15-6

- Capacity : 6 x 15 mL or 12 x 10 mL / 6 X 15 mL
- Max. RPM / RCF : 4,000 / 2,075
- Hole angle rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 20.4 x 10.1
- Supplied with 12 sleeves, No ID ring



15 mL Sleeve,  
**GLS-15**

Max. Capacity : 15 mL  
Max RPM / RCF : 4,000 / 2,075  
Hole dimension ( $\varnothing \times L$ , mm) : 18 x 87  
Hole bottom type : Flat bottom with rubber pad  
Supplied with 4.0 mm thick NBR pad inserted

								
Tube								
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15	15 mL conical
Tube Dimension ( $\varnothing \times L$ , mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 120	17 x 120
Adaptor						None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-
Adaptor hole dimension ( $\varnothing \times L$ , mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-
Adaptor hole bottom type	Round	Open	Conical	Conical	Round	-	-	-
Max. radius (mm)*	95.5	111	81.5	81.5	104.5	116	116	116
Max. RCF (g-force)*	1,708	1,986	1,458	1,458	1,869	2,075	2,075	2,075



# 416 Low-speed Centrifuge



## Features

- Speed : 4,000 rpm (2,549 xg) ; 4,000 rpm (2,700 xg)
- Capacity : 10 x 50 mL /c50 mL ; 16 x 15 mL
- Very quiet operation at less than 56 dB allowing a comfortable laboratory environment
- Lid drop protection allows easiness and safety when loading or unloading samples
- Automatic lid release and vivid end alarm allows easy retrieval of sample
- Unique vacutainer buckets for separation of 32 vacutainer samples
- Large assortment of accessories for micro tubes and all sizes of tubes up to 100 mL
- In Vitro Diagnostic Medical Device

## Technical Specifications


<b>Max. RPM/PCF for Fixed Angle</b>	4,000 rpm / 2,700 xg
<b>Max. RPM/PCF for Swing-out</b>	4,000 rpm / 2,826 xg
<b>Max. Capacity for Fixed Angle</b>	16 x 15 mL, 10 x 50 mL
<b>Max. Capacity for Swing-out</b>	4 x 100 mL, 4 x 8 vacutainer tube, 2 x 2 MTPs
<b>Time control</b>	Timed <100 min or continuous
<b>Acc. time to Max. Speed</b>	≤20 sec
<b>Dec. time from Max. Speed</b>	≤25 sec
<b>RCF/RPM conversion</b>	Yes
<b>Noise level (dependent on rotor)</b>	≤52 dB

















<b>RCF/RPM conversion</b>	Yes
<b>Program Memory</b>	10
<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)
<b>Power Requirement</b>	340 VA
<b>Dimension (W x D x H)</b>	375 x 480 x 260 mm
<b>Net Weight</b>	19.5 kg
<b>CE MARK</b>	Yes
<b>Cat No.</b>	GZ-0416

## Angle Rotor, GRA-S-50-10

- Capacity : 10 x 50 mL or 50 mL Conical | Max. RPM / RCF : 4,000 / 2,549
- Hole angle rotation :  $\angle 45^\circ$  | Hole dimension ( $\varnothing \times L$ , mm) : 32.2 x 13.5
- Supplied with 10 sleeves, No ID ring



	50 mL Sleeve, <b>GLS-50</b>	Max. RPM / RCF : 4,000 / 2,549 Hole dimension ( $\varnothing \times L$ , mm) : 30 x 99 Hole bottom type : Flat bottom with rubber pad Max. height for tube fit (mm) : 130 Supplied with 3.5 mm thick NBR pad
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Tube									
Tube capacity (mL)	14 mL	15	15 mL conical	25 mL conical	25 mL conical	30	50 mL conical	50 mL conical (Skirt)	50
Tube Dimension ( $\Phi \times L$ , mm)	15.7 x 96	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29.5 x 118	29.5 x 118	29 x 108
Adapter								None	None
Cat No.	GAS-u14(f50)	GAS-u15(f50)	GAS-u15(f50)	GAS-c25(f50)	GAS-c25(f50)	GAS-30(f50)	GAS-c50(f50)	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	17.2 x 75	17.2 x 87	17.2 x 87	27.1 x 14.1	27.1 x 14.1	26 x 86.5	29.5 x 17.5	-	-
Adaptor hole bottom type	Open	Open	Open	Conical	Conical	Round	Conical	-	-
Max. radius (mm)	141.9	141.9	141.9	115	115	135	135.5	142.5	142.5
Max. RCF (g-force)	2,538	2,538	2,538	2,057	2,057	2,415	2,424	2,549	2,549

## Fixed Angle Rotor, GRA-S-c50-10

- Capacity : 10 x 50 mL or 50 mL Conical | Max. RPM / RCF : 4,000 / 2,508
- Hole angle rotation :  $\angle 45^\circ$  | Hole dimension ( $\varnothing \times L$ , mm) : 32.2 x 13.5
- Supplied with 10 sleeves, No ID ring



	50 mL Sleeve, <b>GLS-c50</b>	Max. RPM / RCF : 4,000 / 2,508 Hole dimension ( $\varnothing \times L$ , mm) : 31 x 99 Hole bottom type : Conical Max. height for tube fit (mm) : 130
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Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	17 x 120	28.8x83	28.8x78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	17 x 105	27.1x14.1	27.1x14.1	26x83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	139.6	115	115	135.5	136.1	140
Max. RCF (g-force)	2,497	2,057	2,057	2,424	2,435	2,508














