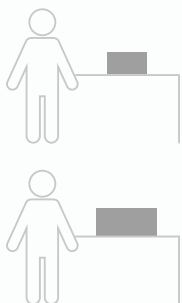


# 416, 624R

## Low-speed Centrifuge



## Features

- Compact, low speed centrifuges with 32 x blood tube capacity for fractionation of blood samples.
- 12 x 15 mL and 8 x 50 mL capacity for simple precipitation of biological samples and cell culture.
- Bio-Safe buckets ensure safe centrifugation of hazardous samples.
- A separate button for “Soft” start/stop function to achieve very gentle acceleration and deceleration. (416 only)
- Furnished with unique air flow design and anti-vibration structure to minimize heat and noise. (416 only)
- Fast cool function, Pre-cooling to 4°C for temperature-sensitive samples preventing protein denaturation and other damages. (624R only)
- CE IVD version available. (optional only for 416)

## Technical Specifications

|   | 416  | 624R   |
|---|--|--|
| <b>Max. RPM/PCF for Fixed Angle</b>     | 4,000 rpm / 2,700 xg                                   | 6,000 rpm / 3,960 xg                                   |
| <b>Max. RPM/PCF for Swing-out</b>       | 4,000 rpm / 2,826 xg                                   | 4,800 rpm / 3,888 xg                                   |
| <b>Max. Capacity for Fixed Angle</b>    | 16 x 15 mL, 10 x 50 mL                                 | 10 x 50 mL   |
| <b>Max. Capacity for Swing-out</b>      | 4 x 100 mL,<br>4 x 8 Vacuum tube,<br>2 x 2 MTPs        | 4 x 100 mL,<br>4 x 8 Vacuum tube,<br>2 x 2 MTPs        |
| <b>Temp. range (°C)</b>                 | -  | -10°C to 40°C  |
| <b>FAST cool button</b>                 | -  | Yes  |
| <b>Time control</b>                     | Timed <100 min or continuous                           | Pulsed, timed <10 hr or continuous                     |
| <b>Acc. time to Max. Speed</b>          | ≤20 sec  | -  |
| <b>Dec. time from Max. Speed</b>        | ≤25 sec  | -  |
| <b>Time counting range</b>              | -  | Selectable, at set speed or from starting              |
| <b>Noise level (dependent on rotor)</b> | ≤52 dB   | ≤60dB  |
| <b>RCF/RPM conversion</b>               | Yes  | Yes  |
| <b>ACC/DEC Ramps</b>                    | -  | 9/10   |
| <b>Program Memory</b>                   | 10   | 100  |
| <b>Power Supply</b>                     | AC 230V, 50Hz<br>(AC 220-230V, 60/50Hz; 110V optional) | AC 230V, 50Hz<br>(AC 220-230V, 60/50Hz; 110V optional) |
| <b>Power Requirement</b>                | 340 VA   | 900 VA   |
| <b>Dimension (W x D x H)</b>            | 375 x 480 x 260 mm                                     | 584 x 535 x 317 mm                                     |
| <b>Net Weight</b>                       | 19.5 kg  | 65 kg  |
| <b>CE MARK</b>                          | Yes  | Yes  |
| <b>Cat No.</b>                          | GZ-0416  | GZ-0624R   |

## Fixed Angle Rotor, GRF-SR-c50-6

- Capacity : 6 x 50 mL conical
- Max. RPM : 6,000
- Max. RCF : 3,960 xg
- Only for 624R



| Tube type (mL) | Max. RCF (xg) | Adaptor Cat. No. |
|----------------|---------------|------------------|
| 50             | 3,856         | GAS-50(c50)      |
| 30             | 3,816         | GAS-30(c50)      |
| 25 conical     | 3,320         | GAS-c25(c50)     |
| 15 conical     | 3,767         | GAS-c15(c50)     |

## Angle Rotor for 416 : GRA-S-50-10 / 624R : GRA-SR-50-10

- Capacity : 10 x 50 mL
- Max. RPM : 4,000
- Max. RCF : 2,549 xg



| Tube type (mL) | Max. RCF (xg) |       | Adaptor Cat. No. |
|----------------|---------------|-------|------------------|
|                | 416           | 624R  |                  |
| 50 conical     | 2,549         | 2,549 | GAS-c50(f50)     |
| 30             | 2,415         | 2,415 | GAS-30(f50)      |
| 25 conical     | 2,057         | 2,057 | GAS-c25(f50)     |
| 15 (conical)   | 2,538         | 2,538 | GAS-u15(f50)     |
| 14             | 2,538         | 2,538 | GAS-u14(f50)     |

