



High Speed Refrigerated Centrifuge

6500



Max. 22,000 rpm/48,700 xg
Max. 3 Liters



Features

■ Maximum Capacity

6x500 mL bottles to be centrifuged at 12,090 xg

■ Auto Interlock Lid

Lid can be opened/closed using one hand.

- To close lid
Push slightly and the lid locks automatically by an electrical interlock system
- To open lid
Press the lid open key and the lid opens automatically after releasing the interlock.
A foot switch (optional) also enables hands-free lid opening.

■ Easy-to-use and convenient functions

- Memory flashing function for easy spin-down (Patent pending)
Automatically memorizes the duration of spin-down operation ranging from 1 to 90 seconds. Merely pressing the key the next time starts the spin-down procedure for the memorized duration.
- Five operation condition memory settings are available, with one-touch saving, access and operation possible.
- Equipped with a tachometer port to comply with GMP requirements. Actual rotor speed is easy to check.
- Acceleration and deceleration curve can be varied in three steps according to the type of sample and experimental conditions.
- RCF (xg)-set operation function and stepped centrifugal force function
- Integrator function that can attain optimization of centrifuging conditions. G-sec value (integrated RCF value) can be measured and operation with this value set is possible.
- The timer can be set up to 990 minutes or seconds. During hold operation, the elapsed time of operation is displayed.
- Pre-cooling function enables the rotor to reach low temperatures before the experiments.



Foot switch (Optional)

The lid opens automatically when the switch is pressed. A newly designed gas spring produces smooth and quick opening, while hands-free opening makes the experiments easier.

Compact Space Requirement of 50 cm width, 74 cm depth.



■ Safety pursued

- The various alarm detector sensors secure operation. When the alarm is detected, the operation stops.
- Safety is increased by a rotor setup condition sensor that detects whether or not the rotor is properly set on the driver shaft. (Patent pending)
- Automatic rotor identification. (Patented)
Rotor type is automatically identified and over-speed detection is enabled when a rotor is simply placed on the driver shaft.

■ A safety cabinet with an anti-biohazard HEPA filter (Class I) can be set. (optional)

■ Sample temperature kept at 4°C

(At the ambient temperature of 25°C. Please refer to the rotor.)

■ Design incorporates friendliness to the global environment and recycling

A limited amount of plastic is used to reduce the load on the environment.

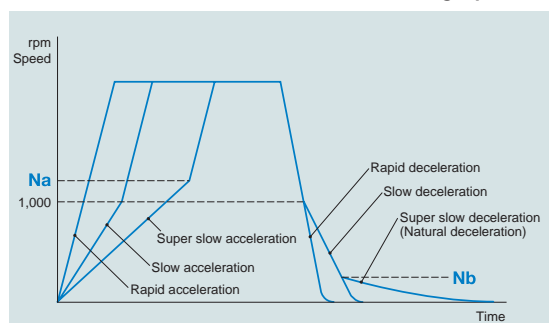
Acceleration and deceleration characteristics

Acceleration and deceleration curves can be varied in three steps according to the type of sample and experimental conditions.

Acceleration and/or deceleration commencement speed can be selected for the sample easy to stir.

Density gradient method is also possible.

Acceleration/deceleration characteristics graph



- For the super slow acceleration and the super slow deceleration, a characteristic change-over speed Na and Nb can be set from 0 to 22,000 rpm.
- Natural deceleration starts at the change-over speed Nb.



High RCF 30,190 xg ~ 15,880 xg Fixed Angle Rotor

Cap support structure enables high g-force centrifugation without tube breakage. (excluding AG-6512C) (Patent pending)
 High g-force enables separation of sticky protein.
 Speed down or special tube is not necessary to prevent tube from breakage.



Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	At keeping 4 °C Max. Speed rpm	* Max. RCF xg
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* showing maximum speed and RCF when keeping the sample at 4°C. (At the ambient temperature 25°C)

AG-508CA

8 x 50 mL Conical tube	30x117	15,000	30,190	13,000	22,680
8 x 15 mL Conical tube *	17x121	15,000	29,680	13,000	22,300

* Adaptor (Code No.055-1250) is necessary.



