

# Thermal Cycler – Techne TC-312



## Small, low cost

Out of the worlds best selling thermal cyclers, the TC-312 is the smallest, lowest cost unit on the market. It is available with 25 x 0.2 ml or 20 x 0.5 ml microtube interchangeable block formats.

## Fast-track programming with free software upgrades

With modern, intuitive programming and ready-to-go templates, creating even the most complicated protocols is simple.

As new functionality is added to the software, updates can be downloaded for free from the Techne website.

## Reliable, high performance

Experience in thermal cycler manufacturing since 1987, ensures that the TC-312 provides both guaranteed performance and quality results, everytime.

## Portable Dual Voltage

This Compact unit is not only light, but has a variable voltage selector so you can take it with you anywhere in the world!

## Key Features:

**Unparalleled block uniformity:**  $\pm 0.1^{\circ}\text{C}$  at  $50^{\circ}\text{C}$ , ensuring optimal reproducibility

**Fastest heating rate:** up to  $3.6^{\circ}\text{C}/\text{Sec}$  heating rate and  $2.0^{\circ}\text{C}/\text{Sec}$  cooling rate

**Smallest footprint yet:** at only  $561\text{ cm}^2$ , the TC-312 is even economical on space

**PC control & networking:** The TC-312 can be networked together with other Techne cyclers allowing up to 32 cyclers to be connected to one PC.

**Password protection:** Protect your program against unwanted modifications.

**Heated lid:** The selectable temperature range heated lid ( $+100^{\circ}\text{C}$  to  $+115^{\circ}\text{C}$ ) is sprung to fit a variety of height tubes and can be enabled or disable

**Full 2 year warranty**

## BLOCK TEMPERATURE:

Block temperature range	$4^{\circ}\text{C}$ to $99^{\circ}\text{C}$
Heating ramp rate*	$3.6^{\circ}\text{C}/\text{Sec}$ .
Cooling ramp rate 0.2 ml block*	$2.0^{\circ}\text{C}/\text{Sec}$ .
Cooling ramp rate 0.5 ml block*	$1.8^{\circ}\text{C}/\text{Sec}$ .
Uniformity at $50^{\circ}\text{C}$ *	$0.2^{\circ}\text{C}$
Uniformity at $72^{\circ}\text{C}$ *	$0.4^{\circ}\text{C}$
Uniformity at $95^{\circ}\text{C}$ *	$1.0^{\circ}\text{C}$
Accuracy at $50^{\circ}\text{C}$ *	$\pm 0.2^{\circ}\text{C}$
Accuracy at $72^{\circ}\text{C}$ *	$\pm 0.4^{\circ}\text{C}$
Accuracy at $95^{\circ}\text{C}$ *	$\pm 0.3^{\circ}\text{C}$
Temperature set point adjustment	$0.1^{\circ}\text{C}$
End of program cooling below ambient	YES

\* All specifications given are typical values under ambient temperature of  $20^{\circ}\text{C}$ . More details are available upon request

## SPECIFICATION

### TEMPERATURE

Temperature range  $^{\circ}\text{C}$   $4^{\circ}\text{C}$  to  $99^{\circ}\text{C}$

### PROGRAMMING

Number of programs\* 99 (3 segment programs)  
 Alphanumeric Key Pad Yes  
 Program naming capability Alphanumeric  
 Program password Protection Yes  
 Display Large 4 line Alphanumeric

Maximum number of segments/loop\* 80  
 Maximum number of repeat cycles per program \* 99  
 End of program alarm Yes (can be disabled)  
 Pause facility Yes  
 Incremental/Decremental timing & Temperature Yes  
 Auto Restart on power failure Yes  
 Run end time calculation Yes

Variable programmable ramp rate steps  $\pm 0.1^{\circ}\text{C}/\text{Sec}$

Serial port RS 232 socket & PC connection Yes

Voltage selection switch (230 V/120V) Yes

Dimensions LxWxH (mm)  $330 \times 170 \times 190$

Footprint  $561\text{ cm}^2$

NET WEIGHT 6kg