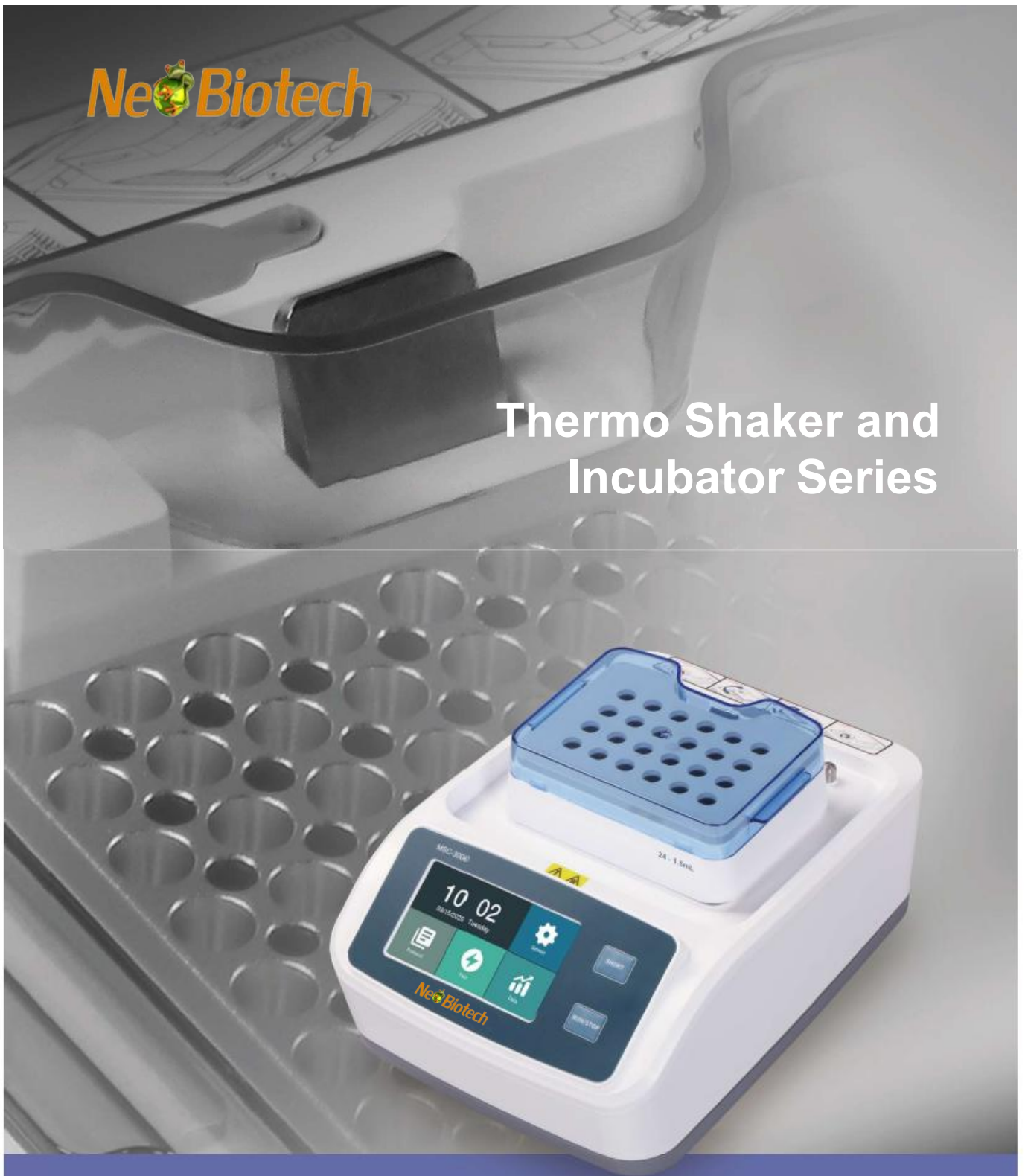


**NeoBiotech**

## Thermo Shaker and Incubator Series



- Thermo Shaker Incubator Series
- Thermo Shaker for Microplate Series
- Vortex Series

Neo Biotech

# 01 Thermo Shaker Incubator Series

## MS-3000 / MSC-3000 Thermo Shaker Incubator

MS-3000 / MSC-3000 is an upgrade of the existing thermo shaker incubator operation mode. Different from the common instrument parameter setting through membrane keys, MS-3000 / MSC-3000 uses 4.3-inch color LCD screen combined with the graphical operation interface to give users a better experience. Various program editing options, such as shaking start time, cycle steps, heating rate, etc., help to find the best experimental conditions.