AG-6512C *3

12 x 50 mL Conical tube	30x117	10,000	15,880	10,000	15,880
12 x 15 mL Conical tube	17x121	10,000	13,300	10,000	13,300

50 mL conical tube (PP) with cap of 36 mm diameter or less made by BIO-BIK, CORNING, FALCON, GREINER, IWAKI, NUNC and SARSTEAD can be accommodated. 35 mL Oak ridge conical tube (PC, POCO) made by NALGE NUNC is acceptable. AG-508CA can accommodate 15 mL conical tubes (PP) made by CORNING, FISHER and GREINER. AG-6512C can accommodate 15 mL conical tube (PP) made by any company.

Plate Rotor

Shield cover is useful for prevention against contamination.
 Useful for DNA extraction & purification, ethanol precipitation, purification of PCR product in PCR plate, elimination of Dye-terminator.

	Max. Size of Plate mm	Max. Speed rpm	Max. RCF xg
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with shield cover

RS-751GS *3,7

12 x microplate	86(W)x128(D)x90(H)	5,000	4,390
4 x deepwell plate			

* Tray (Code No.055-6380) is necessary.



with shield cover

RS-745GS *3,7

12 x microplate	86(W)x128(D)x90(H)	4,200	3,100
4 x deepwell plate			

* Tray (Code No.055-6380) is necessary.

Tray Code No.055-6380 (Optional)



12x 96 well plate



4x deepwell plate



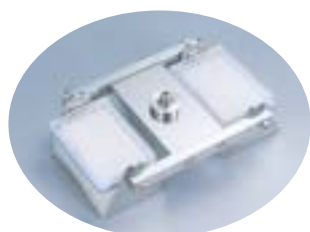
4x squarewell plate



2 deepwell plate +
filter plate



2x PCR plate



RMP-89G

8 x microplate	86(W)x130(D)x89(H)	2,400	1,080
4 x deepwell plate			

* Tray (Code No.055-6370) is available (optional).

250mL~500mL Large Volume Fixed Angle Rotor



Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	At keeping 4 °C Max. Speed rpm	* Max. RCF xg
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* showing maximum speed and RCF when keeping the sample at 4°C. (At the ambient temperature 25°C)

AG-2506

6 x 250 mL	60 ~ 62.4x119 ~ 137	11,500	21,000	10,000	15,880
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Tube adaptor is available for various capacities.
As for details, please contact your dealer.



AG-5004 *2,3

4 x 500 mL	69 ~ 70.2x155 ~ 170.5	8,500	12,360	8,500	12,360
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Tube adaptor is available for various capacities.
As for details, please contact your dealer.



AG-5006 *2,3

6 x 500 mL	69 ~ 70.2x155 ~ 170.5	8,000	12,090	8,000	12,090
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Tube adaptor is available for various capacities.
As for details, please contact your dealer.

Sealing Adaptor for Biohazard-proof



Sealing adaptor for high speed fixed angle rotor

Available for 10 mL and 50 mL Oak ridge type tubes and 250 mL bottles.
Autoclavable (121°C).



for 10mL Oak ridge type tube
Code No.055-4280



for 50mL Oak ridge type tube
Code No.055-0530



for 250mL bottle
Code No.055-4510

High Speed Rotor
AG-506R · AG-508R · AG-1008A ·
AG-5004 · AG-5006

Code No. *	Nominal Capacity	Tube	Tube size Dia x length mm	Rotor	Max. Speed rpm	Max. RCF xg
055-4280	10mL Oak ridge type tube	FEP 3114-0010	16.0x81.5	AG-506R	20,000	43,380
		PSF 3115-0010	16.0x82.0			
		PC 3118-0010	16.1x81.7	AG-508R	17,500	36,980
		PPCO 3119-0010	16.0x81.4			
055-0530	50mL Oak ridge type tube	FEP 3114-0050	28.8x107.7	AG-1008A	13,500	26,690
		PSF 3115-0050	29.0x107.7			
		PC 3118-0050	28.8x107.0			
		PPCO 3119-0050	28.8x106.7			
055-4510	250mL Bottle	PPCO 3120-0250	61.8x127.7	AG-5004	8,500	12,360
		PC 3122-0250	61.8x127.6	AG-5006	8,000	12,090

