

## 416

Clinical, Low-Speed Centrifuge



CE

CE  
0120

- | The 416, compact bench top centrifuge with maximized capacity of 400 ml
- | Commonly used in the fractionation of blood samples and simple precipitation of biological samples
- | A separate button for "Soft" start/stop function to achieve very gentle acceleration and deceleration
- | Furnished with unique air flow design and anti-vibration structure to minimize heat and noise generation
- | Lid drop protection design allows easiness and safety when loading or unloading samples.
- | Automatic lid release and vivid end alarm for easy retrieval of sample
- | A large assortment of rotors, buckets and adaptors for microtubes and all sizes of tubes up to 100 ml
- | CE MDD-certified version also available (inquire)

## | Applications






- General laboratory applications including sample separations of cellular materials, blood, urine, sperm, etc.
- Clinical applications including PRP, PRF and stem cell isolation
- Low-speed gentle centrifugation of microbead containing microplates
- Gentle and soft spin-down or washing of primary cells and cell lines

Technical Specifications







Max. RPM/RCF	Fixed angle	4,000 / 2,700 xg	Parameters on display window	RPM (RCF), Min (Sec)
	Swing-out	4,000 / 2,826 xg	Imbalance cut-off	Yes
Max. capacity	Fixed angle	16 x 15 ml	Safety lid lock	Yes
	Swing-out	4 x 100 ml, 32 vacutainer tube, 4 MTPs	Lid drop protection	Yes
Time control		Timed < 100 min or continuous	Automatic lid release at completion	Yes
RPM/RCF conversion			Yes	Power supply (V/Hz)
Noise level (dB)		≤ 52	Power requirement (VA)	340
ACC/DEC (sec)		≤ 20 / ≤ 25	Dimension (W x D x H, mm)	375 x 480 x 260
SOFT start/stop		Yes	Weight without rotor (kg)	19.5
Program memory		10	CE mark	Yes
Parameters on display window		RPM (RCF), Min (Sec)	Cat. No.	GZ-0416

Rotors Overview

**GRS-S-100-4**

<p><b>GLB-b100-100</b></p>  <p>4 x 100 ml 4,000/2,774 xg</p>	<p><b>GLB-b50-100</b></p>  <p>4 x 50 ml 4,000/2,700 xg</p>	<p><b>GLB-10-8-100</b></p>  <p>4 x 8 x 10 ml vacutainer 4,000/2,774 xg</p>	<p><b>GLB-bd15-100</b></p>  <p>4 x 2 x 15 ml 4,000/2,700 xg</p>	<p><b>GLB-bdc15-100</b></p>  <p>4 x 2 x 15 ml conical 4,000/2,774 xg</p>
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**GRS-S-50-4**

<p><b>GLB-50-50</b></p>  <p>4 x 50 ml 4,000/2,700 xg</p>	<p><b>GLB-c50-50</b></p>  <p>4 x 50 ml conical 4,000/2,700 xg</p>	<p><b>GLB-15-50</b></p>  <p>4 x 15 ml 4,000/2,700 xg</p>	<p><b>GLB-c15-50</b></p>  <p>4 x 15 ml conical 4,000/2,700 xg</p>	<p><b>GLB-d15-50</b></p>  <p>4 x 2 x 15 ml 4,000/2,700 xg</p>	<p><b>GLB-dc15-50</b></p>  <p>4 x 2 x 15 ml conical 4,000/2,700 xg</p>
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**GRS-S-15-6**


