

# 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-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 with protruding screw for coupling into motor shaft
- Two rubber O-rings inserted








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-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 ( $\varnothing \times L$ , 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)	-
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)	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 :  $\leq 45^\circ$
- 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 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
			None	None
<b>Adapter</b>				
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)	22,610	24,614	27,590	27,590

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

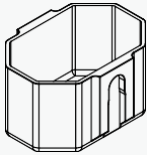
- Capacity : 8 x 8-Tube PCR strips, 64 x 0.2 mL
- Max. RPM / RCF : 12,000 / 10,803
- Hole angle from axis during rotation :  $\leq 45^\circ$
- Hole dimension ( $\varnothing \times L$ , mm) : 6.5 x 16
- Hole bottom type : Round
- Max. height for tube fit (mm) : 25
- Supplied with a lid



		
<b>Tube</b>		
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. RPM	12,000	12,000
Max. RCF (g-force)	Inner 9,434 Outer 10,803	Inner 9,434 Outer 10,803















## 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

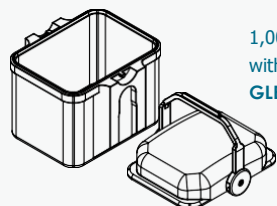


1,000 mL Hi-capacity Bucket,  
GLB-h1000-1000

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



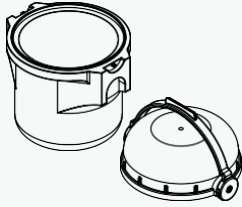
1,000 mL Rectangular Bucket  
with a Click seal cap,  
GLB- br1000-1000

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-15-28(r1000)	GAM-c15-22(r1000)	GAM-50-11(r1000)	GAM-c50-10(r1000)
Rack capacity (ea / 4)	40 / 160	40 / 160	35 / 140	28 / 112	22 / 88	11 / 44	10 / 40
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			
Cat. No.	GAM-c50-10(r1000) <small>with GAS-sc50(c50)</small>	GLP-mw-r1000	GLP-mw-r1000
Rack capacity (ea / 4)	10 / 40	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

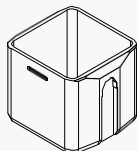
Max. RPM / RCF : 3,700 / 3,337  
 Max. Radius (mm) : 218  
 Hole dimension (Ø x L, mm) : 99 x 120  
 Max. height for tube fit (mm) : 155 (w / cap), 170 (w / o cap)  
 Hole bottom type : Flat  
 Supplied with a cap and O-ring, No cap version is also available

									
<b>Tube</b>									
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
<b>Adapter</b>									
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

								
<b>Tube</b>								
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
<b>Adapter</b>		 with GAS-sc50(c50)					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

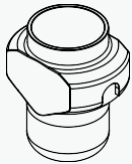


750 mL Rectangular Bucket,  
GLB-r750-r750

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

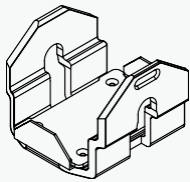


500 mL Round Bucket,  
GLB-500-r750

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 (Φ x L,mm)	69.5 x 170.2



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



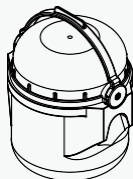
Tube		
Tube capacity (mL)	MTP	DWP
Tube Dimension (Φ x L,mm)	86 x 128 x 15	86 x 128 x 60
Bucket capacity (ea / 4)	4 / 16	1 / 4

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

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



**Bio-Safe** Manufacturer Validated

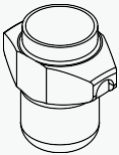


750 mL Round Bucket  
with a Click seal cap,  
GLBB-b750-750

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

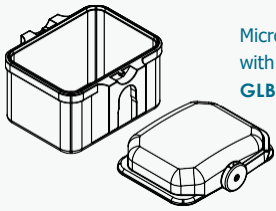
Tube	50 mL	50 mL conical (skirted)	250	250 mL	500 mL	500	750
Tube capacity (mL)	conical			conical	conical		
Tube Dimension ( $\Phi \times L$ , mm)	29.5 x 118	29.5 x 118	61.5 x 128	60 x 163	96.2 x 147	73.5 x 142	97 x 152
Adapter							None
Cat. No.	GAM-c50-5 (750)	GAM-c50-5 (750)	GAS-250 (750)	GAS-c250 (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



**500 mL Round Bucket,  
GLB-500-750**





Max. RPM / RCF : 4,600 / 5,157  
 Max. Radius (mm) : 218  
 Hole dimension (Ø x L, mm) : 70 x 135  
 Max. height for tube fit (mm) : 172  
 Hole bottom type : Flat

<b>Tube</b>	
Tube capacity (mL)	500
Tube Dimension (Φ x L,mm)	69.5 x 170.2



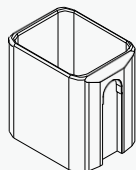
**Microplate Holder Bucket  
with a Click seal cap,  
GLB-mw-750B**

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

<b>Tube</b>		
Tube capacity (mL)	MTP	DWP
Tube Dimension (Φ x L,mm)	86 x 128 x 15	86 x 128 x 60
<b>Plate Holder</b>		
Cat. No.	GLP-mw-r750B	GLP-mw-r750B
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

