

Benchmark 

INCUSHAKER Series

Shaking Incubators

- + **Exceptional temperature uniformity**
- + **Compact, benchtop design (Mini, just 11" wide)**
- + **Exchange flask clamps in one second with the new **MAGiC CLAMP™** magnetic system**



INCUSHAKER Mini



INCUSHAKER 10L/LR

WITH
MAGiC CLAMP
PATENT PENDING





Incu-Shaker 10L
(H1010)



Incu-Shaker Mini
(H1000-M)

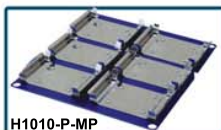
The new Incu-Shaker™ series of shaking incubators provide digitally regulated temperature with precisely controlled, circular (orbital) mixing, optimized for the culture of a wide variety of cell types.

The Incu-Shaker Mini is the most compact shaking incubator in its class. Despite the remarkably small footprint, a large 11.5 x 9.5 in. work space accepts several platforms for use with a variety of flasks, tubes and other common vessels.

With similar features to the Incu-Shaker Mini, the Incu-Shaker 10L and 10LR models are equipped with a large 18 x 18 inch platform for high capacity applications. (See Chart for a complete listing of the maximum flask capacity.)

The standard platform (included with all three models) features a non-slip, rubber coated surface, ideal for tissue culture flasks, Petri dishes and staining trays. Convenient MAGIC Clamp™ platforms, flask clamps and tube racks are also available for use with Erlenmeyer flasks and test tubes. This unique, magnetic attachment method is the easiest way to instantly change between flask clamps of different sizes. Each clamp utilizes a powerful (patent pending) magnetic base to securely attach the clamp to the shaking platform without the use of screws, bolts or tools.

Temperature, shaking speed and run time are displayed on the large LED control panel located on the front of the unit. The integral microprocessor includes a constant monitoring system that verifies and maintains accuracy through the duration of the program. Sophisticated over-temperature and over-speed controls ensure long life, safety and sample integrity.



H1010-P-MP



H1010-P-SP



H1000-MR-1550

Technical Data:

Temperature Range:	Ambient +5 to 60°C (Increments of 0.1°C)
Temperature Range (10LR):	Ambient -15 to 60°C (Increments of 0.1°C)
Temperature Uniformity:	+/- 0.25 %
Temperature Accuracy:	+/- 0.1 %
Shaking Speed Range:	30 to 300rpm (Increments of 1rpm)
Shaking Orbit:	19mm (3/4")
Platform Dimensions:	
Incu-Shaker Mini	9.5 x 11.5 in. / 23.5 x 29.2 cm
Incu-Shaker 10L/LR	17.8 x 17.8 / 45 x 45 cm
Exterior Dimensions:	
Incu-Shaker Mini	11 x 15.7 x 10.5 in. / 28 x 40 x 27 cm
Incu-Shaker 10L	20 x 26 x 19 in. / 51 x 65 x 47 cm
Incu-Shaker 10LR	20 x 31 x 22 in. / 51 X 79 X 56 cm.
Weight:	
Incu-Shaker Mini	25 lbs. / 11.5 kg
Incu-Shaker 10L	120 lbs / 55 kg
Incu-Shaker 10LR	170lbs / 78 kg
Electrical:	120 or 230V, 50-60Hz

Ordering Information

H1000-M* Incu-Shaker Mini, includes standard rubber mat platform, 115V
 H1010* Incu-Shaker 10L, includes standard rubber mat platform, 115V
 H1012* Incu-Shaker 10LR, includes standard rubber mat platform, 115V

*To order an item in 230V, add (-E) to item number.