**GLB-15-15**



6 x 15 ml  
4,000/2,826 xg

**GRA-S-15-16A**

**GLB-15A-FA**



16 x 15 ml  
4,000/2,700 xg

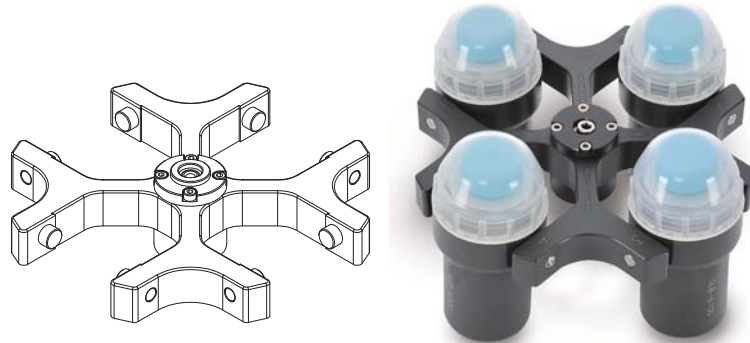
**GRS-S-mw-2**



2 x MTP  
4,000/1,986 xg

### Swing-Out Rotor, GRS-S-100-4

4 loadings  
 ↗ 90°



Bioseal Bucket with O-ring

<b>Bioseal 100 ml Bucket GLB-b100-100</b>
Bucket bore (Φx L, mm) : 47 x 99 Radius (mm) : 155.1 Max. RPM : 4,000 Max. RCF : 2,774 xg Max. height for tube fit (mm) : 120 (w/ cap) / 130 (w/o cap)

Tube										
Tube capacity (ml)	1.5~2.0	2.6~7	4~10	9~15	15 ml conical	15 ml conical	50	50 ml conical	85	100
Tube rack										
Cat. No.	<b>GAM-m2.0-6 (b100)</b>	<b>GAM-7-5 (b100)</b>	<b>GAM-10-5 (b100)</b>	<b>GAM-15-3 (100)</b>	<b>GAM-c15-3 (100)</b>	<b>GAS-c15 (b100)</b>	<b>GAS-50 (b100)</b>	<b>GAS-c50 (b100)</b>	<b>GAS-85 (b100)</b>	<b>GAS-100 (b100)</b>
Rack capacity (ea/6)	6/24	5/20	5/20	3/12	3/12	1/4	1/4	1/4	1/4	1/4
Hole dimension (Φx 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 106.4	44.2 x 106.4

\* The bioseal cap is compatible with (b100) but not with (100) adaptor.



<b>Bioseal 50 ml Bucket GLB-b50-100</b>
Bucket capacity : 1/ea Bucket bore (Φx L, mm) : 30.5 x 97 Radius (mm) : 150.9 Max. RPM : 4,000 Max. RCF : 2,700 xg Max. height for tube fit (mm) : 125 (w/ cap) / 130 (w/o cap)

<b>Vacuotainer 10 ml Bucket GLB-10-8-100</b>
Bucket capacity : 8/ea Bucket bore (Φx L, mm) : 16 x 89 Radius (mm) : 155.1 Max. RPM : 4,000 Max. RCF : 2,774 xg Max. height for tube fit (mm) : 120

<b>Bioseal Dual 15 ml Round Bucket GLB-bd15-100</b>
Bucket capacity : 2/ea Bucket bore (Φx L, mm) : 17 x 98 Radius (mm) : 150.9 Max. RPM : 4,000 Max. RCF : 2,700 xg Max. height for tube fit (mm) : 115

<b>Bioseal Dual 15 ml Conical Bucket GLB-bdc15-100</b>
Bucket capacity : 2/ea Bucket bore (Φx L, mm) : 17 x 102.5 Radius (mm) : 155.1 Max. RPM : 4,000 Max. RCF : 2,774 xg Max. height for tube fit (mm) : 120

Tube				
Tube capacity (ml)	15	15 ml conical	50 ml conical	50
Adaptor				None
Cat. No.	<b>GAS-u15(50)</b>	<b>GAS-c50(50)</b>	-	-
Adaptor bore (Φx L, mm)	18.5 x 100	29.5 x 17.5	-	-

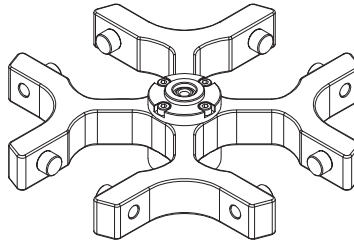
Tube	
Tube capacity (ml)	10
Bucket capacity (ea/4)	8/32

Tube	
Tube capacity (ml)	15
Bucket capacity (ea/4)	2/8

Tube	
Tube capacity (ml)	15 ml conical
Bucket capacity (ea/4)	2/8

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

4 loadings  
 ↗ 90°



**50 ml Round Bucket  
 GLB-50-50**  
 Bucket capacity : 1/ea  
 Bucket bore (Φx L, mm) : 30.5 x 91  
 Radius (mm) : 150.9  
 Max. RPM : 4,000  
 Max. RCF : 2,700 xg  
 Max. height for tube fit (mm) : 125



