

Universal Refrigerated Centrifuge



5911

Set rotors without tools

Conforms to International Safety Standard IEC61010-2-020

Measure the balance of sample only by the naked eye (for rotors at 5,000 rpm or less)

■ Set and change rotors easily, without tools

(except when RA-508C rotor is used)

■ Sample balance can be measured by the naked eye

(for rotors at 5,000 rpm or less)

■ Easy-to-use functions maximize convenience

- Memory function for easy spin-down automatically by memorizing the duration of spin-down operations (patented).
- 5 available memory settings, with one-touch save and recall operation.
- Operation according to the centrifugal force (xg), as well as step centrifugation and integrator setting (g-sec).
- Optional foot switch enables hands-free lid opening.

■ Conforms to International Safety Standard IEC61010-2-020

(except when RA-508C rotor is used)

■ Numerous detectors ensure safe and reliable operations. If problem is detected, operation will stop immediately.

- Rotor sensor detects which type of rotor is mounted.

■ Fullfill GMP requirements

- Equipped with tachometer port to comply with GMP requirements. Actual rotor speed is easy to check.

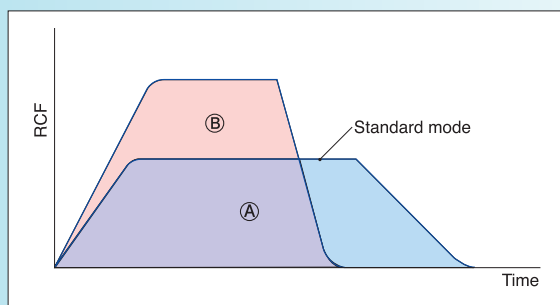
■ Wide variety of rotors and accessories

- Swinging bucket rotor ST-2504MS can be used up to 4,800 rpm/4,300 xg, and optional sealing caps for biohazard-proof operations are available.

■ Sample temperature maintained at 4°C at maximum speed of rotation for all rotors

(25°C ambient temperature).

■ Reduce plastic use and special designed for ecology and recycle.



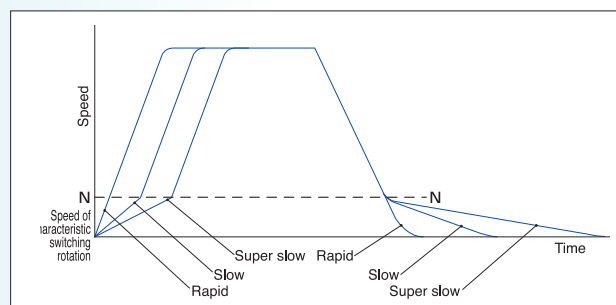
Integrator function g-sec value

Identical applications of total centrifugal force are easily reproducible using the g-sec function

- The integrator function enables identical centrifugal effects to be applied. (A) = (B)

● Variable acceleration and deceleration function

Acceleration and deceleration curves can be changed to fit your samples and purpose. Initial acceleration and deceleration speeds can be adjusted to accommodate the samples which get stirred up easily. Density gradient centrifugation is also possible.



Acceleration/deceleration characteristics

- Super-slow acceleration or deceleration is available for centrifugation of especially sensitive samples, to avoid resuspension.
- Suitable for centrifugation of easily resuspended samples, density gradient methods and blood cell cleaning.
- The rotational speed N when the acceleration/deceleration profile changes at can be set, which enables super-slow acceleration and deceleration for especially sensitive samples.

Sealing caps can be used with swinging bucket rotors ST-2504MS and ST-5004M for biosafety.



ST-2504MS Swinging bucket rotor

Maximum Capacity : 4 x 250mL

Maximum Speed : 4,800rpm

Maximum RCF : 4,300xg

- Various tubes can be centrifuged (from 36x1.5mL to 4x250mL). There are 7 types of tube rack.
- Sealing caps are available, which are useful for anti-biohazard.

** "Sealing caps and O-ring" (Code 055-0964) are optional.



ST-5004M Swinging bucket rotor

Maximum Capacity : 4 x 500mL

Maximum Speed : 4,000rpm

Maximum RCF : 3,080xg

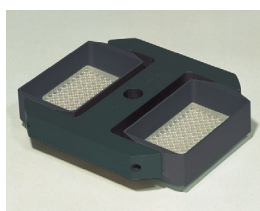
- Various tubes can be centrifuged (from 72x1.5mL to 4x500mL).
- Sealing caps are available, which are useful for anti-biohazard.

