

KUBOTA

Universal Refrigerated Centrifuge



5911

Set rotors without tools

Conforms to International Safety Standard IEC61010-2-020

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

■ Set and change rotors easily, without tools

(except when RA-410M3 rotor is used)

■ Sample balance can be measured by eye

(for rotors at 5,000 rpm or less)

■ Easy-to-use functions maximize convenience

- Memory function for easy spin-down automatically memorizes 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 stepped centrifuging and integral centrifuging (g-sec) settings.
- Optional foot switch enables hands-free lid opening.

■ Conforms to International Safety Standard

IEC61010-2-020 (except when RA-410M3 rotor is used)

■ Numerous detectors ensure safe, reliable operations. If trouble is detected, operation stops immediately.

- Rotor sensor detects what rotor is mounted.

■ Complies with GMP requirements

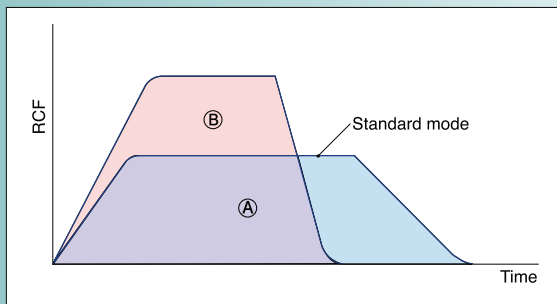
- Equipped with a tachometer port to comply with GMP requirements. Actual rotor speed is easy to check.

■ Multi-purpose unit supports using a wide variety of rotors and accessories

- Swinging bucket ST-2504MS rotor 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.



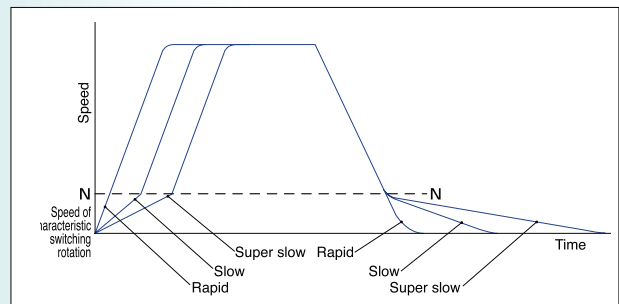
Integrator function g-sec value

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 best fit your samples and goals. Initial acceleration and deceleration speeds can be adjusted to accommodate easily perturbed samples. Density gradient centrifugation is also enabled.



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 can be set, enabling super-slow acceleration and deceleration for especially sensitive samples.

New swinging rotor, ST-2504MS & ST-5004M released for sales

New Buckets for ST-722M released for sales

NEW



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 is useful for anti-biohazard.
- ** "Sealing Cap 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 is useful for anti-biohazard.
- ** Sealing Caps are equipped with rotor (not optional).



ST-722M Swinging bucket rotor

Round buckets (Code No.053-0020, sealing caps are available), stainless steel buckets (Code No.053-5820) and aluminum buckets (Code No.053-5840) can be used at maximum 3,500rpm.

- Sealing caps are available with round buckets (Code No.053-0020).

(Patent pending)



PT-89M Plate rotor

8 micro-plates or 1 filter plate and 2 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







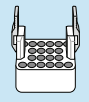

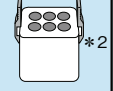








50/15mL x 8 conical tubes
This economical, multipurpose angle rotor accepts 12mL or 50mL tubes.



RA-410M3 Fixed-angle rotor


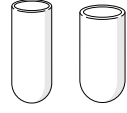










For 8 x 50/15 mL conical tubes
12 mL and 50 mL tubes can be used with this multipurpose angle rotor.