## Angle Rotor, GRA-S-15-16

- Capacity : 16 x 15 mL
- Max. RPM / RCF : 4,000 / 2,700
- Hole angle rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 20.4 x 10.5
- Supplied with 16 sleeves, No ID ring



15 mL Sleeve,  
**GLS-15**

Max. RPM / RCF : 4,000 / 2,700  
 Hole dimension ( $\varnothing \times L$ , mm) : 18 x 87  
 Hole bottom type : Flat bottom with rubber pad  
 Max. height for tube fit (mm) : 125 (120 for conical / wider cap)  
 Supplied with 4.0 mm thick NBR pad

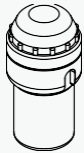
								
Tube								
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 120	17 x 120
Adapter						None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-
Adaptor hole dimension ( $\Phi \times L$ , mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-
Adaptor hole bottom type	Round	Open	Conical	Conical	Round	-	-	-
Max. radius (mm)*	134	146	118.5	118.5	139.4	150.9	150.9	150.9
Max. RCF (g-force)*	2,397	2,612	2,120	2,120	2,494	2,700	2,700	2,700

# Swing Rotor, GRS-S-100-4

- 4 loadings
- Max. RPM : 4,000
- Angle from axis during rotation :  $\angle 90^\circ$
- Supplied with a lubricant, No ID ring



**Bio-Safe** Porton Down Certified

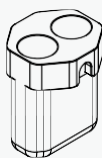


100 mL Bucket with a Cap,  
GLBB-b100-100

Max. RPM / RCF : 4,000 / 2,774  
 Max. Radius (mm) : 155.1  
 Hole dimension ( $\varnothing$  x L, mm) : 47 x 99  
 Max. height for tube fit (mm) : 120 (w/ cap) / 130 (w/o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and an O-ring, No cap version is available












Tube									
Tube capacity (mL)	1.5 ~ 2.0	2.0 mL screw cap	5 mL conical	5 mL conical	2.6 ~ 7	4 ~ 10	15	15 mL conical	15 mL conical
Tube Dimension ( $\Phi$ x L, mm)	11 x 38	10.1x46	16 x 59	16 x 67	13 x 75	16 x 100	16 x 120	17 x 120	17 x 120
Adapter									
Cat. No.	GAM-m2.0-6(b100)	GAM-m2.0-6(b100)	GAM-c5-3(b100)	GAM-c5-3(b100)	GAM-7-5(b100)	GAM-10-5(b100)	GAM-15-3(100)	GAM-c15-3(100)	GAS-c15(b100)
Rack capacity (ea / 4)	6 / 24	6 / 24	3/12	3/12	5 / 20	5 / 20	3 / 12	3 / 12	1 / 4
Rack hole dimension ( $\Phi$ x L,mm)	11 x 39	11 x 39	17.2 x 52	17.2 x 52	13.5 x 60	16 x 60	17.5 x 105	17.2 x 106.5	17.2 x 106.5
Rack hole bottom type	Round	Round	Conical	Conical	Round	Flat	Flat	Conical	Conical
Max. height tube fit (mm)	115	115	75	75	115	115	120	120	120
Max. radius (mm)*	150.1	150.1	110.1	110.1	150.1	150.1	152.1	155.1	155.1
Max. RCF (g-force)*	2,685	2,685	1,969	1,969	2,685	2,685	2,721	2,774	2,774

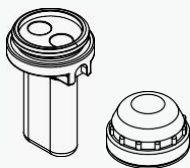
Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	30	50	50mL conical	50 mL conical (Skirted)	85	100
Tube Dimension ( $\Phi$ x L, mm)	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115
Adapter								
Cat. No.	GAS-c25(b100)	GAS-c25(b100)	GAS-30(b100)	GAS-50(b100)	GAS-c50(b100)	GAS-sc50(b100)	GAS-85(b100)	GAS-100(100)
Rack capacity (ea / 4)	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension ( $\Phi$ x L,mm)	17.2 x 52	17.2 x 52	26 x 86	29.5 x 95.9	30 x 100	29.8 x 100	38.5 x 96.4	44.2 x 93
Rack hole bottom type	Conical	Conical	Round	Round	Conical	Flat	Round	Round
Max. height tube fit (mm)	118	118	118	118	120	120	118	118
Max. radius (mm)*	153.5	153.5	153.5	153	153	153	153.5	150.1
Max. RCF (g-force)*	2,746	2,746	2,746	2,737	2,737	2,737	2,746	2,685



50 mL Conical Bucket,  
**GLB-dc50-100**




Max. RPM / RCF : 4,000 / 2,774  
 Max. Radius (mm) : 155.1  
 Hole dimension (Ø x L, mm) : 30 x 89  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Conical

Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension (Φ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Bucket capacity(ea / 6)	2 / 8	2 / 8	2 / 8	2 / 8	2 / 8	2 / 8
Adaptorholedimension (Φ x L,mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	152.5	118.5	118.5	143.9	144.1	155.1
Max. RCF (g-force)	2,728	2,120	2,120	2,574	2,578	2,774



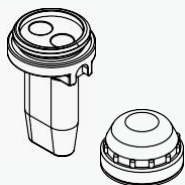
15 mL Dual Round Bucket  
with a Cap,  
**GLB-bd15-100**

Max. RPM / RCF : 4,000 / 2,700  
Max. Radius (mm) : 150.9  
Hole dimension ( $\varnothing$  x L ,mm) : 17 x 87  
Max. height for tube fit (mm) : 123 (w/ cap) / 127 (w/o cap)  
Hole bottom type : Round  
Supplied with a cap and O-ring