Optional Platforms and Shelves

H1000-MR	MAGic Clamp universal platform, for Incu-Shaker Mini (9.5x11.5")
H1010-MR	MAGic Clamp universal platform, for Incu-Shaker 10L (18x18")
H1000-P-MP	Microplate platform, 4 position for Incu-Shaker Mini
H1010-P-MP	Microplate platform, 6 position for Incu-Shaker 10L
H1000-P-SP	Spring rack platform, holds uncommon vessels for Incu-Shaker Mini
H1010-P-SP	Spring rack platform, holds uncommon vessels for Incu-Shaker 10L
H1010-SH	Optional Shelf, for Petri Dishes, microplates, trays, etc. (14 x 5.5") for Incu-Shaker 10L (max. 3)

Flask & Tube Rack Accessories for MAGic Clamp Platforms

H1000-MR-50	Flask Clamp, 50ml (H1000-MR: max. 20 / H1010-MR: max. 49)
H1000-MR-125	Flask Clamp, 125ml (H1000-MR: max. 12 / H1010-MR: max. 36)
H1000-MR-250	Flask Clamp, 250ml (H1000-MR: max. 8 / H1010-MR: max. 25)
H1000-MR-500	Flask Clamp, 500ml (H1000-MR: max. 5 / H1010-MR: max. 16)
H1000-MR-1000	Flask Clamp, 1000ml (H1010-MR: max. 9)
H1000-MR-2000	Flask Clamp, 2000ml (H1010-MR: max. 5)
H1000-MR-MP	Microplate Clamp, (H1000-MR: max. 4 / H1010-MR: max. 6)
H1000-MR-1550	Tube Rack, 20x50 & 30x15 ml tubes (H1000-MR: max.1 / H1010-MR: max. 4)
H1000-MR-T15	Tube Rack, 32x15 tubes (H1000-MR: max. 2 / H1010-MR: max. 8)
H1000-MR-T50	Tube Rack, 15x50 tubes (H1000-MR: max. 2 / H1010-MR: max. 8)
H1000-MR-T600	Bottle Rack, 4x500/600ml conical bottles (H1000-MR: max. 1 / H1010-MR: max. 2)

Maximum capacity of Erlenmeyer flasks

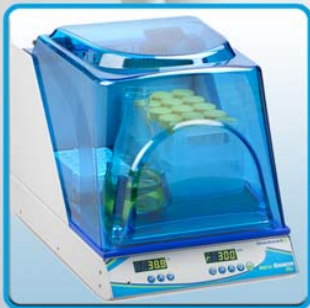
Flask Size:	Incu-Shaker Mini	Incu-Shaker 10L/LR
50ml	20	49
125ml	12	36
250ml	8	25
500ml	5	16
1L	0	9
2L	0	5

Benchmark 

INCUSHAKE[®] Series

Shaking Incubators

- + *Exceptional temperature uniformity*
- + *Miniature and cooling options available*
- + *Exchange flask clamps in one second with the new **MAGiC CLAMP™** magnetic system*



INCUSHAKE[®] Mini



INCUSHAKE[®] 10L/LR

WITH
**MAGiC
CLAMP**
PATENT PENDING

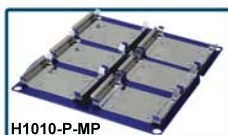




Incu-Shaker 10L
(H1010)



Incu-Shaker Mini
(H1000-M)



H1010-P-MP



H1010-P-SP



H1000-MR-1550

Technical Data:

Temperature Range (Mini): Ambient +5 to 70°C (Increments of 0.1°C)
 Temperature Range (10L): Ambient +5 to 60°C (Increments of 0.1°C)
 Temperature Range (10LR): Ambient -15 to 60°C (Increments of 0.1°C)
 Temperature Uniformity: +/- 0.25 %
 Temperature Accuracy: +/- 0.1 %
 Shaking Speed Range: 30 to 300rpm (Increments of 1rpm)
 Shaking Orbit: 19mm (3/4")
 Platform Dimensions:
 Incu-Shaker Mini: 9.5 x 11.5 in. / 23.5 x 29.2 cm
 Incu-Shaker 10L/LR: 17.8 x 17.8 / 45 x 45 cm
 Exterior Dimensions:
 Incu-Shaker Mini: 11 x 15.7 x 10.5 in. / 28 x 40 x 27 cm
 Incu-Shaker 10L: 20 x 26 x 19 in. / 51 x 65 x 47 cm
 Incu-Shaker 10LR: 20 x 31 x 22 in. / 51 X 79 X 56 cm.
 Weight:
 Incu-Shaker Mini: 25 lbs. / 11.5 kg
 Incu-Shaker 10L: 120 lbs / 55 kg
 Incu-Shaker 10LR: 170lbs / 78 kg
 Electrical: 120 or 230V, 50-60Hz

Ordering Information

H1000-M* Incu-Shaker Mini, includes standard rubber mat platform, 115V
 H1010* Incu-Shaker 10L, includes standard rubber mat platform, 115V
 H1012* Incu-Shaker 10LR, includes standard rubber mat platform, 115V
 *To order an item in 230V, add (-E) to item number.