**50 ml Conical Bucket  
 GLB-c50-50**  
 Bucket capacity : 1/ea  
 Bucket bore (Φx L, mm) : 29.5 x 91.5  
 Radius (mm) : 150.9  
 Max. RPM : 4,000  
 Max. RCF : 2,700 xg  
 Max. height for tube fit (mm) : 125

Tube				
Tube capacity (ml)	15	15 ml conical	50 ml conical	50
Adaptor			None	
Cat. No.	<b>GAS-u15(50)</b>	<b>GAS-c50(50)</b>	-	
Adaptor bore (Φx L, mm)	17.3 x 87	29.5 x 17.5	-	

Tube	
Tube capacity (ml)	50 ml conical
Bucket capacity (ea/4)	1/4



**15 ml Round Bucket  
 GLB-15-50**  
 Bucket capacity : 1/ea  
 Bucket bore (Φx L, mm) : 17 x 93  
 Radius (mm) : 150.9  
 Max. RPM : 4,000  
 Max. RCF : 2,700 xg  
 Max. height for tube fit (mm) : 125



**15 ml Conical Bucket  
 GLB-c15-50**  
 Bucket capacity : 1/ea  
 Bucket bore (Φx L, mm) : 17 x 93  
 Radius (mm) : 150.9  
 Max. RPM : 4,000  
 Max. RCF : 2,700 xg  
 Max. height for tube fit (mm) : 120



**Dual 15 ml Round Bucket  
 GLB-d15-50**  
 Bucket capacity : 2/ea  
 Bucket bore (Φx L, mm) : 17 x 91.5  
 Radius (mm) : 150.9  
 Max. RPM : 4,000  
 Max. RCF : 2,700 xg  
 Max. height for tube fit (mm) : 120



**Dual 15 ml Conical Bucket  
 GLB-dc15-50**  
 Bucket capacity : 2/ea  
 Bucket bore (Φx L, mm) : 17 x 91.5  
 Radius (mm) : 150.9  
 Max. RPM : 4,000  
 Max. RCF : 2,700 xg  
 Max. height for tube fit (mm) : 120

Tube	
Tube capacity (ml)	15
Bucket capacity (ea/4)	1/4

Tube	
Tube capacity (ml)	15 ml conical
Bucket capacity (ea/4)	1/4

Tube	
Tube capacity (ml)	15
Bucket capacity (ea/4)	2/8

Tube	
Tube capacity (ml)	15 ml conical
Bucket capacity (ea/4)	2/8

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

6 loadings  
 ↗ 90°



15 ml Bucket <b>GLB-15-15</b>
Bucket capacity : 1/ea Bucket bore (Φx L, mm) : 17 x 93.8 Radius (mm) : 158 Max. RPM : 4,000 Max. RCF : 2,826 xg Max. height for tube fit (mm) : 125

Tube			
Tube capacity (ml)	10	15	15 ml conical
Bucket capacity (ea/6)	1/6	1/6	1/6

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

16 x 15 ml  
 ↗ 45°  
 Hole diameter (mm) : 18  
 Max. height for tube fit (mm) : 125 (120 for conical)



15 ml Sleeve <b>GLB-15A-FA</b>
Sleeve bore (Φx L, mm) : 18 x 97.5 Radius (mm) : 150.9 Max. RPM : 4,000 Max. RCF : 2,700 xg

Tube						
Tube capacity (ml)	3	4	5	10	15	15 ml conical
Adaptor				None	None	None
Cat. No.	<b>GAS-3(15)</b>	<b>GAS-4(15)</b>	<b>GAS-5(15)</b>	-	-	-
Adaptor bore (Φx L, mm)	13.5 x 61	13.5 x 65	13.5 x 85	-	-	-
Radius (mm)	134	136	146	150.5	150.9	147.5
Max. RPM	4,000					
Max. RCF (g-force)	2,397	2,433	2,612	2,692	2,700	2,638

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


2 loadings

└ 90°

Area dimension (mm) : 88.5 x 130.3

Max. height for microplate fit (mm) : 35



Plate	
Plate capacity (ml)	MTP
Holder capacity (ea/2)	2/4
Radius (mm)	111
Max. RPM	4,000
Max. RCF (g-force)	1,986