Tube			
Tube capacity (mL)	15 mL glass	15 mL open top	15
Tube Dimension ( $\Phi$ x L,mm)	16 x 100	16 x 114	16 x 120
Bucket capacity (ea / 6)	2 / 8	2 / 8	2 / 8
Max. height tube fit (mm)	123	123	123
Max.radius(mm)	150.9	150.9	150.9
Max.RCF (g-force)	2,700	2,700	2,700








**Bio-Safe**

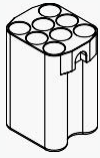
Porton Down Certified



15 mL Dual Conical Bucket  
with a Cap,  
**GLBB-bdc15-100**

Max. RPM / RCF : 4,000 / 2,774  
Max. Radius (mm) : 155.1  
Hole dimension ( $\varnothing$  x L,mm) : 17 x 97.5  
Max. height for tube fit (mm) : 120 (w/ cap) / 125 (w/o cap)  
Hole bottom type : Conical  
Supplied with a cap and O-ring, No cap version is available

Tube				
Tube capacity (mL)	5 mL conical	5 mL conical	14 mL	15 mL conical
Tube Dimension ( $\Phi$ x L, mm)	16 x 59	16 x 67	15.7 x 96	17 x 120
Adapter				None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	GAS-14(c15)	-
Bucket capacity (ea / 6)	2 / 8	2 / 8	2 / 8	2 / 8
Adaptorholedimension( $\Phi$ xL,mm)	14.8 x 20	14.8 x 20	16 x 7.8	-
Adaptor hole bottom type	Conical	Conical	Round	-
Max. radius (mm)	102	102	115.1	155.1
Max. RCF (g-force)	1,826	1,826	2,059	2,774



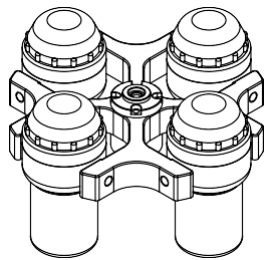
Vacutainer 10 mL Bucket,  
**GLB-15-8-100**

Max. RPM / RCF : 4,000 / 2,719  
 Max. Radius (mm) : 152  
 Hole dimension (Ø x L, mm) : 17 x 86  
 Hole bottom type : Flat  
 Max. height for tube fit (mm) : 115  
 Supplied with 3.0 mm thick NBR rubber pad

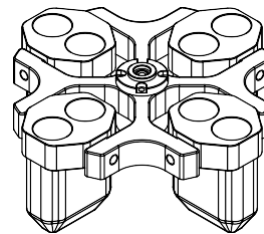
Tube									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 100	16 x 114	16 x 120
Adapter						None	None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-	-
Bucket capacity (ea / 6)	8 / 32	8 / 32	4 / 16	4 / 16	4 / 16	8 / 32	8 / 32	8 / 32	2 / 8
Adaptor hole dimension (Φ x L, mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-	-
Adaptor hole bottom type	Round	Open	Conical	Conical	Round	-	-	-	-
Max. height tube fit (mm)	88	115	75	75	103.5	115	115	115	125(center)
Max. radius (mm)*	125	156.6	112	112	140.5	152	152	152	152
Max. RCF (g-force)*	2,236	2,719	2,003	2,003	2,513	2,719	2,719	2,719	2,719

\* Depending on the size of cap, there is a possibility of not fit-in.

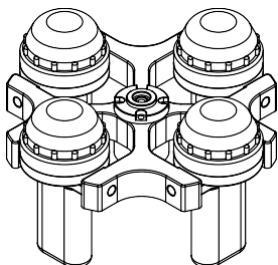
### Adaptable Buckets of Rotor, GRS-S-100-4



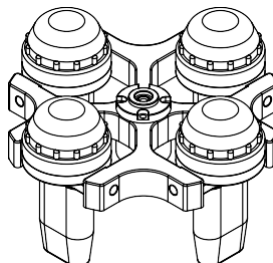
GLBB-b100-100



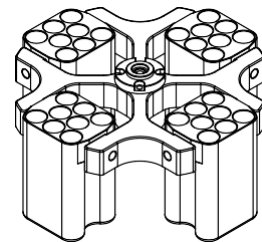
GLBB-dc50-100



GLBB-bd15-100



GLBB-bdc15-100

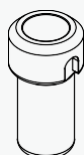


GLB-15-8-100



















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

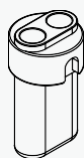
- 4 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant
- No ID ring



50 mL Bucket,  
GLB-50-50




Max. RPM / RCF : 4,000 / 2,700  
 Max. Radius (mm) : 150.9  
 Hole dimension ( $\varnothing$  x L, mm) : 30.5 x 91  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Flat  
 Supplied with 4.0 mm thick NBR pad

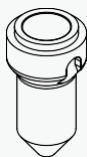
Tube									
Tube capacity (mL)	14 mL	15	15 mL conical	25 mL conical	25 mL conical	30	50 mL conical	50 mL conical (Skirt)	50
Tube Dimension ( $\Phi$ x L, mm)	15.7 x 96	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29.5 x 118	29.5 x 118	29 x 108
Adapter								None	None
Cat No.	GAS-u14(f50)	GAS-u15(f50)	GAS-u15(f50)	GAS-c25(f50)	GAS-c25(f50)	GAS-30(f50)	GAS-c50(f50)	-	-
Adaptorhole dimension ( $\Phi$ x L, mm)	17.2 x 75	17.2 x 87	17.2 x 87	27.1 x 14.1	27.1 x 14.1	26 x 86.5	29.5 x 17.5	-	-
Adaptor hole bottom type	Open	Open	Open	Conical	Conical	Round	Conical	-	-
Max. radius (mm)	150.9	150.9	150.9	117.1	117.1	142.1	142	150.9	150.9
Max. RCF (g-force)	2,700	2,700	2,700	2,095	2,095	2,542	2,540	2,700	2,700