Optional Platforms and Shelves

H1000-MR MAGic Clamp universal platform, for Incu-Shaker Mini (9.5x11.5")
 H1010-MR MAGic Clamp universal platform, for Incu-Shaker 10L (18x18")
 H1000-P-MP Microplate platform, 4 position for Incu-Shaker Mini
 H1010-P-MP Microplate platform, 6 position for Incu-Shaker 10L
 H1000-P-SP Spring rack platform, holds uncommon vessels for Incu-Shaker Mini
 H1010-P-SP Spring rack platform, holds uncommon vessels for Incu-Shaker 10L
 H1010-SH Optional Shelf, for Petri Dishes, microplates, trays, etc. (14 x 5.5") for Incu-Shaker 10L (max. 3)

Flask & Tube Rack Accessories for MAGic Clamp Platforms

H1000-MR-50 Flask Clamp, 50ml (H1000-MR: max. 20 / H1010-MR: max. 49)
 H1000-MR-125 Flask Clamp, 125ml (H1000-MR: max. 12 / H1010-MR: max. 36)
 H1000-MR-250 Flask Clamp, 250ml (H1000-MR: max. 8 / H1010-MR: max. 25)
 H1000-MR-500 Flask Clamp, 500ml (H1000-MR: max. 5 / H1010-MR: max. 16)
 H1000-MR-1000 Flask Clamp, 1000ml (H1000-MR: max. 2 / H1010-MR: max. 9)
 H1000-MR-2000 Flask Clamp, 2000ml (H1010-MR: max. 5)
 H1000-MR-MP Microplate Clamp, (H1000-MR: max. 4 / H1010-MR: max. 6)
 H1000-MR-1550 Tube Rack, 20x50 & 30x15 ml tubes (H1000-MR: max.1 / H1010-MR: max. 4)
 H1000-MR-T15 Tube Rack, 32x15 tubes (H1000-MR: max. 2 / H1010-MR: max. 8)
 H1000-MR-T50 Tube Rack, 15x50 tubes (H1000-MR: max. 2 / H1010-MR: max. 8)
 H1000-MR-T600 Bottle Rack, 4x500/600ml conical bottles (H1000-MR: max. 1 / H1010-MR: max. 2)
 H1000-MR-TSR Tilted holder for 15mL and 50mL tube racks

Maximum capacity of Erlenmeyer flasks

Flask Size:	Incu-Shaker Mini	Incu-Shaker 10L/LR
50ml	20	49
125ml	12	36
250ml	8	25
500ml	5	16
1L	2	9
2L	0	5

INCUB-SHAKER^{CO₂} Mini

Heat • Shake • CO₂

The **ONLY** CO₂ Incubator with a **MAGic Clamp™** Shaker



MAGic
CLAMP™
PATENTED



Six side direct heating for excellent uniformity and recovery



Integral, MAGic Clamp orbital shaker, ideal for suspension cell culture



Dual beam infrared sensor, for precise CO₂ control

Ideal for the culturing cells, the Incu-Shaker CO₂ Mini combines a precision CO₂ incubation chamber with an integral orbital shaker, providing the optimum conditions for suspension cell culture.

With our unique and proprietary heat distribution technology, the incubator provides the highest levels of temperature accuracy with minimal fluctuation (within 0.1°C). The six-side heating system in combination with a low speed internal fan uniformly spreads air throughout the stainless steel chamber (without air exchange from the external environment). For applications requiring solely gravity convection, this internal fan can be disabled, significantly reducing the concern of sample to sample contamination.

A beltless motor drive provides a horizontally circular shaking motion at a consistent 19mm orbit. The included platform (9.5 x 11.5 in.) can be used for low speed shaking of a variety of laboratory vessels, including Erlenmeyer flasks, culture plates and media bottles. For higher speed mixing, a patented MAGic Clamp platform is available for magnetic attachment of flask clamps and tube racks.





