



AELAB GUANGZHOU CO.,LTD





# COMPANY PROFILE

AELAB GUANGZHOU CO.,LTD is a company that has many of manufacturing and selling wide range of laboratory & medical instruments. The main product include liquid handing, nucleic acid and protein analysis, Spectrometer, cleaning machines. Over 15years international sales experience and already provide service over 100 countries. We are able to provide installation,debugging, training service onsite. For general machines we are providing online training service or telephone call training service to distributors. The machine basic information and brochure customers can download from our website directly.

AELAB machines are pass ISO/CE certificate and company got the report from SGS/TUV/BV companies. All the machine give 1year or 2years warranty to make sure customer can rest assured selling our machine. For the payment we can accept T/T, L/C, DP, etc. The goods can be arrange shipment by air, sea or air-express in any of China port. If you require any special documents we can follow your instruction make it, such as: CO, 3Q documents, test report, documents apply from CCPIT or embassy.

Our mission is to develop and market products through distributors all over the world. To meet your requires, our technical and supportive staffs will help you choose the most suitable products.

Please do not hesitate, AELAB products are worth a try! Welcome to join us!

## **AELAB Passed SGS/TUV/BV/ISO/CE/ROHS/FC Certificates:**

1. ISO Certificate for company.
2. CE Certificate for product: Micro Volume Spectrophotometer
3. CE Certificate for product: PCR Cyclor
4. CE Certificate for product: Hotplate Stirrer
5. CE Certificate for product: Block Heater
6. CE Certificate for product: Tube Roller Mixer, Rotatory Mixer, Vortex Mixer, Orbital Shaker, Lab Rocker.
7. CE Certificate for product: Electronic Pipette, Manual Pipette, Pipette Tips
8. CE Certificate for product: Titrator
9. CE Certificate for product: Ultrasonic Cleaner
10. CE Certificate for product: Portable Incubator, Water Bath Incubator.
11. CE Certificate for product: UV Vis Spectrophotometer, Flame Photometer.



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## Hotplate Stirrer

7" inch hotplate magnetic Stirrers 550°C series are suitable for various heating and mixing applications with excellent chemical resistance, compact shape and efficient heat transfer. They are widely used in every field of science like biology, chemistry, physical science, pharmaceutical science etc.

### Features:

- ◆ Microprocessor PID controls.
- ◆ RS232 interface enables data preservation and control by a PC.
- ◆ LCD/LED display with speed and temperature control knobs.
- ◆ Max. heating temperature of 550°C.
- ◆ Ceramic work plate of 184x184mm.
- ◆ Speed is adjustable from 100 to 1500rpm.
- ◆ "Hot" safety indication on LCD when the plate temperature is above 50°C.
- ◆ PT1000 external temperature sensor for precise temperature control.
- ◆ Ceramic work plate with a high power of 1050W reaches a maximum temperature of 550°C.



### Technical Specifications:

Model	AHS-101	AHS-102	AHA-201
Type	Hotplate Stirrer		Hotplate
Work plate Dimension [W x D]	184x184mm (7 inch)		
Work plate material	Glass ceramic		
Motor type	Brush less DC motor	Shaded pole motor	---
Motor rating input	18W	15W	---
Motor rating output	10W	1.5W	---
Power	1050W	1030W	1010W
Heating output	1000W		
Voltage	100-120/200-240V 50/60Hz		
Stirring positions	1	1	---
Max. stirring quantity, [H2O]	20L	10L	---
Max. magnetic bar[length]	80mm	80mm	---
Speed range	100-1500rpm	0-1500rpm	---
Speed display	LCD	Scale	---
Temperature display	LCD	LED	LED
Heating temperature range	Room Temp.-550°C,increment 1°C		
Temperature control accuracy	±1 °C (<100°C) ±1%(>100°C)	±10°C	
Overheating protection	580°C		
Temperature display accuracy	±0.1°C		
External temperature sensor	PT1000 (accuracy ±0.2)		
"Hot" warning	50°C		
Data connector	RS232	-	---
Protection class	IP21		
Dimension [WxDxH]	215x360x112mm		
Weight	5.3kg		
Permissible ambient temperature and humidity	5-40°C, 80%RH		

## Magnetic Hotplate Stirrers

These magnetic stirrers deliver powerful, smooth mixing and safe heating. These are useful in biological, physical, chemical, pharmaceutical laboratories, etc.

### Features:

- ◆ LCD Digital control of speed and temperature.
- ◆ Maintenance free brushless DC motor.
- ◆ RS232 interface enables data preservation and transmission and control through a PC.
- ◆ Speed setting range from 0-1500rpm.
- ◆ RS232 interface provides PC control and data transmission.
- ◆ Ceramic work plate with max. temperature of 340°C.
- ◆ Various optional accessories make it suitable for many applications.
- ◆ "Hot" warning safety indication on LED when the plate temperature exceeds above 50°C.
- ◆ PT1000 external temperature sensor for precise temperature control accuracy of  $\pm 0.2^{\circ}\text{C}$ .



### Technical Specifications:

Model	AHO-101	AHO-102	ASC-201	ASC-202
Work plate dimension	$\phi 135\text{mm}(5\text{ inch})$			
Work plate material	stainless steel cover with ceramic			
Motor type	Brushless DC motor			
Motor rating input	18W			5W
Motor rating output	10W			3W
Power	550W			515W
Heating output	500W			
Voltage	100-120/200-240V 50/60Hz			
Stirring positions	1			
Max. stirring quantity[H <sub>2</sub> O]	20L			3L
Max. magnetic bar[length]	80mm			50mm
Speed range	100-1500rpm		0-1500rpm	200-1500rpm
Speed display	LCD		Scale	LED
Temperature display	LCD		Scale	LED
Heating temperature range	Room temp.-340°C, increment 1°C			Room temp.-280, increment 1°C
Temperature control accuracy	$\pm 1^{\circ}\text{C}(<100^{\circ}\text{C})$ , $\pm 1\%(>100^{\circ}\text{C})$		---	$\pm 1^{\circ}\text{C}(<100^{\circ}\text{C})$ $\pm 1\%(>100^{\circ}\text{C})$
Over temperature protection	420°C			
Temperature display accuracy	$\pm 0.1^{\circ}\text{C}$	$\pm 0.1^{\circ}\text{C}$	$\pm 0.5^{\circ}\text{C}$	$\pm 1^{\circ}\text{C}$
External temperature sensor	PT1000 (accuracy $\pm 0.2$ )			
"Hot" warning	50°C	50°C	-	50°C
Data connector	RS232	RS232	-	RS232
Protection class	IP42	IP42	IP42	IP21
Timer function	-	1min to 99h 59min	---	---
Dimension[WxDxH]	160×280×85mm			
Weight	2.8kg			
Permissible ambient temperature and humidity	5-40°C, 80%RH			



## Magnetic Stirrers

These magnetic stirrers deliver powerful, smooth mixing and safe heating. These are useful in biological, physical, chemical, pharmaceutical laboratories, etc.

### ASO-201 Features:

- ◆ Speed adjustable from 0-1500rpm with a simple dial knob.
- ◆ Max. stirring capacity of 10L[H2O].
- ◆ Ceramic work plate highly resistance to chemical erosion.

### ASO-202 Features:

- ◆ Speed adjustable from 0-1500 rpm with a simple dial knob.
- ◆ Max. stirring capacity of 20L[H2O].
- ◆ Stainless steel ceramic work plate which can provide good chemical resistance.

### ASS-201 , ASS-202 Features:

- ◆ Broad speed range from 100-1500rpm.
- ◆ Suitable for high speed mixing applications.
- ◆ Max. stirring capacity is 3L [H2O].
- ◆ LED digital speed control (ASS-201).
- ◆ Good chemical resistant work plate.



### Technical Specifications:

Model	ASO-201	ASO-202	ASS-201	ASS-202
Work plate dimension	184x184mm(7inch)	φ135mm(5 inch)		
Work plate material	Glass ceramic	Stainless steel cover with ceramic	Nylon+GF	
Motor type	Shaded pole motor	Brushless DC motor		
Motor input power	15W	18W	5W	
Motor output power	1.5W	10W	3W	
Power	30W		15W	10W
Voltage	100-120/200-240V,50/60Hz			
Stirring positions	1			
Max. stirring quantity[H2O]	10L	20L	3L	
Max. magnetic bar[length]	80mm		50mm	
Speed range	0-1500rpm			
Speed display	Scale		LED	Scale
Protection class	IP21	IP42		
Dimension[WxDxH]	215x360x112mm	160×280×85mm	150×260×80mm	
Weight	3.8kg	2.8kg	1.8kg	
Permissible ambient temperature and humidity	5-40°C, 80%RH			



## 8-Channels Hotplate Magnetic stirrer

ACHR-101/102 is a hotplate stirrer designed for high-efficiency experiments. The maintenance free brushless DC motor working with low noise. Working surface adopts stainless steel coated silicone film which is non-slip and corrosion resistant.

### Features:

- ◆ LCD display
- ◆ Stable temperature
- ◆ Max. temperature 120℃
- ◆ Multi channel improves efficiency
- ◆ Stirrer bar running synchronously ensure samples uniformity
- ◆ Maintenance free brushless DC motor



### Technical Specifications:

Model	ACHR-101	ACHR-102
Type	Hotplate Stirrer	Stirrer
Voltage	AC100~120V/AC200~240V 50~60Hz	AC100~120V/AC200~240V 50~60Hz
Position	8	8
Max.Capacity	8x400ml	8x400ml
Stirring bar length	46mm	46mm
Temperature	RT +5~120℃	--
Safe temperature	140℃	--
Speed range	200-1200 rpm	200-1200 rpm
Timer	--	1m~99h59m
Power	400W	30W
Motor	Brushless DC motor	
Working surface	stainless steel coated silicone film	
Display	LCD	
Dimension (W×D×H)	205x480x50 (mm)	205x480x50 (mm)

## Overhead Stirrers

AELAB Overhead Stirrers are designed for high volume and high viscosity sample stirring applications. These are used in polymer processing, organic and inorganic solvent mixing, chemical synthesis and many more pharmaceutical applications.

### Features:

- ◆ Easy and user friendly operation with LCD/LED digital display of set and actual speeds.
- ◆ Speed adjustable within 50-2200rpm with precise speed control.
- ◆ High performance BLDC motor with overload protection.
- ◆ Speed maintains as the viscosity changes.
- ◆ RS232 interface to control and data document(ASHO-701,702).
- ◆ Microprocessor controlled safety circuits prevent splashing.
- ◆ Powerful torque suitable for stirring of highly viscous liquids.
- ◆ Protection class of IP21 , IP42.
- ◆ A wide range of shaft accessories for different kinds of applications.



### Technical Specifications:

Specifications	ASHO-701	ASHO-702	ASHO-703	ASHO-704
Max. stirring quantity[H2O]	20L	40L	20L	40L
Power	70W	130W	70W	130W
Motor type	Brush less DC motor			
Motor input power	60W	120W	60W	120W
Motor output power	50W	100W	50W	100W
Speed range	50-2200rpm			
Speed display accuracy	±3rpm			
Speed display	LCD		LED	
Torque display	LCD		LED	
Voltage	100-240V, 50/60 Hz			
Overload protection display	LED lights			
Max. torque	40Ncm	60Ncm	40Ncm	60Ncm
Viscosity max.	10000mPas	50000mPas	10000mPas	50000mPas
Chuck range diameter	0.5-10mm			
Dimension[W×D×H]	83x220x186mm			
Weight	2.8kg			
Protection class	IP21		IP42	
Permissible ambient temperature and humidity	5-40℃ 80%RH			
Data connector	RS232		-----	





# Overhead Stirrers



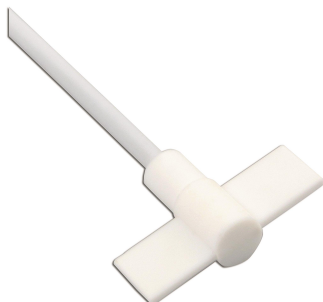
Machine Stand



Standard Accessories



## Optional Accessories



## Block Heater

### Features:

- ◆ A wide range of temperature control up to 120°C.
- ◆ Useful for heating of samples at low temperatures.
- ◆ Timer function support is available.
- ◆ LED digital display of temperature and time.
- ◆ Various types of optional blocks are available.
- ◆ Overheating protection.
- ◆ Plastic Lid for protection and heat preservation.

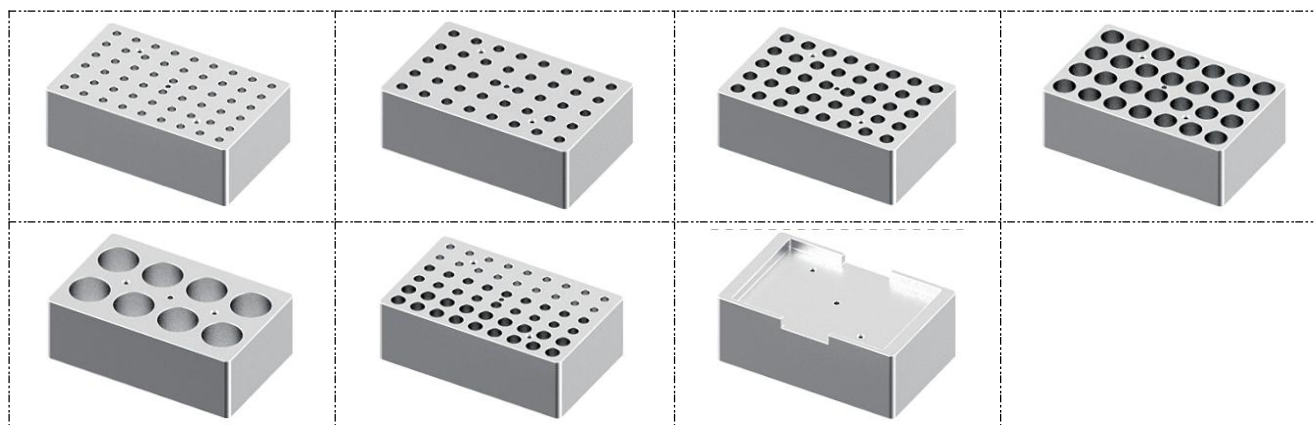


### Technical Specifications:

Model	AE-BH101
Functions	Heating
Temperature range	Room temp.-120°C
Temperature control accuracy [at 37°C]	± 0.5°C
Temperature uniformity	± 0.5°C
Max. heating rate	5.5°C/min
Timer	1min-99h59min
Screen	LED
Overheating protection	140°C
Adapter block material	aluminum
Voltage, Frequency	100-120V/220-240V,50Hz/60Hz
Power	160W
Dimension [D×W×H]	175 x 290 x 85mm
Weight	3kg

### Block Ordering Detail:

Ordering No.	Capacity	Diameter Depth	Ordering No.	Capacity	Diameter Depth
A101	0.2mLx54	6.4mm 15mm	F101	50mLx8	29.8mm 48mm
B101	0.5mLx40	8.2mm 26.4mm	G101	0.2mL+0.5mL+1.5/2mL 18+18+18	
C101	1.5mLx40 2mLx40	11mm 34.7mm	H101	96 or 384 well plate	
D101	5/15mLx28	17mm 48mm	I101	8 PCR strips and 96 PCR microplate	
E101	5mL blood collection tube x 45	13.5mm 48mm	J101	Two-in-one block, bead bath/water bath	



## Mini Block Heater

AELAB 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, etc.

### 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.

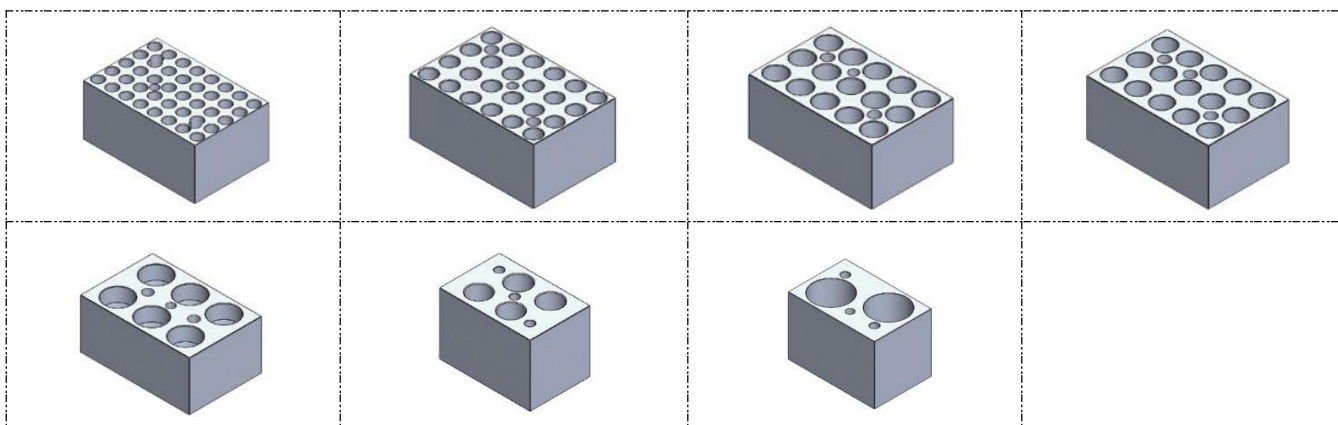


### Technical Specifications:

Specifications	AE-BHmini01	AE-BHmini02	AE-BHmini03
Display	LCD		
Temperature setting range[°C]	1-100	0-100	25-100
Temperature range [°C]	Room temperature-23~100		RT+5~100
Temperature control accuracy[°C]	±0.5		
Temperature display accuracy[°C]	0.1		
Minimum time taken for heating(25°C -100°C )	≤20min		
Max. Heating Rate	8°C /min		6.5°C /min
Time setting range	0-999min/0-999sec		
No. of programs in memory	9(2steps for each )		
Rapid calibration	Support		
USB interface	Support		
Error code reminder	Support		
External dimension [mm]	110x162x140		
Overall weight [kg]	≤1		
Power supply	DC12V,100-240V, 50/60Hz		
Operating temperature[°C]	+10~40°C		
Operating humidity [% RH]	≤80%RH		

### Block Ordering Detail:

Ordering No.	Capacity	Diameter x Depth	Ordering No.	Capacity	Diameter x Depth
A201	0.2ml×40	6.4×20 mm	F201	15ml×4	16.4×45mm
B201	0.5ml×24	8.2×28.4mm	G201	50ml×2	29×45mm
C201	1.5mL×15	11.2×31mm	H201	0.2ml×40	PCR 8 strips block
D201	2ml×15	11×31mm	I201	8-well ELISA strip	
E201	5mL×6	17×31mm			



The Thermo Shaker 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.

## Features:

- ◆ Clear and easy-to-read TFT screen.
- ◆ Excellent performance for temperature controlled mixing applications.
- ◆ Up to 9 user define programs.
- ◆ A wide range of heating blocks to accommodate tubes with different capacities.
- ◆ Aluminum heating blocks enhance heat transfer.
- ◆ Easily interchangeable blocks with magnetic adhesion and without any tools..
- ◆ A transparent plastic lid is available to better preserve the temperature.



## Technical Specifications:

Model	AE-TSI100	AE-TSI200	AE-TSI300	AE-TSI400
Functions	Heating, Cooling & Mixing	Heating & Mixing	Heating & Cooling	Heating
Temperature range	Heating: RT ~100℃	Heating: RT~ 100℃	Heating: RT ~110℃	Heating:
	Cooling: RT~ below RT 15℃		Cooling: RT~ below RT 25℃	RT+5℃ ~ 100℃
Temperature setting range	0.1-100℃	15-100℃	-5-110℃	15-100℃
Temperature control accuracy	± 0.5℃			
Temperature uniformity	Max.± 0.5℃			
Max. heating rate	5.5℃/min			
Max. cooling rate	5℃ /min(100℃-RT.)	---	2.5℃ /min(100℃-RT.)	---
	0.5℃/min(below RT)		0.5℃/min(below RT)	
Mixing frequency	200-1500rpm			---
Mixing orbit	3mm			
Program	9			
Screen	TFT			
Overheating protection	150℃			
Adapter block material	aluminum			
Voltage, Frequency	DC12V,100~240V,50/60Hz			
Power	200W			
Dimension [D×W×H]	200×235×120mm ( without the heating block )			
Weight	7.3kg			

## Block Ordering Detail:

Order No.	Speed	Capacity	Diameter x Depth	Order No.	Speed	Capacity	Diameter x Depth
A301	1500rpm	24x0.5mL	8.1x26mm	F306	800rpm	8x15mL	16.9x80mm
B302	1500rpm	24x1.5mL	10.9x30.8mm	G307	600rpm	4x50mL	29.6x80mm
C303	1500rpm	24x2mL	10.9x30.8mm	H308	1500rpm	0.2mLx96 PCR plate	
D304	1500rpm	8x5mL(round bottom)	13.6x42mm	1309	1500rpm	microplate	
E305	1400rpm	8x5mL(cone bottom)	17x51.5mm				



## Vortex Mixers

Vortex mixer is used in most bioscience laboratories for mixing liquids in tubes.

In a biochemical or analytical laboratory they may be used to mix the reagents of an assay or to mix the experimental samples.

### Features:

- ◆ Speed adjustable from 0-2500rpm (AVT-501).
- ◆ Fixed speed of 2500rpm (AVT-502).
- ◆ Standard configuration with an adapter for Ø30mm tube or smaller.
- ◆ 3 position power switch with touch/continuous modes of operation.
- ◆ Wide range of accessories available.
- ◆ Shaded pole motor for less maintenance.
- ◆ Good corrosion resistant aluminum alloy casing exterior.
- ◆ Small rubber vacuum grippers hold the unit during operation.
- ◆ LED indicator of power.



VT1.1 Standard top(Default)  
For <Ø30mm tubes and small vessels

### Technical Specifications:

Specifications	AVT-501 (Adjustable speed 0-2500rpm )	AVT-502 (Fixed speed 2500rpm)
Voltage	110-120V/220-230V,50/60Hz	110-120V/220-230V,50/60Hz
Power	60W	60W
Mixing motion	Orbital	Orbital
Orbital diameter	4mm	4mm
Motor type	Shaded pole motor	Shaded pole motor
Motor rating input	58W	58W
Motor rating output	10W	10W
Speed range	0-2500rpm	2500rpm
Speed display	Scale	---
Run type	Touch operation/Continuous	Touch operation/Continuous
Dimension[W×H×D]	127×130×160mm	127×130×160mm
Weight	3.5kg	3.5kg
Permissible ambient temperature	5-40 °C	5-40 °C
Permissible relative humidity	80%RH	80%RH
Protection class	IP21	IP21





## Tube Roller

Tube Rollers are used for uniform mixing of blood samples, viscous liquids, and whole blood components in the anticoagulation tubes or bottles. These rollers can mix samples in any type of liquid containers. Tube rollers are microprocessor controlled with digital timer.

### Features:

- ◆ Maximum load of up to 4Kg.
- ◆ Gentle mixing in rolling motion with a capacity of 6 tubes.
- ◆ LCD digital display of adjustable speed and time (ATRL-1).
- ◆ Speed adjustable from 10-70rpm and timer from 1-1199min (ATRL-1).
- ◆ Speed adjustable from 0-70rpm (ATRL-2).
- ◆ LED overload indicator.



