



## Dry Block Heaters

Dry block heaters – QB series  
1, 2 or 4 block digital block heaters  
for microtubes and microplates

BT5D high temperature dry  
block heater

BTD dry block heater  
For microtubes

Dry block heating and cooling  
system

PCH-1, PCH-2 & PCH-3 dry block heating  
and cooling systems for microtubes

CH3-150 Combitherm dry block  
heating and cooling system  
For a range of tube sizes

# QB Dry Block Heaters

The dry block heating systems combines digital temperature control for precision, and uniformity. Designed for flexibility and efficiency the block heaters come with a choice of standard and custom blocks. The versatile dry block heater series are ideal for general sample heating, research or chemistry applications.

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Accurate, reproducible, rapid and safe heating of your samples - advanced temperature control combined with high quality, precision-engineered blocks provide superior thermal contact

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Versatile range of interchangeable heating blocks to fit any sample tube or plate - from our standard range of blocks, or custom-made blocks to suit your application

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Full range of models and options - for standard through to more sophisticated applications

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QBD1



QBD2



QBD4



QBH2

## Applications

- Life-science/cancer research - DNA extraction incubations, DNA denaturation, PCR, ELISA and Western blotting, molecular biology
- General - heating samples



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# QBD2

## QB Dry Block Heaters

A versatile, general purpose system with up to four interchangeable blocks for maximum flexibility. Combines superior temperature control and uniformity for precision. High quality design that offers excellent reliability, accuracy and durability.

Wide range of interchangeable blocks - extraction tool supplied as standard for easy and safe removal blocks.



Double size blocks for 0.2ml microplates, strips or individual tubes.



Range of convenient features including alarms, single and dual point calibration, programmed start/stop, 'offset' for known sample temperature variation and choice of external or internal probes.

Simple to use dial plus two keys for fast, accurate set-up.

Compact footprint and sloping fascia optimises benchspace and ensures a clear visibility of digital display.



## Product highlights

- Temperature range ambient +5°C to 130°C, with rapid heat-up time
- Stability:  $\pm 0.1^{\circ}\text{C}$
- Uniformity:  $\pm 0.1^{\circ}\text{C}$
- Digital temperature control for optimal precision
- External probe available for accurate in-sample or in-block temperature control
- Includes block removal tool
- Custom blocks available on request



Optional safety cover - protects samples from contamination and users from accidental contact with hot blocks.

Over-temperature cut-out protects your samples and your workplace.

Custom blocks - for virtually any tube or vessel.

Convenient timer facility, with audible buzzer, for reaction timing and function timing, e.g. delayed heater switch-on/off.

High power heater for fast heat-up. From 25°C to 100°C in only 20 minutes.

High quality, robust construction in streamlined coolwall aluminium and chemical-resistant plastic - durable in demanding environments.

## Applications

- General use - incubating samples at set temperatures, heating block for boiling of solutions in tubes
- Life-science-cell digestion, DNA/RNA extraction, post sequencing PCT clean-up-dry down step, boiling in vitro DNA/RNA protein samples, incubating invitro reactions/digestions, extraction of DNA for real-time PCR analysis, denaturing nucleic acid and protein samples
- Industrial - digestion of environmental samples for chemical oxygen demand analysis, soil digests, maintaining temperatures
- Biopharm - conductivity testing

# QB Dry Block Heating Systems

## Technical specifications



		QBD1	QBD2	QBD4	QBH2
		Precision digital dry block heater			High performance digital
Dimensions	h x d x w mm	120 x 240 x 200	120 x 285 x 200	120 x 390 x 200	120 x 295 x 200
Temperature range	°C	Ambient +5 to 130			Ambient +5 to 200
Stability	@37°C ±°C	0.1			
Uniformity within the block	@37°C ±°C	0.1			
across similar blocks	@37°C ±°C	0.2			
Temperature display, LED		•			
Display resolution	°C	0.1			
Heat up time 25°C to 100°C		20 minutes			15 minutes
Three programmable temperature/ time segments plus end-of-program segments		-			•
Reaction timer, with audible buzzer		1 to 999 minutes			
Function timer for delay of heater start-up/switch-off		Up to 72 hours			
Off-set adjustment		•			
Two-point calibration of internal and external probes		•			
High/low temperature alarms, settable to within 0.5°C of set temperature		•			
Fault indication display		•			
Extraction tool for easy and safe block removal		•			
Safety	over tem- perature cut-out	Thermal fuse			
Heater power	230V W	150	300	600	300
	120V W	100	200	400	200
Supply voltage	V	120 or 230			
Weight	kg	2.2	2.7	3.6	3