Convenient block replacement method, only need to flip the block handle to quickly replace. In addition, thermo lid accessories with a magnetic port design can effectively improve the temperature uniformity in the test tube, avoid changes in the concentration of Reagents in the test tube caused by liquid evaporation and condensation, and ensure the stability of the reaction conditions.



MSC-3000 / MS-3000



Toggle handle to replace block

## Features

### Stable performance and long service life

- Microprocessor control, good temperature control linearity, accurate shaking speed, small fluctuation
- DC brushless motor drive, long service life, maintenance-free
- Built-in over-temperature protection device, more reliable to use

### Excellent performance, precise temperature control

- Full power heating or other heating rate gears can be chosen to prevent the experiment from failing due to uneven temperature changes
- Optional thermo lid accessories can effectively improve the temperature uniformity in the test tube
- Optional full power cooling and other cooling rate gears

### Multiple block choices, faster loading and unloading

- Various blocks are available, and can be customized
- New designed method of block loading and unloading, blocks can be replaced without tools

### Open design, more comprehensive program settings

- Various heating methods can be chosen according to the experimental needs
- Shaking method can be set according to requirements, and both forward and reverse rotation can be set
- Program continuous operation function, multiple programs are connected to each other, no need to set repeatedly
- MSC-3000 low-temperature storage function, the program is completed, and the samples can be automatically stored in low-temperature

### Smarter and easier to use

- 4.3-inch color LCD screen display, intuitive and easy to operate
- Power failure self-recovery function, the device can automatically resume operation according to the originally set procedure after power failure recovery
- Various standard sample blocks are available, and the blocks can be automatically identified

## Optional Performance Component: ThermoLid

When incubating test tubes, PCR plates, etc., condensation will form on the tube walls and caps. Neo Biotech new generation of temperature control and mixing instrument with ThermoLid technology that reliably prevents condensation inside the tube, allowing consistent sample concentrations over the incubation time.

Therefore, the ThermoLid facilitates further improvements in temperature uniformity, allowing the sample to obtain optimal reaction conditions that yield the best results.

### Thermo Lid



Effectively prevent reagent evaporation, improve the uniform concentration

### Installation and Wiring



Magnet port, easy and fast installation; stable data transmission to ensure thermo lid performance

### Height Adjustment



Compatible with various specifications of centrifuge tubes; can be used for up to 5 mL centrifuge tubes

