



MULTI-THERM™
COOL - HEAT - SHAKE

- + Temperature control from 0° to 100°C
- + Exchangeable blocks, for tube sizes 0.2ml to 50ml
- + Precision contoured wells for uniform thermal transfer
- + Two models: Heat/Cool or Heat only
- + Sequence link function for linking or repeating programs (HC model only)



The MultiTherm™ shaker is a temperature controlled vortexer, useful for a variety of molecular biology applications, including:

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

Despite its modest footprint, the MultiTherm accommodates all common laboratory tubes and plates, including as many as 6x50ml tubes. Speed, temperature and time are set digitally and current as well as set values are continuously shown on the LCD. A heat only model, as well as a heat and cool model are available. The HC model includes a sequence link function for linking together temperature profiles. An integral over-temperature control ensures long life, safety and sample integrity. Blocks are sold separately.

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:	± 0.5°C
Speed Range:	200 to 1500 rpm, or "off"
Timer:	1 min. to 99 hrs. 99 min. / continuous
Motion / Orbit:	Orbital / 3mm
Capacity:	Per selected block
Dimensions: (W x D x H)	8.25 x 11.5 x 8.25 in. 21 x 29 x 21 cm
Weight:	18 lbs (8kg)
Electrical:	115V or 230V, 50-60Hz, 500W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
H5000-HC*	MultiTherm Shaker with heating and cooling
H5000-H*	MultiTherm Shaker with heating only
H5000-02	Block, 96 x 0.2ml or 1 PCR plate
H5000-05	Block, 54 x 0.5ml
H5000-CMB	Block, combination, 15x0.5ml & 20x1.5ml
H5000-15	Block, 35 x 1.5ml
H5000-20	Block, 35 x 2.0ml
H5000-12	Block 24 x 12mm (200-1200rpm / Amb.-10° to 100°C)
H5000-150	Block, 15 x 15ml (200-750rpm / Amb.-10° to 100°C)
H5000-500	Block, 6 x 50ml (200-750rpm / Amb.-10° to 100°C)
H5000-MP	Block, 1 x microplate (Amb. -10 to 60°C)
H5000-1232	Block, 24 x 2ml HPLC / Autosampler vials (12x32mm)
H5000-5MT	Block, 12 x 5ml centrifuge tubes (conical)
H5000-DWMP	Block, 1 x deep well microplate (max. height, 54mm)
H5000-CU	Block, custom drilled, for tubes/vials up to 40mm tall
H5000-WB	Block, for liquids, beads, etc. (chamber: 4 x 2.6 x 1")

*115V with US plug. For 230V (EU plug), please add (-E).

MULTI-THERM™ Touch
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- + Large, full color touch screen
- + Tool-less block exchange
- + Optional heated lid

Ordering Information:

Item No.	Description:
H5100-HCT*	MultiTherm Touch with heating and cooling
H5100-HL	Optional heated lid, adjustable height

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

*Wide range of accessory blocks available, visit www.benchmarkscientific.com



- + Intuitive touchscreen control
- + Program wizard for quick & easy protocol entry
- + Fast, reliable results
- + Fully adjustable heated lid
- + Full sized model with gradient option
- + Mini version for low throughput labs

Fast, reliable cycling and ease of use make the Benchmark thermal cyclers the ideal choice for medium to high throughput laboratories as well as teaching facilities or those looking for a personal sized cycler.

Both the full-sized TC-9639 and mini TC-32 feature large, full color touchscreens with icon driven menus. A program wizard guides users through quick and easy entry of protocols with on board storage for over 100 typical programs. The TC-9639 has been upgraded with a gradient option for quick optimization or protocols.

The unique format of the block in the TC-9639 accepts 0.2ml tubes, strips and PCR plates as well as 0.5ml tubes. Wells in the block of the TC-32 are arranged in a 4x8 format compatible with 0.2ml tubes or strips. The blocks have a low thermal mass, allowing for exceptionally fast heating and cooling. This process is tightly controlled to maintain precision, accuracy, and uniformity both in the block and the samples. Heated lids maintain reactant concentrations. The height of the heated platen in the lid of the TC-9639 can be adjusted to fit snugly against the tops of tubes and plates.

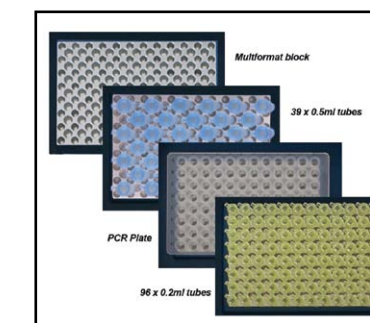
While the TC-32 has a smaller footprint and lower capacity than the TC-9639, it still maintains many of the same programming features including time and temperature increments/decrements, auto pause, auto restart after a power failure and the ability of maintain samples at 4°C after a run.

Technical Data:

Capacity, TC-32 Mini:	32 x 0.2ml or 4 PCR Strips
Capacity, TC-9639 Multifomat Block:	96 x 0.2ml tubes/strip tubes or 39 x 0.5ml tubes or 1 nonskirted 96 well plate
384 Well Block:	1 x 384 well plate (TC-9639 only)
In-situ Adapter:	4 slides (fits multifomat block)
Temp. Control Range:	0° to 100°C
Temperature Control:	Simulated sample or block
Accuracy/Uniformity:	±0.2°C/±0.2°C (TC-9639) ±0.25°C/±0.25°C (TC-32)
Max. Ramp Rate: (Heat/Cool):	5°C per sec. / 4°C per sec.
Lid Temperature:	30° to 112°C, user adjustable
Gradient Range/Differential:	30°-105°C left to right/ 1°-30°C (TC-9639)
Program Memory:	Up to 100 programs (TC-9639 offers unlimited storage with a USB flash drive)
Increments/decrements:	Yes, time and temperature
Power Failure Restart:	Yes
Dimensions (TC-9639):	10.2 x 14.2 x 9.9 in. / 26 x 36 x 25cm
Dimensions (TC-32):	9.1 x 7.1 x 6.2 in / 23 x 18 x 15.7 cm
Weight:	16 lbs (7.3kg) / 7 lbs (3.2kg)
Electrical:	Universal Voltage 100 to 240V, 50-60 Hz
Warranty:	2 Years



Touchscreen control



Unique block format (TC-9639)

Ordering Information:

Item No.	Description:
T5005-3205*	TC-32 Mini Thermal Cycler, 32 x 0.2ml block
T5000-96*	TC-9639 Thermal Cycler, multifomat block (Accepts 1 PCR plate, 96 x 0.2ml tubes or 39 x 0.5ml tubes)
T5000-384*	TC-9639 Thermal Cycler, 384 well block
T5000-A-IS	In-situ adapter for 4 slides, fits T5000-96

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