## Angle Rotor for 416 : GRA-S-c50-10 / 624R : GRA-SR-c50-10

- Capacity : 10 x 50 mL Conical
- Max. RPM : 4,000
- Max. RCF : 2,508 xg



| Tube type (mL) | Max. RCF (xg) |       | Adaptor Cat. No. |
|----------------|---------------|-------|------------------|
|                | 416           | 624R  |                  |
| 50             | 2,435         | 2,435 | GAS-50(c50)      |
| 30             | 2,424         | 2,424 | GAS-30(c50)      |
| 25 conical     | 2,057         | 2,057 | GAS-c25(c50)     |
| 15 (conical)   | 2,497         | 2,497 | GAS-c15(c50)     |

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

- Capacity : 24 x vacuum tube
- Max. RPM : 4,000
- Max. RCF : 2,773 xg
- Only for 624R



| Tube type (mL)  | Max. RCF (xg) | Adaptor Cat. No. |
|-----------------|---------------|------------------|
| 14              | 2,549         | GAS-14(f15)      |
| 5               | 2,170         | GAS-c5(f15)      |
| Φ13 x 100 mm VT | 2,733         | GAS-5(f15)       |
| Φ13 x 75 mm VT  | 2,367         | GAS-3(f15)       |

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

- Capacity : 16 x vacuum tube
- Max. RPM : 4,000
- Max. RCF : 2,700 xg
- Only for 416



| Tube type (mL)  | Max. RCF (xg) | Adaptor Cat. No. |
|-----------------|---------------|------------------|
| 14              | 2,494         | GAS-14(f15)      |
| 5               | 2,120         | GAS-c5(f15)      |
| Φ13 x 100 mm VT | 2,612         | GAS-5(f15)       |
| Φ13 x 75 mm VT  | 2,397         | GAS-3(f15)       |

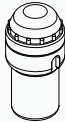
## Swing out Rotor for 416 : GRS-S-100-4 / 624R : GRS-SR-100-4

**- Capacity : 4 Buckets**

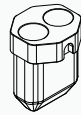
- 416 Max. RPM / RCF : 4,000 / 2,774 xg
- 624R Max. RPM / RCF : 4,200 / 3,059 xg



**Bio-Safe** Porton Down Certified

|  | Tube type (mL)     | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|--|--------------------|-------------------------|---------------|-------|------------------|
|  |                    |                         | 416           | 624R  |                  |
|  <p>100 mL Bucket<br/><b>GLBB-b100-100</b></p> <p><b>416 Max. RPM / RCF :<br/>4,000 / 2,774 xg</b></p> <p><b>624R Max. RPM / RCF :<br/>4,200 / 3,059 xg</b></p> <p><b>Hole bottom type : Flat</b></p> | 100 *              | 4                       | 2,685         | 2,960 | GAS-100(b100)    |
|  | 85                 | 4                       | 2,739         | 3,027 | GAS-85(b100)     |
|  | 50 conical (Skirt) | 4                       | 2,721         | 2,721 | GAS-sc50(b100)   |
|  | 50 conical         | 4                       | 2,721         | 2,721 | GAS-c50(b100)    |
|  | 50                 | 4                       | 2,739         | 3,019 | GAS-50(b100)     |
|  | 30                 | 4                       | 2,739         | 3,019 | GAS-30(b100)     |
|  | 25 conical         | 4                       | 2,739         | 3,019 | GAS-c25(b100)    |
|  | 15 conical *       | 12                      | 2,774         | 3,059 | GAM-c15-3(100)   |
|  | 15 conical         | 4                       | 2,774         | 3,059 | GAS-c15(b100)    |
|  | 15 *               | 12                      | 2,721         | 3,000 | GAM-15-3(100)    |
|  | φ16 x 100 mm VT    | 20                      | 2,685         | 2,960 | GAM-10-5(b100)   |
|  | φ13 x 75~100 mm VT | 20                      | 2,685         | 2,960 | GAM-7-5(b100)    |
|  | 5                  | 12                      | 1,969         | 2,171 | GAM-c5-3(b100)   |
|  | 1.5 / 2.0          | 24                      | 2,685         | 2,960 | GAM-m2.0-6(b100) |