Rotor, Bucket, Tube Rack Table for Model 5911

Tube							
	Nominal Capacity	36 x 1.5/2mL	72 x 1.5/2mL	80 x 1.5/2mL	68 x 5~7mL blood collecting tube	24 x 8mL CPT cell preparation tube	80 x 10mL (glass)
Tube size (mm) diam. x length	9.5~11 x 36~42			12.5~13.7 x 62~110		13.5~15.8 x 81~130	12.5~13.8 x 65~95
Maximum Speed rpm	3,500/4,800	4,000	3,500	3,500	3,500	3,500	3,500
Maximum RCF xg	2,260/4,250	3,040	2,290	2,300	2,310	2,260	2,260
Swinging Bucket Rotor  ST-722M Max 3,500 rpm Max 2,380 xg Autoclavable* Choose either bucket.	Tube Rack, Adaptor Code No.  Bucket Code No. 053-5820 Buckets are optional.	055-4800		Bucket Code No. 053-5840  Adaptor Code No. 055-0260 *1	055-6900  *2	055-4740	
	Tube Rack, Adaptor Code No.  Bucket Code No. 053-0020 Sealing caps and O-rings Code No.055-0964 Buckets and sealing caps are optional.	055-1190		—	—	—	—
 ST-2504MS Max 4,800 rpm Max 4,300 xg Autoclavable*	Tube Rack, Adaptor Code No.  Sealing caps and O-rings Code No.055-0964 Buckets are equipped with rotor.	055-1190		—	—	—	—
 ST-5004M Max 4,000 rpm Max 3,080 xg Autoclavable*	Tube Rack, Adaptor Code No. Buckets and sealing caps are optional.	—	055-0770		—	—	—

* The number of times allowed for autoclaving are limited. Please refer an instruction manual.

The maximum speed and maximum RCF of ST-722M indicated on the left in red. The maximum speed and maximum RCF of ST-2504MS indicated on the right in blue.

Tube							
	Nominal Capacity	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
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	3,500/4,800	4,000	3,500	3,500	3,500/4,800	4,000	3,500/4,800
Maximum RCF xg	2,260/4,250	3,040	2,330	2,300	2,260/4,250	2,990	2,260/4,250
Swinging Bucket Rotor  ST-722M Max 3,500 rpm Max 2,380 xg Autoclavable* Choose either bucket.	Tube Rack, Adaptor Code No.  Bucket Code No. 053-5820 Buckets are optional.	—	—	055-6070	055-4770	—	—
	Tube Rack, Adaptor Code No.  Bucket Code No. 053-0020 Sealing caps and O-rings Code No.055-0964 Buckets and sealing caps are optional.	055-1170		—	—	055-1200	—
 ST-2504MS Max 4,800 rpm Max 4,300 xg Autoclavable*	Tube Rack, Adaptor Code No.  Sealing caps and O-rings Code No.055-0964 Buckets are equipped with rotor.	055-1170		—	055-1200	—	* 4
 ST-5004M Max 4,000 rpm Max 3,080 xg Autoclavable*	Tube Rack, Adaptor Code No. Buckets and sealing caps are optional.	—	055-0760		—	055-1180	—

* The number of times allowed for autoclaving are limited. Please refer an instruction manual.

The maximum speed and maximum RCF of ST-722M indicated on the left in red. The maximum speed and maximum RCF of ST-2504MS indicated on the right in blue.

68 x 10mL blood collecting tube/15mL				28 x 5~10mL blood collecting tube/15mL				48 x 5~10mL blood collecting tube/15mL				48 x 5~10mL blood collecting 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)							
15~17.2 x 52~110				12~17.2 x 72~110												17 x 121												27~36.4 x 85~110																			
3,500				3,500/4,800				3,500				4,000				3,500/4,800				3,500				4,000				3,500				3,500/4,800				3,500				4,000							
2,300				2,200/4,150				2,330				2,990				2,270/4,280				2,300				3,060				2,330				2,200/4,150				2,330				2,970							
Bucket Code No. 053-5840 				—				055-0880 				—				—				Bucket Code No. 053-5840 				—				055-4780 				—				055-4760 				—							
—				055-1140 				—				—				055-1160 				—				—				—				055-1150 				—				—							
—				055-1140 				—				—				055-1160 				—				—				—				055-1150 				—				—							
—				—				—				055-0730 				—				—				—				055-0750 				—				—				055-0740 							

