

# AE<sub>Labs</sub> LAB

Lab & Medical Instruments Global Supplier.

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1. **PCR-Cycler.**  
\* Cycler 003, 004, 005, 006.
2. **Hotplate, Stirrer, Stirrer Hotplate.**
3. **Cold Keeper.**
4. **Melting Point Device.**
5. **Block Heater-Aluminum Blocks.**
6. **Sample Concentrator.**
7. **Microplate Shaker.**
8. **Orbital Shaker.**
9. **Circular Mixer Incubator.**
10. **3D Gyration Rocker.**
11. **See Saw (Wave) Rocker.**
12. **Vortex Mixer.**
13. **Rotatory Mixer.**
14. **Tube Roller Mixer.**
15. **Sterilizer.**
16. **Mini-Plate Centrifuge.**
17. **High Speed Mini-Centrifuge.**
18. **Mini Centrifuge.**

## Contact Us:





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# PCR-Cycler

## Cycler 003

Most economic and high performance cycler

The Cycler 003 thermal cycler is reliable with excellent ramping rate (maximum over 5 °C/sec) and most economic personal PCR.

The Cycler 003 is designed to be compact and portable. It is only 600 cm<sup>2</sup> footprint and weighs 6.8 Kg.

The self-adjusted heated lid (100°C to 115°C), designed to reduce the risk of sample evaporation, can be enabled or disabled. The heated lid only comes on if the block is set above 35°C.

The powerful programming logic makes it user friendly. Several common used methods have been created as templates for users, this helps with even the most complicated protocol program set ups. The on-screen displayed ramping rate helps users to monitor the working condition of the machine.

Two major sample blocks formats can be chosen.

1. The small personal block: 25 X 0.2 ml and 20 X 0.5 ml
2. The half-full-size blocks: 48 X 0.2 ml and 30 X 0.5 ml. This design allows users to have more flexibility.

### Technical Specification

#### Temperature

Temperature range 4°C to 99°C

Block uniformity ± 0.5°C

Temperature accuracy ± 0.5°C

End of program cooling below ambient YES

#### Heating/Cooling Rate

Maximum heating rate 4.5°C/sec

Maximum cooling rate 3°C/sec

#### Heated Lid

Heated lid temperature 100°C to 115°C

Heated lid enable/disable YES

#### Programming

Program naming using alpha keys YES

Program password protection YES

Number of programs (3 step) 37

#### Dimensions

Height 185 mm

Width 185 mm

Length 330 mm

Weight 6.8 Kg

#### Power

AC INPUT 120V or 230V with Switch



### Ordering Information

Part Number	Product Description
Cyl-003-1	Cycler 003 thermal cycler for 25 x 0.2ml microtubes, 120V / 230V
Cyl-003-2	Cycler 003 thermal cycler for 20 x 0.5ml microtubes, 120V / 230V
Cyl-003-3	Cycler 003 thermal cycler for 48 x 0.2ml microtubes, 120V / 230V
Cyl-003-4	Cycler 003 thermal cycler for 30 x 0.5ml microtubes, 120V / 230V
Cyl-01	Cycler 003 Block for 25 x 0.2ml microtubes
Cyl-02	Cycler 003 Block for 20 x 0.5ml microtubes
Cyl-03	Cycler 003 Block for 48 x 0.2ml microtubes
Cyl-04	Cycler 003 Block for 30 x 0.5ml microtubes





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## Cycler 004

### HALF FULL SIZE high performance cycler

The Cycler 004 thermal cycler is designed to accommodate 48 wells personal cycler, i.e. the half wells of the full size well plates (96 wells). Different from Cycler 003, when using 48 wells plate, the ramping rate can reach 4.5 °C/sec.

The adjustable heated lid (100°C to 115°C), designed to reduce the risk of sample evaporation, can be enabled or disabled. The heated lid only comes on if the block is set above 35°C.

The powerful programming method makes users easily understand and straight forward. Several frequent used methods have been created as templates for users creating even the most complicated protocols with ease. The on-screen showed ramping rate helps users to monitor the working condition of the machine.

Most newly created feature of the Cycler 004 is the calibration mode. Connected with calibration head, the machine will do the calibration in minutes.

