

KUBOTA

Hematocrit Centrifuge



3220

Interchangeable rotors enable 3 types of centrifuging.
1.5/2 mL micro tubes
15 mL glass tubes
Hematocrit capillary tubes

HT/2 rotor commonly-used for hematocrit capillary tubes and 1.5/2 mL micro tubes, and it is most suitable for animal clinics.

Features and Convenient functions

- **Maximum speed :** 12,000 rpm
- **Maximum RCF :** 15,000 xg
- **Maximum capacity :**
 - (1) 8 x 1.5/2 mL micro tubes
 - (2) 4 x 15 mL glass tubes
 - (3) 30 x Hematocrit capillary tubes
- **3 available memory settings, with one-touch save and recall operation.**
A memory function is available for repetitive operation using the same values of operation, i.e. speed and time.
- **Buzzer at the end of operation**
5 different buzzer sounds allow recognition of the end of a centrifuge operation from across the room.
- **Complies with GMP requirements**
Equipped with a tachometer port to comply with GMP Tachometer port is useful for actual rotor speed measurements.
- **Easy-to-follow digital display**
Please refer to the operation panel on the next page.

- **Safety comes first**
The 3220 model conforms to International Safety Standard IEC 61010-2-020. In the event of breakage, all fragments will be safely retained inside the centrifuge unit. Interlocking parts are protected against mechanical impact and employ a two-stage electrical protection circuit.



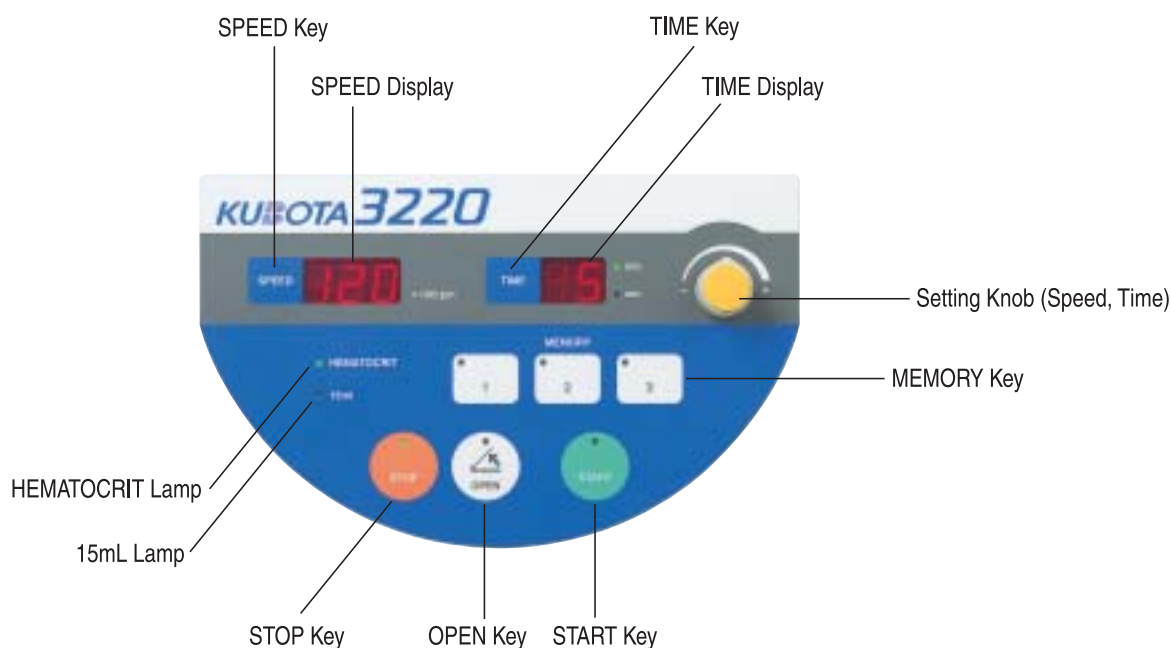
- **Speed limit**
When using HT/15 rotor, the maximum speed of rotor is automatically adjusted by using tubes. It prevents the speed to raise to more than specified below.
With Hematocrit capillary tubes: maximum speed is 12,000rpm
With 15mL glass tubes: maximum speed is 4,000rpm



Tube holder
Maximum speed is changed by the tube holder.
(HT/15 rotor only)

When you use it with hematocrit capillary tubes, 15mL metallic tubes should be inserted into the tube holder as shown in photo. When you use it with 15mL glass tubes, take 15mL metallic tubes out from tube holder and mount it onto HT/15 rotor. Then the maximum speed is changed into 4,000rpm.

