



# Instruments

Catalog 2018-2019

 **BIOER  
TECHNOLOGY**

Address: 1192 Bin An Rd, Hi-tech (Binjiang) District, Hangzhou, 310053, P.R. China  
Phone: +86-571-87774567(Main Line) Fax: +86-571-87774553/87772210  
Direct Phone: +86-571-87774575 (Overseas Department)  
<http://www.bioer.com.cn> Email: [overseas@bioer.com.cn](mailto:overseas@bioer.com.cn)

\*All rights reserved please refer to actual products for true colour representation.

 **BIOER  
TECHNOLOGY**

# Company Profile

BIOER TECHNOLOGY CO., LTD is a Professional enterprise, major in development, production, marketing and service for life science instruments and reagents. BIOER owns an advanced factory with the total occupation area of 26000M<sup>2</sup> and a floor area of 15000 M<sup>2</sup>. BIOER has high-class establishments such as 10000 class super clean workshop, GMP reagent workshop, Laboratory Center, and so on. BIOER has won Germany's TUV ISO9001 and ISO13485 certifications.

The predecessor of BIOER is R&D department of Ferrotec China. With the development of business, BIOER became an independent company departing from Ferrotec Group(China) in 2002. Ferrotec is one of the largest high-quality Peltier suppliers in the world.

With the development for 20 years, BIOER has become the largest PCR instruments and related equipments supplier in Asia area, and also become one of the world's largest suppliers of PCR instruments. BIOER has established and extensive worldwide sales network. BIOER has established comprehensive and good relation of cooperation with many life science suppliers in all of the world.

With the business philosophy as "Diligent, Determined, Pioneering, Excellent", BIOER will continue our efforts, carry on the past and open a way for future, thus to make greater contribution in the life sciences field for human health.

*Diligent . Determined . Pioneering . Excellent*



# Table of Contents

	<b>Real-Time PCR Detection System</b> LineGene9600 Plus LineGeneK Plus LineGeneMINI	<b>Chapter 1</b>
	<b>Thermal Cycler</b> GeneMax GeneTouch GeneTouch Plus Galaxy XP Cycler LifeECO LifeTouch GeneQ	<b>Chapter 2</b>
	<b>Dry Bath</b> Thermo Shaker ThermoCell Cooling & Heating Block ThermoQ ThermoCell Mixing Block	<b>Chapter 3</b>
	<b>Water Bath Series</b> 4L/8L/12L Water Bath Constant Low Temperature Bath Shaking Bath Others	<b>Chapter 4</b>
	<b>Sample Preparing</b> GenePure Plus	<b>Chapter 5</b>
	<b>Others</b> Gene-Lab Mini-Run Hatch-Master	<b>Chapter 6</b>



# LineGene Series

## Real-Time PCR Detection System

- ▶ Peltier technology: Solid-state, thermoelectric heating and cooling unit for improved control and durability.
- ▶ Bottom detection system provides greater accuracy and sensitivity of measurements.
- ▶ High-powered photomultiplier provides sensitive detection.
- ▶ Long life LED excitation light source does not need maintenance or preheating.
- ▶ Hot-lid feature allows oil-free operation.
- ▶ Advanced PID control ensures the accuracy of temperature control.



1  
Chapter

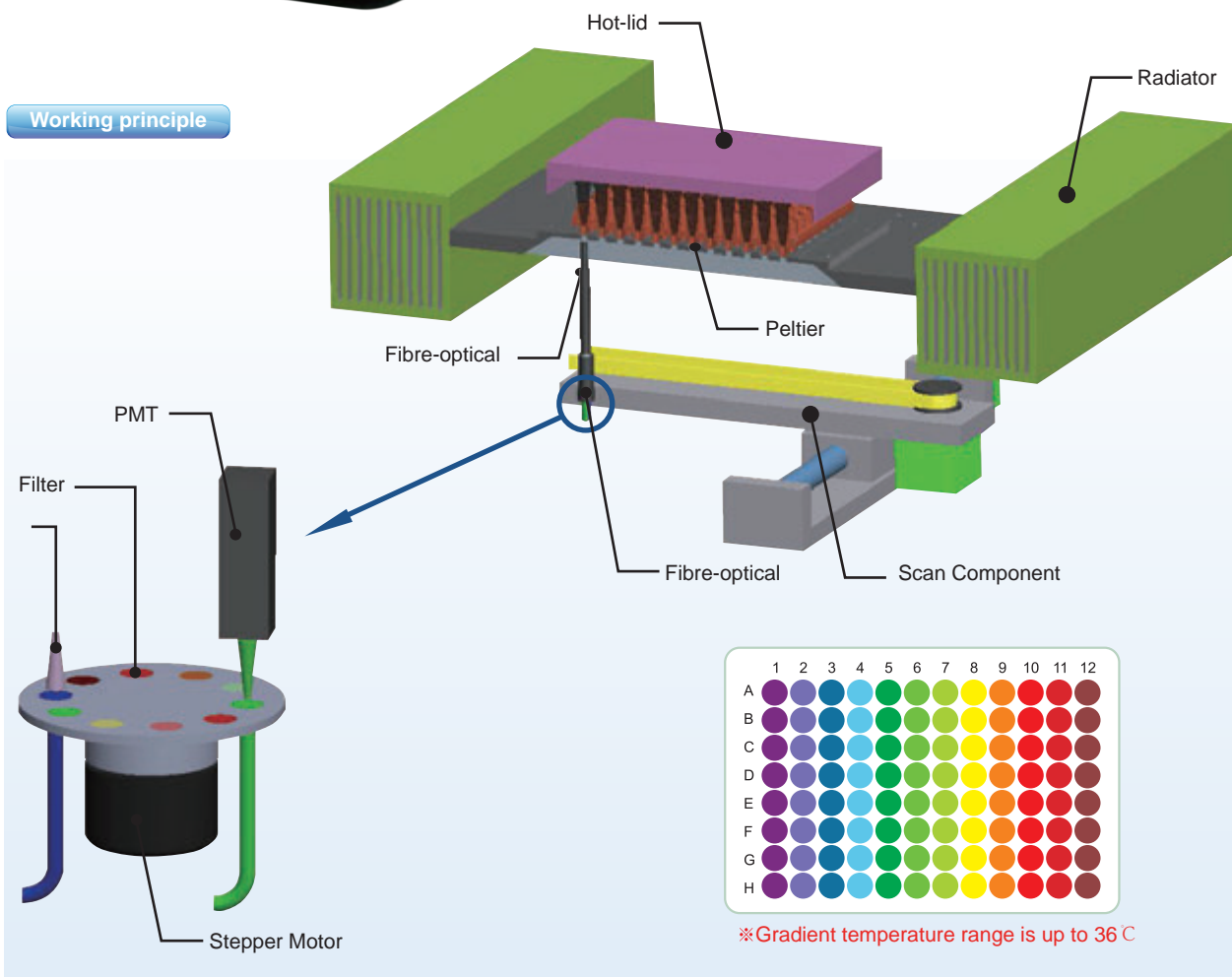
LineGene 9600 Plus



LineGene 9600 Plus is the newest product of Bioer's real-time PCR detection system family. Based on LineGene family's tradition, LineGene 9600 Plus performs 96 sample capacity, 5 detection channels and wider temperature range.

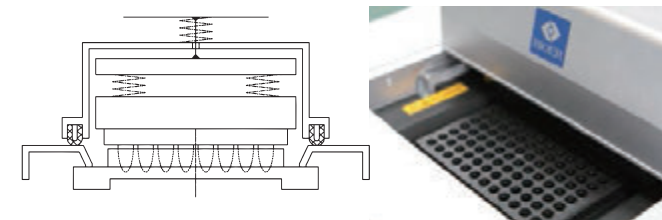
Adopting FERROTEC newest Peltier, fiber optic technology and a new global wide range power supply, the highly improved instrument is available for a variety of scientific research and clinical applications.

Working principle

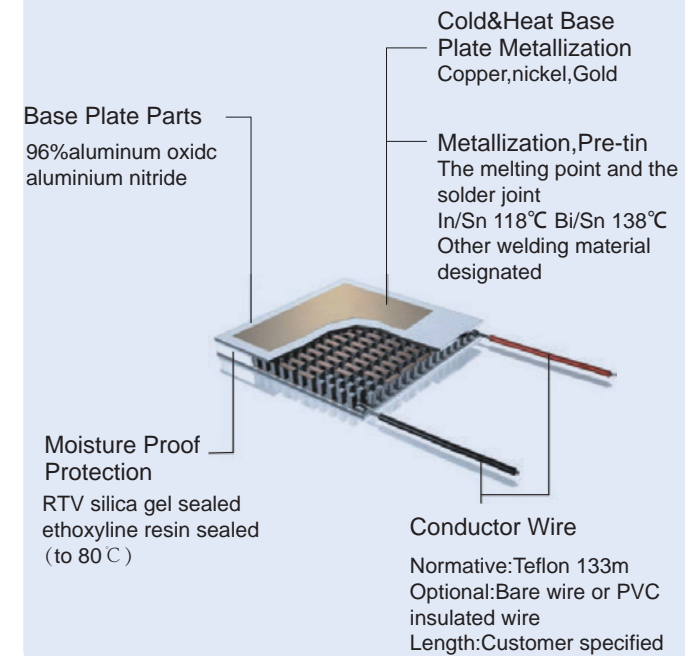


Hardware article

The hot-lid applies a new method of frame pressing. Six springs are distributed on the block in regular intervals. The pressure frame presses on the springs and the springs force on the block to ensure the uniformity of pressure. Moreover, the hot-lid has a perfect sealing design. The new design of pressure frame has rubber pad embedded around the edge, and it tightly wraps the aluminum heating plate and forces on it to create a sealed space around the block. This new design avoids the convection of hot and cold air around the block so that the good dynamic uniformity of block temperature is achieved.

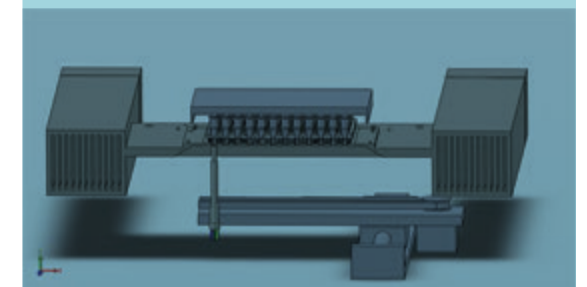


TE refrigeration using 72 long life series, the process in TE base plate and the semiconductor substrate using the new adhesive technology, make the TE also work normally under high humidity environment, and greatly improve the service life of the TE piece at the same time, through the experiment testing TE refrigeration service life greatly increased.



The one at the bottom of the unique scanning, effectively prevent interfere with each other.

- ▶ Use long life of LED light source. It doesn't need to maintain.
- ▶ Advanced optical fiber transmission technology makes photoelectric detection system more sensitive and reliable.
- ▶ Precision optical path system combined with ultra high sensitivity of PMT system, makes the fluorescence detection more accurate and sensitive.

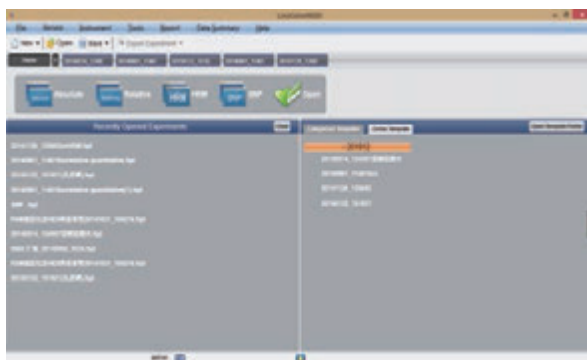




Product software

Powerful software system

- English interface, flexible program setting, comprehensive analysis and reporting functions, all the parameters can be stored
- can print multiple or single sample report
- remote network provides the most advanced technical support for LineGene9600 Plus real-time PCR detection system
- support Windows tablets
- support RS232, USB, Bluetooth interface



Software Interface

The LineGene 9600 Plus software includes Absolute Quantification, Relative Quantification, SNP Analysis, HRM Analysis function modules. With the preset programs, the user can set up experiments simply and fast.



Many software programs give customers a variety of operating experience and meet customers' various selection.

Operation interface



We can see the real-time temperature curve, application process and real-time fluorescence signal to master the experimental progress.

Software analysis interface



Three different algorithms ensure the accuracy of Ct value analysis. The user can use standard reference set up in experiment to generate standard curve and analyze the results or import external standard curves to analyze and save experiment resources.