* Adaptor is made of Polyethetale and the cap of Polycarbonate
FEP: Teflon FEP, PSF: Polysulfone, PC: Polycarbonate, PPCO: Polypropylene copolymer

7mL~100mL Middle Volume Fixed Angle Rotor



AG-716 ^{*3}

	Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	At keeping 4 Max. Speed rpm	* Max. RCF xg
16 x 7 mL	15.9 ~ 16.4x60 ~ 64	22,000	48,700	17,000	29,080

* showing maximum speed and RCF when keeping the sample at 4°C. (At the ambient temperature 25°C)



AG-1212

12 x 12 mL	15.9 ~ 16.4x103 ~ 109	21,000	47,330	17,000	31,020
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AG-1224 ^{*1,3}

24 x 12 mL	15.9 ~ 16.4x103 ~ 105	17,000	36,190	14,000	25,540
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AG-506R ^{*2}

6 x 50 mL	28.7 ~ 29x103 ~ 109	20,000	43,380	16,000	27,760
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Tube adaptor is available for various capacities.
As for details, please contact your dealer.



AG-508R ^{*2}

8 x 50 mL	28.7 ~ 29x103 ~ 109	17,500	36,980	14,500	25,390
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Tube adaptor is available for various capacities.
As for details, please contact your dealer.



AG-1008A ^{*2,3}

8 x 100 mL	38x114	13,500	26,690	12,000	21,090
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Tube adaptor is available for various capacities.
As for details, please contact your dealer.



RA-360G ^{*3}

24 x 15 mL	16x126	3,500	2,270	3,500	2,270
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Micro Rotor



	Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	Bucket Code No.	Tube Rack Adaptor Code No.
AG-224					
2.4 x 2 mL	9.5 ~ 11.0x36 ~ 42	22,000	44,370		
2.4 x 0.5 mL	7.0 ~ 7.9x25 ~ 34	22,000	39,500		055-7590
2.4 x 0.4 mL	5.4 ~ 6.1x26 ~ 48	22,000	43,830		055-7580
2.4 x 0.2 mL PCR	5.9 ~ 6.3x20 ~ 24	15,000	16,100		055-0500

At keeping 4°C, the maximum speed is 19,000rpm (33,090xg).



	Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	Bucket Code No.	Tube Rack Adaptor Code No.
RA-159G *3					
7.2 x 2 mL	9.5 ~ 11.0x36 ~ 42	13,500	24,250 *1		
7.2 x 0.5 mL	7.0 ~ 7.9x25 ~ 34	13,500	24,040 *1		055-7590
7.2 x 0.4 mL	5.4 ~ 6.1x26 ~ 48	13,500	23,640 *1		055-7580
7.2 x 0.2 mL PCR	5.9 ~ 6.3x20 ~ 24	13,500	20,580 *1		055-0500



	Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	Bucket Code No.	Tube Rack Adaptor Code No.
RS-35G swinging bucket rotor *3					
1.6 x 2 mL	9.5 ~ 11.0x36 ~ 42	15,000	18,360	053-5130	
4.0 x 0.5 mL	7.0 ~ 7.9x25 ~ 34	15,000	16,100	053-5130	
2.0 x 0.5 mL	7.0 ~ 7.9x25 ~ 34	15,000	16,100	053-5140	
3.6 x 0.4 mL	5.4 ~ 6.1x26 ~ 48	15,000	18,360	053-5150	
1.6 x 0.2 mL PCR	5.9 ~ 6.3x20 ~ 24	15,000	11,820	053-5130	055-0500

Swinging Bucket Rotor



	Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	Bucket Code No.	Tube Rack Adaptor Code No.
RS-200G *3					
4 x 50 mL	28.7 ~ 29.3x101 ~ 115	11,500	20,700		

Tube adaptor is available for various capacities.
As for details, please contact your dealer.



	Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	Bucket Code No.	Tube Rack Adaptor Code No.
RS-410G *3,4 Sealing cap is available and is biohazard-proof. Autoclavable (121°C)					
48x2mL	10.7x42	5,000	4,160	attached to rotor	S17008
48x5mL	12.5x75	5,000	4,160	attached to rotor	S17006
48x7mL	12 ~ 12.5x100 ~ 112	5,000	4,160	attached to rotor	S17007
28x7mL blood collecting tube	12.5 ~ 13x75 ~ 106	5,000	4,160	attached to rotor	S17027
12x15mL Conical tube *5	16.5x120.6	5,000	4,160	attached to rotor	S17019
12x15mL Conical tube *5	16.5x120.6	5,000	4,470 *8	S13130	
28x10mL blood collecting tube/15mL	15.5 ~ 17x90 ~ 110	5,000	4,160	attached to rotor	S17015
4x50mL	34x110	5,000	4,160	attached to rotor	S17050
4x50mL	27 ~ 36.5x75 ~ 110	5,000	4,160	attached to rotor	055-5670
4x50mL Conical tube	29.5x117	5,000	4,160	attached to rotor	S17049
4x100mL	44 ~ 45x110	5,000	4,160	attached to rotor	S17100
4x200mL	56.5x104	5,000	4,160	attached to rotor	



	Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	Bucket Code No.	Tube Rack Adaptor Code No.
RS-720G					
80x2mL	9.5 ~ 11x36 ~ 42	3,500	2,290 *8	053-5820	055-4800
96x1.8mL Sample cup	17x38	3,500	2,040 *8	053-5820	055-4940
96xRIA tube	10 ~ 12x70 ~ 95	3,500	2,190 *8	053-5820	055-4730
80x10mL	12 ~ 14x70 ~ 95	3,500	2,260 *8	053-5820	055-4740
48x10mL blood collecting tube/15mL	15 ~ 17.2x75 ~ 110	3,500	2,330	053-5820	055-4750
68x7mL blood collecting tube	12.5 ~ 13.5x75 ~ 110	3,500	2,300	053-5840	055-0260
68x10mL blood collecting tube/15mL	15 ~ 17.2x75 ~ 110	3,500	2,300	053-5840	
28x15mL Conical tube	17x121	3,500	2,300	053-5840	
32x15mL Conical tube	17x121	3,500	2,330	053-5820	055-4780
8x50mL	27 ~ 36.5x75 ~ 110	3,500	2,330	053-5820	055-4760
16x50mL Conical tube	30x117	3,500	2,330	053-5820	055-6070
4x100mL	38 ~ 46.5x75 ~ 120	3,500	2,330	053-5820	055-4770
4x175mL Conical tube *6	61x118	3,500	2,330	053-5820	055-4850
4x200mL Conical tube *6	61x130	3,500	2,330	053-5820	055-4850
4x225mL Conical tube *6	61x137	3,500	2,330	053-5820	055-4850
4x250mL	60 ~ 61.8x100 ~ 130	3,500	2,380 *8	053-5820	055-4850



	Tube size diam. x length mm	Max. Speed rpm	Max. RCF xg	Bucket Code No.	Tube Rack Adaptor Code No.
RS-1400GA *3					
4 x 250 / 350 mL	67 ~ 71x100 ~ 128	5,000/4,000	4,810/3,080		

Tube adaptor is available for various capacities.
As for details, please contact your dealer.

*1 The RCF figure shows RCF of the outer tube.

As to RCF of the inside, please contact your local dealer.

*2 Sealing cap and sealing adaptor for bio-hazard proof are available. Please contact your dealer for details.