### Technical Specifications:

Specifications	ATRL-1	ATRL-2
Amplitude	24mm	24mm
Motor type	DC motor	DC motor
Rocking motion	Rocking and rolling	Rocking and rolling
Amplitude	24mm	24mm
Max. load capacity	4kg	4kg
Number of rollers	6	6
Roller size[length]	280mm	280mm
Speed range	10 -70rpm	0-70rpm
Speed display	LCD	Scale
Timer	Yes	--
Timer display	LCD	--
Time setting range	1-1199min	--
Operation mode	Continuous/timer	Continuous
Voltage	100-240V,50/60Hz	100-240V,50/60Hz
Power	30W	25W
Dimension [D×W×H]	450×260×120mm	450×260×120mm
Weight	5.1kg	4.5kg
Permissible ambient temperature and humidity	5-40°C,80%RH	5-40°C,80%RH
Protection class	IP21	IP21

## Micro Plate Mixers

AELAB Microplate Mixer is used for holding single or double microplates. The compact shape of AMSL-1 Microplate Mixer occupies less bench space and makes the storage easier. It is widely used in life sciences including microbiology, cell and molecular biology, immunology and biotechnology

### Features:

- ◆ High efficiency BLDC motor.
- ◆ Small and compact design requires minimum bench top space.
- ◆ Speed adjustable within 0-1500rpm using speed control knob.
- ◆ Designed for mixing of single or double micro plates in orbital motion.
- ◆ Wide range of accessories are available.
- ◆ The standard pack includes a single micro plate clamp.



### Technical Specifications:

Specifications	AMSL-1
Shaking movement	Orbital
Orbital diameter	4.5mm
Max. shaking weight(with accessory)	0.5kg
Motor type	Brushless DC motor
Motor rating input	18W
Motor rating output	10W
Speed range	Single microplate: 0-1500rpm Double microplate: 0-1000rpm
Speed display	Scale
Voltage	100-240V,50/60Hz
Power	20W
Dimension	260×150×80mm
Weight	3kg
Permissible ambient temperature and humidity	5-40°C,80%RH
Protection class	IP21



## 3D Rotating Mixer

With adjustable rotation speed and vibration, which is suitable for various tubes. It can provide efficient and mild mixing, so that biological samples in suspension state, all 1.5ml ~ 50ml test tubes can be assembled arbitrarily. It is suitable for similar applications such as prevention of blood coagulation, latex diagnosis and immunoprecipitation. It is easy to move and carry, and can be placed in incubator or biosafety cabinet.

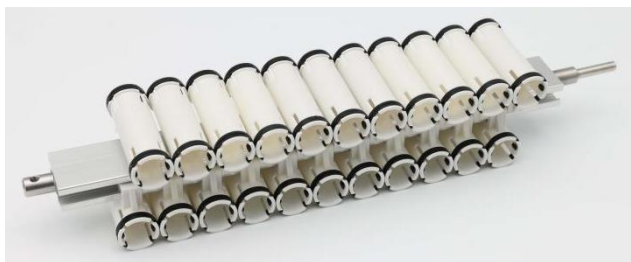
### Features:

- ◆ Free assembly of test tube fixture without dismantling rotary clamp
- ◆ LCD display
- ◆ 2 additional self-programming programs
- ◆ 10 different self-contained programs (rotation and vibration)
- ◆ 360 degree rotation and vibration
- ◆ Adjustable time and speed at any angle.



### Technical Specifications:

Model	ACMI-005
Speed	1rpm ~100rpm
Oscillation Method	Circle
Timing	1m ~99h59m
Voltage	DC12V
Power	12W
Dimension(W×D×H)(mm)	440×135×280
Weight	2 kg



## Rotators

Rotators perform effective mixing than rollers. Rotators can use rotisserie type or disk type design accessory which holds sample tubes of 1.5mL to 50mL capacities. With adjustable rotation speed, they are useful in various applications which need continuous agitation, hematology, blood chemistry and diagnostic applications.

### ARM-801 Features:

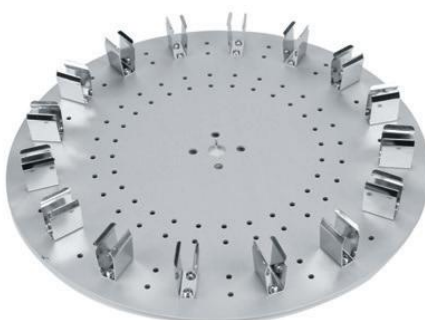
- ◆ LCD digital control of speed and time.
- ◆ Speed adjustable from 10-70rpm.
- ◆ Fully adjustable tilt angle up to 90°.
- ◆ DC motor with less maintenance.
- ◆ Low speed rotation enhances the agitation of biological samples.
- ◆ Various types of disk and clip accessories to accommodate most common tubes.

### ARM-802 Features:

- ◆ Speed adjustable from 0-80rpm.
- ◆ Low speed rotation enhances the agitation of biological samples.
- ◆ Various types of disk and clip accessories to accommodate most common tubes.

### Technical Specifications:

Specifications	ARM-801	ARM-802
Motor type	DC motor	DC motor
Tilt angle	0-90°	--
Speed range	10-70rpm	0-80rpm
Speed display	LCD	Scale
Timer display	LCD	Scale
Timer	1-1199min	--
Operation mode	Continuous / timer	Continuous
Voltage	100-240V, 50/60Hz	100-240V, 50/60Hz
Power	40W	20W
Dimension [D×W×H ]	280×210×300mm	300×220×310mm
Permissible ambient temperature and humidity	5-40°C, 80%RH	5-40°C,80%RH
Protection class	IP21	IP21





## Rotators

### ASRM-7 Features:

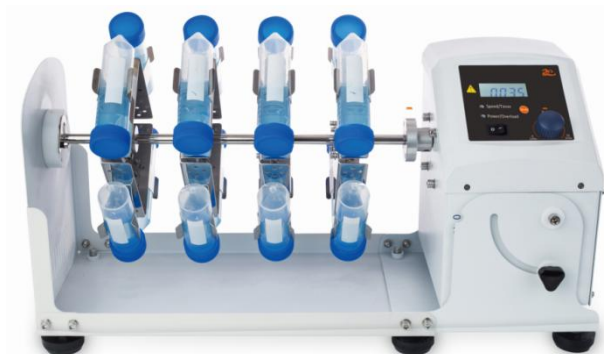
- ◆ Various types of rotisserie and clip accessories to accommodate centrifuge tubes of different sizes.
- ◆ LCD digital control of speed and time.
- ◆ Speed adjustable from 10-70rpm.
- ◆ DC motor with less maintenance.
- ◆ Low speed rotation provides effective mixing.

### ASRM-8 Features:

- ◆ Speed adjustable from 0-80rpm.
- ◆ Low speed rotation provides effective mixing in a variety of centrifuge tubes.
- ◆ Various types of rotisserie and clip accessories to accommodate most common tubes.

### Technical Specifications:

Specifications	ASRM-7	ASRM-8
Motor type	DC motor	DC motor
Speed range	10-70rpm	0-80rpm
Speed display	LCD	Scale
Timer display	LCD	Scale
Timer	1-1199min	--
Operation mode	Continuous/timer	Continuous
Voltage	100-240V, 50/60Hz	100-240V, 50/60Hz
Power	40W	20W
Dimension [D×W×H]	220×510×260mm	150×530×190mm
Permissible ambient temperature and humidity	5-40°C, 80%RH	5-40°C, 80%RH
Protection class	IP21	IP21





## Orbital and Linear Shakers

Orbital shakers with a variety of accessories are suitable for use in different laboratories in microbiology, chemistry, biochemistry and molecular biology in applications like drug analysis, ELISA, Enzyme immunoassays, protein synthesis, etc.,

### AOS-1 Features:

- ◆ Compact and space saving unit.
- ◆ Microprocessor PID control ensures powerful and consistent shaking motion.
- ◆ Load capacity up to 7.5Kg
- ◆ LCD digital control of speed and time.
- ◆ Programmable speed ranges from 100-500rpm.
- ◆ Easy-to-set digital timer from 1min-19h59min.
- ◆ High performance BLDC motor with overspeed detection.
- ◆ Variety of accessories suitable for most commonly used vessels.
- ◆ RS232 interface for data documentation and external control through PC.

### AOS-2 Features:

- ◆ Max. load capacity 3kg.
- ◆ Independent LCD display for speed and time.
- ◆ Speed and time value can be altered during running.
- ◆ Maintenance-free brushless DC motor.
- ◆ Foot screws height can be adjusted to make sure stable running.
- ◆ Continuous or timing mode optional.

### AOSM-1 Features:

- ◆ Load capacity up to 3Kg with platform.
- ◆ Independent LED digital control of speed and time.
- ◆ Light in weight with low maintenance DC motor.
- ◆ Programmable speed ranges from 40-200rpm.
- ◆ Variety of accessories suitable for most commonly used vessels.



## Technical Specifications:

Model	AOS-1	AOS-2	AOSM-1	AOSM-2
Orbital diamter /Amplitude	10mm		20mm	10mm
Max.load capacity (with platform)	7.5kg	3kg	3kg	7.5kg
Motor type	Brushless DC motor			
Motor input power	28W	20W	16W	28W
Motor output power	15W	15W	10W	15W
Speed range	100-500rpm	70-400rpm	70-200rpm	100-350rpm
Speed display	LCD	LCD	LED	LCD
Timer display	LCD	LCD	LED	LCD
Time setting range	1min-19h59min	1-1199min		1min-19h59min
Voltage	100-240V, 50/60Hz			
Power	30W	25W	20W	30W
Weight	12.5kg	9.8kg	3.1kg	13.5kg
Ambient temperature and humidity	5-40℃, 80%			
Dimensions (WxDxH)	370x420x100mm	420X370X100mm	330x270x110mm	420X370X100mm
Protection class	IP21			
Data connector	RS232	---		

## Mini Centrifuge / Micro Centrifuge

### Features:

- ◆ Extremely quiet with noise level  $\leq 45\text{dB}$ .
- ◆ Compact design for less bench space.
- ◆ Easy-to-use, one-button control.
- ◆ Powerful motor up to 7000rpm (AE-MC-7).
- ◆ Suitable for 2mLx8/1.5mLx8 and PCR8x2 rotors.
- ◆ Accelerates and brakes in seconds.



### Technical Specifications:

Model	AE-MC-7	AE-MC-5
Max. Speed	7000rpm	5000rpm
Max. RCF	2680×g	1360×g
Rotor Capacity	0.2/0.5/1.5/2.0mL×8 0.2mL×16 PCR strips or	0.2/0.5/1.5/2.0mL×8 0.2mL×16 PCR strips or
Run Time	Continuous operation	Continuous operation
Driving Motor	DC motor	DC motor
Power	AC110-240V/50Hz/60Hz 20W	AC110-240V/50Hz/60Hz 20W
Noise Level	$\leq 45\text{dB}$	$\leq 45\text{dB}$
Dimension [D×W×H]	160x170x122mm	160x170x122mm
Weight	0.5kg	0.5kg
Certification	ISO/CE	ISO/CE

### Rotor :



Max. speed: 7000/5000rpm  
 Max. RCF: 5460/2680/1360×g  
 Rotor capacity: 2mL/1.5mL×8, 0.2mL×8, 0.5mL×8  
 Rotor material: High strength plastic  
 Available rotor adapters: AE5P2, AE5P2



Max. speed: 10000/7000/5000rpm  
 Max. RCF: 5460/2680/1360×g  
 Rotor capacity: 0.2mL×16 PCR strips,  
 0.2 mL×2 PCR 8 strips  
 Rotor material: High strength plastic

### Adapter :



0.2mL rotor adapter  
 Used with AE8-2 rotor  
 8pcs/pk



0.5mL rotor adapter  
 Used with AE8-2 rotor  
 8pcs/pk

## High Speed Mini Centrifuge

### Features:

- ◆ Large LCD display with intuitive menu for quick and easy operational settings.
- ◆ Compact design and small foot print.
- ◆ High efficiency BLDC motor quickly accelerates the rotor to set speed.
- ◆ Precise rotation speed and quiet operation with noise level  $\leq 45\text{dB}$ .
- ◆ Maintenance free motor with a powerful centrifugal force up to  $15100\times g$  and max. speed of 15000rpm.



### Technical Specifications:

Specifications	AE-MC-15
Max. Speed	15000rpm(500-15000rpm), increment:100rpm
Max. RCF	15100 $\times g$ , increment: 100 $\times g$
Speed Accuracy	$\pm 20\text{rpm}$
Rotor Capacity	0.2mL/0.5mL/1.5mL/2mL $\times 12$
Run Time	30sec-99min/Continuous
Driving Motor	Brush less DC motor
Safety Devices	Dual door interlock, Over-speed detection, Over-temperature detection, Automatic internal diagnosis
Power	Single-phase, AC100V-240V
Noise level	50Hz/60Hz, 3A, 100W
Acceleration/Braking time	$\leq 54\text{dB}$
Dimension[D $\times$ W $\times$ H]	11s $\uparrow$ /9s $\downarrow$
Weight	255 $\times$ 245 $\times$ 140mm
Certification	6kg
Advanced features	EMC, CE, FCC, ICES, cTUVus, CB
	Speed/RCF switch, Short-time run function, sound-alert function

### Rotor:



### Adaptor:



## Low Speed Centrifuge

Low speed clinical centrifuges are widely used in the medical industry. Ideal for separation of serum, plasma, urine, fecal samples in biochemical & medical laboratories. It is an essential equipment of every clinical laboratory, blood bank, medical college and medical research institute.

### AE-LSC-4C Features:

- ◆ Max. capacity 50ml×4, Adapt to different sizes of blood collection tubes and centrifuge tubes suitable for swing out rotor and angle rotor.
- ◆ Rotor speed can be set in RPM/RCF, with 3 programs storage capacity for routine applications.
- ◆ Max. speed 4000rpm.
- ◆ Automatic internal diagnosis and self-detection.
- ◆ Maintenance-free brushless DC motor.



### AE-LSC-4E Features:

- ◆ Speed range of 300-4000rpm.
- ◆ 3 programs storage capacity for routine applications.
- ◆ Automatic internal diagnosis.
- ◆ Maintenance free brushless DC motor.



### Technical Specifications:




Model	AE-LSC-4C	AE-LSC-4E
Speed range	500-4000rpm increment: 100rpm	300-4000rpm increment: 100rpm
Max. RCF	2500×g	1900×g
Speed accuracy	±100rpm	±100rpm
Rotor	Swing6×15ml	Angel 8×15ml (Default),
	Swing4×50ml	
	Angle 24×15 ml,	Angel 10ml×12
	Angle 12×10ml/8×15ml	
Run time	1-99min, HOLD	1-99min, HOLD
Motor	Brushless DC motor	Brushless DC motor
Display	LCD	LED
Program	Blood: 3200rpm,10min.	Blood: 3200rpm,10min.
	Urine: 1800rpm,5min.	Urine: 1800rpm,5min.
	Faecal: 1300rpm,10min.	Faecal: 1300rpm,10min.
Safety Device	Automatic internal diagnosis	Automatic internal diagnosis
Acceleration/deceleration	3↑4↓steps	25s↑35s↓
Power	Single phase,	Single phase,
	100V-240V, 50Hz/60Hz	100V-240V, 50Hz/60Hz
Dimension(W×D×H)	364×440×268mm	286×367×227mm
Weight	14.5kg	9.2kg
Noise	≤62dB(A)	≤60dB(A)



## Rotor:

 <p><b>S6-15</b> Max. speed: 4000rpm Rotor capacity: 15ml×6 Rotor material: Aluminum alloy</p>	 <p><b>S4-50</b> Max. Speed: 4000rpm Rotor capacity: 50ml×4 Rotor material: Aluminum alloy</p>	 <p><b>A24-15P</b> Max. speed: 4000rpm Rotor capacity: 15ml×24 Rotor material: High strength plastic</p>
 <p><b>A8-15P</b> Max. Speed: 4000rpm Rotor capacity: 15ml×8 Rotor material: High strength plastic</p>	 <p><b>A12-10P</b> Rotor capacity: 15ml×8, 10ml×12 Rotor material: High strength plastic</p>	

## Adaptor:

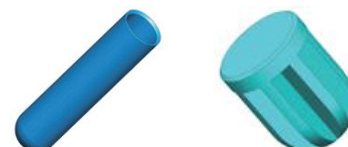
			
<p>50ml change 15ml adapter, Adapted to 17×120mm centrifuge tube, 13/16×100mm blood collection tube 4pcs/pk, for S4-50</p>	<p>15ml adapter for 17×120mm centrifuge tube, 13/16×100mm blood collection tube 24 pcs/pk, for S6-15, A24-15P, A8-15P</p>	<p>5ml adapter, Adapted to 13×75mm blood collection tube 24 pcs/pk, for S4-50, S6-15, A24-15P</p>	<p>1.5/2ml Cryogenic Vials/ centrifuge tube adapter, 24 pcs/pk, for S4-50, S6-15, A24-15P, A12-10P, A6-50P</p>



## Low Speed Centrifuge

### AE-LSC-5 Features:

- ◆ Speed range from 300-5000rpm.
- ◆ Rotor speed can be set and displayed by RPM or G-force.
- ◆ Defined program by knob will be stored and activated when power on.
- ◆ Two programs P1/P2, easy to start the procedure by one key.
- ◆ Two deceleration speeds setting to meet different requirements.
- ◆ Easy-to-read processing display and sound alert.
- ◆ Automatic lid-lock release after running.



### AE-LSC-4.5 Features:

- ◆ Max. speed 4500rpm.
- ◆ Rotor speed can be set in RPM/RCF.
- ◆ 3 preloaded programs for fast operation of PRP/PRF/CGF application.
- ◆ 9 programs for customization can be stored in memory.
- ◆ Powerful CPU for easy operation of speed, time and all other parameters.
- ◆ Easy-to-read processing display and sound alert.
- ◆ Automatic lid-lock release after running.
- ◆ Maintenance-free brushless DC motor.



### Technical Specifications:

Specifications	AE-LSC-5	AE-LSC-4.5
Speed Range	300-5000rpm, increment: 10rpm	300-4500rpm, increment: 10rpm
Max. RCF	2350xg, increment: 10g	2490xg, increment: 10g
Speed accuracy	±20rpm	±10rpm
Rotor capacity	6x15ml/10mL/7mL/1.5-5mL	8x15ml, 12x10mL/7mL/5mL
Run Time	30sec-99min, HD (continuous running)	30sec-99min
Motor	Brushless DC motor	Brushless DC motor
Display	LCD	LCD
Programs Memory	2	9 programs (6 steps for each program) PRP, PRF, CGF
Safety Devices	Door interlock, Overspeed detector; Automatic internal diagnosis	
Power	Single-phase, 110V-240V, 50Hz/60Hz, 70W	
Dimension [W×D×H]	300×240×180mm	
Weight	5.2kg	
Advanced Features	Speed/RCF switch; sound-alert function	

## Hematocrit Centrifuge

Hematocrit centrifuge with AC24P hematocrit rotor is used for determination of volume fractions of erythrocytes in blood for diagnostic purposes and doping tests. Also it is used for the photometric determination of bilirubin content in neonate blood samples. Hematocrit centrifuge with A24-2P tube rotor, can be used for extraction of DNA and RNA.

### Features:

- ◆ Max.speed is 12000rpm, max. RCF 13680×g
- ◆ Precise control of speed and time separately
- ◆ Rotor capacity: Hematocrit rotor: 24 capillary



### Technical Specifications:

Specifications	AE-HC-12
Speed Range	500-12000rpm, increment: 100rpm
Max. RCF	13680×g
Speed Accuracy	±100
Rotor Capacity	1 type
Run Time	10sec-99min/Continuous
Motor	Brushless DC moto
Display	LCD
Safety Devices	Door interlock
Acceleration/Braking time	40s↑40s↓
Power	Single-phase, 200V-240V,50Hz/60Hz, 5A; 380W
Dimension [D×W×H]	280×364×213mm
Weight	10kg
Certification	-
Advanced Features	Speed/RCF switch;Short-time run function; sound-alert function

## High Speed Micro Centrifuge

### Features:

- ◆ Special multi-flow air cooling design with patent ensures fast cooling of the rotor
- ◆ and low energy consumption
- ◆ Temperature display appropriate for gentle handling of sensitive samples
- ◆ Three-layer sealed rotor prevents accidental leakage during centrifugal process
- ◆ allowing risk-free microbial contamination
- ◆ High strength aluminum alloy rotor can be fully autoclaved for unlimited service life
- ◆ Four rotors are optional complete with 24 places 1.5/2.0mL tubes,
- ◆ bigger 5.0mL, smaller 0.2mL and 0.5mL tubes with adapters



### Technical Specifications:

Specifications	AE-HSC-15
Max. Speed	15000rpm(200-15000rpm), increment:10rpm
Max. RCF	21380xg, increment:10xg
Speed Accuracy	±20 rpm
Rotor Capacity	5mL×18, 5mL culture tubex12 0.2mL/0.5mL/1.5mL/ 2mL×24, 0.5mL×36, PCR8×4
Run Time	30sec-99min/Continuous
Motor	Brushless DC moto
Safety Devices	Dual door interlock, Over-speed detection, Automatic internal diagnosis
Power	Single-phase,AC220V-240V, 50Hz/60Hz, 5A, AC110V-120V, 50Hz/60Hz, 8A 200W
Acceleration /Braking time [Sec]	25s↑25s↓
Dimension [D×W×H]	280×364×266mm
Weight	12kg
Certification	CE cTUVus FCC MCA
Advanced Features	Speed/RCF switch; Short-time run function; sound-alert function
Noise Level	≤64dB

## High-speed Refrigerated Micro Centrifuge

### Features:

- ◆ Centrifuge chamber door with automatic adsorption door lock design, can be closed with a single finger.
- ◆ Precooling, the compressor will automatically start cooling as long as the set temperature is lower than the ambient temperature.
- ◆ Sound indicator to prompt that the upper cover is closed to maintain the temperature inside the chamber, after centrifugation.
- ◆ Advanced R290 fluorine free refrigerant, low carbon and environmental protection.
- ◆ Maximum rotation speed can be achieved even at 4°C.
- ◆ Up to 9 program storage capacity according to experimental needs.
- ◆ Biosafety rotor, three-layer seal for biosafety
- ◆ High-strength aluminum alloy, three layered biosafety to withstand numerous high temperature and high pressure sterilizations.
- ◆ Five rotors with 0.2mL, 0.5mL, 1.5mL, 2mL and 5mL centrifuge tubes/ PCR tubes capacity.
- ◆ An external condensation tank prevents condensate within the centrifuge chamber.



