Thermal Control

TC1000-G
Thermal Cycler Gradient

TC1000-S
Thermal Cycler Standard

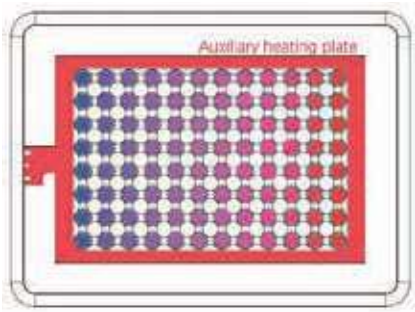
Thermal cycler is essential laboratory instrument in the field of molecular, research such as gene chip, gene detection, gene cloning, gene expression, and applied market like drug discovery, agriculture, food industry, etc.

Features

1 **High performance long life Peltier and independent control circuits for different heating segments implement accurate temperature control;**

2 **Auxiliary heating mechanism diminishes the "edge effect" and enhance the temperature uniformity**

Temperature uniformity＜0.3°C



3 **Wide touchdown PCR temperature range (-9.9°C~+9.9°C) and Long PCR time range (-9min59s~+9min59s)**

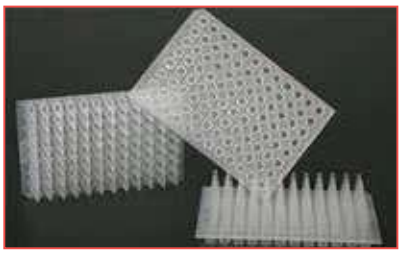
4 **Gradient temperature setting supported, saving time and high efficiency.**

5 **Running process can be controlled at will**

View the saved program in the operation, click the "Status" button to enter the running interface.

6 **User friendly interface on 7 inch color touch screen enable you edit the program very simple. All parameters is very visible for choice.The PCR touch screen pen improves the operation experience and reduces the cross contamination risk.**

7 **It can be adapted to multi-brand common PCR tubes, 8-well PCR strips and 96-well PCR plates.**



8 **More features**

File customization, multi-file storage,
Power-off protection function, automatic program recovery,
Hot lid auto-off function: If the module temperature is lower than 30°C, the hot lid function will automatically turn off.

Specifications	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 /°C	4~105	4~105
Lid Temperature Range /°C	30~110	30~110
Temperature Display Accuracy /°C	±0.1	±0.1
Temperature Display Accuracy@55°C	±0.3	±0.3
Temperature uniformity@55°C	<0.3	<0.3
Max. Heating/Cooling Rate	5°C/Sec	5°C/Sec
Gradient Temperature Setting Range /°C	30~99°C	-
Gradient Range /°C	1~42°C	-
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 and 16 files each folder	Max. 30 segments 99 cycle max.16 folder and 16 files each folder
Power off protection	Yes	Yes
Power Supply	100~120V/200~240V,50/60Hz	100~120V/200~240V,50/60Hz
Dimension[WxDxH]	280x370x250 mm	280x370x250 mm
Weight	11kg	11kg

As a necessary choice for quantitative analysis of molecular biology, real-time PCR system has been widely used in various fields such as scientific research, clinical detection and diagnosis, quality and safety testing, and forensic applications.

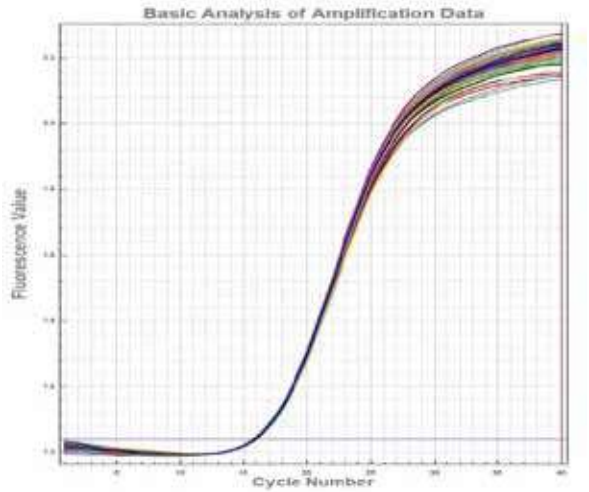
Real-Time PCR System

Accurate 96

Features

- Up to 6 fluorescence detection channels allowing multiplex PCR.
- Effectively reduce multi-color crosstalk and edge effect, no ROX correction required.
- New optical scanning detection system
- Innovative scanning method and time-resolved signal separation technology
- Unique edge temperature compensation technology
- User-friendly software

