Thermal Control

Digital Dry Bath

The microprocessor controlled Digital Dry Baths offer control over both temperature and time, eliminating the need for an external thermometer or timer.
Used to thaw, boil, incubate and warm samples for different applications in molecular biology, assay preparation,tissue/cell culture, biochemistry, genetics, histology, clinical, environmental and industrial laboratories.

Dry bath provides precise temperature for various experiments. Thermo mix also has mixing function, and widely used in various fields such as molecular biology and cell biology, including gene synthesis, gene purification, gene cloning, gene expression, protein expression analysis , enzyme reaction, bacterial growth and so on.

List of models:

Model	Image	Function	Temp. Setting Range	Mixing speed	Blocks	Page
HB60-S		Heating	25°C,30°C, 37°C,45°C,60°C	-	5mL × 30+15mL × 8	p.32
HB120-S		Heating	25°C–120°C	-	0.2mL × 54 0.5mL × 40 1.5/2mL × 40 5/15mL × 28 5mL blood collection tube × 45 50mL × 8 (0.2mL+0.5mL+1.5/2mL) × 18 0.2mL × 96 Microplate Bead/water bath	p.32
HB105-S1/ S2		Heating	25°C–105°C	-	0.2mL × 30 0.5mL × 20 1.5mL × 20 2mL × 20 15mL × 12 50mL × 4 Bead/water bath	p.32
HB150-S1/ S2		Heating	25°C–150°C	-		p.32
H100-Pro		Heating	25°C–100°C	-	0.5mL × 24 1.5mL × 24 2mL × 24 5mL × 5 15mL × 8 50mL × 4 0.2mL × 96 Microplate	p.33
HC110-Pro		Heating&Cooling	-5°C–110°C	-		p.37
HCM100-Pro		Heating& Cooling&Mixing	0°C–100°C	200–1500rpm		p.36
HM100-Pro		Heating&mixing	15°C–100°C	200–1500rpm		p.36
Mini H100		Heating	25°C–100°C	-	0.2mL × 40 0.5mL × 24 1.5mL × 15 2mL × 15 5mL × 6 15mL × 4 50mL × 2	p.35
Mini HC100		Heating&Cooling	0°C–100°C	-		p.35
Mini HCL100		Heating&Cooling	0°C–100°C	-		p.35
DWB20-S		Heathing	25℃–80℃	-	20L	p.39

Dry Bath Series

Small footprint. Rapid & accurate temperature control. Overheating protection.
Accommodates various types of tube holders to meet every lab need.
HB105-S1 / HB105-S2 / HB150-S1 /HB150-S2 /HB120-S / HB60-S / H100-Pro /

HB105-S1

HB105-S2

HB150-S1

HB150-S2

HB120-S

HB60-S

MiniHCL100

H100-Pro

Features

- Accurate and uniform temperature control
- Digital control and display of time and temperature
- Wide range of temperature control for different applications
- Monitor temperature in real-time, and set timer
- Wide range of heating blocks compatible with most popular lab tubes
- Overheating protection ensures sample and user safety
- Equipped with a lid for heat preservation, and preventing pollution
- User-friendly setting knob for easy and simple operation

HB105-S1 HB105-S2
HB150-S1 HB150-S2

Durable, reliable safe and convenient to use

Features

- Single and double heat block modules available
- Highest temperature up to 150 ℃
- Buzzer alert when the time is up
- External temperature sensor PT1000

HB120-S / HB60-S

Easy to use, safe and durable

Features

- Low profile – space saving design
- Timer function support available
- Discrete heating temperature levels: 25 ℃, 30 ℃, 37 ℃, 45 ℃, 60 ℃ (HB60-S)
- 5/10mL × 38 dual purpose heating block (HB60-S)

H100-Pro

Digitally accurate with exceptional temperature uniformity

Features

- Customizable user setting program with up to 6 sequential steps
- Temperature calibration function inbuilt for users
- Magnetic heat block mounting eliminating need of any tools
- Interchangeable sample blocks designed to provide versatility, easy cleaning and disinfecting
- Accurate temperature control of each heating block with lid to minimize the heat loss

Applications

Suitable for clinical laboratories, for sample preparation, Enzyme-substrate reactions, biochemistry tests, serum coagulation tests and many other.