MAGic Clamp™ Platform

Optional MAGic Clamp accessories (Patented) are available for attaching erlenmeyer flasks, microplates, test tube racks and other vessels to the shaking platform. This patented design allows for instant, magnetic attachment of clamps without the use of tools, screws and other hardware.

Sealed Inner Glass Door

The inner glass door is transparent, allowing visualization of samples without fully exposing the chamber to the ambient environment, improving performance and reducing energy waste.



Heated Door

The six sided, direct heating design provides the highest level of temperature uniformity (± 0.5). In addition, the heated door prevents the forming of condensation on the inner glass door, for improved sample visualization.

Adjustable, pull out shelf

An included stainless steel shelf allows shaking of suspended cells while simultaneously incubating adherent cells. This static shelf can be pulled outward for easy loading/unloading and can be adjusted or (removed) for shaking taller vessels.



Technical Data:

Temperature Range:	Ambient +5 to 60°C
Temperature Accuracy:	$\pm 0.5^\circ\text{C}^*$
Temperature Uniformity:	$\pm 0.5^\circ\text{C}^*$
Temperature Increment:	0.1°C
Temperature Stability:	0.1°C*
Speed Range:	30 to 300 rpm
Speed Increment:	1 rpm
Mixing Orbit:	19mm (3/4 in.)
CO2 Range:	0 to 20%
CO2 Increment:	0.1%
CO2 Accuracy:	$\pm 0.1\%$
CO2 Sensor:	Dual Beam IR
Time Range:	1 min. to 48 hours (or continuous)
Platform Dimensions:	9.5 x 11.5 in. (23.5 x 29 cm)
Chamber Dimensions:	13.2 x 10.25 x 15.4 in. (33.5 x 26 x 39.2 cm)
Chamber Volume:	46L
Chamber Material:	Stainless Steel
Exterior Dimensions:	16.5 x 18.3 x 21.8 in. (42 x 46.5 x 55.3 cm)
Weight:	90 lbs / 40.1 kg
Electrical:	120V or 230V, 50-60Hz (350W)

* At a set temperature of 37.0°C

Maximum Capacity Chart:

50ml Flasks	125ml Flasks	250ml Flasks	500ml Flasks	1000ml Flasks	Microplates	15ml Tubes	50ml Tubes
20	12	8	5	4	4	64	30



MAGic Clamp Platform
H1000-MR with Adjustable MAGic Clamp (H1000-MR-CMB)

Ordering Information:

H3501*	Incu-Shaker CO₂ Mini, with non-slip rubber mat platform (9.5 x 11.5in.)
H2300-REG	Optional CO ₂ gas regulator
	MAGic Clamp Accessories
H1000-MR	MAGic Clamp Universal Platform, 9.5 x 11.5 inch
H1000-MR-CMB	MAGic Clamp Adjustable Flask Clamp, for 125, 250 & 500ml Erlenmeyer flasks (max. 12 x 125ml, 8 x 250ml or 5 x 500ml)
H1000-MR-50	Magic Clamp Flask Clamp, for 50ml Erlenmeyer flask (max. 20)
H1000-MR-125	Magic Clamp Flask Clamp, for 125ml Erlenmeyer flask (max. 12)
H1000-MR-250	Magic Clamp Flask Clamp, for 250ml Erlenmeyer flask (max. 8)
H1000-MR-500	Magic Clamp Flask Clamp, for 500ml Erlenmeyer flask (max. 5)
H1000-MR-1000	Magic Clamp Flask Clamp, for 1L Erlenmeyer flask (max. 4)
H1000-MR-MP	Magic Clamp Flask Clamp, for microplates (max. 4)
H1000-MR-T15	Magic Clamp Tube Rack, 32 x 15ml (max. 2)
H1000-MR-T50	Magic Clamp Tube Rack, 15 x 50ml (max. 2)
H1000-MR-1550	Magic Clamp Tube Rack, 32 x 15ml (max. 1)
H1000-MR-T600	Magic Clamp Tube Rack, 4 x 500/600ml bottles
H1000-MR-TSR	Magic Clamp Slanted Tube Rack Holder, holds tube racks at an adjustable angle
	Additional Accessories
H1000-P-MP	Dedicated Platform, 4 x microplates
H1000-P-SP	Universal Spring Platform
	*115V with USA Plug. For 230V with EU plug, add (-E)



