

# 2236R



GYROZEN 2236R centrifuge is designed for large capacity and high-speed daily working laboratories to save time with a streamlining process. This model goes up to 22,000 rpm (54,111 x g) with six of 50 ml tubes and 7,000 rpm (10,825 x g) with six of one-liter bottles. It covers down to PCR-tube and micro tubes and up to 1 L tubes. The beauty of this model is graphical display on a 7" touch screen with intuitive controls. All the setting conditions are shown in a numerical way and the actual operating status in a graphic. It also provides high flexibility in manipulations of sophisticated protocols such as multi-step centrifugation or step-wise continuous operation. 2236R is the best choice for the multi-users environment like a core facility with functions of ID and password control and tracking. It is widely used not only research laboratories but industrial production facilities too. With the lift-up lid and the small footprint of 2236R, you will love the freedom of space organization.

## ► Applications

- Ideal for a wide range of experiments from simple precipitation and separation to filtering, concentration, precipitations, density gradient separation, etc.
- Clinical, industrial, academic and scientific separation applications

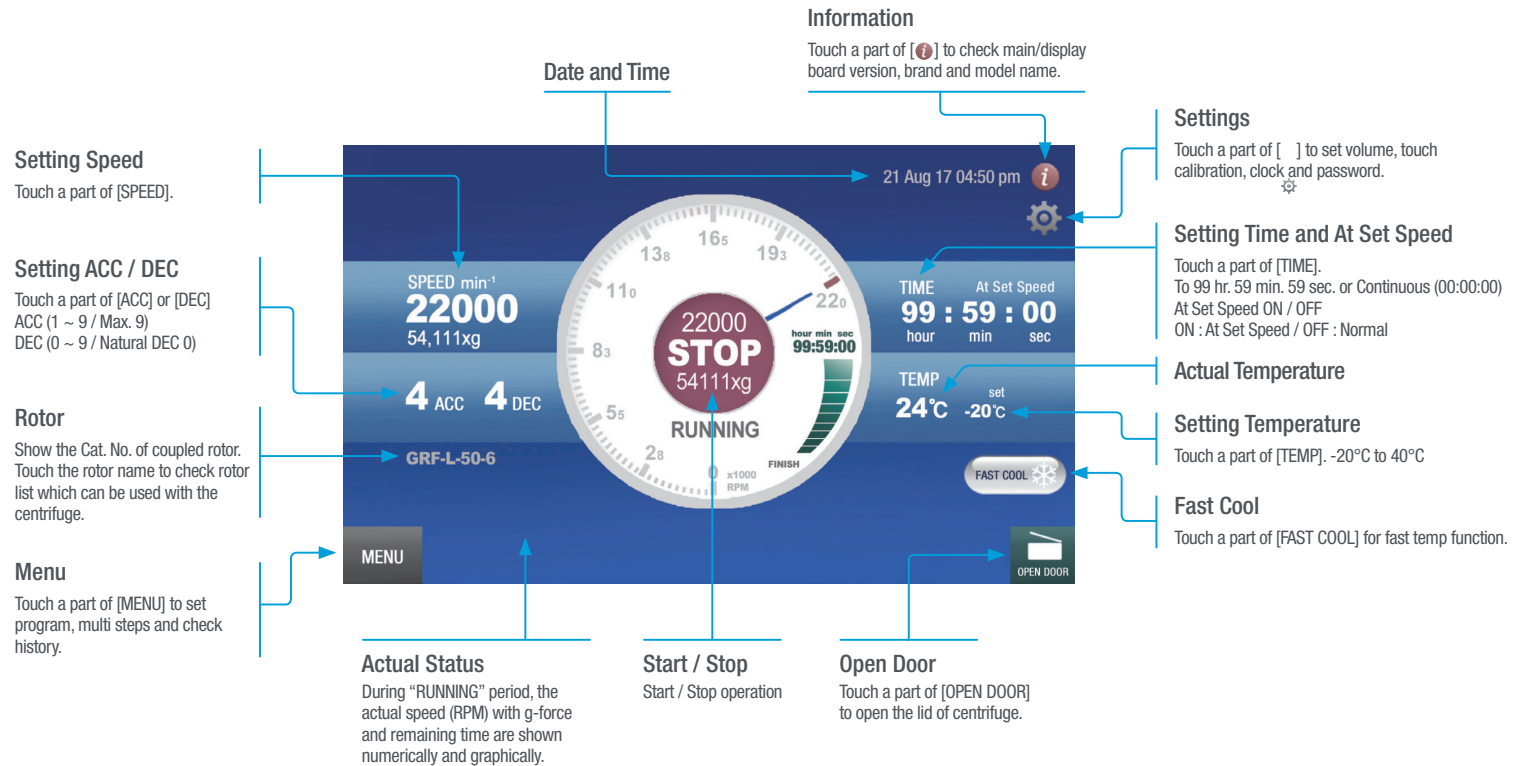
## ► Technical Specifications

Max. RPM/RCF	Fixed angle	22,000 / 54,111 xg	Parameters on display window	Simultaneous display of all parameters of set and actual figures
	Swing-out	4,000 / 3,134 xg	Automatic rotor identification	Yes
Max. capacity	Fixed angle	6 x 1,000 ml, 30 x 1.5/2.0 ml	Imbalance cut-off	Yes
	Swing-out	4 x 250 ml, 48 x 15 ml, 16 MTPs	Safety lid lock	Yes
Temp. range (°C)		-20 to +40	Lid drop protection	Yes
FAST cool button		Yes	Motorized lid open & close	Yes
Time control		Timed < 100 hr or continuous	Automatic lid release at completion	Yes
Time counting modes		Selectable, at set speed or from starting	Chamber material	SUS304
		Windows CE / 7" touch screen	Power supply	230 V, 50 Hz (AC 220-230 V, 50/60 Hz; 110 V optional)
OS / Control Display		Windows CE / 7" touch screen	Power requirement (kVA)	4.0
RPM/RCF conversion		Yes	Dimension (W x D x H, mm)	824 x 634 x 1,049