Specifications	H100-Pro	HB105-S1 HB105-S2	HB150-S1 HB150-S2	HB120-S	HB60-S
Temperature range[℃]	Room temp+5-100	Room temp+5-105	Room temp+5-150	Room temp+5-120	Room temp+5-60
Temperature Setting range [℃]	15-100	25-105	25-150	25-120	5 gears:25, 30, 37,45,60
Temperature control accuracy[℃]	±0.5	25-90: ±0.3 90-105: ±0.6	25-90: ±0.3 90-105: ±0.6	±0.5	±0.5
Temperature uniformity@ 37℃[℃]	±0.5	±0.2	±0.2	±0.5	±0.3
Power [W]	200	HB105-S1:100 HB105-S2:200	HB150-S1:100 HB150-S2:200	160	160
Time setting range	0min~99h30min	0min~99h59min	0min~99h59min	0min~99h30min	0min~99h30min
External sensor	-	Yes	Yes	-	-
Display	TFT	LED	LED	LED	LED
Voltage,Frequency	110/220V,50/60HZ	110/220V,50/60HZ	110/220V,50/60HZ	110/220V,50/60HZ	110/220V,50/60HZ
External Dimension[WxDxH]	200x235X120	290x210X120	290x210X120	175X290X85	175X290X85
Weight（kg）	7.3	3.2	3.2	3	2.5
Operating temperature[℃]	10-40	10-40	10-40	10-40	10-40
Operating humidity[% RH]	<80	<80	<80	<80	<80

Mini Dry Bath

Mini HCL100 / Mini HC100 / Mini H100

Portable and option to power by automobile power adapter

Features

- Mini, lightweight, safe with LCD display
- Digital control over both temperature and time
- Built-in user recalibration function guarantees long term temperature accuracy
- Overheating protection
- Optional cooling function
- Interchangeable blocks for a wide variety of test tube sizes
- Mini HCL100 with hot lid to prevent water condensing on the tube cap

Applications

Useful for rapid and uniform heating of biological samples in applications like preservation, denaturation of nucleic acids and proteins, and many other applications.

Specifications	Mini HCL100	Mini HC100	Mini H100
Display	LCD	LCD	LCD
Temperature setting range[℃]	0–100	0–100	25–100
Temperature range [℃]	Room temperature–23~100	Room temperature–23~100	Room temperature+5~100
Temperature control accuracy[℃]	±0.5	±0.5	±0.5
Temperature display accuracy[℃]	0.1	0.1	0.1
Minimum time taken for heating(25℃+100℃)	≤20min	≤20min	≤20min
Minimum time for cooling(20℃–0℃)	≤25min	≤25min	–
Max. Heating Rate	8℃/min	8℃/min	6.5℃/min
Max. Cooling Rate	3℃/min	3℃/min	–
Time setting range	0–999min/0–999sec	0–999min/0–999sec	0–999min/0–999sec
Program Memory	9(2steps for each)	9(2steps for each)	9(2steps for each)
Temperature self–calibration	Support	Support	Support
USB interface	Support	Support	Support
Error code display	Support	Support	Support
Dimension[WxDxH]	110x162x140mm	110x162x140mm	110x162x140mm
Total Weight [kg]	≤1	≤1	≤1
Voltage,Frequency	DC12V,100–240V, 50/60Hz	DC12V,100–240V, 50/60Hz	DC12V,100–240V, 50/60Hz
Power [w]	60	60	60
Operating temperature[℃]	+10–40	+10–40	+10–40
Operating humidity [% RH]	≤80	≤80	≤80

Thermo Mix HCM100-Pro / HM100-Pro

Thermo Mix series integrates precise and efficient heating & cooling and mixing function

HCM100-Pro-Heating/Cooling/Mixing
HCM100-Pro combines the excellent mixing and accurate temperature control, to make your work efficiently and productively

Module compatibility
Flexible adapter selection, compatible with various tubes

Magnet adhesion technology
Quick interchange of blocks with magnet adhesion technology without any tools