### Technical Specifications:

Specifications	AE-HRC-15
Max. Speed	15,000rpm (200-15,000rpm) in 100rpm increments.
Max. RCF	21,380×g, step: 10×g
Capacity	1.5/2mL×24, 0.5mL×36, PCR8×4, 5mL×12, 5mL×18.
Temperature setting	-20°C - 40°C
Timing	30s-99 min; HOLD (continuous running)
Motor Type	DC brushless motor
Safety Performance	Dual door lock, over-speed detection, over-temperature detection with Internal diagnosis system.
Power Requirements	Single phase, 200-240V, 50Hz, 500W
Dimensions(mm)	332(Width) × 553(depth) × 283(height)
Weight	30kg
Acceleration and deceleration time	25s↑ 25s↓
Noise	≤56dB
Other functions	Rotation speed/RCF switchover, inching operation, running process indicator, sound alert. Acceleration/ deceleration in 9 steps, program storage capacity.



## Rotor:



### AS24-2

for AE-HSC-15/AE-HRC-15

Max. speed: 15000rpm

Max. RCF: 21380×g

Rotor capacity: 2mL/1.5mL×24/0.2mL×24/0.5mL×24

Rotor material: Aluminum alloy

Bio-safe(Bio sealing): Yes

Available rotor adapters: A02P2,A05P2



### AS12-V5

for AE-HSC-15/AE-HRC-15

Max. speed: 15000rpm

Max. RCF: 21380×g

Rotor capacity: 5mL×12(Cone bottom)

Rotor material: Aluminum alloy

Bio-safe(Bio sealing): Yes



### AS36-05

for AE-HSC-15/AE-HRC-15

Max. speed: 15000rpm

Max. RCF: 21380×g

Rotor capacity: 0.5mL×36,0.2mL×36

Rotor material: Aluminum alloy

Bio-safe(Bio sealing): Yes

Available rotor adapters: A02P05



### AS4-PCR8

for AE-HSC-15/AE-HRC-15

Max. speed: 15000rpm

Max. RCF: 21380×g

Rotor capacity: 0.2mL/PCR8×4

Rotor material: Aluminum alloy

Bio-safe(Bio sealing): Yes



### AS18-5

for AE-HSC-15/AE-HRC-15

Max. speed :15000rpm

Max. RCF:21380×g

Rotor capacity:5mL×18 ( Round bottom )

Rotor material:Aluminum alloy

Bio-safe(Bio sealing):Yes

## Adaptor:





## Infrared Sterilizer / Bacti-Cinerator Sterilizer

Infrared Sterilizer is new designed. It is used for incineration and disinfection of small tools and bottle mouth such as inoculation rings, inoculation needles, lab tweezers and triangle and test tube mouths. It is easy to use, simple to operate and the sterilization only takes 5~7 seconds. It can be widely used in the environment of biological safety cabinets, purification worktables, suction fans, mobile vehicles, etc.

### Features

- ◆ Completely replace alcohol lamp, Safe and convenient
- ◆ Temperature reaches above 820°C
- ◆ Small and light, easy to use
- ◆ Suitable for anaerobic chamber
- ◆ In the ceramic funnel to prevent contagious splashing and cross-contamination
- ◆ Automatic shutdown after working for a long time,



### Technical Specifications:



Model	BCS-14	BCS-35	ST800-SA
Center High Temperature	825°C+/-50°C		300-830°C
Display	Analog		LED display
Max.Diameter of Sterilizer Goods	Φ14	Φ35	Φ15
Length of Sterilizer	150mm	100mm	140mm
Dimensions (DXWXH)	105X152X200mm	105X140X200mm	158X192X290mm
Power	200W	400W	190W
Weight	1.3kg	1.4kg	1.5kg

## Glass Bead Sterilizer

Glass Bead Sterilizers are a Quick, Easy and Accurate alternative to traditional methods of sterilization. Once switched 'ON', the units are ready to use within 15 Minutes and ensure total sterilization by destruction of all Micro-Organisms within 10 seconds.

Glass Bead Sterilizers are incorporated with an imported thermostat, which maintains the temperature with 100-300°C. These units, having a stainless steel body, are compact enough to be placed on any Laminar Air Flow Work benches or any other work side tables in a clean room atmosphere.



### Technical Specifications:

Model	GBS-10A	GBS-10B
Crucible size	Φ40×80 mm	Φ40×140 mm
Preset Temperature Range	100-300℃	
Temperature Accuracy	≤±5℃	
Initial Stabilization Time	10 minutes	
Up to Max.Temp Time	≤25mins	
Weight of Glass Bead	150g	300g
Material of Lid	Stainless	Stainless
Wattage	120W	250W
Input	100-120 V/ 200-240V, 50/60Hz	
NOTE: Temperature Range can be set according to customers requirements		

## Portable Pressure Steam Sterilizer (AE-P series)

ISO/CE Pass

### Features :

- ◆ Intelligent microcomputer control system: Using LED digital control system; After sterilization finished, sterilizer will automatic alarm and shut down.
- ◆ Interlock device: The control system can real time supervision the sterilizer chamber's temperature and pressure. Only under the safety temperature and pressure can open the sterilizer's cover. Make sure the operator's safety.
- ◆ The structure of cover's opening: Using shift place type of quick-open cover to improve sealing and safety performance.
- ◆ Preset program: Can preset fixed program that sterilize the liquid and solid body.
- ◆ Memory storage system: Store the last operation program so convenient next operation.
- ◆ Digital display screen: Digital display screen and working indicator light display running state.
- ◆ Safety devices: Interlock device, overtemperature and over pressure protecting system, burned protection, safety relief valve, current leakage protector and automatic fault detection.



AE-P18B



AE-PB24/AE-PB30

### Technical Specifications:

Parameter/Model	AE-P18B	AE-PB24	AE-PB30
Configuration	Semi-automatic Control		
Material/Pot Wall Thickness(mm)	Shell: Temperature resistant high quality engineering plastics, Pan: High quality stainless steel 304 material/ 2mm		
Volume/GW	18L/16kg	24L/24Kg	30L/32Kg
Voltage/Power	220V/2Kw	220V/2Kw	220V/2Kw
Packing size(L x W x H mm)	500 x 500 x 700	500 x 500 x 800	500 x 500 x 900
Gross Weight ( KG )	14	29	32
Product size(L x W x H mm)	400 x 380 x 620	370 x 430 x 730	370 x 430 x 820
Sterilization chamber volume ( D x H mm)	280x395	280x495	280 x 585
Use volume ( D x H mm)	269x260	269x330	269x420
Time setting range	0-999min	0-999 min	0-999 min
Rated working pressure	0.142MPa	0.142MPa	0.142MPa
Sterilization temperature setting range	50~126℃	50~126℃	50~126℃

## Vertical Pressure Steam Sterilizer (AE-V series)

ISO/CE Pass

## Features :

## I. Basic structure

1. The shell case is made of high temperature thermoplastic material with outstanding impact resistance and stainless steel.
2. The pot body of sterilizer is made of food grade stainless steel(304).
3. The lid opening and closing device adopts the lever type multi-link synchronous telescopic structure, which makes the lid and the pot body open and close flexible and light, safe and reliable.

## II. Control and operation

The console uses the LCD window graphic dynamic display, the function settings are all selected by scrolling graphic and text, the whole sterilization phase is monitored by micro-computer graphic display and automatic cycle control, and the automatic shutdown is initiated when sterilization phase ends(with an alarm).

## III. Function description

1. It has a one-button sterilization function selection, which can make a quick and clear choice based on different items.
2. With air-cooled chilling device to ensure that the pot body is quickly cooled at the end of sterilization, thus reducing the time to open the lid.
3. It has the function of preheating and melting of sterilized items and has time and temperature selection for the items to be dissolved.
4. A USB interface is available for the convenience of monitoring process with connection to a computer and of collecting data.
5. Sterilization reservation function is available so that users can start it at a set time.
6. Automatic fault detection and judgment system is in place.
7. The full-automatic control model has the function of discharging the low temperature air and exhausting steam when sterilization procedure ends.

## IV. Safety devices

1. It has a safety Interlocking device structure of which is featured by electronic and mechanical interaction, thus ensuring that it automatically locks the lid when there is pressure in the pot and avoid any danger resulted from improper operations.
2. Double protection system with the mechanical safety relief valve and electronically controlled overvoltage protective device.
3. It has heater anti-drying protection function and leakage protection system.

AE-VB30/50/75

AE-VE30/50/75



AE-VB40/60/80

AE-VC40/60/80



## Technical Specifications:

Parameter/Model	AE-VB40/60/80	AE-VB30/50/75	AE-VC40/60/80	AE-VE30/50/75
Configuration	Semi-automatic Control		Full-automatic control, Automatic Exhaust	
The main material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Volume/GW	40L/60L/80L 93/95.5/110kg	30L/50L/75L 94/98/110kg	40L/60L/80L 97/99/113.kg	30L/50L/75L 97/101/113.5kg
Voltage/Power	220V/3.5Kw	220V/3.5Kw	220V/3.5Kw	220V/3.5Kw
Packing size (L x W x H mm)	780x660x1160(40L/60L) 780x660x1320(80L)	780x660x1160(30L/50L) 780x660x1320(75L)	780x660x1160(40L/60L) 780x660x1320(80L)	780x660x1160(30L/50L) 780x660x1320(75L)
Product size (L x W x H mm)	570x690x1020(40L/60L) 570x690x1170(80L)	570x630x970(30L/50L) 570x630x1140(75L)	570x690x1020(40L/60L) 570x690x1170(80L)	570x630x970(30L/50L) 570x630x1140(75L)
Sterilization chamber volume(D x H mm)	370x380(40L) 370x560(60L) 370x750(80L)	370 x 320(30L) 370 x 500(50L) 370 x 690(75L)	370x380(40L); 370x560(60L) 370x750(80L)	370 x 320(30L) 370 x 500(50L) 370 x 690(75L)
Basket size(D x H mm)	350x190(40L) 350x360(60L) 350x190 & 360 (80L)	335 x 190(30L) 335 x 360(50L) 335X190 & 360(75L)	350x190(40L); 350x360(60L) 350x190 & 360 (80L)	335 x 190(30L) 335 x 360(50L) 335X190 & 360(75L)
Time setting range	0-99 h	0-99 h	0-99 h	0-99 h
Rated working pressure	0.217MPa	0.217MPa	0.217MPa	0.217MPa
Sterilization temperature setting range	50~134℃	50~134℃	50~134℃	50~134℃

## Vertical Pressure Steam Sterilizer (AE-V series)

ISO/CE Pass

### Features :

#### Basic structure

1. The shell case is made of high temperature thermoplastic material with outstanding impact resistance and stainless steel.
2. The pot body of sterilizer is made of food grade stainless steel(304).
3. The lid opening and closing device adopts the lever type multi-link synchronous telescopic structure, which makes the lid and the pot body open and close flexible and light, safe and reliable.

#### Control and operation

The console uses the LCD window graphic dynamic display, the function settings are all selected by scrolling graphic and text, the whole sterilization phase is monitored by micro-computer graphic display and automatic cycle control, and the automatic shutdown is initiated when sterilization phase ends(with an alarm).

#### Function description

1. It has a one-button sterilization function selection, which can make a quick and clear choice based on different items.
2. With air-cooled chilling device to ensure that the pot body is quickly cooled at the end of sterilization, thus reducing the time to open the lid.
3. It has the function of preheating and melting of sterilized items and has time and temperature selection for the items to be dissolved.
4. A USB interface is available for the convenience of monitoring process with connector to a computer and of collecting data.
5. Sterilization reservation function is available so that users can start it at a set time.
6. Automatic fault detection and judgment system is in place.
7. The full-automatic control model has the function of discharging the low temperature air and exhausting steam when sterilization procedure ends.

#### Safety devices

1. It has a safety Interlocking device structure of which is featured by electronic and mechanical interaction, thus ensuring that it automatically locks the lid when there is pressure in the pot and avoid any danger resulted from improper operations.
2. Double protection system with the mechanical safety relief valve and electronically controlled overvoltage protective device.
3. It has heater anti-drying protection function and leakage protection system.
4. The full-automatic control model has the function of discharging the low temperature air and exhausting steam when sterilization procedure ends.

#### Safety devices

1. It has a safety Interlocking device structure of which is featured by electronic and mechanical interaction, thus ensuring that it automatically locks the lid when there is pressure in the pot and avoid any danger resulted from improper operations.
2. Double protection system with the mechanical safety relief valve and electronically controlled overvoltage protective device.
3. It has heater anti-drying protection function and leakage protection system.



### Technical Specifications:

Parameter/Model	AE-V30KBS/V50KBS/V75KBS	AE-VD30/VD50/VD75
Configuration	Semi-automatic Control	Full-automatic control, Automatic Exhaust
The main material	Stainless steel	Stainless steel
Volume/GW	30L/50L/75L 93/96/101kg	30L/50L/75L 93/96/101kg
Voltage/Power	220V/3.5Kw	220V/3.5Kw
Packing size (L x W x H mm)	760 x 650 x 1270 (30L/50L) 760 x 650 x 1430 (75L)	760 x 650 x 1270 (30L/50L) 760 x 650 x 1430 (75L)
Sterilization chamber volume (D x H mm)	370x400(30L) 370x550(50L) 370x700(75L)	370x400(30L) 370x550(50L) 370x700(75L)
Basket size(D x H mm)	335x190(30L) 335x360(50L) 350x190x3pcs (75L)	335x190(30L) 335x360(50L) 350x190x3pcs (75L)
Time setting range	0-99 h	0-99 h
Rated working pressure	0.142MPa	0.142MPa
Sterilization temperature setting range	50~126℃	50~126℃



## Vertical Pressure Steam Sterilizer (AE-V series)

ISO/CE Pass

### Features :

Intelligent microcomputer control system: Using LED digital control system; After sterilization finished, sterilizer will automatic alarm and shut down.

Electric interlock device: The control system can real time supervision the sterilizer chamber's temperature and pressure. Only under the safety temperature and pressure can open the sterilizer's cover. Make sure the operator's safety.

The structure of cover's opening: Using 8 rotary extendable stick to improve sealing and safety performance.

Preset program: Can preset fixed program that sterilize and dry the liquid and solid body.

Memory storage system: Store the last operation program so convenient next operation.

Exhaust steam control: After sterilization, exhaust steam valve automatically work when sterilization time run out(apply to Auto exhaust and dry configuration).

Interface check: Provide temperature and pressure check interface; convenient to check multiple position temperature measurement.

Digital display screen: Digital display screen and working indicator light display running state.

Safety devices: Interlock device, overtemperature and over pressure protecting system, burned protection, safety relief valve, current leakage protector and automatic fault detection.

Print function(add configuration): Print the current temperature and sterilization time.



### Technical Specifications:

Parameter/Model	AE-V100KBS	AE-V150KBS	AE-V200KBS
Configuration	Semi-automatic Control	Semi-automatic Control	Semi-automatic Control
The main material	Stainless steel	Stainless steel	Stainless steel
Volume/GW	100L/188Kg	150L/213Kg	200L/238Kg
Voltage/Power	380V/6Kw	380V/6kw	380V/6Kw
Packing size(L x W x H mm)	760 x 800 x 1340	760 x 800 x 1530	760 x 800 x 1720
Product size(L x W x H mm)	650x650x1200	650x650x1400	650x650x1700
Sterilization chamber volume(D x H mm)	500 x 550	500 x 760	500 x 1000
Basket size(D x H mm)	465x230 & 2pcs	465x230 & 3pcs	465x230 & 4pcs
Time setting range	0-99 h	0-99 h	0-99 h
Rated working pressure	0.217MPa	0.217MPa	0.217MPa
Sterilization temperature setting range	50~134℃	50~134℃	50~134℃

## Horizontal Steam Sterilizer (AE-H series)

### Features :

Intelligent microcomputer control system: Using LED digital control system; After sterilization finished, sterilizer will automatic alarm and shut down.

Interlock device: The control system can real time supervision the sterilizer chamber's temperature and pressure. Only under the safety temperature and pressure can open the sterilizer's cover. Make sure the operator's safety.

The structure of cover's opening: Using 8 rotary extendable stick to improve sealing and safety performance.

Preset program: Can preset fixed program that sterilize the liquid and solid body.

Memory storage system: Store the last operation program so convenient next operation.

Exhaust steam control: After sterilization, exhaust steam valve should be opened(Digital display screen reminds exhaust steam) when sterilization time run out.

Interface check: Provide temperature and pressure check interface; convenient to check multiple position temperature measurement.

Digital display screen: Digital display screen and working indicator light display running state.

Safety devices: Interlock device, overtemperature and over pressure protecting system, burned protection, safety relief valve, current leakage protector and automatic fault detection.

Print function(add configuration): Print the current temperature and sterilization time.



### Technical Specifications:

Parameter/Model	AE-H120KC	AE-H200KC	AE-H300KC
Configuration	Semi-automatic Control	Semi-automatic Control	Semi-automatic Control
The main material	Stainless steel	Stainless steel	Stainless steel
Volume/GW	120L/225Kg	200L/300Kg	300L/333Kg
Voltage/Power	380V/2.5Kw X 3	380V/3kw X 3	380V/4Kw X 3
Packing size(L x W x H mm)	1340x730x1700	1640x830x1800	1640x930x1900
Product size(L x W x H mm)	1220x620x1540	1550x720x1640	1550x820x1740
Sterilization chamber volume (D x H mm)	400 x 960	500 x 1120	600 x 1240
Basket size(Upper length X upper width X lower length X lower width X height mm)	380x340x380x225x140	480x440x480x250x195	500x540x500x300x230
Time setting range	0-99 h	0-99 h	0-99 h
Rated working pressure	0.217MPa	0.217MPa	0.217MPa
Sterilization temperature setting range	50~134℃	50~134℃	50~134℃

## Rotary Evaporator

### AE-RE2 Features :

- ◆ Large LCD digital display indicates rotation speed, heating temperature and time.
- ◆ User friendly operation with automatic motor lift.
- ◆ Automatically lift the evaporation flask out of the bath in case of accidental power failure.
- ◆ 5L flask capacity heating bath with stainless steel interior, compatible with both water and oil bath. Water/oil heating mode can be changed only through a switch.
- ◆ Safety circuits prevent overheating at 220°C and these can be used for high temperature evaporation.
- ◆ Chemically resistant PTFE sealing ring designed to be vacuum tight.
- ◆ USB interface for data documentation and control through PC.
- ◆ Vertical condenser with large surface area of 1700 cm<sup>2</sup> provides excellent cooling effect.
- ◆ Wide variety of glassware suitable for various applications.



### AE-RE2S Features:

- ◆ 5L heating bath with a wide temperature range (room temp. to 180°C), independent temperature control, make it can be used separately.
- ◆ Water/oil heating mode can be changed only through a switch.
- ◆ Manual lift combined with auxiliary lift for precise positioning of the glassware.
- ◆ PID control ensures high temperature accuracy at  $\pm 1^\circ\text{C}$  (water).
- ◆ Overheating protection temperature at 220°C Boil-dry protection, automatically power off if heating without water/oil in the heating bath.
- ◆ Speed range from 20 to 200rpm, timing interval operation in clockwise and anticlockwise directions for drying process.
- ◆ Patented condenser (cooling surface 1200/1700cm<sup>2</sup> for selection), double helix condensing tube + center circular arc design to speed up the flow rate of liquid with excellent cooling effect.
- ◆ Ejection mechanism ensures easy exchange of evaporating flask Adjustable immersion angle
- ◆ Patented double spring sealing ring which is made of PTFE provides an excellent sealing performance
- ◆ Remote function provides PC control and data transmission.
- ◆ Compatible with the entire range of AE-RE2 glassware.



### Technical Specifications:

Specifications	AE-RE2	AE-RE2-H	AE-RE2S
Type	Vertical	Horizontal	Vertical
Motor Type	Brushless DC motor		
Speed Range	20-280rpm		20-200rpm
Display	LCD (speed, temperature, time)		LED (speed, temperature, time)
Clockwise and Anti-clockwise	Yes		Yes
Heating Temperature Range	Room temp. to 180°C		Room temp. to 180°C
Control Accuracy	water: $\pm 1^\circ\text{C}$ , oil: $\pm 3^\circ\text{C}$		water: $\pm 1^\circ\text{C}$ oil: $\pm 3^\circ\text{C}$
Heating Power	1300W		1200 W
Stroke Displacement	automatic 150mm		Manual 110mm + auxiliary 100mm
Timer	Yes		Yes
Time Setting Range	1-999min		1~999s
Dimension[D×W×H]	465×457×583mm		Main Unit: 440×320×450mm Heating Bath: 300×300×240mm
Weight	15kg		Main Unit: 7kg Heating Bath: 3kg
Permissible Ambient Temperature	5-40°C		5~40 °C
Permissible Relative Humidity	80%RH		80%RH
Protection Class	IP20		IP20
USB Interface	Yes		
Voltage/Frequency	100-120/200-240V 50/60Hz		
Power	1400W		

## Rotary Evaporator



### Technical Specifications:

Model		AE-RE5	AE-RE10	AE-RE20	AE-RE50
Electrical Requirement		1~220V, 50/60Hz	1~220V, 50/60Hz	3~, 380V, 50/60Hz	3~, 380V, 50/60Hz
Motor Power		250 W	3.8 KW	250W	250 W
Overall Power		2.3 KW	250 W	6.3KW	6.3 KW
Working Environment		5~35°C	5~35°C	5~35°C	5~35°C
Water Bath	Temperature	Room Tem~99 °C	Room Tem~99°C	Room Tem~99°C	Room Tem~99°C
	Temp Accuracy	±1 °C	±1°C	±1°C	±1°C
	Size	Φ300×170mm	Φ350×220mm	Φ450×260	Φ550×320mm
	Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Media	Water	Water	Water	Water
Capacity		12L	21L	41L	77L
Condenser	Type	Vertical double condensing coils	Main Condenser + Auxiliary Condenser	Main Condenser + Auxiliary Condenser	Main Condenser + Auxiliary Condenser
	Cooling Surface	2780 cm <sup>2</sup>	Main Condenser: 3900cm <sup>2</sup> Auxiliary Condenser: 2530cm <sup>2</sup>	Main Condenser: 9480cm <sup>2</sup> Auxiliary Condenser: 3580cm <sup>2</sup>	Main Condenser: 11500cm <sup>2</sup> Auxiliary Condenser: 4000cm <sup>2</sup>
Rotating Flask	Capacity	5L	10L	20L	50L
	Opening Diameter	Flange Φ50mm	Flange Φ125mm	Flange Φ125mm	Flange Φ125mm
	Evaporating Speed	Water: 2 L/h; Alcohol: 5.4 L/h	Water: 3.2L/h; Alcohol: 8.6L/h	Water: 5 L/h; Alcohol: 14.3 L/h	Water: 9 L/h; Alcohol: 24.5 L/h
	Rotating Speed	20~140 rpm	20~130 rpm	20~130 rpm	20~110 rpm
	Speed Control	Digital Display and Stepless Control	Digital Display and Stepless Control	Digital Display and Stepless Control	Digital Display and Stepless Control
Receiving Flask Capacity		3L	5L	10L	20L
Vacuum	Ultimate Vacuum	≤ 399.9 (3mmHg)	≤ 399.9 Pa (3mmHg)	≤ 399.9 Pa (3mmHg)	≤ 399.9 Pa (3mmHg)
	Vacuum Sealing	PTFE + Viton Gaskets	PTFE + Viton Gaskets	PTFE + Viton Gaskets	PTFE + Viton Gaskets
Lift	Lifting	Motorized Lift	Motorized Lift	Motorized Lift	Motorized Lift + Manual Lift
	Lifting Distance	0~150mm	0~160mm	0~190mm	0~180mm
Safety Protection		Dry-run, Over-temp shut-off, Fuse protections	Dry-run, Over-temp shut-off, Fuse protections	Dry-run, Over-temp shut-off, Fuse protections	Dry-run, Over-temp shut-off, Fuse protections
Dimension (mm)		835W×400D×1090H	990W×550D×1655H	1195W×635D×2070H	1345W×770D×2140H
Net Weight		35 KG	61 KG	90 KG	140 KG
Package		Wooden Case	Wooden Case	Wooden Case	Wooden Case



## Water Bath Shaker

This equipment offers water bath incubation and mild vibration which is economical, safe and quiet. Widely used in fields of biology, microbiology, medical analyzer and etc.