## Specification

### MSC-3000

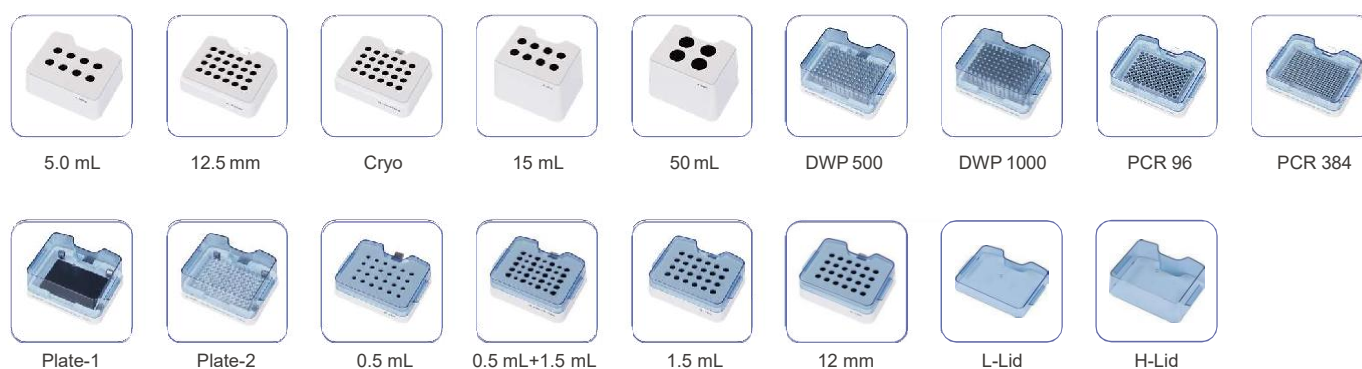
### MS-3000

Temp. control range	0 °C~105 °C	RT.+5 °C
Time setting	1 s~99 h59 min59 s	1 s~99 h59 min59 s
Temp. control accuracy	±0.5 °C	±0.5 °C
Temp. uniformity	±0.5 °C (@30-50 °C)	±0.5 °C (@30-50 °C)
Ambient temperature	5 °C ~30 °C	5 °C ~30 °C
Relative humidity	≤70 %	≤70 %
Power supply	100-240 V 50-60 Hz	100-240 V 50-60 Hz
Heating time	≤15 min, 40 °C~100 °C (ambient temperature 20 °C~30 °C)	≤10 min, 40 °C~100 °C (ambient temperature 20 °C~30 °C)
Cooling time	≤20 min (ambient temperature≤20 °C: 20 °C~0 °C) ≤20 min (ambient temperature≤25 °C: RT.~4 °C) ≤20 min (ambient temperature≤30 °C: RT.~10 °C)	----
Heating rate gear	MAX, 3 °C/min, 2 °C/min, 1 °C/min, 0.1 °C/min	MAX, 3 °C/min, 2 °C/min, 1 °C/min, 0.1 °C/min
Cooling rate gear	MAX, 1 °C/min, 0.5 °C/min, 0.1 °C/min	----
Heating time	9 °C/min (RT.~100 °C, 1.5 mL block)	9 °C/min (RT.~100 °C, 1.5 mL block)
Cooling time	4 °C/min (100 °C~RT., 1.5 mL block)	----
Input power	200 W	200 W
Fuse	125 V 2.5 A Φ5×20	125 V 2.5 A Φ5×20
Mixing orbit	3 mm	3 mm
Speed	100~3000 rpm	100~3000 rpm
Display	4.3 inch touch screen (capacitive)	4.3 inch touch screen (capacitive)
Program number	50	50
External port	USB: program related, printer; 7 Pin socket: thermo lid	USB: program related, printer; 7 Pin socket: thermo lid
Dimension (mm)	318×154×220	318×154×220
Weight	10 kg	9 kg

## MS-3000 / MSC-3000 Suitable Block: MateB Series

According to different needs, Neo Biotech has designed their own modules for consumables such as 0.2 mL to 50 mL centrifuge tubes, MTP, DWP, 96 / 384 PCR plates and so on.

All modules are equipped with a convenient replacement mechanism, making module replacement quick and easy. No tools required, just press the handle on the rear of the module to remove the module in seconds. In addition, the thermal insulation module considers the user's safety and effectively prevents burning fingers.



## Ordering Information

Code	Description
NB-12049A	MSC-3000 thermo shaker incubator (heating and cooling type), 100-24 V AC, 200 W
NB-12049B	MS-3000 thermo shaker incubator (heating type), 100-24 V AC, 200 W

