



Table Top Refrigerated Centrifuge

5500



Table Top Refrigerated Centrifuge Model 5500

Features

- **Maximum speed of 15,000rpm**
- **Maximum RCF of 21,040xg**
- **Rapid acceleration**
10 sec to the maximum speed of 15,000 rpm when the AT-2018M micro rotor is used.
- **Sample temperature kept at 4°C**
At the ambient temperature of 25°C. See rotor table for details.
- **Selective temperature indication/setting**
Either the temperature of the chamber or the sample temperature, which depends upon the type and the speed of the rotor, can be selected.
- **Eco mode**
To save the power, the display and refrigerator automatically turns off 10 minutes after operation.
- **Auto interlock lid**
Lid can be opened/closed using one hand
- **Biohazard protection rotor**
AT-2730M rotor is certified as bio-hazard proof with the CAMR standard.
- **Tool-free rotor**
Mount or dismount the rotor without using a tool. (except the fixed angle rotor.)

Easy-to-use and convenient functions

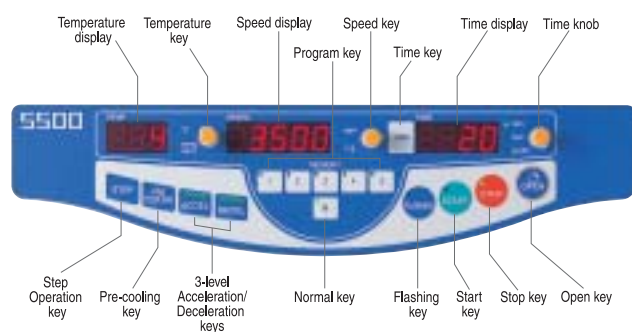
- **Easy-to-follow, digital display**
See the operation panel.
- **Memory flashing for easy spin-down**
Automatically memorizes the duration of spin-down operation ranging from 1 to 90 seconds. Merely pressing the key the next time starts the spin down for the memorized duration.
- **Program memories (5 channels) for repeated routine operation**
A memory function is available for repetitive operation using the same set values of operation, i.e. speed, time, and temperature.
- **Acceleration and deceleration**
Acceleration and deceleration curve can be varied in three steps according to the sample and experimental conditions.
- **Pre-cooling**
Enables the rotor to reach low temperatures before the experiments.
- **Buzzer at the end of operation**
5 different buzzer sounds allow recognition of the end of a centrifugal operation from across the room.
- **Compliance with GMP requirements**
Equipped with a tachometer port for measurement of the actual rotor speed. Actual rotation radius can be set and the indication of correct RCF is realized.
- **Delayed start function**
The operation automatically starts after the preset duration from pressing the START key. This function enables centrifuging of the fresh blood that is taken out at the time just when the erythrocytes coagulate.
- **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 the operation with this value is possible.

Safety pursued

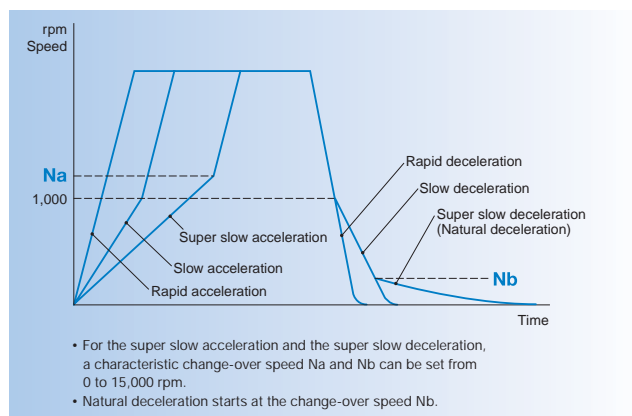
- 5500 conforms to the International Safety Standard IEC 61010-2-020.
- Equipped with various sensors for higher safety. Operation stops at the occurrence of an abnormality.
- Equipped with an automatic rotor identification when a rotor is simply placed on the driver shaft.



Operation Panel of Model 5500



Acceleration/deceleration characteristics graph



Micro rotor



AT-2018M
18 x 2mL

AT-2724M
Multi-angle rotor
3 types of tubes, 2mL, 0.5mL and 0.2mLPCR can be used without an adaptor.

