

1.2 Table-top High-speed Centrifuges **1696R**



The refrigerated LABOGENE 1696R combines high capacity and performance in an attractive form that clearly sets itself from the others. It combines a high capacity of up to 4 x 1,000 mL, with class-leading versatility of 13 kinds of fixed angle rotors (including 4 x 250 mL carbon fiber rotor), and 7 kinds of swing-out rotors with different tube racks. It also features the improved high-performance motor specifically developed for 1696R to minimize any speed deviation, which makes it ideal for a setting that require both precision and consistency in every step.

Features

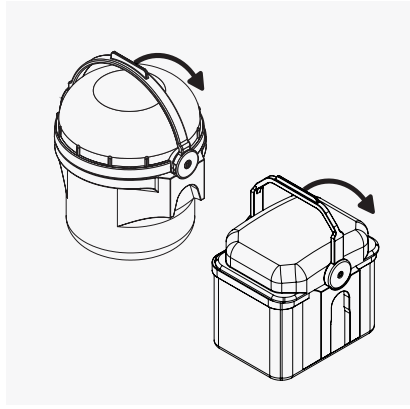
- High centrifugation speed that goes up to 27,590 x g (16,000 rpm)
- Swing-Out bucket rotors accommodate tubes and bottles from 0.2 mL to 1,000 mL
- Motorized soft-touch lid for easy effortless closing
- Highly visible display screen with integrated touch buttons for easy maintenance
- Numeric keys for quick setting
- Fast-Cool function that sets temperature to 4°C in 5 minutes for a quick start
- Key-lock function to prevent any unintentional changes during operation
- Automatic rotor recognition and imbalance detection warning for safety

Advanced Features



Built in Storage

Thanks to its smart use of space, the emergency tool and leveler is always within easy reach for maximum operational safety



Click Type Bucket

Locking mechanism is incorporated with the handle for secured lock and easy handling



Large Display with Integrated Touch Buttons

Contourless single continuous display with integrated touch buttons for easy cleaning

Outstanding Features

- White FND display
- Automatic Rotor Identification
- Imbalance Cut-Off
- Safety Lid Lock
- Lid Drop Protection
- Motorized Lid Open & Close
- Adjustment Of Volume And repetition Of Alarm Sound

Technical Specifications

1696R

Max. RPM/PCF Fixed Angle	16,000 rpm / 27,590 xg	Acc. time to max. speed	-
Max. RPM/PCF Swing-out	5,000 rpm / 5,394 xg	Dec. time from max. speed	-
Max. Capacity Fixed Angle	6 x 250 mL, 48 x 15 mL, 48 x 1.5/2.0/5.0 mL	ACC/DEC ramps	9/10
Max. Capacity Swing-out	4 x 1,000 mL, 8 x 250 mL, 116 x 50 mL	Program memory	100, 4 easy program save/call
Temp. range	-11°C to 40°C	Power supply	220~230 V, 60/50 Hz (110 V optional)
FAST cool button	Yes	Power Requirement	2.0 kVA
Time control	Pulse, timed <10 hr or continuous	Dimension (W x D x H)	775 x 695 x 395 mm
Time counting range	Selectable, at set speed or from starting	Net weight	116 kg
RCF/RPM conversion	Yes	CE MARK	-
Noise level (dependent on rotor)	≤60 dB (GRS-B-750-4 : ≤70 dB)		

Ordering Information

Cat. No. Description

Main Body

LZ-1696R	1696R, table-top centrifuge without Rotor (220V, 50/60Hz)
LZ-1696R-110	1696R, table-top centrifuge without Rotor (110V, 50/60Hz)