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



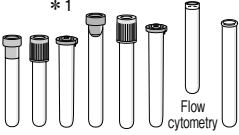
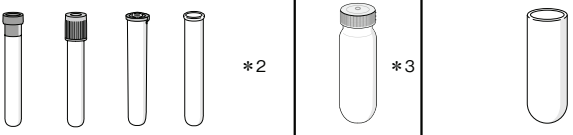

- *1 5-7mL blood collecting tubes made by SEKISUI (Insepack II), Termo (Venocject II), Nipro (Neotube), Beckton Dickinson (Vacutainer) can be used. Tube for flow cytometry can also be used.
- *2 Vacutainer 8 mL blood collecting tube for CPT cell separation (nominal φ16 x 125) made by Beckton Dickinson can be used.
- *3 5-10 mL blood collecting tubes made by SEKISUI (Insepack II), Termo (Venocject II), Nipro (Neotube), Beckton Dickinson (Vacutainer) can be used. Tube for flow cytometry can also be used.

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				Self-Standing sputum tube											
61 x 118/61 x 130/61 x 137				60~61.8 x 100~134.4												85 x 135				cap diam. φ48~φ31				cap diam. φ48 cap diam. φ37 cap diam. φ31				cap diam. φ48 cap diam. φ37 cap diam. φ31											
3,500				3,500				3,500/4,800				4,000				4,000				3,500/4,800				4,000				3,500											
2,330				2,380				2,290/4,300				3,080				3,080				2,260/4,250				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 				—				—							
—				—				—				—				—				—				055-1210 				—				—							
—				055-0780 				—				—				055-0780 				—				can be used without adaptors				055-0810 				055-0800 				055-0790 			

*4 175/225 mL conical BD Falcon tubes (Catalogue No.352076/No.352075) require cushions (Catalogue No.352090). Sealing cap cannot be used with 225mL tubes.
 *5 175/225 mL conical BD Falcon tubes (Catalogue No.352076/No.352075) require cushions (Catalogue No.352090).
 *6 200 mL Nalgene bottles (Code No.376813) require cushions (Code No.377585).
 *7 Nalgene and Herolab 250mL flat bottom bottles can be used.
 *8 500mL bottles (Code No.K15501C/PPCO) can be used.


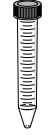
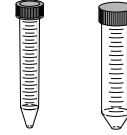
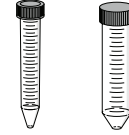

Rotor, Bucket, Tube Rack Table for Model 5911

* The number of times allowed for autoclaving are limited. Please refer an instruction manual.

		Micro tubes	Blood collecting tubes, glass tubes			50mL bottles					
Swinging Bucket Rotor ST-480M Max 3,500 rpm Max 2,380 xg  Autoclavable*	Tube		*1  Flow cytometry			*2 					
	Nominal Capacity	48 x 1.5/2mL	24 x 5~7mL blood collecting tube	24 x 10mL (glass)	4 x 10mL blood collecting tube/15mL	8 x 10mL blood collecting tube/15mL	32 x 10mL blood collecting tube/15mL	4 x 50mL (Oak Ridge)	4 x 50mL (glass)	8 x 50mL (glass)	
	Tube size (mm) diam. x length	9.5~11 x 36~42	12.5~13.3 x 46~110			15~17.2 x 86~110			27~29 x 100~108	27~38 x 100~110	
	Maximum Speed rpm	3,500	3,500			3,500 (5,000)	3,500	3,500	3,500 (5,000)	3,500 (5,000)	3,500
	Maximum RCF xg	1,880	2,270			2,230 (4,560)	2,230	2,270	2,180 (4,410)	2,270 (4,640)	2,270
Bucket Code No.	053-5040	053-5850			053-7110	053-7150	053-7130	053-7110	053-7110	053-7150	
Adaptor Code No.	—	—			055-7400	055-7400	—	055-4310	—	—	
Cushion Code No.	—	—			024-1400	024-1400	—	—	—	—	
ST-504M Max 5,000 rpm Max 4,860 xg  Autoclavable*	Bucket Code No.	—	—			053-7080	—	—	053-7080	053-7080	—
	Adaptor Code No.	—	—			055-7400	—	—	055-4310	—	—
	Cushion Code No.	—	—			024-1400	—	—	—	—	—