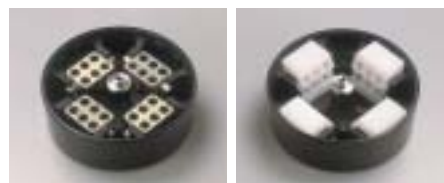
AT-2730M
Bio-sealed rotor
30 x 2mL
Good for anti-biohazard usage. The bio-hazard proof rotor is certified with the CAMR standard.

Fixed-angle rotor



RA-410M3
8 x 50/15mL Conical tube

Multi rotor MT-2036M



24 x 2mL
Swinging bucket

24 x 2mL
Fixed-angle bucket

MT-2036 rotor can be used for four different centrifuging types by changing buckets.

Rotor, Bucket, Tube Rack Table for Model 5500

Rotor Name	Nominal Capacity	Tube size (mm) diam. x length	Maximum Speed rpm	Maximum RCF xg	Bucket Code No.	Tube Rack Adaptor Code No.
Micro rotor						
AT-2018M	18 x 2mL	9.5-11.0 x 36-42	15,000	20,630	—	—
	18 x 0.5mL	7.0-7.9 x 25-34	15,000	18,110	—	055-7590
	18 x 0.4mL	5.4-6.1 x 26-48	15,000	20,120	—	055-7580
	18 x 0.2mL PCR	5.9-6.3 x 20-24	15,000	15,850	—	055-0500
AT-2724M	24 x 2mL	9.5-11.0 x 36-42	15,000	20,630	—	—
	12 x 0.5mL	7.0-7.9 x 25-34	15,000	16,850	—	—
	24 x 0.4mL	5.4-6.1 x 26-48	15,000	20,380	—	055-7580
	12 x 0.2mL PCR	5.9-6.3 x 20-24	15,000	14,840	—	—
BS AT-2730M	30 x 2mL	9.5-11.0 x 36-42	14,000 *1	21,040	—	—
	14 x 0.5mL	7.0-7.9 x 25-34	14,000 *1	17,530	—	—
	30 x 0.4mL	5.4-6.1 x 26-48	14,000 *1	20,380	—	055-1240
	14 x 0.2mL PCR	5.9-6.3 x 20-24	14,000 *1	16,430	—	—
Multi-rotor MT-2036M						
With Swing buckets	24 x 2mL	9.5-11.0 x 36-42	11,000	10,010	053-9850	—
	24 x 0.5mL	7.0-7.9 x 25-34	11,000	8,250	053-9850	055-7590
	32 x 0.5mL	7.0-7.9 x 25-34	11,000	8,790	053-9860	—
	24 x 0.4mL	5.4-6.1 x 26-48	11,000	9,740	053-9850	055-7580
	40 x 0.4mL	5.4-6.1 x 26-48	11,000	9,880	053-9870	—
	24 x 0.2mL PCR	5.9-6.3 x 20-24	11,000	6,490	053-9850	055-0500
With Fixed-angle buckets	24 x 2mL	9.5-11.0 x 36-42	11,000	9,880	053-9880	—
	24 x 0.5mL	7.0-7.9 x 25-34	11,000	8,390	053-9880	055-7590
	36 x 0.5mL	7.0-7.9 x 25-34	11,000	9,880	053-9890	—
	24 x 0.4mL	5.4-6.1 x 26-48	11,000	9,740	053-9880	055-7580
	60 x 0.4mL	5.4-6.1 x 26-48	11,000	9,740	053-9900	—
	24 x 0.2mL PCR	5.9-6.3 x 20-24	11,000	6,900	053-9880	055-0500
With buckets that serve as 8 serial PCR tubes	12 x 0.2mL PCR	5.9-6.3 x 20-24	10,000	4,920	053-6210	055-0500
	8 x 0.2mL 8 serial PCR	*2 5.9-6.3 x 20-24	10,000	7,710	053-6210	—
	12 x 2mL	9.5-11.0 x 36-42	10,000	6,710	053-6210	—
	12 x 0.5mL	7.0-7.9 x 25-34	10,000	5,810	053-6210	055-7590
With Horizontal buckets	12 x 0.4mL	5.4-6.1 x 26-48	10,000	6,600	053-6210	055-7580
	36 x 2mL	9.5-11.0 x 36-42	11,000	10,010	053-9910	—
	36 x 0.5mL	7.0-7.9 x 25-34	11,000	8,250	053-9910	055-7590
	48 x 0.5mL	7.0-7.9 x 25-34	11,000	9,880	053-9920	—
