

# Thermal Cyclers

## Thermal Cycler, TC-5000

The TC-5000 gradient thermal cycler enables you to optimise your experiments at the "touch of a screen", with the same mechanical features as the TC-4000.

### Proven track record

Over 20 years experience in thermal cycler design ensures that the Techne TC-5000 encompasses reliability with all the specifications required for advanced protocols.

### Graphical display

The '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 visualisation of your experiment's status.

### Touchscreen

The TC-5000 incorporates a unique user-friendly programming interface provided by a 115 x 90mm touch-sensitive screen.

### Excellent heating rate

A maximum heating rate of 3.0°C/sec and block uniformity of  $\pm 0.3^\circ\text{C}$  at 50°C with or without a gradient...no compromise!

### Wide linear gradient

The most linear 96-well gradient cycler on the market, with an amazing range of 30°C, allowing annealing temperatures to be optimised in a single experiment.

### Gradient calculator

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

- Gradient range 20°C to 70°C, maximum 30°C
- Quad Circuit Technology: 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-5000 exhibits the most accurately controlled linear gradient available
- Versatile block format: The truly user-friendly interchangeable block system allows blocks to be changed in a matter of seconds without the need for any tools (60 x 0.5ml, 96 x 0.2 ml, 96 x 0.2 ml for fully skirted plates, 384-well, or flat plate for *In-situ*)
- Decremental/incremental time and temperature
- Defined pressure, programmable heated lid
- PC control via Gensoft software with free upgrades available from [www.techne.com](http://www.techne.com). The TC-5000 is networkable and can be linked to a single PC together with other thermal cyclers in the Techne® range.

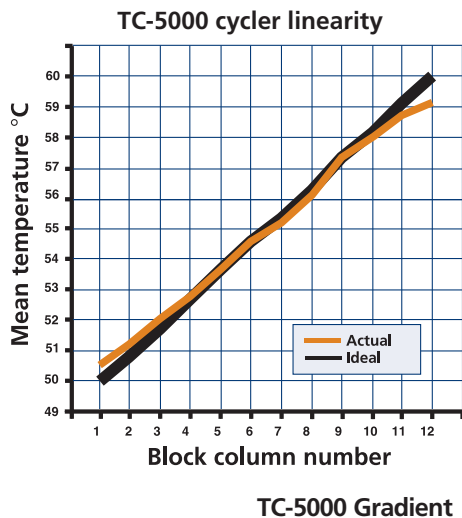


TC-5000

**ALL BLOCKS  
WITH EXTENDED  
WARRANTY**  
4 years or  
80,000 cycles\*  
\*See local distributor for  
details and conditions.



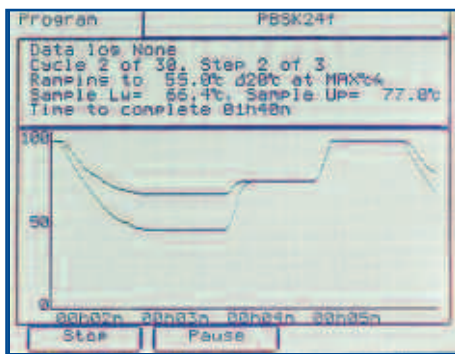
TC-5000



The graph on the right shows the linearity of a 0.2ml TC-5000 cycler block in relation to the ideal linearity. Due to quad circuit technology, the Techne® block exhibits an almost perfect linearity with deviations occurring only at block edges where the laws of thermodynamics prevent a perfect linearity from existing.

## Technical Specification

Model	TC-5000
<b>Block formats</b>	
0.5ml capacity	60
0.2ml capacity	96
384-well	Yes
<i>In-situ</i>	Yes
<b>Block Temperature</b>	
Temperature range	4°C to 99°C
Gradient range	20°C to 70°C
Maximum gradient <sup>1</sup>	30°C (16°C for 384 block)
Maximum ramp rate <sup>2</sup>	3.0°C/sec
Block uniformity at 50°C	<±0.3°C
<b>Heated Lid</b>	
Selectable heated lid temperature	100°C to 115°C
Heated lid enable/disable	Yes
Over-temperature cut-out	Yes
<i>Heated lid only comes on if the block is set above 35°C</i>	
<b>Programming</b>	
Number of programs <sup>3</sup>	50
Programming	Touchscreen
Graphical display	Real-Time Graph
Maximum hold time	99 hrs
Minimum hold time	1 sec
Auto restart on power failure	Yes
Dimensions L x W x H	420 x 220 x 260mm
Voltage	230/115V, 50-60Hz
Power	620W
Shipping Weight	14kg



**TC-5000 Screen**

## Ordering Information

Product Code	Description
FTC5/05	TC-5000 Gradient thermal cycler for 60 x 0.5ml microtubes, 115V/230V
FTC5/H02	TC-5000 Gradient thermal cycler for 96 x 0.2ml microtubes or 96-well plates, 115V/230V
FTC5/F02	TC-5000 Gradient thermal cycler for 96 x 0.2ml microtubes or 96-well fully skirted plates, 115V/230V
FTC5/384	TC-5000 Gradient thermal cycler for 384-well plates, 115V/230V
FTC5/FLAT	TC-5000 Gradient thermal cycler for <i>In-situ</i> (non-gradient), 115V/230V
FTC51B5D	TC-5000 Gradient block for 60 x 0.5ml microtubes
FTC51BHD	TC-5000 Gradient block for 96 x 0.2ml microtubes or 96-well plates
FTC51BFD	TC-5000 Gradient block for 96 x 0.2ml microtubes or 96-well fully-skirted plates
FTC5B384	TC-5000 Gradient block for 384-well plates
FTC51BID	TC-5000 Flat plate block for <i>In-situ</i> (non-gradient)

<sup>1</sup>Unavailable for *In-situ* block

<sup>2</sup>Given are typical values of a standard 0.2ml block, in an ambient temperature of 20°C.

<sup>3</sup>Actual numbers are dependent on complexity of the programs.

All Techne® cyclers have a full 4-year warranty with blocks having a 4-year or 80,000 cycle warranty – whichever comes first.