Consolidated report



Basic experiment information, experiment process, plate diagram, and amplification curve can be put into the report, which makes it clear and unambiguous.

QC report



Safeguarding the accuracy of your experiments.

Technical parameters

Product Name	LineGene9600 Plus Fluorescence Quantitative PCR Detection System			
Model	FQD-96A			
Sample Capacity	96-Well PCR plate, 12x8-strip, 96x0.2ml(Bottom Transparent)			
Dynamics Range	1~10 <sup>10</sup> Copies			
Excitation Wavelength	300-800nm			
Emission Wavelength	500-800nm			
Detected Fluorescence	F1:FAM,SYBR Green I ; F2:VIC,HEX,TET,JOE, CY3,NED,TAMRA;	F1:FAM,SYBR Green I ; F2:VIC,HEX,TET,JOE, CY3,NED,TAMRA; F3:ROX,TEXAS-RED,	F1:FAM,SYBR Green I ; F2:VIC,HEX,TET,JOE, CY3,NED,TAMRA; F3:ROX,TEXAS-RED, F4:CY5;	F1:FAM,SYBR Green I ; F2:VIC,HEX,TET,JOE, CY3,NED,TAMRA; F3:ROX,TEXAS-RED, F4:CY5; F5:CY5.5;
Block Temp. Range	4~105 °C (Minimum Increment: 0.1 °C) SOAK Low Temp. Conservation Function			
Heating/Cooling Rate	5.0 °C/s(max)			
Temp. Control Accuracy	≤±0.1 °C			
Temp. Fluctuation	≤±0.1 °C			
Temp. Uniformity	≤±0.3 °C			
Temp. Control Mode	BLOCK/Tube Simulation Mode (Automatic Control Based On Sample Volume)			
Sample Volume Range	5~100µL			
Gradient Temp. Range	1~36 °C			
Hot-lid Temp. Range	30~110 °C (Adjustable, Default 105 °C), Automatic Hot-lid			
Fluorescence Detection Repeatability	5%			
Scan Mode	Entire Plate or Designated Line			
Program	Max 20 Segments for Each Program, Max 99 Cycles			
Operation Mode	Continuous			
Scan Period	5.5s			
Feature Function	Absolute Quantification·Relative Quantification·SNP Analysis; Data Automatic Analysis; Melting Curve Genotyping; Gradient; HRM; Multi-channel Crosstalk Correction; Background Correction; Automatic Gain; Customized Parameters;			
Operation System	Microsoft: Windows7/windows 8.1 Software: Excel2000/2002/2003/2007/2012			
PC Configuration	Memory: 2G Hard Disk: 32GB			
Power Supply	100-240V~ 50/60Hz 600W			
Dimension(LxWxH)	410mmx386mmx352mm			
Socket	USB Adapter, RS232 Adapter, Bluetooth Adapter			
Authentication	Ferrotec Peltier/CE (EMC & LVD)/IVD/RoHS2/PICC product quality liability insurance			

## LineGene K Plus

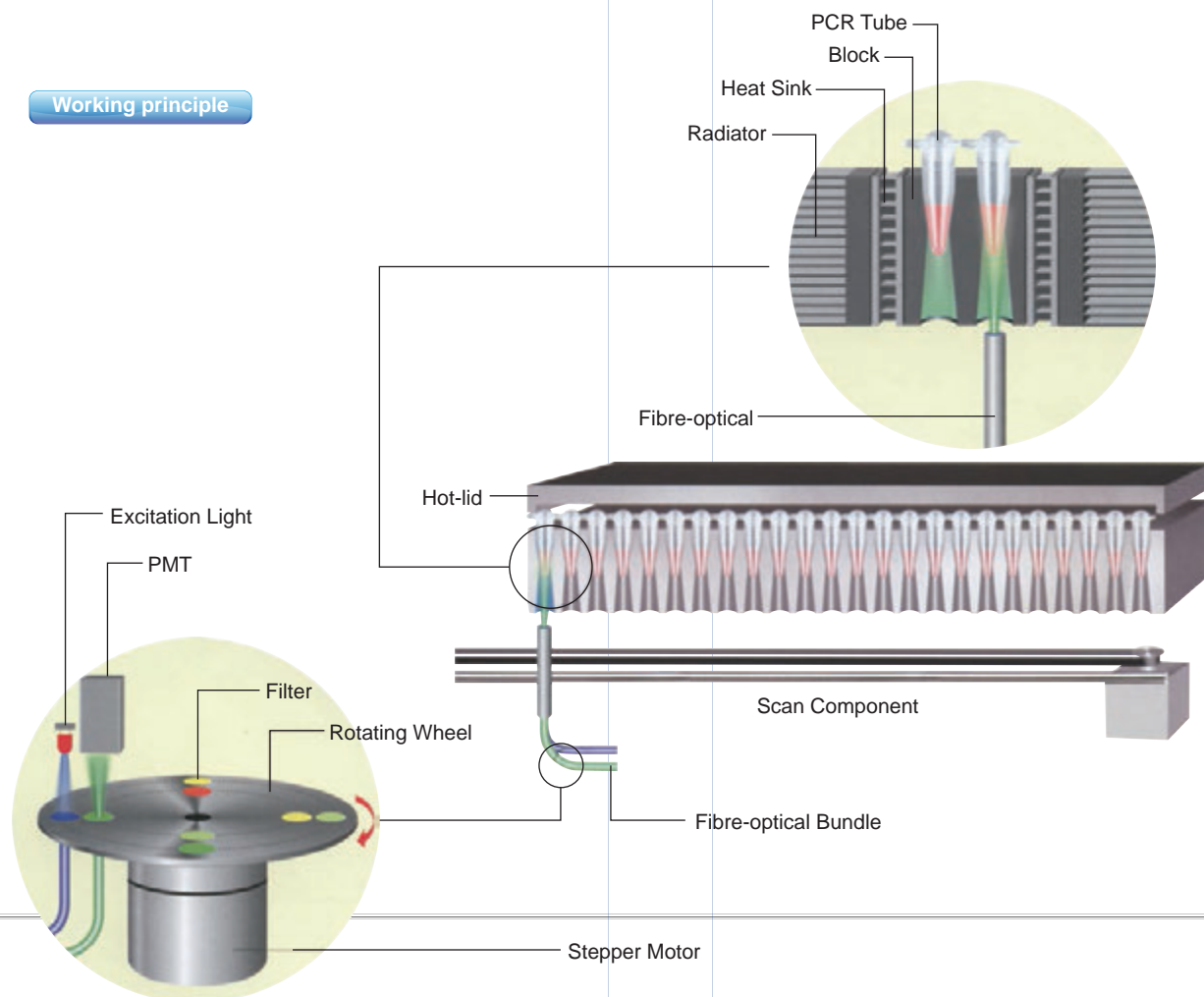


LineGene K Plus is Bioer's latest realtime PCR detection system.

LineGene K Plus has a faster heating and cooling rate, better temperature control accuracy, temperature uniformity and the machine stability with the specially-made Peltier by Ferrotec, advanced optical fiber technology, the new wide voltage power supply, its unique block radiating patent technology and the bottom detection patent mode. It can be used with Windows Tablet PC. This new touch screen operation will bring you the ultimate experience of human-computer interaction.

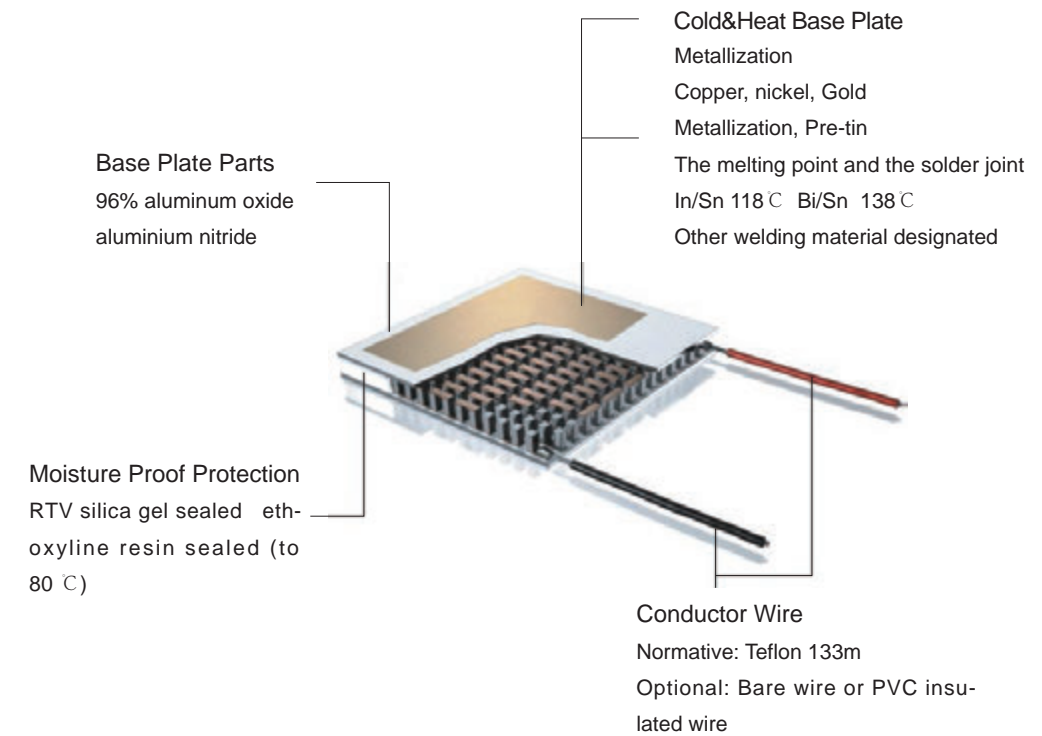
The new and innovative LineGene K Plus Real-time PCR detection system can adapt to different levels of customer requirements, which can fully meets various requirements of scientific research and clinical applications.

### Working principle

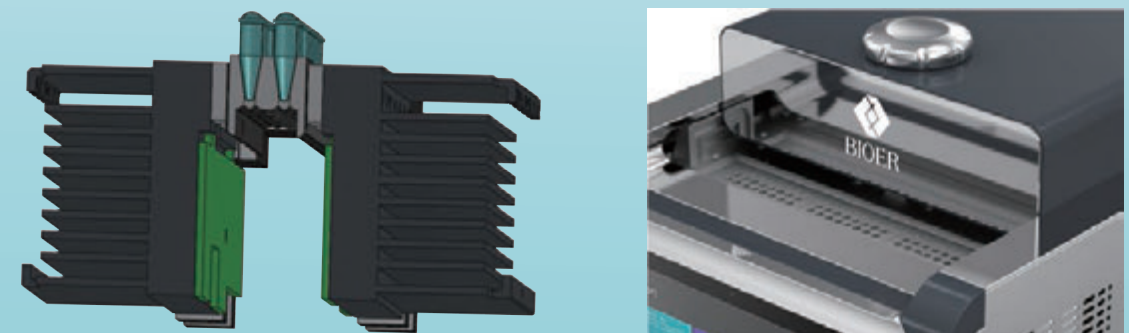


### Precise temperature control system

By adopting unique side double Ferrotec heating method, add heat transmission area, speed up heat transmission, improve the rate of temperature increase. Meanwhile, novel three-block design ensures temperature uniformity of each block controlled independently without interruption.



- Advanced thermoelectric refrigeration technology and super fast heat cycle system ensure fast and stable heating and cooling.
- Multipoint temperature control ensures better temperature uniformity for 48 sample holes.
- SOAK ensures low temperature conservation of PCR kits.
- Hot lid realizes PCR oil-free operation.
- Auto hot lid, no need for manual open/close, ensures constant pressure regarding various heights' PCR tubes.