** Sealing caps are equipped with rotor (not optional).



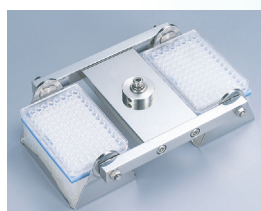
ST-722M Swinging bucket rotor

Stainless steel buckets (Code No.053-5820) and aluminum buckets (Code No.053-5840) can be used at maximum speed 3,500rpm.



PT-21M Plate rotor

6 micro-plates or 2 deep-well plates can be set. This rotor can be used for ethanol precipitation at 3,100 xg.



PT-89M Plate rotor

8 micro-plates or 2 filter plates and 4 deep-well plates can be set. Plates with a maximum height of 89 mm can be used.



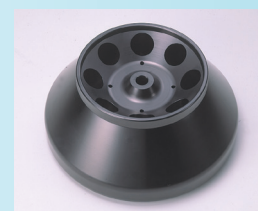
PT-745MS Plate rotor

12 micro-plates and 4 deep-well plates can be set. Ethanol precipitation can be carried out at 3,100 xg.



AT-508C Fixed-angle rotor


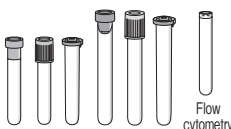












8 x 50/15mL conical tubes. This economical, multipurpose angle rotor accepts 12mL to 50mL tubes.


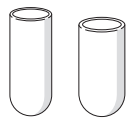








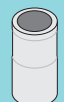





RA-508C Fixed-angle rotor

For 8 x 50/15 mL conical tubes 12 mL to 50 mL tubes can be used with this multipurpose angle rotor.

Table of Rotors, Buckets and Tube Racks for Model 5911

Tube								
		36 x 1.5/2mL	72 x 1.5/2mL	80 x 1.5/2mL	68 x 5~7mL thin blood collection tube		24 x 8mL CPT cell preparation tube	80 x 10mL (glass)
Nominal Capacity								
Tube size (mm) diam. x length		9.5~11 x 36~42			12~13.7 x 62~110		13.5~15.8 x 81~130	12~13.8 x 65~95
Maximum Speed rpm		4,800	4,000	3,500	3,500		3,500	3,500
Maximum RCF xg		4,250	3,040	2,290	2,300		2,310	2,080
Swinging Bucket Rotor		Tube Rack, Adaptor Code No.		055-4800	Bucket Code No. 053-5840		055-6900	055-4740
	ST-722M Max 3,500 rpm Max 2,380 xg Autoclavable *		Bucket Code No. 053-5820 Buckets are optional.	—	—		 *1	 *2
	ST-2504MS Max 4,800 rpm Max 4,300 xg Autoclavable *		Sealing caps and O-rings Code No.055-0964 Buckets are equipped with rotor. Sealing caps are optional.		—	—	—	—
	ST-5004M Max 4,000 rpm Max 3,080 xg Autoclavable *		Buckets and sealing caps are equipped with rotor.	—		—	—	—

Tube								
		4 x 50mL conical tube	12 x 50mL conical tube	16 x 50mL conical tube	4 x 100mL (glass)		4 x 175/225mL conical tube	
Nominal Capacity								
Tube size (mm) diam. x length		30 x 117			38~46.5 x 83~120	38~46.5 x 113~120		61 x 118 / 61 x 137
Maximum Speed rpm		4,800	4,000	3,500	3,500	4,800	4,000	4,800
Maximum RCF xg		4,250	3,040	2,330	2,330	4,250	2,970	4,250
Swinging Bucket Rotor		Tube Rack, Adaptor Code No.		055-6070	055-4770			
	ST-722M Max 3,500 rpm Max 2,380 xg Autoclavable *		Bucket Code No. 053-5820 Buckets are optional.	—	—			—
	ST-2504MS Max 4,800 rpm Max 4,300 xg Autoclavable *		Sealing caps and O-rings Code No.055-0964 Buckets are equipped with rotor. Sealing caps are optional.		—	—		*4,6
	ST-5004M Max 4,000 rpm Max 3,080 xg Autoclavable *		Buckets and sealing caps are equipped with rotor.	—		—		—

⚠ Rotor has prescribed operating life cycle and years of operation, after that the rotor must be replaced. For more details, please contact us.