\* Cannot use cap sealing

|  | Tube type (mL) | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|--|----------------|-------------------------|---------------|-------|------------------|
|  |                |                         | 416           | 624R  |                  |
|  <p>Dual 50 mL Conical Bucket<br/><b>GLB-dc50-100</b></p> <p><b>416 Max. RPM / RCF :<br/>4,000 / 2,774 xg</b></p> <p><b>624R Max. RPM / RCF :<br/>4,200 / 3,059 xg</b></p> <p><b>Hole bottom type : Conical</b></p> | 50 conical     | 8                       | 2,774         | 3,059 | -                |
|  | 50             | 8                       | 2,588         | 2,854 | GAS-50(c50)      |
|  | 30             | 8                       | 2,592         | 2,858 | GAS-30(c50)      |
|  | 25 conical     | 8                       | 2,102         | 2,317 | GAS-c25(c50)     |
|  | 15 conical     | 8                       | 2,774         | 3,059 | GAS-c15(c50)     |

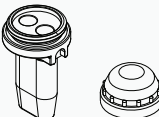
**Bio-Safe**

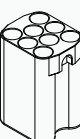
Manufacturer Validated

|  | Tube type (mL) | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|--|----------------|-------------------------|---------------|-------|------------------|
|  |                |                         | 416           | 624R  |                  |
|  <p>Dual 15 mL Bucket<br/><b>GLBB-bd15-100</b></p> <p>416 Max. RPM / RCF :<br/>4,000 / 2,700 xg</p> <p>624R Max. RPM / RCF :<br/>4,200 / 2,976 xg</p> <p>Hole bottom type : Round</p> | 15 open top    | 8                       | 2,700         | 2,976 | -                |

**Bio-Safe**

Porton Down Certified

|   | Tube type (mL) | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|---|----------------|-------------------------|---------------|-------|------------------|
|   |                |                         | 416           | 624R  |                  |
|  <p>Dual 15 mL Conical Bucket<br/><b>GLBB-bdc15-100</b></p> <p>416 Max. RPM / RCF :<br/>4,000 / 2,774 xg</p> <p>624R Max. RPM / RCF :<br/>4,200 / 3,059 xg</p> <p>Hole bottom type : Conical</p> | 15 conical     | 8                       | 2,774         | 3,059 | -                |
|   | 14             | 8                       | 2,352         | 2,593 | GAS-14(c15)      |
|   | 5              | 8                       | 1,746         | 1,925 | GAS-c5(c15)      |

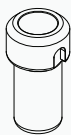
|   | Tube type (mL)  | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|---|-----------------|-------------------------|---------------|-------|------------------|
|   |                 |                         | 416           | 624R  |                  |
|  <p>Vacuum tube Bucket<br/><b>GLB-15-8-100</b></p> <p>416 Max. RPM / RCF :<br/>4,000 / 2,719 xg</p> <p>624R Max. RPM / RCF :<br/>4,200 / 2,998 xg</p> <p>Hole bottom type : Flat</p> | 15              | 8                       | 2,719         | 2,998 | -                |
|   | 15 open top     | 32                      | 2,719         | 2,998 | -                |
|   | Φ16 x 100 mm VT | 32                      | 2,719         | 2,998 | -                |
|   | 14              | 16                      | 2,513         | 2,771 | GAS-14(f15)      |
|   | 5               | 16                      | 2,003         | 2,209 | GAS-c5(f15)      |
|   | Φ13 x 100 mm VT | 32                      | 2,719         | 2,998 | GAS-5(f15)       |
|   | Φ13 x 75 mm VT  | 32                      | 2,236         | 2,465 | GAS-3(f15)       |