# QB Dry Block Heating Systems

## Options and accessories

			QBD1	QBD2	QBD4	QBH2
Interchangeable blocks						
Number of blocks	140 x 50 x 63 mm		1	2	4	2
QB-0		Plain block without holes		•		
QB-10		For 24 x ø 10mm test tubes, 50mm hole depth		•		
QB-12		For 24 x ø 12mm test tubes, 50mm hole depth		•		
QB-13		For 12 x ø 13mm test tubes, 50mm hole depth		•		
QB-16		For 12 x ø 16mm test tubes, 50mm hole depth		•		
QB-17H		For 10 x Falcon tubes tall 17mm ø test tubes, 75mm hole depth, designed for 15ml falcon tubes		•		
QB-18		For 12 x ø 18mm test tubes, 50mm hole depth		•		
QB-24		For 5 x ø 24mm test tubes and universal bottles, 50mm hole depth		•		
QB-50		For 4 x 50ml centrifuge test tubes, glass universals, 50mm hole depth ø 29mm, designed for 50ml falcon tubes		•		
QB-H		For 56 x 0.2ml microtube, 14mm hole depth, ø 6.5mm		•		
QB-E0		For 24 x 0.5ml microtube, 30mm hole depth, ø 8mm		•		
QB-E1		For 24 x 1.5ml microtube, 35mm hole depth, ø 10.8mm		•		
QB-E2		For 24 x 2.0ml microtube, 35mm hole depth, ø 11mm		•		
QB-E5		For 12 x 5.0ml microtube, 53.5mm hole depth, ø 16.7mm		•		
QB-DN		For Dolphin nose tube 24 x ø 11.13mm to ø 6.1mm		•		
External Pt1000 temperature probe						
QBEP		Standard probe. For in-sample or in-block temperature control; encased in stainless steel sheath, ø 3mm x 30mm long, with 350mm of cable.		•		
QBEP-WM		Short-form probe. For in-sample or in-block temperature control; encased in stainless steel sheath, ø 3mm x 14mm long, with 350mm of cable.		•		
Microplate blocks for molecular biology and biotechnology applications (Double-size blocks 140 x 100 x 75mm supplied with additional extraction tool)						
QDP-H		96 holes in microplate configuration for 0.2ml microplates, strips or individual tubes. Uniformity ± 0.3°C within tubes across the block; 6.2mm ø holes, 14mm hole depth.	-	•	-	•
QDP-FL		Universal block for standard 96-well plates (u-well, v-well, flat bottom, high temperature). Uniformity ± 0.50°C between wells; supplied with hinged, double layer lid to create an insulated incubation chamber.	-	•	-	•
Safety covers (not required with QDP-FL Microtiter blocks)						
	Made from tough clear acrylic for maximum visibility whilst preventing accidental touching of a hot block or contamination of samples from splashes. Clearance height 85cm.	QBL1	QBL2	QBL4	QBL2	

# BT5D

## High Temperature Dry Block Heater

Compact digital dry block heating system for high temperature applications. Features LED temperature display, easy-to-use interactive user interface for fast and accurate set up. Provides temperature control without the need for fluids and reduces the risk of contamination.

Temperature range ambient +10°C to 400°C, with rapid heat-up time

Stability:  $\pm 0.5^\circ\text{C}$

Uniformity:  $\pm 1\%$

Timed or continuous operation

Choice of two models with different block capacities



Adjustable over temperature cut-out protects users, valuable samples and the workplace.

Digital controller for accurate and reproducible time and temperature setting.

Raised feet to protect the work surface from extremely high temperatures.

Robust construction for long term durability and reliability.

Choice of two models

- BT5D-16 For 38 x  $\varnothing$ 16mm
- BT5D-26 For 22 x  $\varnothing$ 26mm

Customised blocks available, please enquire for further information.

### Applications

- Veterinary laboratories - digestion of tissue samples for lead analyses
- Chemical laboratories - organic synthesis
- Technology and research - materials (explosives) testing
- Any application requiring heating in a dry block up to 400°C



# BT5D High Temperature Dry Block Heater

## Technical specifications



		BT5D
		Digital control
Dimensions	h x d x w mm	145 x 420 x 205
Capacity	BT5D-16	38 x $\varnothing$ 16 x 60mm (depth) tube
	BT5D-26	22 x $\varnothing$ 26 x 60mm (depth) tube
Temperature range	$^{\circ}\text{C}$	Ambient +10 to 400
Stability	$\pm^{\circ}\text{C}$	0.5 (up to 300 $^{\circ}\text{C}$ )
Uniformity		1%
Display		LED
Display resolution	$^{\circ}\text{C}$	1
Alarms		High and low
Heat up time	ambient +10 to 400 $^{\circ}\text{C}$	1 hour 40 minutes
Timer		1 to 9999 minutes
Safety	over temperature protection	Adjustable cut-out
Electrical power	230V W	750
	120V W	750
Supply voltage	V	120 or 230 (50/60Hz)
Weight	kg	7.5

