

11 Thermoshakers

Thermoshaker with cooling

PCMT for microtubes and microplates

Thermoshaker

PHMT for microtubes and microplates

Thermoshaker for microplates

PHMP and PHMP-4 for 2 or 4 microplates



Thermoshakers »

Thermoshakers

A range of compact, efficient and highly versatile thermoshakers, with excellent temperature uniformity, ideal for applications requiring heating/cooling and shaking in microplates and microtubes. Suitable for use in cold rooms and incubators (operating temperature range +4°C to +40°C).

By combining the mixing operation with heating/cooling, reaction process times and operator workload are reduced and the efficiency of many procedures is increased, resulting in a higher throughput.

- Thermoshaker with cooling for microtubes, microplates and PCR plates - PCMT
- Thermoshakers for microplates and PCR plates - PHMP
- Thermoshaker for microtubes, microplates and PCR plates - PHMT

2
year warranty



PCMT thermoshaker with cooling for microtubes and microplates



PHMT thermoshaker for microtubes and microplates



PHMP thermoshaker for two microplates



PHMP-4 thermoshaker for four microplates

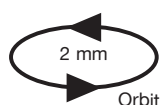
Thermoshakers » PCMT thermoshaker with cooling for microtubes and microplates

PCMT – thermoshaker with cooling for microtubes and PCR plates

Variable speed and temperature, heating and cooling thermoshaker with a choice of blocks for microtubes and microplates.

- a microtube and microplate thermoshaker
- a compact benchtop incubator
- a microtube and microplate shaker

- **Fast heat-up and cooling times**
- **Temperature setting range +4°C to 100°C**
- **Temperature control range ambient -15°C to +100°C**
- **Shaking speed: 250 to 1400 rpm**
- **Temperature stability $\pm 0.1^\circ\text{C}$**
- **Improved fast start 3s to maximum shaking speed**
- **Temperature calibration function**



Fast heat-up and cooling times.
Quick to reach specified mixing speed

Even mixing across the thermoshaker block

Excellent uniformity across the block

Digital timer with sound alarm - 1 min to 96 hours

New upgraded! Temperature calibration function to compensate for differences in the thermal behaviour of different tubes and samples

Low voltage cord fits easily through door gaskets, safe and economical running



PCMT microplate and microtube thermoshaker with cooling

Choice of 5 interchangeable blocks:

- HC18 (20 x 0.5 ml and 12 x 1.5 ml microtubes)
- HC32 (20 x 0.2 ml and 12 x 1.5 ml microtubes)
- HC24N (24 x 1.5 ml microtubes)
- HC24 (24 x 2 ml microtubes)
- HC96 (96-well microplate for PCR, 0.2 ml)

Block is required. Specify when ordering

Quiet motor operation, compact size and reliable

Clear 16 x 2 character LCD display indicates the set and actual time of operation, mixing speed and temperature

Simultaneous or independent heating/cooling and mixing functions

New upgraded! Fast start - acceleration 3 seconds


Applications:

- Life-science - genetic analyses, extraction of DNA, RNA and further sample preparation, biochemical studies of enzymatic reactions and processes, extraction of metabolites from cellular materia, incubation, agitation, digestion of samples/standards for peptide mapping

Thermoshakers » PCMT » Models and specifications

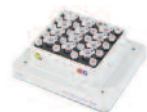
Thermoshakers with cooling – models and specifications

● = option

		Microplate and microtube thermoshaker
		PCMT
		
Temperature setting range	°C	+4 to 100
Temperature control range		15°C below ambient to +100°C
Temperature uniformity over the block		@4°C ±0.6°C / @37°C ±0.1°C / @100°C ±0.3°C
Temperature display		2 line x 16 character LCD
Average heat up speed		5°C / min from +25°C to +100°C (HC15 block)
Average cooling speed (HC15 block)	from +100°C to +25°C @+25°C to +4°C	5°C / min (~ 15 mins) 1.8°C / min (~ 8 mins)
Capacity	microtubes	see accessories below
Capacity	microplates	1
Shaking speed	rpm	250 to 1400
Orbit diameter	mm	2
Timer (with auto-off and audible alarm)		1 min to 96 hours (1 min increment)
Heating / cooling power	W	60
Input voltage	V dc	12
Input current	A	4.16
External power supply	V	100-240
Maximum noise	dba	53.8