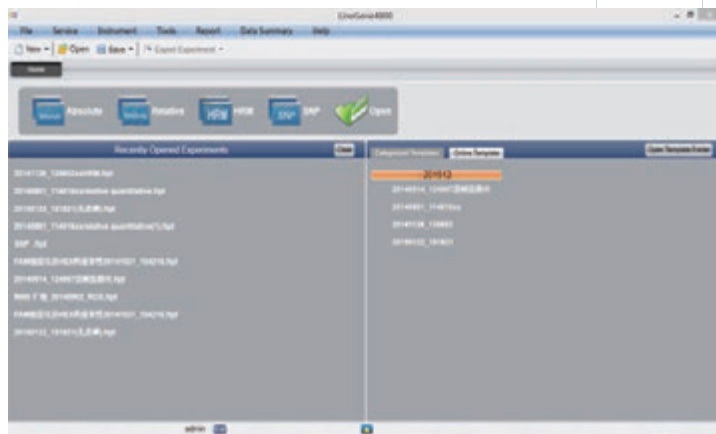


## Powerful software system

- Chinese/English interface, flexible program setting, comprehensive analysis and report function, all the parameters can be stored
- Multiple or single report printing is supportive
- Automation, accuracy and in-time service provided by long-distance network, give the most advanced technology support for 48 well quantitative detection system.
- Support Windows Tablet
- Support connecting modes of RS232, USB, Bluetooth



● Tablet software interface



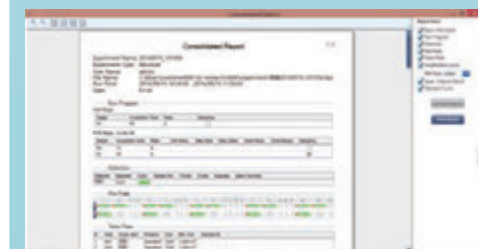
- Main interface covers simplified settings of quantification, relative quantification, SNP, HRM function, besides, more functions like, open latest file and classified template. It's more convenient to search previous experiments and create a new experiment through classified template.



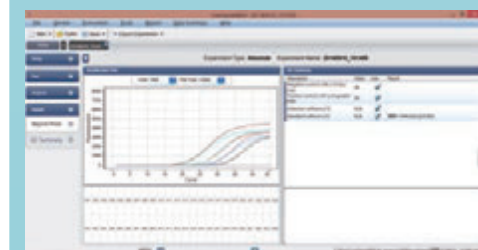
- On the software running interface, real-time temperature curve, we can see program running progress and real-time fluorescence, to better master the whole experiment progress.



- On the experiment result analysis interface, three Ct value calculation methods analyze the Ct value accurately. It can analyze experiment result by standard curve from standard or by importing outside standard curve, to reduce experiment time.

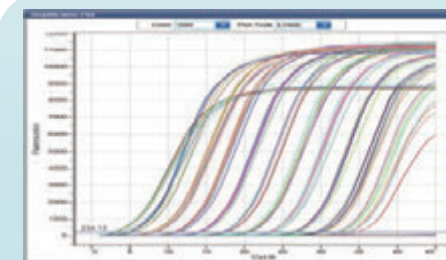


- Consolidated report includes basic experiment information, programs, reacting plate picture, amplification curve. All the experiment data is clear at one glance.

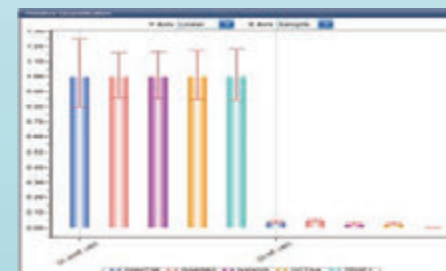


- Quality control report ensures the experiment accuracy.

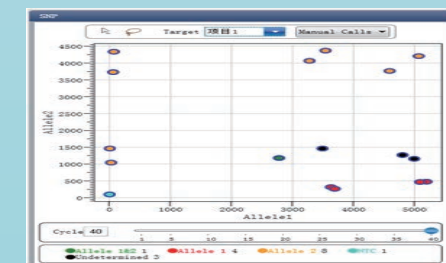
## Technical parameters of product



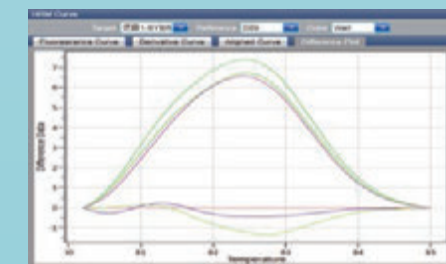
- Absolute Quantification  
Repeating the experiments of 10 times concentration gradient. The results show good reproducibility and high sensitivity.



- Relative Quantification  
The detected genes: GAPDH(Endogenous Control), NANOG, OCT3/4, DNMT3B, GABRB3, TOGF1. The results show that the relative content of each gene is detected accurately.



- SNP  
The results shows that different genotypes are obviously distinguished.



- HRM  
2 templates with one base pair difference in triplicate. The difference is easily recognized.



## Specifications

Product name	LineGene K Plus Real-Time PCR Detection System			
Model	FQD-48A			
Certificate	Ferrotec Peltier/CE/MET/RoCH2/PICC product quality liability insurance			
Sample Capacity	48x0.2ml (Single tube or Strips 8 PCR tubes)			
Detected Fluorescence	F1	F2	F3	F4
Dye	FAM, SYBR Green I	VIC, HEX, JOE, Cy3 TAMRA	ROX, TEXAS-RED	Cy5 Quasar 670
Block Temp. Range	4~105 C (Min setting scale is 0.1 C)			
Heating/Cooling Rate	C/s(max)			
Temp. Control Accuracy	±0.1 C (55 C typical value)			
Temp. Fluctuation	±0.1 C			
Temp. Uniformity	±0.3 C			
Hot-lid Temp. Range	70 C ~ 110 C (Adjustable, Default 105 C, Automatic Hot-lid)			
Operation Mode	Three independent temperature control blocks, 0.1~6 C Temperature difference between blocks.			
Temp. Control Mode	Continuous			
Feature Function	Absolute Quantification, Relative Quantification, SNP Analysis, Melting Curve Genotyping, Gradient, HRM, Multi-channel Crosstalk Correction, Background Correction, Automatic Gain, Customized Parameters.			
Operation System	Windows7/Windows8/Windows 10			
PC Configuration	Surface Pro series PC/Laptop			
Socket	USB adapter, RS232 adapter, Bluetooth adapter			
Power Supply	100-240V ~ 50/60Hz 600W			
Dimension	384mmx353mmx348mm			
Weight	13kg			

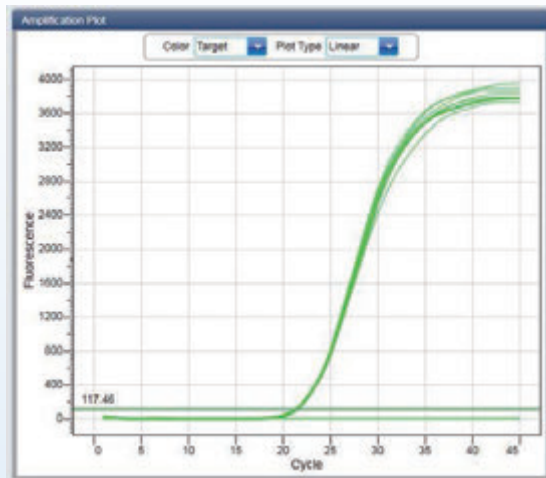
LineGene MINI



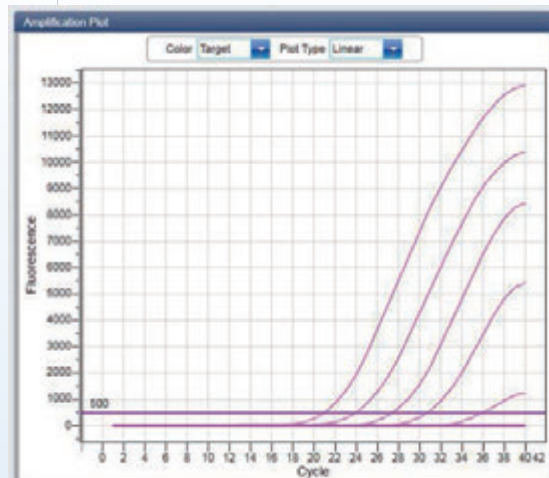
LineGene MINI is a portable real time PCR detection system which is developed in response to diversified and highly complicated application environment. This product adopts the small capacity design for 16 single tubes & strip tubes, which can be powered by battery pack. With the customized TE module, new optical path design and top scanning mode, LineGene MINI is designed to be a new generation of Bioer real time PCR system.

Product features

- 16 single tubes & strip tubes
- Customized TE module
- Battery pack can be used as power supply
- Top scanning mode
- Applicable in diversified and highly complicated application environment



Experimnt Curve Under Same Concentration



Gradient Concentration Curve

Technical parameters

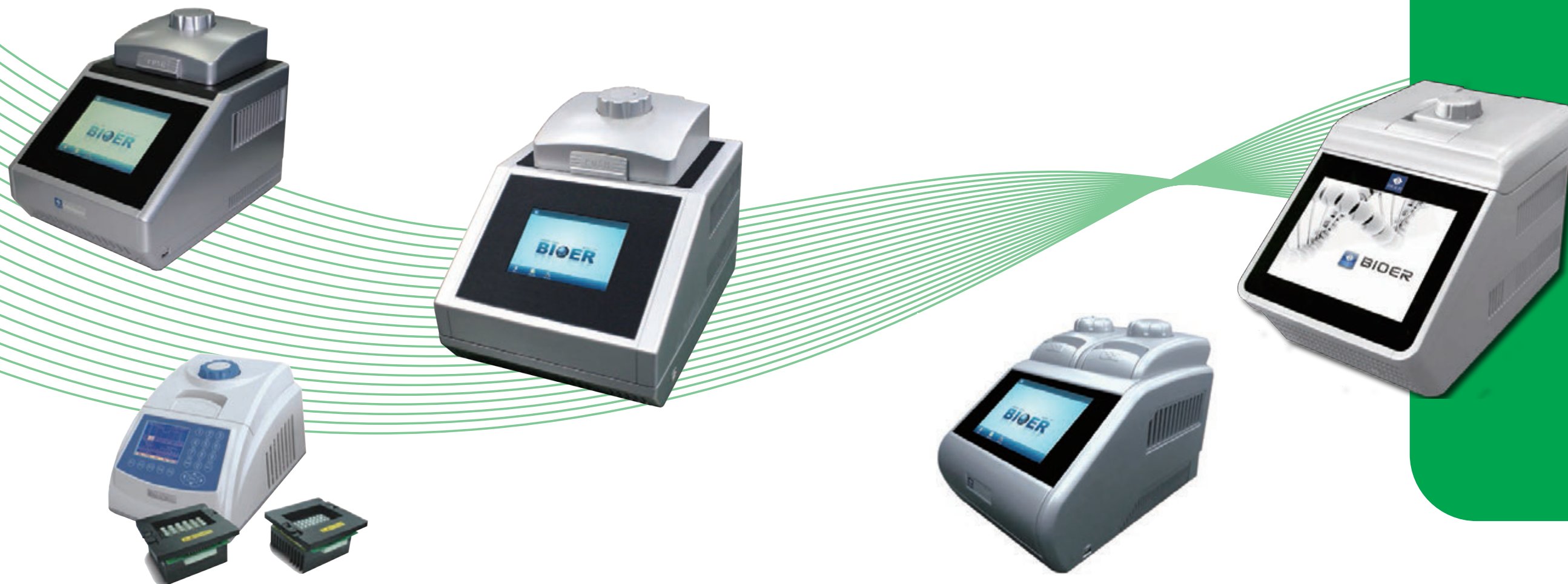
Model	FQD-16A						
Sample Capacity	16 × 0.2ml tubes (flat and transparent cap) 2 × 8-tube strips (flat and transparent cap)						
Reaction Volume	10-100µl						
Temperature Control Mode	Tube mode						
Temperature Control Method	Peltier						
Temperature Range	0 - 100 C						
Maximum Heating/Cooling Rate	5 C/S						
Average Heating/Cooling Rate	3 C/S						
Temperature Resolution	0.1 C						
Temperature Uniformity	± 0.15 C						
Temperature Accuracy	± 0.1 C						
Hot Lid Temperature Range	85-110 C						
Excitation Wavelength Range	400 to 700nm						
Detection Wavelength Range	450 to 750nm						
Sensitivity	1 copy						
Dynamic Range	1-10 <sup>10</sup> Copies						
Factory Calibrated Dyes	<table border="1"> <thead> <tr> <th>BYQ 6618E</th> <th>BYQ 6622E</th> <th>BYQ 6623E</th> </tr> </thead> <tbody> <tr> <td>F1 : FAM,SYBR Green I F3 : ROX</td> <td>F1 : FAM,SYBR Green I F2 : VIC,HEX, TET,JOE TAMRA, CY3, NED</td> <td>F1 : FAM,SYBR Green I F2 : VIC,HEX, TET,JOE, TAMRA, CY3, NED F3 : ROX F4 : CY5</td> </tr> </tbody> </table>	BYQ 6618E	BYQ 6622E	BYQ 6623E	F1 : FAM,SYBR Green I F3 : ROX	F1 : FAM,SYBR Green I F2 : VIC,HEX, TET,JOE TAMRA, CY3, NED	F1 : FAM,SYBR Green I F2 : VIC,HEX, TET,JOE, TAMRA, CY3, NED F3 : ROX F4 : CY5
BYQ 6618E	BYQ 6622E	BYQ 6623E					
F1 : FAM,SYBR Green I F3 : ROX	F1 : FAM,SYBR Green I F2 : VIC,HEX, TET,JOE TAMRA, CY3, NED	F1 : FAM,SYBR Green I F2 : VIC,HEX, TET,JOE, TAMRA, CY3, NED F3 : ROX F4 : CY5					
Dimension	W 280mm × D 220mm × H 240mm						
Net Weight	6.5 kg						
Adapter Input Voltage	100 - 240V						
Adapter Input Frequency	50 - 60Hz						
Power	DC 24V 180 W, power adaptor needed						
Connection Options	USB port						
Safety Protection and Alarm	Block, hot lid and heat sink temperature sensors short-circuit, open-circuit alarm and protection Hot lid over temperature alarm and protection						
Environment Temperature Range	5-35 C						
Safety Certification	Ferrotec Peltier/CE/RoHS 2.0						
Warm-up Time	No Need						



# Thermal Cycler

Bioer's Thermal Cycler is designed to meet the needs of today's laboratory. A Peltier thermoelectric (TE) module ensures precise temperature control. This makes the instrument versatile for many kinds of experimental methods that require temperature programming and control.

