



# Thermo Shaker Incubator

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**NB-12-049A**

## **Thermo Shaker Incubator (heating and cooling type), 100-24V AC, 200 W**

Cat# NB-12-049A



### **Description**

NB-12-049A is an upgrade of the existing thermo shaker incubator operation mode. Different from the common instrument parameter setting through membrane keys, NB-12-049A 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. The thermo shaker incubator is a comprehensive upgrade to the existing instruments. Superior temperature control, excellent mixing performance, and easy-to-use software ensure complete, reliable, and reproducible experimental results. With Neo-Biotech series modules, it can meet your diverse experimental requirements.

## 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

Toggle handle to replace block



### 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
- 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. Allsheng 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

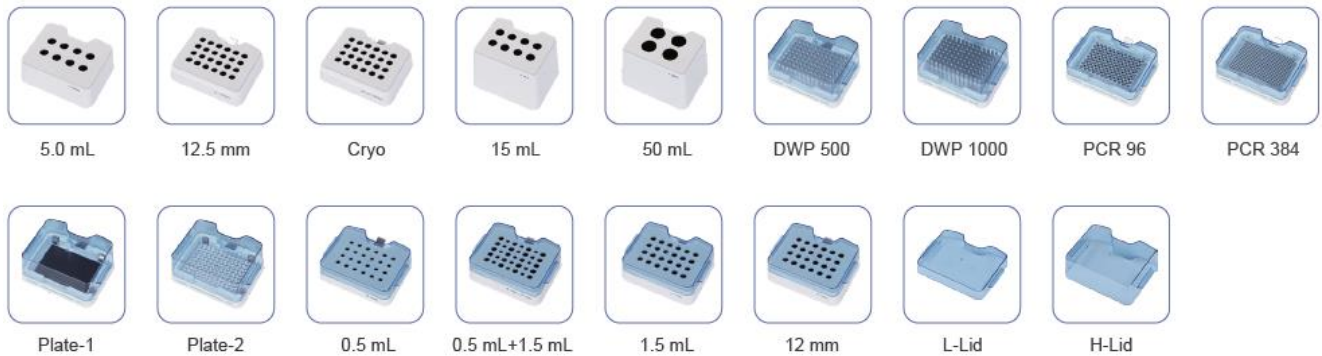
## Specifications

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

## Suitable Block: NB-12-049 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-12-049A	Thermo Shaker Incubator (heating and cooling type), 100-24V AC, 200 W
NB-12-049B	Thermo Shaker Incubator (heating type), 100-24V AC, 200 W

Code	Type	Description	Max. speed	Max. Temp.	Thermo lid available
NB-12-049-01	Block 0.5 mL	24×0.5 mL tube	2000 rpm	105 °C	✓
NB-12-049-02	Block 1.5 mL	24×1.5 mL tube	2000 rpm	105 °C	✓
NB-12-049-03	Block 2.0 mL	24×2.0 mL tube	2000 rpm	105 °C	✓
NB-12-049-04	Block 0.5 mL+1.5 mL	15×0.5 mL+20×1.5 mL tube	2000 rpm	105 °C	✓
NB-12-049-05	Block 5.0 mL	8×5 mL tube	1000 rpm	105 °C	✓
NB-12-049-06	Block 12 mm	24×φ12 mm tube	2000 rpm	105 °C	-
NB-12-049-07	Block Cryo	24×1.5 mL / 2.0 mL cryovial	2000 rpm	105 °C	-
NB-12-049-08	Block 15 mL	8×15 mL tube	1000 rpm	105 °C	-
NB-12-049-09	Block 50 mL	4×50 mL tube	1000 rpm	105 °C	-
NB-12-049-11	Block Plate-1	96×0.2 mL microplate	3000 rpm	105 °C	✓
NB-12-049-12	Block Plate-2	96×2 mL deepwell plate	1000 rpm	105 °C	-
NB-12-049-13	Block PCR 96	96×0.2 mL PCR plate	2000 rpm	105 °C	✓
NB-12-049-14	Block 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	Block DWP 1000	96/1,000 µL deepwell plate	1600 rpm	105 °C	✓
	Block L-Lid	L-Lid transparent lid (low) is suitable for MateB 0.5 mL, 1.5 mL, 2.0 mL, 5 mL, Plate-1, Plate-2, PCR96 and PCR384			
	Block H-Lid	H-Lid transparent lid (high) is suitable for Block DWP 500/1000			
NB-12-049-17	ThermoLid	Thermo lid			

Block Lid available on request