



## QCycler 96+

### THERMAL CYCLER SPECIFICATIONS

#### Thermal Blocks

Block Materials	Modular anodized aluminium or gold coated silver blocks with 4 sensors
Traceability	NIST traceable temperature calibration
Blocks Available	96 well gradient block: for 96 well PCR plates or 96 x 0.2ml tubes 96 well gradient combi block: for 96 well PCR plates, 96 x 0.2ml tubes 4 slide/microarray 384 well high throughput block: for 384 well plates

#### High Pressure Heated Lid

Lid Temperature	112°C
Lid Pressure Range	Lid pressure manual – compatible with all seals
Ambient Temperature	10°C to 30°C
Relative Humidity	0% to 95%

#### User Interfaces

Screen Type	6.4 inch TFT colour touchscreen
System Input	Touchscreen, external keyboard and mouse (USB), barcode scanner (USB)
Temperature Display	Real-time graphical display of actual and set block temperatures Real-time digital display of all sensor values
Communication Interfaces	1 x USB front (personal memory stick)+3xrear

#### User & File Management

User Level Management	3 levels: Administrator, User with Administrator selectable restricted rights, Guest
User File Protection	Yes, for programs and reports
File Organization	Windows Explorer, user-defined folders and subfolders
Program Storage	Minimum 1000 (internal memory or USB stick). Unlimited PC program storage



### Reports & Validation

Report Function	Encrypted GLP report, LabBook report
Validation	Internal auto validation prior to each program start Thermal engine validation function

### Networking & Barcode Option

Networking	Cycler network up to 4 units Server – Satellite system network up to 4 units
Barcode Option	Barcode documentation via handheld barcode scanner

### Thermal Engine Characteristics

Temperature Control	4°C – 99.9°C with simulated volume dependent control algorithm
Sample Volume Range	5-100µl
Sample Accuracy	±0.4°C (20-99°C), ± 1°C (4-20°C)
Sample Homogeneity	±0.4°C
Heating	Up to 6°C per second
Cooling	Up to 3°C per second
Sample Overshoot	< 1°C
Gradient Temperature Range	30°C - 80°C (96 well only)
Maximum/minimum Gradient Span	30°C / 4°C

### Embedded TAS Specification

Dimensions (LxWxH)	125mm x 90mm x 30mm
Weight	100g
Measurement range	0°C – 100°C
Number of channels	10 (8+2 lid sensors)
Probe identification/position	Position and identification of probe is automatic
Measurement resolution	16 bits
Accuracy: average channel value accuracy	Accuracy +/- 0.1°C @55.0
Software sample rate/channel	Sampling rate of 10 Hz (10 times a second) to once per hour
Response time of temperature sensor	Rapid time constant sensor (<0.2s)
Identity of temperature probe	Each probe stores its own identity
Sensor calibration interval	Up to 12 months
Accreditation	CE Mark UKAS Certified



**Software Features**

Auto start	When TAS in position and lid down
PDF report	Exported to USB stick
Displays historical Test results	12 displayed 1000 stored
Allows self calibration	At user decision
Facilitates relative Performance tracking	

**Power & Dimensions**

Electronic Power Supply	100V to 240V (frequency 48 to 62Hz)
Dimensions	(WxDxH) 34cm x 42cm x 26cm
Weight	12kg approx.
Operating Conditions	10°C - 30°C, 0-95% relative humidity
Regulatory	CE compliant
Warranty	2 years on all systems