### Features:

- ◆ TFT color display, easy operation to set up programs
- ◆ Maintenance free brushless motor
- ◆ PID controlled, stable temperature
- ◆ Built-in liquid level sensor with beep alarm, safe and reliable
- ◆ Hinge lid can open to 95 degree, convenient for user to handle samples



### Technical Specifications:

Model	AE-SI-100
Tank volume	10L
Temperature control range	RT +5~100℃
Timer	1m~99h59m
Speed range	30-200 rpm
Temperature accuracy	±0.3℃
Uniformity	±0.3℃
Vibration mode	Circle
Tank dimension	240x300x150
Voltage	AC100~120V/AC200~240V 50~60Hz
Power	1100W
Dimension (W×D×H)	340x470x355 (mm)

Capacity	
Tube	Flasks
45*10ml	6*100ml
45*15ml	3*250ml
20*50ml	2*500ml
—	1*1000ml

## Dry/ Water Bath Incubator

Water Bath is a multi-function thermostat water tank controlled by PID. It's an indispensable tool in the fields of pharmaceutical, biochemistry, scientific research, environmental protection and etc.

### Features:

- ◆ High quality water tank: Wearproof and corrosion-resistant stainless steel
- ◆ coated by Teflon
- ◆ With large-diameter drain valve for quickly discharge
- ◆ 10 programs stored for fast operation
- ◆ Controlled by PID, high precision and tiny fluctuation
- ◆ Big size TFT display
- ◆ Built-in liquid level sensor with buzzer alarm
- ◆ Good uniformity due to a big heating plate fixed under the tank bottom



### Technical Specifications:

Model	AE-SI-2	AE-SI-2A	AE-SI-3A	AE-SI-5	AE-SI-10
Voltage	AC100~120V/AC200~240V 50~60Hz				
Temp.	R.T. +5~100℃				
Timer	1m~99h59m				
Temp. Accuracy	±0.3℃				
Uniformity	±0.3℃ (37℃)				
Capacity	2L	2Lx2	2Lx3	5L	10L
Power	250W	500W	750W	550W	1000W
Tank Dimension(W×D×H)	135x150x150(mm)	135x150x150(mm)x2	135x150x150(mm)x3	155x300x150(mm)	240x300x150(mm)
Dimension(W×D×H)	205x253x204 (mm)	415x253x204 (mm)	625x253x204 (mm)	205x395x210 (mm)	290x395x210 (mm)
Weight	2kg	4kg	5.5kg	3.5kg	4.8kg

## Portable Incubator

**Model: AE-PI-100**

### Introduction:

The portable incubator AE-PI-100 is designed for personal uses in storing and incubating samples at temperature ranging from 5°C to 60°C.

The incubator employed the sophisticated Peltier technology with capable of heating and cooling. The temperature resolution is 1°C;  $\pm 0.2^\circ\text{C}$  accuracy; and  $\pm 0.2^\circ\text{C}$  stability.

The incubator can be carried out and plug into the car cigarette outlet.

### Specifications:

**Temp. Range:** 5°C to 60°C

**Temp. Accuracy:**  $\pm 0.2^\circ\text{C}$

**Temp. Uniformity:**  $\pm 0.5^\circ\text{C}$

**Temp. Stability:**  $\pm 0.2^\circ\text{C}$

**Temp. Increment:** 0.1°C

**Selection on Heating and Cooling:**

Automatically Detected

**Calibration Capable:** Yes

**Portability:** handle and Car Cigarette Plug included

**Internal Dimensions:** 19.0 x 27 x 35 cm

**Packing Size: (w x d x h):** 55 x 38 x 47 cm

**Capacity:** 18L

**Gross Weight:** 9.0 kg

**Electrical:** 100 to 240V, 50-60Hz, 60 W

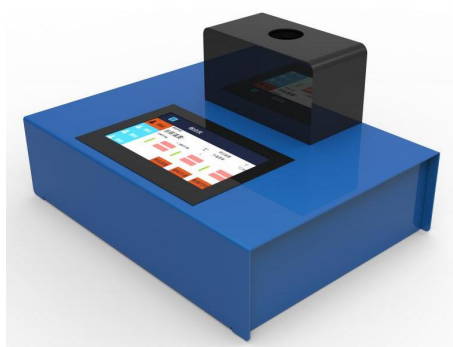
**Operating environment:** 4°C (cold room) to 60°C



# Colorful Touch Screen Melting Point Device

## Key Features:

1. Colorful Touch Screen Display.
2. Increase Temperature can easy setting from 0.1 to 10°C/min.
3. One time can test 3 samples. Temperature can reach to 40010°C.
4. High resolution microscope lenses can observe sample clearly.
5. Built-in cooling fan can easy come down temperature and test next samples.
6. PID control temperature, fully closed design of furnace body to avoid any empyrosis for the user.



## Applications:

Melting point device is widely using in chemical industry and medicine. It is a necessary instrument for the production of food, drugs, spices, dyes and other organic crystal substances.

## Technical Specifications:

Model	DMP-800	DMP-600
Temperature Range	Room Temperature to 400°C	Room Temperature to 320°C
Cooling Function	Built-in cooling fan	NO
Resolution	0.1°C	
Temperature Increase Speed	0.1°C-10°C (100temperature point infinitely adjustable)	
Temperature Control Method	PID control temperature, fully closed design of furnace body	
Accuracy	±0.4°C (<250°C), ±0.7°C (>250°C)	
Repeatability	When 0.1°C/Min, repeatability ±0.3°C	
Display	FTF High Solution Color Touch Screen	
Output	RS232 interface	
Sample Tube	external diameter $\phi$ 1.6mm, internal diameter : $\phi$ 1.2mm	
Voltage	100V-240V 50HZ-60HZ	
Power	100W	
Size	250mm*250mm*150mm	
Weight	1.2kg	

## The more details for this machine:





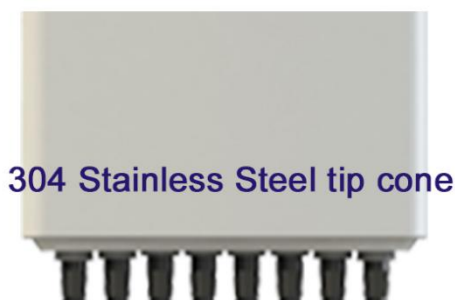
## Major Features of Automatic pipettes:

- ◆ No manual, no pipetting mode, more fast and convenient.
- ◆ One pipette can finish your experiment from beginning to end.
- ◆ A operator thinks what a machine can do.

Adjustable aspirate liquid and dispense liquid volume Light pressing, without pressing switch A kind of pipette which can incline to do imbibition and drainage while without influencing the precision Operating space is reduced 50% 4 models, precise pipetting Structure renovation. The pipette controller with no returning liquid

## How convenient for this automatic pipettes?

- 1.Choose the volume by rotatable button, save your time and convenient. (eg. From 0.1ul to 1050ul, only press one time can reach. Any volume you need, by a second can reach.)
- 2.No manu, no mode, the machine can respond what you want. (no need setting any model, one mode to another mode just press major button can reach. By a second the machine can automatically reach to any mode.)
- 3.Built-in more than 15 kinds of pipetting mode, it can satisfied any testing requirements.
- 4.Rechargeable batteries can make sure the machine working long time.
- 5.Many kinds of custom made available. 6.The cover never change the color and the tips mouth and piston can sterilize by high temperature.



OEM/ODM Design



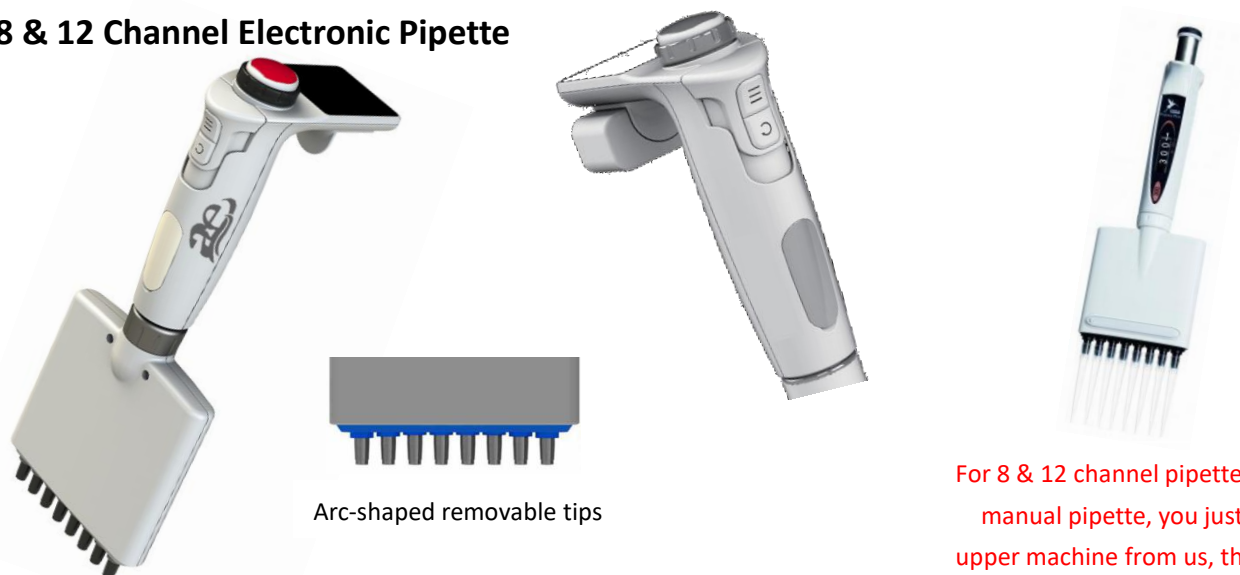
## Single Channel Electronic Pipette



## Technical Specifications:

Model	Volumn	Increment	Volume (μl)	Systematic Error		Random Error	
				+/-μl	+/-%	+/-μl	+/-%
AE-EP003	0.1-3ul	0.05ul	0.3	0.03	10	0.018	6
			1.5	0.036	2.4	0.024	1.6
			3	0.039	1.3	0.024	0.8
AE-EP0010	0.2-10ul	0.1μl	1	0.025	2.5	0.015	1.5
			5	0.075	1.5	0.035	0.7
			10	0.1	1	0.04	0.4
AE-EP0020	0.5-20ul	0.1ul	2	0.15	7.5	0.04	2
			10	0.15	7.5	0.05	0.5
			20	0.2	1	0.06	0.3
AE-EP0100	2-100ul	0.5ul	10	0.2	2	0.1	1
			50	0.4	0.8	0.15	0.3
			100	0.6	0.6	0.15	0.15
AE-EP0200	5-200ul	1μl	20	0.5	2.5	0.2	1
			100	0.8	0.8	0.25	0.25
			200	1.5	0.75	0.4	0.2
AE-EP0300	10-300ul	1ul	30	0.75	2.5	0.24	0.8
			150	1.05	0.7	0.3	0.2
			300	1.2	0.4	0.45	0.15
AE-EP0500	10-500ul	2ul	50	0.8	1.6	0.35	0.7
			250	1.2	0.48	0.6	0.24
			500	2	0.4	0.8	0.16
AE-EP1000	50-1000ul	5μl	100	2	2	0.6	0.6
			500	2.5	0.5	1	0.2
			1000	4	0.4	1.5	0.15
AE-EP5000	0.1-5ml	25μl	500	5	1	2.5	0.5
			2500	12.5	0.5	5	0.2
			5000	30	0.6	10	0.2
AE-EP10000	1-10ml	100ul	1000	50	5.0	6	0.6
			5000	50	1.0	10	0.2
			10000	60	0.6	16	0.16
Single Channel Pipette for Polymerase chain reaction (PCR)							
(Note: This Series pipette is more suitable for Polymerase chain reaction and molecular experiment)							
AE-EP10P	0.2-10ul	0.1μl	1	0.025	2.5	0.95	1.5
			5	0.06	1.2	0.02	0.4
			10	0.08	0.8	0.025	0.25
AE-EP200P	5-200ul	1μl	20	0.5	2.5	0.15	0.75
			100	0.6	0.6	0.2	0.2
			200	1.2	0.6	0.3	0.15
AE-EP1000P	50-1000ul	5μl	100	1.5	1.5	0.5	0.5
			500	1.2	0.24	0.8	0.16
			1000	2.5	0.25	1	1

## 8 & 12 Channel Electronic Pipette

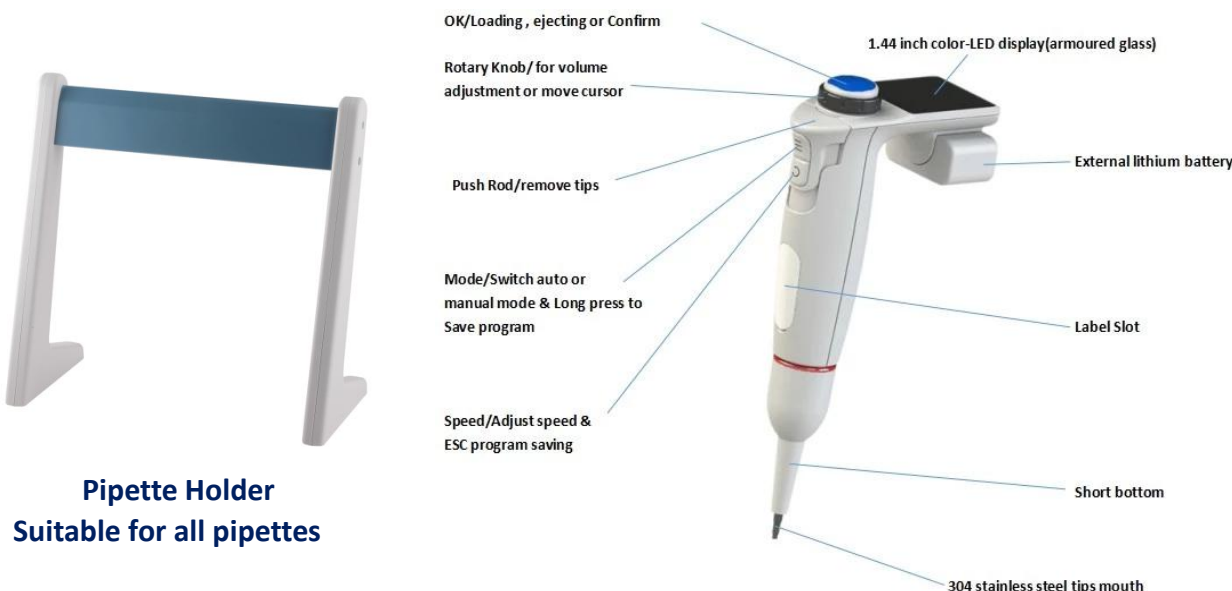


Arc-shaped removable tips

For 8 & 12 channel pipette, if you have this manual pipette, you just need buy the upper machine from us, the down part can using in our machine

### Technical Specifications:

Order Code	Volume Range	Increment	Volume (μl)	Systematic Error		Random Error	
				+/-μl	+/-%	+/-μl	+/-%
8 Channels							
AE-EP8011	0.2-10μl	0.01μl	1	0.025	2.5	0.015	1.5
			5	0.06	1.2	0.02	0.4
			10	0.08	0.8	0.025	0.025
AE-EP8021	5-100μl	0.1μl	10	0.2	2	0.1	1
			50	0.4	0.8	0.12	0.24
			100	0.5	0.5	0.15	0.15
AE-EP8031	10-300μl	0.5μl	30	0.75	2.5	0.24	0.8
			150	1.05	0.7	0.3	0.2
			300	1.2	0.4	0.45	0.15
12 Channels							
AE-TP1201	0.2-10μl	0.01μl	1	0.025	2.5	0.015	1.5
			5	0.06	1.2	0.02	0.4
			10	0.08	0.8	0.025	0.025
AE-TP1202	5-100μl	0.1μl	10	0.2	2	0.1	1
			50	0.4	0.8	0.12	0.24
			100	0.5	0.5	0.15	0.15
AE-TP1203	10-300μl	0.5μl	30	0.75	2.5	0.24	0.8
			150	1.05	0.7	0.3	0.2
			300	1.2	0.4	0.45	0.15



Pipette Holder  
Suitable for all pipettes

## Mechanical Pipettes (Adjustable & Fixed)

All pipettes have been quality tested according to ISO8655-2:2002 with calibration certificate. The quality control involves gravimeter testing of each pipette with distilled water at 22°C .

### Features for Single Channel:


- Lightweight, ergonomic, low force design
- Digital display clearly reads volume setting
- The pipettes cover volume range of 0.1µl to 10ml
- Easy to calibrate and maintain with tool supplied
- Design helps avoid repetitive strain injuries
- Calibrated in accordance with ISO8655. Each pipette supplied with individual test certificate
- The low part is available for autoclaving
- Manufactured from innovative materials


### Features for Multi-channels:


- 8 and 12 channel pipettes are available for standard 96-well plate
- Dispensing head rotates for optimum pipetting convenience
- Individual piston and tip cone assemblies allow easy repair and maintenance
- Compound material tip cone design allows visual seal verification
- Can be used with universal style pipette tips






Single-channel Adjustable Volume Pipettes								
Picture	Model	Volume range	Increment	Test Volume	Maximum permissible		Maximum Permissible	
					systematic error		random error	
					(Inaccuracy)		(Imprecision)	
				( $\mu\text{L}$ )	%	$\mu\text{L}$	%	$\mu\text{L}$
	AE-MA01	0.1-2.5 $\mu\text{L}$	0.05 $\mu\text{L}$	2.5 $\mu\text{L}$	2.50%	0.0625	2.00%	0.05
				1.25 $\mu\text{L}$	3.00%	0.0375	3.00%	0.0375
				0.25 $\mu\text{L}$	12.00%	0.03	6.00%	0.015
	AE-MA02	0.5-10 $\mu\text{L}$	0.1 $\mu\text{L}$	10 $\mu\text{L}$	1.00%	0.1	0.80%	0.08
				5 $\mu\text{L}$	1.50%	0.075	1.50%	0.075
				1 $\mu\text{L}$	2.50%	0.025	1.50%	0.015
	AE-MA03	2-20 $\mu\text{L}$	0.5 $\mu\text{L}$	20 $\mu\text{L}$	0.90%	0.18	0.40%	0.08
				10 $\mu\text{L}$	1.20%	0.12	1.00%	0.1
				2 $\mu\text{L}$	3.00%	0.06	2.00%	0.04
	AE-MA04	5-50 $\mu\text{L}$	0.5 $\mu\text{L}$	50 $\mu\text{L}$	0.60%	0.3	0.30%	0.15
				25 $\mu\text{L}$	0.90%	0.225	0.60%	0.15
				5 $\mu\text{L}$	2.00%	0.1	2.00%	0.1
	AE-MA05	10-100 $\mu\text{L}$	1 $\mu\text{L}$	100 $\mu\text{L}$	0.80%	0.8	0.15%	0.15
				50 $\mu\text{L}$	1.00%	0.5	0.40%	0.2
				10 $\mu\text{L}$	3.00%	0.3	1.50%	0.15
	AE-MA06	20-200 $\mu\text{L}$	1 $\mu\text{L}$	200 $\mu\text{L}$	0.60%	1.2	0.15%	0.3
				100 $\mu\text{L}$	0.80%	0.8	0.30%	0.3
				20 $\mu\text{L}$	3.00%	0.6	1.00%	0.2
	AE-MA07	50-200 $\mu\text{L}$	1 $\mu\text{L}$	200 $\mu\text{L}$	0.60%	1.2	0.15%	0.3
				100 $\mu\text{L}$	0.80%	0.8	0.30%	0.3
				50 $\mu\text{L}$	1.00%	0.5	0.40%	0.2
	AE-MA08	100-1000 $\mu\text{L}$	5 $\mu\text{L}$	1000 $\mu\text{L}$	0.60%	6	0.20%	2
				500 $\mu\text{L}$	0.70%	3.5	0.25%	1.25
				100 $\mu\text{L}$	2.00%	2	0.70%	0.7
	AE-MA09	200-1000 $\mu\text{L}$	5 $\mu\text{L}$	1000 $\mu\text{L}$	0.60%	6	0.20%	2
				500 $\mu\text{L}$	0.70%	3.5	0.25%	1.25
				200 $\mu\text{L}$	0.90%	1.8	0.30%	0.6
	AE-MA10	1000-5000 $\mu\text{L}$	50 $\mu\text{L}$	5000 $\mu\text{L}$	0.50%	25	0.15%	7.5
				2500 $\mu\text{L}$	0.60%	15	0.30%	7.5
				1000 $\mu\text{L}$	0.70%	7	0.30%	3
	AE-MA11	2-10mL	0.1mL	10mL	0.60%	60	0.20%	20
				5mL	1.20%	60	0.30%	15
				2mL	3.00%	60	0.60%	12

8-channels Adjustable Volume Pipettes								
Picture	Model	Volume range	Increment	Test Volume	Maximum permissible		Maximum Permissible	
					systematic error		random error	
				(Inaccuracy)		(Imprecision)		
				(μl)	%	μl	%	μl
	AE-8M10	0.5-10μL	0.1μL	10μL	1.50%	0.15	1.50%	0.15
				5μL	2.50%	0.125	2.50%	0.125
				1μL	4.00%	0.04	4.00%	0.04
	AE-8M50	5-50μL	0.5μL	50μL	1.00%	0.5	0.50%	0.25
				25μL	1.50%	0.375	1.00%	0.25
				5μL	3.00%	0.15	2.00%	0.1
	AE-8M300	50-300μL	5μL	300μL	0.70%	2.1	0.25%	0.75
				150μL	1.00%	1.5	0.50%	0.75
				50μL	1.50%	0.75	0.80%	0.4

12-channels Adjustable Volume Pipettes								
Picture	Model	Volume range	Increment	Test Volume	Maximum permissible		Maximum Permissible	
					systematic error		random error	
				(Inaccuracy)		(Imprecision)		
				(μl)	%	μl	%	μl
	AE-12M10	0.5-10μL	0.1μL	10μL	1.50%	0.15	1.50%	0.15
				5μL	2.50%	0.125	2.50%	0.125
				1μL	4.00%	0.04	4.00%	0.04
	AE-12M50	5-50μL	0.5μL	50μL	1.00%	0.5	0.50%	0.25
				25μL	1.50%	0.375	1.00%	0.25
				5μL	3.00%	0.15	2.00%	0.1
	AE-12M300	50-300μL	5μL	300μL	0.70%	2.1	0.25%	0.75
				150μL	1.00%	1.5	0.50%	0.75
				50μL	1.50%	0.75	0.80%	0.4

Single-channel Fixed Volume								
Picture	Model	Volume range	Increment	Test Volume	Maximum permissible		Maximum Permissible	
					systematic error		random error	
				(Inaccuracy)		(Imprecision)		
				(μl)	%	μl	%	μl
	AE-MF01	5μL	-	5μL	1.30%	0.065	1.20%	0.06
	AE-MF02	10μL	-	10μL	0.80%	0.08	0.80%	0.08
	AE-MF03	20μL	-	20μL	0.60%	0.12	0.50%	0.1
	AE-MF04	25μL	-	25μL	0.50%	0.125	0.30%	0.075
	AE-MF05	50μL	-	50μL	0.50%	0.25	0.30%	0.15
	AE-MF06	100μL	-	100μL	0.50%	0.5	0.30%	0.3
	AE-MF07	200μL	-	200μL	0.40%	0.8	0.20%	0.4
	AE-MF08	250μL	--	250μL	0.40%	1	0.20%	0.5
	AE-MF09	500μL	-	500μL	0.30%	1.5	0.20%	1
	AE-MF10	1000μL	-	1000μL	0.30%	3	0.20%	2
	AE-MF11	2000μL	-	2000μL	0.30%	6	0.15%	3
	AE-MF12	5000μL	-	5000μL	0.30%	15	0.15%	7.5

## Pipette Controller

### ◆ Adjustable aspirate liquid and dispense liquid volume.

Adjustable pipetting volume. No need to staring at the liquid surface.