Code	Type	Description	Max. speed	Max. Temp.	Thermo lid available
NB-12-049-01	MateB 0.5 mL	24×0.5 mL tube	2000 rpm	105 °C	✓
NB-12-049-02	MateB 1.5 mL	24×1.5 mL tube	2000 rpm	105 °C	✓
NB-12-049-03	MateB 2.0 mL	24×2.0 mL tube	2000 rpm	105 °C	✓
NB-12-049-04	MateB 0.5 mL+1.5 mL	15×0.5 mL+20×1.5 mL tube	2000 rpm	105 °C	✓
NB-12-049-05	MateB 5.0 mL	8×5 mL tube	1000 rpm	105 °C	✓
NB-12-049-06	MateB 12 mm	24×φ12 mm tube	2000 rpm	105 °C	-
NB-12-049-07	MateB Cryo	24×1.5 mL / 2.0 mL cryovial	2000 rpm	105 °C	-
NB-12-049-08	MateB 15 mL	8×15 mL tube	1000 rpm	105 °C	-
NB-12-049-09	MateB 50 mL	4×50 mL tube	1000 rpm	105 °C	-
NB-12-049-11	MateB Plate-1	96×0.2 mL microplate	3000 rpm	105 °C	✓
NB-12-049-12	MateB Plate-2	96×2 mL deepwell plate	1000 rpm	105 °C	-
NB-12-049-13	MateB PCR 96	96×0.2 mL PCR plate	2000 rpm	105 °C	✓
NB-12-049-14	MateB PCR 384	384-well PCR plate	3000 rpm	105 °C	✓
NB-12-049-15	MateB DWP 500	96/500 μL deepwell plate	1600 rpm	105 °C	✓
NB-12-049-16	MateB DWP 1000	96/1,000 μL deepwell plate	1600 rpm	105 °C	✓
NB-12-049-17	MateB H-Lid	H-Lid transparent lid (high) is suitable for MateB DWP 500/1000			

## MS-100 / MSC-100 Thermo Shaker Incubator

MS-100 / MSC-100 thermo shaker incubator for tubes adopts DC brushless motor and microcomputer control technology, and combines the two functions of constant temperature and shaking, which greatly shortens the time of experimental operation and improves work efficiency. It is an ideal automation tool for sample incubation, catalysis, shaking and preservation. MSC-100 thermo shaker incubator for tubes also has multi-mode functions such as heating, cooling, and shaking to meet the needs of different users.



MSC-100



MS-100

### LCD

LCD displays time and speed; it's easy to accurately set and reproduce experimental conditions.

### Self-recovery

Power failure self-recovery function, the device can automatically resume operation according to the originally set procedure after power failure recovery. The experimental conditions are consistent and the results are stable.

### Accurate Temp. Control

Microprocessor control, good temperature control linearity, temperature control accuracy of  $\pm 0.5\text{ }^{\circ}\text{C}$ . Accurate temperature control improves experiment repeatability.



Mixing orbit 2 mm, coordinating the shaking speed, forms a 2D mix and has an excellent sample mixing ability.

### CE

Multiple safety protection functions, conforming CE safety standards, safe and reliable.

### Customizable Block

Various standard sample blocks are available, which is easy to be replaced. The blocks with special specifications can be customized.