*** The number of times allowed for autoclaving is limited. For more details, please contact us.**

68 x 10mL blood collection tube/15mL	28 x 5~10mL blood collection tube/15mL	48 x 5~10mL blood collection tube/15mL	48 x 5~10mL blood collection tube/15mL	16 x 15mL conical tube	28 x 15mL conical tube	28 x 15mL conical tube	32 x 15mL conical tube	4 x 50mL (glass)	8 x 50mL (glass)	12 x 50mL (glass)
15~17.2x52~110	12~17.2x72~110	12~16.8x72~110	12~16.8x72~110	17x121				27~36.4x85~110		
3,500	4,800	4,000	3,500	4,800	3,500	4,000	3,500	4,800	3,500	4,000
2,300	4,150	2,970	2,300	4,280	2,300	3,060	2,330	4,150	2,330	2,990
Bucket Code No. 053-5840 	—	—	055-0880 	—	Bucket Code No. 053-5840 	—	055-4780 	—	055-4760 	—
—	055-1140 	—	—	055-1160 	—	—	—	055-1150 	—	—
—	—	055-0730 	—	—	—	055-0750 	—	—	—	055-0740

This convenient tube rack can accommodate blood collection tubes of various sizes (such as 5 mL, 7 mL, 10 mL), as well as 15 mL glass tubes.

- *1 5-7mL blood collection tubes which can be used are insepack II and ST series by SEKISUI, Venoject II by TERUMO, Neo tube by NIPRO and Vacutainer by BD. The tubes for flow cytometry are applicable.
- *2 The blood collection tubes which can be used are Vacutainer 8mL CPT by BD.
- *3 5-10mL blood collection tubes which can be used are insepack II and ST series by SEKISUI, Venoject II by TERUMO, Neo tube by NIPRO and Vacutainer by BD. The tubes for flow cytometry are applicable.

4 x 175/200/225mL conical tube	4 x 250mL *7	4 x 250mL *7	4 x 250mL *7	4 x 500mL *8	4 x Self-Standing sputum tube	Self-Standing sputum tube 4 x, 8 x, 12 x	Self-Standing sputum tube 8 x, 12 x, 16 x
61x118/61x130/61x137	60~62x100~134.4			85x135	cap diam. φ48	cap diam. φ48, cap diam. φ37, cap diam. φ31	cap diam. φ48, cap diam. φ37, cap diam. φ31
3,500	4,000	3,500	4,800	4,000	4,800	4,000	3,500
2,330	3,080	2,380	4,300	3,080	4,250	3,020	2,250, 2,290, 2,300
055-4850 	—	055-4850 	—	—	—	—	055-0430, 055-0440, 055-0450
—	—	—	can be used without adaptors	—	055-1210 	—	—
—	055-0780 	—	—	055-0780 	can be used without adaptors	055-0810, 055-0800, 055-0790 	—

- *4 175/225mL Falcon conical tubes (catalogue No.352076/352075) require cushions (catalogue No.352090).
- *5 200mL Nalgene conical tubes (catalogue No.376813) require cushions (catalogue No.377585). Maximum RCF is 3,020 xg when ST-5004M rotor is used.
- *6 Sealing caps can not be used with 200/225mL conical tubes.
- *7 Nalgene, Helolab, and Corning 250mL flat bottom bottles can be used.
- *8 500mL bottles (Code No.K115501C/PPCO) can be used.

Table of Rotors, Buckets and Tube Racks for Model 5911

⚠ Rotor has prescribed operating life cycle, after that the rotor must be replaced.

For more details, please contact us.

*** The number of times allowed for autoclaving is limited. For more details, please contact us.**

		Micro tube	Blood collection tube, glass tube						50mL tube				
Tube			*1						*2				
Nominal Capacity		48 x 1.5/2mL	16 x 5~10mL blood collection tube		16 x 15mL (glass)		4 x 7~10mL blood collection tube/15mL	8 x 7~10mL blood collection tube/15mL	32 x 7~10mL blood collection tube/15mL	4 x 50mL (glass)	8 x 50mL (glass)		
Tube size (mm) diam. x length		9.5~11 x 36~42	12~17 x 65~105						12~17.2 x 86~110			27~38 x 100~110	
Maximum Speed rpm		3,500	3,500		3,500 (5,000)		3,500	3,500	3,500	3,500 (5,000)	3,500		
Maximum RCF xg		1,880	2,220		2,230 (4,560)		2,230	2,270	2,270	2,270 (4,640)	2,270		
Bucket Code No.		053-5040	053-4930						053-7110	053-7150	053-7130	053-7110	053-7150
ST-480M Max 3,500rpm Max 2,380 xg Autoclavable *													
Bucket Code No.		—	—						053-7080	—	—	053-7080	—
ST-504M Max 5,000rpm Max 4,860 xg Autoclavable *		—	—							—	—		—
Adaptor Code No.		—	—						055-7400	055-7400	—	—	—
ST-480M · ST-504M		—	—						*3 024-1400	*3 024-1400	—	—	—
Cushion Code No.		—	—						—	—	—	—	—

Choose optional buckets, adaptors and cushions.

