Q-Cycler II

The **Q-Cycler II** is a high performance gradient Thermal Cycler (Thermocycler) which, when fitted with a user-interchangeable thermal block, offers state-of-the-art performance in every regard. The unit is fully compatible with the entire range of Quanta Biotech's user-interchangeable Thermal Blocks offering users an unparalleled level of adaptability.

The cycler is built around Quanta Biotech's revolutionary Quad Thermal Engine Technology (QuarTET), a sophisticated thermal control system specifically designed to drive a single interchangeable thermal block as four independent zones providing near-perfect uniformity and control of accuracy.

Both Block and Simulated Consumable control modes are available for precise temperature control using the consumable of choice.

Operation of the Q-Cycler II couldn't be simpler; utilising a 6.4 inch high resolution colour touch screen the intuitive user interface facilitates rapid program creation and execution of even the most complex protocols including touchdown, time and temperature increments, gradient steps and hot starts.

USB networking can be used to connect and drive up to three further thermal cyclers creating a mini network, the Q-Cycler II independently controlling and displaying real time data for both itself and each connected satellite — choose any combination from the S-Range thermal cycler satellite range.

Data pertaining to each and every experiment performed is recorded in a unique electronic GLP file ensuring full laboratory traceability and experimental validation.

Features

- Compatible with all interchangeable thermal blocks (thereby attaining outstanding accuracy and uniformity)
- Intuitive, touchscreen driven, user interface for rapid programming and runs
- Mini networking — connect up to 3 S-Range satellites
- Fully adjustable heated lid
- Block / Simulated consumable control modes
- Inbuilt OQ testing and GLP reporting
- Program storage in individual user directories for > 10,000 programs
- Intelligent protocol creation wizard
- Program resume / abandon function in the event of a power failure
- USB connectivity
- Universal mains operating voltage 85 — 275 Va.c.

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Thermal Cycler Range

Multi-Block Q-Systems

The **Q-System 2** thermal cycler system combines a Q-Cycler II and an S-range Satellite utilising a mini USB network. Operated by the 6.4 inch colour touch screen on the integral computer of the Q-Cycler II controls the two completely independent thermal cycler blocks ensuring perfect protocol execution for every run. The system is fully compatible with all of Quanta Biotech's user-interchangeable Thermal Blocks.

The **Q-System 4** thermal cycler system combines a Q-Cycler II and three S-range Satellites in a four block system utilising a mini USB network. Operated by the 6.4 inch colour touchscreen on the integral computer of the Q-Cycler II controls the two completely independent thermal cycler blocks ensuring perfect protocol execution for every run. The system is fully compatible with all of Quanta Biotech's user-interchangeable Thermal Blocks.

This single block architecture has distinct advantages over the old fashioned quad block single chassis systems offered by other manufacturers:

Maximum versatility — units can be positioned to utilise space effectively
Expandability - individual satellites/blocks can be simply added or removed
Flexibility - any S-range satellite can be used and future-proofing is ensured
Serviceability - satellites can be removed and replaced whilst retaining a fully operational system

Features

- Two / four independent thermal blocks
- Compatible with all interchangeable thermal blocks (thereby attaining outstanding accuracy and uniformity)
- Toolless block interchange
- Intuitive user interface for rapid programming and runs
- GLP files and individual user directories for > 10,000 programs
- Intelligent protocol creation wizard
- Inbuilt OQ testing and GLP reporting
- USB connectivity
- Program resume / abandon function in the event of a power failure
- Universal mains operating voltage 85 — 275 Va.c.

Quanta Biotech

Thermal Cycler Range




S-range Satellites

The **S-range** of satellites are high performance modular thermal cyclers. They all offer state of the art thermal engine technology and can be controlled by either a Q-Cycler II, or by a PC running Quanta Biotech's PCQB thermal cycler software, through a simple USB connection.

The Q-Cycler II can control up to three satellites (of the same or mixed formats) and a PC can control up to 15 satellites. All units can concurrently run their own individual protocols and a convenient summary screen shows all the thermal cycler runs in real time.

PCQB PC Software offers the same features as that of the Q-Cycler II again facilitating rapid program creation and execution of even the most complex protocols including touchdown, time and temperature increments and hot starts. Once more unique electronic GLP files are used to ensure full laboratory traceability and experimental validation.

The **S-96** satellite perfectly complements the Q-Cycler II utilising the same QuarTET control technology and it is fully compatible with the complete range of user-interchangeable Thermal Blocks.

The **S-48** has a fixed 48 well (8 x 6) 0.2ml block.

The **S-24** has a fixed 24 well (8 x 3) 0.2ml block.

As with all Quanta Biotech thermal cycler the satellites operate on any input voltage in the range 85 –275 Va.c.

Features

- PC Network of up to fifteen units all running independent protocols
- S-96 compatible with all user-interchangeable thermal blocks
- Fixed blocks on S-48 and S-24
- Intuitive user interface for rapid programming and runs
- Ramp rate up to 6ºC/s, uniformity better than ±0.4ºC
- State of the art thermal engines for superior performance
- Up to 30ºC gradients on S-96
- S-24 smallest and quietest thermal cycler

Interchangeable Thermal Blocks

An extensive range of high performance user-interchangeable Thermal Blocks to suit every customer's needs.