### Technical Specification

#### Temperature

Temperature range 4°C to 99°C

Block uniformity  $\pm 0.5^{\circ}\text{C}$

Temperature accuracy  $\pm 0.5^{\circ}\text{C}$

End of program cooling below ambient YES

#### Heating/Cooling Rate

Maximum heating rate 4.5°C/sec

Maximum cooling rate 3°C/sec

#### Heated Lid

Heated lid temperature 100°C to 115°C

Heated lid enable/disable YES

#### Programming

Program naming using alpha keys YES

Program password protection YES

Number of programs (3 step) 37

#### Dimensions

Height 185 mm

Width 185 mm

Length 330 mm

Weight 6.8 Kg

#### Power

AC INPUT 120V or 230V with Switch



### Ordering Information

Part Number	Product Description
Cyl-004-1	Cycler 004 thermal cycler for 48 x 0.2ml microtubes, 120V / 230V
Cyl-004-2	Cycler 004 thermal cycler for 30 x 0.5ml microtubes, 120V / 230V
Cyl-10	Cycler 004 Block for 48 x 0.2ml microtubes
Cyl-11	Cycler 004 Block for 30 x 0.5ml microtubes







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## Cycler 005

### HALF FULL SIZE AND high performance cycler

The Cycler 005 provides the researcher with the means of accurately controlling the temperature profile of samples. It has many scientific applications, including DNA amplification and sequencing.

The Cycler 005 can cycle samples between 4°C and 99°C.

The Cycler 005 is programmed by means of an integral keypad and LCD display. A program, which can be recalled from memory, consists of:

- a series of specified temperatures in °C
- the times for which each specified temperature will be held (Hold Times)
- the desired heating or cooling rates, in °C/sec, between each specified temperature
- optional instructions as to whether the times and/or the temperatures are to increase or decrease when a cycle is repeated.

The memory can store up to 80 programs.

Two interchangeable blocks are available for this model: 0.2ml x 48 and 0.5ml x 30 wells blocks which have less sample compartment but with higher ramping rate; 0.2ml x 48 (standard) and 0.5ml x 30 wells blocks which have more wells but less ramping rate.

### Technical Specification

Temperature	
Temperature range	4°C to 99°C
Block uniformity	± 0.5°C
Temperature accuracy	± 0.5°C
End of program cooling below ambient	YES
Heating/Cooling Rate	
Maximum heating rate	4.5°C/sec
Maximum cooling rate	3°C/sec
Heated Lid	
Heated lid temperature	100°C to 115°C
Heated lid enable/disable	YES
Programming	
Program naming using alpha keys	YES
Program password protection	YES
Number of programs (3 step)	37
Dimensions	
Height	185 mm
Width	185 mm
Length	330 mm
Weight	6.8 Kg
Power	
AC INPUT	120V or 230V with Switch



### Ordering Information

Part Number	Product Description
Cyl-005-1	Cycler 005 thermal cycler for 48 x 0.2ml microtubes, 120V / 230V
Cyl-005-2	Cycler 005 thermal cycler for 30 x 0.5ml microtubes, 120V / 230V
Cyl-20	Cycler 005 Block for 48 x 0.2ml microtubes
Cyl-21	Cycler 005 Block for 30 x 0.5ml microtubes





# Cycler 006

**FULL SIZE AND high performance cycler**

The Cycler 006 provides the researcher with the means of accurately controlling the temperature profile of samples. It has many applications, including DNA amplification<sub>1</sub> and sequencing. The Cycler 006 can cycle samples between 4°C and 99°C.

The Cycler 006 is programmed by means of an integral keypad and LCD display. A program, which can be recalled from memory, consists of:

- a series of specified temperatures in °C
- the times for which each specified temperature will be held (Hold Times)
- the desired heating or cooling rates, in °C/sec, between each specified temperature
- optional instructions as to whether the times and/or the temperatures are to increase or decrease when a cycle is repeated.

The memory can store up to 100 programs.

## Technical Specification

Temperature	
Temperature range	4°C to 99°C
Block uniformity	± 0.5°C
Temperature accuracy	± 0.5°C
End of program cooling below ambient	YES
Heating/Cooling Rate	
Maximum heating rate	3.5 °C/sec
Maximum cooling rate	2.5 °C/sec
Heated Lid	
Heated lid temperature	100°C to 115°C
Heated lid enable/disable	YES
Programming	
Program naming using alpha keys	YES
Program password protection	YES
Number of programs (3 step)	37
Dimensions	
Height	260 mm
Width	220 mm
Length	420 mm
Weight	12 Kg
Power	
AC INPUT	120V or 230V with Switch



## Ordering Information

Part Number	Product Description
Cyl-006-1	Cycler 006 thermal cycler for 96 x 0.2ml microtubes, 120V / 230V
Cyl-006-2	Cycler 006 thermal cycler for 60 x 0.5ml microtubes, 120V / 230V
Cyl-30	Cycler 006 Block for 96 x 0.2ml microtubes
Cyl-31	Cycler 006 Block for 60 x 0.5ml microtubes





# Hotplates

## Application:

We offer a variety of hotplates, ranging from different size, different top materials, and different temperature setting. Most hotplates come with the spill prevention feature, and hot warning features.