- ▶ TC series thermal cyclers use the advanced Peltier Technology
- ▶ Hot-lid enables the oil-free operation
- ▶ Gradient function
- ▶ The menus' software is more simple
- ▶ Cooling and heating speed can be set up





GeneMax is Bioer's latest generation thermal cycler, which is a peak of 10 years' technology and performance development, is also the best feedback for the customers' 10 years support.

GeneMax adheres to FERROTEC's Peltier research and development, manufacture and application ability. Its performance and function has reached a new level, which can realize the perfect optimization for the annealing temperature. GeneMax is with 10.4 inches large LCD touch screen, more convenient for the man-machine interaction. It's efficient and stable by using ARM9 processor and ThreadX system. Moreover, GeneMax is launched with a gold-plated block at the first time. Its performance is more superior performance in temperature control. At the same time, bluetooth signal converter can realize wireless link between the instrument and computer .



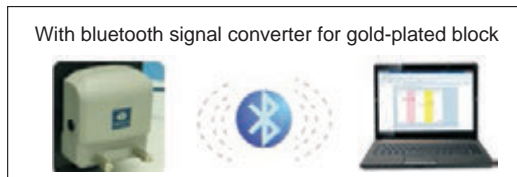
**New function**

With the application of new technology, GeneMax has two ways to optimize the temperature in lines In normal mode , annealing temperature can be changed linearly by selected value In advanced mode , annealing temperature of every line can be choosed freely by users (Temperature difference range of lines  $\leq 5^{\circ}\text{C}$ )

Add the Tm calculation function

**Powerful performance**

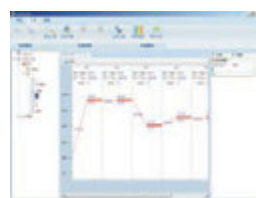
- 10.4 inch large touch screen brings an unprecedented operation experience
- Using ARM9 processor and ThreadX system, Death rate is less than one in a million
- Temperature performance is more superior. The max heating rate is up to  $5^{\circ}\text{C}/\text{s}$ , and the accuracy is  $\leq 0.1^{\circ}\text{C}/\text{s}$ .
- Adjustable hot-lid height is fit for various lab consumables.
- Various file storage method
- Computer networking functions. One computer can control more than one GeneMax, suitable for high-throughput experiments.



**Two blocks for your choice**

**Noble gold-plated block**  
 $\leq 0.1^{\circ}\text{C}$  temperature uniformity meets the high requirement of experiments

**Classic copper block**  
With mature model design and high performance-price ratio. Temperature uniformity is  $\leq 0.2^{\circ}\text{C}$ .



Name	GeneMax	
Productcode	BYQ6067	BYQ6068
Model	TC-S	TC-S-B
Sample capacity	96-PCR plate (full-skirted) 96x0.2ml tubes 12x8-strip	
Cooling technology	Peltier-based,12sensors,6groups of independent module	
Display	10.4 inch, 262k – color LCD display and touch screen	
Temp.range	4.0 C-105 C	
Heating speed of ramping	$\geq 5^{\circ}\text{C}/\text{s}$	
Cooling speed of ramping	$\geq 4^{\circ}\text{C}/\text{s}$	
Temp.uniformity	$\leq \pm 0.2^{\circ}\text{C}$	
Temp.accuracy	$\leq 0.1^{\circ}\text{C}$ (55 C) , $\leq 0.15^{\circ}\text{C}$ (72 C) , $\leq 0.15^{\circ}\text{C}$ (95 C)	
Ramping Range adjustable	0.1 C	
Temp.control modes	BLOCK,TUBE	
Ramping Range adjustable	0.1 C-5.0 C	
Memory	$\geq 250$ typical programs onboard, unlimited with USB flash drive expansion	
Max. No. of cycle	99 Suitable for Nested PCR	
Time up/down	0-9min59s, suitable for Long PCR	
Temp. up/down	0-9.9 C , Suitable for Touch down PCR	
Gradient function	YES	
Auto pause/power protection	YES	
Soak function	YES	
Temp. difference range of line	0.1-5.0 C	
Hot-lid temperature range	30 C-110 C	
Height of hot-lid	Automatic Adjusted	
Auto shut-off function of hot-lid	When block temperature is below setting temperature or after finish running, the hot-lid will be auto shut-off	
Communication Interface	Rs232	LAN and Bluetooth
Power supply	100-240V , 50-60Hz, 800W	
Net Weight	14Kg	
Dimensions	457x316x309mm (LxMxH)	
Certificate	Ferrotec Peltier/MET/CE/RoHS	





GeneTouch is the newest model of multi-functional thermal cycler made by Bioer. This new instrument guarantees the reliable and stable experiment result due to its powerful function. The new password protection and USB storage function to protect customer's data confidentiality. The network function provides. On the basis of Gene Pro, Gene Touch has added a color LCD touch screen, which makes experiment display and operation more clear and visual.



● TC-EA

Block: B96GA / B3084UA / B384GA / B48DA / B41A

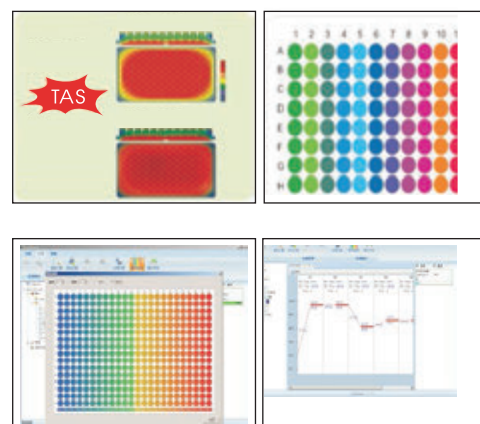
**Software**

- 6.5" colorful touch screen makes interfaces intuitive and user friendly.
- Language diversity.
- POST ensures the safety test and password secures your private protocols.
- Pause function for your special request.
- Easy upgrade for future advanced functions.

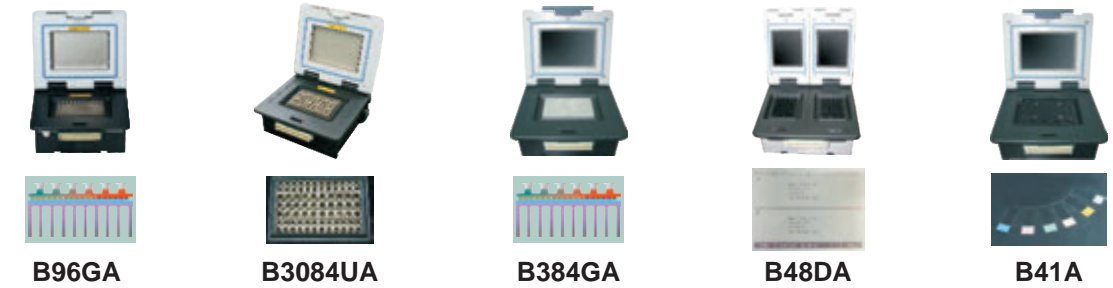


**Powerful hardware**

- Metallic frame, fashion, space saving.
- Adjustable hot lid pressure. Fit for various lab consumables.
- The FERROTEC long life Peltier guarantees the stable performance of the machine with the precise data.
- Its unique TAS technology avoids weakness of edge effect of thermal elements, which increases the uniformity to keep the good repeatability of results.
- Excellent gradient function, with the temperature range up to 30 C, to meet the needs, even the most demanding tests.
- Network function-one computer can control many GeneTouch, best for massive experiments or industry.
- Multiple blocks for your laboratory choice.



**For GeneTouch:**



Name		GeneTouch				
Product code	BYQ6071					
Model	TC-EA					
Blok model	B-96GA	B-3048UA	B-384GA	B-48DA	B-41A	
Sample capacity	96-PRC plate (full-skirted) 96x0.2ml tubes 12x8-strip	30x0.5ml 48x0.2ml 4x12-strip	384-PRC plate full-skirted)	48x0.2ml 6x8-strip	4xstandard in situ plates	
Cooling technology	Peltier-based					
Display	6.5inch, 262k-color LCD display and touch screen					
Temp. range	4.0 C-105 C					
Heating rate	≥4 C/s	≥2.8 C/s	≥2.8 C/s	≥4 C/s	≥1.8 C/s	
Cooling rate	≥4 C/s	≥2.8 C/s	≥2.8 C/s	≥4 C/s	≥1.8 C/s	
Temp. uniformity	≤±0.2 C					
Temp. accuracy	≤±0.1 C (55 C), ≤±0.15 C (72 C), ≤±0.15 C (95 C)					
Temp. control modes	0.1 C					
Ramping Range adjustable	BLOCK, TUBE					
Memory	≥250 typical programs onboard, unlimited with USB flash drive expansion					
Max. No. of cycle	99. suitable for Nested PCR					
Time. up/down	0-9min59s, suitable for Long PCR					
Temp. up/down	0-99 C, suitable for Touchdown PCR					
Auto pause/power protection	YES					
Soak function	YES					
Thermal gradient accuracy	≤±0.4 C (35 C-99 C)					
Gradient range	30 C-105 C	—	30 C-105 C	—	—	
Gradient range of temp difference	1 C-30 C	—	1 C-30 C	—	—	
Hot-lid temperature range	30 C-110 C					
Height of hot-lid	Automatic Adjusted					
Auto shut-off function of hot-lid	When block temperature is below setting temperature or after finish running, the hot-lid will be auto shut-off					
Communication Interface	LAN					
Power supply	100-240V, 50-60Hz, 600w					
Dimensions	368x250x285mm (LxWxH)					
Net Weight	10.5kg					
Certificates	Ferrotec Peltier / MET / CE / RoHS					

GeneTouch Plus



GeneTouch Plus is Bioer newest thermal cycler with dual block and dual gradient. GeneTouch Plus inherits all the features of GeneTouch. And on the basis of GeneTouch, it uses the latest Internal vacuum radiator technology to dissipate the heat effectively and optimize the gradient temperature distribution. It can provide excellent temperature uniformity for PCR test, ensure the stability when using the gradient temperature, and guarantee the accuracy and reliability of the test results. The new dual 48 wells gradient block can instantly make it into two units.

Name	GeneTouch Plus	
Product code	BYQ6615	
Model	B-48DA	B-96GA
Cooling technology	Peltier-based	
Display	6.5 inch, LCD display and touch screen	
Sample capacity	6x8-strip 48x0.2ml	96x0.2ml tubes 96-PCR plate (full-skirted)12x8-strip
Temp. range	4.0 C-105 C	
Temp. control modes	BLOCK mode or TUBE mode	
Temp. accuracy	±0.1 C (55 C), ±0.15 C (72 C), ±0.15 C (95 C)	
Temp. uniformity	±0.2 C	
Heating/cooling rate	4.0 C/s	
Gradient range of temp difference	1-30 C	1-36 C
Gradient range	35-99 C	30-99 C
Thermal gradient accuracy	±0.5 C	
Hot-lid temp. range	Room temperature +5 C-110 C (default 105 C)	
Height of hot-lid	Automatic adjusted	
Memory	>150 typical programs onboard, unlimited with USB flash drive expansion	
Max. segments	10	
Max. program steps	100	
Max. No. of cycle	99, suitable for Nested PCR	
Time up/down	0-9min59s, suitable for Long PCR	
Temperature up/down	0-9.9 C, suitable for Touchdown PCR	
Auto pause/Power protection	YES	
Soak function	YES	
Communication interface	LAN / USB 2.0 / RS232 / Bluetooth	
Net weight	10Kg	

Galaxy<sup>XP</sup>Cycler



Galaxy<sup>XP</sup>Cycler is a revolutionary multifunctional thermal cycler. Eight different interchangeable sample blocks give the XP Cycler exceptional versatility for PCR methods using tubes, strip well or plates. Its high ramping rate and precision temperature control provide fast, accurate results. The extra large display and user-friendly interface make operation easy. The unit automatically recognizes which sample block is in place, eliminating the need for an operator to manually supply this information.