*3 Please confirm the delivery schedule with your dealer.

*4 RS-410G can accommodate sealing cap (Code No.S17111) (optional).

*5 S17019 tube rack cannot be accommodated with the sealing cap. Code No.S13130

12x15 mL conical bucket can accommodate sealing cap (Code No.S17111) (optional).

*6 175 mL conical tube is made by Falcon (Code No.352076) and requires a cushion (Code No.352096).

200 mL conical tube is made by Nalge Nunc (Code No. 376813) and requires a cushion adaptor

(Code No.377585).

225 mL conical tube is made by Falcon (Code No.352075) and requires a cushion (Code No.352096).

*7 Please check the strength of plates before using the centrifuge. The plate at the bottom may be damaged.

*8 As to RCF display, please refer to Instruction and Service manual.

Specifications

Model 6500

- Maximum Speed ● 22,000rpm
- Maximum RCF ● 48,700xg
- Maximum Capacity ● 3,000mL
- Control system ● Micro-processor control (Brushless motor)
- abnormality detected display ● Speed, RCF, Time, g-sec, Temperature, Acceleration & Deceleration, 5 channel memories
- Lid open, Imbalance, Over speed, Abnormally high temperature, Rotor mounting abnormality
- Function for detecting an occurrence of electrical abnormality in motor, inverter, lid interlock, speed sensor and temperature sensor.
- Acceleration / Deceleration ● Three-level selectors; Rapid, Slow and Super Slow
- Speed setting ● From 200 to 22,000rpm, 10rpm increments
- Speed indication ● Digital display, From 0 to 22,500rpm, 10rpm increments
- RCF setting ● From 10 to 48,700xg, 10xg increments
- RCF indication ● Digital display, From 0 to 50,940xg, 10xg increments
- Integrator setting and indication ● Digital display, From 1.00 to 9.99x10³ g-sec
- Timer setting and indication ● Digital display, with Hold and Flashing
 - from 1 sec to 100 sec, in 1 sec increment
 - from 100 sec to 990 sec, in 10 sec increments
 - from 1 min to 100 min, in 1 min increment
 - from 100 min to 990 min, in 10 min increments
- Temperature setting and indication ● Digital display, 1°C increments, Pre-cooling
 - Temperature setting range -20°C to +40°C
 - Temperature indication -20°C to +43°C
- Refrigerant ● R404A
- Power requirements ● Single phase AC220V±10%, 230V±10%, 50/60Hz, 30A
- Rated voltage and Rated current ● 220/230V, 50/60Hz, 12A
- Power consumption and Heat output ● 1800W 6.5MJ/h
- Dimensions, weight ● 50(W) x 74(D) x 94(H)cm^{*1}, 195kg

(*1) Those of projections are not included.

All specifications and external appearance subject to change without notice.

* On Model 6500 only use KUBOTA made rotor, adapter and tube rack. Do not attempt use rotors, adapters or tube racks made by other manufacturers.

* The rotor mentioned in the catalogue is usable on other KUBOTA centrifuge models. For details, refer to the catalogues relevant to each model.

* Follow instructions given in the relevant Instruction & Service Manual for operating centrifuges.



Safety Precautions

For your safe use of the equipments, be sure to read the instruction manual carefully before you start its operation.

Parts may be adversely affected by heat, humidity and specimens or deteriorated by aging resulting in functional failures or may even lose their safety characteristic to cause accidents.



DISCONTINUE USE

Always discontinue use when phenomena listed at right appear.

- The rotor or bucket has been found to be damaged or corroded.
- A burnt smell comes out of the equipment.
- You receive a minor electrification when you touch the equipment body by a naked hand.
- Some other abnormality or failure has been found occurring.

IMPORTANT

To prevent occurrences of functional failures or accidents, turn off the power switch, pull out the power cable plug from the plug socket and be sure to contact your nearest Kubota Dealer, or an office of Kubota Corporation when there is no Kubota Dealer in your neighbourhood.

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