Operation Panel



HT/2 rotor (patent pending)

Both 16 x hematocrit capillary tubes and 8 x 1.5/2 mL micro tubes can be used at the same time by HT/2 rotor.



	16 x capillary tubes	8 x 2 mL micro tubes
Maximum speed	12,000 rpm	12,000 rpm
Maximum RCF	15,000 xg	12,720 xg
Tube size (diam.x length) mm	1.75 x 75	9.5 to 11 x 36 to 42
Adaptor	055-7590 for 0.5 mL and 0.5 mL PCR	
	055-7580 for 0.4 mL	
	055-0500 for 0.2 mL PCR	

HT/15 rotor

24 x hematocrit capillary tubes and 4 x 15 mL glass tubes can be used by HT/15 rotor.



	24 x capillary tubes	4 x 15 mL glass tubes
Maximum speed	12,000 rpm	4,000 rpm
Maximum RCF	15,000 xg	2,100 xg
Tube size (diam.x length) mm	1.75 x 75	15 to 17.2 x 85 to 110

• This HT/15 rotor is equipped with tube holder which is for adjusting maximum speed.

HT rotor

HT rotor is exclusively used for 30 x hematocrit capillary tubes.



Maximum speed	12,000 rpm
Maximum RCF	15,000 xg
Tube size (diam.x length) mm	1.75 x 75

Specifications

Model 3220

Maximum Speed	● 12,000 rpm
Maximum RCF	● 15,000 xg
Maximum Capacity	● (1) 8 x 1.5/2 mL micro tubes ● (2) 4 x 15 mL glass tubes ● (3) 30 x hematocrit capillary tubes
Control system	● Microprocessor control (brushless motor) Speed, Time and 3 memory banks
Alarm display	● Lid open, Imbalance, Over speed Detected electrical abnormality in motor, inverter, lid interlock and speed sensor
Speed limit control	● Automatic maximum speed switching (when HT/15 rotor is used) With Hematocrit capillary tubes: maximum speed is 12,000 rpm With 15 mL glass tubes: maximum speed is 4,000 rpm
Speed setting	● From 300 to 12,000 rpm, 100 rpm increments
Speed indication	● Digital display, from 0 to 12,000 rpm, 100 rpm increments
Timer setting and indication	● Digital display, with Hold 1 second to 99 seconds, 1 sec increments 1 minute to 99 minutes, 1 min increments
Sounds for informing centrifuging stop	● 5 types and no sounding
Power requirements	● Single phase 50/60Hz, 110V±10%, 115V±10%, 120V±10%, 10A Single phase 50/60Hz, 220V±10%, 230V±10%, 240V±10%, 6A
Rated voltage and rated current	● 110V/115V/120V 3.0A, 220V/230V/240V 1.2A
Power consumption and Heat output	● 200W, 0.72MJ/h
Dimensions, weight	● 32cm x 39cm x 27cm (WxDxH) *1, 20kg
Certificates of conformity	● IEC 61010-2-020 CE Marking (220V/230V/240V)



(*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.

 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. <ul style="list-style-type: none"> •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. 	<div style="background-color: yellow; padding: 5px; display: inline-block;">IMPORTANT</div> 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.

KUBOTA CORPORATION

<http://www.centrifuge.jp>

29-9 Hongo 3-chome, Bunkyo-ku, Tokyo 113-0033, Japan

Tel +81 3 3815 1331 Fax +81 3 3814 2574

E-mail: f-trade@kubotacorp.co.jp

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