Rotors for 1696R

GRF-B-s0.2-64	A fixed angle rotor with aluminum lid for 64 PCR tubes or 8 rows of PCR strips
GRF-B-m2.0-30	A fixed angle rotor with aluminum lid for 30 microtubes
GRF-B-m2.0-48	A fixed angle rotor with aluminum lid for 48 microtubes
GRF-B-15-12	A fixed angle rotor with aluminum lid for 12 of 15 mL tubes
GRF-B-c15-12	A fixed angle rotor with aluminum lid for 12 of 15 mL conical tubes
GRF-B-15-24	A fixed angle rotor with aluminum lid for 24 of 15 mL tubes
GRF-B-50-8	A fixed angle rotor with aluminum lid for 8 of 50 mL tubes
GRF-B-c50-6	A fixed angle rotor with aluminum lid for 6 of 50 mL conical tubes
GRF-B-85-6	A fixed angle rotor with aluminum lid for 6 of 85 mL tubes
GRF-B-250-6	A fixed angle rotor with aluminum lid for 6 of 250 mL tubes and 6 of 15 mL tubes
GRF-BC-250-6	A fixed angle carbon Rotors for 6 of 250 mL tubes
GRS-B-100-6	Six-wing swing 100 mL rotor for holding round bucket, GLB-10-8-100, GLB-bd15-100, GLB-bdc15-100, GLB-b50-100, GLB-dc50-100 and GLB-b100-100
GRS-B-250-4	Four-wing swing 250 mL rotor for holding round bucket, GLB-250-250, GLB-c250-250, GLB-60-250, and GLB-d20/10-250
GRS-B-r250-4	Four-wing swing 250 mL rotor for holding rectangular bucket, GLB-r250-r250 and GLP-mw-r250
GRS-B-750-4A	Four-wing swing 750 mL stainless Rotors for holding bucket, GLB-b750-750A, GLB-500-750A, & GLP-mw-750A
GRS-B-r750-4	Four-wing swing 750 mL rotor for holding rectangular bucket, GLB-r750-r750, GLB-500-r750 & GLP-mw-r750
GRS-B-1000-4	Four-wing swing 1,000 mL rotor for holding bucket, GLB-b1000-1000, GLB-r1000-1000 & GLB-h1000-1000

Buckets and Microplate Holders

GLB-10-8-100	8 x 10 mL vacutainer 10 mL bucket of swing rotor, GRS-B-100-6
GLB-bd15-100	2 x 15 mL bucket of swing rotors, GRS-B-100-6 incl. cap, GBL-b100
GLB-bdc15-100	2 x 15 mL conical bucket of swing rotors, GRS-B-100-6 incl. cap, GBL-b100
GLB-b50-100	50 mL bucket of swing rotors, GRS-B-100-6 incl. cap, GBL-b100
GLB-dc50-100	2 x 50 mL conical bucket of swing rotors, GRS-B-100-6 incl. cap, GBL-b100
GLB-b100-100	100 mL bucket of swing rotors, GRS-B-100-6 incl. cap, GBL-b100
GLB-r250-r250	Rectangular 250 mL bucket of rotor, GRS-B-r250-4
GLB-d20/10-250	2 x 20 mL & 2 x 10 mL rectangular multi-tube bucket of rotor, GRS-B-250-4 for 20 mL and 10 mL syringe
GLB-60-250	60 mL round bucket of rotor, GRS-B-250-4 for 60 mL syringe
GLB-250-250	250 mL round bucket of rotor, GRS-B-250-4
GLB-c250-250	250 mL conical bucket of rotor, GRS-B-250-4
GLP-mw-r250	Microplate holder of Rotor, GRS-G/L-r250-4

Buckets and Microplate Holders

GLB-500-r750	500 mL round bucket of rotor, GRS-B-r750-4
GLP-mw-r750	Microplate holder of rotor GRS-B-r750-4
GLB-r750-r750	Rectangular 750 mL bucket of rotor, GRS-B-r750-4
GLB-500-750A	500 mL round bucket of rotor, GRS-B-750-4A
GLB-b750-750A	750 mL bucket of rotor, GRS-B-750-4A incl. cap
GLP-mw-750A	Microplate holder of rotor GRS-B-750-4A
GLB-b1000-1000	1,000 mL bucket of rotor, GRS-B-1000-4 incl. cap
GLB-r1000-1000	Rectangular 1,000 mL bucket of rotor, GRS-B-1000-4 incl. cap
GLP-mw-r1000	Microplate holder, GLB-r1000-1000
GLB-h1000-1000	High capacity 1,000 mL bucket of rotor, GRS-B-1000-4