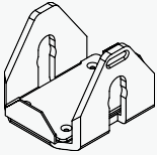
- 4 loadings
- Max. RPM : 4,000
- Angle from axis during rotation:  $\angle 90^\circ$
- Supplied with a lubricant



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

Tube	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 capacity (mL)	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
Tube Dimension ( $\Phi \times L$ , mm)									
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	25mL conical	30	50	50 mL conical	50 mL conical (Skirted)	100	250 mL conical	250	
Tube capacity (mL)	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
Tube Dimension ( $\Phi \times L$ , mm)									
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

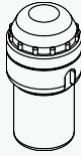


# Swing Rotor, GRS-B-100-6

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



**Bio-Safe** Porton Down Certified

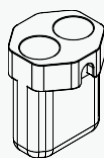


100 mL Bucket with a Cap,  
GLBB-b100-100

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












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(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 ( $\Phi$ 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	17.2x 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

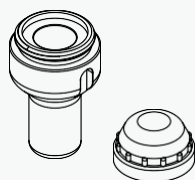
Tube								
Tube capacity (mL)	25 mL conical	25 mL conical	30	50	50mL conical	50 mL conical (Skirted)	85	100
Tube Dimension ( $\Phi$ x L, mm)	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118	29.5 x 118	38 x 106	44 x 115
Adapter								
Cat. No.	GAS-c25(b100)	GAS-c25(b100)	GAS-30(b100)	GAS-50(b100)	GAS-c50(b100)	GAS-sc50(b100)	GAS-85(b100)	GAS-100(b100)
Rack capacity (ea / 4)	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6
Rack hole dimension ( $\Phi$ 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

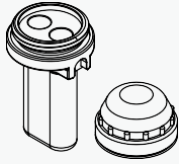
Tube						
Tube capacity (mL)	15 mL conical	25 mL conical	25 mL conical	30	50	50 mL conical
Tube Dimension (Φ x L, mm)	17 x 120	28.8 x 83	28.8 x 78.5	25.7 x 101.4	29 x 108	29.5 x 118
Adapter						None
Cat No.	GAS-c15(50)	GAS-c25(c50)	GAS-c25(c50)	GAS-30(c50)	GAS-50(c50)	-
Bucket capacity (ea / 6)	2/12	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)	3,372	2,702	2,702	3,203	3,207	3,424



50 mL Bucket with a Cap,  
GLB-b50-100




Max. RPM / RCF : 4,200 / 3,343  
 Max. Radius (mm) : 169.5  
 Hole dimension (Ø x L, mm) : 30.5 x 87  
 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 also 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)	3,343	3,343	3,343	2,676	2,676	3,169	3,343	3,343	3,343



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

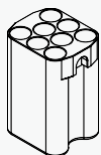
**Bio-Safe** Porton Down Certified



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



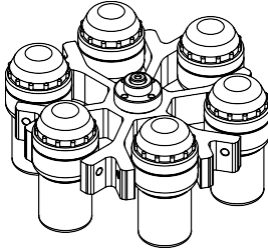
Vacutainer 10 mL Bucket,  
GLB-15-8-100

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

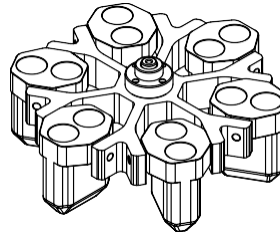
									
<b>Tube</b>									
Tube capacity (mL)	2.0 ~ 4 mL VT	4 ~ 7 mL VT	5 mL conical	5 mL conical	14 mL	8 ~ 10 mL VT	15 mL glass	15 mL open top	15
Tube Dimension (Φ x L, mm)	13 x 75	13 x 100	16 x 59	16 x 67	15.7 x 96	16 x 100	16 x 100	16 x 114	16 x 120
<b>Adapter</b>						None	None	None	None
Cat No.	GAS-3(f15)	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.

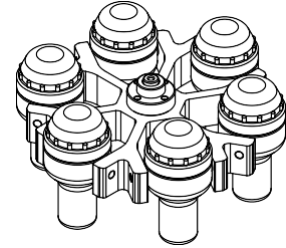
### Adaptable Buckets of Rotor, GRS-B-100-6



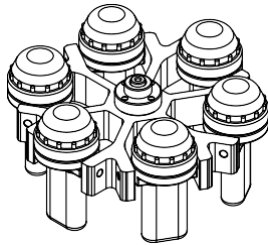
GLBB-b100-100



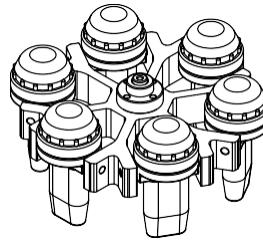
GLB-dc50-100



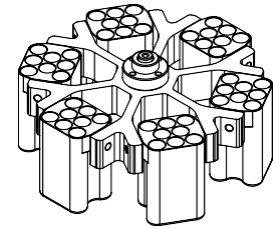
GLB-b50-100



GLB-bd15-100



GLBB-bdc15-100



GLB-15-8-100