The maximum speed and maximum RCF of ST-504M are indicated in the brackets ().

		conical tube					conical tube for biohazard-proof			
Tube										
Nominal Capacity		16 x 15mL conical tube	4 x 15mL conical tube	4 x 50mL conical tube	8 x 15mL conical tube	8 x 50mL conical tube	4 x 50mL (Oak Ridge)	4 x 15mL conical tube	4 x 50mL conical tube	
Tube size (mm) diam. x length		17 x 121	17 x 121	30 x 117	17 x 121	30 x 117	27~29 x 100~108	17 x 121	30 x 117	
Maximum Speed rpm		3,500	3,500 (5,000)	3,500 (5,000)	3,500	3,500	3,500 (5,000)	3,500 (5,000)	3,500 (5,000)	
Maximum RCF xg		2,340	2,370 (4,840)	2,380 (4,860)	2,370	2,380	2,180 (4,440)	2,370 (4,840)	2,380 (4,860)	
Bucket Code No.		053-4980	053-5010		053-5020		053-7110	053-0040		
ST-480M Max 3,500rpm Max 2,380 xg Autoclavable *								*4		
Bucket Code No.		—	053-4970		—		053-7080	053-0050		
ST-504M Max 5,000rpm Max 4,860 xg Autoclavable *		—			—			*4		
Adaptor Code No.		—	055-1280	—	055-1280	—	—	055-1280	—	
ST-480M · ST-504M		—		—		—	—		—	

*1 5-7mL blood collection tubes made by SEKISUI (Insepack II), Termo (Venoject II), Nipro (Neotube), Becton Dickinson (Vacutener) can be used. Tube for flow cytometry can also be used.

*2 7-10 mL blood collection tubes made by SEKISUI (Insepack II), Termo (Venoject II), Nipro (Neotube), Becton Dickinson (Vacutener) can be used.

*3 Optional cushions (Code No.024-1400) are required.

*4 Sealing caps and O-rings (silicone) are equipped with buckets.

Plate rotor

PT-21M

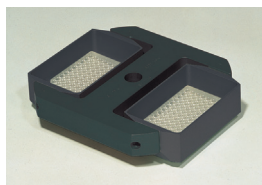


Plate	Nominal Capacity	Plate size mm	Maximum Speed rpm	Maximum RCF xg	Adaptor Code No.
	2 x PCR plate 6 x MTP *1	86(W)×130(D)×62(H)	5,000	3,100	—
	2 x DWP *1				

PT-89M



Plate	Nominal Capacity	Plate size mm	Maximum Speed rpm	Maximum RCF xg	Adaptor Code No.
	2 x PCR plate 8 x MTP *1	86(W)×130(D)×89(H)	2,400	1,080	 055-6370 *2
	4 x DWP *1				

PT-745MS



Plate	Nominal Capacity	Plate size mm	Maximum Speed rpm	Maximum RCF xg	Adaptor Code No.
	2 x PCR plate 12 x MTP *1	86(W)×128(D)×90(H)	4,200	3,100	Tray 055-6380 *2
	4 x DWP *1				

Trays Code No.055-6380 (optional)



12 x 96 well plate

4 x DWP

4 x square-well plate

2 DWP + filter plate

2 x PCR plate

Fixed-angle rotor

AT-508C

8 x 50mL conical tube



RA-508C

8 x 50mL conical tube



Lid (Code No.028-1260) is optional.

Tube	Nominal Capacity	Tube size (mm) diam. x length	AT-508C		RA-508C		Adaptor Code No.
			Maximum Speed rpm	Maximum RCF xg	Maximum Speed rpm	Maximum RCF xg	
	8 x 12mL plastic *3	15.7~16.4×102~105	6,000	5,110	8,500	9,370	055-1120
	8 x 14mL *4	17×100	6,000	4,990	8,500	9,130	055-0550
	8 x 15mL conical tube	17×121	6,000	5,270	8,500	9,530	055-1280
	8 x 50mL plastic *5	26.4~28.7×98~115	6,000	4,990	8,500	9,290	055-1110
	8 x 50mL conical tube	30×117	6,000	5,350	8,500	9,690	—
Sartorius							
	Ⓐ Vivaspin 2	16.7×129	6,000	5,270	7,780	7,990	055-1280
	Ⓑ Vivaspin 6	16.7×129					
	Ⓒ Vivaspin 15R/20	30×117	6,000	5,350	6,680	5,990	—
Millipore							
	Ⓓ Amicon Ultra-4	17.3×124	6,000	5,270	7,540	7,500	055-1280
	Ⓔ Amicon Ultra-15	29.7×121	5,800	5,000	6,100	4,990	—

**⚠ Rotor has prescribed operating life cycle, after that the rotor must be replaced.
For more details, please contact us.**

* The number of times allowed for autoclaving is limited. For more details, please contact us.