Eight interchangeable blocks for different kinds of application

The XP Cycler automatically recognizes sample blocks and configures its software accordingly.

8<sup>A-H</sup> Interchangeable blocks

Name	Galaxy XP							
Model	GeneTouch Plus							
Block code	XP-A	XP-B	XP-C	XP-D	XP-E	XP-F	XP-G	XP-H
Sample capacity	96-microplate (half-skirted) 12x8-strip 96x0.2ml	60x0.5ml	30x0.5ml 30x0.5ml	48x0.2ml 48x0.2ml	48x0.2m 30x0.5ml	384- microplate (full-skirted)	96-microplate (half-skirted) 12x8-strip 96x0.2ml	4xstandard in situ plates
Temp. range	4.0 C-105 C							
Heating/Cooling rate	≥4.0 C/s							
Block Temp. uniformity	±0.4 C							
Block Temp. accuracy	±0.3 C							
Adjustable of hot-lid press	Yes							
Gradient range	——	——	——	——	——	——	1-30 C	——
Temp. control mode	BLOCK mode or TUBE mode							
Display	320x240LCD, 5.7inch							
Graph Display	Yes							
Program Storage	99							
Max. segments	5							
Max. program steps	16							
Max. cycles	99							
Power supply	AC220V 50Hz 600W							
Size (mm)	470x340x260 (LxWxH)							
Net weight	10kg							
Interfaces	RS232							
Certificates	Ferrotec Peltier / MET / CE / RoHS2.0							

Note: The performance parameters above are for TC-XP-A only.



LifeECO



Easy experiment

Intuitive interfaces

- ▶ 5.7 inch large touch screen colorful display, the bilingual language choices, direct communication. Settings at a glance, powerful program editing function, flexible and efficient to define your application.
- ▶ Pause Function, the program can be run manually or pre-program suspended.
- ▶ POST normal state to ensure than equipment to protect the safety test, improved user management, password protection, experimental procedures to copy, delete, operating etc.
- ▶ Three kinds of file storage for your choice: Equipment storage, USB FLASH-Take your experiment data everywhere with you, USB port to a computer.

Superior performance

- ▶ Using the unique TAS technology, LifeECO avoids the edge effect of thermal conduction of block, provides PCR experiments with first-class temperature uniformity. It ensures the repeatability of results.

Multiple temperature control modes

- ▶ The users can choose TUBE mode or BLOCK mode. The BLOCK mode directly reflects the changes of metal block. While the simulating TUBE mode is able to demonstrate the actual temperature changes of reagents. According to the reagents, choose a suitable temperature control mode can achieve the best conditions of amplification.

Gradient function thermal cycler

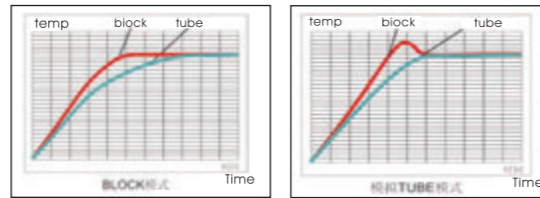
- ▶ Excellent gradient function, with the temperature range up to 30 °C, to meet the needs, even the most demanding tests.

Smart block

- ▶ When the hot-lid is heating, the block can keep lower temperature to improve amplification specificity.

Three modes of operation for your choice

- ▶ Network function---One computer can control many LifeECO, best for massive experiment or industry.



LifeTouch



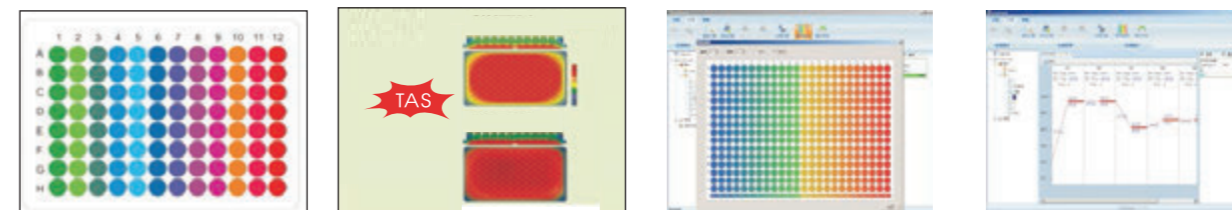
LifeTouch is a brand new thermal cycler made by Bioer with best efforts after LifePro. Besides using the same technology of TC series, LifeTouch has an advanced thermoelectric cooling technology and creative TAS technology, Which upgrades the overall performance to a new level: higher precision of temperature control, faster heating and cooling speed, better block temperature uniformity, smaller instrument dimension, and more silent operating environment. LifeTouch not only has the 30 °C gradient function to optimize the experiment condition, but also has the USB storage function and network function. On the basis of LifePro, LifeTouch has added a color LCD touch screen, which makes experiment display and operation more clear and visual.

Software

- ▶ 6.5' large colorful touch screen makes interfaces intuitive and user friendly.
- ▶ Language diversity.
- ▶ POST ensures the safety test and the password secures your private protocols.
- ▶ Pause function for your special request.
- ▶ Easy upgrade for future advanced functions.

Superior performance

- ▶ The compact design with the fixed 96 well block and all advantages of touch screen becomes your necessary laboratory assistance.
- ▶ The effective guarantees the experimental data with high uniformity and accuracy.
- ▶ The network PC control enables to build up a laboratory data centre, however, password protects your own protocol.



Name	LifeECO	LifeTouch
Product code	BYQ6078	BYQ6072
Model	TC -96/G/H(b)C	TC- 96/G/H(b)B
Sample capacity	96-PCR plate(full-skirted) 96x0.2ml tubes 12x8-strip	
Cooling technology	Peltier-based	
Display	LCD display and touch screen(5.7inch)	6.5inch,262,144colorer LCD display and touch screen
Temp. range	4 C~105 C	
Heating/Cooling rate	≥4.0 C/s	
Temp. uniformity	≤± 0.3 C	≤±0.2 C
Temp. accuracy	± 0.1 C (55 C), ≤±0.2 C (≥90 C)	
Temp. control modes	± 0.1 C (55 C), ≤±0.2 C (≥90 C)	
Temp.control modes	BLOCK or TUBE	BLOCK or TUBE
Ramping range adjustable	0.1 C~4 C	
Memory	≥250 typical programs onboard, unlimited with USB flash drive expansion	
Max. No. of cycle	99. Suitable for Nested PCR	
Time up/down	0~9min59s, Suitable for Long PCR	
Temperature up/down	0~-9.9 C, Suitable for Touchdown PCR	
Auto pause/power protection	YES	
Soak function	YES	
Gradient range of temp difference	1-30 C	
Gradient range	30~99.9 C	
Hot-lid Temp. Range	Room temperature +5 C-110 C (default 105 C)	
Height of hot-lid	Automatic Adjusted	
Auto shut-off function of hot lid	While block temperature is lower than setting temperature or program ends, the hot-lid will be automatically closed.	
Communication Interface	USB	LAN
Power supply	100-240V,50-60Hz,600W	
Dimensions(LxWxH)	335x260x270mm	345x260x270mm
Net weight	10kg	
Certificates	Ferrotec Peltier/CE/RoHS2.0	

\*The ideal value under the standard laboratory environment



The concept of GeneQ set of superior performance, compact structure, friendly interface, reliable results for all. Especially in the heating speed, temperature control accuracy, uniformity and module, GeneQ shows the excellent performance.

### More outstanding performance for Blocks

- ▶ Faster: ≥5 C/s maximum heating rate
- ▶ More accurate: ≤±0.3 C block temp. accuracy
- ▶ More uniform: ≤±0.2 C block temp. uniformity

### Add hot-lid adjustment function

- ▶ Hot-lid temperature and pressure are both adjustable.
- ▶ Simple operation can meet different needs in experiments.

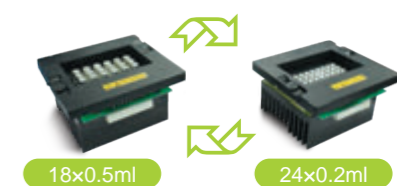
### Super software performance

- ▶ 320x240 dot matrix LCD screen, graph display settings and real-time monitoring, clear interface.
- ▶ Sections or steps setting can be set up to meet the requirements of complex setting requirement.
- ▶ Cooling and heating speed can be set up, and the temperature and time can be automatically modified to meet the special PCR setting.
- ▶ 100 programs storage to meet the multiple users' operation.
- ▶ The BLOCK mode and TUBE mode can be chosen.



● TC-18/H(b)  
● TC-24/H(b)

※Fast and easy change the blocks from 24x0.2ml into 18x0.5ml without changing the hot-lid.



8-strip/24-microplate

Name	GeneQ	
Model	TC-24H(b)	TC- 18/H(b)
Sample capacity	24*0.2ml 8-strip 24-microplate	18*0.5ml
Temp. range	4 C~105 C	
Heating rate	≥5.0 C/s	≥4.0 C/s
Cooling rate	≥4.0 C/s	≥3.0 C/s
Temp. uniformity	≤±0.2 C	
Temp. accuracy	≤±0.2 C	
Temp. control modes	BLOCK or TUBE	
Hot-lid Temp. Range	Room temperature +5 C-110 C (default 105 C)	
Adjustability of Hot Lid Press	Yes	
Display	Yes	
Program Storage	100 files	
Max. Segments	5	
Max. Program Steps	16	
Max. Cycles	99	
Power supply	AC220V 50Hz 200VA	
Size(mm)	345*250*270(L*W*H)	
Net weight	3.2kg	
Certificates	Ferrotec Peltier / MET / CE / ROHS2.0	



# Dry Bath

## Cooling & Heating Block

The Cooling & Heating Block is an instrument that provides a computer-controlled thermoelectric temperature environment for samples. Sample blocks are readily interchangeable so the instrument is readily adapted to different sample containers, i.e. tubes, plates, etc.

The Cooling & Heating Block can be used for sample preparation, enzyme preservation, enzyme-substrate reactions, DNA amplification and blood coagulation.

- ▶ module customized according to all kinds of demands
- ▶ powerful programming function, operate easily
- ▶ Various specifications
- ▶ Compact, portable, clean
- ▶ heating and cooling rapidly and accurately
- ▶ Alternative to water bath and ice bath
- ▶ mixing function



## Thermo Shaker



This product can be widely used in sample preservation, various enzymes catalysis reactions, DNA synthesis and plasmid / RNA / DNA purification, including PCR reaction, etc.

### Features:

- ▶ Touch screen operation
- ▶ Mixing frequency up to 3000rpm
- ▶ Quick & easy-to-exchange blocks
- ▶ Ferrotec peltier and precise PID temperature control
- ▶ Up to 10 programs simultaneously



### Specifications:

Model No	MB-202
Temperature Setting Range	1°C~100°C (Minimum Setting Increments 0.1°C)
Temperature Control Range	Room Temperature-15°C~100°C (minimum temperature 0°C)
Temperature Control Accuracy	±0.5°C (15°C~100°C)
Temperature Control Mode	Block Mode
Temperature Uniformity	±0.5°C (20°C~45°C) ±0.8°C (<20°C or >45°C)
Interchangeable Blocks	A: 384, B: 96x0.2ml (skirt plate, single tube), C: 54x0.5ml, D: 35x1.5ml, E: 35x2.0ml, F: 12x5.0ml, G: 12x15ml, H: 4x50ml, J: 32x0.2ml+20x1.5ml
Shaking Speed	300rpm~3000rpm
Shaking Amplitude	3mm
Timing Range	0~99h59min
Power Input	100V-240V AC, 50/60Hz, 180W
Dimension (mm)	310x210x145 (LxHxW) (Base)
Net Weight	6.3kg (with Block A)
Safety Certification	Ferrotec Peltier/CE/MET/RoHS2.0

## ThermoCell Cooling & Heating Block



### Features:

- ▶ Programmable for up to 5 sequential steps of different temperature and duration
- ▶ Automatically adjusting (PID) control for temperature stability  
Wide temperature setting range
- ▶ Light-weight design for portability
- ▶ Sample block design is easily removed for cleaning or replacement
- ▶ Optional water bath block for added application flexibility
- ▶ Peltier design of CHB-202 provides thermal efficiency, reliability and compact size



With a special water bath block, the unit can be used as a water bath, which provides a free space for different kinds of tubes.

