

# TD5A-WS

## Low Speed Bench Top Centrifuge

### Operational Manual

Madell Technology Corp.

<http://www.madelltech.com>



### 1. TD5A-WS centrifuge specifications:

Max. Speed:	5000r/m
Max. RCF:	4390×g
Max Capacity:	148×7ml
Noise:	<65dB (A)
Power:	AC 220V 50Hz 6A (Or AC110V made for customer request)
Weight:	48Kg

### 2. Rotors:

TD5A-WS can be equipped with 4 rotors and 4 exchangeable brackets.

Rotor	Bracket	Max speed (r/min)	Capacity	Max RCF
1N	Angle rotor	5000	12×10ml	3500×g
2N	Swing rotor	4000	148×7ml	3000×g
3N	Swing rotor	4000	4×400 ml	3300×g
4N	1	5000	4×100ml	4390×g
	2	4000	8×50ml	2810×g
	3	4000	32×15ml	2810×g
	4	4000	72×5ml	2800×g
5N	Micro plate rotor	4000	2×2×96 hole	3020×g

### 3. Features:

The TD5A-WS centrifuge is equipped with microprocessor control, touching button panel, digital display, DC brushless motor and PWM speed adjustment.

1. Special vibration isolator is used for great vibration damping and automatic balancing.
2. High accurate PWM speed control, quiet DC brushless motor.
3. Four rotors are available, and 4 brackets can be replaced for various tubes applications.

### 4. Operation Procedures:

1. Place this centrifuge on a flat table or platform. Conduct careful visual inspection for balancing. Make sure it is mounted properly by manually shaking it.
2. Close the door and check if it is locked properly.

3. Open the cover (no power supply and draw the string in front of centrifuge). Place test tubes (in even numbers and test samples should be equal) into the rotor, and set them in balancing. The tube caps must be screwed tightly. Rotate the rotor by hand, make sure the rotor can swing smoothly.

4. Plug the power cable and turn on the power button. (this button is located on the back of the centrifuge).

5. Select the rotor type, speed and time by pressing the “SET” button, according to the working requirements. Set up must be conducted when the machine is not running. When the centrifuge is being set up, the stop indicator should be on and the running indicator flashes. Speed and time can be changed during operation by pressing the “SET” button.

1). **Rotor selection:** press the “SET” button when the centrifuge is not running (the rotor LED should be on), then press “▲” or “▼” to set the rotor type. (four rotors are available.)

2). **Speed setting:** press the “SET” button (the speed LED should be on), then press the button “▲” or “▼” to set the desired speed (max. speed is 5000r/min).

3). **Time setting:** press the “SET” button (the time LED should be on), then press “▲” or “▼” to set the operation time (max. time is 99min, count down).

4). After performing the above three steps, press the “ENTER” button to confirm the settings of rotor, speed and time, and then press “START” to start the centrifuge.

5). Press the “RCF” button (RCF light should be on) to check the RCF value during operation. The centrifuge will go back to normal operation in 3 seconds.

6). The centrifuge stops automatically after time counts down to 0; the buzzer rings 15 times at this time; press the “RCF” button to stop it; press the “STOP” button to stop the centrifuge when the centrifuge is running; the buzzer will not ring at this time.

7). The lid opens automatically after the centrifuge stops; the sample tubes can be taken out at this time (if the lid does not open automatically, pull the string under the centrifuge)

8). Turn the power off if the centrifuge is not used anymore.

## 5. Notices and Precautions:

1). Do not move or shake the centrifuge during operation. Do not put anything on the lid, or damage will happen when it opens automatically.

2). Place the centrifuge on a steady platform or table. Make sure the four rubber legs stand in balance to prevent vibration.

3). Power cable must be plugged into an outlet with ground connection.

4). Liquid in the centrifuge tubes should be even. Big difference may cause the centrifuge shaking during operation. In this case, the centrifuge should be stopped to rearrange the tubes. Also, the tubes should be placed symmetrically with even

numbers.

5). If the tubes break during operation, heavy shaking will occur. The centrifuge should be stopped to take necessary steps to fix the problem.

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