## Custom blocks are available on request

If you cannot find what you are looking for in our standard product portfolio, our custom solutions experts are available to develop the right solution for your requirements. Contact the team today, who will be happy to help. Call +44 (0) 1763 260 811 or email [salesdesk@grantinstruments.com](mailto:salesdesk@grantinstruments.com). More information can also be found here: [www.grantinstruments.com](http://www.grantinstruments.com).

# BTD

## Fixed block system

A compact and flexible fixed block system for rapid and precise heating of microtubes up to 100°C. Features digital control, two line display for simple and accurate setting of temperature and time, combined with the display of current status when in operation.

Temperature range ambient +5°C to 100°C, with rapid heat-up time

Stability:  $\pm 0.1^\circ\text{C}$

Uniformity:  $\pm 0.1^\circ\text{C}$

Digital temperature control for optimum precision

Capacity for up to 49 microtubes in a combination of four common sizes

Integral timer



**Powerful heater, for rapid heat-up times**  
25°C to 37°C in just 4 minutes  
25°C to 100°C in just 15 minutes

**Convenient integral timer for time-sensitive incubations.**

**2-line display for simple and precise setting of temperature/time showing actual and preset values.**

**Heating block holds combinations of four microtube sizes simultaneously - up to a total of 49 tubes**

- 24 x 1.5/2.0ml
- 15 x 0.5ml
- 10 x 0.2ml

**Sturdy, durable, easy-to-clean plastic outer case: compact design with small footprint.**

### Applications

- Life-science/cancer research - DNA extraction incubations, DNA denaturation, PCR, ELISA and Western blotting, molecular biology
- General - heating samples

# BTD Dry Block Heating Systems

## Technical specifications



		BTD
		Digital control - dry block heater
Dimensions	h x d x w mm	115 x 230 x 210
Temperature range	°C	Ambient +5 to 100
Temperature setting range	°C	25 to 100
Stability	±°C	0.1
Uniformity	@37°C ±°C	0.1
Temperature display		2 line x 16 character LCD
Setting resolution	°C	0.1
Heat up time	25°C to 100°C	4 minutes
	25°C to 100°C	15 minutes
Capacity	ml	10x 0.2, 15x 0.5, 24x 1.5/2.0
Timer		1 minute to 96 hours (increments of 1 minute)
Safety	over temperature cut-out	Thermal fuse
Power consumption	230V W	200 (0.87A)
	120V W	200 (1.7A)
Nominal operating voltage	V	120 or 230 (50/60Hz)
Weight	kg	2.8

# PCH

## Dry block for heating and cooling

Compact, flexible, easy-to-use systems for rapid heating and cooling of microtubes. The PCH series offers effective tools for DNA/RNA sample preparation and offers a choice of three fixed blocks for different sized microtubes.

Cooling and heating temperature range from  $-10^{\circ}\text{C}$  to  $100^{\circ}\text{C}$ , with rapid cool down and heat-up times

Stability:  $\pm 0.1^{\circ}\text{C}$

Choice of three models: capacity for up to 32 microtubes in a combination of two sizes (PCH-1) or up to 20 microtubes of one size (PCH-2 and PCH-3)

Convenient integral reaction timer with audible alarm



Ingenious block construction, combined with powerful Peltier cooler, produces rapid heating and cooling.

2-line LCD display clearly indicates both set and actual value for temperature and time.

DNA denaturation techniques further supported with an audible alarm for denaturation 'time-up'; samples can then be quickly cooled.



PCH-1 block holds a combination of two microtube sizes simultaneously - up to a total of 32 tubes: 12 x 1.5ml plus 20 x 0.5ml.  
PCH-2 up to a total of 20 x 1.5ml microtubes.  
PCH-3 up to a total of 20 x 2ml microtubes.

Dry temperature control system maintains clean and aerosol-free environment.

Simple push button combinations for easy set-up.

Rapid DNA denaturation at  $95^{\circ}\text{C}$  quickly achieved.

## Applications

- Life-science - storing restriction enzymes, nick translations, ligation reactions, restriction digests, protein solubilisation for PAGE, warm incubation of microcentrifuge tubes for hybridisation, enzyme reactions and deactivations.

