

# 1248, 1248R, 1580, 1580R

Table-top, High-speed Centrifuges



Bio



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
Max. RPM/PCF for Fixed Angle	12,000 rpm / 16,582 xg	12,000 rpm / 16,582 xg	15,000 rpm / 24,249 xg	15,000 rpm / 25,910 xg
Max. RPM/PCF for Swing-out	5,000 rpm / 5,394 xg	5,000 rpm / 5,394 xg	5,000 rpm / 5,394 xg	5,000 rpm / 5,394 xg
Max. Capacity for Fixed Angle	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
Max. Capacity for Swing-out	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
Temp. Range (°C)	-	-20°C to 40°C	-	-20°C to 40°C
Fast Cool Button	-	Yes	-	Yes
Time Control	Pulse, timed <100 min or continuous	Pulse, timed <10 min or continuous	Pulse, timed <100 min or continuous	Pulse, timed <10 hr or continuous
Time Counting Range	Selectable, at set speed or from starting			
RCF/RPM Conversion	Yes			
Noise Level (dependent on rotor)	≤60 dB			
ACC/DEC Ramps	9/10			
Program Memory	100			
Power Supply	AC 230V, 50Hz (AC 220-230V, 60/50Hz, 110V optional)			
Power Requirement	900 VA	2.5 kVA	1.5 kVA	2.5 kVA
Dimension (W x D x H)	475 x 561 x 330 mm	655 x 620 x 357 mm	540 x 650 x 380 mm	770 x 650 x 390 mm
Net Weight	40 kg	78 kg	57 kg	93 kg
CE MARK	Yes			
Cat No.	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 :  $\leq 25^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 6.2 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 ( $\varnothing \times L$ , 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 :  $\leq 34^\circ$
- 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










Tube								
Tube capacity (mL)	15	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical	85 mL
Tube Dimension ( $\varnothing \times L$ , 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)	-
Adapter hole dimension ( $\varnothing \times L$ , 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	-
Adapter 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				
Tube capacity (mL)	15	15 mL conical	30	50
Tube Dimension ( $\varnothing \times L$ , 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)	-
Adapter hole dimension ( $\varnothing \times L$ , mm)	17 x 94	17 x 105	26 x 83.8	-
Adapter hole bottom type	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 ( $\varnothing \times L$ , 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)	-
Adapter hole dimension ( $\varnothing \times L$ , mm)	17 x 105	27.1 x 14.1	27.1 x 14.1	26 x 83.8	27.9 x 11	-
Adapter hole bottom type	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, GRF-G-15-24

- Capacity : 24 x 15 mL
- Max. RPM / RCF : 8,000 / 8,872
- Hole angle from axis during rotation :  $\geq 30^\circ$
- Hole dimension ( $\Phi \times L$ , mm) : 17.1 x 94
- Hole bottom type : Round
- Max. height for tube fit (mm) : 120
- Supplied with a lid and O-ring inserted








☞ Only for R model

Tube	
Tube capacity (mL)	15
Tube Dimension ( $\Phi \times L$ , mm)	16 x 120
Max. radius (mm)	Inner 103 / Outer 124
Max. RCF (g-force)	Inner 7,370 / Outer 8,872

## 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 :  $\geq 25^\circ$
- 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 :  $\leq 45^\circ$
- 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





Tube				
Tube capacity (mL)	0.2	0.5	1.5/2.0	2.0 mL screw cap
Tube Dimension ( $\varnothing \times L$ , 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 ( $\varnothing \times L$ , 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 (1248R / 1248)	12,000	12,000	12,000	12,000
Max. RCF (g-force)	12,718	13,835	15,520	15,520

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

- Capacity : 8 x 8-Tube PCR strips, 64 x 0.2 mL
- Max. RPM / RCF : 12,000 / 10,803
- 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



Tube		
Tube capacity (mL)	0.2	8-Strip tube
Tube Dimension ( $\varnothing \times L$ , mm)	6 x 8	6 x 8
Max. radius (mm)	Inner 58.6 Outer 67.1	Inner 58.6 Outer 67.1
Max. RPM	12,000	12,000
Max. RCF (g-force)	Inner 9,434 Outer 10,803	Inner 9,434 Outer 10,803