Intuitive display
LCD display for time, speed and temperature parameters

Program keys
Freely programmable
Fast and simple access to the most frequently used temperature and time parameters
Save up to 9 user defined programs

Block self-recognition
The system can automatically identify the heating module to ensure the smooth completion of the experiment

Add-ons
Three ponit temperature calibration for precise temperature control

Temperature protection
Block equipped with a lid for heat preservation

Features

- Fully programmable
- Precise temperature control for heating and cooling
- Real-time display of speed, temperature and time
- Excellent mixing (200-1500rpm)
- Quick interchange of blocks without tools and automatic block recognition
- Compatible with most popular tubes
- Block equipped with a lid for heat preservation
- Temperature self-calibration

Applications

Precise and efficient heating/cooling and mixing is applicable for many applications such as Gene synthesis, gene purification, gene and protein denaturation, enzymatic reaction, bacterial growth, and others.

Thermo control HC110-Pro

heating and cooling with digital display

Features

- Compact, programmable and overheating protection for safe sample handling
- Precise temperature control for heating and cooling -5℃ to 110℃ for all major lab applications
- Interchangeable sample blocks available
- Most common application includes reagent warming/cooling, DNA extractions, enzymatic reactions and reactions that need to processed at or near room temperature.

As low as -5℃

Precise temperature control for heating and cooling between -5℃-110℃.

Specifications	HCM100-Pro	HM100-Pro	HC110-Pro
Functions	Heating,cooling&mixing	Heating&mixing	Heating&cooling
Temperature range [℃]	Below room temp 15- 100	Room temp-100	Below room temp 25- 110
Temperature Setting range [℃]	0.1-100	15-100	-5-110
Temperature control accuracy@20-45 [℃]	±0.5	±0.5	±0.5
Temperature uniformity@20-45 [℃]	±0.5	±0.5	±0.5
Power [W]	200	200	200
Time setting range	0min~99h30min	0min~99h30min	0min~99h30min
Max Heating speed	5.5℃/min	5.5℃/min	5.5℃/min
Max Cooling speed	5℃/min（100℃-room temp） 0.5℃/min（below room temp）	-	2.5℃/min（100℃-room temp） 0.5℃/min（below room temp）
Mixing speed [rpm]	200-1500	200-1500	-
Mixing orbit [mm]	3	3	-
Display	TFT	TFT	TFT
Program	9	9	9
Overheating protection [℃]	150	150	150
Voltage,Frequency	110/220V，50/60HZ	110/220V，50/60HZ	110/220V，50/60HZ
Dimension [mm]	200x235X120	200x235X120	200x235X120
Weight [kg]	7.3	7.3	7.3
Operating temperature [℃]	10-40	10-40	10-40
Operating humidity [% RH]	<80	<80	<80

Blocks

H100-Pro/HC110-Pro/HCM100-Pro/HM100-Pro

Cat.No	18900401	18900402	18900403	18900404	18900405	18900406	18900407	18900420	18900423
Block types									
Capacity	0.5mL × 24	1.5mL × 24	2mL × 24	5mL × 8 round bottom	5mL × 8 cone bottom	15mL × 8	50mL × 4	0.2mL × 8 PCR strips or 0.2mL × 96 PCR microplate	ELISA microplate

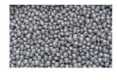
HB120-S

Cat.No											
	Standard	18900218	18900219	18900253	18900220	18900221	18900222	18900224	18900223	18900546	—
	Thin	18900274	18900275	18900276	18900277	—	—	18900278	18900279	—	18900504
Block types											
Capacity		0.2mL × 54	0.5mL × 40	1.5mL × 40	2mL × 40	5/15mL × 28	50mL × 8	0.2mL+0.5mL +1.5/2mL 18+18+18	microplate	5mL blood collection tubex45	0.2mL × 8 PCR strips or 0.2mL × 96 PCR microplate