## Technical Specifications:

Model	AHC-101 Microcrystal Top Hotplates	AHC-102 Microcrystal Top Hotplates
Plate Dimension	160X160mm	300X300mm
Heated Area	120X120mm	220X220mm
Heated Power	550W	1500W
Maximum Plate Temp.	550°C	550°C
Dimension (mm,)	220X240X145	330X380X145
Net Weight (Kg)	2.8	8
Power Supply	230V, 50Hz or 110V, 60Hz	



AHC-101/102

Model	AHA-101 Aluminum Top Hotplates	AHA-102 Aluminum Top Hotplates
Plate Dimension	127(5')x127(5')mm	150 Diameter Round Top
Heated Area	100X100mm	120 Diameter
Heated Power	350W	350W
Maximum Plate Temp.	350°C	350°C
Dimension (mm)	127X130X85	190X260X125
Net Weight (Kg)	1.0	2.0
Power Supply	230V, 50Hz or 110V, 60Hz	



AHA-101



AHA-102



# Stirrers

## Application:

We offer a range of stirrers made of different materials. Our stirrers equipped with digital sensor to actively control the speed of the stirrer through a feedback mechanism. The stirrer speed is keeping unchanged regardless the changes in liquid property and/or environmental temperature. And the stir bars are not disengaged during stirring.

## Technical Specifications:

Model	ASC-201 Ceramic Top Stirrer	ASC-202 Ceramic Top Stirrer
Plate Dimension	160X160mm	300X300mm
Stirrer Speed (rpm)	150-1500	150-1500
Max. Stirring Capacity	20L	20L
Dimension (mm)	220X240X135	330X380X125
Net Weight (Kg)	2.3	8.3
Power Supply	230V, 50Hz or 110V, 60Hz	



ASC-201

Model	ASA-201 Aluminum Top Stirrer	ASS-202 Stainless Steel Top Stirrer
Plate Dimension	150 Diameter Round Top	150 Diameter Round Top
Stirrer Speed (rpm)	150-1500	150-1500
Max. Stirring Capacity	20L	20L
Dimension (mm)	190X260X115	190X260X110
Net Weight (Kg)	1.8	1.8
Power Supply	230V, 50Hz or 110V, 60Hz	



ASA-201/ASS-202

Model	ASS-201 Stainless Steel Top Stirrer	ASS-901 Stainless Steel Top 9-position Stirrer
Plate Dimension	127(5')x127(5')mm	300X300mm
Stirrer Speed (rpm)	300-2800	300-2800
Max. Flasks Dimension	2	250ml
Motor	Brushless Motor, 2W	
Dimension (mm)	128X128X55	300X300X55
Net Weight (Kg)	0.8	2
Power Supply	AC90-230V, 50-60Hz	



ASS-901



# Stirrer Hotplates

## Application:

We provide a variety of stirrer hotplates. Product ranges cover from economic to sophisticated types.

All hotplates come with the spill prevention, over heated protection and “Hot” status warning feature.

The stirring is actively controlled by digital sensor through a feedback mechanism for all of models regardless digital or analog. The stirrer speed is keeping unchanged regardless the changes in liquid property and/or environmental temperature, preventing the disengaged of the stir bad during stirring.

The digital types of the stirrer hotplates have much more sophisticated performance and safety feature to use in scientific research. The hotplate can be used with or without the probe, and have excellent control stability and accuracy. The unit will automatically beep and shut off when the probe left outside by negligent, or solution dried out, or sample solution. The external probe can be easily calibrated by adjusting the calibration screw.