Accessories

HC18 interchangeable block for
20 x 0.5 ml microtubes plus
12 x 1.5 ml microtubes



●

HC24N interchangeable block for
24 x 1.5 ml microtubes



●

HC24 interchangeable block for
24 x 2.0 ml microtubes



●

HC32 interchangeable block for
20 x 0.2 ml microtubes plus
12 x 1.5 ml microtubes



●

HC96 interchangeable block for
96-well microplates (0.2 ml)



●

Note: PCMT unit supplied without a block, please order from above.

Thermoshakers » PHMT thermoshaker for microtubes and microplates

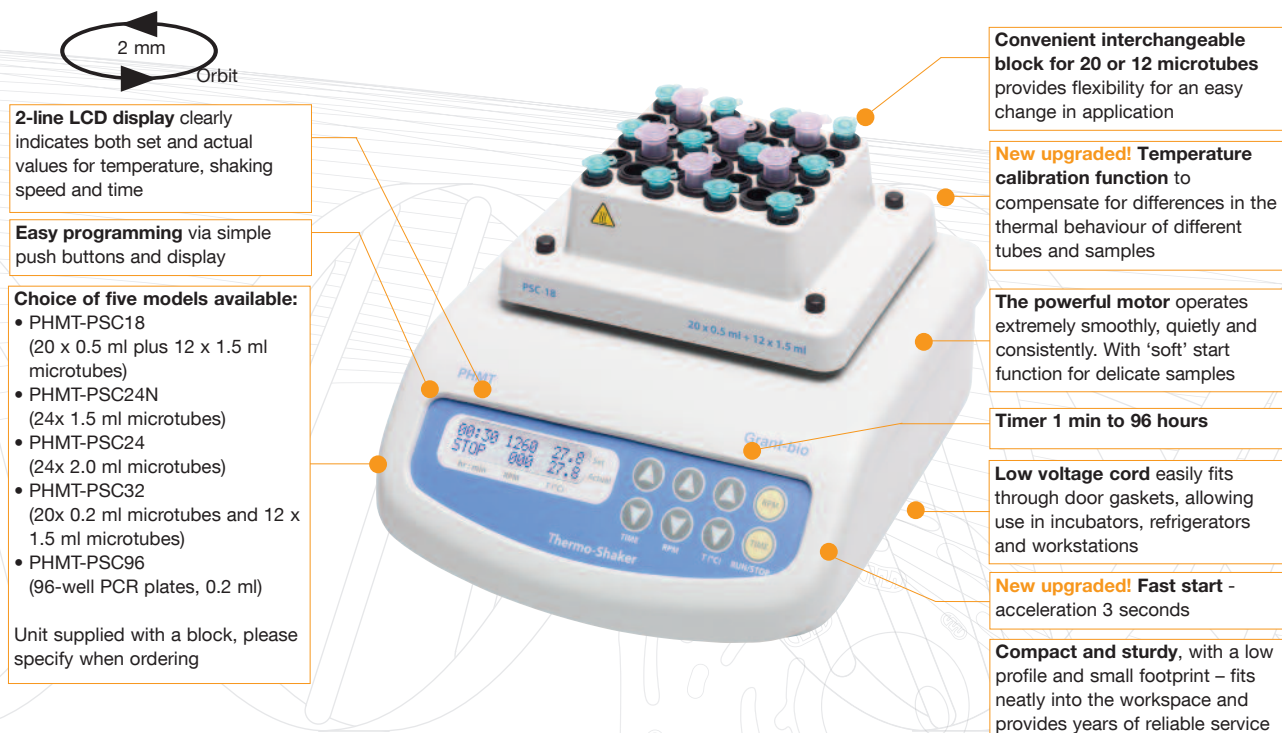
PHMT - thermoshaker for microtubes and PCR plates

Variable speed, variable temperature thermoshaker combining three instruments in one for maximum versatility and efficiency:

- a microtube and microplate thermoshaker
- a compact benchtop incubator
- a microtube and microplate shaker in cold or ambient temperatures