### Specifications:

Model	Heating Block(HB202)	Cooling & Heating Block(CHB202)
Temp. Setting Range	10°C ~ 105°C	-10°C ~ 105°C
Temp. Control Range	(RT+5°C) ~ 105°C	0°C ~ 100°C
Timing Range	1min-99h59min	
Temp. Uniformity	±0.5°C	
Temp. Accuracy	±0.5°C	
Temp. fluctuation	±0.5°C	
Heating Time	≤12min(20°C ~ 100°C)	≤35min(20°C ~ 100°C)
Cooling Time	—	≤25min(20°C ~ 0°C)
Standard Block	A: 40×1.5ml; B: 54×0.5ml; C: 96×0.2ml; D: 24×φ15mm; H: 40×2.0ml; G: 26×0.5ml+24×1.5ml; J:Elisa Block E: 115mm×73mm×38mm(LxWxH)Water bath block	
Heating Parts	Heater	TE
Cooling Parts	—	TE
Size (mm)	300×200×160(LxWxH)	
Net Weight	2.8kg	3.2kg
Power Supply	AC220V ~ 50Hz 120W	

\* The performance parameters above are for standard block A only.  
Others are to be informed later.

## Thermo Q



### Creative software:

- ▶ PC software controls instrument running. One computer controls more than one unit.
- ▶ Edit function: multipoint temperature & time range settings. With new cycle settings, program settings imitate PCR programs, which greatly increase applicability.
- ▶ Inspect and monitor during running and can print the whole report after experiment.
- ▶ Hot plug: if pull out the connecting wire during running, the running won't be stopped. The computers are not occupied during the experiment.
- ▶ The computer software records instrument running diary in real time.
- ▶ The program auto-memory function: the instrument will auto save the last setting, which can be repeatedly used next time.
- ▶ The computer software records instrument running diary in real time.





### Specifications

Main body	HB-T1(No hot-lid)	HB-T2(Hot-lid)	CHB-T1(No hot-lid)	CHB-T2(Hot-lid)
Block	A: 20×0.5+15×1.5ml; B: 35×1.5ml; C: 54×0.5ml; D: 96×0.2ml; E: 35×2ml;			
Temp. Range	RT.+5°C ~ 100°C		0°C ~ 100°C	
Temp. Display Resolution	0.1°C			
Heating Time	≤10min(RT. ~ 100°C)		≤8min ( RT. ~ 100°C )	
Cooling Time	/		≤8min(100°C ~ 4°C)	
Temp. Uniformity	≤±0.5°C			
Temp.Control Accuracy	≤±0.2°C			
Temp. Fluctuation	≤±0.1°C			
Timing Range	0 ~ 99h59min or ∞			
Program Segment Setting Function	Yes			
Cycle Setting Function	Yes			
Program Auto-memory Function	Yes			
QC Report Print Function	Yes			
Max. Segments	9			
Max.Cycles	99			
Hot-lid Operating Temp.	≥Block Temp. +10°C: when block temp. ≤15°C hot-lid won't work			
Hot-lid Heating time	heating time from RT.to110°C ≤10min			
Power Supply	AC100~240V 50~60Hz 90W (by power adapter)		AC100~240V 50~60Hz 120W (by power adapter)	
Communication Interface	USB B Port			
Operating State Display	Three - colorLED display (Red:Heating state、 Yellow:Temp. Constant state、 Green: Cooling state)			
Temp. Display	Triple LED display			
Alarm	Sensor abnormal alarm, red operating state lamp flickers; Fault alarm if hot-lid won't work			
Over Temp. Protection	Over temp.Protection ≤120±5°C (include block& hot-lid)			
Dimension	150×170×145mm (L×M×H)			
Net	≤1.8kg		≤2.0kg	
Certificates	Ferrotec Peltier / CE / RoHS			

\* Hot-lid parameters are only for instrument with hot-lid heating section.  
Parameters are tested in standard environment.

### Order information:

Order information	Heating Block	Cooling & Heating Block
Main body	No hot-lid Hot-lid	HB-T1 HB-T2
Block	20×0.5ml+15×1.5ml 35×1.5ml 54×0.5ml 96×0.2ml 35×2ml	CHB-T1 CHB-T2 CHB-A CHB-B CHB-C CHB-D CHB-E
Optional	Temperature controller Hot-lid heating section	HB-BA CHB-BA
Certificates	Ferrotec Peltier / CE / RoHS	

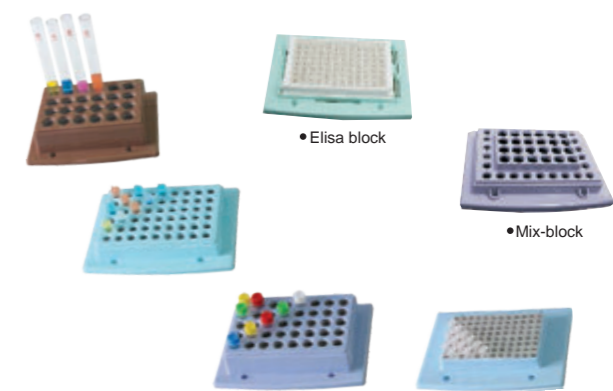
## ThermoCell Mixing Block



ThermoCell Mixing Block combines the functions of mixing and temperature control, providing a convenient means to incubate and react samples. This unit employs Peltier Effect heat exchange technology to provide accurate, stable temperature control. It can be used with a selection of interchangeable blocks for plates and tubes.

### Features:

- Accurate control and monitor time, temperature and speed  
Extract temperature control with PID circuit
- Gentle, reliable mixing with long-life direct current motor
- Low noises working even under the speed of 15000rpm
- Special damping provides quiet operation even at high speeds
- Choose from several standards sample blocks for plates or tube
- Custom blocks are available to satisfy special experimental requirements
- Large VFD display and simple controls provide a user-friendly interface
- Conforms to CE safety standard



### Custom blocks available

### Specifications:

Name	ThermoCell series Mixing Block
Model	MB-102 (MB-101)
Temp. Setting Range	0 ~ 105 C
Temp. Control Range	RT. -14 C ~ 100 C
Temp. Control Accuracy	≤±0.5 C
Temp. Uniformity	≤±0.5 C
Heating Time	≤12min(20 C ~ 100 C)
Heating Speed	≥5 C/min
Cooling Time	≤8min (RT. To RT -10 C), ≤15min (100 C to RT +10 C)
Cooling Speed	≥6 C/min (100 C to RT) ≥0.8 C/min(RT. To 10 C)
Mixing Speed	300rpm ~ 1500rpm (rotation)
Mixing Amplitude	3mm
Timing Range	1 ~ 99h59min
Standard Block	A: 40×1.5ml; B: 54×0.5ml C: 96×0.2ml; D: 24×φ15mm; H: 40×2.0ml; G: 26×0.5ml+24×1.5ml; J: Elisa Block
Power Supply	MB-102: AC220V±22V 50/60Hz ±1Hz 150W MB-101: AC220V±11V 50/60Hz ±1Hz 150W
Dimension (mm)	328×166×249(L×H×W)
Net Weight	8.5kg

\*Note: RT: Room Temperature (20 C ~ 25 C)

4L/8L/12L Water Bath



Introduction

- ▶ The 4L/8L/12L Water Bath is comprised of a bath and a high-precision thermostat, which combines the microprocessor and the PID technique.
- ▶ The 4L/8L/12L digital Water Bath is popular for laboratory use and applied in many industries such as chemical, medicine, biochemistry, metrology and other light industries and scientific research etc.

Features

Control panel

- ▶ Digital display, easy setting and operating, adjustable temperature, alarm signal display

Advanced Thermostatic Controller

- ▶ High temperature control accuracy up to  $\pm 0.2$  C
- Wide temperature control range in room temperature  $\pm 10 \sim 100$  C

Safety features

**Overheat function** The power will automatically be turned off when the internal temperature is over 110 C

Accessories

- ▶ Metal lid with concentric rings
- ▶  $\phi 15 \times 41$  or  $\phi 18 \times 41$  Tube rack (stainless steel)
- ▶ Gabled plastic lid
- ▶ Flask tray (stainless steel)



Specifications:

Parameter	Model	N3-4	N3-8	N3-12
Volume		4L	8L	12L
Temp. Control Range		RT.+10 ~ 99.9 C	RT.+5 ~ 99.9 C	
Temp. uniformity		$\pm 0.2$ C		
Heater		480W	600W	800W
Temp. Fluctuation		$\pm 0.5$ C (RT.+5 C ~ 80 C); $\pm 0.8$ C (80 C ~ 99.9 C)		
Heating Time		$\leq 80$ min (20 C ~ 95 C)	$\leq 100$ min (30 C ~ 95 C)	
Power supply		AC220V $\pm 22$ V 50 $\pm 1$ Hz	AC220 ~ 240V 50/60Hz	
Input Power		500W	600W	800W
Temp. setting		0.1 C		
Bath inner dimension(mm)		238x135x146(LxWxH)	325x265x150(LxWxH)	325x265x200(LxWxH)
Outside dimension(mm)		370x200x250 (LxWxH)	445x285x316 (LxWxH)	
Net weight		8.5kg	10.5kg	

Constant Low Temperature Bath



Introduction

The Constant Low Temperature Bath is comprised of a compressor refrigeration system and a high precision thermostat which combines the microprocessor and the PID control technique. The constant low temperature bath is widely used in industries such as petroleum, chemical, medicine, biochemistry, metrology and other light industries and scientific research etc.

Features (N2-4RC)

Control panel

- ▶ Digital display, easy setting and operating, adjustable temperature, alarm signal display

Advanced thermostatic controller

- ▶ High temperature control accuracy of  $\pm 0.03$  C.
- ▶ Wide temperature control range, temperature can be controlled and set at will in the range of -10 C ~ 99.9 C.

Environment friendly compressor refrigeration system

- ▶ Continuous operation in the range of -10 C ~ 45 C,
- ▶ High cooling rate,
- ▶ High cooling power at low temperature,
- ▶ Automatic switching on/off of compressor

Circulation system

- ▶ The bath is installed with a powerful jet-pump for agitating and connected with the external circulation system.

Max. head: 2m; Flow rate  $\geq 10$ L/min

Safety features

Low liquid level protection

If the water level is too low, the heating pipes will shut off and the alarm light will illuminate.

Temperature out of control

If the temperature exceeds the present level by 2 C during the thermostatic process the heating pipe will shut off the alarm light will illuminate.

Protection of compressor

(In the case of high working temperature) If the temperature inside the bath exceeds 45 C, the alarm light will illuminate and the compressor will be disabled to protect the refrigeration system, thus more reliable operation is assured.

Over current protection

If the electrical current is exceeded during the operation, the internal fuse will blow thereby protecting the operator.

Specifications:

Parameter	Model	N2-4RC
Temp. control range		-10 C ~ 99.9 C
Temp. control precision		$\pm 0.03$ C
Heating power		750W
Nominal power		135W
Refrigerant		R134a
Temp. raising time		$\leq 60$ min (20 C ~ 95 C)
Temp. lowering time		$\leq 90$ min (95 C ~ 20 C)
Circulation pump capacity		Max. flow 10L/min Max. Head 2m
Power supply		AC220 ~ 240V 50Hz
Input power		950W
Insulation resistance		$\geq 1.5$ M $\Omega$
Dielectric strength		Withstanding 50Hz, sin wave AC 1500V for 10 seconds without flashing or breakdown
Dimension of work area (mm)		150x140x140 (LxWxH)
Bath inner Dimension (mm)		300x150x160 (LxWxH)
Outside dimensions (mm)		400x230x660 (LxWxH)
Size of outer circulation connection (mm)		Size of jet port and return port connection: $\phi 12$ mm



All rights reserved please refer to actual products for true colour representation. UL61010 CAN/CSA-C22.2 NO.61010-1





## Shaking bath

### Introduction

The shaking bath is a compact water bath with shaking capabilities, and digital thermostat is fitted for ease of use.

