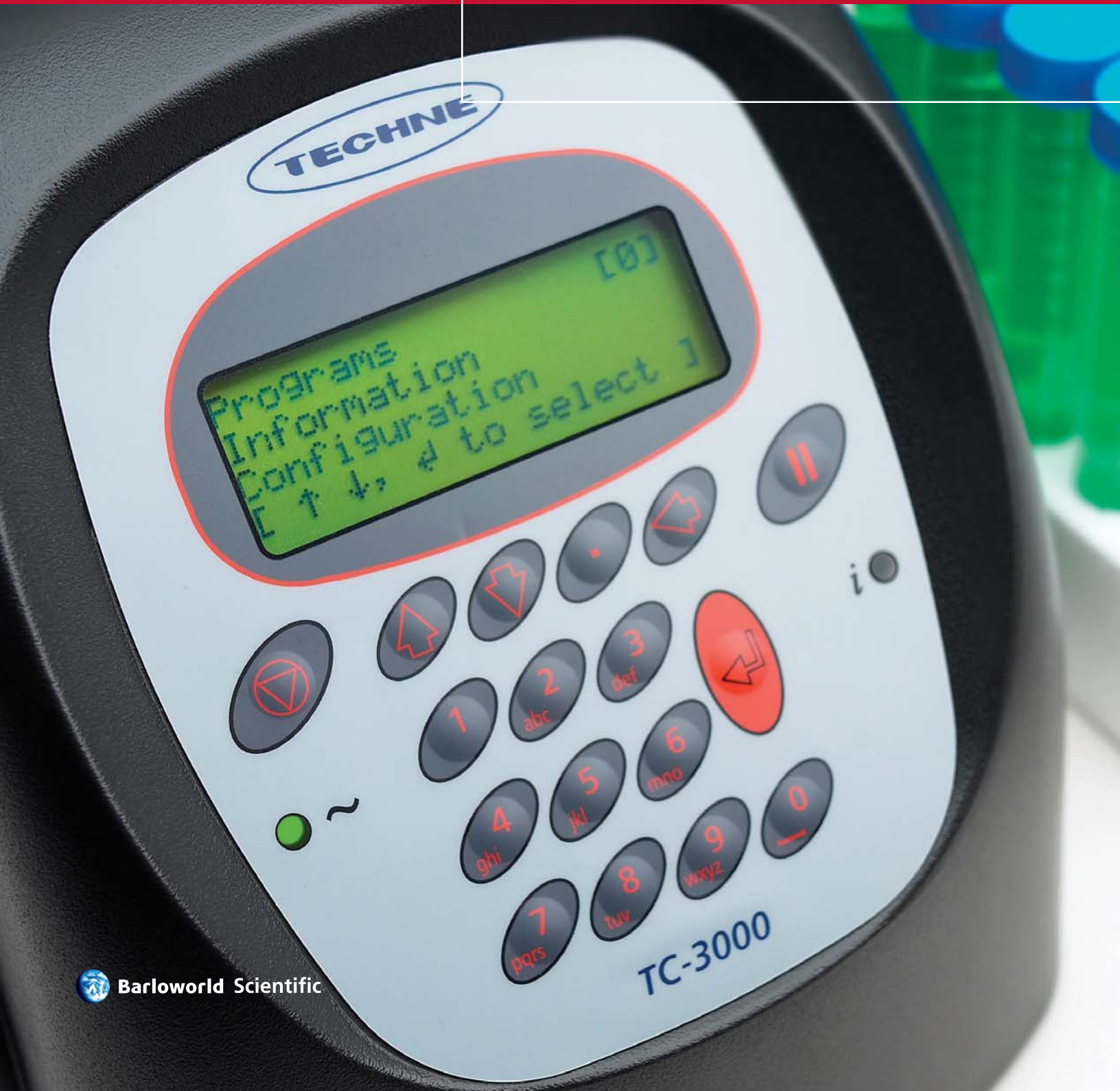




TC-3000 Thermal Cycler

Industry Leading Warranty...
4 years or 80,000 cycles



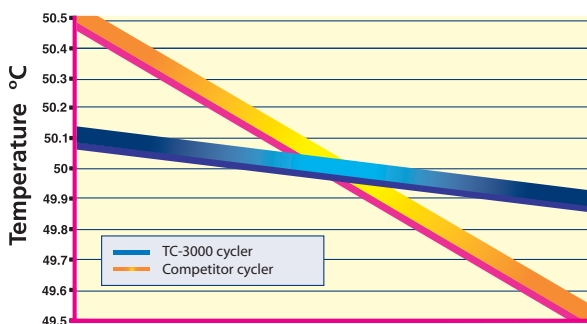


TC-3000 Thermal Cycler

The TC-3000 thermal cycler is unrivalled as a reliable low cost Personal cycler. Designed for research and teaching, the TC-3000 offers the ultimate in low cost solutions where ease of use is high on the priority list.



