



BTB additionally offers:

- integral timer, settable from 1 minute to 96 hours, for time-sensitive incubations
- two line display allows simple and accurate setting of temperature and time, plus on-going display of current status during operation

			BTD	BTA
Temperature range	°C	amb. + 5 to 100	amb. + 5 to 100	amb. + 5 to 100
Setting range	°C	25 to 100	20 to 100	20 to 100
Setting resolution	°C	0.1	0.5	0.5
Stability	@37°C	°C	±0.1	±0.1
Uniformity	@37°C	°C	±0.2	±0.2
Heat-up time	25 to 100°C	mins	16	16
	25 to 37°C	mins	2.5	2.5
Power	W		200	200
Supply voltage	V		115 or 230	115 or 230
			(50-60Hz)	50-60Hz)
Overall dimensions	w/d/h	mm	210/230/110	245/175/105
Block diameter/depth		mm	130/45	130/45
Timer			1min to 96 hrs	n/a
Safety	overtemperature		thermal fuse	thermal fuse

Block heaters with fixed microtube block

BTB and BTA block heaters are ideal for rapid and precise heating of microtubes, for applications up to 100°C. The distinctive circular block holds a combination of four microtube sizes simultaneously, and rapid heat up enables swift change of application - for maximum flexibility. The aluminium block is housed in a compact, stylish plastic moulding, which is durable, sturdy and easy-to-clean.

The digital BTB and analogue BTA offer:

- fixed circular microtube block
- capacity for 49 microtubes:
 - 24 x 1.5 ml / 2.0ml
 - 15 x 0.5 ml
 - 10 x 0.2 ml
- temperature range ambient + 5 to 100°C
- stability ± 0.1 °C
- easy and precise temperature setting
- powerful heater for fast heat-up:
 - 25°C to 100°C in just 16 minutes
 - 25°C to 37°C in just 2.5 minutes
- small footprint and compact design



Grant laboratory products

- meet the requirements of IEC61010 parts 1 and 2
- are CE marked to indicate that they meet the requirements of the Low Voltage and EMC Directives

The Quality Management System complies with the requirements of BS EN ISO 9001:2000.

Repairs are normally carried out within five working days of arrival at our factory or receipt of authorisation to repair. Alternatively, spare parts can be despatched within two working days.

Grant products are guaranteed for three years against faulty materials and workmanship.



Block heater range



For interchangeable blocks:

- QBD** digital
- QBH** high performance
- QBA** analogue

With fixed block for microtubes:

- BTB** and **BTA**

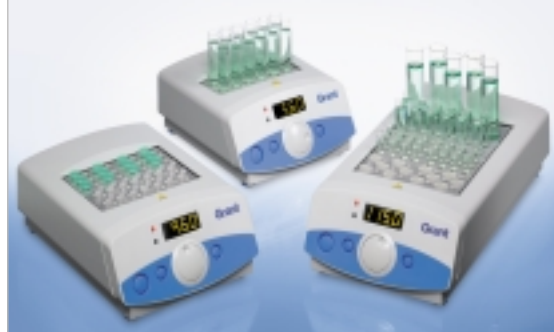
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Digital block heaters, with interchangeable blocks

QBD and QBH block heaters build on the superior performance, high quality design and rugged reliability of the highly successful Grant QBT series, enhanced by additional firmware features.

The general purpose QBD series comprises 1, 2 and 4 block models, while the 2-block QBH2 offers higher performance for more demanding applications.

QBD digital block heaters

Three models for 1, 2 or 4 interchangeable blocks, for applications up to 130°C.

Of robust construction, in streamlined coolwall aluminium and chemical-resistant plastic, with an exciting contemporary design.

The sloping fascia ensures clear visibility both for set-up and in operation, while the profile and the footprint are minimised.

ambient + 5°C to 130°C operation

stability ± 0.1°C, uniformity ± 0.1°C

easy interactive user interface - a sensitive rotor plus two keys and digital display, for fast and accurate set-up

reaction timer with audible buzzer, from 1 minute to 72 hours

function timer for delay of heater start-up or switch-off by up to 72 hours

off-set adjustment for high accuracy of operating temperature

two-point user recalibration of internal and external probes

safety features

- overtemperature protection by thermal fuse
- variable high and low temperature alarms, settable to within 0.5°C of the set temperature
- fault indication display

external Pt1000 temperature probe, allows in-sample or in-block temperature control (available as an accessory)

block extraction tool included as standard, for easy and safe block removal



QBH2 high performance block heater

QBH2, for 2 interchangeable blocks, is similar to QBD series except:

ambient + 5°C to 200°C operation

front-panel programming interface allowing set-up of three temperature/time segments, plus an end-of-program segment for control of indefinite hold temperature

adjustable overtemperature cut-out for sample protection

Specification		QBD1	QBD2	QBD4	QBH2
Temperature range	°C	ambient + 5 to 130			amb. + 5 to 200
Temperature setting range	°C	15 to 130			15 to 200
Stability	@37°C °C	±0.1			±0.1
Uniformity					
within the block	@37°C °C	±0.1			±0.1
across similar blocks	@37°C °C	±0.2			±0.2
Temperature display		LED			LED
Display resolution	°C	0.1			0.1
Heat up time	25 to 100°C mins	15			20
Power	W	150	300	600	300
Supply voltage	V	115 or 230 (50-60Hz)			115 or 230 (50-60Hz)
Overall dimensions	w/d/h mm	200/230/100	200/280/100	200/380/100	200/280/100
Safety	overtemperature	thermal fuse			thermal fuse

QBA analogue block heaters, with interchangeable blocks

QBA series analogue block heaters present an exceptionally high quality solution at a very cost-effective price. Two models for 1 or 2 interchangeable blocks, for applications up to 100°C.