The shaking bath is used in laboratories of hospitals, schools, and scientific research centre for experimental use such as culture, reaction, dissolution, and mixing in areas such as biochemistry, microbiology, genetics and cytology.

### Features

- ▶ Compact size and light weight low noise and no pollution
- ▶ Temperature digitally with displayed with high temperature control accuracy
- ▶ Thin-film panel for ease of operation
- ▶ Digitally displayed shaking speed
- ▶ Wide range of shaking speeds
- ▶ Shaking brackets of various specifications
- ▶ Full protection system with self-diagnostic function including low liquid level protection and temperature out of control protection for reliable safe operation



### Specifications:

Model	N2-4RC	N1-13S
Performance	Shaking model	Reciprocating
	Temp. control range	RT.+0.5°C ~ 80°C (When outside cooling equipment is used : -19.9°C ~ 80°C)
	Temp. control accuracy	±0.02°C
	Shaking speed	20 ~ 160rpm
	Stroke length	30mm
Function	Temp. control method	P.I.D
	Temp. setting and display	Temperature setting accuracy: 0.1°C . Temperature display accuracy: 0.01°C
	Shaking speed setting and display	Knob setting, speed display accuracy: 1rpm
Component	Protection function	Low liquid level protection, temperature's out-of-control protection
	Sensor	pt100
	Heater	1000W
Specification	Circulation pump capacity	Jet-type, \ Max. Flow 9L/min \ Max. head 1.2m
	Vessel number	Conical flask: 200ml (4) 100ml (9) 50ml (12) Test tube: φ16-18 (100)
	Bath material & capacity	SUS 304 15L
	Shaking bracket dimension load	228x228mm(208x208mm) About 2kg
	Dimension (mm)	314x550x505(LxWxH)
	Power supply	AC220±22V 50±1Hz
	Input power	1200W
Net weight	25kg	

Parameter	Model	N-40W	
Environment Temp.		5°C ~ 40°C	
Temp. control range		RT. +5°C ~ 80°C	
Temp. control accuracy		±0.02°C	
Temp. setting accuracy		0.1°C	
Temp. display accuracy		0.01°C	
Heater		Main power 1800W	Auxiliary power 1000W
Circulation pump capacity		Jet-type	Max. flow 19L/min Max. head 3.4m
Electricity leaking for action of protection system		30mA	
Insulation resistor		>1.5MΩ	
Internal dimension (mm)		400x350x300	
Dimension (mm)		590x410x410	
Window dimension (mm)		340x215	
Power supply		AC220V±22V 50±1Hz	
Input power		2900W 14A	
Net weight		35kg	

Parameter	Model	N2-18WRC
Temp. control range		0 ~ 80°C
Temp. control accuracy		±0.05°C
Heater		1500W
Nominal capacity of compressor		1/4p
Refrigerant		R134a
Heating time		<80min (from RT. 20°C to 95°C)
Cooling time		<150min (from RT. 20°C to 0°C)
Power supply		AC220±22V 50±1Hz
Input power		2500W
Insulation resistor		≥1.5MΩ
Dielectric intensity		Tested by AC voltage of 50Hz, sin wave 1500V for 1min, no flashover detected
Dimensions of work area of water bath (mm)		290x290x200(LxWxH)
Dimensions of internal water bath (mm)		400x300x200(LxWxH)
Outline dimension (mm)		500x400x730(LxWxH)
Outside circulation interface dimension (mm)		The jet and circumfluence hole diameter: φ10mm
Net weight		50kg

Parameter	Model	N1-2C	N2-2C
Temp. control range		RT. +10°C ~ 95°C	RT. +5°C ~ 95°C
Temp. control accuracy		±0.02°C	
Heater		1000W	
Heating time		<80min (from RT. 20°C to 95°C)	≤45min (30°C ~ 95°C)
Power supply		AC220±22V 50±1Hz	
Input power		1100W	1200W
Insulation resistor		≥1.5MΩ	
Dielectric intensity		Tested by AC voltage of 50Hz, sin wave:1500V for 1min, no flashover detected.	
Internal dimension (mm)		130x95x170 (LxWxH)	150x140x140(LxWxH)
Dimensions of internal water bath (mm)		260x160x170 (LxWxH)	300x150x160 (LxWxH)
Outline dimension (mm)		420x234x428 (LxWxH)	380x230x450 (LxWxH)
External circulation		The jet and circumfluence hole diameter: φ10mm Size of jet port and return port connection: φ12mm	
Cooling pipe interface dimension		φ10mm	
Net weight		15Kg	10Kg

# Sample Preparing

GenePure Plus uses magnetic bead extraction technology to extract and purify nucleic acids from sources such as blood, tissue and other cell masses. Its unique structural design provides time-saving, power-saving, and high efficiency operation, making it a valuable tool for laboratory research.



**5**  
Chapter



## GenePure Plus CE

Using magnetic beads separation technology, after choosing the corresponding kits, Gene Pure Plus can automatically extract and purify nucleic acid with high purification such as blood, tissue or cells, etc. It is with ingenious structure design, various function and easy operation. The unit is with tablet PC and UV lamp. Gene Pure Plus is very helpful for clinical genetic inspection and molecular biology laboratory subject research.



### Product Features

Ingenious structure & various function

integrated with tablet PC, UV lamp and temperature control system, the unit is with easier operation, safer experiment, full lysing, complete elution and better result.

Fully automatic & high capability

with automatic nucleic acid purification, the unit will process up to 32samples. Automated purification is 4-5 times faster than manual methods

Standardization and stable result

It has several standard nucleic acid and purification procedures ready for use. And it can also be customized to meet special experimental requirement. The automatic and standard operation ensures the stable experiment result without artificial error.

Avoid pollution and be safer

Intelligent operation system controls strictly the pollution between wells. The disposable plastic tube for extraction and UV lamp are used to minimize the pollution between different batches. The danger of harmful kit is greatly reduced.

### Working principle

1 Lysing

Place cells in lysis buffer to release nucleic acid into buffer.

2 Absorption

Add magnetic beads to the buffer to absorb nucleic acid.

3 Washing

Repeatedly wash the beads to remove contaminating cellular material, protein, salt, etc.

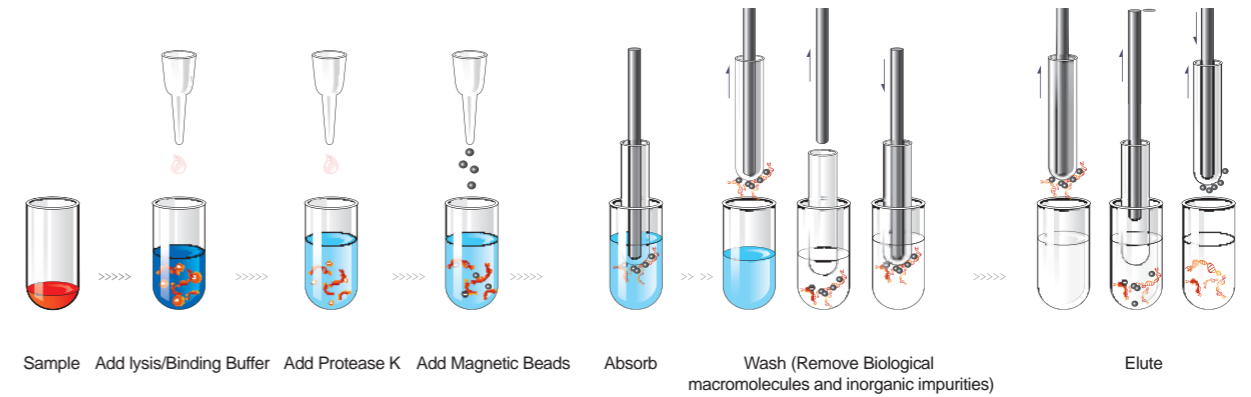
4 Elution

Transfer the beads to elution buffer and mix. The nucleic acid is released from the beads and dissolved in the buffer.

5 Reclaim

Remove the magnetic beads and the purified nucleic acid solution is ready for use.

### Result Analysis

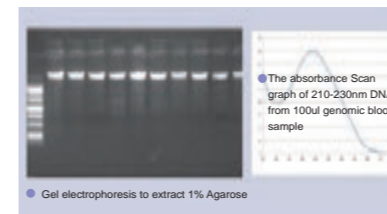


The heating function can help the lysing of samples better, release more nucleic acid and increase nucleic acid yield. So it improves the total extraction efficiency.

### Software and application



- Gene Pure Plus is with tablet PC and latest operation software. It makes the operation much easier and also gives you unlimited space.



- Bioer has many purification kits, such as viruses DNA purification kits, genomic blood DNA purification kits, general genomic DNA purification kits, etc. You will get result by using Gene Pure Plus together with above kits.

Product name	Gene Pure Plus
Model	NPA-32+
Certificate	CE/PICC product quality liability insurance
Processing volume	20 ~ 1000μl
Sample capacity	1-32
Retention of magnetic particles	≥98%
Uniformity of purification	Cv<3%
Heating temperature control range	lysing: RT. ~ 120 C elution: RT. ~ 120 C
Mixing	Multi-modes, multi-speed and adjustable
Disinfection method	UV lamp
Kits species	Kits with magnetic beads
Operating system	Windows7/8
Computer	Windows tablet PC, PC/Laptop
Socket	USB, RS232 adapter, Bluetooth adapter and WIFI
Programming	Set, edit or delete programs, and set purification programs freely
Size (mm)	372×430×440(LxWxH)
Net weight	28kg
Power supply	AC100-240V 50Hz/60Hz 600W
Operating temp. range	10 C ~ 40 C
Operating humidity range	10% ~ 90%

# Others

Gene Lab

Hatch-Master



6  
Chapter



## Gene Lab (model No.:SL-6040A)

BIOER's SL-6040A Gene Lab is a "turn-key" gene analysis laboratory. It provides an easy way to establish an area-segregated, nucleic and amplification laboratory with uni-directional work-flow. Gene Lab will save you much of time, efforts and cost associated with traditional lab design and construction. The laboratory consists of three separate work areas, each with its own segregated air supply and buffered entry area.



● SL-6040A

ASAFE, SECURE SPACE FOR EXPERIMENTATION  
Patent Number in China:200420109896.9

### Features (N2-4RC)

Complete laboratory installation from a fully engineered and standardized design. This allows rapid installation and eliminates the time and cost for developing a custom laboratory design.

Design addresses air flow and sample handling requirements to control contribution.

System includes an operation procedure that provides information on lab operating principles, equipment recommendations and organization, safety provisions/considerations and maintenance; information that provides a quick start toward development of your own customized analysis, quality control, maintenance and regulatory compliance procedures.

Laboratory partitions are constructed of high quality, hard-surfaced materials including aluminum alloy hardware and wall panels.

Gene lab is supplied complete with built-in work surfaces, interior lighting, air filtration systems, sample handling airlocks and a fully plumbed preparation sink. Gene lab is fully wired with electrical, telephone and computer network connections.

A sophisticated contamination control system-comprised of segregated work areas with individual air-handling. These areas are well-designed to reduce the possibility of sample contamination.

### Design considerations:

Overall layout is good style, establishments are self-contained, arrangement is reasonable.



Appropriately located racks for protective garments



Adjustable air flow vents in each work area.



Stainless steel sink with hands-free water faucet.



Special designed filters remove dust and other particulates.



Switch and circuit breaker panel are centrally located



Molecular aluminum construction ensures airtight seams.



Ergonomically designed work areas increase comfort and efficiency.



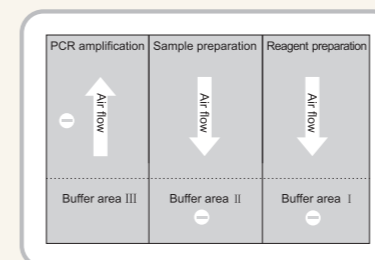
Each lab equipped with telephone and internet connections.

### Measures for anti-contamination:

Segregated work areas with independent air pressure control:

Three segregated working areas are provided by the Gene Lab SL-6040A with different air flow control:

The air pressure in each working area can be independently adjusted to prevent aerosol contamination. Twin-doors entry chambers allow users to change gowns and shoe covers upon entering or exiting a critical work area.