Capacity	Cat. No.18900523
Two-in-one block, bead bath/water bath Adapt to S2	

Capacity	Cat. No.18900520
Aluminum beads	

HB105-S1 /HB105-S2 /HB150-S1 /HB150-S2

Cat.No	18900459	18900460	18900461	18900462	18900463	18900464	18900465	18900522	18900523	18900520
Block types										
Capacity	0.2mL × 30	0.5mL × 20	1.5mL × 20	2mL × 20	5mLx12	15mL × 12	50mL × 4	Dual purpose block,bead bath/water bath Adapt to S1	Dual purpose block,bead bath/water bath Adapt to S2	Aluminum beads

Mini HCL100/Mini HC100/Mini H100

Cat.No	18900414	18900415	18900416	18900428	18900417	18900426	18900427
Block types							
Capacity	0.2mL × 40	0.5mL × 24	1.5mL × 15	2mL × 15	5mL × 6	15mL × 4	50mL × 2
Diameter ×depth	6.4 × 20 mm	8.2 × 28.4mm	11.2 × 31mm	11 × 31mm	17 × 31mm	16.4 × 45mm	29 × 45mm

DWB20-S
Laboratory Water Bath

Features

- Microprocessor-controlled
- Rapid heating, constant temperature after reaching set temperature
- Superior temperature uniformity
- High temperature accuracy and overheating protection
- 304 stainless steel lid
- Temperature up to 80°C and corrosion resistant
- Safe and easy to maintain

Applications

General-purpose water baths are solidly built, with high performance, ideal for a wide range of lab applications for daily routine incubation in variety of research and testing laboratories. It is also used for tissue culture application, enzyme reaction studies, growth observation studies, fermentation analysis and various other general and specialized application in different laboratories.

Specifications	DWB20-S
Display	LED
Temperature range [℃]	Room temp.+5-80
Temperature stability at 37℃ [℃]	± 0.5
Temperature accuracy at 37℃ [℃]	± 0.3
Bath volume [L]	20
Overheating protection	yes
Extenal Temperature Senor	PT1000
Dimension [WxDXH]	667x349x357mm
Housing	Q235 Plastic panel
Parts touch water [including lid]	Stainless steel
Weight [kg]	16.2
Voltage,Frequency	220V, 50/60Hz
Heating power [W]	1000
Ambient temperature [℃]	+10-40
Ambient humidity [% RH]	<80

TC1000-G
Thermal Cycler Gradient

TC1000-S
Thermal Cycler Standard

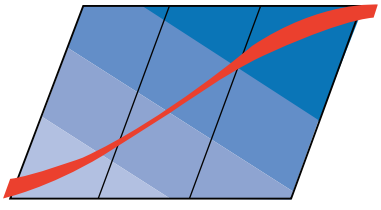
Elegant design, excellent precision and accurate, reproducible results and precise PCR optimization

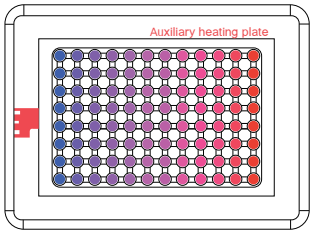
High performance with advanced thermal gradient technology, state-of-the-art electronics, precision peltier device and flexible user interface.

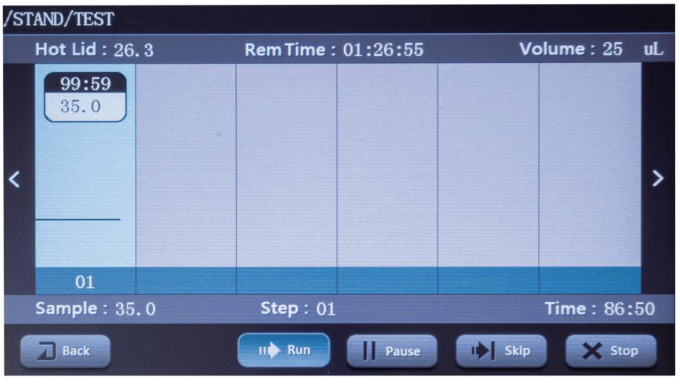
The TC1000G/S is an essential laboratory instrument for molecular biology with applications such as sequencing, gene cloning, gene expression,mutagensis, and it is also used in areas such as drug discovery, agriculture, food industry, etc.