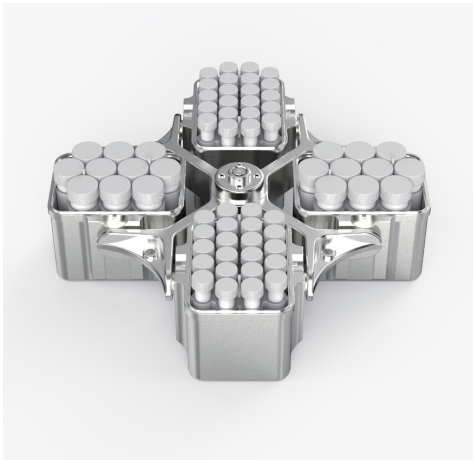
Adaptors and Tube Racks

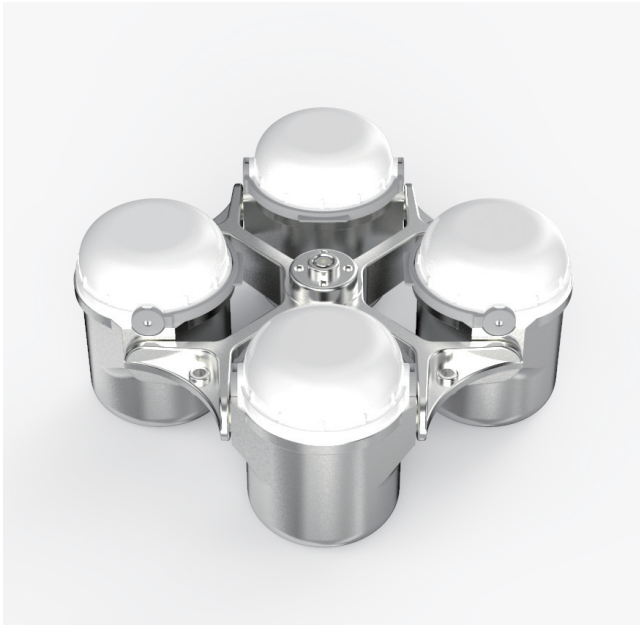
GAS-m0.2(2)	0.2 mL adaptor of microtube rotors
GAS-m0.5(2)	0.5 mL adaptor of microtube rotors
GAS-u15(50)	15 mL round & conical adaptor of bucket GLB-b50-100
GAS-c50(50)	50 mL conical adaptor of bucket GLB-b50-100
GAS-15(50)	15 mL adaptor of rotor, GRF-B-50-8
GAS-c15(50)	15 mL conical adaptor of rotor, GRF-B-50-8
GAS-c15(c50)	15 mL conical adaptor of rotor, GRF-B-c50-6
GAS-15(85)	15 mL adaptor of rotor, GRF-B-85-6
GAS-c15(85)	15 mL conical adaptor of rotor, GRF-B-85-6
GAS-50(85)	50 mL adaptor of rotor, GRF-B-85-6
GAS-c50(85)	50 mL conical adaptor of rotor, GRF-B-85-6
GAM-m2.0-6(b100)	6 x 1.5/2.0 mL microtube multi-tube rack for bucket GLB-b100-100
GAM-7-5(b100)	5 x 7 mL multi-tube rack for bucket GLB-b100-100
GAM-10-5(b100)	5 x 10 mL multi-tube rack for bucket GLB-b100-100
GAM-15-3(100)	3 x 15 mL multi-tube rack for bucket GLB-b100-100, not applicable with cap
GAM-c15-3(100)	3x 15 mL conical multi-tube rack for bucket GLB-b100-100, not applicable with cap
GAS-c15(b100)	15 mL conical adaptor of bucket GLB-b100-100
GAS-50(b100)	50 mL adaptor of bucket GLB-b100-100
GAS-c50(b100)	50 mL conical adaptor for bucket GLB-b100-100
GAS-85(b100)	85 mL adaptor for bucket GLB-b100-100
GAS-100(b100)	100 mL adaptor for bucket GLB-b100-100