Channel 6	Channel 5	Channel 4
NED/Cy3/TAMRA	ROX/Texas Red	FAM/SYBR
VIC/HEX/TET/JOE	CY5/Quasar 670	FAM/SYBR
Channel 3	Channel 2	Channel 1



Technical Parameters

Temperature control system		Detection system	
Sample capacity	0.1ml PCR tubes×96, 8×12 PCR plate or 96 well plate ×1	Excitation light source	4/6 monochrome high efficiency LEDs
Reaction volume	10-50 μl	Detection device	PMT
Thermal cycle technology	Peltier	Detection mode	Time-resolved signal separating technology
Max. Heating/Cooling rate	6.0° C/s	Excitation/detection wavelength range	455-650nm/510-715nm
Heating temperature range	4 – 100 °C	Fluorescent channels	4/6 channels
Temperature accuracy	± 0.2°C	Supported dye	FAM/SYBR Green, VIC/JOE/HEX/TET, ABY/NED/TAMRA/Cy3, JUN, ROX/ Texas Red, Mustang Purple, Cy5/LIZ
Temperature uniformity	±0.2°C @60°C , ±0.2°C @95°C	Sensitivity	Single copy gene
Temperature gradient setting range	30–100°C	Resolution	1.33 folds copy number difference can be distinguished in single-plex qPCR
Temperature gradient difference setting range	1 – 36°C	Dynamic range	10 orders of magnitude copies

HB120-S

Dry bath

Features

- A wide range of temperature control up to 120°C
- Timer control up to 99+ hour
- Various types of optional blocks are available
- Overheating protection
- Lid for protection and heat preservation

Specifications	HB120-S
Functions	Heating
Temperature range	Room temp.-120°C
Temperature setting range	15°C~120°C
Temperature control accuracy [at 37°C]	± 0.5°C
Temperature uniformity	± 0.5°C
Max. heating rate	5.5°C/min
Timer	0min-99h59min
Screen	LED
Overheating protection	140°C
Adapter block material	aluminum
Voltage, Frequency	100-120V/220-240V,50Hz/60Hz
Power	160W
Dimension[W×D×H]	175 x 290 x 85mm
Weight	3kg

Adapter block selection

Overheating protection

Timer

LED display

Cat.No.	Block types	Capacity	Diameter Depth
Standard:18900218 Thin:18900274		0.2mLx54	6.4mm 15mm
Standard: 18900219 Thin: 18900275		0.5mLx40	8.2mm 26.4mm
Standard: 18900253(1.5mL) 18900220(2mL) Thin: 18900276(1.5mL) 18900277(2mL)		1.5mLx40 2mLx40	11mm 34.7mm
Standard:18900221		5/15mLx28	17mm 48mm
Standard:18900222		50mLx8	29.8mm 48mm
Standard:18900224 Thin:18900278		0.2mL+0.5mL+1.5/2mL 18+18+18	-
Standard:18900223 Thin:18900279		96 or 384 well plate	-
Thin:18900504		8 PCR strips and 96 PCR microplate	
18900523		Two-in-one block, bead bath/water bath	No more concern of tube sizes

HB60-S

Dry bath

Features

- Adjustable temperature from ambient to 60°C;
- Excellent temperature control accuracy and uniformity to protect samples and ensure precision result of tests;
- Timer function and continuous function are available to meet different applications;
- Fast heating rate to improve the efficient workflow;
- Especially suitable for sample preparation of semiautomatic biochemistry analyzer;
- 5ml and 10ml mixed heating block;
- Overheating protection.