Meet your need within a simple touch.

### ◆ Light pressing, without pressing switch

Regular button pressing strength of a normal auxiliary liquid suction device is 1000g.

Long-time pressing will make fingers tiring. This pipette controller is only 110g.

A simple light touch will be enough for imbibition, pipetting, dispense, and mix.

### ◆ A kind of pipette which can incline to do imbibition and drainage while without influencing the precision

Pipette can incline to do imbibition and drainage, while no damage will be done to its precision. Different with regular suction device which needs vertical liquid pipette, but complete imbibition, drainage, and separation according to scales.

### ◆ Operating space is reduced 50%

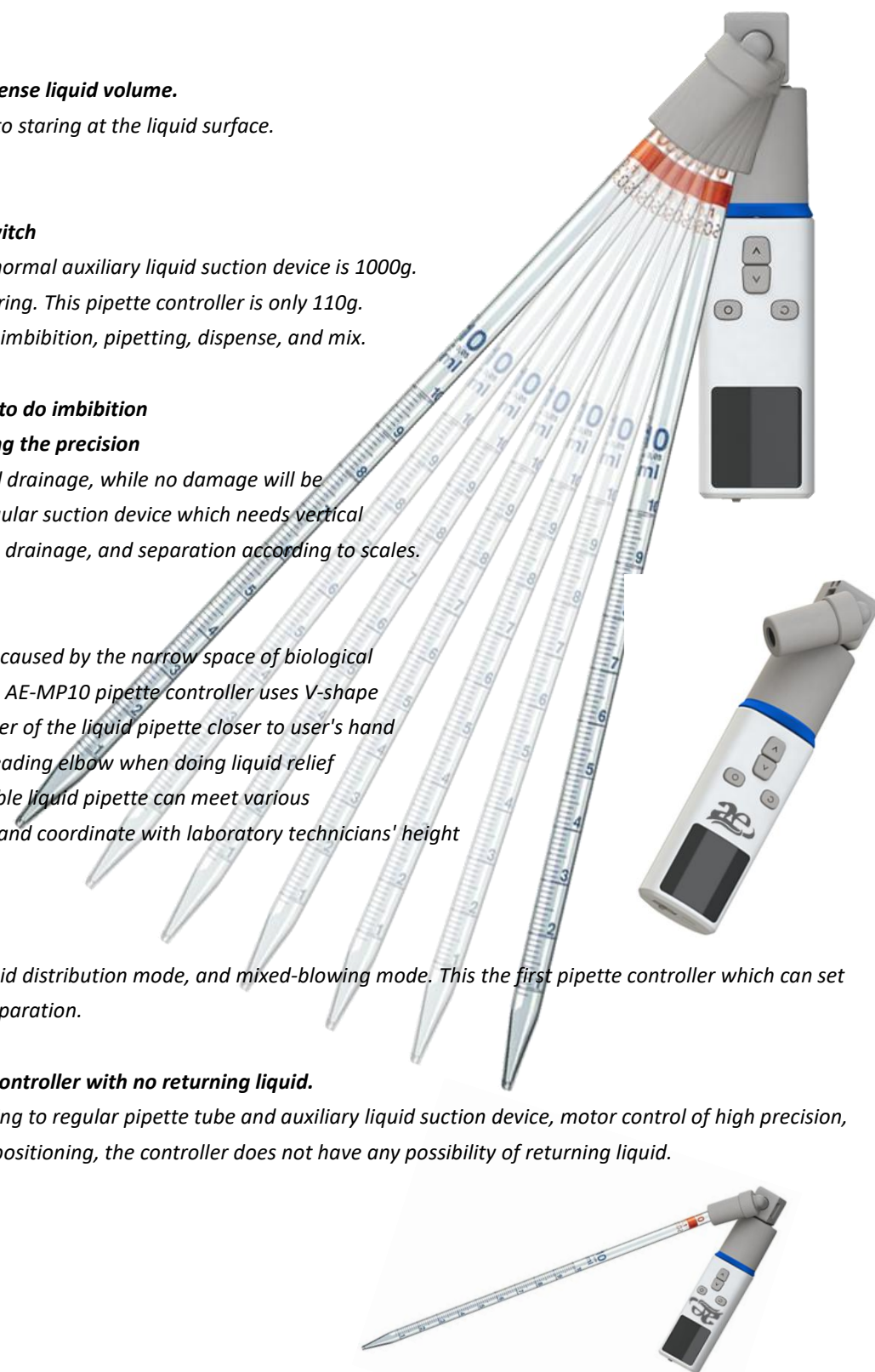
To the unreasonable product structure caused by the narrow space of biological safety cabinet and the U-shape design, AE-MP10 pipette controller uses V-shape structure which makes the gravity center of the liquid pipette closer to user's hand and effectively lower the height of spreading elbow when doing liquid relief and reduces user's tiring level. Adjustable liquid pipette can meet various requirements of different experiments and coordinate with laboratory technicians' height to best condition.

### ◆ 4 modes, precise pipetting

Includes free mode, manual mode, liquid distribution mode, and mixed-blowing mode. This the first pipette controller which can set status of liquid imbibition and liquid separation.

### ◆ Structure renovation. The pipette controller with no returning liquid.

With a better structure design comparing to regular pipette tube and auxiliary liquid suction device, motor control of high precision, and compressor structure of accurate positioning, the controller does not have any possibility of returning liquid.



## Technical Specifications:

Order Code	Volume Range	Increment	Volume (μl)	Systematic Error		Random Error	
				+/-μl	+/-%	+/-μl	+/-%
AE-MP10	10ml	100μl	1	15	1.5	7.5	0.75
			5	40	0.8	12.5	0.25
			10	50	0.5	25	0.25

## Pipette Filler

### Features:

- ◆ Compatible with most of the plastic and glass pipettes from 0.1 -100mL.
- ◆ Six different speed modes for aspiration and dispensing different liquids .
- ◆ Large LCD display showing low battery warning and speed settings .
- ◆ Enables single-handed operation with minimum effort .
- ◆ Light and ergonomic design providing easy usability .
- ◆ High capacity Li-ion battery enable long runtime of operation .
- ◆ Powerful pump fills a 25mL pipette in <5 seconds .
- ◆ 0.45µm replaceable hydrophobic filter .



### Technical Specifications:

Specifications	Levo Plus
Aspiration Speed	25mL<5s (6 shift)
Dispensing Speed	Motor (6 shift)/Gravity
Battery	Lithium-ion
Battery Service Life	More than 8 Hours of Intermittence Use
Charging Time	2-3 Hours
Pipette Types	Glass or Plastic Pipette (0.1-100mL), Pasteur Pipettes
Filter	0.45µm Hydrophobic
Weight	200g

Large LCD display showing low battery warning and speed settings

Select the desired coarse speed by pressing the button +/-



Hydrophobic filter 0.45µm

Silicone adapter for 0.1-100mL pipette tip, fully autoclavable





## Digital Titrator

The digital titrator provides accurate, precise and convenient bottle-top titration, as well as optimum operator safety. It combines both magnetic stirrer and titrator functions, making it easier for the operator to achieve satisfactory results in the field of analytical chemistry, food industry, water analysis etc.

### Features:

- ◆ High quality motor with excellent precision and accuracy .
- ◆ Electronic control provides a fatigue-free operation .
- ◆ Remote control panel prevents manual disturbance during operation .
- ◆ Built-in magnetic stirrer for a complete and easy operation .



### Technical Specifications:

Product Name	Electronic Titrator
Volume Range	0.01mL-99.99mL, Max piston lift is 10mL, resolution is 10μL
Volume Accuracy	R=0.2% CV=0.07%
Velocity	16 stages
Operating Temperature Range	10oC-30℃
Quality Control	DIN EN ISO 8655
Control Type	External control, including the stirrer and the burette program

## Digital Dispenser

### Features:

- ◆ For liquid with vapor pressure up to 500mbar, viscosity up to 500mm<sup>2</sup>/s, temperature up to 40°C, density up to 2.2g/cm<sup>3</sup>.
- ◆ Excellent chemical resistance.
- ◆ Fully autoclavable at 121°C.
- ◆ Reagent recovery function reduces waste and prevents dripping when not in operation.
- ◆ Fast, reliable and reproducible volume locking mechanism.
- ◆ Easy to disassemble and clean, minimum maintenance.
- ◆ With 6 different adapters for reagent bottles of various sizes.
- ◆ Flexible filling tube adapts to reagent bottles of various sizes.



### Technical Specifications:

Volume Range mL	Graduation ml	A $\pm$		CV $\leq$	
		%	$\mu$ l	%	$\mu$ l
0.5-5	0.1	0.5	25	0.2	10
1.0-10.0	0.2	0.5	50	0.2	20
2.5-25.0	0.5	0.5	125	0.2	50
5.0-50	1	0.5	250	0.2	100
10-100	2	0.5	500	0.2	200



Reagent recovery function reduces reagent waste and prevents dripping when not in operation



Closure Cap Screw design easy to open/close and free of contact with reagents



Fast, reliable and reproducible volume locking mechanism

6 adapters allow fitting to most common bottles

Adjustable aspirating tube for different height bottles



## Handheld Homogenizer

### Features:

- ◆ Ideal for manual operation due to its light weight and ergonomic design
- ◆ Processing range: 0.1-50mL or 1-250mL
- ◆ 316L stainless steel shafts are fully autoclavable and inert for highly corrosive solutions
- ◆ All shafts are interchangeable for easy dismantling and cleaning.
- ◆ Speed from 8,000 to 32,000 rpm



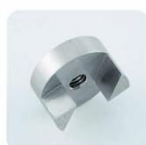
### Technical Specifications:

Specifications	AE-H50
Power Supply	110-120V/60Hz
	220-240V / 50-60 Hz
Motor Type Universal motor	160 W
	AC carbon brush motor
Speed Range	8000-32000rpm
Max. Circum. Speed	6.3-14m/sec
Speed Control Dial knob	10 stage
Working Volume [ H 2 O]	0.1-50mL (Dispersing shaft)
Max. Viscosity	5,000mPas
Material of Dispersing Shaft	SS 316L stainless steel, PTFE
Weight	0.54 kg
Dimension [L x W x H]	46mm x 55mm x 230mm
Noise	72 dB(A)
Operating Environment	0-40 °C, 85% rel. humidity
Protection Class	IP20

### Shafts:



### Rotor:



**Bioprep-24R** is your solution for sample preparation and cell lysis. The reliable, fast and high-throughput homogenizer to extract DNA, RNA or proteins from animal, human and plant tissues, micro-organisms, spores, bones, etc. Grind and homogenize a large range of biological samples, compatible with any analysis DNA-RNA Electrophoresis, Liquid Chromatography, Western Blot etc.

## Features:

1. "3D Rotating High Speed Motion" for quick disruption of those fibrous tissues and resistant cells
2. 50 programmable memory settings and user optional condition settings
3. A wide range of rotation speed settings from 4 to 7 m/s, increment 0.05m/s
4. Brushless motor realizing no brush particle generation
5. Easy to remove sample tube holder and fix sample tubes
6. Easy to monitor the disruption process through the clear lid
7. Simultaneously homogenize: Bioprep-24R 24\*2ml tubes or 12\*5ml tubes
8. Disposable tubes ensure no threat of cross-contamination or sample degradation
9. The Bioprep-6 and Bioprep-24 vigorously and uniformly shakes the tubes providing an efficient, consistent, high yield and quality homogenization usually in 35s or less

## Applications

Any researcher who requires genomic DNA, RNA or recombinant protein as a starting material will benefit from the unit system.

- Northern blot analysis, qPCR and microarrays
- Optimization of recombinant protein expression
- Library synthesis and Southern blots
- Pathogen screening of soil or water
- RT-PCR and differential display
- Environmental surveys
- Verification of food safety



## Technical Specifications:

Type	Bioprep-24R(Cooling Function)
Display	OLED
Speed Range(m/s)	4.00m/s~7.00m/s, increment 0.05m/s
Speed Range (rpm)	2430rpm -- 4260rpm, increment 10rpm
Cycle Duration	1s -- 90s, increment 1s
Pause time	1s -- 90s, increment 1s
Cycle	10
Programmable	50
Samples	24 x 2ml/1.5ml/0.5ml or 12 x 5ml grinding tube
Acceleration Time	<4s
Deceleration Time	<4s
Noise	<70 db
Power	150W
Dimensions (W×D×H)	300×500×360 mm
Weight (kg)	40.0 kg
Power Supply	AC100~240V, 50/60Hz
Temperature Range	-10℃~40℃
From RT.to 0℃	<30min
Temperature uniformity	±2℃
Cooling method	Compressor refrigeration

## Typical Samples:

- Animal, Plant, Human cells;
- Micro-organisms;
- Drugs, polymers, lotions, etc.
- Soil and sediments;
- Swabs and feces
- Bone, brain, tumors
- Bacterial gram + or -
- Yeast, fungi, spores
- Seeds, roots
- Feces, swabs



## Nucleic Acid Purification System

### Products introduction :

Auto-Pure series products is an automated system for purifying DNA, RNA, proteins and cells from a variety of sample materials, such as blood, cells and tissue samples. The Auto-Pure purification technology is automated and enables high-speed, high-quality processing with no cross-contamination between the samples or reagent carry-over.

The following automated instruments platforms are available for different processing requirements:

**High throughput, fast extraction and modular design can meet variety of needs by one unit.**

### Operational advantages

#### 1. High-throughput:

Auto-Pure96 can process 96x1ml samples simultaneously

Auto-Pure24 can process 24x10ml samples simultaneously

2. Open and multiple functions design can be provided more methods for reagent optimization, and also a reliable choice

3. Touchscreen interface and easy operation, parameters can be tuned based on experimental requirements

4. Accurate temperature control system ensures stability of purification performance

5. Patent structure design with center rotary table which makes it occupies smaller area of magnetic rod tip comb, which guaranteed stability and reliability (Success rate >99.99%)

### Antipollution measures

1. Avoid reagent splashing through drip shield plate and beads dried way controlled by software

2. Disposable consumables which can avoid cross contamination

### Simple and intelligent operation

1. Front door can be opened, you can stop it at any moment which is very convenient for reagent optimization and experimental status viewing

2. Start with self-check, equipped with power-off protection

3. 8-plate identification design guaranteed their target position, even though external forces exist

4. Automatic detection in case kit missing

5. With QR code identification, special reagent can be recognized, without setting program or obtaining protocols

### Compatible with automated systems (Optional)

Auto- pure96/24 can be used with automatic equipment, including mechanical arm, liquid processing system, etc., which meet the demand of high-flux experiment



Magnetic head for Auto-Pure96



Auto-Pure96 consumable

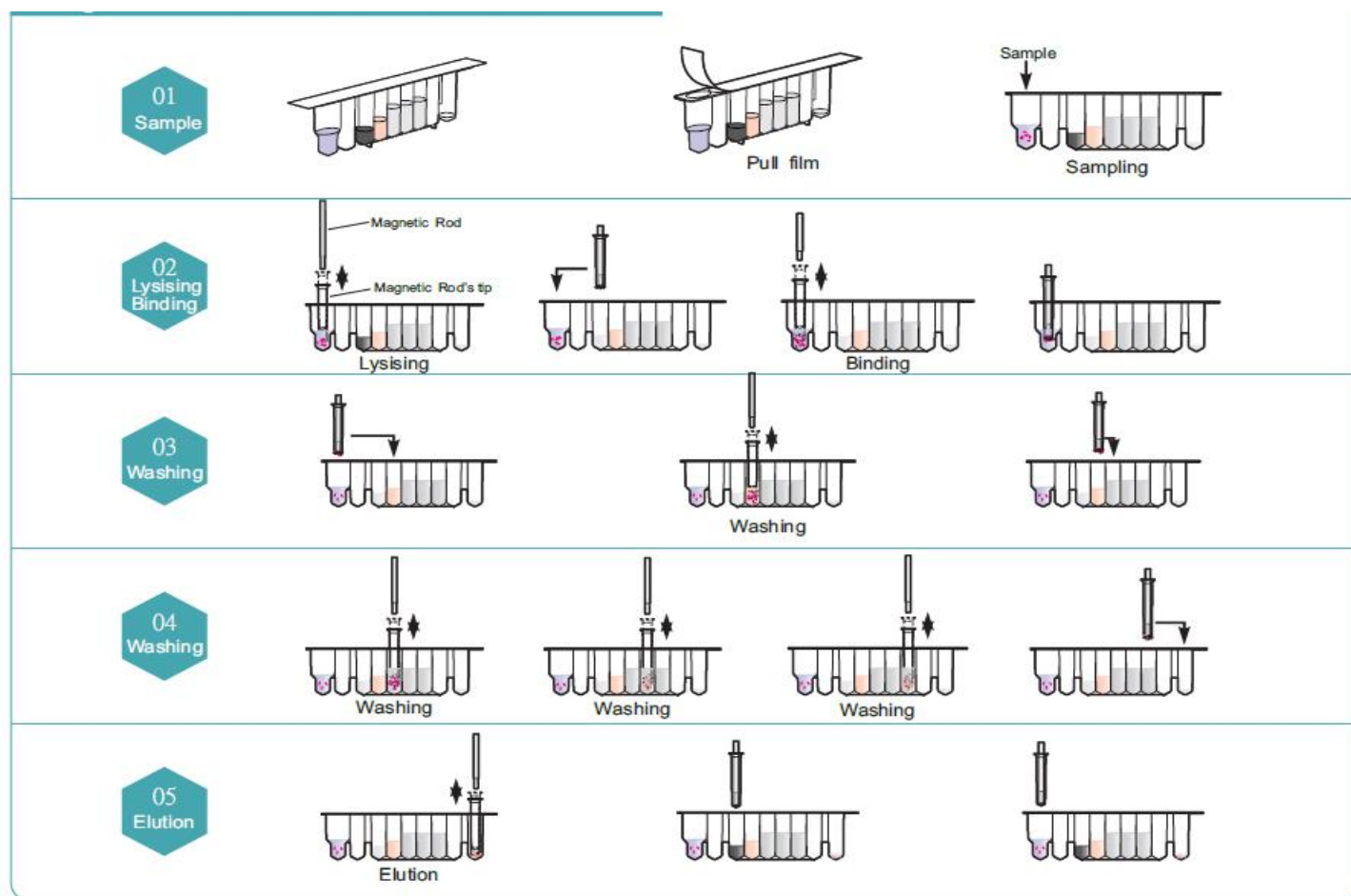


Magnetic head for Auto-Pure24



Auto-Pure24 consumable





## Technical Specification :

Type	Auto-Pure96	Auto-Pure24
Throughput	1~96	1~24
Process volume	50~1000μl	50~10000μl
Collection efficiency	>95%	>95%
Magnetic rod number	96	24
Plate types	96 Deepwell plate	24x14.6ml plate
Purification accuracy	100 copy sample positive rate>95%	
Stability	CV<5%	
Heating for lysis tube	Ambient temperature~120°C	
Heating for elution tube	Ambient temperature~120°C	
Operation	7 inch color touch screen	
Extraction steps	Lysis, binding, washing and elution	
Storage Capacity	more than 100 programs	
Protocol Management	Create, edit, delete, protocol mode	
Pollution Control	UV light	
Lighting	Yes	
Extension interface	4 standard USB port, built-in SD card	
Exhaust	Fan	
Power Supply	450W	450W
Dimensions	560 × 620 × 500mm	560 × 620 × 500mm
Weight	54Kg	54Kg

## High-Pressure Gas Gene Gun

Gene gun technology (particle bombardment) is a kind of all-new gene-delivery technology, it will be the size of a micron, gold or a nucleic acid of tungsten particles accelerated to the required speed, thus genes into the cells, tissues or organs. Get instant stability and high efficient expression, transformation. Has the characteristics of rapid, simple, safe and efficient.