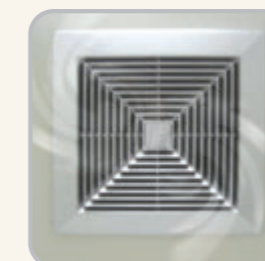
① Set as standard three areas and pressure is adjustable



② UV lamps help control cross-contamination



③ Secure electronic airlock for a sample transfer



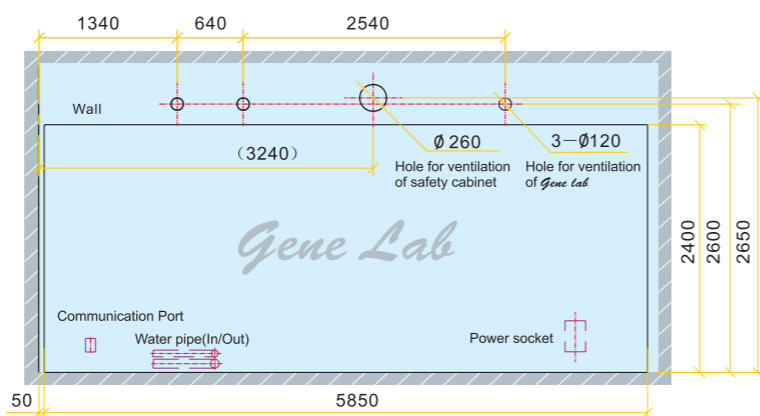
④ Air exhaust pipe system



⑤ Safe and hermetic

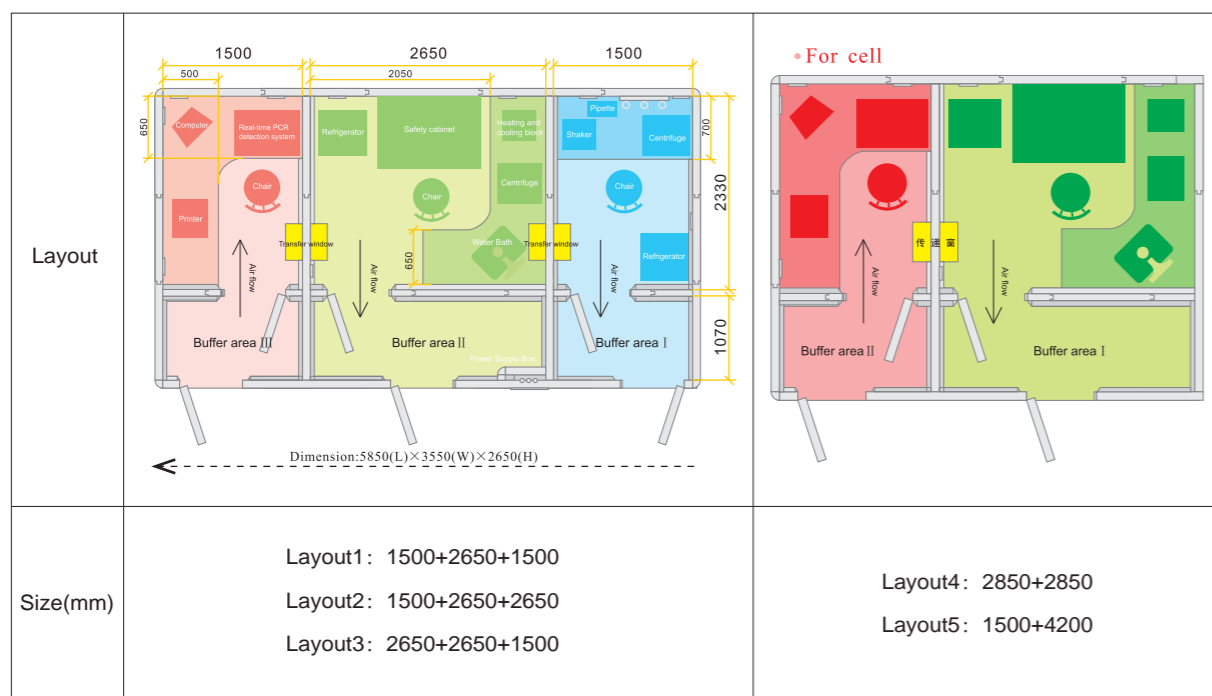
**Installation requirements:**

- ① The minimum installation space for a Gene Lab is 6.0x4.5x3.0 meters (LxWxH)
- ② The floor should be flat with a variance of less than 5 mm/2M.
- ③ Preliminary site preparations must include:
  - Installation of vent ductwork for positive airflow system
  - Wiring for 220V/110V, 50Hz, 5kW
  - Plumbing connections for water and drains
  - Connections for network and telephone wiring



**Additional Requirements for the standard installation, not included in SL-6040A Gene Lab**

- Equipment for PCR Amplification Area**
  - Real-Time PCR Detection System
  - Pipette
  - Windows-based PC and Printer
  - Mobile UV lamp
- Equipment for Sample Preparation Area**
  - Biological Safety Cabinet (class II)
  - Pipette
  - Mobile UV
  - Refrigerator
  - Shaker
  - Heating/Cooling Block
  - Waste Container
  - High-Speed Refrigerated Centrifuge
- Equipment for Reagent Preparation Area**
  - Refrigerator
  - Centrifuge
  - Pipette
  - Shaker
  - Mobile UV Lamp



**Mini-Run**

The GE-100 apparatus can be used for agarose gel electrophoresis with application throughout biological sciences. The electrophoresis chamber has a built-in DC power supply. The cover and gel migration (support) board are made from an engineer plastic resistant to etching. Electrodes are platinum for clean operation and durability. This unit operates from 110V 50/60Hz power and is supplied with a power transformer to convert 220V 50Hz as needed.



**Specifications:**

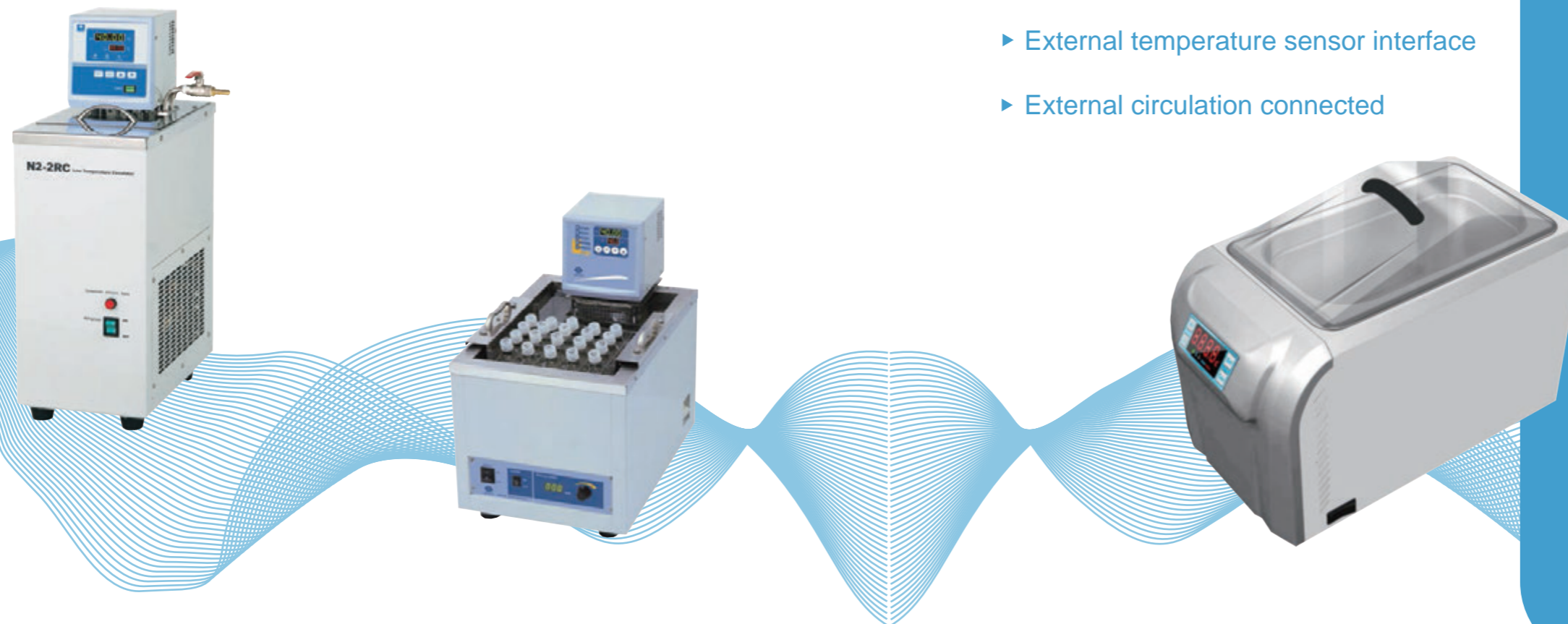
Model	GE-100
Power requirements	AC100V ~ 110V 50 ~ 60Hz; AC 220V 50Hz (with transformer)
Output Voltage	DC 50V/DC 100V
Volume of electrophoresis bath	250ml (for both chambers)
Size (mm)	192x130x60 (LxWxH) (electrophoresis chamber)
Sample comb's size (tooth width x thickness x teeth number)	4mm x 1mm x 8 4mm x 1mm x 17 6mm x 1mm x 6 6mm x 1mm x 12
Gel chamber capacity (mm)	60x55 (4pieces) 110x55 (2pieces) 60x55 110x55
Transformer	AC 220V (Input) / AC 110V (output)
Net weight	320g (This apparatus)



# Water Bath Series

This series of products are widely used as temperature controlled water baths in industries such as petrolcum, chemical, medicine, biochemistry, metrology and other light industries and scientific research etc.

- ▶ The control panel is simple and easy to operate
- ▶ Advanced thermostat controller
- ▶ Environment-friendly compressor refrigeration system, no CFC
- ▶ The bath is installed with a powerful jet-pump for agitating and connected with the external circulation system
- ▶ Perfect safety device
- ▶ External temperature sensor interface
- ▶ External circulation connected



Incubator

Incubator

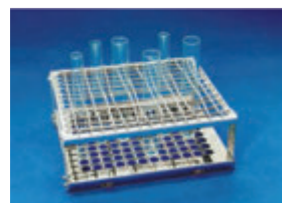
## Hatch-Master

The Hatch-Master is a temperature controlled shaker apparatus, well suited to biotechnology laboratories, especially for incubation and proliferation of various kinds of cell cultures. The system provides programmable shaking, time and temperature control so users can design and implement sequential operations with ease.



### BYQ 6H60

The flask clamp for 250ml&500ml triangle flasks.



### BYQ 6012E

The flask clamp of 290mmx250mm for conventional tubes: 50mmx100mm, 20mmx200mm, 30mmx200mm,



### Some of the notable operational features include:

- Choose agitation by reciprocation or rotation.
- Control temperature between 15 °C and 60 °C.
- Computer control-create programs of up to 20steps for unattended operation on a windows-based PC and upload specific programs to the Hatch-Master as needed.
- Peltier thermoelectric system with digital control ensures accurate, stable temperature control and reliability.
- Fail-safe power protection maintains program and data in the event of power loss.
- Intelligent monitor records events, performs self-testify and automatically corrects many malfunctions, including: sensor function, temperature fluctuations, motor malfunctions and open-door events. The system issues audible alarms for malfunction events.
- Automatic PID circuit for accurate temperature maintenance.
- A temperature alarm can be set within a range of +5 °C of the programmed operating temperature.

### Notable physical features include:

- Large, high definition vacuum fluorescent display, soft-touch control panel and friendly software interface provide easy user operation.
- Super large double-pane insulated window provides clear viewing.
- Easy-to-change shaker table shaking of various shapes of containers.
- Optional flask clamps allow safe shaking of various shapes of containers.
- DC motor provides high power efficiency.
- Operation is quiet even at maximum speed.
- Door can be configured for left or right opening for convenience in different placement situations.
- A liquid drain is provided for easy clean-up after spills.

### Specifications:

Model	SI-23MC
Temp. uniformity within compartment	±1 °C (37 °C)
Temp. control accuracy	±0.2 °C (37 °C)
Temp. control range	15 °C ~ 60 °C
Temp. calibration range	±5 °C
Heating/cooling component	Peltier effect heat exchanger
Shaking speed	20-300rpm
Shaker amplitude	25mm
Shaking mode	Rotation, reciprocation
Shaker table dimensions(mm)	290x250(LxW)
External dimensions (mm)	560x420x650(LxWxH)
Maximum load for shaking	3.5kg
Time setting range	0 ~ 99h59min
Running model	Program/General
Display mode	Colorful VFD+LED
Supply voltage	AC 220/110V,50/60Hz,400W
Power requirement	400W
Net weight	50kg