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Adaptors and Tube Racks

GAM-m2.0-20(r250)	20 x 1.5/2.0 mL microtube multi-tube rack for bucket GLB-r250-r250
GAM-5-12(r250)	12 x 5 mL multi-tube rack of bucket, GLB-r250-r250
GAM-15-12(r250)	12 x 15 mL multi-tube rack of bucket, GLB-r250-r250
GAM-c15-9(r250)	9 x 15 mL conical multi-tube rack of bucket, GLB-r250-r250
GAM-50-4(r250)	4 x 50 mL multi-tube rack of bucket, GLB-r250-r250
GAM-c50-3(r250)	3 x 50 mL conical multi-tube rack of bucket, GLB-r250-r250
GAM-85-2(r250)	2 x 85 mL & 2 x 15 mL multi-tube rack of bucket, GLB-r250-r250
GAS-250(r250)	250 mL adaptor of bucket, GLB-r250-r250
GAS-250(r750)	250 mL adaptor of bucket, GLB-r750-r750
GAM-5-30(r750)	30 x 5 mL multi-tube rack of bucket, GLB-r750-r750
GAM-15-20(r750)	20 x 15 mL multi-tube rack of bucket, GLB-r750-r750
GAM-c15-16(r750)	16 x 15 mL conical multi-tube rack of bucket, GLB-r750-r750
GAM-50-8(r750)	8 x 50 mL multi-tube rack of bucket, GLB-r750-r750
GAM-c50-5(r750)	5 x 50 mL conical multi-tube rack of bucket, GLB-r750-r750
GAS-c250(r750)	250 mL conical adaptor of buckets, GLB-r750-r750
GAS-c500(r750)	500 mL conical adaptor of buckets, GLB-r750-r750
GAM-5-24(750)	24 x 5 mL multi-tube rack of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A
GAM-10-21(750)	21 x 10 mL multi-tube rack of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A
GAM-15-19(750)	19 x 15 mL multi-tube rack of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A
GAM-c15-14(750)	14 x 15 mL conical multi-tube rack of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A
GAM-50-7(750)	7 x 50 mL multi-tube rack of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A
GAM-c50-5(750)	5 x 50 mL conical multi-tube rack of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A
GAS-250(750)	250 mL adaptor of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A
GAS-c250(750)	250 mL conical adaptor of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A (w/o cap)
GAS-c500(750)	500 mL conical adaptor of buckets, GLB-750-750, GLB-b750-750 & GLB-b750-750A (w/o cap)
GAM-10-35(r1000)	35 x 10 mL multi-tube rack of buckets, GLB-r1000-1000
GAM-15-28(r1000)	28 x 15 mL multi-tube rack of buckets, GLB-r1000-1000
GAM-c15-22(r1000)	22 x 15 mL conical multi-tube rack of buckets, GLB-r1000-1000
GAM-50-11(r1000)	3 x 15 mL multi-tube rack for bucket GLB-b100-100, not applicable with cap
GAM-c50-10(r1000)	10 x 50 mL conical multi-tube rack of buckets, GLB-r1000-1000
GAM-5-48(h1000)	48 x 5 mL multi-tube rack of buckets, GLB-h1000-1000
GAM-10-38(h1000)	38 x 10 mL multi-tube rack of buckets, GLB-h1000-1000
GAM-15-29(h1000)	29 x 15 mL multi-tube rack of buckets, GLB-h1000-1000
GAM-c15-29(h1000)	29 x 15 mL conical multi-tube rack of buckets, GLB-h1000-1000
GAM-50-13(h1000)	13 x 50 mL multi-tube rack of buckets, GLB-h1000-1000
GAM-c50-13(h1000)	13 x 50 mL conical multi-tube rack of buckets, GLB-h1000-1000
GAM-250-2(h1000)	2 x 250 mL multi-tube rack of buckets, GLB-h1000-1000


