ASHC-305L/306L

## Technical Specification:

Model	ASHC-301 Microcrystal Top Stirrer Hotplate	ASHC-302 Microcrystal Top Stirrer Hotplate	ASHA-501 Aluminum Top Stirrer Hotplate
Plate Dimension	160X160mm	300X300mm	150 Diameter Round Top
Heated Area	120X120mm	220X220mm	120 Diameter
Heated Power	500W	1500W	350W
Maximum Plate Temp.	550°C	550°C	350°C
Stirrer Speed (rpm)	150-1500		
Max. Stirring Capacity	20L		
Dimension (mm)	220X240X145	330X380X145	190X260X125
Net Weight (Kg)	3.6	8.5	2.5
Power Supply	230V, 50Hz or 110V, 60Hz		



ASHC-301/302



ASHA-501





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# Digital Stirrer Hotplates

Model	ASHC-305 Digital Stirrer Hotplate	ASHC-306 Digital Stirrer Hotplate	ASHA-505 Digital Stirrer Hotplate
Plate Dimension	160X160mm	300X300mm	150 Diameter Round Top
Heated Area	120X120mm	220X220mm	120 Diameter
Heated Power	500W	1500W	350W
Digital Control	PID	PID	PID
Control Accuracy	<+/-0.5°C for solution		
Digital Display	Dual: solution temp with probe; Plate temp without probe		
Display Resolution	0.1 with probe, 1 without probe.		
Safety Features	Warning light on, when plate above 50°C; Beep and shut off when the outside probe leaving solution or when the solution dry; When turn off, display keep on until below 50°C;		
Capable of Calibration	Yes		
Maximum Plate Temp.	550°C	550°C	350°C
Max Solution Temp	200°C		
Stirrer Speed (rpm)	100-1800		
Max. Stirring Capacity	20L		
Dimension (mm)	220X240X145	330X380X145	190X260X125
Net Weight (Kg)	3.6	8.5	2.5
Power Supply	230V, 50Hz or 110V,60Hz		

Model	ASHC-307 Digital Stirrer Hotplate	ASHC-308 Digital Stirrer Hotplate	ASHA-507 Digital Stirrer Hotplate
Plate Dimension	160X160mm	300X300mm	150 Diameter Round Top
Heated Area	120X120mm	220X220mm	120 Diameter
Heated Power	500W	1500W	350W
Digital Control	PID	PID	PID
Control Accuracy	<+/-0.5°C for solution		
Digital Display	Selective display for setting temperature (plate or probe), real temperature (plate or probe), stirring speed		
Display Resolution	0.1 with probe, 1 without probe.		
Safety Features	Warning light on, when plate above 50°C; Beep and shut off when the outside probe leaving solution or when the solution dry; When turn off, display keep on until below 50°C;		
Capable of Calibration	Yes		
Maximum Plate Temp.	550°C	550°C	350°C
Max Solution Temp	200°C		
Stirrer Speed (rpm)	100-1800		
Max. Stirring Capacity	20L		
Dimension (mm)	220X240X145	330X380X145	190X260X125
Net Weight (Kg)	3.6	8.5	2.5
Power Supply	230V, 50Hz or 110V,60Hz		





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# Cold Keeper

## Application:

### Most Economic Device To Replace The Ice Bucket.

Simply plug it in, turn it on, and put the sample in, the Cold Keeper can keep your sample at low temperatures for long periods. No hassle, no contamination, and excellent value for money!

20 sample compartments in each block, sizes from 0.2ml to 2ml, simply change format of the compartments when you need different sizes. The unit can also use the ceramic-coated aluminum beads to accommodate various sample vials at the same time.

There are two different models: ACK-301, the analog device, keeps your sample at 0°C, and ACK-302, with display and setting. You can adjust temperature from 0°C to any set point lower than room temperature.



## Technical Specification:

Model	ACK-301	ACK-302
Temperature Range	0°C - 4°C with no adjustment	0°C to room temp -5°C
Temperature Accuracy	- - -	±1°C
Cooling Technology	Peltier	
Power Supply	Input 90-230V, output 12V, 5A, 60 W	
Dimension	188WX188LX158H	
Weight	2 KG	

## Blocks Information:

Part Number	Description
ACK-01	Anodised Aluminium block (32.5Hx75Lx75W) with 20 X inserts for 0.2 ml vials.
ACK-02	Anodised Aluminium block (32.5Hx75Lx75W) with 20 X inserts for 0.5 ml vials.
ACK-03	Anodised Aluminium block (32.5Hx75Lx75W) with 20 X inserts for 1.5 ml vials.
ACK-04	Anodised Aluminium block (32.5Hx75Lx75W) with 20 X inserts for 2.0 ml vials.
ACK-05	Anodised Aluminium block (32.5Hx75Lx75W) with 20 X inserts for combination vials (0.2, 0.5, 1.5 and 2 ml)





# Melting Point Device

## Application:

DMP-100 is a economic and easy-use melting point device. With a precise thermistor control system, the measurement range of the device is excellent, giving 0.1°C resolutions on display.