Uniformity of Temperature Across Sample Block



Graph showing the typical uniformity across the block at 50°C set point on a Techne thermal cycler compared to competitors' cyclers

Techne TC Thermal Cyclers enjoy a well-earned reputation for accuracy and reliability and are in use laboratories around the world. Compact, robust and versatile, the range includes models to suit every application and budget.

The TC-3000 is one of the smallest, lowest cost units on the market. It is available as a stand alone unit in 25 x 0.2ml or 20 x 0.5ml microtube interchangeable block formats.

- Unparalleled block uniformity: typically +/- 0.1°C at 50°C, ensuring optimal reproducibility.
- Fast heating rate: up to 3.6°C/sec for quick PCR cycles
- Small footprint: at only 91 in², the TC-3000 is even economical on space.
- Fast and intuitive programming with large memory, features quick dial and password protection.
- Heated lid with selectable temperature range from 100°C to 115°C is sprung to fit both 0.2ml domed and 0.5ml flat top tubes and can be enabled or disabled.

Technical Specification

Sample capacity (0.5ml)	20
Sample capacity (0.2ml)	25
User interchangeable blocks (tool required)	Yes
Heating rate	3.6°C/sec
Block uniformity at 50°C	±0.1°C
Temperature range	4°C to 99°C
Temperature set point precision	0.1°C
Selectable heated lid temperature	100°C - 115°C
Heated lid enable/disable	Yes
Over-temperature cut-out	Yes
Number of programs	80
Password protection	Yes
Programming / display	4-line alphanumeric
Peltier elements / blocks	4
Dimensions L x W x H (inches)	13 x 7 x 7.5
Connection to PC (RS232)	Yes (via Gensoft)
Power	230V / 120V

Ordering information

Code	Description
FTC3/02	Thermal cycler TC3000, 25 x 0.2ml capacity
FTC3/05	Thermal cycler TC3000, 20 x 0.5ml capacity
Accessory blocks	
FTC3/02/B	Block, 25 x 0.2ml
FTC3/05/B	Block, 20 x 0.5ml



TC-412 Thermal Cycler

Industry Leading Warranty...
4 years or 80,000 cycles



The **TC-412** is a high performance, high sample throughput instrument at a **highly affordable price.**



Versatile block format

The truly user-friendly fully interchangeable block system allows blocks to be exchanged in a matter of seconds without the need of any tools (60 x 0.5ml, 96 x 0.2ml, 384-well or flat plate for in-situ).

Adjustable heated lid

Defined pressure, programmable heated lid (100°C to 115°C) to accommodate a variety of consumables.

Intuitive programming

4-line display with intuitive, simple-to-use software with alphanumeric programming, password protection, simple copy/edit functions and much more.

8 Peltiers

Building on the innovative Quad Circuit Technology of the TC-512, the TC-412 ensures unsurpassed control accuracy and temperature uniformity.

Low cost

The TC-412 is one of the most affordable full sized Thermal Cyclers.

PC networking

The TC-412 can be connected to a PC along with other Techne cyclers for low volume or high throughput applications using Gensoft*

* Techne thermal cyclers are PC friendly and can be linked in combination or alone to a PC using Gensoft.

** Available by special order only

Technical Specification

Blocks Formats	
0.5ml capacity	60
0.2ml capacity	96
384-well block	Yes
In-situ block	Yes
User interchangeable	Yes
Block Temperature	
Maximum ramp rate*	2.6°C/sec
Block uniformity at 50°C*	< ±0.3°C
Temperature range	4°C to 99°C
Temperature set point precision	0.1°C
Heated Lid	
Selectable heated lid temperature	100°C - 115°C
Heated lid enable/disable	Yes
Over temperature cut out	Yes
Regulated lid pressure	Yes
Heated lid only comes on if block is set above 35°C	
Programming	
Number of programs*	80
Password protection	Yes
Programming	4-line alphaN
Incremental/decremental temperature	Yes
Incremental/decremental hold time	Yes
Maximum hold time	18 hrs
Minimum hold time	1 sec
Variable programmable ramp rate	0.1°C/sec steps
Run end time calculation	Yes
Pause and stop facility	Yes
End of program alarm (enable/disable)	Yes
Auto restart on power failure	Yes
Miscellaneous	
Serial port	RS232
Dual Voltage (120/230V)	Yes
Temperature sensor	Thermistor
Peltier elements/block	8
Dimensions L x W x H (in inches)	16.5 x 8.6 x 10.2
Footprint L x W (in inches)	16.5 x 8.6
Connection to PC control program	Yes
Free software upgrades from website	Yes
Power consumption	620 Watts
Frequency	50 - 60 Hz
Net weight (in lbs.)	25

Ordering information

Code	Description
FTC41S5D	TC-412 60 x 0.5ml microtubes, 230/115V
FTC41H2D	TC-412 96 x 0.2ml microtubes or 96-well plate, 230/115V
FTC4384D**	TC-412 384-well microtitre plate, 230/115V
FTC41FLD**	TC-412 Flat plate for in-situ, 230/115V