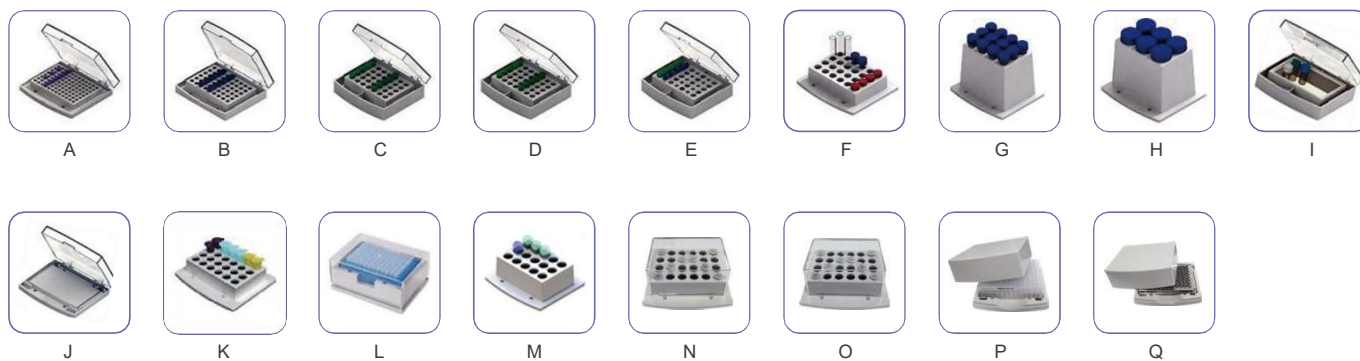
## Specification

### MS-100

### MSC-100

	MS-100	MSC-100
Temp. control range	RT.+5 °C~100 °C	0 °C~100 °C (ambient temperature $\leq$ 20 °C) 4 °C~100 °C (ambient temperature $\leq$ 25 °C) 10 °C~100 °C (ambient temperature $\leq$ 30 °C)
Temp. uniformity	$\leq 0.5\text{ }^{\circ}\text{C}$	$\leq 0.5\text{ }^{\circ}\text{C}$
Timer range	1 min~99 h59 min	1 min~99 h59 min
Temp. control accuracy	$\pm 0.5\text{ }^{\circ}\text{C}$	$\pm 0.5\text{ }^{\circ}\text{C}$
Display accuracy	$\pm 0.1\text{ }^{\circ}\text{C}$	$\pm 0.1\text{ }^{\circ}\text{C}$
Shaking speed	200~1500 rpm	200~1500 rpm
Heating time (40 ~ 100 °C)	$\leq 10$ min	$\leq 15$ min
Refrigeration time (detected at 25 °C ambient temperature)	----	$\leq 20$ min (decrease from RT. to RT.-20 °C) $\leq 15$ min (decrease from 100 °C to 20 °C)
Mixing orbit	2 mm	2 mm
Dimension (mm)	300×220×170	300×220×170
Weight	7 kg	8.5 kg

## MS-100 / MSC-100 Suitable Block



## Ordering Information

Code	Description
NB-12-0012A	MS-100 thermo shaker incubator, with a block; AC220 V/AC120 V, 50/60 Hz, 150 W
NB-12-0012B	MSC-100 thermo shaker incubator, with a block; AC220 V/AC120 V, 50/60 Hz, 250 W

Code	Type	Description	Max. speed	Max. Temp.
NB-12-0012-01	A	96×0.2 mL tubes	1500 rpm	100 °C
NB-12-0012-02	B	54×0.5 mL tubes	1500 rpm	100 °C
NB-12-0012-03	C	35×1.5 mL tubes	1500 rpm	100 °C
NB-12-0012-04	D	35×2.0 mL tubes	1500 rpm	100 °C
NB-12-0012-05	E	15×0.5 mL+20×1.5 mL tubes	1500 rpm	100 °C
NB-12-0012-06	F	24×Dia.≤Φ12 mm tubes	1200 rpm	100 °C
NB-12-0012-01	G	12×15 mL Falcon tube	750 rpm	100 °C
NB-12-0012-08	H	6×50 mL Falcon tube	750 rpm	100 °C
NB-12-0012-09	I	103×67×30 mm rectangular bath block	1500 rpm	100 °C
NB-12-0012-10	J	96×0.2 mL microplate	1500 rpm	100 °C
NB-12-0012-11	K	24×5 mL tubes	1200 rpm	100 °C
NB-12-0012-12	L	96 deep-well microplate	800 rpm	80 °C
NB-12-0012-13A	M	15×5 mL Eppendorf tubes	1200 rpm	100 °C
NB-12-0012-15	N	24×2 mL tubes	1200 rpm	100 °C
NB-12-0012-14	O	24×1.5 mL tubes	1200 rpm	100 °C
NB-12-0012-16	P	96×1000 μL Deep-well plate	1200 rpm	100 °C
NB-12-0012-17	Q	MTPs deep-well plate	1200 rpm	100 °C

## || TMS-200 / TMS-300 Thermo Shaker Incubator

TMS-200 / TMS-300 thermo shaker incubator has small size and fast shaking speed, integrating shaking and incubation functions and intelligent operation concept . It not only can mix various microtubes, PCR plates, deepwell plates and microplates and other common laboratory consumables, but also has the function of heating and incubating various blocks.



TMS-200 / TMS-300

### LCD

LCD displays time and speed; it's easy to accurately set and reproduce experimental conditions.

### Self-recovery

Power failure self-recovery function, the device can automatically resume operation according to the originally set procedure after power failure recovery. The experimental conditions are consistent and the results are stable.

### Accurate Temp. Control

Patented technology and anti-vibration technology support accurate and efficient mixing and temperature control, with programmable functions to improve experimental repeatability



Mixing orbit 2 mm and 3 mm, coordinating the shaking speed, forms a 2D mix and has an excellent sample mixing ability.

