

# 1236R, 1736R, 2236R

Floor Standing, High-speed Centrifuges



## 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)	-
Adaptor hole dimension ( $\Phi \times L$ , 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)	-
Adaptor hole dimension ( $\Phi \times L$ , 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 ( $\varnothing \times L$ , 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 ( $\Phi \times L$ , mm)	61.5 x 128	69 x 168
Adapter		None
Cat No.	GAS-250(500)	-
Adaptor hole dimension ( $\Phi \times L$ , 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 ( $\varnothing \times L$ , 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 ( $\Phi \times L$ , 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 ( $\varnothing \times L, \text{mm}$ ) : 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 ( $\varnothing \times L, \text{mm}$ )	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 ( $\varnothing \times L, \text{mm}$ )	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) (1736R/2236R)	23,268/ 41,366	22,765/ 40,472	20,350/ 36,178	20,350/ 36,178	21,193/ 41,232	23,520/ 41,813	23,017/ 40,919	25,029/ 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 ( $\varnothing \times L, \text{mm}$ ) : 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 ( $\varnothing \times L, \text{mm}$ )	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 ( $\varnothing \times L, \text{mm}$ )	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 ( $\varnothing \times L, \text{mm}$ ) : 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 ( $\Phi \times L, \text{mm}$ )	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 ( $\Phi \times L, \text{mm}$ )	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 ( $\varnothing \times L, \text{mm}$ ) : 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	30	50
Tube Dimension ( $\Phi \times L, \text{mm}$ )	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)	-
Adaptor hole dimension ( $\Phi \times L, \text{mm}$ )	17 x 94	17 x 105	26 x 83.8	-
Adaptor hole bottom type	Round	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 ( $\varnothing \times L, \text{mm}$ ) : 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 ( $\Phi \times L, \text{mm}$ )	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 ( $\Phi \times L, \text{mm}$ )	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 ( $\varnothing \times L, \text{mm}$ ) : 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 ( $\Phi \times L, \text{mm}$ )	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 ( $\Phi \times L, \text{mm}$ )	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. 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 ( $\varnothing \times L$ ,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-G-15-24

- Capacity : 24 x 15 mL
- Max. RPM / RCF : 8,000 / 8,872
- Hole angle from axis during rotation :  $\angle 30^\circ$
- Hole dimension ( $\varnothing \times L$ , 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 1236R

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-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)	-
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) (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)	-
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)	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 ( $\varnothing \times L$ , mm) : 11.1 x 39
- Hole bottom type : Round I Max. height for tube fit (mm) : 52
- Supplied with a lid



\* Applicable 1736R / 2236R







				
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. 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 ( $\varnothing \times L$ , mm) : 11.1 x 39
- Hole bottom type : Round I Max. height for tube fit (mm) : 52
- Supplied with a lid





\* Only for 1236R

				
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. RCF (g-force)	12,718	13,835	15,520	15,520

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

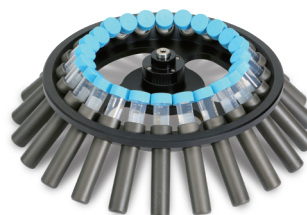
- Capacity : 8x8-Tube PCR strips, 64 x 0.2 mL
- Max. RPM / RCF : 12,000 / 10,803
- Hole angle from axis during rotation :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 6.5 x 16
- Hole bottom type : Round
- Max. height for tube fit (mm) : 25
- Supplied with a lid



Tube		
Tube capacity (mL)	0.2	8-Strip tube
Tube dimension ( $\Phi \times L$ , mm)	6 x 8	6 x 8
Max. radius (mm)	Inner 58.6 Outer 67.1	Inner 58.6 Outer 67.1
Max. 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 :  $\angle 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 20.4 x 14
- Supplied with 24 sleeves
















\* Only for 1236R



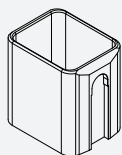
15 mL Sleeve  
**GLB-15/10A**

Hole dimension ( $\varnothing \times L$ , mm) : 18 x 87  
 Max. height for tube fit (mm) : 125 (120 for conical / 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-10(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)*	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

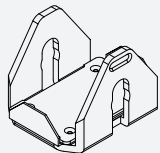


250 mL Rectangular Bucket  
GLB-r250-r250

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 ( $\Phi$ 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 ( $\Phi$ 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 ( $\Phi$ 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 ( $\Phi$ 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(lea / 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 :  $\angle 90^\circ$
- Supplied with a lubricant



250 mL Round Bucket  
**GLB-250-250**

Max. RPM / RCF : 5,000 / 5,394  
Max. Radius (mm) : 193  
Hole dimension (Ø x 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 (Φ 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	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 (Φ x 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

Tube									
Tube capacity (mL)	25mL conical	30	50	50 mL conical	50 mL conical (Skirted)	85	100	250 mL conical	250
Tube Dimension (Φ x 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 (Φ x 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

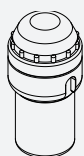
# Swing Rotor, GRS-G-100-6

- 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

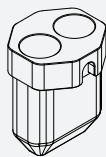


100 mL Bucket with a Cap  
**GLB-b100-100**

Max. RPM / RCF : 4,000 / 3,105  
 Max. Radius (mm) : 173.6  
 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 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-15-9(b100)	GAM-c15-3 (b100)	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

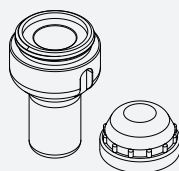
Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	30	50	50 mL conical	50 mL conical (Skirted)	85	100
Tube Dimension ( $\Phi \times L$ , mm)	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115
Adapter								
Cat. No.	GAS-c25(b100)	GAS-c25(b100)	GAS-30(b100)	GAS-50(b100)	GAS-c50(b100)	GAS-sc50(b100)	GAS-85(b100)	GAS-100(b100)
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(50)	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)	3,059	2,451	2,451	2,905	2,909	3,105

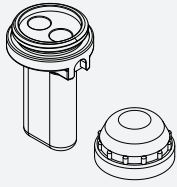


50 mL Bucket with a Cap  
GLB-b50-100

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 (Skirt)	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)	-	-
Adaptor 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	-	-
Adaptor hole bottom type	Open	Open	Open	Conical	Conical	Round	Conical	-	-
Max. radius (mm)*	169.5	169.5	169.5	135.7	135.7	160.7	169.5	169.5	169.5
Max. RCF (g-force)*	3,032	3,032	3,032	2,427	2,427	2,875	3,032	3,032	3,032





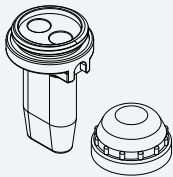
15 mL Dual Round Bucket  
with a Cap  
**GLB-bd15-100**

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 (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








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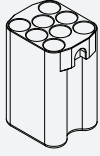
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15 mL Dual Conical Bucket  
with a Cap  
**GLBB-bdc15-100**















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 (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
Adaptor hole 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)	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)	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