The analogue user interface is combined with a precision thermostat, setting resolution 2°C. Of robust construction in streamlined coolwall aluminium and chemical-resistant plastic, with an exciting contemporary design. A sloping fascia for ease of set up, with a small footprint and low profile.

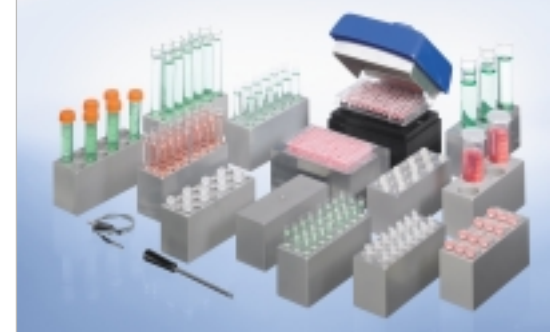
ambient + 5°C to 100°C operation

setting resolution 2°C

stability ± 1.0°C, uniformity ± 1.0°C

block extraction tool included as standard, for easy and safe block removal.

		QBA1	QBA2
Temperature range	°C	ambient + 5 to 100	
Temperature setting range	°C	0 to 100	
Setting resolution	°C	2	
Stability	@37°C °C	±1.0	
Uniformity			
within the block	@37°C °C	±1.0	
across similar blocks	@37°C °C	±1.0	
Heat up time	25 to 100°C mins	25	
Power	W	150	300
Supply voltage	V	115 or 230 (50-60Hz)	
Overall dimensions	w/d/h mm	200/230/100	200/280/100
Safety	overtemperature	thermal fuse	



Accessories for QBD, QBH and QBA digital block heaters

Interchangeable blocks

Block dimensions: 140 x 50 x 63 mm

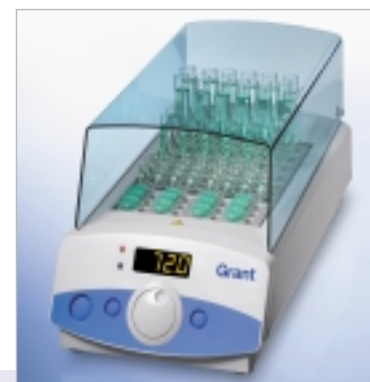
The 63mm depth ensures precision temperature control for test tube applications.

The threaded hole accommodates either the extraction tool or a thermometer.

Order ref.	Tube Ø/type	Holes per block	Hole depth mm
QB-0	plain block	--	
QB-10	10mm	24	50
QB-12	12mm	24	50
QB-13	13mm	12	50
QB-16	16mm	12	50
QB-18	18mm	12	50
QB-24	24mm and universal bottles	5	50
QB-50	50ml centrifuge tubes, glass universals	4	50
QB-H	0.2ml micro tube	56	14
QB-E0	0.5ml micro tube	24	30
QB-E1	1.5ml micro tube	24	35
QB-E2	2.0ml micro tube	24	35

Polycarbonate safety covers

Tough, clear polycarbonate covers maintain visibility while preventing anyone from accidentally touching a hot block. They also protect against splashing and are particularly recommended for use during high temperature operation.

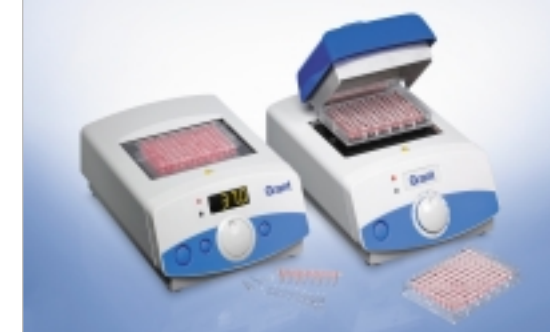


Cover	Model
QBL1	for QBA1, QBD1
QBL2	for QBA2, QBD2, QBH2
QBL4	for QBD4

External temperature probe

QBEP: Pt1000 sensor encased in a stainless steel sheath, 3mm x 30mm, fitted with 350mm of cable.

QBEP	for QBD1, QBD2, QBD4, QBH2
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Microlitre blocks for QBD2, QBH2, QBA2

Alternative double-size blocks are available for models QBD2, QBH2 and QBA2, for:-

- 0.2ml tubes, strips or microplates
- standard/high temperature 96 well microtitre plates: u-well, v-well, or flat bottom

These are particularly useful in the fields of molecular biology and biotechnology.

QDP-H block for 0.2ml microplates, strips or individual tubes

With 96 holes in microplate configuration, the block accommodates one 96-well plate, 8 x 12- or 12 x 8-well strips or up to 96 individual capped tubes.

A snug fit is ensured in the precision drilled wells, for excellent uniformity: ±0.3°C within tubes across the block.

QDP-FL universal block for standard 96-well plates

Accommodates the most commonly used types of 96-well microtitre plate: u-well, v-well, flat bottom, high temperature. Also suitable for cell culture plates.

Undrilled aluminium block, black anodised for efficient heat transfer; supplied complete with hinged lid.

The double layer lid creates an insulated incubation chamber for good sample uniformity, whilst the outer surface stays cool for user comfort; uniformity: ±0.5°C between wells.

Order ref.	Tube type	Holes/block	Hole Ømm	Hole depth mm	Block dimensions mm
QDP-H	0.2 ml	96	6.2	14	140/100/40
QDP-FL	96-well plates	--	--	--	140/100/50

An additional extraction tool is supplied with each of the QDP-H and QDP-FL blocks, for easy and safe block removal.