Specifications

	HB60-S
Voltage [VAC]	200~240
Frequency [Hz]	50/60
Power [W]	160
Capacity	5ml×30+10ml×8pcs
Heating temperature range	5 gears: 25°C, 30°C, 37°C, 45°C, 60°C
Temperature display	LED
Control accuracy	± 0.5°C
Temperature uniformity	± 0.3°C
Max. heating rate	5.5°C /min
Safety temperature	80 °C
Time setting range	0min -99h59min
Operation type	Continuous/ timed operation
Dimensions[W×D×H]	175×290×85mm
Weight[kg]	2.5

Overheating protection

Timer

LED display

Block types	Capacity	Diameter Depth
	5/10mLx38	Φ13m/15.25mm 33mm

HB105-S1/HB105-S2
HB150-S1/HB150-S2
Dry bath

Features

- A wide range of temperature control up to 105°C/150°C.
- Overheating protection.
- Sound reminder function.
- External temperature sensor PT1000
- Block equipped with a lid for heat preservation and prevent pollution.
- Knob adjustment is easy to operate.

Cat.No.	Block types	Capacity	Diameter Depth
18900459		0.2mL×30	6.4×15mm
18900410		0.5mL×20	8.2×26.4mm
18900461		1.5mL×20	11×34.7mm
18900462		2mL×20	11×34.7mm
18900412		5/15mL×12	17×48mm
18900413		50mL×4	29.8×48mm
18900522		Two-in-one block, bead bath/water bath Adapt to S1	
18900523		Two-in-one block, bead bath/water bath Adapt to S2	
18900520		Aluminum beads	




Specifications	HB105-S1	HB105-S2	HB150-S1	HB150-S2
Screen	LED	LED	LED	LED
Temperature range[°C]	Room temp+5~105	Room temp+5~105	Room temp+5~150	Room temp+5~150
Temperature setting range [°C]	25~105	25~105	25~150	25~150
Temperature control accuracy[°C]	25-90：±0.3 90-105：±0.6	25-90：±0.3 90-105：±0.6	25-90：±0.3 90-150：±0.6	25-90：±0.3 90-150：±0.6
Temperature uniformity@37°C [°C]	±0.2	±0.2	±0.2	±0.2
Power [w]	100	200	100	200
Time setting range	0~99h59min	0~99h59min	0~99h59min	0~99h59min
External sensor	Yes	Yes	Yes	Yes
USB interface	Yes	Yes	Yes	Yes
Power supply	110/220V, 50/60Hz	110/220V, 50/60Hz	110/220V, 50/60Hz	110/220V, 50/60Hz
External dimension[mm]	290x210x120	290x210x120	290x210x120	290x210x120
Weight[kg]	3.2	3.2	3.2	3.2
Operating temperature[°C]	+10~40	+10~40	+10~40	+10~40
Operating humidity [% RH]	<80	<80	<80	<80

Mini Dry bath is portable, compact and convenient.It is useful for rapid and uniform heating of biological samples, in applications like preservation and denaturation of nucleic acids and proteins and many other applications.

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

Mini HCL100
Mini HC100
Mini H100
Dry Bath

Features

- Light in weight
- LCD display of both temperature and time.
- Rapid calibration support
- Overheating protection
- Optional blocks with different capacities are available
- Safe and stable
- USB interface to save the data
- Mini HCL100 with hot lid provided to preserve the generated heat

Specifications

	Mini HCL100	Mini HC100	Mini H100
Display	LCD	LCD	LCD
Temperature setting range[°C]	0-100	0-100	25-100
Temperature range [°C]	Room temperature-23~100	Room temperature-23~100	Room temperature+5~100
Temperature control accuracy[°C]	±0.5	±0.5	±0.5
Temperature display accuracy[°C]	0.1	0.1	0.1
Minimum time taken for heating(25°C-100°C)	≤20min	≤20min	≤20min
Minimum time for cooling (20°C-0°C)	≤25min	≤25min	/
Max. Heating Rate	8°C /min	8°C /min	6.5°C /min
Max. Cooling Rate	3°C /min	3°C /min	/
Time setting range	0-999min/0-999sec	0-999min/0-999sec	0-999min/0-999sec
No. of programs in memory	9(2steps for each)	9 (2steps for each)	9(2steps for each)
Rapid calibration	Support	Support	Support
USB interface	Support	Support	Support
Error code reminder	Support	Support	Support
External dimension [mm]	110x162x140	110x162x140	110x162x140
Overall weight [kg]	≤1	≤1	≤1
Power supply	DC12V,100-240V, 50/60Hz	DC12V,100-240V, 50/60Hz	DC12V,100-240V, 50/60Hz
Power[w]	60	60	60
Operating temperature[°C]	+10-40	+10-40	+10-40
Operating humidity [% RH]	≤80	≤80	≤80