## Swing out Rotor for 416 : GRS-S-50-4 / 624R : GRS-SR-50-4

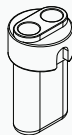


**- Capacity : 4 Buckets**

- 416 Max. RPM / RCF : 4,000 / 2,700 xg
- 624R Max. RPM / RCF : 4,800 / 3,888 xg

|   | Tube type (mL) | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|---|----------------|-------------------------|---------------|-------|------------------|
|   |                |                         | 416           | 624R  |                  |
| <br>50 mL Bucket<br><b>GLB-50-50</b><br><br>416 Max. RPM / RCF :<br>4,000 / 2,700 xg<br><br>624R Max. RPM / RCF :<br>4,800 / 3,888 xg<br><br>Hole bottom type : Flat | 50             | 4                       | 2,700         | 3,888 | -                |
|   | 50 conical     | 4                       | 2,700         | 3,888 | GAS-c50(f50)     |
|   | 30             | 4                       | 2,583         | 3,720 | GAS-30(f50)      |
|   | 25 conical     | 4                       | 2,107         | 3,034 | GAS-c25(f50)     |
|   | 15 (conical)   | 4                       | 2,700         | 3,888 | GAS-u15(f50)     |
|   | 14             | 4                       | 2,700         | 3,888 | GAS-u14(f50)     |

|   | Tube type (mL) | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|---|----------------|-------------------------|---------------|-------|------------------|
|   |                |                         | 416           | 624R  |                  |
| <br>50 mL Conical Bucket<br><b>GLB-c50-50</b><br><br>416 Max. RPM / RCF :<br>4,000 / 2,700 xg<br><br>624R Max. RPM / RCF :<br>4,800 / 3,888 xg<br><br>Hole bottom type : Conical | 50 conical     | 4                       | 2,700         | 3,888 | -                |
|   | 50             | 4                       | 2,517         | 3,624 | GAS-50(c50)      |
|   | 30             | 4                       | 2,517         | 3,624 | GAS-30(c50)      |
|   | 25 conical     | 4                       | 2,027         | 2,918 | GAS-c25(c50)     |
|   | 15 conical     | 4                       | 2,700         | 3,887 | GAS-c15(c50)     |

|  | Tube type (mL) | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|--|----------------|-------------------------|---------------|-------|------------------|
|  |                |                         | 416           | 624R  |                  |
| <br>Dual 15 mL Bucket<br><b>GLB-d15-50</b><br><br>416 Max. RPM / RCF :<br>4,000 / 2,700 xg<br><br>624R Max. RPM / RCF :<br>4,800 / 3,888 xg<br><br>Hole bottom type : Round | 15             | 8                       | 2,700         | 3,888 | -                |

|  | Tube type (mL) | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|--|----------------|-------------------------|---------------|-------|------------------|
|  |                |                         | 416           | 624R  |                  |
| <br>Dual 15 mL Conical Bucket<br><b>GLB-dc15-50</b><br><b>416 Max. RPM / RCF :</b><br><b>4,000 / 2,700 xg</b><br><b>624R Max. RPM / RCF :</b><br><b>4,800 / 3,888 xg</b><br><b>Hole bottom type : Conical</b> | 15 conical     | 8                       | 2,700         | 3,888 | -                |
|  | 14             | 8                       | 2,277         | 3,279 | GAS-14(c15)      |
|  | 5              | 8                       | 1,671         | 2,406 | GAS-c5(c15)      |

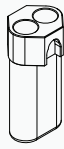
## Swing out Rotor for 416 : GRS-S-15-6 / 624R : GRS-SR-15-6

### - Capacity : 6 Buckets

- 416 Max. RPM / RCF : 4,000 / 2,737 xg

- 624R Max. RPM / RCF : 4,400 / 3,312 xg



|  | Tube type (mL)  | Max. capacity per rotor | Max. RCF (xg) |       | Adaptor Cat. No. |
|--|-----------------|-------------------------|---------------|-------|------------------|
|  |                 |                         | 416           | 624R  |                  |
| <br>Dual Vacuum Tube Bucket<br><b>GLB-d15-15</b><br><b>416 Max. RPM / RCF :</b><br><b>4,000 / 2,737 xg</b><br><b>624R Max. RPM / RCF :</b><br><b>4,400 / 3,312 xg</b><br><b>Hole bottom type : Flat</b> | Φ16 x 100 mm VT | 12                      | 2,737         | 3,312 | -                |
|  | Φ13 x 100 mm VT | 12                      | 2,737         | 3,312 | GAS-5(f15)       |
|  | Φ13 x 75 mm VT  | 12                      | 2,164         | 2,727 | GAS-3(f15)       |

## Swing out Rotor for 416 : GRS-S-mw-2 / 624R : GRS-SR-mw-2

### - Max. capacity per rotor: 4 x MTP / 2 x DWP

- Max. RPM : 4,000

- Max. RCF : 2,000 xg

