

Tabletop Micro Refrigerated Centrifuge



3520
3520H

Useful features and their benefit

- Acceleration and deceleration in 14 seconds
(when using MA-2024 Rotor)
- Sample temperature can be maintained at 4°C with a temperature adjustment function
- Memory flashing function for easy spin-down
(patented)

The lid will automatically open after the flashing process is completed.

- Easy-to-use operation panel with large control knobs
- Exhaust vent is located deep in the upper part of the centrifuge to minimize contamination and the annoying exhaust air
- Space-saving design with a width of 29 cm and a depth of 48.4 cm
- 'Eco mode' is selectable
When left unused for 10 minutes, the freezer will stop automatically and the display will be turned off. Low power consumption, which is approx. 35 W in power-saving mode.



Designed for easy operation from the researchers' point of view

Specialized rotors for various applications

- **Fast acceleration and deceleration. Compatible with the spin column — MA-2024 Rotor**
Spin columns can be used in the microtube (optional: adaptor required).



- **Shield rotor can be used to spin 24 x 1.5/2.0 mL tubes — MA-2724 Rotor**
0.2-mL PCR tubes can also be spun without adaptors.



Table of rotors and adaptors for Model 3520



MA-2024

24 x 1.5/2mL

Rotor lid

Code No. 028-1420 (optional)

Spin column adaptor

Code No. 028-1360 (optional)

convenient adaptor

Spin columns can be installed on therefore the microtube. The tube caps will not be torn off by centrifugal force.



Rotor Name	Nominal Capacity	Tube Size (mm) diam. x length	Maximum Speed rpm	Maximum RCF x g	Adaptor Code No.
MA-2024	24 x 1.5/2mL	9.5~11 x 36~42	15,000	20,630	—
	24 x 0.5mL	7~7.9 x 25~34	15,000	18,360	055-7590
	24 x 0.2mL PCR *1	5.9~6.3 x 20~24	15,000	16,100	055-0500
	24 x Tube for spin column *2	9.5~12.3 x 36~50	15,000	20,380	028-1360



MA-2724 Shield rotor

24 x 1.5/2mL, 12 x 0.5mL, 12 x 0.2mL PCR



Shield rotor lid

Code No. 028-1370 (optional)

- This shield rotor prevents sample leakage.
- Four types of tubes, 2mL, 1.5mL, 0.5mL, and 0.2mL PCR, can be used without adaptors.

Rotor Name	Nominal Capacity	Tube Size (mm) diam. x length	Maximum Speed rpm	Maximum RCF x g	Adaptor Code No.
MA-2724	24 x 1.5/2mL 12 x 0.5mL 12 x 0.2mL PCR *3	9.5~11 x 36~42	15,000	20,630	—
		7~7.9 x 25~34	15,000	16,850	—
		5.9~6.3 x 20~24	15,000	14,840	—
	24 x 0.5mL	7~7.9 x 25~34	15,000	18,360	055-7590
	24 x 0.2mL PCR *1	5.9~6.3 x 20~24	15,000	16,100	055-0500



MA-512

12 x 5mL

Suitable when 2 mL is insufficient in terms of capacity

Rotor Name	Nominal Capacity	Tube Size (mm) diam. x length	Maximum Speed rpm	Maximum RCF x g	Adaptor Code No.
MA-512	12 x 5mL *4	15 x 59	15,000	20,630	—

⚠ 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 0.2mL PCR tubes may not be used at maximum speed, since they may be unresistant for the speed.

*2 Millipore Amicon Ultra-05, Ultra-free-MC and Qiagen tubes can be used.

When the Qiagen tubes are used, 12 tubes can be centrifuged. Please distribute tubes alternately.

*3 24 x 1.5/2mL tubes and 12 x 0.5mL tubes or 0.2mL PCR tubes can be used together within 24 holes.

*4 Bio bik 5mL sampling tubes and Watson 5mL mega tubes can be used.

Specifications

Model 3520

Maximum Speed	● 15,000rpm
Maximum RCF	● 20,630xg
Maximum Capacity	● 60mL
Control system	● Micro-processor control (Brushless motor) Speed, RCF, Time, Temperature, 3 channel memories
Alarm display	● Lid open, Imbalance, Over speed, Abnormal High Temperature Function for detecting an occurrence of electrical abnormality in speed sensor, Inverter, lid lock, motor, temperature sensor
Speed setting and indication	● Digital display, in 100rpm steps
RCF setting and indication	● Digital display, in 100xg steps
Timer setting and indication	● Digital display, with Hold and with Memory Flashing from 1 sec to 99 sec, in 1 sec increment setting and indication from 1 min to 99 min, in 1 min increment setting and indication
Buzzer which informs the end of the operation	● 5 kinds + no sound
Temperature setting and indication	● Digital display in 1°C increments, with pre-cooling setting from -9°C to 40°C / indication from -10°C to 43°C
Refrigerant	● R-134a
Power requirements	● Single phase AC110V±10%, AC115V±10%, 50/60Hz, 15A Single phase AC220V±10%, 230V±10%, 50/60Hz, 10A
Rated voltage and Rated current	● 110V 4.2A, 115V 4.0A, 220V 2.1A, 230V 2.0A
Power consumption and Heat output	● 460W 1.7MJ/h
Dimensions, weight	● 29(W) x 48.4(D) x 28.4(H)cm, 30.2kg, height with opened lid 53cm ^{*1}
Certificates of Conformity	● IEC 61010-2-020 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.



Prohibited

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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