HC110-Pro

Thermo control with cooling

Features

- Precise temperature control for heating and cooling
- Flexible adapter selection
- Programmable
- Compatible with various tubes
- Quick interchange of blocks with magnet adhesion technology and without any tools
- Block equipped with a lid for heat preservation
- Three-point temperature calibration

Cat.No.	Blocks	Speed	Capacity	Diameter x Depth
18900401		1500rpm	24x0.5mL	8.1x26mm
18900402		1500rpm	24x1.5mL	10.9x30.8mm
18900403		1500rpm	24x2mL	10.9x30.8mm
18900404		1500rpm	8x5mL (round bottom)	13.6x42mm
18900405		1400rpm	8x5mL (cone bottom)	17x51.5mm
18900406		800rpm	8x15mL	16.9x80mm
18900407		600rpm	4x50mL	29.6x80mm
18900420		1500rpm	0.2mLx96 PCR plate	-
18900423		1500rpm	microplate	-

Excellent temperature accuracy

Programmable

Adapter self recognition

Specifications

Specifications	HC110-Pro
Functions	Heating & cooling
Temperature range	Heating: room temp. - 110°C Cooling: room temp. - below room temp. 25°C
Temperature setting range specifications	-5~110°C
Temperature control accuracy[@20–45°C]	± 0.5°C
Temperature uniformity[@20–45°C]	± 0.5°C
Max. heating rate	5.5°C/min
Max. cooling rate	2.5°C/min (100°C-room temp.) 0.5°C/min (below room temp.)
Time setting range	0~99h30min
Screen	TFT
Program	9
Overheating protection	150°C
Adapter block material	aluminum
Voltage, Frequency	100–240V,50/60Hz
Power	200W
Dimension[W×D×H] (without the heating block)	200×235×120mm
Weight	7.3kg

HCM100-Pro
Thermo Mix

HM100-Pro
Thermo Mix with heating

H100-Pro
Thermo control

Features

- Excellent mixing result
- Stable and wide range of speed adjustment
- Precise temperature control for heating and cooling
- Flexible adapter selection
- Programmable
- Compatible with various tubes
- Quick interchange of blocks with magnet adhesion technology and without any tools
- Block equipped with a lid for heat preservation
- Three-point temperature calibration

The Thermo Mix series allow for precise and efficient heating and mixing, as well as excellent temperature accuracy and uniformity, offering a wide range of applications, such as gene synthesis, gene purification, gene and protein denaturation, enzymatic reaction, bacterial growth, etc.

Blocks self recognition

Specifications	HCM100-Pro	HM100-Pro	H100-Pro
Functions	Heating, cooling & mixing	Heating & mixing	Heating
Temperature range	Heating: room temp. - 100°C Cooling: room temp. - below room temp. 15°C	Heating: room temp. - 100 °C	Heating: room temp+5 °C. - 100°C
Temperature setting range specifications	0.1~100°C	15~100°C	15~100 °C
Temperature control accuracy[@ 20–45°C]	± 0.5°C	± 0.5°C	± 0.5°C
Temperature uniformity[@ 20–45°C]	± 0.5°C	± 0.5°C	± 0.5°C
Max. heating rate	5.5°C/min	5.5°C/min	5.5°C/min
Max. cooling rate	5°C /min(100°C-room temp.) 0.5°C/min(below room temp.)	-	-
Mixing frequency	200-1500rpm	200-1500rpm	-
Mixing orbit	3mm	3mm	-
Time setting range	0~99h30min	0~99h30min	0~99h30min
Screen	TFT	TFT	TFT
Program	9	9	9
Overheating protection	150°C	150°C	150°C
Adapter block material	aluminum	aluminum	aluminum
Voltage, Frequency	100-240V,50/60Hz	100-240V,50/60Hz	100-240V,50/60Hz
Power	200W	200W	200W
Dimension[W×D×H] (without the heating block)	200×235×120mm	200×235×120mm	200×235×120mm
Weight	7.3kg	7.3kg	7.3kg