Swing-out Rotor : GRS-B-1000-4

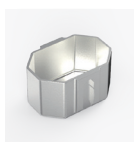
4 loadings
 $\angle 90^\circ$



High Capacity 1,000 mL Bucket
 GLB-r1000-1000

Bucket bore (w x d x h, mm)	97 x 134 x 94
Radius (mm)	201.5
Max. RPM	3,700
Max. RCF (g-force)	3,084
Max. height for tube fit (mm)	117 (w/cap) / 125 (w/o cap)

Tube							
Tube capacity (mL)	10	15	15 mL conical	50	50 mL conical	MTP	DWP
Tube rack							
Cat. No.	GAM-10-35 (r1000)	GAM-15-28 (r1000)	GAM-c15-22 (r1000)	GAM-50-11 (r1000)	GAM-c50-10 (r1000)	GLP-mw-r1000	
Rack capacity (ea/4)	35/140	28/112	22/88	11/44	10/40	6/28	2/8
Hole dimension (Φ x L, mm)	16 x 85	17.2 x 85	17 x 90	29.2 x 87	29.5 x 92.5	130 x 88.5	



High Capacity 1,000 mL Bucket
GLB-h1000-1000

Bucket bore (w x d x h, mm)	110 x 168.7 x 95
Radius (mm)	202
Max. RPM	3,700
Max. RCF (g-force)	3,092
Max. height for tube fit (mm)	117

Tube								
Tube capacity (mL)	3	5	10	15	15 mL conical	50	50 mL conical	250
Tube rack								
Cat. No.	GAM-5-48(h1000)		GAM-10-38 (h1000)	GAM-15-29 (h1000)	GAM-c15-29 (h1000)	GAM-50-13 (h1000)	GAM-c50-13 (h1000)	GAM-250-2 (h1000)
Rack capacity (ea/4)	48/192		38/152	29/116	29/116	13/52	13/52	2/8
Hole dimension (Φ x L, mm)	13.2 x 50	13.2 x 85	16 x 85	17.2 x 85	17 x 90	29.2 x 87	29.5 x 92.5	62 x 87



Bioseal Round 1,000 mL Bucket
GLB-b1000-1000

Bucket bore (Φ x L, mm)	99 x 114
Radius (mm)	218
Max. RPM	3,700
Max. RCF (g-force)	3,337
Max. height for tube fit (mm)	143 (w/cap) / 173 (w/o cap)

Tube												
Tube capacity (mL)	3	5	10	15	15 mL conical	50	50 mL conical	250	250 mL conical	500 mL conical	750	1,000
Tube rack											None	None
Cat. No.	GAM-5-24(750)	GAM-10-21 (750)	GAM-15-19 (750)	GAM-c15-14 (750)	GAM-50-7 (750)	GAM-c50-5 (750)	GAS-250 (750)	GAS-c250 (750)	GAS-c500 (750)	-	-	
Rack capacity (ea/4)	24/96	21/84	19/76	14/56	7/28	5/20	1/4	1/4	1/4	1/4	1/4	
Hole dimension (Φ x L, mm)	13.2 x 58	13.2 x 85	16 x 85	17.2 x 85	17 x 85	29.2 x 87	29.2 x 88	62.3 x 87	60.5 x 125	95.6 x 58	-	-

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Swing-out Rotor : GRS-B-750-4A

4 loadings
 $\angle 90^\circ$



Bioseal Round 750 mL Bucket
 GLB-b750-750A

Bucket bore ($\Phi \times L$, mm)	99 x 105
Radius (mm)	205
Max. RPM	4,600
Max. RCF (g-force)	4,850
Max. height for tube fit (mm)	130 (w/cap) / 142 (w/o cap)

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



Round 500 mL Bucket
GLB-500-750A

Bucket bore (Φ x L, mm)	69.2 x 135
Radius (mm)	218
Max. RPM	4,600
Max. RCF (g-force)	5,157
Max. height for tube fit (mm)	165