- Capacity for up to 24 or up to 32 microtubes or PCR 96 well plate
- Temperature setting range: +25°C to 100°C
- Temperature control range: +5°C above ambient to 100°C
- Shaking speed: 250 to 1400 rpm
- Rapid heat-up speed
- Continuous or timed operation, with alarm and automatic switch-off facility
- Improved fast start 3s to maximum shaking speed
- Temperature calibration function

Model PHMT-PSC18 shown








- Applications:**
- Life-science - genetic analyses, extraction of DNA, RNA and further sample preparation, biochemical studies of enzymatic reactions and processes, extraction of metabolites from cellular material, incubation, agitation, digestion of samples/standards for peptide mapping

Thermoshakers » PHMT » Models and specifications

Thermoshakers – models and specifications

● = option

	For microtubes				For microplates
	PHMT-PSC18	PHMT-PSC24N	PHMT-PSC24	PHMT-PSC32	PHMT-PSC96
					
	4 kg h: 130 mm d: 230 mm w: 205 mm	4 kg h: 130 mm d: 230 mm w: 205 mm	4 kg h: 130 mm d: 230 mm w: 205 mm	4 kg h: 130 mm d: 230 mm w: 205 mm	4 kg h: 130 mm d: 230 mm w: 205 mm
Temperature setting range °C	+ 25 to 100				
Temperature control range	+5°C above ambient to 100°C				
Temperature uniformity over the block	@ +37°C ±0.1°C @ +60°C ±0.2°C @ +100°C ±0.2°C				
Display	2 line x 16 character LCD				
Heat up speed RT to 100°C	4°C/min				
Capacity	32 microtubes 20 x 0.5 ml and 12 x 1.5 ml	24 x 1.5 ml microtubes	24 x 2.0 ml microtubes	32 microtubes 20 x 0.2 ml and 12 x 1.5 ml	96-well PCR plate
Shaking speed rpm	250 to 1400				
Orbit diameter mm	2				
Timer	1 min to 96 hours (1min increment)				
Weight kg	4				
Input voltage V dc	12				
Input current A	4.16				
External power supply V	100-240				
Heating power W	42				
Maximum noise dBA	54.7				

Accessories

PSC18 additional / spare block 20 x 0.5 ml microtubes plus 12 x 1.5 ml microtubes	●
PSC24N additional / spare block 24 x 1.5 ml microtubes	●
PSC24 additional / spare block 24 x 2.0 ml microtubes	●
PSC32 additional / spare block 20 x 0.2 ml microtubes plus 12 x 1.5 ml microtubes	●
PSC96 additional / spare block 96-well microplates (0.2 ml)	●

Thermoshakers » PHMP and PHMP-4 thermoshaker for microplates

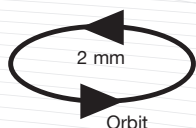
Thermoshaker PHMP and PHMP-4 for microplates

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 instruments 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 60°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 two 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 immunofluorescence reaction, ELISA incubation
 - Molecular biology (for microbial cell cultivation and DNA analysis)

Thermoshakers » PHMP and PHMP-4 » Models and specifications

Thermoshakers – models and specifications				
● = option	2-plate thermoshaker		4-plate thermoshaker	
	PHMP		PHMP-4	
	 <p>h: 125 mm d: 250 mm w: 265 mm weight: 7kg</p>		 <p>h: 140 mm d: 390 mm w: 380 mm weight: 9kg</p>	
Temperature setting range	°C	+25 to 60		
Temperature control range		ambient +5°C to 60°C		
Temperature uniformity @ 37°C		±0.25		
Temperature stability	°C	±0.1		
Temperature display		2 line x 16 character LCD		
Average heat up speed		12 mins 35 mins		
	from 25°C to 37°C			
	from 37°C to 60°C			
Capacity	microplates	2		4
Shaking speed	rpm	250 to 1200		
Speed setting resolution	rpm	10		
Orbit diameter	mm	2		
Timer (with auto-off and audible alarm)		1 min to 96 hours (1 min increment)		
Max. height of microplates	mm	18		
Weight	kg	6		9
Input voltage	V dc	12		
Input current	A	3.3		4.15
External power supply	V	100-240		



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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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