15 mL Dual Round Bucket,  
GLB-d15-50












Max. RPM / RCF : 4,000 / 2,700  
 Max. Radius (mm) : 150.9  
 Hole dimension ( $\varnothing$  x L, mm) : 17 x 91.5  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Round

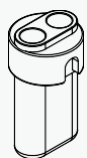
Tube			
Tube capacity (mL)	15 mL glass	15 mL open top	15
Tube Dimension ( $\Phi$ x L, mm)	16 x 100	16 x 114	16 x 120
Max. height tube fit (mm)	125	125	125
Max. radius (mm)	150.9	150.9	150.9
Max. RCF (g-force)	2,700	2,700	2,700



50 mL Bucket,  
**GLB-c50-50**








Max. RPM / RCF : 4,000 / 2,700  
 Max. Radius (mm) : 150.9  
 Hole dimension (Ø x L,mm) : 29.5 x 91.5  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Conical

Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension (Φ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat. No.	GAS- c15(c50)	GAS- c25(c50)	GAS- c25(c50)	GAS- 30(c50)	GAS- 50(c50)	-
Rack hole dimension (Φ x L,mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Rack hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	150.9	119.9	119.9	145.3	145.5	150.9
Max. RCF (g-force)	2,700	2,145	2,145	2,599	2,578	2,700



15 mL Dual Conical Bucket,  
**GLB-dc15-50**

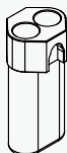
Max. RPM / RCF : 4,000 / 2,700  
 Max. Radius (mm) : 150.9  
 Hole dimension (Ø x L,mm) : 17 x 91.5  
 Max. height for tube fit (mm) : 120  
 Hole bottom type : Conical

Tube				
Tube capacity (mL)	5 mL conical	5 mL conical	14 mL	15 mL conical
Tube Dimension (Φ x L, mm)	16 x 59	16 x 67	15.7 x 96	17x120
Adapter				None
Cat No.	GAS- c5(c15)	GAS- c5(c15)	GAS- 14(c15)	-
Adaptorhole dimension (Φ x L,mm)	14.8 x 20	14.8 x 20	16 x 7.8	-
Adaptor hole bottom type	Conical	Conical	Round	-
Max. radius (mm)	98.6	98.6	131.6	150.9
Max. RCF (g-force)	1,826	1,826	2,354	2,700








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

- 6 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Rotor dimension / weight ( $\varnothing \times L$ , mm / g) : 198.2 x 44 / 573
- Supplied with a lubricant, No ID ring



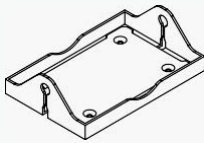
15 mL Dual Round Bucket,  
**GLB-d15-15**

Max. RPM / RCF : 4,000 / 2,737  
 Max. Radius (mm) : 153  
 Hole dimension ( $\varnothing \times L$ , mm) : 17 x 88  
 Max. height for tube fit (mm) : 122  
 Hole bottom type : Flat with rubber pad  
 Supplied with 3.0 mm thick NBR rubber pad

			
<b>Tube</b>			
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	8 ~ 10 mL VT
Tube Dimension ( $\varnothing \times L$ , mm)	13 x 75	13 x 100	16 x 100
<b>Adapter</b>			None
Cat No.	GAS-3(f15)	GAS-5(f15)	-
Bucket capacity (ea / 4)	2 / 12	2 / 12	2 / 12
Adaptorhole dimension ( $\varnothing \times L$ ,mm)	13.5 x 61	13.5 x 85	-
Adaptor hole bottom type	Round	Open	-
Max. height tube fit (mm)	95	123	123
Max. radius (mm)	126	153	153 Max.
RCF (g-force)	2,164	2,737	2,737

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

- 2 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with microplate holder, No ID ring



Microplate Bucket,  
GLP-mw

Max. RPM / RCF : 4,000 / 2,000  
 Max. Radius (mm) : 111.8  
 Hole dimension (w x d, mm) : 86.5 x 128.5  
 Max. height for tube fit (mm) : 35  
 Supplied with 3.0 mm thick ABS pad



### Tube

Tube capacity (mL)	MTP
Tube Dimension ( $\Phi$ x L,mm)	86 x 128 x15
Bucket capacity (ea / 2)	2 / 4

# 624R Low-speed Centrifuge



## Features

- Speed : 6,000 rpm (3,960 xg); 4,800 rpm (3,888 xg)
- Capacity : 10 x 50 mL / c50 mL ; 24 x 15 mL ; 24 x 2.0 mL
- Fast cooling allows a temperature drop to 4°C within 5 minutes : function for quick start of cooled samples
- Compressor-off function : minimizes unnecessary cooling and frosting when lid is open
- Intuitive control interface with numeric input buttons allows easy setting and editing of running conditions
- Selectable time mode of “from starting” and “At Set SPEED” which is meant to start counting the running time when set speed is reached