Noise level (dB)		~ 60	Weight without rotor (kg)	240
ACC/DEC		9/10 steps	CE mark	Yes
Program memory		100	Cat. No.	GZ-2236R

## ► 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
- Instrument lock/unlock by password control and protocol management by user ID is ideal for core lab facility or multi-user environment
- 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.
- Windows CE based 7" LCD Touch Screen with simultaneous display of all the parameters of set and actual values.
- Selectable time mode of "at set SPEED" for counting running time only when reached the set speed
- Up to 5 protocols per run can be combined for convenient operation of complicated experiments.
- The parameters of TIME, TEMP, ACC and DEC are allowed to be changed during operation.

## ▶ Control Panel



## Swing-out Rotor, GRS-L-r250-4

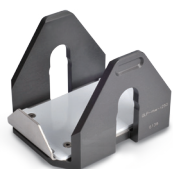
4 loadings  
 $\leq 90^\circ$



### 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-15-12(r250)		GAM-c15-9 (r250)	GAM-50-4 (r250)	GAM-c50-3 (r250)	GAM-85-2(r250)		GAS-250(r250)
Rack capacity (ea/4)	20/80	12/48		12/48		9/36	4/16	3/12	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 86.5	38.5 x 86.5	62.5 x 87



### Microplate Holder GLP-mw-r250



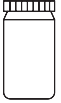

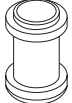
Holder (w x d x h, mm)  
 : 88 x 128.5 x 80  
 Radius (mm) : 153  
 Max.RPM:4,000  
 Max.RCF(g-force):2,737

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



### Fixed Angle Rotor, GRF-L-1000-6



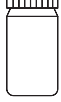

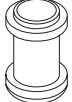
6 x 1000 ml  
 $\angle 25^\circ$   
 Hole diameter (mm) : 98  
 Max. height for tube fit (mm) : 175

Tube			
Tube capacity (ml)	250	500	1000
Adaptor			None
Cat No.	<b>GAS-250(1000)</b>	<b>GAS-500(1000)</b>	-
Adaptor bore ( $\Phi \times L$ , mm)	62 x 109	69 x 149	-
Radius (mm)	164.1	183.4	197.6
Max.RPM	7,000		
Max.RCF (g-force)	8,990	10,047	10,825



### Fixed Angle Rotor, GRF-L-1000-4


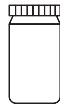

4 x 1000 ml  
 $\angle 25^\circ$   
 Hole diameter (mm) : 98  
 Max. height for tube fit (mm) : 175