	36 x 0.4mL	5.4-6.1 x 26-48	11,000	9,740	053-9910	055-7580
	100 x 0.4mL	5.4-6.1 x 26-48	11,000	10,010	053-9930	—
36 x 0.2mL PCR	5.9-6.3 x 20-24	11,000	6,490	053-9910	055-0500	
Fixed-angle rotor The below fixed angle rotor is not tool-free rotor						
RA-410M3	8 x 15mL Conical tube	17 x 121	10,000	13,190	—	055-1280
	8 x 50mL Conical tube	30 x 117	10,000	13,420	—	—
Plate rotor						
PT-21M	6 x micro-plate	*3	86 (W) x 130 (D) x 62(H)	5,000	3,100	Equipped with rotor
	2 x deepwell-plate	*3				
Swinging bucket rotor						
ST-720M	80 x 2mL	9.5-11 x 36-42	3,500	2,290	053-5820	055-4800
	96 x RIA tube	10-12.3 x 65-95	3,500	2,190	053-5820	055-4730
	48 x 5/7mL narrow blood collecting tube	*4 12-13.3 x 63-110	3,500	2,310	053-5820	055-4990
	24 x 8mL CPT cell preparation tube	*5 13.5-15.8 x 81-130	3,500	2,310	053-5820	055-6900
	80 x 10mL	12.5-13.8 x 65-95	3,500	2,260	053-5820	055-4740
	48 x 10mL blood collecting tube/15mL	15-17.2 x 81-110	3,500	2,330	053-5820	055-4750
	68 x 5/7mL narrow blood collecting tube	*4 12.5-13.7 x 62-110	3,500	2,300	053-5840	055-0260
	68 x 10mL blood collecting tube/15mL	15-17.2 x 52-110	3,500	2,300	053-5840	—
	28 x 15mL Conical tube	17 x 121	3,500	2,300	053-5840	—
	32 x 15mL Conical tube	17 x 121	3,500	2,330	053-5820	055-4780
	8 x 50mL	27-36.4 x 85-110	3,500	2,330	053-5820	055-4760
	16 x 50mL Conical tube	30 x 117	3,500	2,330	053-5820	055-6070
	4 x 100mL	38-46.5 x 75-120	3,500	2,330	053-5820	055-4770
	4 x 175/200/225mL Conical tube	*6 61 x 118/61 x 130/61 x 137	3,500	2,330	053-5820	055-4850
	4 x 250mL	60-61.8 x 100-130	3,500	2,380	053-5820	055-4850
	48 x 2mL	10.7 x 42	5,000	4,160	Equipped with rotor	S17008
	48 x 5mL RIA tube	12.5 x 55-75	5,000	4,160	Equipped with rotor	S17006
	48 x 7mL	12-12.5 x 100-112	5,000	4,160	Equipped with rotor	S17007
28 x 7mL blood collecting tube	12.5-13 x 75-106	5,000	4,160	Equipped with rotor	S17027	
12 x 15mL Conical tube	*7 16.5 x 120.6	5,000	4,160	Equipped with rotor	S17019	
12 x 15mL Conical tube	*7 16.5 x 120.6	5,000	4,470	S13130	—	
28 x 10mL blood collecting tube/15mL	15.5-17 x 87-110	5,000	4,160	Equipped with rotor	S17015	
4 x 50mL	34 x 110	5,000	4,160	Equipped with rotor	S17050	
4 x 50mL	27-35.8 x 82-110	5,000	4,160	Equipped with rotor	055-5670	
4 x 50mL Conical tube	29.5 x 117	5,000	4,160	Equipped with rotor	S17049	
4 x 100mL	44-45 x 110	5,000	4,160	Equipped with rotor	S17100	
4 x 200mL	56.5 x 104	5,000	4,160	Equipped with rotor	—	

*1 Cooling down to 7°C or below is possible at this speed.