Tube



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



Bioseal Microplate Holder
GLP-mw-750A

Holder bore (w x d x h, mm)	93 x 130 x 63
Radius (mm)	170.5
Max. RPM	4,600
Max. RCF (g-force)	4,033

Plate



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





















Swing-out Rotor : GRS-B-r750-4

4 loadings
 $\angle 90^\circ$



Rectangular 750 mL Bucket
 GLB-r750-r750

Bucket bore (w x d x h, mm)	99 x 99 x 98
Radius (mm)	200
Max. RPM	3,600
Max. RCF (g-force)	2,898
Max. height for tube fit (mm)	135

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



Round 500 mL Bucket
GLB-500-r750

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

Tube



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



Bioseal Microplate Holder
GLP-mw-r750

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

Plate



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



Swing-out Rotor : GRS-B-250-4

4 loadings
 $\angle 90^\circ$



Round 250 mL Bucket
GLB-250-250

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

Tube



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



60 mL Syringe Bucket
GLB-60-250

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

Tube



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

Adaptor



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



Round 250 mL Bucket
GLB-c250-250

Bucket bore ($\Phi \times L$, mm)	60.5 x 130.2
Radius (mm)	193
Max. RPM	5,000
Max. RCF (g-force)	5,394
Max. height for tube fit (mm)	153

Tube



Tube capacity (mL)	250 mL conical
Bucket capacity (ea/6)	1/4



Dual Syringe Bucket
GLB-d20/10-250

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

Tube



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

Adaptor



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



Swing-out Rotor : GRS-B-r250-4

4 loadings
 $\angle 90^\circ$



Rectangular 250 mL Bucket
GLB-r250-r250

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

Tube										
Tube capacity (mL)	1.5/2.0	3	5	10 / 15	15 mL conical	50	50 mL conical	15	85	250
Tube rack										
Cat. No.	GAM-m2.0-20 (r250)	GAM-5-12 (r250)	GAM-5-12 (r250)	GAM-15-12 (r250)	GAM-c15-9 (r250)	GAM-50-4 (r250)	GAM-c50-3 (r250)	GAM-85-2 (r250)	GAM-85-2 (r250)	GAS-250 (r250)
Rack capacity (ea/4)	20/80	12/48	12/48	12/48	9/36	4/16	3/12	2/8	2/8	1/4
Hole dimension (Φ x L, mm)	11.3 x 39	13.5 x 58	13.5 x 80	17.5 x 90	17.5 x 90	30.2 x 90	30.5 x 90	17 x 85.6	38.5 x 86.5	62.5 x 87



Microplate Holder
GLP-mw-r250

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

Plate



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



Swing-out Rotor : GRS-B-100-6

6 loadings
 ∠ 90°



Round 100 mL Bucket with Cap
GLB-b100-100

Bucket bore (Φ x L, mm)	47 x 99
Radius (mm)	173.6
Max. RPM	4,200
Max. RCF (g-force)	3,424
Max. height for tube fit (mm)	120 (w/ cap) / 130 (w/o cap)

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

Tube										
Tube capacity (mL)	1.5~2.0	2.6~7	4~10	9~15	15 mL conical	15 mL conical	50mL	50mL conical	85	100
Tube rack										
Cat. No.	GAM-m2.0-6 (b100)	GAM-7-5 (b100)	GAM-10-5 (b100)	GAM-15-3 (B100)	GAM-c15-3 (B100)	GAS-c15 (b100)	GAS-50 (b100)	GAS-c50 (b100)	GAS-85 (b100)	GAS-100 (b100)
Rack capacity (ea/6)	6/36	5/30	5/30	3/18	3/18	1/6	1/6	1/6	1/6	1/6
Hole dimension (Φ x L, mm)	11 x 39	13.5 x 60	16 x 60	17.5 x 105	17.2 x 106.5	17.2 x 106.5	29.5 x 95.9	30 x 100	38.5 x 96.3	44.2 x 93



Round 50 mL Bucket with Cap
GLB-b50-100

Bucket bore (Φ x L, mm)	30.5 x 97
Radius (mm)	169.5
Max. RPM	4,200
Max. RCF (g-force)	3,343
Max. height for tube fit (mm)	115 (w/ cap) / 125 (w/o cap)