The device is designed to simultaneously measure two samples. The internal LED light source, together with clear magnified lens and tilt rear feet aids users to have a broader and clearer view.

The measurement ranges from room temperature to 300°C. The two different ramping speed modes make measurement much quicker and convenient.

The operation is very user friendly. The unit is the most economic pricing makes the device unbeatable in the market.



## Technical Specification:

Model	DMP-100
Temperature range (°C )	Ambient to 300
Temperature accuracy (°C )	± 1.0 at 20°C, ± 2.5 at 300°C
Display	Four digit LED
Display resolution (°C )	0.1
Readout hold	Yes
Number of samples	2
Fast Stage Ramp rate (°C/min )	20 fixed
Slow Ramp rates	adjustable between 1 to 10
Dimensions (w x d x h)	160 x 220 x 170mm
Net weight	1.8 Kg
Electrical supply	230V, 50Hz, 75W



# Block Heaters

## *Applications:*

Block heater is designed for widely use in Chemical, Biochemical, Clinical and other General Labs for heating, digesting, incubating, concentrating and other heating processes.

There are two models of block heaters, Analog and digital. The analog types have two temperature range (room temp. To 130°C) and digital types have higher temperature range (room temp. to 200°C). There are six different model of the block heaters: ABH-103A (analog); ABH-102A(analog); ABH-102D (digital); ABH-101A (analog); ABH-101 (digital); and ABH-102 (digital, twin control).

The analog control the temperature by proportion and digital control the temperature with advanced PID and giving better uniformity across blocks and much accurate heating.

The digital types come with calibration function. Calibration can be easily set up using 1 to 5 point. After calibration, the display will reflect actual sample tubes or block temperature. The ABH-102 can be separately controlled for the two different blocks.

When ordered the 96x0.2ml block, the two adapters will be added in the order. And 96x0.2ml block can only be used in the three blocks models (ABH-101, ABH-101A).

All of the block heaters come with the block removal tool and thermometer ranging from 0-200°C.

## *Technical Specification:*

Model	ABH-101A	ABH-102A	ABH-103A
Temperature Range	Room Temperature-130°C		
Control	Analog		
Max. Block Number	1	2	3
Temperature Stability	+/-0.1°C		
Temperature Maximum Variety Between Identical Blocks @ 50°C	+/-0.2°C		
Power Supply	230V, 50Hz or 110V, 60Hz		
Dimension (mm)	140x270x110	220x270x110	275x270x110





# Block Heaters

## Technical Specification:

Model	ABH-101D	ABH-102D	ABH-103D
Temperature Range	RT+10°C to 200°C	RT+10°C to 200°C	RT+10°C to 200°C
Control	Digital	Digital	Digital
Max. Block Number	1	2	3
Temperature Stability	±0.1 °C	±0.1 °C	±0.1 °C
Temperature Maximum Variety between Identical Blocks @ 50 °C	±0.2 °C	±0.2 °C	±0.2 °C
Power Supply	230V, 50 Hz or 110V, 60 Hz		
Dimension (mm)	285X200X105	305X230X105	305X300X105

Model	ABH-104A	ABH-104D	ABH-102
Temperature Range	RT+10°C to 130°C	RT+10°C to 200°C	RT+10°C to 200°C
Control	Analog	Digital	Digital, Twin Control
Max. Block Number	4	4	2
Temperature Stability	±0.1 °C	±0.1 °C	±0.1 °C
Temperature Maximum Variety between Identical Blocks @ 50 °C	±0.2 °C	±0.2 °C	±0.2 °C
Power Supply	230V, 50 Hz or 110V, 60 Hz		
Dimension (mm)	260X360X105	260X360X105	305X300X105