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

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



15 mL Sleeve  
GLB-15/10A

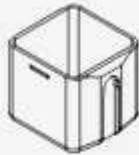
Hole dimension ( $\varnothing \times L$ , mm) : 18 x 87  
 Max. height for tube fit (mm) : 125 (120 for conical/wide cap)  
 Hole bottom type : Flat bottom with rubber pad  
 Supplied with 30 mm thick NBR pad

Tube								
Tube capacity (mL)	20 ~ 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
Adapter						None	None	None
Cat. No.	GAS-3(F15)	GAS-5(F15)	GAS-c5(F15)	GAS-c5(F15)	GAS-10(F15)	-	-	-
Adapter hole dimension ( $\varnothing \times L$ , mm)	13.5 x 61	13.5 x 85	14 x 20	14 x 20	16.5 x 7	-	-	-
Adapter hole 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 :  $\leq 90^\circ$
- 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)	20 ~ 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)*	2.894	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 (skined)	250 mL	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	29,5 x 118	60 x 163	96,2 x 147	73,5 x 142
Adapter								
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 (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	151,5	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



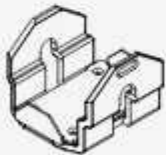


500 mL Round Bucket  
GLB-500-r750

Max. RPM / RCF : 3,600 / 3,159  
 Max. Radius (mm) : 218  
 Hole dimension (Ø x L, mm) : 70 x 135  
 Max. height for tube fit (mm) : 172  
 Hole bottom type : Flat



Tube	
Tube capacity (mL)	500
Tube Dimension (Ø x L, mm)	69.5 x 170.2



Microplate Holder Bucket  
GLP-nw-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		
Tube capacity (mL)	MTP	DWP
Tube Dimension (Ø 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 :  $\pm 90^\circ$
- Supplied with a lubricant


**Bio-Safe**

Manufacturer Validated



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

Max. RPM / RCF : 4.000 / 3.667  
Max. Radius (mm) : 205  
Hole dimension ( $\varnothing \times L$ , 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 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 ( $\varnothing \times L$ , 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 ( $\varnothing \times L$ , 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 ( $\varnothing \times L$ , 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 ( $\varnothing \times L$ , 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)	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 overflow.

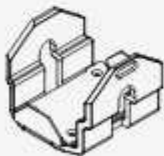


500 mL Round Bucket  
GLB-500-750

Max. RPM / RCF : 4,000 / 3,900  
 Max. Radius (mm) : 218  
 Hole dimension (Ø x L, mm) : 70 x 135  
 Max. height for tube fit (mm) : 172  
 Hole bottom type : Flat



Tube	
Tube capacity (mL)	500
Tube Dimension (Ø x L, mm)	69.5 x 170.2



Microplate Holder Bucket  
GLP-mw-r750

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		
Tube capacity (mL)	MTP	DWP
Tube Dimension (Ø 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)	25 mL conical	25 mL conical	50 mL conical	50 mL conical (skined)	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-ac50(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-nw-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	10.1 x 46	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-m20-9(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)	25 mL conical	30	50	50 mL conical	50 mL conical Skired	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-ac50(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






60 mL Syringe Bucket  
GLB-60-250

Max. RPM / RCF : 5,000 / 5,394  
 Max. Radius (mm) : 193  
 Hole dimension (Ø x L, mm) : 31.9 x 130.2  
 Max. height for tube fit (mm) : 162  
 Hole bottom type : Flat

Tube			
Tube capacity (mL)	10 mL syringe	20 mL syringe	60 mL syringe
Tube Dimension (Ø x L, mm)	16.5 x 108	21.5 x 112	29.6 x 160



  

Adapter			
Cat No.	GAS-10a(60)	GAS-20a(60)	GAS-60a(60)
Adapter hole dimension (Ø x L, mm)	16.7 x 84	21.8 x 92	31.6 x 29.1
Adapter hole bottom type	Conical / Flat	Conical / Flat	Conical / Open
Max. radius (mm)	167.2	169.9	193
Max. RCF (g-force)	4,673	4,749	5,394