H1000-MR-CMB



H1000-MR-1550



H1000-MR-MP



H1000-MR-T600



H1000-P-SP

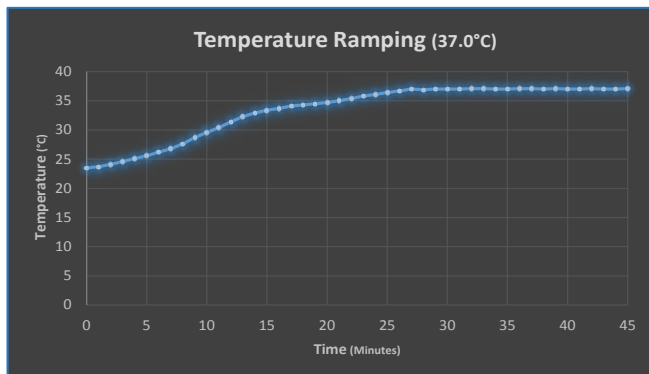


Fig. 1. Temperature Ramping Chart: Chamber temperature progression from room temperature to a set temperature of 37.0°C. Shows the set temperature reached in under 30 minutes and holds steady within 0.1C of 37.0C throughout the duration.

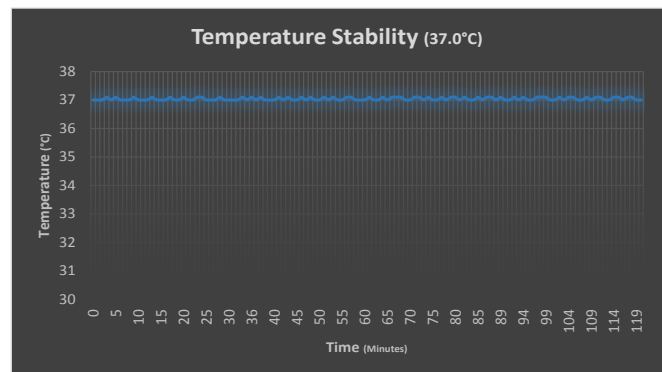


Fig. 2. Temperature Stability Chart: Chamber temperature for a two hour duration following stabilization (within 0.1°C) at 37.0°C.

MULTI-THERM™ COOL - HEAT - SHAKE



- Temperature control from 0° to 100°C
- Exchangeable blocks, for tube sizes 0.2 to 50ml
- Precision contoured wells, for uniform thermal transfer
- Two models: heat/cool or heat only

Technical Data:

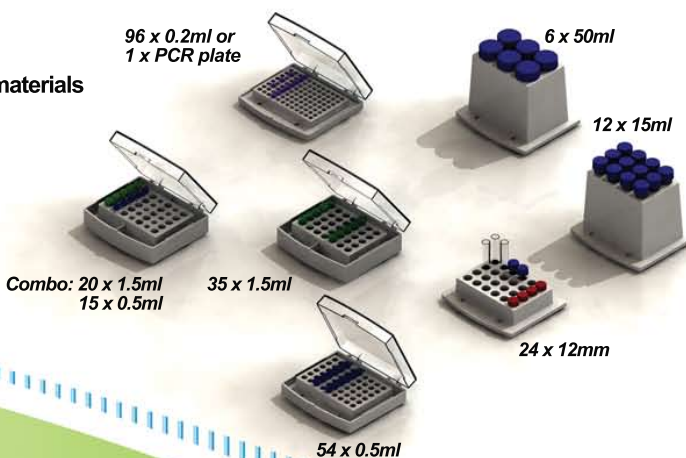
Temp. Range (HC):	Ambient -20° to 100°C
Temp. Range (H):	Ambient +5° to 100°C
Heating Ramp Rate:	5.0°C / min.
Cooling Ramp Rate:	2.5°C / min. (HC only)
Temp. Accuracy:	+/-1.0°C
Speed Range:	200 to 1500 rpm, or "off"
Motion / Orbit:	Horizontally circular / 2mm
Capacity:	Per selected block
Dimensions:	8.25 x 11.5 x 8.25 in. 21 x 29 x 21 cm
Weight:	18lb. / 8kg
Electrical:	120V, 60Hz or 230V, 50-60Hz