### CE

Multiple safety protection functions, conforming CE safety standards, safe and reliable.

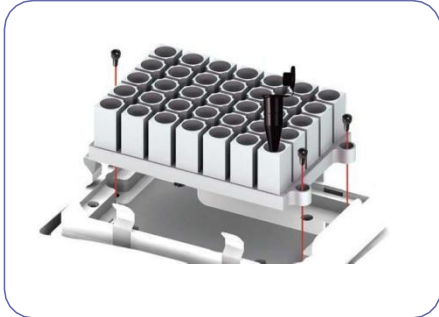
### Customizable Block

Various standard sample blocks are available, which is easy to be replaced. The blocks with special specifications can be customized.

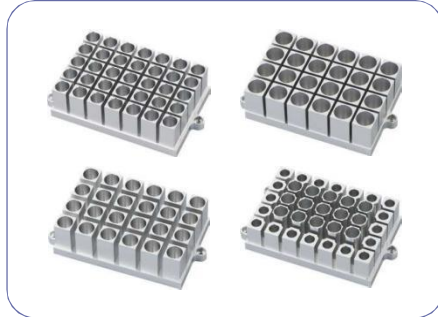
## Specification

	TMS-200	TMS-300
Temp. control range	RT.+5 °C~100 °C	RT.+5 °C~100 °C
Temp. uniformity	≤0.5 °C	≤0.5 °C
Timer range	1 min~99 h59 min	1 min~99 h59 min
Temp. control accuracy	±0.25 °C (37 °C) ±0.5 °C (95 °C)	±0.25 °C (37 °C) ±0.5 °C (95 °C)
Display accuracy	±0.1 °C	±0.1 °C
Shaking speed	300~3000 rpm	300~2000 rpm
Heating time (25 ~ 100 °C)	≤12 min	≤12 min
Mixing orbit	2 mm	3 mm
Dimension (mm)	230×170×165	230×170×165
Weight	5.5 kg	5.5 kg

## TMS-200 / TMS-300 Suitable Block



Easy to replace blocks



Various types of blocks



Tube holder



# 02 Thermo Shaker for Microplate Series

## MX100-4A Microplate Shaker

The microplate shaker is driven by a DC brushless motor, which is mainly used for microplate (96-well / 384-well plate), cell culture plate (24-well plate, 48-well plate, 96-well plate, etc.) and 1.5 / 2.0 mL centrifuge test tube and other solutions to mix and shake.



### LCD

LED displays time and speed; it's easy to accurately set and reproduce experimental conditions.

### Self-recovery

Power failure self-recovery function, the device can automatically resume operation according to the originally set procedure after power failure recovery. The experimental conditions are consistent and the results are stable.

### Tube Rack

Optional 2.0 / 1.5 mL centrifuge tube rack, which can mix up to 80 centrifuge tubes at the same time.



Mixing orbit 3 mm, with an excellent sample mixing ability.

### CE

Multiple safety protection functions, conforming CE safety standards, safe and reliable.

## Specification

### MX100-4A

Mixing orbit	3 mm
Shaking speed setting accuracy	10 rpm
Shaking speed	200~1500 rpm standard microplate 200~1000 rpm deepwell plate or tube holder
Timer range	1 min~99 h59 min
Power supply	AC 220 V
Dimension (mm)	290×270×120
Weight	6.5 kg

## Ordering Information

Code	Description
NB-12-0017	MX100-4A microplate shaker

## MB100 / MK100 Microplate Thermo Shaker

MB100 series: 96-well thermo shaker

MK100 series: 96-well incubator for microplate, no shaking function

MB100 / MK100 microplate thermo shaker is designed for shaking or incubation of 1-4 standard 96-well plates. The typical feature of this series is two-side heating of microplates, so that each well of the microplate can be heated evenly.



**LCD**

LCD displays the setting, actual temperature, time and shaking speed; it's easy to accurately set and reproduce experimental conditions.

**Thermo Lid**

Two-side heating of microplates allows each well of the microplate to be faster and more evenly heated.