# PCH series

## Technical specifications

				
		PCH-1	PCH-2	PCH-3
Dimensions	h x d x w mm	165 x 260 x 240		
Temperature range	°C	-10 to 100		
Temperature control range	°C	Ambient -30 to 100		
Stability	±°C	0.1		
Setting resolution	±°C	0.1		
Block Dimensions	h x d x w mm	100 x 110		
Heat up time	25°C to 37°C °C/min	3		
	25°C to 100°C °C/min	16		
Cool down time	100°C to -10°C °C/min	28		
	25°C to -10°C °C/min	21		
Capacity	microtubes ml	12 x 1.5 plus 20 x 0.5	20 x 1.5	20 x 2.0
Display		2 line x 16 character LCD		
Timer		1 minute to 96 hours/non-stop		
External power supply		Input AC 100-240V, 50/60Hz Output DC 12V		
Power consumption	230V W	60 (0.3A)		
	120V W	60 (0.3A)		
Input voltage	V dc	12		
Weight	kg	3.2		



Choice of two models; capacity for up to 32 microtubes in a combination of two sizes: 12 x 1.5 ml plus 20 x 0.5 ml (PCH-1) or up to 20 microtubes of one size: 20 x 1.5 ml tubes (PCH-2), up to a total of 20 x 2 ml microtubes (PCH-3).

A 2-line LCD display clearly indicates both set and actual values for temperature and time. Works in combination with simple push buttons for easy set-up.

# CH3-150

## Combitherm-2 dry block heating and cooling system

Durable compact dry block heating and cooling system with independently regulated heating and cooling blocks in the same unit for added flexibility. The blocks are available in a choice of seven interchangeable blocks are available or custom blocks to suit more specific tube sizes.



Protective lid - reduces risk of contamination.

2-line LCD display clearly indicates both set and actual value for temperature and time.

Easy change of parameters during unit performance saves time during applications.

Independent controls with 16 user adjustable programs including temperature and time.



## Product highlights

- Stability:  $\pm 0.1^{\circ}\text{C}$
- Digital timer with sound alarm: 1 min to 99 h 59 min
- User adjustable programs temperature and time: 16 (heating) and 16 (cooling)
- Digital temperature control for optimum precision
- Independently regulated heating and cooling blocks in the same unit
- Temperature calibration function
- Custom blocks available on request





Choice of 7 interchangeable blocks (order blocks separately) - extraction tool supplied as standard. Custom blocks available on request.

Temperature calibration function for precise temperature control.

Simple programming for independent use of heating and cooling block.

## Applications

- Life-science - storing restriction enzymes, nick translation, ligation reactions, restriction digests, protein solubilisation for PAGE, warm incubation of microcentrifuge tubes for hybridisation, enzyme reactions and deactivations
- Incubating samples at set temperatures, heating block for boiling of solutions in tubes
- Life-science-cell digestion, DNA/RNA extraction, post sequencing PCT clean-up-dry down step, boiling in vitro DNA RNA/ protein samples, incubating invitro reactions/digestions, extraction of DNA for real-time PCR analysis, denaturing nucleic acid and protein samples
- Industrial - digestion of environmental samples for chemical oxygen demand analysis, soil digests, maintaining temperatures

# CH3-150

## Technical specifications



		CH3-150
		Combitherm-2 dry block heating/cooling system
Dimensions	h x d x w mm	220 x 285 x 295
Heating block temperature range	°C	+25 to +150
Heating block temperature control range	°C	Ambient +5 to +150
Heating block setting resolution	°C	1
Heating block stability	°C	±0.1
Cooling block temperature range	°C	-3 to +20
Cooling block temperature control range	°C	Ambient -23 to ambient -5
Cooling block setting resolution	°C	0.1
Cooling block stability	°C	±0.1
Digital timer with sound alarm		1 min–99 hrs 59 min (increment 1 min)
User adjustable programs (temperature and time)		16 (heating) + 16 (cooling)
Display		LCD
Nominal operating voltage	V	230 only (50/60Hz)
Weight	kg	5.6

# CH3-150

## Options and accessories

B2-50		Interchangeable block for 2 x Ø 48mm tubes depth 58mm
B10-13		Interchangeable block for 10 x Ø 13mm tubes, flat bottom, depth 30mm
B10-16		Interchangeable block for 10 x Ø 16mm tubes depth 56mm
B5-29		Interchangeable block for 5 x Ø 29mm tubes, flat bottom, depth 40mm
B6-25		Interchangeable block for 6 x Ø 25mm tubes depth 40mm
B18-12		Interchangeable block for 18 x Ø 12mm tubes, round bottom, depth 58mm
B23-1.5		Interchangeable block for 23 x 1.5ml micro tubes, depth 35mm

## Contact us today

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