Choose optional buckets, adaptors and cushions.

The maximum speed and maximum RCF of ST-504M indicated on the right.

		Conical tubes					Conical tubes for biohazard-proof		
Swinging Bucket Rotor ST-480M Max 3,500 rpm Max 2,380 xg  Autoclavable*	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 Conical tube	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	30 x 117	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	2,230 (4,560)	2,370 (4,840)	2,380 (4,860)
Bucket Code No.	053-4980	053-5010		053-5020		053-7110	053-0040		
Adaptor Code No.	—	055-1280	—	055-1280	—	055-5760	055-1280	*5	
ST-504M Max 5,000 rpm Max 4,860 xg  Autoclavable*	Bucket Code No.	—	053-4970		—	053-7080	053-0050		
	Adaptor Code No.	—	055-1280	—	—	055-5760	055-1280	*5	
	Cushion Code No.	—	—	—	—	—	—	—	

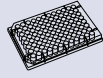

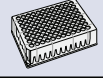
- *1 5-7mL blood collecting tubes made by SEKISUI (Insepack II), Termo (Venoject II), Nipro (Neotube), Beckton Dickinson (Vacutener) can be used. Tube for flow cytometry can also be used. Maximum 16 tubes of 5-7 mL blood collecting tubes made by Termo (Venoject II) can be used.
- *2 7-10 mL blood collecting tubes made by SEKISUI (Insepack II), Termo (Venoject II), Nipro (Neotube), Beckton Dickinson (Vacutener) can be used.
- *3 Nalgene oak ridge tube (Code No.3114-0050, 3115-0050, 3118-0050, 3119-0050) can be used.
- *4 Optional cushions (Code No.024-1400) are required.
- *5 Sealing caps and O-rings (silicone) are equipped with buckets.

↑
Equipped with sealing cap (patent pending)

Plate Rotor

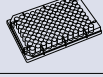
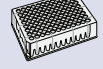
PT-89M



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

PT-745MS



	2 x PCR plates *1 12 x Micro-plates	86 (W) × 128 (D) × 90 (H)	4,200	3,100	Trays 055-6380 *2,3
	4 x Deep-well plates *1				

*1 Verify plate strength before centrifuging. Plates in lower position may fracture.
*2 Optional tray is available.

*3 **Trays** Code No.055-6380 (optional)



12 x 96 well plate

4 x deep-well plate

4 x square-well plate

2 deep-well + filter plate






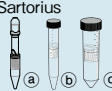
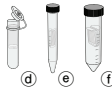
2 x PCR plate