*2 The centrifugal force of outer tube

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

*4 5/7mL narrow tube made by Sekisui(Insepack II), Termo(Venoject II), Nipro(Neotube) and Becton Dickinson (Vacutener) can be used. Tube for flow cytometry can be used.

*5 The CPT cell preparation tube is made by Becton Dickinson (Vacutener 8mL for CPT cell separation)

*6 175 and 225mL conical tubes are made by Falcon (Catalogue No.352076 and 352075 respectively) and requires a cushion (Catalogue No.352090).

200mL conical tube is made by Nalge Nunc (Catalogue No.376813) and requires a cushion adaptor (Catalogue No.377585).

*7 Sealing cap cannot be accommodated on S17019 tube rack. Sealing cap (Code No.S17111) can be accommodated on S13130 bucket for 12 x 15mL conical tube.

Plate rotor



Commonly used for 12 x 2mL, 8 x 0.2mL 8 serial PCR, 12 x 0.2mL, 12 x 0.4mL and 12 x 0.5mL. One bucket can accommodate 8 serial PCR, 0.2mL, 0.4mL, 0.5mL and 2mL tubes.



36 x 2mL Horizontal bucket



PT-21M
PT-21M can do ethanol precipitation at 3,100xg.

Swinging bucket rotor



ST-720M
The tube rack set in the rotor is for conical tube (TC).



ST-410M
The cover at the top of the bucket is a sealing cap (Code No.S17111) (optional).
Note that the combination shown above was grouped for the photograph only.
This arrangement cannot be used.

Specifications

Model 5500

Maximum Speed	● 15,000rpm
Maximum RCF	● 21,040xg
Maximum Capacity	● 1,020mL
Control system	● Micro-processor control (Brushless motor) Speed, RCF, Time, g-sec, Acceleration & Deceleration, Temperature, 5 channel memories
Alarm display	● Lid open, Imbalance, Over speed, Abnormally high temperature Function for detecting an occurrence of electrical abnormality in motor, inverter, lid interlock and speed sensor, temperature sensor
Acceleration / Deceleration	● Three-level selectors; Rapid, Slow and Super Slow
Speed setting	● From 200 to 15,000rpm, 10rpm increments
Speed indication	● Digital display, From 0 to 15,500rpm, 10rpm increments
RCF setting	● From 10 to 21,040xg, 10xg increments (adjustable to actual rotation radius)
RCF indication	● Digital display, From 0 to 22,030xg, 10xg increments (adjustable to actual rotation radius)
Integrator setting and indication	● Digital display, From 1.00 to 9.99x10 ⁹ g-sec
Timer setting and indication	● Digital display, with Hold and Memory Flashing from 1 sec to 100 sec, in 1 sec increment setting / indication from 100 sec to 990 sec, in 10 sec increments setting / 1 sec increment indication from 1 min to 100 min, in 1 min increment setting / indication from 100 min to 990 min, in 10 min increments setting / in 1 min increment indication
Temperature setting and indication (chamber)	● Digital display, 1°C increments setting and indication from -20°C to 40°C with Pre-cooling
Refrigerant	● R134a
Power requirements	● Single phase AC110V±10%, 15A Single phase AC115V±10%, 15A Single phase AC220V±10%, 10A Single phase AC230V±10%, 10A
Rated voltage and Rated current	● 110V 9.1A, 115V 8.7A, 220V 4.6A, 230V 4.4A
Power consumption and Heat output	● 0.78kW 2.8MJ/h
Dimensions, weight	● 70(W) x 65(D) x 36(H)cm ^{*1} , 102kg
Test standard	● Manufactured and tested in accordance with IEC 61010-2-020

(*1) Those of projections are not included.

All specifications and external appearance subject to change without notice.

* On Model 5500 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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