## Technical Specifications












<b>Max. RPM/PCF for Fixed Angle</b>	6,000 rpm / 3,960 xg
<b>Max. RPM/PCF for Swing-out</b>	4,800 rpm / 3,888 xg
<b>Max. Capacity for Fixed Angle</b>	6 x 50 mL
<b>Max. Capacity for Swing-out</b>	4 x 100 mL, 4 x 8 vacutainer tube, 2 x 2 MTPs
<b>Temp. range (°C)</b>	-10°C to 40°C
<b>FAST cool button</b>	Yes
<b>Time control</b>	Pulsed, timed <10 hr or continuous
<b>Time counting range</b>	Selectable, at set speed or from starting
<b>Noise level (dependent on rotor)</b>	≤60 dB

<b>RCF/RPM conversion</b>	Yes
<b>ACC/DEC Ramps</b>	9/10
<b>Program Memory</b>	100
<b>Power Supply</b>	AC 230V, 50Hz (AC 220-230V, 60/50Hz; 110V optional)
<b>Power Requirement</b>	900 VA
<b>Dimension (W x D x H)</b>	584 x 535 x 317 mm
<b>Net Weight</b>	65 kg
<b>CE MARK</b>	Yes
<b>Cat No.</b>	GZ-0624R

## Fixed Angle Rotor, GRF-SR-c50-6

- Capacity : 6 x 50 mL conical
- Max. RPM / RCF : 6,000 / 3,960
- Hole angle from axis during rotation :  $\angle 25^\circ$
- Hole dimension ( $\varnothing$  x L, mm) : 30 x 108.6
- Hole bottom type : Conical
- Max. height for tube fit (mm) : 125
- Supplied with a lid and an O-ring inserted



						
<b>Tube</b>						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\varnothing$ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
						None
<b>Adapter</b>						
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Adaptor hole dimension ( $\varnothing$ x L, mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	93.6	82.5	82.5	94.8	95.8	98.4
Max. RCF (g-force)	3,767	3,320	3,320	3,816	3,856	3,960

## Angle Rotor, GRA-SR-50-10



















- Capacity : 10 x 50 mL or 50 mL Conical | Max. RPM / RCF : 4,000 / 2,508
- Hole angle rotation :  $\angle 45^\circ$  | Hole dimension ( $\Phi \times L$ , mm) : 32.2 x 13.5
- Supplied with 10 sleeves, No ID ring



50 mL Sleeve,  
**GLS-50**

Max. RPM / RCF : 4,000 / 2,549  
 Hole dimension ( $\Phi \times L$ , mm) : 30 x 99  
 Max. height for tube fit (mm) : 130  
 Hole bottom type : Flat bottom with rubber pad  
 Supplied with 3.5 mm thick NBR pad

Tube									
Tube capacity (mL)	14 mL	15	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical	50 mL conical (Skirt)
Tube Dimension ( $\Phi \times L$ , mm)	15.7 x 96	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118
Adapter							None		None
Cat. No.	GAS-u14(f50)	GAS-u15(f50)	GAS-u15(f50)	GAS-c25(f50)	GAS-c25(f50)	GAS-30(f50)	-	GAS-c50(f50)	-
Rack hole dimension ( $\Phi \times L$ ,mm)	17.2 x 75	17.2 x 87	17.2 x 87	27.1 x 14.1	27.1 x 14.1	26 x 86.5	-	29.5 x 17.5	-
Rack hole bottom type	Open	Open	Open	Conical	Conical	Round	-	Conical	-
Max. radius (mm)	141.9	141.9	141.9	115	115	135	142.5	142.5	142.5
Max. RCF (g-force)	2,538	2,538	2,538	2,057	2,057	2,415	2,549	2,549	2,549














## Angle Rotor, GRA-SR-c50-10

- Capacity : 10 x 50 mL or 50 mL Conical | Max. RPM / RCF : 4,000 / 2,508
- Hole angle rotation :  $\angle 45^\circ$  | Hole dimension ( $\varnothing \times L$ , mm) : 32.2 x 13.5
- Supplied with 10 sleeves, No ID ring



50 mL Sleeve,  
GLS-c50

Hole dimension ( $\varnothing \times L$ , mm) : 31 x 99  
Max. height for tube fit (mm) : 130  
Hole bottom type : Conical

Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	17 x 120	28.8x83	28.8x78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Adaptorholedimension( $\Phi \times L$ ,mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	139.6	115	115	135.5	136.1	140
Max. RCF (g-force)	2,497	2,057	2,057	2,424	2,435	2,508














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

- Capacity : 24 x 15 mL (12 outer, 12 inner)
- Max. RPM / RCF : 4,000 / 2,773
- Hole angle rotation :  $\angle 45^\circ$  | Hole dimension ( $\varnothing \times L$ , mm) : 20.4 x 10
- Supplied with 24 sleeves | Rotor ID ring underneath the rotor body



15 mL Sleeve,  
GLS-15

Hole dimension ( $\varnothing \times L$ , mm) : 18 x 87  
Max. height for tube fit (mm) : 125 (120 for conical / wider cap)  
Hole bottom type : Flat bottom with rubber pad  
Supplied with 3.0 mm thick NBR pad