The **MULTI-THERM** shaker is a temperature controlled vortexer, useful for a variety of molecular biology applications including:

- Denaturation of DNA, RNA and proteins
- Lipid extractions
- Yeast and bacteria cultivation
- Restriction digests
- Reverse transcription
- DNA/plasmid isolation
- Gentle thawing of biological materials

Despite its modest 8 x 11 in. footprint, all popular tubes and plates are compatible, including as many as six 50ml tubes. Speed, time and temperature settings are continuously visible on the LCD, simultaneously showing both actual and selected values. Integral over-temperature control ensures long life, safety and sample integrity.



Ordering Information:

H5000-HC MultiTherm Shaker with heating and cooling, 115V

H5000-H MultiTherm Shaker with heating only, 115V

To order in 230V, please add (-E) to the end of the item number.

Please order blocks separately:

H5000-02	Block, 96 x 0.2ml or one PCR plate
H5000-05	Block, 54 x 0.5ml
H5000-CMB	Block, combination 15 x 0.5ml and 20 x 1.5ml
H5000-15	Block, 35 x 1.5ml
H5000-20	Block, 35 x 2.0ml
H5000-12*	Block, 24 x 12mm (200 to 1200rpm / Ambient -10° to 100°C)
H5000-150*	Block, 12 x 15ml (200 to 750rpm / Ambient -10° to 100°C)
H5000-500*	Block, 6 x 50ml (200 to 750rpm / Ambient -10° to 100°C)

* Note: The larger mass of this block results in a reduced speed and temperature range.

Benchmark Scientific Inc.
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INCU-MIXER™ MP

HEATED MICROPLATE VORTEXER

- Optimized for incubated mixing in microplates
- Heated lid prevents condensation
- Accepts plates up to 46mm high (H6004 only)
- Independently control time, temperature and speed
- Available in two-plate or four-plate format

Technical Data

Temp. Range:	Ambient +5 to 70°C
Temp. Accuracy:	± 0.2°C
Temp. Uniformity:	± 0.5°C
Shaking Speed:	100-1500 rpm (MP4) 100-1200 rpm (MP2)
Shaking Orbit:	2mm
Dimensions:	12.6 x 13.8 x 7.3 in (MP4) 11 x 10.6 x 5.5 in (MP2)
Weight:	19.7 lbs / 9 kg (MP4) 15.4 lbs / 7 kg (MP2)
Electrical:	115V or 230V, 50-60Hz (MP4) 100 - 240V, 50-60Hz (MP2)



Incu-Mixer MP4
(H6004)

The new Incu-Mixer MP series by Benchmark Scientific is designed to provide an optimal method for vortexing and incubating microplates. Simultaneous heating from both the bottom surface and the lid provide temperature uniformity throughout the sample. Additionally, the heated lid minimizes evaporation and prevents condensation. A compact, 2mm orbit ensures thorough mixing in microplates without splashing. Speed, time and temperature are all displayed in real time on the large LCD screen while an internal validation system constantly monitors all parameters for accuracy.

Designed for application flexibility, the Incu-Mixer series is available in two, and four-plate capacities. The four-plate model features an increased chamber height for accepting plates up to 46mm high. Independent time, temperature and speed controls allow the mixer to function as 3 machines in one; a multi-plate incubator, vortexer, or a combination of the two. The Incu-Mixer MP series is ideal for a wide variety of molecular biology applications including immunochemical reactions, enzyme and protein analysis, and microarray analysis.



Microtube Adapter
H6000-MP



Incu-Mixer MP2
(H6002)

Ordering Information

H6002	Incu-Mixer MP2 Two position incubated plate vortexer
H6004*	Incu-Mixer MP4 Four position incubated plate vortexer
H6000-MP	Microtube Adapter (for H6004 only) For 1.5/2.0mL and 0.5mL microtubes

* Includes US plug, for EU plug, please add (-E)

Benchmark 
Scientific

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