10 mL / 20 mL Dual Syringe Bucket  
GLB-d20/10-250

Max. RPM / RCF : 5,000 / 4,752 / 4,472  
 Max. Radius (mm) : 170 (20 mL) / 160 (10 mL)  
 Hole dimension (Ø x L, mm) : 22.5 x 100 (20 mL) / 16 x 90 (10 mL)  
 Max. height for tube fit (mm) : 132 (20 mL) / 125 (10 mL)  
 Hole bottom type : Flat

Tube		
Tube capacity (mL)	10 mL syringe	20 mL syringe
Tube Dimension (Ø x L, mm)	16.5 x 108	21.5 x 112

Adapter		
Cat No.	GAS-10a(10)	GAS-20a(20)
Adapter hole dimension (Ø x L, mm)	16.5 x 13.6	22 x 16.6
Adapter hole bottom type	Conical / Open	Conical / Open
Max. radius (mm)	160	170
Max. RCF (g-force)	4,472	4,752

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

- 6 loadings
- Max. RPM : 4.000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant



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100 mL Bucket with a Cap  
GLBB-b100-100

Max. RPM / RCF : 4.000 / 3.105  
 Max. Radius (mm) : 173.6  
 Hole dimension (Ø 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

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 (Φ x 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-m20-6 (b100)	GAM-m20-6 (b100)	GAM-c5-3 (b100)	GAM-c5-3 (b100)	GAM-7-5 (b100)	GAM-10-5 (b100)	GAM-c15-9 (b100)	GAM-c15-3 (b100)	GAS-c15 (b100)
Rack capacity (ea / b)	6 / 36	6 / 36	3 / 18	3 / 18	5 / 30	5 / 30	3 / 18	3 / 18	1 / 6
Rack hole dimension (Φ 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

Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	30	50	50 mL conical	50 mL conical (skirted)	85	100
Tube Dimension (Φ 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-ac50 (b100)	GAS-85 (b100)	GAS-100 (b100)
Rack capacity (ea / b)	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6
Rack hole dimension (Φ 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	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-ds50-100

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(f50)	GAS-c25(f50)	GAS-c25(f50)	GAS-30(f50)	GAS-50(f50)	-
Bucket capacity (ea / b)	2/12	2/12	2/12	2/12	2/12	2/12
Adapter 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	-
Adapter 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



50 mL Bucket with a Cap  
GLB-b50-100




Max. RPM / RCF with : 4,000 / 3,032  
Max. Radius (mm) : 169.5  
Hole dimension (Ø x L, mm) : 30.5 x 97  
Max. height for tube fit (mm) : 120 (w/ cap) / 125 (w/o cap)  
Hole bottom type : Flat bottom with rubber pad  
Supplied with a cap and O-ring. No cap version is available

Tube									
Tube capacity (mL)	14 mL	15	15 mL conical	25 mL conical	25 mL conical	30	50 mL conical	50 mL conical (skin)	50
Tube Dimension (Φ 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)	-	-
Adapter hole dimension (Φ 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	-	-
Adapter hole bottom type	Open	Open	Open	Conical	Conical	Round	Conical	-	-
Max. radius (mm) <sup>1</sup>	169.5	169.5	169.5	135.7	135.7	160.7	169.5	169.5	169.5
Max. RCF (g-force) <sup>1</sup>	3,032	3,032	3,032	2,427	2,427	2,875	3,032	3,032	3,032



15 mL Dual Round Bucket  
with a Cap  
GLB-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 (ø x L, mm)	16 x 100	16 x 114	16 x 120
Bucket capacity (ea / 6)	2 / 12	2 / 12	2 / 12
Max. height for 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

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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 (ø x L, mm)	16 x 59	16 x 67	15.7 x 96	17 x 120
Adaptor				None
Cat. No.	GAS-c5(c15)	GAS-c5(c15)	GAS-14(c15)	-
Bucket capacity (ea / 6)	2 / 12	2 / 12	2 / 12	2 / 12
Adaptor hole dimension (ø 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)	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

Tube									
Tube capacity (mL)	20~4 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) <sup>1)</sup>	144	171	130	130	159.5	171	171	171	171
Max. RCF (g-force) <sup>1)</sup>	2,576	3,059	2,325	2,325	2,853	3,059	3,059	3,059	3,059