ABH-104A



ABH-102



ABH-104D





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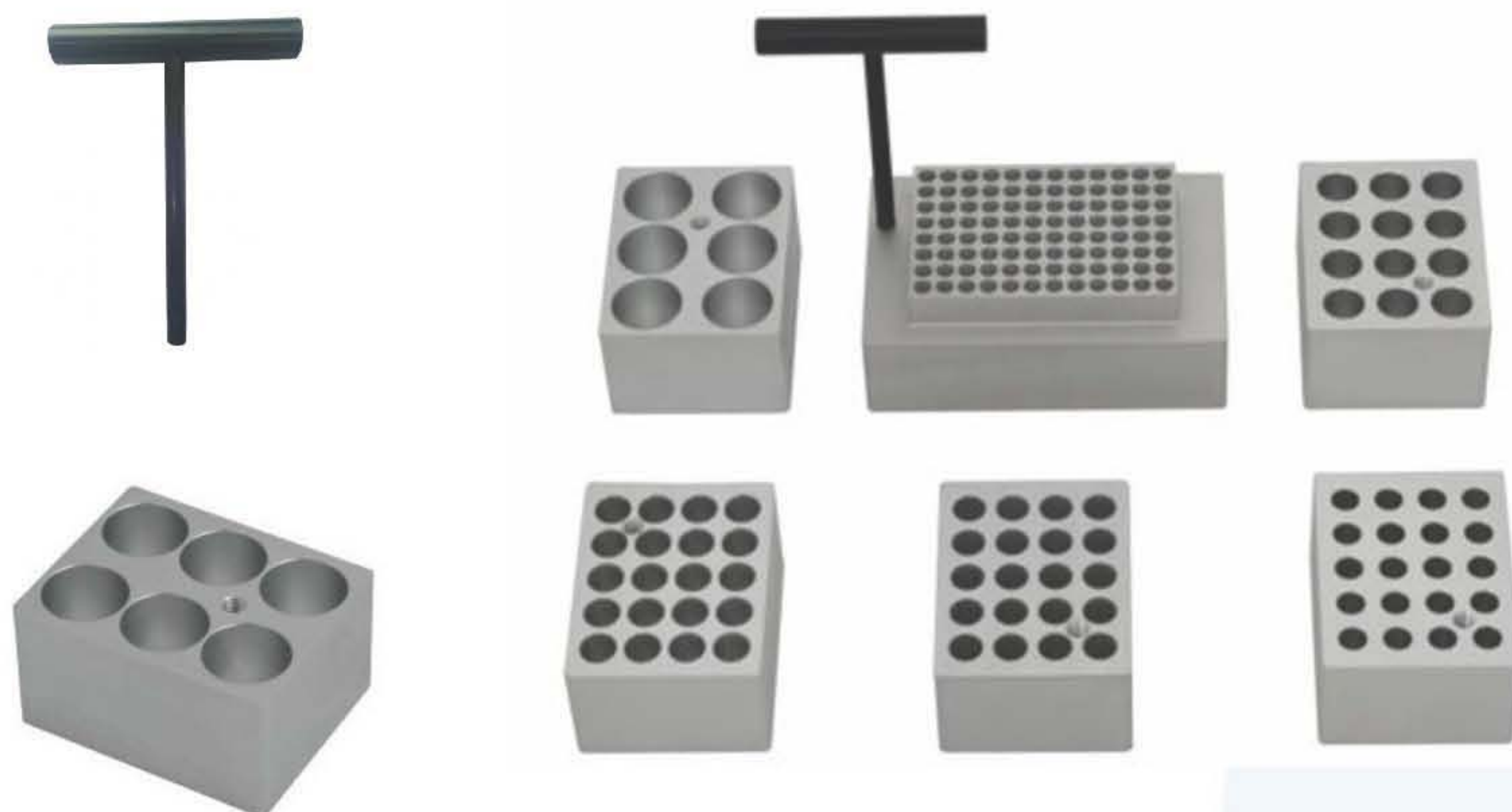
# Block Heater-Aluminum Blocks

All insert blocks made from anodized aluminum with identical dimension (75WX95LX50H) and can be used in any combination except the 96X0.2 blocks.

We also provide any customer-made blocks with desired insertion depth and diameter.