### Features:

- ◆ A simple, rapid and flexible, a variety of cell types Help the instantaneous expression and stable expression
- ◆ Only a small amount of DNA and cells, no carrier DNA To common import, for large fragment DNA plasmid unlimited
- ◆ In vivo and in vitro transformation and high specificity Bombardment ventricular unique round transformation, removable, convenient cleaning and disinfection;
- ◆ Material use cost low, every gun in addition to the high pressure gas costs 3 USD less.
- ◆ High repeatability
- ◆ Other methods could not be completed, with special growth need cell transformation
- ◆ Uniform particle distribution
- ◆ The biggest control experimental process

### APPLICATION AREA :

- ◆ Animals: tissues (skin, organs), cells, organs, etc
- ◆ Plants: living plants, leaves, or other plant tissues
- ◆ Yeast, bacteria, and other microorganisms
- ◆ Gene expression research
- ◆ Agricultural biotechnology and crop improvement
- ◆ Plants vaccines



### SYSTEM STANDARD CONFIGURATION :

Host, vacuum pump, 1000 gun dissipation (3.5/4.5/7Mpa ruptured membrane, carrier film, stainless steel mat, 2 bottles gold powder, 1 bottle of tungsten powder)

### Technical Specifications:

Target Region	(big) 40cm <sup>2</sup>
Pressure Range	3-12MPa
Target Type	Animals: cell and organ culture Plants: The smaller of the whole plants, cell culture, explant, yeast, bacteria and other micro-organelles, chloroplast, mitochondria
Voltage	220V/110V
Gas	Helium or nitrogen (helium is more optimized)
Metal Particle	Φ0.8-1.5μm

## Micro Volume Spectrophotometer

- ◆ User-friendly software, easy to use: It is easy to use, free software updates are available
- ◆ Micro-volumes measuring : Only require 0.5~2μl sample to accurate determinate of nucleic acids, proteins
- ◆ Fast and easy measurements :Turn on and instantly measure without lamp warm up time; Easy measurement within 8 sec
- ◆ Long life's Xenon flash lamp :Xenon flash lamp, 10 flashes, up to 10 years, no cells or cuvettes, no dilutions and expensive consumables
- ◆ No consumables required:Direct microvolume measurements from 1–2μL of sample. Eliminates the need for expensive accessories
- ◆ No computer required and with touch screen (only AE-NANO300) :AE-NANO300 is equipped with Android system operation
- ◆ The Nano-100 / AE-NANO300 are full range of wavelength (200-800nm) detection ability

### Technical Specification :

Model	AE-NANO100	AE-NANO300	AE-NANO400A	AE-NANO500
Wavelength Range	200-800nm	200-800nm	260nm, 280nm	200-800nm
Minimum Sample Size	0.5-2.0uL	0.5-2.0uL	1-2.0uL	0.5-2.0uL
Path Length	0.2mm	0.2mm	0.5mm	0.05mm
	1.0mm	1.0mm		0.3mm
				1.0mm
Light Source	Xenon flash lamp	Xenon flash lamp	UVLED	Xenon flash lamp
Detector Type	3864-Linear CCD array	2048-Linear CCD array	UV-sillion photocell	2048-Linear CCD array
Wavelength Accuracy	1nm	1nm	—	1nm
Spectral Resolution	≡ 3nm (FWHM at Hg546 nm)		—	≡ 3nm(FWHM at Hg546nm)
	546nm Hg546 HGHHGHHHhGhghhgHg546 Hg546nm)			Hg546om]
	≧ 3nm (FWHM at Hg546nm			
Absorbance Precision	0.003Abs	0.003Abs	0.005Abs	0.003Abs
Absorbance Accuracy	1%(7.332Abs at 260nm) , 1% (7.332Abs at 260nm) , 1% (7.332Abs at 260nm) , 1%(7.332Abs at 260nm)			
Absorbance Range	0.02 - 90A	0.02 - 100A	0.02 - 80A	0.02 - 100A
Detects Nucleic Acid up to	2-4500ng/ul (dsDNA)	2-5000ng/ul (dsDNA)	10-4000ng/ul (dsDNA)	2-15000ng/ul (dsDNA)
Measurement Time	<8S	<5S	<8S	<6S
Data Output	Connect PC	USB	USB	USB
Operating Voltage	24V DC	24V DC	24V DC	24V DC
Operating Power	20W	25W	25W	25W
Standby Power	5W	5W	5W	5W
Packing Size (W x D x H)	500 x 495 x 310mm	500 x 495 x 310mm	500 x 495 x 310mm	500 x 495 x 310mm
Gross Weight	9.2kg	9.2kg	9.2kg	9.2kg
Software Compatibility	WinXP, Win7. Win8	Android System	Android System	Android System
Fluorescent detection				
Sensitivity	—	—	dsDNA: 0.5pg/ul	—
Linear Dynamic Range	—	—	R²>0.995	—
Repeatability	—	—	<1.5%	—
OD600nm Measurement				
Light Source	—	LED	LED	LED
Wavelength Range	—	600±8nm	600±8nm	600±8nm
Absorbance Range	—	0-4A	0-4A	CMA



### AE-NANO100 Features :

1. Turn on and instantly measure without lamp warm up time
2. Full scan capability from 200-800nm within 5 sec
3. Detects Nucleic Acids up to 4500ng/ul (dsDNA)
4. 3864-Element linear silicon CCD array

### AE-NANO300 Features :

1. AE-NANO300 is an improved Micro-Spectrophotometer based on Nano-100 with 200-800nm. It is added a function of bacterium cell concentration detection (OD600)
2. Android system operation, 7 inch touch screen no computer, APP soft, simple interface, easy to use
3. Turn on and instantly measure without lamp warm up time; Full scan capability from 200-800nm within 6 sec.
4. The data can be printed with built-in printer, and can output via SD-RAM Card and USB memory
5. When the AE-NANO300 is idly left more than 5mins, it will switch off automatically. Then, the user can awake the machine by touching the screen

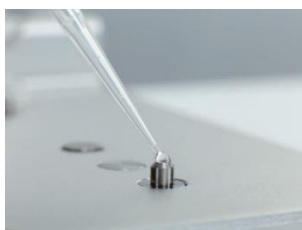


### AE-NANO400A Features:

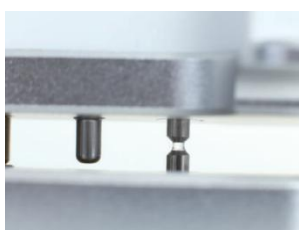
1. This is a basic micro-volume UV spectrophotometer designed (only 3 types of wavelength: 260nm, 280nm and 365nm) for the measurement of nucleic acids and proteins.
2. Android system operation, 7 inch touch screen no computer, APP software, simple interface, easy to use.
3. To detect the concentration of bacteria and microorganism are more convenient with the OD600 function.
4. Measure nucleic acid concentration at 260nm and purity using the ratio 260/280.
5. Measure purified protein concentration at 280nm.
6. The data can be printed with built-in printer, the data can output via SD-RAM and USB memory.

### AE-NANO500 Features:

1. AE-NANO500 is designed base on AE-NANO300:
  - A.To added the 0.05mm optical path length, and the highest detection concentration up to 15000ng/ul
  - B.To added the Fluorescence detection function, which can be used for accurate quantification of extremely low concentration nucleic acid with a lower limit of 0.5pg/ul
  - C.Automatic detect after put down the arm
2. The patented lifting motor structure makes the liquid column stretch more gentle, preventing the liquid column from breaking due to structural problems. In addition, the structure can effectively solve the instability of reading caused by high concentration sample, especially suitable for precise quantification of protein samples
3. Android system, 7-inch capacitive touch screen, intuitive APP software, simple and easy to use
4. To detect the concentration of bacteria and microorganism are more convenient with the OD600 function
5. With a 2048-Element linear CCD array detector, the detection and display can be completed in 6s
6. Equipped with HD touch screen, no need to connect computer.
7. Longer service life of optical component, intelligent identification of user usage. The light source will auto off after 5 minutes without any operation to extend service life.
8. The result can be printed by a built-in printer or exported via USB for data analysis and storage.



Adding Sample



Test Sample



Quick and Easy Clean



## Colorful Touch Screen Thermal Cycler

### Applications:

Thermal Cycler is essential laboratory instrument useful in molecular genetics research areas like genetic finger printing ,genetic testing, genetic chip, genetic cloning, genetic expression, DNA cloning, DNA sequencing, prenatal testing, tissue typing, preimplantation of genetic diagnosis, quantitative determination of gene expression levels etc , and applied market like drug discovery, agriculture, food industry, etc.

Also used to amplify DNA segments and perform temperature sensitive reactions. These thermal cyclers consist of a block designed to accommodate micro centrifuge tubes or 96-well plates for precise temperature control and uniform operation.

### Features:

- ◆ The hot lid is flexible to press the tube caps or plate cover uniformly and ensure minimum loss of evaporation.
- ◆ Hot lid auto-off function: if the module temperature is lower than 3 degree, the hot lid function will automatically turn off.
- ◆ Large LCD digital touch screen for easy programming with clear display and user friendly software.
- ◆ User defined large program storage system of up to 16 folders and 16 files in each folder.
- ◆ High precision temperature control with high heating/ cooling ramping rates.
- ◆ Homogeneous temperature across plate wells or PCR tubes.
- ◆ Aluminum heating block for efficient heat transfer.



### Technical Specifications:

Model	CYL-006-1	CYL-005-1
Sample Capacity	96X0.2mL PCR tube	96X0.2mL PCR tube
	8X12 PCR plate or 96 well plate	8X12 PCR plate or 96 well plate
Heating Temperature Range	4-105℃	
Lid Temperature Range	30-110℃	
Temperature Display Accuracy	±0.1℃	
Temperature Control Accuracy [at 55℃]	±0.3℃	
Temperature uniformity[at 55℃]	<0.3℃	
Max. Heating/Cooling Rate	5℃/Sec	3℃/Sec
Gradient Temperature Setting Range	30-99℃	---
Gradient Range	1-42℃	---
Adapter block material	aluminum	
Display	7" LCD 800x480	
Input	Touch panel	
User defined file system	Max. 30 segments 99 cycles max. 16 folder and 16 files each folder	
Power off protection	Yes	
Power Supply	100-120V/200-240V,50/60Hz	
Dimension [D×W×H] ( without the heating block )	280x370x250 mm	
Weight	11kg	

## Mini Real Time PCR

Designed for rapid nucleic acid testing need in applied fields such as clinical, food, environmental and research. It is supported by high sensitive fluorescence measurements made in real time.

It can detect 16 samples at the same time., and the standard configuration is FAM/SYBR, VIC two-color fluorescence channels.

### Features:

- ◆ On board software with large screen panel, easy for use:7-inch color touch screen shows all parameters, test results and real time testing curve.
- ◆ Portable and light : the weight is only 4kg. It can be used with vehicle power supply for immediate on-site detection.
- ◆ Sensitive and efficient optical signal detection system, multi-channel fluorescence without crosstalk: based on unique Fresnel lens, high-efficiency PMT and maintenance-free LED. 16-hole scanning takes only 1s.
- ◆ Compatible with 0.2mL PCR transparent tubes or eight stripes, can measure 16 samples at a time.
- ◆ Ultra-fast temperature control system: unique liquid circulation refrigeration.
- ◆ Software functions can be customized.
- ◆ 4G data memory. Testing results can be exported with USB or printed.



### Technical Specifications:

Mini Real Time PCR	
Sample capacity	2×8 0.2ml tube/strips, clear
Reaction volume	10-50μl
Touch screen	YES
Thermal cycle technology	Peltier, liquid circulation refrigeration
Max. Heating/Cooling rate	6.0°C/s
Heating temperature range	4 – 100 °C
Temperature accuracy	±0.2°C
Temperature uniformity	±0.2°C @60°C ±0.3°C @95°C
Excitation light source	Monochrome high efficiency LED
Detection device	PMT
Detection mode	Fast hole-by-hole scanning
Fluorescent channels	Standard: FAM/ SYBR, VIC/HEX/ TET
	Optional: ROX, CY5/TAMRA
Sensitivity	Single copy gene
Dynamic range	10 orders of magnitude copies
Analysis mode	CT value analysis, absolute quantitative analysis
Dimension [W×D×H]	205×190×98mm
Power Supply	100-240V or Optional 12V, 10A mobile power
Weight	4kg

## Microplate Washer

The APW-100 Microplate Washer is easy, convenient and versatile to use for washing microplate in ELISA assays. It efficiently remove liquid from wells. Low residual volumes eliminate high background signal to ensure reliable assay results. Washing performance can be optimized by adjusting wash parameters, such as wash cycles, soaking time, shaking speed, dispense and aspiration height and speed.

### Features:

- ◆ Strainer in the pipeline and automatic washing functions avoid the liquid blocking the pipeline
- ◆ Low residual liquid, each well  $\leq 0.5\mu\text{l}$
- ◆ Compatible for microplates: flat, U, V, C bottom
- ◆ 4.3 inch color LCD display, easy to operate
- ◆ Washing head position can accurate to 0.1mm
- ◆ Wash parameters can be set to make sure the best washing effect
- ◆ Support external U-disk, for program exporting
- ◆ 100 programs can be saved
- ◆ Uniform volume mark make it easy to measure the liquid
- ◆ Automatic alarm for full liquid



### Safety and reliable feature:

The APW-100 is equipped with liquid position sensor to avoid the washing liquid used up or waste liquid from overflow, minimize the risk and avoid the liquid being sucked into the pump to break the equipment. Besides it has shaking function which can improve the washing efficiency.

The APW-100 Microplate Washer has 4.3 inch LCD display with friendly interface, U-disk can be used to transfer the datas between the PC and the washer or between two washers, it can also be used to upgrade the software. The washing head can be replaced easily for different kinds of microplates.

### Easy Operation:

The APW-100 has 4.3 inch LCD display with friendly interface, U-disk can be used to transfer the datas between the PC and the washer or between two washers, it can also be used to upgrade the software. The washing head can be replaced easily for different kinds of microplates.

### Technical Specifications:

Model	APW-200
Residual liquid	$\leq 0.5\mu\text{l}$
Washing heads	1×8 or 1×12 heads
Plate types	Flat, U, V, C bottom
Washing volume	50~2000 $\mu\text{l}$ , increase by 50 $\mu\text{l}$
Washing method	Central two points multi points
Washing times	99 times
Washing channels	3
bottle	3 pcs 2.5L washing bottle, 1pcs 2.5L waste bottle
Dispense accuracy	CV $\leq 2.0\%$ at 300 $\mu\text{l}$ (CV $\leq 1.5\%$ for 96 wells)
Soaking and Shaking time	19'59"
Number of wash protocols	up to 100
Data connection	USB
Dimensions(W x D x H)	345 x 460 x 200 mm
Weight	11.5kg
Power supply	AC100/240V, 50/60Hz



## Microplate Reader

The AMR-100 Microplate Reader, with a wavelength range of 340–750nm, is a high-performance solution for a wide range of applications, including immunoassays with colorimetric substrates, such as ELISA, and protein assays such as Bradford and Lowry. It is designed for applications within the clinical, biotechnology research and pharmaceutical laboratory.

The AMR-100 can be used as a stand-alone reader or be controlled by a PC or a PAD with Android system

The AMR-100 Microplate Reader is a reliable and robust instrument for a wide variety of research and clinical applications. It reads various kinds of 96-wells plates, and is equipped with shaking function. It can be used as a stand alone instrument or under PC control with regular or APP software. It is easy-to-use the software.

AMR-100 Microplate Reader is a 8-channel absorbance microplate reader that provides not only accurate, reproducible and fast measurements, but also offer innovative design with its easy-to-use control and data analysis software. It is ideal for a variety of ELISA applications in the biology laboratory.

### Features:

It keeps with high visual and logical user interface of software, it can be offered a comprehensive inbuilt calculations, such as blank subtraction, quantitative curve fit, quantitative classification and kinetic calculations, as well as the versatile reporting tool and make data reduction.

1. Easy of use with 7 inch touch screen together with 3 external keys
2. A broad wavelength range of 340-750nm
3. Able to use individually or connect with PC and export results or a PAD with Android system
4. Absorbance range: 0.0~4.000Abs
5. 8 positions optical filter wheel, equipped with 4 standard optical filters
6. Fast and accurate measurement of 96-well plates within 6 seconds
7. Convenient built-in shaker
8. Wide-format internal thermal graphical printer
9. Wide applicability for life science and clinical laboratories
10. Additional reference channel for optimized light intensity
11. Endpoint, kinetic and multi-label measurements for a variety of applications
12. Shaking with variable time and speed
13. PC software, APP software and built-in software for powerful and validated data analysis



### Filters:

The AMR-100 Microplate Reader comes with four standard absorbance filters: 405, 450, 492, and 630nm. We also supply custom filters at 5~9nm intervals from 340 to 750nm on request.

### Software:

AMR-100 keeps with high visual and logical user interface of software, it can be offered a comprehensive inbuilt calculations, such as blank subtraction, quantitative curve fit, quantitative classification and kinetic calculations, as well as the versatile reporting tool and make data reduction.

### Technical Specifications:

Model	AMR-100
Display	7 inch touch screen (800x480 dots)
Light source	Quartz-halogen lamp 6V/10W
Wavelength	340-750nm
Optical filter	Equipped with filters: 405,450,492,630nm
Half-bandwidth of filters	3~9nm
Read-out range	0~4.000Abs
Linearity (405nm)	0~2.000Abs $\leq \pm 1\%$ , 2~4.000Abs $\leq \pm 2\%$
Resolution	0.001Abs
Accuracy (405nm)	$\pm 1\%$ (0-3Abs), $\pm 2\%$ (3-4Abs)
Precision(405nm)	CV $\leq 0.2\%$ (0-3Abs), CV $\leq 1.0\%$ (3-4Abs)
Test speed	<6s for 96 wells plate
Incubator	No
Shaking	3 modes shaking: slow, medium and fast
User interface	Integrated software or PC control software
Operation	Touch screen, 3 pcs external keys
Storage	200 programs and 100,000 test records
Ports	3 USB ports, for PC, printer and USB-disk
Dimensions(W x D x H), weight	440 x 295 x 225 mm, 10kg

## Mini-Electrophoresis System - AE- MiniS

AE- MiniS Electrophoresis System is specifically designed for DNA and RNA electrophoresis.

Voltages 35V/50V/100V, compact, lightweight and easy to operate are its features.

A magnetic sensor allows current to flow to the electrodes only when the lid is in place. If the lid is removed while the system is operating, it will be shut down immediately.

It's ideal for many applications, including Northern and Southern blotting, Cosmid library restriction analysis, microsatellite analysis, PCR fragment analysis, DNA fingerprinting and high-throughput analysis.

### Features:

- ◆ Input Power: AC100~120V 50~60Hz or AC220~240V with transformer 50~60Hz
- ◆ Output Power: DC35V/DC50V/DC100V
- ◆ Bath Dimensions (WxDxH): 110x121x43mm
- ◆ Volume of Bath: 230ml
- ◆ Construction of Bath: PC+ABS with high temperature resistance
- ◆ Max.Power:40W
- ◆ Timer range:1min~99min
- ◆ Overall Dimensions (WxDxH):190x130x60mm



### Technical Specifications:

MODEL	AE- MiniS
Input Power	<b>AE- MiniS1:</b> AC100~120V 50~60Hz <b>AE- MiniS2:</b> AC220~240V with transformer 50~60Hz
Output Power	DC35V/DC50V/DC100V
Bath Dimensions (WxDxH)	110x121x43mm
Volume of Bath	230ml
Construction of Bath	PC+ABS with high temperature resistance
Max.Power	40W
Timer	1~99min
Dimensions(mm)	190x130x60mm

Accessories	
Tooth wide (width x thickness x no.)	3mmx1mmx22
	5.6mmx1mmx12
	3mmx1mmx18
	5.6mmx1mmx10
Gel Dimension (WxD)	126x126mm -- 1pcs
Gel Migration Board (WxD)	110x60mm -- 2pcs
	54x60mm -- 4pcs
Transformer for AC200~240V	AC220V (input) / AC110V (output)

### Ordering Models:

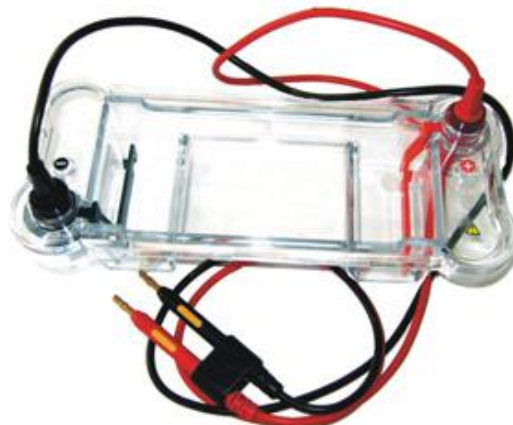
**AE- MiniS1:** AC100~120V 50~60Hz

**AE- MiniS2:** AC220~240V with transformer 50~60Hz

## Horizontal Electrophoresis Apparatus

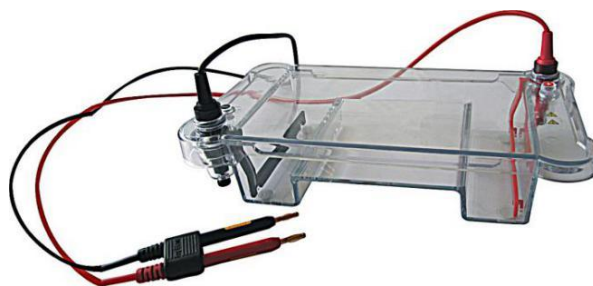
**AE-subMINI** marine electrophoresis is specifically designed for the rapid separation of nucleic acids which can separate and analysis 30 samples within 20 minutes. It also has many unique advantages in DNA fragment recovery experiments. For example, it can be used with different types of electrophoresis buffers, save the buffer, separate the sample rapidly and so on.

Model	AE-subMINI
Gel Tray Size (W×L)	12×12cm
	12×6cm
	6×12cm
	6×6cm
Comb Specifications	6 and 13 well, 0.75mm thick
	8, 11 and 18 well, 0.75mm thick
	8 and 18 well, 1.5mm thick
	2 and 3 well, 2.0mm thick
Buffer Capacity	800ml
Tank	1
All-purpose Glue Device	1
Lid and leads	1
Dimensions & Weight	35×15×10cm, 1.5kg



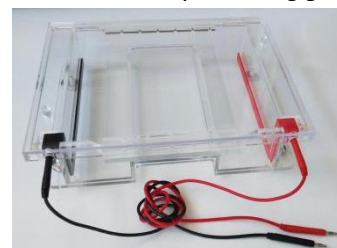
**AE-subMIDI** sub marine system is durable and light weight thermoformed plastic. Horizontal Electrophoresis Apparatus has removable gel trays constructed of UV-transparent polycarbonate to allow easy viewing of ethidium bromide-stained nucleic acids. The trays separately or in different combinations. Well-forming combs provide choices for making narrow, wide, or preparative wells.

Model	AE-subMIDI
Gel tray size (W×L)	12×12cm
	12×6cm
	6×12cm
	6×6cm
Comb Specifications	6 and 13 well, 0.75mm thick
	8, 11 and 18 well, 0.75mm thick
	8 and 18 well, 1.5mm thick
	2 and 3 well, 2.0mm thick
Buffer Capacity	800ml
Tank	1
All-purpose Glue Device	1
Lid and Leads	1
Dimensions (L×W×H)	35×15×10 cm, 1.5kg



**AE-subMAX** is specially designed for multi-sample and high-throughput analysis. It greatly facilitate large-scale PCR products which can do 306 samples within the same time and support the 51 hole electrophoresis comb and 8 and 12 volley. The long gel tray of it is the idea choice for Southern blot, Northern blot and RFLP.

Model	AE-subMAX
Gel tray size (W×L)	25×20cm
Comb specifications	1.0mm thick, 26 teeth; 1.0mm thick, 51
	1.5mm thick, 26 teeth; 1.5mm thick, 51
Buffer capacity	2000-2500ml
Dimensions & Weight	390×300×100cm, 4kg



**AE-caTANK** can be used for immune electrophoresis and cellulose acetate membrane electrophoresis. Immune electrophoresis is a qualitative method for the analysis of the antigen composition and it is a combination of gel electrophoresis and double agar diffusion. Cellulose acetate membrane (CAM) is a simple, rapid separation of biomolecules and the most widely used is the serum protein CAM electrophoresis.