All interchangeable thermal blocks utilise four independently-controlled thermal zones (each powered by two cycling-specific peltiers and monitored via an ultra-high precision temperature sensor) to deliver rapid ramp rates, excellent block uniformity, precise accuracy and clearly defined gradients of up to 30°C.

Thermal blocks can be changed by the user in seconds without the use of any tools. Formats include:

96 well 0.2ml / microplate block
48 x 0.5ml / 48 x 0.2ml combi block
384 well microplate block for high throughput laboratories
Microarray/Slide blocks

Even more flexibility is offered in the form of block type: Standard Gradient (nickel-plated aluminium block with ramp rates up to 3.5ºC/s) and Ultra Gradient (gold-plated silver block with superior ramp rates of up to 6ºC/s).

Every user-interchangeable thermal block undergoes comprehensive thermal performance testing during its manufacture, utilising Quanta Biotech's advanced QTAS temperature acquisition system, each block being verified directly to UKAS / NIST traceable international temperature standards and references.

Features

- Multiple formats and types
- Tool less block interchange
- Ramp rates up to 6ºC/s,
- Uniformity better than ±0.4ºC
- Accuracy better than ±0.5ºC
- Thermal Overshoot less than 1ºC
- Up to 30ºC gradients
- 100 % UKAS /NIST Traceable performance verification

Quanta Biotech

Thermal Cycler Range

Si-range Personal Thermal Cyclers

The **Si-range** of thermal cyclers offers affordable standalone instrumentation with state-of-the-art technology to the research and education marketplace.

All three Si-range thermal cyclers, the Si-24, Si-48 and Si96, utilise an intuitive graphical user interface based on that of the Q-Cycler II. Again this software facilitates rapid program creation and execution of even the most complex protocols including touchdown, time and temperature increments, hot starts and gradient steps where applicable.

In each case the software is operated via a 3.5" colour touch screen.

The **Si-24** has the smallest footprint on the market and when in operation is near silent. It has a fixed 24 well (8 x 3) 0.2ml block which is controlled by the same thermal engine as fitted to the Q-Cycler II.

The **Si-48** has a fixed 48 well (8 x 6) 0.2ml block and uses the same software as the Si-24 giving the ability to intelligently design and subsequently execute the most complex gene amplification protocols.

Both the Si-24 and the Si-48 have extremely low power requirements making them ideal for in-the-field operation or for where power consumption is generally of concern.

The **Si-96** utilises QuarTET control technology and it is fully compatible with the complete range of user-interchangeable Thermal Blocks.

Features

- Small, quiet, personal thermal cyclers
- Intuitive user interface for rapid programming and runs
- Intelligent wizard protocol generation software
- Ramp rate of up to 6ºC/s
- Gradients up to 30ºC for Si-96
- Uniformity better than +/- 0.4ºC
- Fixed pressure heated lid on Si-24 and Si-48
- Low power requirement for Si-24 and Si-48
- Fully adjustable heated lid on Si-96
- Plug and play thermal cyclers

Ordering

S-24 Personal Satellite	**7019008**	Satellite Personal Thermal Cycler including block for 24x0.2ml tubes and PCQB control Software (requires separate control from Q-Cycler II server or PC)
S-48 Personal Satellite	**7019007**	Satellite Personal Thermal Cycler including block for 48x0.2ml tubes and PCQB control Software (requires separate control from Q-Cycler II server or PC)
S-96 High Performance Satellite	**7019005**	Gradient Satellite Cycler including block and PCQB Software (requires separate control from Q-Cycler II server or PC)
Si-24 Personal Cycler	**7019015**	Personal Thermal Cycler with block for 24 x 0.2ml tubes
Si-48 Personal Cycler	**7019016**	Personal Thermal Cycler with block for 48 x 0.2ml tubes
Si-96 Personal Cycler	**7019018**	Gradient Personal Thermal Cycler including block and PCQB Software—please specify block required)
Q-System 4	**7019012**	Q-System 4 standard thermal cycler (including four blocks—please specify standard blocks required)
	7019013	Q-System 4 gradient thermal cycler (including four blocks—please specify gradient blocks required)
	7019014	Q-System 4 ultragradient thermal cycler (including four blocks—please specify ultragradient blocks required)
Q-System 2	**7019009**	Q-System 2 standard thermal cycler (including two blocks—please specify standard blocks required)
	7019010	Q-System 2 gradient thermal cycler (including two blocks—please specify gradient blocks required)
	7019011	Q-System 2 ultragradient thermal cycler (including two blocks–please specify ultragradient blocks required
Q-Cycler II	**7019001**	Q-Cycler II Server standard thermal cycler (including block—please specify standard blocks required)
	7019002	Q-Cycler II Server gradient thermal cycler (including blocks—please specify gradient blocks required)
	7019003	Q-Cycler II Server ultra gradient thermal cycler (including blocks—please specify ultragradient blocks required)
Blocks	**7004003**	Block for 4 Slides/Microarrays
	7004004	Gradient Block for 96x0.2ml/96well plate for Q-Cycler II & S-96 thermal cyclers
	7004005	Gradient Block 96x0.2/48x0.5ml for Q-Cycler II & S-96 thermal cyclers
	7004007	UltraGradient Block for 96x0.2ml/96well plate for Q-Cycler II & S-96 thermal cyclers
	7004008	UltraGradient Block for 384 well plate for Q-Cycler II & S-96 thermal cyclers

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