Interchangeable Blocks

FTC41B5D	Block for 60 x 0.5ml microtubes
FTC41BHD	Block for 96 x 0.2ml microtubes or 96-well plate
FTC4B384**	Block for 384-well microtitre plate
FTC41BID**	Flat plate block for in-situ





TC512 Thermal Cycler

The **TC-512** has a graphical Touch Screen display which enables you to optimize your experiments at the **“touch of a screen.”**



Wide linear gradient:

The only Gradient Thermal Cycler on the market to offer quad circuit technology which results in the most linear gradient on the market, with an amazing range of 30°C. Protocols can be optimized in a single experiment.

Touch Screen:

The TC-512 incorporates a large, 115 x 90mm, touch-sensitive screen that provides a unique user-friendly programming interface which is second to none.

Graphical display:

The unique ‘real-time’ graphical display shows the sample temperature profile while the program is running, including the upper and lower limits of the gradient. This pictorial, real-time representation means instant visualization of your experiment’s status.

Memory cards:

Smart Media memory cards provide an alternative to internal memory storage of your programs, offering security and flexibility.

Gradient calculator:

The gradient calculator function displays the temperature of each column. This ensures replication of the experimental conditions.

High performance:

Each block consists of 8 peltier units, controlled by 4 independent temperature thermistors (control sensors) distributed evenly across the block. This ensures that the TC-512 exhibits the most accurately controlled linear gradient available*.

Fold control:

A maximum heating rate of 3°C/Sec and block uniformity of $\leq \pm 0.4^\circ\text{C}$. With or without a gradient.....no compromise!

Versatile block format:

The truly user-friendly interchangeable block system allows blocks to be interchanged in a matter of seconds without the need of any tools (60 x 0.5ml 96 x 0.2 ml, 3841 well, Insitu Block2).

Intuitive programming:

Easy to use software with free upgrades downloadable from the Techne® website as new functionality is added.

Instrument Software Update:

A new innovation for the TC-512 Thermal Cycler is the ability to update the unit software free of charge.

1 Maximum 16°C gradient with 384 well block

2 in-situ block available as non-gradient only

** Available by special order only

Technical Specification

Blocks Formats	
0.5ml capacity	60
0.2ml capacity	96
384-well block	Yes
Gradient block	0.5mL, 0.2 mL, 384
In-situ block	Yes
User interchangeable	Yes
Block Temperature	
Gradient range	20°C to 70°C
Maximum gradient	30°C (16°C for 384 block)
Maximum ramp rate*	3.0°C/sec
Block uniformity at 50°C*	$\leq \pm 0.3^\circ\text{C}$
Column uniformity with a 10°C gradient	$\leq \pm 0.3^\circ\text{C}$
Temperature range	4°C to 99°C
Temperature set point precision	0.1°C

Heated Lid	
Selectable heated lid temperature	100°C - 115°C
Heated lid enable/disable	Yes
Over temperature cut out	Yes
Regulated lid pressure	Yes
Heated lid only comes on if block is set above 35°C	

Programming	
Memory cards	Yes
Number of programs #	50 or 500 (with card)
Password protection	Yes
Programming	Touchscreen
Graphical display	Real-time graph
Incremental/decremental temperature	Yes
Incremental/decremental hold time	Yes
Maximum hold time	99 hrs
Minimum hold time	1 sec
Variable programmable ramp rate	0.1°C/sec steps
Run end time calculation	Yes
Pause and stop facility	Yes
End of program alarm (enable/disable)	Yes
Auto restart on power failure	Yes

Miscellaneous	
Serial port	RS232
Dual Voltage (120/230V)	Yes
Temperature sensor	Thermistor
Peltierelements/block	8
Dimensions L x W x H (mm)	420 x 220 x 260
Footprint L x W (mm)	420 x 220 (16.5" x 8.7" x 10")
Connection to PC control program	Yes
Free software upgrades from website	Yes
Power consumption	620 Watts
Frequency	50 - 60 Hz
Net weight	11kg (total)

* Given are typical values of a standard 0.2ml block, in an ambient temperature of 20°C.

Actual numbers are dependent on complexity of the programs.

Ordering information

Code	Description
FTC51H2D	TC-512 96 x 0.2ml microtubes or 96-well plate, 120/240
FTC41H2D	TC-512 60 x 0.5ml, 120/240
FTC5384D**	TC-512 384 well microtitre plate, 120/240
FTC51FLD**	TC-512 Flat plate for in-situ, 120/240

Accessories	
FTC51BHD	Block for 96 x 0.2 mL microtubes or 96-well plate (Half or non skirt)
FTC51B5D	Block, 60 x 0.5 mL microtubes
FTC51BID**	Flat plate for insitu (non-gradient)
FTC5B384**	Block for 384-well microtitre plate
FTGSM2	Memory Card



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