Model	AE-caTANK
Platinum electrodes	three electrodes (one negative and two
Immune	for 1 to 20 slides
Comb Specifications	2×8cm, can be used for 1 to 24
	7×9cm, can be used for 1 to 6
	8×12cm, can be used for 1 to 6
Composition	tank, swim clubs, latex tube and power cord
Dimensions & Weight	296×266×122mm, 4kg

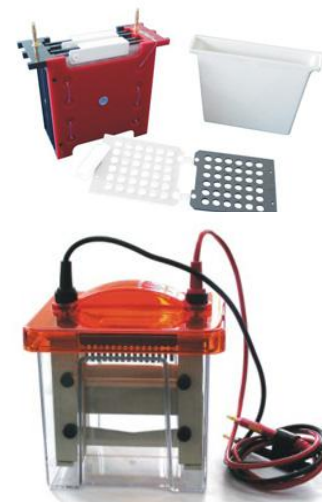




## Vertical Electrophoresis Tank

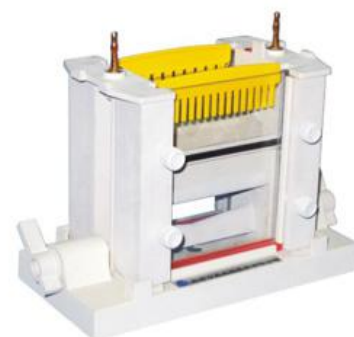
**AE-transBLOT** mini-transfer core can do small gel transfer experiments clipping and high quality. It consists of thermal and elastic polycarbonate injection molding, built-in cooling unit which can quickly absorb the heat transfer process and the limit function and the color difference can ensure the transfer process orientation.

Model	AE-transBLOT
Transfer size(W×L)	95×110mm
Transfer quantity	1~2
Use	1~3 hours by high current or overnight transfer by 50~60mA
Recommended Power	AE-Power600/600i/300
Net weight	1kg



**AE-verMINI** cell is dual vertical electrophoresis system performs vertical gel electrophoresis on mini-format gels. The basic unit includes electrophoresis modules, casting stand and glass plates with permanently bonded gel spacers that simplify hand casting and eliminate leaking during casting. Each module holds one gel sandwich, 10 cm wide and up to 10.5 cm long. One gel can be cast in place on each electrophoresis module.

Model	AE-verMINI
Dimensions ( LxWxH)	160x150x160mm
Gel size (WxH)	Standard configuration: 83x97mm Optional: 83x73mm
Prefabricated plastic	Compatible with Pierce, Invitrogen and Bio-rad precast gels
Glue quantity	1 to 2
On slot buffer	200ml
The following slot buffer	800ml
Comb specifications	1.0mm thick, 9, 10, 15 and 18 well; 0.75mm thick, 10 and 15 well; 1.5mm thick, 10 and 15 well
Recommended Power	AE-Power600/600i/300
Net weight	2.5kg



**AE-verMIDI** is suitable for polyacrylamide protein, nucleic acid electrophoresis and the second dimensional of two-dimensional electrophoresis. It built-in cooling channel and you can add the AE-chillerE05 thermostatic circulator to achieve the purpose of precise temperature control. The hand plastic irrigation system is simple, convenient and user-friendly, it makes electrophoresis experiments become a pleasure.

Model	AE-verMIDI
Prefabricated plastic	Compatible with Pierce and Invitrogen precast gels
On slot buffer	250~300ml
The following slot buffer	800~1200ml
Cooling chamber capacity	400ml
Standard	12,16,20 and 24 well, 1.0mm thick
Recommended Power	AE-Power600/600k
Dimensions ( LxWxH)	190×150×190mm





## Electrophoresis Tank

### AE-verBLOT Features :

mini vertical transfer electrophoresis with the ice box can do small gel transfer experiments clipping and high quality which consists of thermal and elastic polycarbonate injection molding and can place two transfer folders. Using which BG-verMINI can transfer of proteins to nitrocellulose filter membrane or polyvinylidene fluoride easily.

Model	AE-verBLOT
Dimensions ( L×W×H)	160×150×200mm
Transfer size ( W×L )	9.5×11cm
Transfer tank	1
Sponge gasket	4
Transfer folder	2
Buffer capacity	800ml
Recommended Power	AE-Power600k and AE-Power600
Net weight	1.5kg



### AE-verSEQUENCING (W) Features :

can separate DNA and RNA fragments with one nucleotide difference well. It is suitable for SSCP, microsatellite analysis, oligonucleotide separation and so on. Its unique thermal design can maintain a balanced temperature, and eliminate the phenomenon of "Smile" and the outfall located in the sealing of the upper buffer chamber can be easily discharged buffer.

Model	AE-verSEQUENCING(W)
Gel area (W x L):	345×300mm
The shark-tooth comb	0.4mm thick, 68 and 100 well (optional)
Buffer capacity	up to 1000ml
Recommended Power	AE-Power3500
Dimensions (L×W×H)	46×16×36cm



### AE-subMIDI(V) Features :

- **Real-time observation:** Observation the nucleic acid while electrophoresis experiment
- **Low heat long lift:** Semiconductor light-emitting technology
- **Multi-purpose device:** Electrophoresis tank + visible light Transilluminator
- **Multi-purpose slot:** 60mm×60mm, 60mm×120mm, 120mm×60mm, 120mm×120mm



## Electrophoresis Power Supply

Model	AE-POWER300	AE-POWER600	AE-POWER600i	AE-POWER600K
Voltage	5-300V	5-600V	5-600V	5-600V
Current	1-500mA	1-500 m A	1-300m A	1-1000 m A
Power.	1-150W	1-300W	1-180W	1-300W
constant voltage, constant current and constant power	Yes			
Micro-current state function	Yes			
Timer	1min-99h59min			
Pause / Resume function	Yes			
Microcomputer switching power supply	LCD			
Display	Yes			
Programmable method	Yes			
Stores single-step 12 program	Yes			
Automatically generates	Yes			
Leakage protection	Yes			
Automatic recovery after power failure	Yes			
The monitoring of over-voltage, arc, no-load, mutation load, overload and short circuit	Yes			
Operating environment	Temperature 0-40 °C, Humidity 0-95%			
4 jack on the parallel	Yes			
Input voltage	90-260VAc , 50/60Hz			
Dimensions (L×W×H)	33×22×8cm			
Net weight	3.5Kg			



AE-POWER300



AE-POWER600 series



AE-POWER3500



AE-Power500HC

Model	AE-Power600h		AE-Power3500	AE-Power500HC
Voltage	5-600V		5-3500V	10-500V
Current	1-1000 m A		1-400mA	0.01-3.0 A
Power	1-300W		1-400W	1-500W
constant voltage, constant current and constant power	Yes			
Microcomputer switching power supply	Yes			
Timer	1min-99h59min			
Pause / Resume function	Yes			
Display	LCD	High-resolution backlit, 128 × 64 pixel graphical LCD		
Programmable method	Yes			
Can store 12 programs	Yes			
Automatically generates	Yes			
Micro-current state	Yes		--	
Leakage protection	Yes			
Automatic recovery after power failure	Yes			
The monitoring of over-voltage, arc, no-load, mutation load, overload and short circuit	Yes			
Operating environment	Temperature 0-40 °C, Humidity 0-95%			
4 jack on the parallel	Yes			
Input voltage	90-260VAc 50/60HZ			
Dimensions (L×W×H)	32×22×8cm		32×27×10cm	
Net weight	3.5Kg			4.5Kg

## Blue/UV Light Transilluminator

**AE-BV200** LED-Transilluminator uses a super high intensity LED light plate which can illuminate a range of dyes including GelGreen, SYBRsafe, EtBr and the new UltraPower DNA safe dye. It provides a uniform and bright excitation across gels up to 13 x 17cm. This unit is utter compact and extra-thin and has an LED plate which illuminates samples from the bottom up, causing LED trans-illumination. A built-in filter/lid provides the optimum viewing conditions and is ideal for band cutting. It can be used in any AELAB darkrooms or as a stand-alone unit. To realize a perfect visual effect, the use of it in concern with AELAB Gel Signal™ Green is highly recommended

### Features:

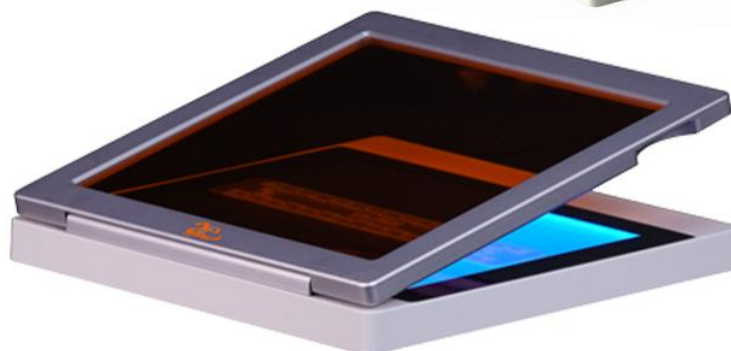
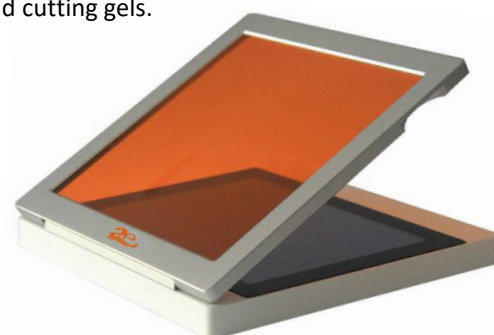
- ◆ Angle adjustable filter/lid can be tilted optionally with one hand, easy for observing and cutting gels.
- ◆ Compact, extra-thin and portable
- ◆ Safer to replace UV
- ◆ Easy for gel cutting: NO need to wear amber glasses
- ◆ NO DNA damage inherent to UV
- ◆ Uniform blue LED trans-illumination, low noise
- ◆ Optimized for use with diverse safe dyes to replace toxic EtBr

### In comparison with UV trans-illuminator:

- ◆ LED Blue light source, Does not cause burn to your skin and eyes
- ◆ Uniform trans-illumination module, symmetrical observation of samples
- ◆ Imported LED with long life and high energy conservation

### Specifications:

- ◆ Instrument dimensions (mm): 210D x 210W x 36H
- ◆ Viewing surface dimensions (mm): 130D x 170W
- ◆ LED Wavelength (nm): 470
- ◆ Lid/ FILTER: amber
- ◆ Sensitivity: up to 0.1 ng
- ◆ Uniformity: < 5% CV (coefficient of variance)
- ◆ LED life: 20,000 hours

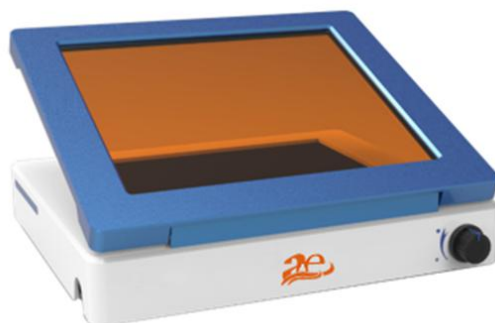


## Blue UV Light Transilluminator

The **AE-Vtrans520** blue light transilluminator is easy to observe and cut the DNA/RNA gel with multiple safe dyes. It can also be used in combination with the AE-gdsAUTO520 gel imaging analysis system.

### Features:

- ◆ Safety: Use blue light source and safety dyes to avoid the damage caused by EB and UV gel imaging system.
- ◆ Continuously adjustable light source intensity: Equipped with an adjustable light source knob, you can choose the appropriate light intensity according to the sample concentration, increase the imaging linear range, and avoid overexposed or weak sample signals.
- ◆ Uniform illumination: 360 LED lights are evenly distributed at the bottom for even illumination.
- ◆ Suitable for a variety of sensitive and safe fluorescent dyes: The maximum absorption peak of many fluorescent dyes is blue-green visible light with a wavelength of 400-500nm, such as GeneFinder TM, SYBR Green, Gelstar, SYPRO Orange, green fluorescent protein Safety dyes.



### Technical Specifications:

Light source	470nm blue light transmission light source
Light intensity	continuously adjustable
Dimensions(L × W × H)	275 × 240 × 69 mm
Observation area(L × W × H)	210 × 180 mm

## UV Transilluminators

AELAB's high quality UV Transilluminators are designed for viewing DNA/RNA in agarose gels stained with ethidium bromide(EB) or other dyes. Transparent hinged cover, with UV-blocking material to protect users from exposure to hazardous UV radiation, is mounted by slip-hinges for easy removal and replacement. These 302nm or 365nm UV lamps produce even distribution at the filter surface for better identification and documentation of viewed gels. The 302nm UV induces high fluorescence and sensitivity in ethidium bromide/DNA complexes producing sharp, distinct bands. At this wavelength, photo-nicking, dimerization and photo-bleaching to gels are minimized. Unsurpassed UV intensity and outstanding irradiance uniformity enable visualization of even trace amounts of DNA. Airproof frame reduces the chance of gel damage or contamination.

### Features:

- ◆ Unique UV protective glass can be adjusted to the operator's visual angle and fixed providing better UV protection.
- ◆ There are different models for you to choose, single/dual wavelength, single/variable intensity, UV/dual-light. The UV wavelength 302 nm or 365nm are selectable according to users' needs. Different wavelength-selectable fit for different DNA dyes, such as SYBR-Green, SYPRO Orange. Also different wavelength for different experimental purpose: 302nm for detection and analysis of EB stained DNA/RNA, 365nm for gel incision or DNA preparation.
- ◆ Dual-light Transilluminator provides two 20cm×20cm work surfaces. White light filter surface is designed for coomassie blue stained protein gels, methylene blue stained DNA gels, silver stained protein gels, autoradiographies, and microtiter plates.
- ◆ Excellent transmission efficiency for certain wavelength ensures highly detective sensitivity and increase the capture ability for weak signals.
- ◆ Rational structural design and high-quality UV lamp produce unsurpassed UV intensity and outstanding irradiance uniformity.
- ◆ Small figure and airproof frame make the equipment life longer and maintenance easier.
- ◆ A cooling fan featured inside can improve the life of the machine.

Model	Description
AE-CUV20A	Single wavelength 302nm, single area: 210x260mm
AE-CUV40A	Double wavelength 302 & 365nm, sample area: 210x260mm





## Tissue Grinders

Tissue Grinder is a motor-driven grinder for re-suspending pellets or disrupting soft tissue in micro centrifuge tubes. The motor is powered by a 3.7V battery and can be used cordlessly for up to 10 hrs.

### Operation:

Take the grinder out. Place the pestle on the pestle adapter. Put the pestle into the microcentrifuge tube, and use the bottom button to start mixing. Release the button after the mixing operation is completed.

### Features:

Handheld, motor-driven

- Re-suspends pellets or disrupts soft tissue in microcentrifuge tubes

- Easy to operate

Avoid Contamination

- Stainless and plastic grinding pestles can be autoclaved

Multiple Applications

- Plant and animal tissues; DNA/ RNA extraction

- Disposable plastic grinding pestle

Battery Powered

- Can be used in mobile

- Ideal for field testing

Easy to clean







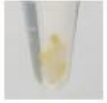







### Animal Tissue Samples

Samples	krpm	Processing Time
Heart	10	High
Liver	5	Low
Spleen	5	Medium
Lung	8	Medium
Kidney	8	Medium
Small intestine	9 - 10	High
Large intestine	5	Low
Brain	5	Low
Testis	8	Medium
Ear	10	N/A
Skin	10	N/A
Marrow	5	Low
Tonsil	8	Medium
Thyroid	8	Medium
Lymph	10	High
Dorsal muscle	10	Medium
Vessel tissue	10	N/A

### Plant Tissue Samples

Samples	krpm	Processing Time
Soybean leaf	6	Low
Wheat leaf	6	Low
Tobacco leaf	6	Low
Chinese Wildrye leaf	5	Low
Bamboo leaf	6	Low
Rice leaf	6	Low
Rice root	7	High
Rice stem	10	N/A
Rice seed	10	N/A
Arabidopsis thaliana seed	7	High
Arabidopsis thaliana leaf	6	Low
Arabidopsis thaliana root	5	Low

### Performance

	Before	After
Tobacco leaf		
Lung		
Large intestine		
Wheat leaf		
Liver		
Heart		

### Technical Specifications:

Model	AE-G50
Speed	Adjustable speed ranging from 3000-8000 rpm. Speed shown on LCD screen
Motor	Large torque brushless motor with 50W constant power output
Applications	Grinding pestles can be autoclaved
Battery	12V DC universal power supply,
Output	2W output with no load 25W MAX output
Dimension	170* 50* 26 mm
Weight	0.5KG

## Gel Image Analysis System



## Technical Specifications:

Model		AE-gdsAUTO320	AE-gdsAUTO520
Camera	Resolution	1280×1024(1.31 million)	2592×1944(5.03 million)
	Pixel size	5.2μm×5.2μm	
	Signal to noise ratio	56dB	
	Detection sensitivity	Nucleic acid as low as 20pg	
Lens	Electric lens	High transparency automatic zoom lens, F1.2, 8-48mm	
	Filter	Professional grade coating filter UV/IR 590nm, optional: 535/605/699nm	
Light source	Light intensity	up to 1000 microns /m³	
	Lighting mode	uv transmission, white light transmission (uv conversion white plate), white light reflection	
	Excitation light source	transmission: 312nm (optional 254nm and 365nm)	
	Bilateral reflection	LED reflection white light lamp	
	UV transmission area	200×250mm	
	Visible light transmission area	210×260mm	
	Equipped with glue cutting device	drawer type sample storage platform, the line of sight is 90° with the sample, which can protect the operator and facilitate the operation of glue cutting	
	Timed shutdown	turn off the uv light source for 15 minutes without operation, effectively extending the service life of the uv lamp and the uv glass	
	All-in-one machine design	it can be controlled by computer or cabinet panel, and can fully control zoom, focus, aperture, transmission ultraviolet lamp and reflection lamp	
	Airborne display screen	12.1-inch industrial control touch LCD	
	Analysis software	customized software Baygene Gel Image Analysis	
	All-in-one machine design: it can be controlled by computer or cabinet panel, and can fully control zoom, focus, aperture, transmission ultraviolet lamp and reflection lamp		
	High-performance low-power I3 processor, dual-core four-thread 1.8g, solid state drive 128G, 4G memory, Windows10 system		
	With standard Internet port, USB, COM, VGA, keyboard and mouse, no need to have a computer		

## Adjustable Blue Light Gel Imaging Analysis System

### Application

The integrated gel imaging analysis system designed for blue light detection and analysis can realize detection, imaging and analysis storage functions without any external device. Compatible fluorescent dyes are GeneFinder<sup>TM</sup>, GeneGreen, GelRed, GelGreen, SYBR Green I, SYBR Safe, Goldview, SYBR Gold, SYPRO Ruby, SYPRO Orange, SYPRO Tangerine, eGFP, Cy2, FITC, etc.

### Features :

- ◆ An integrated gel imaging analysis system designed for blue light detection and analysis, which can realize detection, imaging and analysis storage functions without any external device.
- ◆ The blue light excitation source is adjustable, and the light intensity can be selected according to the concentration of the sample to avoid over-exposure or too weak of the sample.
- ◆ The blue light intensity is evenly distributed and the 488 LED lights inside the blue light transmittance are evenly arranged to ensure the imaging quality.
- ◆ Use visible light source, avoid the use of highly toxic EB, avoid uv damage and damage to samples, effectively protect the experimenter, experimental samples and the environment.



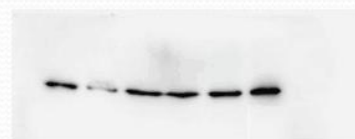
### Technical Specifications:

Model		AE-gdsAUTO 550
Camera	Resolution	2592×1944(5.03 million)
	Pixel size	5.2μm×5.2μm
	Signal to noise ratio	56dB
Lens	Electric lens	High transparency automatic zoom lens, F1.2, 8-48mm
	Filter	Professional grade coating filter UV/IR 590nm, optional: 535/605/699nm
	Lighting mode	blue light transmission and reflection of white light
	Excitation light source	transmission: 470nm
	Bilateral reflection	LED reflection white light lamp
	Transmission area	210×260mm
	Timed shutdown	shut off the blue light source without operation for 15 minutes, effectively extending the service life of the light source
	All-in-one machine design	it can be controlled by computer or cabinet panel, and can fully control zoom, focus, aperture, transmission ultraviolet lamp and reflection lamp
	Airborne display screen	12.1-inch industrial control touch LCD
	High-performance low-power I3 processor, dual-core four-thread 1.8g, solid state drive 128G, 4G memory, Windows10 system	
	With standard Internet port, USB, COM, VGA, keyboard and mouse, no need to have a computer	
	Analysis software: customized software Gel Image Analysis	

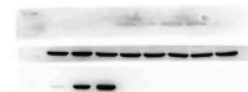


## Mini Chemiluminescence imaging system

- ◆ High-resolution refrigeration CCD with high visibility
- ◆ Resolution: 3488x2574, pixel size: 4.5x4.5um
- ◆ The cooling temperature up to R.T-75°C
- ◆ Photosensitivity >75%, more conversion ability
- ◆ F/0.9 large aperture fixed-focus lens, large amount of light, improve detection sensitivity
- ◆ LED lights on both sides
- ◆ Three shooting modes: single, multiple, manual; And signal overlay
- ◆ Automatic/manually merge Marker and sample images
- ◆ Rich image post-processing functionality
- ◆ Support report printing / PDF / Word output
- ◆ Database report management, convenient for many users
- ◆ Easy to operate, free software upgrade for life



### Practical example



### Technical Specifications:

Model	AE-gdsAUTO 710 MINI
Camera	Imported high resolution low illumination digital refrigeration camera
Resolution	2750×2200 (6.05 million)
Pixel size	4.54 microns × 4.54 microns
Pixel density	16bit
Pixel merge	1×1, 2×2, 4×4
CCD photosensitive chip	SONY ICX 694
CCD dark current	< 0.0005e-/pixel/ SEC @ -40°C
Readout noise	≥62dB
Photosensitive efficiency	>75%
Cooling mode	Semiconductor refrigeration
Cooling temperature	Relative temperature -75°C (Absolute temperature -55°C, dynamic real-time display CCD refrigeration temperature)
Lens	F/0.8, high resolution, large aperture and high permeability fixed focus lens
Zoom	Compatible with shooting sample thickness of 0.1-10mm
Dynamic range	>4.5 orders of magnitude
Lighting source	LED light source on both sides
Shooting area	15×15cm
Overall size (L×W×H)	320×360×550mm
Software	Chemiluminescence professional photo taking software, easy to switch between Chinese and English, free upgrade for life



## Chemiluminescence imaging system

AE-gdsAUTO Multifunctional chemiluminescence imaging analysis system combines high-definition image acquisition, processing, database management, print and other functions. It is a chemiluminescence imaging analysis system specifically designed for nucleic acid (DNA/RNA) and Western Blot protein electrophoresis experiments to help researchers acquire nucleic acid or protein images accurately and quickly and analyze the results.

This system includes AE-gdsAUTO chemiluminescence imager and Chemilmaging imaging software (hereinafter referred to this software).

### Performance Introduction

1. Efficient and automatic image acquisition and processing system;
2. Simple information entry method and fast data management system;
3. Friendly interface to generate report form automatically;
4. Large data storage capacity to realize the scientific and perfect image and information management for users.