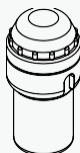
Tube								
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 120	17 x 120
Adapter						None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-
Adaptorholedimension( $\Phi \times L$ ,mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-
Adaptor hole bottom type	Round	Open	Conical	Conical	Round	-	-	-
Max. radius (mm)*	inner 116.3 outer 132.3	inner 136.8 outer 152.8	inner 105.3 outer 121.3	inner 105.3 outer 121.3	inner 126.5 outer 142.5	inner 138 outer 155	inner 138 outer 155	inner 138 outer 155
Max. RCF (g-force)*	inner 2,080 outer 2,367	inner 2,447 outer 2,733	inner 1,884 outer 2,170	inner 1,884 outer 2,170	inner 2,263 outer 2,549	inner 2,469 outer 2,773	inner 2,469 outer 2,773	inner 2,469 outer 2,773

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

- 4 loadings
- Max. RPM : 4,200
- Angle from axis during rotation :  $\angle 90^\circ$
- Rotor dimension / weight ( $\varnothing \times L$ , mm / g) : 206.3 x 53.5 / 860
- Supplied with a lubricant, No ID ring



**Bio-Safe** Porton Down Certified

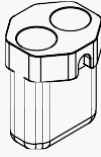


100 mL Bucket with a Cap,  
**GLBB-b100-100**

Max. RPM / RCF : 4,200 / 3,059  
 Max. Radius (mm) : 155.1  
 Hole dimension ( $\varnothing \times L$ , mm) : 47 x 99  
 Max. height for tube fit (mm) : 120 (w/ cap) / 130 (w/o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and an O-ring, No cap version is available












Tube									
Tube capacity (mL)	1.5 ~ 2.0	2.0 mL screw cap	5 mL conical	5 mL conical	2.6 ~ 7	4 ~ 10	15	15 mL conical	15 mL conical
Tube Dimension ( $\Phi \times L$ , mm)	11 x 38	10.1 x 46	16 x 59	16 x 67	13 x 75	16 x 100	16 x 120	17 x 120	17 x 120
Adapter									
Cat. No.	GAM-m2.0-6(b100)	GAM-m2.0-6(b100)	GAM-c5-3(b100)	GAM-c5-3(b100)	GAM-7-5(b100)	GAM-10-5(b100)	GAM-15-3(100)	GAM-c15-3(100)	GAS-c15(b100)
Rack capacity (ea / 4)	6 / 24	6 / 24	3 / 12	3 / 12	5 / 20	5 / 20	3 / 12	3 / 12	3 / 4
Rack hole dimension ( $\Phi \times L$ , mm)	11 x 39	11 x 39	17.2 x 52	17.2 x 52	13.5 x 60	16 x 60	17.5 x 105	17.2 x 106.5	17.2 x 106.5
Rack hole bottom type	Round	Round	Conical	Conical	Round	Flat	Flat	Conical	Conical
Max. height tube fit (mm)	115	115	75	75	115	115	120	120	120
Max. radius (mm)*	150.1	150.1	110.1	110.1	150.1	150.1	152.1	155.1	155.1
Max. RCF (g-force)*	2,960	2,960	2,171	2,171	2,960	2,960	3,000	3,059	3,059

Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	30	50	50 mL conical	50 mL conical (Skirted)	85	100
Tube Dimension ( $\Phi \times L$ , mm)	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115
Adapter								
Cat. No.	GAS-c25(b100)	GAS-c25(b100)	GAS-30(b100)	GAS-50(b100)	GAS-c50(b100)	GAS-sc50(b100)	GAS-85(b100)	GAS-100(100)
Rack capacity (ea / 4)	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Rack hole dimension ( $\Phi \times L$ , mm)	17.2 x 52	17.2 x 52	26 x 86	29.5 x 95.9	30 x 100	29.8 x 100	38.5 x 96.4	44.2 x 93
Rack hole bottom type	Conical	Conical	Round	Round	Conical	Flat	Round	Round
Max. height tube fit (mm)	118	118	118	118	120	120	118	118
Max. radius (mm)*	153.5	153.5	153.5	153	153	153	153.5	150.1
Max. RCF (g-force)*	3,027	3,027	3,027	3,017	3,017	3,017	3,027	2,960



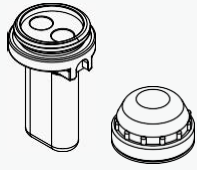
50 mL Conical Bucket,  
**GLB-dc50-100**

Max. RPM / RCF : 4,200 / 3,059  
 Max. Radius (mm) : 155.1  
 Hole dimension (Ø x L, mm) : 30 x 89  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Conical

						
Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension (Φ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Bucket capacity(ea / 6)	2 / 8	2 / 8	2 / 8	2 / 8	2 / 8	2 / 8
Adaptorholedimension(ΦxL,mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adaptor hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	152.5	118.5	118.5	143.9	144.1	155.1
Max. RCF (g-force)	3,008	2,337	2,337	2,838	2,842	3,059




**Bio-Safe**

Manufacturer Validated



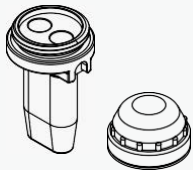
15 mL Dual Round Bucket  
with a Cap,  
**GLBB-bd15-100**

Max. RPM / RCF : 4,200 / 2,976  
Max. Radius (mm) : 150.9  
Hole dimension (Ø x L,mm) : 17 x 98  
Max. height for tube fit (mm) : 123 (w/ cap) / 127 (w/o cap)  
Hole bottom type : Round  
Supplied with a cap and O-ring, No cap version is available

Tube			
Tube capacity (mL)	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L,mm)	16 x 100	16 x 114	16 x 120
Bucket capacity (ea / 6)	2 / 8	2 / 8	2 / 8
Max. height tube fit (mm)	123	123	123
Max.radius(mm)	150.9	150.9	150.9
Max. RCF (g-force)	2,976	2,976	2,976