Tube				
Tube capacity (mL)	15	15 mL conical	50 mL conical	50
Adaptor				50
Cat. No.	GAS-u15(50)		GAS-c50(50)	-
Hole dimension (Φ x L, mm)	17.3 x 87		29.5 x 17.5	-



Dual Conical 50 mL Bucket
GLB-dc50-100

Bucket bore ($\Phi \times L$, mm)	30 x 89
Radius (mm)	173.6
Max. RPM	4,200
Max. RCF (g-force)	3,424
Max. height for tube fit (mm)	125

Tube



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



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

Bucket bore ($\Phi \times L$, mm)	17 x 98
Radius (mm)	169.5
Max. RPM	4,200
Max. RCF (g-force)	3,343
Max. height for tube fit (mm)	123 (w/ cap) / 127 (w/o cap)

Tube



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



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

Bucket bore ($\Phi \times L$, mm)	17 x 102.5
Radius (mm)	173.6
Max. RPM	4,200
Max. RCF (g-force)	3,424
Max. height for tube fit (mm)	120

Tube



Tube capacity (mL)	15 mL conical
Hole dimension ($\Phi \times L$, mm)	2/12





Vacutainer 10 mL Bucket
GLB-10-8-100

Bucket bore ($\Phi \times L$, mm)	16 x 89
Radius (mm)	173.6
Max. RPM	4,200
Max. RCF (g-force)	3,424
Max. height for tube fit (mm)	120

Tube



Tube capacity (mL)	3	5	10
Bucket capacity (ea/6)	8/48	8/48	8/48
Adaptor			None
Cat. No.	GAS-3(10)	GAS-5(10)	-
Adaptor bore ($\Phi \times L$, mm)	13.2 x 58	13.2 x 82	-
Radius (mm)	142.6	167.6	173.6
Max. RPM	4,000	4,000	4,000
Max. RCF (g-force)	2,551	2,998	3,105



Fixed Angle Rotor
GRF-B-250-6

6 x (250 & 15 mL)	
∠ 25°	
Hole Diameter (mm)	62 (250 mL) / 17 (15 mL)
Max. height for tube fit (mm)	130 (250 mL) / 120 (15 mL)

Tube



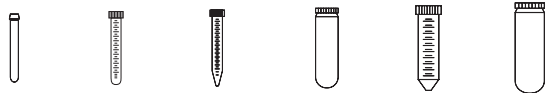
Tube capacity (mL)	15	250
Radius (mm)	131.3	134
Max. RPM	8,000	8,000
Max. RCF (g-force)	9,395	9,588








Fixed Angle Rotor
GRF-B-85-6

6 x 85 mL	
∠ 34°	
Hole Diameter (mm)	38.5
Max. height for tube fit (mm)	122

Tube



Tube capacity (mL)	10	15	15 mL conical	50	50 mL conical	85
Adaptor						None
Cat. No.	GAS-15(85)	GAS-15(85)	GAS-c15(85)	GAS-50(85)	GAS-c50(85)	-
Adaptor bore (Φ x L, mm)	17 x 94	17 x 94	17 x 98	29 x 95	29.5 x 98	-
Radius (mm)	102	103	101	104	102	110
Max. RPM	12,000	12,000	12,000	12,000	12,000	12,000
Max. RCF (g-force)	16,424	16,582	16,260	16,743	16,421	17,709