*1 Test the strength of plates before centrifuging. The bottom and lower plate might be damaged.

*2 Optional tray is available.

*3 Nalgene tubes, No.3110-0120 and No.3117-0120.

*4 BD Falcon tubes, No.352006, 352018 and 352059.

*5 Nalgene tubes, No.3110-0500, No.3110-9500 and No.3117-9500.

Specifications

Model 5911

Maximum Speed	• 8,500 rpm
Maximum RCF	• 9,690 xg
Maximum capacity	• 2,000 mL
Control system	• Inverter microprocessor control
Alarm display	• speed, RCF, time, temperature, g-sec, acceleration/deceleration, 5 channel memories • Lid open, imbalance, over speed, rotor set state, function for detecting an occurrence of electrical abnormality in motor, inverter, lid interlock, speed sensor and temperature sensor
Acceleration/Deceleration	• 3 steps: rapid, slow, super slow
Speed setting and indication	• Digital display, 10 rpm increments
RCF setting and indication	• Digital display, 10 xg increments
Integrator setting and indication	• Digital display, from 1.00 to 9.99 x 10 ⁹ g-sec
Step centrifugation	• Speed, RCF, time, temperature, acceleration/deceleration, 1 channel memory
Timer setting and indication	• Digital display, HOLD (∞) and memory flashing • 1 to 100 sec. / 1 sec. increment • 100 to 990 sec. / 10 sec. increments setting and 1 sec. increment indication • 1 to 100 min. / 1 min. increment • 100 to 990 min. / 10 min. increments setting and 1 min. increment indication
Temperature setting and indication	• Digital display, -20°C to 40°C, 1°C increments
Refrigerant	• R134a
Power requirements	• Single phase 110/115±10% V 50/60Hz, 15A • Single phase 220/230±10% V 50/60Hz, 10A
Rated voltage and rated current	• 110V 9.9A, 115V 9.5A, 220V 4.7A, 230V 4.5A
Power consumption and heat output	• 110/115V 900W, 3.2MJ/h, 220/230V 850W, 3.1MJ/h
Size, weight	• 50(W) x 65(D) x 85(H) cm · 110 kg, height when the lid is open: 138 cm ^{*1}
Conforming standard	• IEC 61010-2-020 (except when RA-508C rotor is used) • CE Marking (AC220V and 230V version)

(*1) Not including projections.

All specifications and external appearance are subjects to change without notice.

* Use only rotors, adaptors and tube racks made by KUBOTA. Do not attempt to use rotors, adaptors or tube racks made by other manufacturers.

* Follow all instructions in the relevant Instruction & Service Manual when operating centrifuges.

Kubota has acquired ISO 9001 and ISO 13485 certification.

Precautions for use

Products in this catalogue are designed for use only by people who have the requisite technical knowledge, and must always be used with considerable care and only for their intended purpose. People who do not have adequate technical knowledge or training should only use the products under appropriate supervision by someone with expert knowledge, or else accidents are likely to occur.



Please immediately stop using the products in any of the cases listed on the right.

- The rotor or buckets appear to be damaged or corroded.
- When the replacement period (years of operation, operating lifetime) of a rotor has passed.
- The equipment emits a burning smell or becomes abnormally hot.
- You receive a weak electric shock when you touch the equipment with your bare hands.
- When any other abnormality or indication of failure is noticed.

IMPORTANT

If any of the cases listed at the left occurs, immediately turn off the power, disconnect the power cable plug or connecting terminals from the main power outlet, place a "Do not use" sign on the unit, and contact the nearest branch of Kubota Corporation.



Safety Precautions

To use the equipment safely, be sure to read the instruction manual carefully before you start operations.

Do not misplace the instruction manual. Keep the instruction manual nearby so that you can refer to it whenever necessary.

- The term of supplying spare parts for repair is 7 years after discontinuation of production (except spare parts which we are unable to procure).
- This catalogue is not for distribution in the USA, Canada and Mexico as products shown are not for sale in these countries.

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