Excellent temperature uniformity

Temperature gradient







Features

- High performance Peltier and independent heating segments improving temperature control
- Auxiliary heating mechanism diminishes the "edge effect" and enhance the temperature uniformity
- Wide touchdown PCR temperature range (-9.9°C~+9.9°C) and Long PCR time range (-9min 59s~+9min 59s)
- Gradient temperature setting optimizes temperature easily in the single run
- Color touch screen with user friendly interface helps to edit programs easily

More features

- Wide options of consumables: common PCR tubes, 8-well PCR strips and 96-well PCR plates can be used
- File customization, multi-file storage
- Power failure protection function, automatic program recovery
- Hot lid auto-off function: If module temperature is lower than 30 °C, the hot lid function will automatically turn off

LCD touch panel

Excellent temperature accuracy

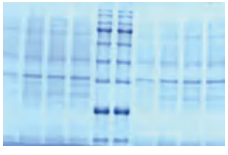
Technical Parameters	TC1000-G	TC1000-S
Sample Capacity	96X0.2mL PCR tube, 8X12 PCR plate or 96 well plate	96X0.2mL PCR tube, 8X12 PCR plate or 96 well plate
Heating Temperature Range /℃	4~105	4~105
Lid Temperature Range /℃	30~110	30~110
Temperature Display Accuracy /℃	±0.1	±0.1
Temperature Display Accuracy@55	±0.3	±0.3
Temperature uniformity@55℃	<0.3	<0.3
Max. Heating/Cooling Rate	5℃/Sec	5℃/Sec
Gradient Temperature Setting Range /℃	30~99℃	–
Gradient Range /℃	1~42℃	–
Adapter block material	Aluminum	Aluminum
Display	7" LCD 800x480	7" LCD 800x480
Input	Touch panel	Touch panel
User defined file system	Max. 30 segments 99 cycles max.16 folder and16 files each folder	Max. 30 segments 99 cycles max.16 folder and16 files each folder
Power off protection	Yes	Yes
Voltage,Frequency	100~120V/200~240V，50/60Hz	100~120V/200~240V，50/60Hz
Dimension[WxDxH]	280x370x250 mm	280x370x250 mm
Weight	11kg	11kg

GelSMART

Features

- Compact footprint (216 x 168 x 128 mm) with a viewing area of 10 x10 cm
- Simple operation of experiments and quick acquisition of results
- Blue LED light source for safe imaging with emission of 470nm
- Blue light illuminator is best for fluorescently stained nucleic acid and protein gels
- Adjustable epi-blue light source emits light with high intensity and minimum heat for better light control
- Quick visualization of fluorescently stained gels/membranes
- Filter holder can accommodate most popular smartphones/tablets
- Optional light-weight mobile App

ECO Safe staining



Coomassie blue stained SDS-PAGE

colony dish image

Applications

GelSMART gel imaging system can be used for qualitative analysis of nucleic acid and protein in purification and /or separation application, or colony counting application. The epi-blue light is harmless and cost saving with substantially longer life. It effectively excites many fluorescent dyes and stains without compromising the integrity of samples to be used for downstream applications, such as subcloning.

GelSMART provides fast access to acquire high quality images of electrophoresis gel or transfer membrane for analysis using smartphone/ tablet.

In addition, Coomassie blue stained SDS-PAGE and colony dishes can be observed with the white light plate mounted on GelSMART. Optionally, you can control the complete imaging system via an app on smartphone or tablet.

Applications

Light source cover

Light source

Smartphone

App

Observe and cut gels safe and sound with the amber filter shield

Specifications	GelSMART
Light Source	470nm epi blue light
White Light Plate	Yes
Protective filter sheild	Amber, using when observing or cutting gels
Viewing Area	10 x 10cm
Compatible Dye	DNA： ECO Safe, SYBR Safe, GelGreen Protein： Lightning Red, Silver/ Coomassie blue,SYPRO Ruby
Light Source (L x W x H)	216 x 168 x 54 mm
Light Source Cover (L x W x H)	211 x 161 x 108 mm
Total Size (L x W x H)	216 x 168 x 128 mm
Weight	1.2 Kg
Power Supply	12V / 1.5A AC power adapter
Optional app	for Android 4.4 and above or iOS9.0 and above