

Thermoshakers » PHMP, PHMP-100 and PHMP-4 thermoshaker for microplates

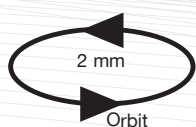
Thermoshaker PHMP, PHMP-100 and PHMP-4 for microplates

Excellent temperature uniformity across the platform/microplate (patented bi-directional heating of microplates) combined with variable speed and variable temperature produces the ideal thermoshaker for microplate incubations.

Can be used with all types of standard depth microplates and offers three devices in one for maximum versatility and efficiency:

- a microplate thermoshaker
- a compact benchtop incubator without shaking
- a microplate shaker in cold or ambient temperatures

- **Temperature setting range: +25°C to 100°C**
- **Stability $\pm 0.1^\circ\text{C}$, uniformity $\pm 0.2^\circ\text{C}$ due to the bi-directional heating system (platform and lid)**
- **Shaking speed: 250 to 1200 rpm**
- **Rapid heat-up**
- **Continuous or timed operation, with alarm buzzer and automatic switch-off facility**
- **Choice of three models with capacity for two or four microplates**
- **Patented dual heating of microplates**



The heated lid completely covers the heating platform to provide bi-directional heating (patented) and a controlled micro-environment. This produces excellent temperature stability and uniformity, whilst preventing condensation

Display of both set and actual temperature and shaking speed

Very easy to operate, with simple set-up of temperature, shaking speed and time via push buttons and the 2-line LCD status display

Soft start/stop protects samples



Model shown PHMP thermoshaker for two microplates

The **PHMP-4** has the same functionality as the PHMP but can accommodate four microplates






The powerful, reliable motor and sturdy construction combine to provide years of consistent operation

Low voltage cord easily fits through door gaskets, allowing use in incubators, refrigerators and workstations

Applications:

- **Cytochemistry** - for in situ reactions
- **Biochemistry** - for enzyme and protein analysis, incubation for biomarker and protein binding assays
- **Immunochemistry** - for immunofermentative reaction, ELISA incubation
- **Molecular biology** (for microbial cell cultivation and DNA analysis)

Thermoshakers » PHMP, PHMP-100 and PHMP-4 » Models and specifications

Thermoshakers – models and specifications			
	2-plate thermoshaker	2-plate thermoshaker	4-plate thermoshaker
	PHMP	PHMP-100	PHMP-4
	 <p>h: 125 mm d: 250 mm w: 265 mm weight: 7kg</p>	 <p>h: 125 mm d: 260 mm w: 270 mm weight: 5.9kg</p>	 <p>h: 140 mm d: 390 mm w: 380 mm weight: 9kg</p>
Temperature setting range	+25 to 60°C		
Temperature control range	ambient +5 to 60°C		
Temperature uniformity @ 37°C	±0.25°C		
Temperature stability	±0.1°C		
Temperature display	2 line x 16 character LCD		
Average heat up speed	12 minutes from 25°C to 37°C 35 minutes from 25°C to 60°C 60 minutes from 25°C to 100°C (PHMP-100 only)		
Capacity	2 microplates	2 microplates	4 microplates
Shaking speed	250 to 1200 rpm		
Speed setting resolution	increment 10 rpm		
Orbit diameter	2 mm		
Timer (with auto-off and audible alarm)	1 min to 96 hrs (1 min increment)		
Max. height of microplates	18 mm		
Weight	7 kg	5.9 kg	9 kg
Input voltage	12 V dc		
Input current	3.3 A	5 A	4.15 A
External power supply	100-240 V		