**Bio-Safe**

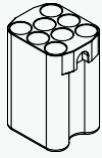
Porton Down Certified



15 mL Dual Conical Bucket  
with a Cap,  
**GLBB-bdc15-100**















Max. RPM / RCF with : 4,200 / 3,059  
Max. Radius (mm) : 155.1  
Hole dimension (Ø x L, mm) : 17 x 97.5  
Max. height for tube fit (mm) : 120 (w/ cap) / 125 (w/o cap)  
Hole bottom type : Conical  
Supplied with a cap and O-ring, No cap version is available

Tube				
Tube capacity (mL)	5 mL conical	5 mL conical	14 mL	15 mL conical
Tube Dimension (Φ x L, mm)	16 x 59	16 x 67	15.7 x 96	17 x 120
Adapter				None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	GAS-14(c15)	-
Bucket capacity (ea / 6)	2 / 8	2 / 8	2 / 8	2 / 8
Adaptorholedimension(ΦxL,mm)	14.8 x 20	14.8 x 20	16 x 7.8	-
Adaptor hole bottom type	Conical	Conical	Round	-
Max. radius (mm)	102	102	115.1	155.1
Max. RCF (g-force)	2,012	2,012	2,279	3,059

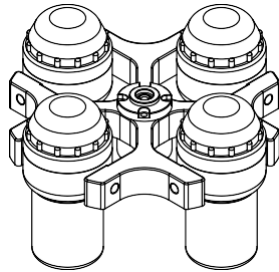


Vacutainer 10 mL Bucket,  
**GLB-15-8-100**

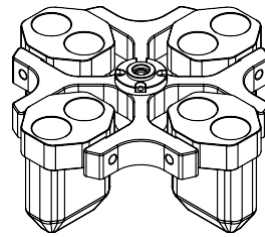
Max. RPM / RCF : 4,200 / 2,998  
 Max. Radius (mm) : 152  
 Hole dimension (Ø x L, mm) : 17 x 86  
 Hole bottom type : Flat with rubber pad  
 Max. height for tube fit (mm) : 115  
 Supplied with 3.0 mm thick NBR rubber pad

									
Tube									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 100	16 x 114	16 x 120
Adapter						None	None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	GAS-c5(f15)	GAS-c5(f15)	GAS-14(f15)	-	-	-	-
Bucket capacity (ea / 6)	8 / 32	8 / 32	4 / 16	4 / 16	4 / 16	8 / 32	8 / 32	8 / 32	2 / 8
Adaptor hole dimension (Φ x L, mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-	-
Adaptor hole bottom type	Round	Open	Conical	Conical	Round	-	-	-	-
Max. height tube fit (mm)	88	115	75	75	103.5	115	115	115	125(center)
Max. radius (mm)*	125	152	112	112	140.5	152	152	152	152
Max. RCF (g-force)*	2,465	2,998	2,209	2,209	2,771	2,998	2,998	2,998	2,998

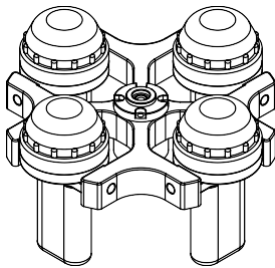
**Adaptable Buckets of Rotor, GRS-SR-100-4**



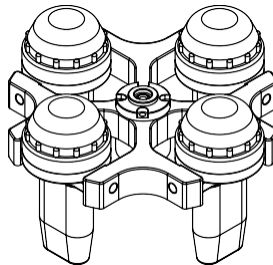
GLBB-b100-100



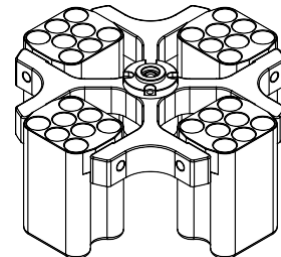
GLB-dc50-100



GLBB-bd15-100



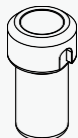
GLBB-bdc15-100



GLB-15-8-100

















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

- 4 loadings | Max. RPM : 4,800
- Angle from axis during rotation:  $\angle 90^\circ$
- Rotor ID ring underneath the rotor body
- Supplied with a lubricant



50 mL Bucket,  
**GLB-50-50**












Max. RPM / RCF : 4,800 / 3,888  
 Max. Radius (mm) : 150.9  
 Hole dimension ( $\varnothing$  x L, mm) : 30.5 x 91  
 Max. height for tube fit (mm) : 125  
 Supplied with 4.0 mm thick NBR pad

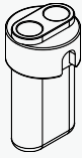
Tube									
Tube capacity (mL)	14 mL	15	15 mL conical	25 mL conical	25 mL conical	30	50 mL conical	50 mL conical (Skirt)	50
Tube Dimension ( $\Phi$ x L, mm)	15.7 x 96	16 x 120	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29.5 x 118	29.5 x 118	29 x 108
Adapter								None	None
Cat No.	GAS-u14(f50)	GAS-u15(f50)	GAS-u15(f50)	GAS-c25(f50)	GAS-c25(f50)	GAS-30(f50)	GAS-c50(f50)	-	-
Adaptor hole dimension ( $\Phi$ x L, mm)	17.2 x 75	17.2 x 87	17.2 x 87	27.1 x 14.1	27.1 x 14.1	26 x 86.5	29.5 x 17.5	-	-
Adaptor hole bottom type	Open	Open	Open	Conical	Conical	Round	Conical	-	-
Max. radius (mm)	150.9	150.9	150.9	117.1	117.1	142.1	150.9	150.9	142
Max. RCF (g-force)	3,888	3,888	3,888	3,055	3,055	3,699	3,699	3,888	3,888