Fixed Angle Rotor
GRF-B-50-8

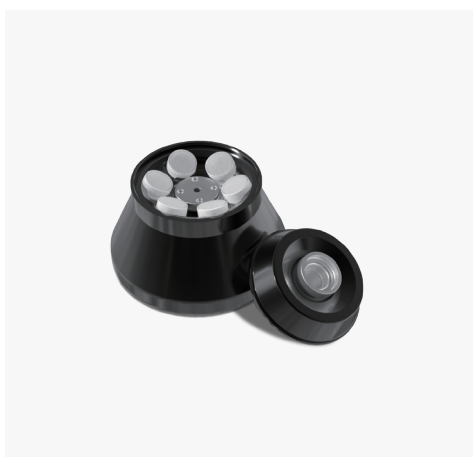
8 x 50 mL

∠ 30°

Hole Diameter (mm) 29.5

Max. height for tube fit (mm) 120

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






Fixed Angle Rotor
GRF-B-c50-6

6 x 50 mL conical

∠ 25°

Hole Diameter (mm) 29.5

Max. height for tube fit (mm) 125

Tube		
Tube capacity (mL)	15 mL conical	50 mL conical
Adaptor		None
Cat. No.	GAS-c15(c50)	-
Adaptor bore (Φ x L, mm)	17 x 105	-
Radius (mm)	93.6	98.4
Max. RPM	13,000	13,000
Max. RCF (g-force)	17,685	18,592



Fixed Angle Rotor
GRF-B-15-24

24 x 15 mL	
∠ 30°	
Hole Diameter (mm)	17.5
Max. height for tube fit (mm)	115

Tube



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



Fixed Angle Rotor
GRF-B-15-12

12 x 15 mL		
∠ 30°		
Hole Diameter (mm)	17	
Max. height for tube fit (mm)	125	

Tube



Tube capacity (mL)	10	15
Radius (mm)	100	100
Max. RPM	15,000	15,000
Max. RCF (g-force)	25,155	25,155



Fixed Angle Rotor
GRF-B-c15-12

12 x 15 mL conical

∠ 25°

Hole Diameter (mm) 17

Max. height for tube fit (mm) 125

Tube

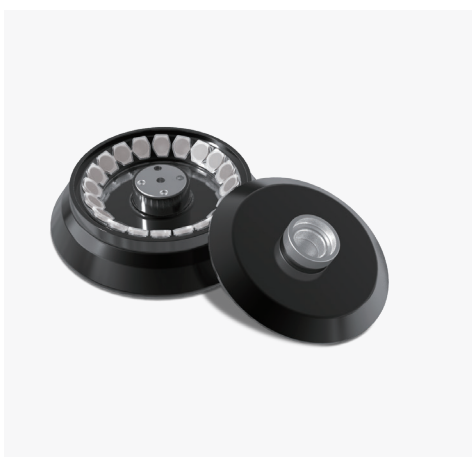


Tube capacity (mL) 15 mL conical

Radius (mm) 103

Max. RPM 15,000

Max. RCF (g-force) 25,910



Fixed Angle Rotor
GRE-B-m5.0-20

20 x 5.0 mL

∠ 45°

Hole Diameter (mm) 17

Max. height for tube fit (mm) 68

Tube



Tube capacity (mL) 5.0

Adaptor None

Cat. No. -

Adaptor bore (Φ x L, mm) -

Radius (mm) 109






Max. RPM 13,500

Max. RCF (g-force) 22,209



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






48 x 1.5/2.0 mL	
∠ 45°	
Hole Diameter (mm)	11.1
Max. height for tube fit (mm)	52

Tube			
Tube capacity (mL)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	80.5 / 67	87.5 / 74	97.8 / 84.3
Max. RPM	15,000	15,000	15,000
Max. RCF (g-force)	20,250 / 16,854	22,011 / 18,615	24,602 / 21,206



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

30 x 1.5/2.0 mL	
∠ 45°	
Hole Diameter (mm)	11.1
Max. height for tube fit (mm)	52

Tube			
Tube capacity (mL)	0.2	0.5	1.5/2.0
Adaptor			None
Cat. No.	GAS-m0.2(2)	GAS-m0.5(2)	-
Adaptor bore (Φ x L, mm)	6.5 x 23	8 x 31	-
Radius (mm)	79	86	96.4
Max. RPM	16,000	16,000	16,000
Max. RCF (g-force)	22,610	24,614	27,590



Fixed Angle Rotor
GRF-B-s0.2-64

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

∠ 45°

Hole Diameter (mm) 6.5

Max. height for tube fit (mm) 16

Tube



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