**Efficient Precise**

Exclusive patented technology and shake proof technology support accurate and efficient mixing and temperature control, with programmable functions to improve experiment repeatability.

**2 mm**

Mixing orbit 2 mm , coordinating the shaking speed, forms a 2D mix and has an excellent sample mixing ability.

**CE**

Multiple safety protection functions, conforming CE safety standards, safe and reliable.

### Specification

Specification	MB100-2A	MK100-2A	MB100-4A	MK100-4A
Temp. control range	RT. +5 °C~70 °C	RT. +5 °C~70 °C	RT. +5 °C~70 °C	RT. +5 °C~70 °C
Timer range	1 min~99 h59 min	1 min~99 h59 min	1 min~99 h59 min	1 min~99 h59 min
Temp. control accuracy	±0.5 °C	±0.5 °C	±0.5 °C	±0.5 °C
Display accuracy	±0.1 °C	±0.1 °C	±0.1 °C	±0.1 °C
Shaking speed	100~1200 rpm	----	100~1500 rpm	----
Heating time (20 to 70 °C)	≤20 min	≤20 min	≤20 min	≤20 min
Capacity	2 microplates	2 microplates	4 microplates / deepwell plates	4 microplates / deepwell plates
Mixing orbit	2 mm	----	2 mm	----
Dimension (mm)	280×270×150	280×270×150	320×350×185	320×350×185
Weight	6.5 kg	4 kg	9 kg	8 kg

### Ordering Information

Code	Description
NB-12-001A	MB100-2A, AC100-240 V, 50/60 Hz, 150 W
NB-12-001AB	MK100-2A, AC100-240 V, 50/60 Hz, 150 W

Code	Description
NB-12-0014C	MB100-4A, AC120/220 V, 50/60 Hz, 300 W
NB-12-0014D	MK100-4A, AC120/220 V, 50/60 Hz, 200 W

# 03 Vortex Series

## MTV-100 Multi-Tube Vortex



### Block

It's suitable for commonly used 10 mm-30 mm tubes. Special specification blocks can be customized. The max. capacity can reach 4.5 kg.

### Mode

Programmable pulsing mode allows users to adjust the pulse-on and pulse-off time between 1 to 59 s, and the setting accuracy is 1 s. This feature enhances the vortex action by creating a vigorous mix.



Mixing orbit 3.6 mm, with an excellent sample mixing ability.



Multiple safety protection functions, conforming CE safety standards, safe and reliable.

## Specification MTV-100

Timer range	1 min~99 h59 min
Shaking speed	500~2500 rpm
Mixing orbit	3.6 mm
Dimension (mm)	426×250×480
Weight	21.5 kg

## Ordering Information

Code	Description
NB-12-0019	MTV-100 multi-tube vortex, AC100-240 V, 1.5 A

Code	Type	Description	Dimension (mm)
NB-12-0019-01	MTV-B01	50×Φ10 mm tube racks	245×132×45
NB-12-0019-02	MTV-B02	50×Φ12 mm tube racks	245×132×45
NB-12-0019-03	MTV-B03	50×Φ13 mm tube racks	245×132×45
NB-12-0019-04	MTV-B04	50×Φ16 mm tube racks	245×132×45
NB-12-0019-05	MTV-B05	50×Φ25 mm tube racks	245×132×45
NB-12-0019-06	MTV-B06	50×Φ29 mm tube racks	245×132×45

## || MTV-1 Mini Vortex

MTV-1 is the smallest vortex on the market, suitable for shaking and mixing samples of various reagents, solutions, chemicals, etc. With standard battery box, it's especially suitable for wild and crowded laboratories.

- Touch mode (short-spin), continuous mode (continuous work for a long time) can be chosen
- Compact structure, reliable quality



### Specification

#### MTV-1

Working mode	Continuous / short-spin
Shaking movement	Orbital
Mixing orbit	3 mm
Speed range	800~2500 rpm
Dimension (mm)	74×91×84
Input power	DC 6 V
Weight	0.35 Kg

### Ordering Information

Code	Description
NB-12-0039	MTV-1 mini vortex, DC6 V, 0.6 W

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