50 mL Bucket,  
**GLB-c50-50**








Max. RPM / RCF : 4,800 / 3,888  
 Max. Radius (mm) : 150.9  
 Hole dimension ( $\varnothing$  x L, mm) : 29.5 x 91.5  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Conical

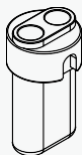
Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension ( $\Phi$ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(c50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Rack hole dimension ( $\Phi$ x L, mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Rack hole bottom type	Conical	Conical	Conical	Round	Round	-
Max. radius (mm)	150.9	119.9	119.9	145.3	145.5	150.9
Max. RCF (g-force)	3,887	3,088	3,088	3,743	3,748	3,888



15 mL Dual Conical Bucket,  
GLB-dc15-50




Max. RPM / RCF : 4,800 / 3,888  
 Max. Radius (mm) : 150.9  
 Hole dimension ( $\varnothing$  x L, mm) : 17 x 91.5  
 Max. height for tube fit (mm) : 120  
 Hole bottom type : Conical

Tube				
Tube capacity (mL)	5 mL conical	5 mL conical	14 mL	15 mL conical
Tube Dimension ( $\Phi$ x L, mm)	16 x 59	16 x 67	15.7 x 96	17x120
Adapter				None
Cat No.	GAS-c5(c15)	GAS-c5(c15)	GAS-14(c15)	-
Adaptor hole dimension ( $\Phi$ x L, mm)	14.8 x 20	14.8 x 20	16 x 7.8	-
Adaptor hole bottom type	Conical	Conical	Round	-
Max. radius (mm)	98.6	98.6	131.6	150.9
Max. RCF (g-force)	2,540	2,540	3,390	3,888



15 mL Dual Round Bucket,  
**GLB-d15-50**

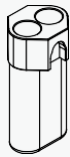
Max. RPM / RCF : 4,800 / 3,888  
 Max. Radius (mm) : 150.9  
 Hole dimension (Ø x L,mm) : 17 x 91.5  
 Max. height for tube fit (mm) : 125  
 Hole bottom type : Round

Tube			
Tube capacity (mL)	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L,mm)	16 x 100	16 x 114	16 x 120
Max. height tube fit (mm)	125	125	125
Max. radius (mm)	150.9	150.9	150.9
Max. RCF (g-force)	3,888	3,888	3,888










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

- 6 loadings
- Max. RPM : 4,400
- Angle from axis during rotation:  $\angle 90^\circ$
- Rotor ID ring underneath the rotor body
- Supplied with a lubricant



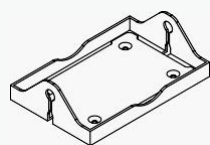
15 mL Dual Round Bucket,  
GLB-d15-15

Max. RPM / RCF : 4,400 / 3,312  
 Max. Radius (mm) : 153  
 Hole dimension ( $\varnothing$  x L,mm) : 17 x 88  
 Max. height for tube fit (mm) : 122  
 Supplied with 3.0 mm thick NBR rubber pad

					
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	8 ~ 10 mL VT	15 mL glass	15 mL open top
Tube Dimension ( $\Phi$ x L, mm)	13 x 75	13 x 100	16 x 100	16 x 100	16 x 114
Adapter			None	None	None
Cat No.	GAS-3(f15)	GAS-5(f15)	-	-	-
Bucket capacity (ea / 6)	2/12	2/12	2/12	2/12	2/12
Adaptorholedimension( $\Phi$ xL,mm)	13.5 x 61	13.5 x 85	-	-	-
Adaptor hole bottom type	Round	Open	-	-	-
Max. height tube fit (mm)	95	123	123	123	123
Max. radius (mm)*	126	153	153	153	153
Max. RCF (g-force)*	2,727	3,312	3,312	3,312	3,312

## Swing Rotor, GRS-SR-mw-2

- 2 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with microplate holder, No ID ring



Microplate Bucket,  
**GLP-mw**

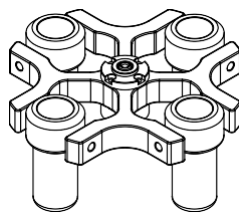
Max. RPM / RCF : 4,000 / 2,000  
 Max. Radius (mm) : 111.8  
 Hole dimension (w x d, mm) : 86.5 x 128.5  
 Max. height for tube fit (mm) : 35  
 Supplied with 3.0 mm thick ABS pad



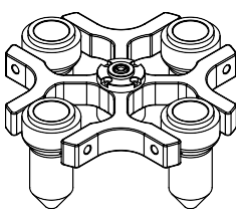
### Tube

Tube capacity (mL)	MTP
Tube Dimension (Φ x L,mm)	86 x 128 x15
Bucket capacity (ea / 2)	2 / 4

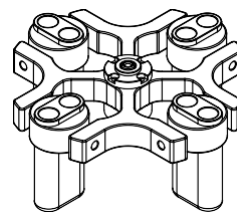
### Adaptable Buckets of Rotor, GRS-SR-50-4



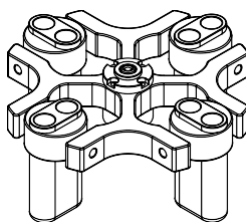
GLB-50-50



GLB-c50-50



GLB-dc15-50



GLB-d15-50



# LabTech

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