Tube			
Tube capacity (ml)	250	500	1000
Adaptor			None
Cat No.	<b>GAS-250(1000)</b>	<b>GAS-500(1000)</b>	-
Adaptor bore ( $\Phi \times L$ , mm)	62 x 109	69 x 149	-
Radius (mm)	135.2	154.5	168.7
Max.RPM	8,000		
Max.RCF (g-force)	9,674	11,055	12,071



## Fixed Angle Rotor, GRF-L-500-6



6 x 500 ml  
 $\angle$  25°  
 Hole diameter (mm) : 70  
 Max. height for tube fit (mm) : 170

Tube		
Tube capacity (ml)	250	500
Adaptor		None
Cat No.	<b>GAS-250(500)</b>	-
Adaptor bore (ΦxL, mm)	69 x 100	-
Radius (mm)	138.3	158
Max.RPM	10,000	
Max.RCF (g-force)	15,462	17,664



## Fixed Angle Rotor, GRF-L-250-6











6 x 250 ml (6 x 15ml)  
 $\angle$  25°  
 Hole diameter (250/15) (mm) : 62/17  
 Max. height for tube fit (250/15) (mm) : 130/120

Tube		
Tube capacity (ml)	15	250
Radius (mm)	131.3	134
Max.RPM	13,000	
Max.RCF (g-force)	24,808	25,318



## Fixed Angle Rotor, GRF-L-85-6







6 x 85 ml  
 $\angle$  25°  
 Hole diameter (mm) : 38.3  
 Max. height for tube fit (mm) : 125

Tube						
Tube capacity (ml)	10	15	15ml conical	50	50ml conical	85
Adaptor						None
Cat. No.	<b>GAS-15(85)</b>		<b>GAS-c15(85)</b>	<b>GAS-50(85)</b>	<b>GAS-c50(85)</b>	-
Adaptor bore (ΦxL, mm)	17 x 94		17 x 98	29 x 95	29.5 x 98	-
Radius (mm)	91.5	92.5	90.5	93.5	91.5	99.5
Max.RPM	20,000					
Max.RCF (g-force)	40,919	41,366	40,472	41,813	40,919	44,496



### Fixed Angle Rotor, GRF-L-50-8


8 x 50 ml  
 $\angle 30^\circ$   
 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-c15(50)	-
Adaptor bore (ΦxL, mm)	17 x 94		17 x 105	-
Radius (mm)	92.5	93.5	96	103
Max.RPM	20,000			
Max.RCF (g-force)	41,366	41,813	42,931	46,062



### Fixed Angle Rotor, GRF-L-50-6




6 x 50 ml  
 $\angle 30^\circ$   
 Hole diameter (mm) : 29.5  
 Max. height for tube fit (mm) : 120

Tube	
Tube capacity (ml)	50
Adaptor	None
Cat. No.	-
Adaptor bore (ΦxL, mm)	-
Radius (mm)	100
Max.RPM	22,000
Max.RCF (g-force)	54,111



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

6 x 50 ml conical  
 $\angle 25^\circ$   
 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 (ΦxL, mm)	17 x 105	-
Radius (mm)	93.6	98.4
Max.RPM	17,000	
Max.RCF (g-force)	30,242	31,793

# 2236R



## Fixed Angle Rotor, GRF-L-15-12


12 x 15 ml  
 $\angle$  30°  
 Hole diameter (mm) : 17  
 Max. height for tube fit (mm) : 125

Tube		
Tube capacity (ml)	10	15
Radius (mm)	100	
Max.RPM	20,000	
Max.RCF (g-force)	44,720	



## Fixed Angle Rotor, GRF-L-c15-12






12 x 15 ml conical  
 $\angle$  25°  
 Hole diameter (mm) : 17  
 Max. height for tube fit (mm) : 125

Tube	
Tube capacity(ml)	15 ml conical
Radius(mm)	103
Max.RPM	20,000
Max.RCF(g-force)	46.062



## Fixed Angle Rotor, GRF-L-m2.0-30



30 x 1.5/2.0 ml  
 $\angle$  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 (ΦxL, mm)	6.5 x 23	8 x 31	-
Radius (mm)	79	86	96.4
Max.RPM	22,000		
Max.RCF (g-force)	42,748	46,536	52,163



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

8 x 8-tube PCR strips, 64 x 0.2 ml  
 $\angle$  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	