### Instrument Parameters

- ◆ High-resolution professional refrigeration CCD;
- ◆ Imaging and other experiment parameters can be saved for users to call again conveniently.
- ◆ Large target surface CCD chip;
- ◆ Large aperture fixed focus lens;
- ◆ High sensitivity based on high light utilization efficiency;
- ◆ Ultraviolet transmission light source 312nm;
- ◆ UV reflection light source 254nm/365nm(optional);
- ◆ Built-in LED light source;
- ◆ R/B/G light source on both sides (AE-gdsAUTO 730 configuration only);
- ◆ Electric 6-site filter wheel, a variety of filters can be used;
- ◆ Chemilmaging professional camera software, switch between Chinese / English, easy operation, free upgrade for life;
- ◆ Dimensions: 405x440x680mm(LxWxH);



### Technical Specifications:

Model	AE-gdsAUTO 730
Camera	Imported high resolution low illumination digital refrigeration camera
Resolution	2750×2200 (6.05 million)
Pixel size	4.5 microns × 4.5 microns
Pixel merge	1×1, 2×2,4×4
Photosensitive efficiency	>75%
Cooling temperature	Relative temperature -75°C (Absolute temperature -55°C)
Lens	F/0.8, high resolution, large aperture and high permeability fixed focus lens
Dynamic range	>4.5 orders of magnitude
Lighting source	RGB 3 colors fluorescence,Uv transmission 312nm(optional 254nm, 365nm),white light transmission (uv transfer white light board), two side white light (12V cold light source),6 digital electric filter wheel: standard 590nm filter
Application	Fluorescence, chemiluminescence, gel imaging

## Mute Ultrasonic Cleaner

### Features:

- ◆ 3.2 inch Chinese LCD screen showing factory name and product brand
- ◆ LCD screen showing instrument type, ultrasonic power, ultrasonic frequency,
- ◆ Ultrasonic time, ultrasonic temperature, parameters detailed and clear
- ◆ LCD display over temperature, over voltage, over current, malfunction beep alarm
- ◆ Acrylic machine panel, beautiful and generous, light and convenient
- ◆ All-Chinese touch-button operating system for operating the instrument
- ◆ Unique Sweep technology for automatic frequency tracking and uniform ultrasonic distribution
- ◆ Unique Degas technology to achieve rapid degassing and work efficiency,
- ◆ Ultrasonic circuits of the instrument, designed at the industrial level, can work continuously for 72 hours
- ◆ Instrument mute design, using high-quality sound-down materials to ≤60 decibels of working noise
- ◆ The instrument is drained by stainless steel pipes, mini ceramic core valves, high temperature and never rust
- ◆ The instrument's heating system, which uses ceramic plates to make the temperature more stable and accurate
- ◆ A handle is installed on both sides of the instrument to facilitate handling and transportation
- ◆ The inner groove of the instrument is punched with high quality 304 stainless steel plate
- ◆ The instrument's net frame, housing and sound-down cover are made of 304 stainless steel



Model	Machine size	Inner slot size	Capacity	Ultrasound frequency	Ultrasonic power	Power adjustable	heating power	Temperature adjustable	Time adjustable	Grid Cover
	L * W * H (mm)	L * W * H (mm)	(L)	(KHz)	(W)	(%)	(W)	(℃)	(min)	Drainage
<b>AE-3200XDS</b>	320×180×350	300×150×150	6	40	160	10-100	400	Room temperature -80	1-9999	Yes
<b>AE-5200XDS</b>	320×270×350	300×240×150	10	40	200	10-100	600	Room temperature -80	1-9999	Yes
<b>AE-250XDS</b>	320×270×350	300×240×150	10	40	250	10-100	600	Room temperature -80	1-9999	Yes
<b>AE-300XDS</b>	320×270×350	300×240×150	10	40	300	10-100	600	Room temperature -80	1-9999	Yes
<b>AE-7200XDS</b>	350×320×350	330×300×150	15	40	400	10-100	800	Room temperature -80	1-9999	Yes
<b>AE-500XDS</b>	530×320×385	500×300×150	22.5	40	500	10-100	1000	Room temperature -80	1-9999	Yes
<b>AE-600XDS</b>	530×320×385	500×300×150	22.5	40	600	10-100	1000	Room temperature -80	1-9999	Yes
<b>AE-700XDS</b>	530×320×385	500×300×200	30	40	700	10-100	1200	Room temperature -80	1-9999	Yes
<b>AE-800XDS</b>	530×320×385	500×300×200	30	40	800	10-100	1200	Room temperature -80	1-9999	Yes
<b>AE-1000XDS</b>	740×440×900	600×300×400	72	40	1000	10-100	4000	Room temperature -80	1-9999	Yes
<b>AE-1500XDS</b>	840×540×900	700×400×400	112	40	1500	10-100	6000	Room temperature -80	1-9999	Yes

## Vaccum Suction System

Our Vaccum suction system is a benchtop, contamination free vacuum equipment, portable and easy to operate. This system combined by a vacuum pump and a collection bottle, which is widely used for sample aspiration/collection in biochemistry and medical engineering experiments like centrifugal liquid supernatant or sediment, Elisa plate washing and biochemical analyzer liquid.

### Features:

- ◆ Quiet, small size
- ◆ Low power driven by motor
- ◆ Oil-resistant pump membrane, can improve pump performance and
- ◆ Anti-vibration
- ◆ Adjustable pressure, air release valve



### Technical Specifications:

Model	AE-VS250	AE-VS1000
Voltage	AC100~120V/AC200~240V 50~60Hz	
Gas flow	26L/m	
Vaccum degree	0.09Mpa	
Pressure	0~0.09Mpa	
Filter bottle	250ml	1000ml
Usage temperature	5℃ ~30℃	
Relative humidity	≤ 70%	
Power	60W	
Dimension (W×D×H)	195x275x150 (mm)	195x275x165 (mm)
Weight	4.2k	4.5kg

### Remarks :

Please pay attention to the liquid volume in collection bottle, discharge when it reaches max. line to avoid suck-back.

Don't keep it working over than 30min, turn off the equipment when it warms up. Restart when it cools down.

After finishing experiment, vent residual gas from pump to extend equipment life. The trapped air in pump may damage pump

## Glassware Washer

Laboratory glassware washer is easier to standardize and achieve analytical cleanliness, eliminating interference for analytical tests. At the same time, it can free the personnel from heavy work and help them focus more on core research. It also prevents the personnel from being exposed to harmful detergents and improves the lab environment.



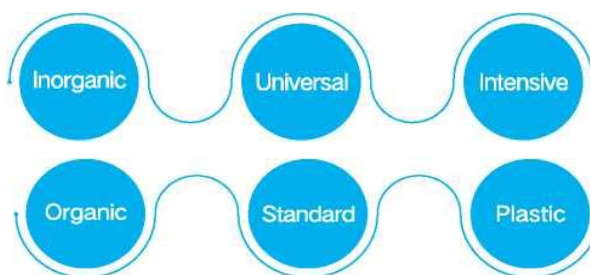
### Large Capacity

2 layers, upper and lower, with 2 independent baskets on each layer, can be placed 4 baskets for one time, and be flexibly combined.

Suitable for all kinds of vessels, Erlenmeyer flask, round-bottom flasks, reagent bottles, cylinders, test tubes, auto-sampler bottles, etc.

### Washing Programs

Meet the requirement of different industries such as organic, inorganic or physical chemistry, biology, microbiology, medicine, pharmacy, food or cosmetic, etc.



### Airtight Washing

Regarding washing in need of detergents such as acid and alkali, the airtight space can avoid volatilization of detergents and exposure of personnel to harmful reagents.

### Customized Basket

For special washing needs, we provide basket customization services to meet various user needs

### Technical Specifications:

Model	AE-S8000D
External dimensions	870 (840) x 900 x700mm
Wash cabinet	625 x 542 x 520mm
Volume	176L
Programs	13programs
Water temperature max	93°C
Electrical connection	380V / 220V
Total connected load	<9 <sup>^</sup> /V/ 6.5kW
Heater rating	8kW / 5.5 kW
Wash pump	0.6kW
Net weight rating	130kg
Water supply	Cold water or hot water
Water connection	Standard quick connector
Flowing pressure	0.04-1 .00MPa



## UV VIS Spectrophotometer AE-S90/S80 Series

AE-S90/AE-S80 Series are wide screen double beam spectrophotometer. Its integrated design assures long term stability and durability. The highly stable optics and one or two detectors measure the sample and reference simultaneously optimising measurement accuracy. It has measurement modes for photometrics, concentration, multi-wavelength, spectrum scanning, kinetics, quantitation, DNA and protein analysis. The PC software is supplied as standard and offers additional functionality with preloaded methods for DNA and protein analysis, as well as extensive post-measurement tools, unlimited results saving and easy export of data.

The precisely aligned detector and quality deuterium and halogen lamps enhance the precision across the uv/vis spectrum starting from 190nm and into the near-infrared 1100nm. It is ideal for quality control, general research, pharmaceutical, biochemical and clinical laboratory applications.

### Features:

- ◆ Double beam spectrophotometer with highly stable optics.
- ◆ Extremely versatile with full functionality from 190 to 1100nm.
- ◆ Variable spectral bandwidth 0.5, 1, 2, 4, 5nm.
- ◆ 2 or 8 cell holder available.
- ◆ 6 inches LCD display & integrated user interface.
- ◆ USB port for data storage.
- ◆ ISO/CE Certificate passed.
- ◆ A & E Lab PC software included as standard.
- ◆ Extensive range of accessories available.



AE-S90 Series

### Technical Specifications:

Wavelength	
Wavelength Range	190-1100nm
Wavelength Accuracy	±0.3nm
Wavelength Repeatability	0.2nm
Bandwidth	1nm/1.8nm/0.5,1,2,4,5nm
Photometri	
Accuracy	±0.3%T
Photometric Repeatability	0.2%T
Photometric Display Range	-0.3-3A,0-200%T,0-9999C
Stability	± 0.001A/h @ 500nm
Baseline Flatness	±0.001A
Noise	±0.001A
Stray Light	≤0.05%T @220nm, 360nm
Others	
Data Output Port	USB
Printer Port	Parallel Port
Optical System	Double Beam (1200 lines/mm grating)
Display	LCD (320x240 Dots )
Lamps	Deuterium & Tungsten Halogen Lamp
Detector	Silicon Photodiode
Software	UV PC Software
Power Supply	AC 220V/50Hz, 110V/60Hz.
Packing Size & Gross Weight	860x660x465mm & 35kg

### Ordering Models:

Order Code	Description
AE-S90-MD	Large screen, double beam, 2 single cell holder, Bandwidth: 0.5/1.0/2.0/4.0/5.0nm, with PC software.
AE-S90-1D	Large screen, double beam, 2 single cell holder, Bandwidth: 1nm, with PC software.
AE-S90-2D	Large screen, double beam, 2 single cell holder, Bandwidth: 1.8nm, with PC software.
AE-S80-MS	Large screen, single beam, 4 cell holder, Bandwidth: 0.5/1.0/2.0/4.0/5.0nm, with PC software.
AE-S80-1S	Large screen, single beam, 4 cell holder, Bandwidth: 1nm, with PC software.
AE-S80-2S	Large screen, single beam, 4 cell holder, Bandwidth: 1.8nm, with PC software.

## Colorful Touch UV-VIS Spectrophotometer AE-S80-TS AE-S90-TD

Color Touch series are

- # Intelligent alarm function.
- # Display several groups of data at the same time for direct reading.
- # New panel with touch screen.
- # System encryption function.
- # Module design for easy operation.



### Features:

- ◆ 800x480 touch screen display which shows clear graphs.
- ◆ Stand-alone system which can realize spectrum measurement, quantitative, wavelength scanning, kinetics, system setting directly on the instrument.
- ◆ The instrument uses a rigid 8mm die-case aluminum base as its optical mount to ensure instrument stability and reliability.
- ◆ Automatic system calibration and positioning to recover deviation after long-time use.
- ◆ Imported main optical spare parts to ensure low stray light, stability and reliability.
- ◆ With powerful memory, can print data and graphs in A4 format directly by connecting to a printer.
- ◆ Data can export to USB directly.

### Technical Specifications:

Wavelength	
Wavelength Range	190-1100nm
Wavelength Accuracy	±0.5nm
Wavelength Repeatability	≤0.2nm
Band Width	2nm
Photometric	
Photometric Accuracy	±0.2%T (0-100%T) ±0.002Abs (0-0.5Abs) ±0.004Abs (0.5-1.0Abs)
Photometric Repeatability	≤0.15%T (0-100%T) 0.001Abs (0-0.5Abs) 0.002Abs (0.5-1.0Abs)
Photometric Display Range	0-200%T, -0.4~4.0A, 0-9999C
Stability	±0.001A/h (@500nm)
Baseline Flatness	±0.001A
Noise	±0.0005A
Stray Light	≤0.05%T@220nm, 360nm
Others	
Data Output Port	USB
Printer Port	USB port
Display	800x480 touch screen
Lamps	Imported D2 lamp & W lamp
Detector	Silicon photodiode
Power Supply	AC220V/50Hz or 110V/60Hz
Packing Size & Gross Weight	860x660x465mm - 37kg (AE-90-TD) 860x660x465mm - 36kg (AE-S80-TS)

### Ordering Models:

Order Code	Description
AE-S80-TS	Touch Screen, Single beam UV-VIS Spectrophotometer, wavelength range 190-1100nm, bandwidth: 2nm. Without PC Software, the data can transfer from USB interface or connect to computer print it.
AE-S90-TD	Touch Screen, Double beam UV-VIS Spectrophotometer, wavelength range 190-1100nm, bandwidth: 2nm. Without PC Software, the data can transfer from USB interface or connect to computer print it.

## UV VIS Spectrophotometer AE-S70/S60 Series

AE-S70/S60 Series spectrophotometers have the most attractive cost performance. It is widely used in colleges and enterprises for general quantitative analysis and experiments. The instrument uses a lead screw structure so that the instrument wavelength accuracy and wavelength resolution can be greatly improved.

8mm thick optical base: the instrument uses a rigid die-cast aluminum base as its optical mount to ensure instrument stability and reliability. It can set up various standard curves according to customer/s solutions and find the concentration of unknown solutions.

### Features:

- ◆ Single beam spectrophotometer with highly stable optics.
- ◆ 6 inches & compact LCD display. Integrated user interface.
- ◆ Extremely versatile with full functionality
- ◆ UV range: 190 to 1100nm, VIS range: 320-1100nm.
- ◆ Spectral bandwidth 1.8 & 2nm.
- ◆ USB port for data storage.
- ◆ ISO/CE Certificate passed.
- ◆ A & E Lab PC software available.
- ◆ Extensive range of accessories available.



### Technical Specifications:

AE-S60 Series

Wavelength	
Wavelength Range	UV range: 190-1000nm VIS range: 325-1000nm
Wavelength Accuracy	AE-S70: $\pm 0.5\text{nm}$ AE-S60: $\pm 1\text{nm}$
Wavelength Repeatability	AE-S70: $\pm 0.2\text{nm}$ AE-S60: $0.5\text{nm}$
Band Width	AE-S70: 1.8nm/2nm AE-S60: 2nm/4nm
Wavelength Setting	Auto
Photometric	
Photometric Accuracy	AE-S70: $\pm 0.3\%T$ AE-S60: $\pm 0.5\%T$
Photometric Repeatability	AE-S70: $0.2\%T$ AE-S60: $0.3\%T$
Photometric Display Range	0-200%T, -0.3-3.0A, 0-9999C
Stability	0.002A/h @ 500nm
Baseline Flatness	AE-S70: $\pm 0.002A/\pm 0.0015A$
Noise	$\pm 0.001A$
Stray Light	AE-S70: $\leq 0.05\%T$ AE-S60: $\leq 0.3\%T$ @220nm, 360nm
Others	
Data Output Port	USB
Printer Port	Parallel Port
Optical System	Single Beam (1200 lines/mm grating)
Display	AE-S70: LCD (320x240/128x64 Dots ) AE-S60: 128x64 Dots LCD
Lamps	Deuterium & Tungsten Halogen Lamp
Detector	Silicon Photodiode
Software	UV or VIS software
Power Supply	AC 220V/50Hz, 110V/60Hz.
Packing Size & Gross Weight	AE-S70: 700x610x440mm & 25kg AE-S60: 57x45x31cm & 13kg

### Ordering Models:

Order Code	Description
AE-S70-1U	6 inch display, single beam, 4 cell holder, 190-1100nm, Bandwidth: 1.8nm.
AE-S70-2U	2.5 inch display, single beam, 4 cell holder, 190-1100nm, Bandwidth: 2nm.
AE-S60-2U	2.5 inch display, single beam, 4 cell holder, 190-1000nm, Bandwidth: 2nm
AE-S60-4U	2.5 inch display, single beam, 4 cell holder, 200-1000nm, Bandwidth: 4nm.
AE-S70/S60 Series Visible Spectrophotometer	
AE-S70-2V	2.5 inch display, single beam, 4 cell holder, 320-1100nm, Bandwidth: 2nm, wavelength accuracy: $\pm 0.5\text{nm}$ .
AE-S60-4V	2.5 inch display, single beam, 4 cell holder, 325-1000nm, Bandwidth: 4nm.

## VIS Spectrophotometer AE-S50 Series

### Features:

- ◆ Visible spectrophotometer with highly stable optics.
- ◆ Extremely versatile with full functionality from 325 to 1000nm.
- ◆ Spectral bandwidth 4nm.
- ◆ Integrated user interface.
- ◆ USB port for data storage.
- ◆ Extensive range of accessories available.



### AE-S50-4V Features:

- ◆ With microprocessor controlled, it can realize auto zero and auto 100% adjustment with one push-button.
- ◆ 1200 line grating which ensures high resolution, low stray light and high parameters accuracy.
- ◆ Equipped with USB port which can be connected to PC and edit data via software. Data can print while connect with a micro-printer.
- ◆ Four display mode: Absorption, transmittance, concentration and coefficient directly by different mode switching.
- ◆ Compact design, easy to carry.

### AE-S50-4V TOUCH Features:

- ◆ The holographic blazed grating monochromator has the advantages of high wavelength accuracy, good monochromaticity and low stray light.
- ◆ 7-inch multi color touch-screen, good human-computer interface.
- ◆ Linear regression method and coefficient method are added to the concentration test method.
- ◆ USB interface is added, and large capacity memory can store 30 concentration curves.
- ◆ Adopt microcomputer measurement system, with high conversion accuracy of T-A, automatic adjustment of 0% T and 100% T, concentration factor setting and concentration direct reading.
- ◆ High accuracy, Good Reproducibility and Stability of Measurement Readings.
- ◆ Automatic light gate technology, No need blackbody, to protect the photoelectric sensor.

### Technical Specifications:

Wavelength	
Wavelength Range	325-1000nm
Wavelength Accuracy	±2nm
Wavelength Repeatability	1nm
Band Width	4nm/2nm
Photometric	
Photometric Accuracy	±0.5%T
Photometric Repeatability	0.3%T/0.2%T
Photometric Display Range	T. A. C. F
Stability	0.002A/h @ 500nm
Stray Light	≤0.3%T@220nm, Touch ≤0.1%T, 360nm
Others	
Data Output Port	USB
Printer Port	Parallel Port
Display	LCD Display/Touch Screen
Lamps	Tungsten Halogen Lamp
Detector	Silicon Photodiode
Software	VIS software (Optional)
Packing Size & Gross Weight	AE-S50-4V 570×450×330mm - 9kg AE-S50-4V TOUCH 580×460×345mm - 12.5kg

### Ordering Models:

Order Code	Description
AE-S50-4V	LCD Display, Single Beam, Visible Spectrophotometer, 325-1000nm, Bandwidth: 4nm.
AE-S50-4V TOUCH	Touch Screen Display, Single Beam, Visible Spectrophotometer, 325-1000nm, Bandwidth: 2nm.



## Flame Photometer

This instrument is used for analyzing & measuring the content & concentration of elements (K, Na, Li, Ca, Ba). It can be widely applied to agriculture (soil, fertilizer, and tobacco), industry (cement, glass, ceramics, mineral or ore powder, fireproof material), food (wine, water), laboratory, clinical experiments and pathology research (serum, urine, and plasma), etc.

### Features:

- ◆ With **K, Na, Li, Ca, Ba** five filters, which can detect three kinds of elements, show three kinds of elements content simultaneous.
- ◆ LCD display, touch panel with numeric keypad.
- ◆ With auto correlation coefficient calculating function.
- ◆ With ore-select function for flame size.
- ◆ A flame-out protection device.
- ◆ with single point calibration function.
- ◆ Calibration curve can be saved.
- ◆ With RS232 interface, can connect with external printer.
- ◆ with a mist separator.
- ◆ Easy adjustable Relief valve, direct view of pressure gauge.



### Technical Specifications:

Measurement Range	K: 0-100ppm, Na: 0-100ppm, Li: 0-100ppm, Ca: 0-1000ppm, Ba: 0-3000ppm
Stability	The biggest change in the relative volume in 15s: ≤3%
Linear Error	K:0.2ppm, Na:0.5ppm, Li:0.1ppm, Ca:2ppm, Ba:8ppm.
Min. Detection Limit	K:0.1ppm, Na:0.1ppm, Li:0.1ppm, Ca:2ppm, Ba:8ppm.
Curve Calibration	Straight-line method; Polygon method; Quadratic fit.
Linearity	Better than the best results of the intermediate value of 2% (single-point CAL)
Standard Accessories	Air-compress for all models
Standard Accessories	Micro-printer for all models
Optional Accessories	PC Software
Packing Size	76x41x57 cm (wooden case) & 74x40x55 cm (carton box)
Gross Weight	27 kg (wooden case) & 20 kg (carton box)

### Ordering Models:

Model	Display	Elements	Example
<b>AE- FP8201</b>	LCD Display	K, Na, Li, Ca, Ba 5 elements choose 2 elements	K,Na; K,Li; K, Ca; K,Ba; Li,Ca; Ca,Ba; etc
<b>AE-FP8301</b>		K, Na, Li, Ca, Ba 5 elements choose 3 elements	K, Na, Li; K,Na,Ca; K,Na,Ba; Li,Ca,Ba; etc
<b>AE-FP8401</b>		K, Na, Li, Ca, Ba 5 elements choose 4 elements	K, Na, Li,Ca; K,Na,Li,Ba; Na, Li,Ca,Ba; etc
<b>AE-FP8501</b>		K, Na, Li, Ca, Ba 5 elements choose 5 elements	K, Na, Li,Ca, Ba;

### Economic Models:

Model	AE-FP8201-A		AE-FP8201-B
Display	LCD display		
Range	K: 0-100ppm, Na: 0-100ppm		
Stability	The biggest change in the relative volume in 15s: ≤3%		
Linear Error	K: 0.2ppm Na: 0.5ppm		
Min. Detection limit	K: 0.1ppm Na: 0.1ppm		
Curve calibration	Straight-line method, Polygon method; 2-points calibrate.		Straight-line method, Polygon method; 1-10 points calibrate.
Linearity	Better than the best results of the intermediate value of 2% (single-point CAL)		
Printer	Optional, built-in printer or external micro-printer		