Fixed-angle Rotor

AT-508C

8 x 50mL Conical tube



Tube	Nominal Capacity	Tube size (mm) diam. x length	AT-508C		RA-410M3		Adaptor Code No.
			Maximum Speed rpm	Maximum RCF xg	Maximum Speed rpm	Maximum RCF xg	
	8 x 12mL (Plastic) *1	15.8~16.5 x 97~120	6,000	5,110	8,500	9,370	055-1120
	8 x 14mL *2	17 x 100	6,000	4,990	8,500	9,130	055-0550
	8 x 15mL Conical tube	17 x 121	6,000	5,270	8,500	9,530	055-1280
	8 x 50mL (Plastic) *3	26.4~28.7 x 98~115	6,000	4,990	8,500	9,290	055-1110
	8 x 50mL Conical tube	30 x 117	6,000	5,350	8,500	9,690	—
 Sartorius a b c	a) Vivaspin 2 b) Vivaspin 6	16.7 x 129	6,000	5,270	8,500	9,530	055-1280
	c) Vivaspin 20	30 x 117	6,000	5,350	8,500	9,690	—
	Millipore						
 d e f	d) Amicon Ultra Free-CL	16.3 x 77	6,000	4,270	8,500	8,000	055-1330
	e) Amicon Ultra-4	17 x 129	6,000	5,270	8,500	9,530	055-1280
	f) Amicon Ultra-15	30 x 121	6,000	5,350	8,500	9,690	—

RA-410M3

8 x 50mL Conical tube



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

*1 Nalgene tubes, No.3110-0120 and No.3117-0120.
*2 BD Falcon tubes, No.352006, 352018 and 352059.
*3 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	• Micro-processor control (brushless motor) Speed, RCF(g), Time, g·sec, Temperature, Acceleration and Deceleration, 5 memory banks
Alarm display	• Lid open, Imbalance, Over speed, Abnormally high temperature, Detected electrical abnormality in motor, inverter, lid interlock, speed sensor and temperature sensor
Acceleration/Deceleration	• Three selectable rates; Rapid, Slow and 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 - 9.99 x 10 ⁹ g·sec
Stepped centrifugal	• speed, RCF(g), time, temperature, acceleration and deceleration, 1 memory bank
Timer setting and indication	• Digital display, with HOLD function (continuous operation) and electric buzzer 1 second to 100 seconds, 1 sec increments 100 seconds to 990 seconds, 10 sec increments 1 minute to 100 minutes, 1 min increments 100 minutes to 990 minutes, 10 min increments
Temperature setting and indication	• digital display, -20°C to +40°C, 1°C increments
Refrigerant	• R134a (CFC free)
Power requirements	• Single phase 50/60 Hz, 110V±10% 15A, 115V±10% 15A Single phase 50/60 Hz, 220V±10% 10A, 230V±10% 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
Dimensions, weight	• 50(W) x 65(D) x 85(H) cm ^(※1) , 110kg
Certificates of conformity	• IEC 61010-2-020 (except when RA-410M3 rotor is used) CE Marking (AC220V and 230V Version)



(※1) Not including projections.

All specifications and external appearance are subject 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.

NOTE	Products in this catalogue are designed for use by people having the requisite technical knowledge, and must always be used with care. People who do not have adequate technical knowledge or training should use our products only under appropriate supervision, or else hazards are likely to occur.
 DISCONTINUE USE INDICATIONS	<p>Always discontinue use if any of the conditions listed at right are evident.</p> <ul style="list-style-type: none"> • The rotor or bucket appears to be damaged or corroded. • The defined lifetime of the rotor expires. • The equipment emits a burnt smell. • You receive a minor electric shock when you touch the equipment with your bare hand. • Any other abnormality or indication of failure is noticed.
IMPORTANT	In the event of any observed abnormality in the equipment or its parts, to prevent occurrence of functional failure or accidents, immediately turn off the power switch, disconnect the power cable plug from the mains socket and contact your local distributor or Kubota Corporation if there is no local distributor in your neighbourhood.
 Safety Precautions	<p>For your safe use of the equipment, be sure to read the instruction manual carefully before you start operations.</p> <p>Do not misplace the instruction manual. Keep the instruction manual nearby so you can refer to it whenever necessary.</p>

• Spare parts for repair are typically available for a period of 10 years after production is discontinued (except when spare parts cannot be procured).

• This catalogue is not for distribution in the USA, Canada or Mexico, as the products shown are not for sale in these countries.

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