## Technical Specification:

ADB-01	Blocks (normal blocks)	6 X 27 mm Block
ADB-02	Blocks (normal blocks)	30 X 0.5 ml Block
ADB-03	Blocks (normal blocks)	20 X 1.5 ml Block
ADB-04	Blocks (normal blocks)	2 X 50 ml (Flat Bottom) Block
ADB-05	Blocks (normal blocks)	20 X 10 mm Block
ADB-06	Blocks (normal blocks)	20 X 2 ml Block
ADB-07	Blocks (normal blocks)	20 X 13 mm
ADB-09	Blocks (normal blocks)	20 X 12 mm Block
ADB-10	Blocks (normal blocks)	20 X 12 mm, 33 mm Depth Block
ADB-11	Blocks (normal blocks)	12 X 16 mm Block
ADB-12	Blocks (normal blocks)	20 X 2 ml Block
ADB-15	Blocks (normal blocks)	8 X 19 mm Block
ADB-16	Blocks (normal blocks)	4 X 33 mm Block
ADB-20	Blocks (normal blocks)	30 X 6.35 mm, 26 mm depth, for 0.5 ml glass tube
ADB-17	Blocks (96 wells)	Dryblock insert - 96 wells X 0.2 ml
ADB-18	Block Removing tool	Black removal tool
ADB-19	Block Spacer	Plastic Spacer used with 96 X 0.2 ml block





# Sample Concentrator

## *Applications:*

The Concentrator is used to help drying out the large sample volume through blowing the gas (normally nitrogen or other inert gas) into the samples tubes. Combined with the block heater, it can accelerate the concentrate process and often be use used in chemical, biochemical and biological labs.

A & E Lab offers two models of Concentrators: ABC-201 and ABC-202. The ABC-201 can be used with many types of conventional tubes in different blocks, but the ABC-202 can only be used for the 96X0.2ml block. The stand of the concentrator can use two different gas chamber head.

The Concentrators come with the adjustable valve for controlling the gas pressure and tubing for easily plug into gas source.

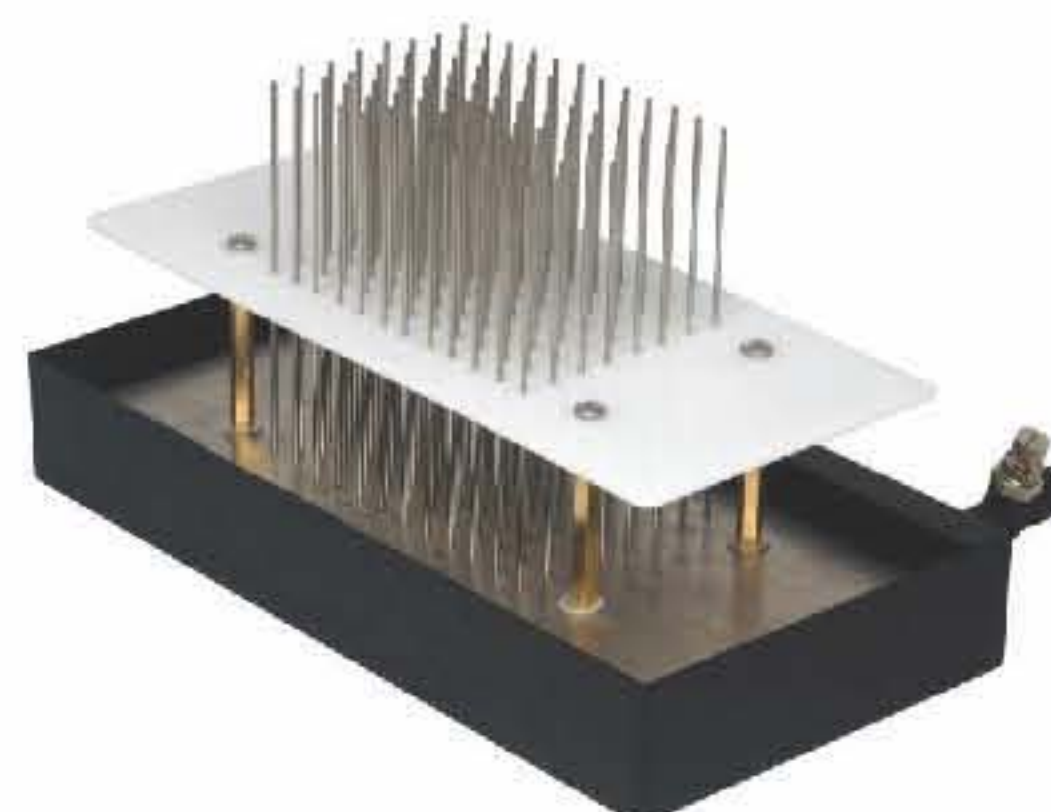
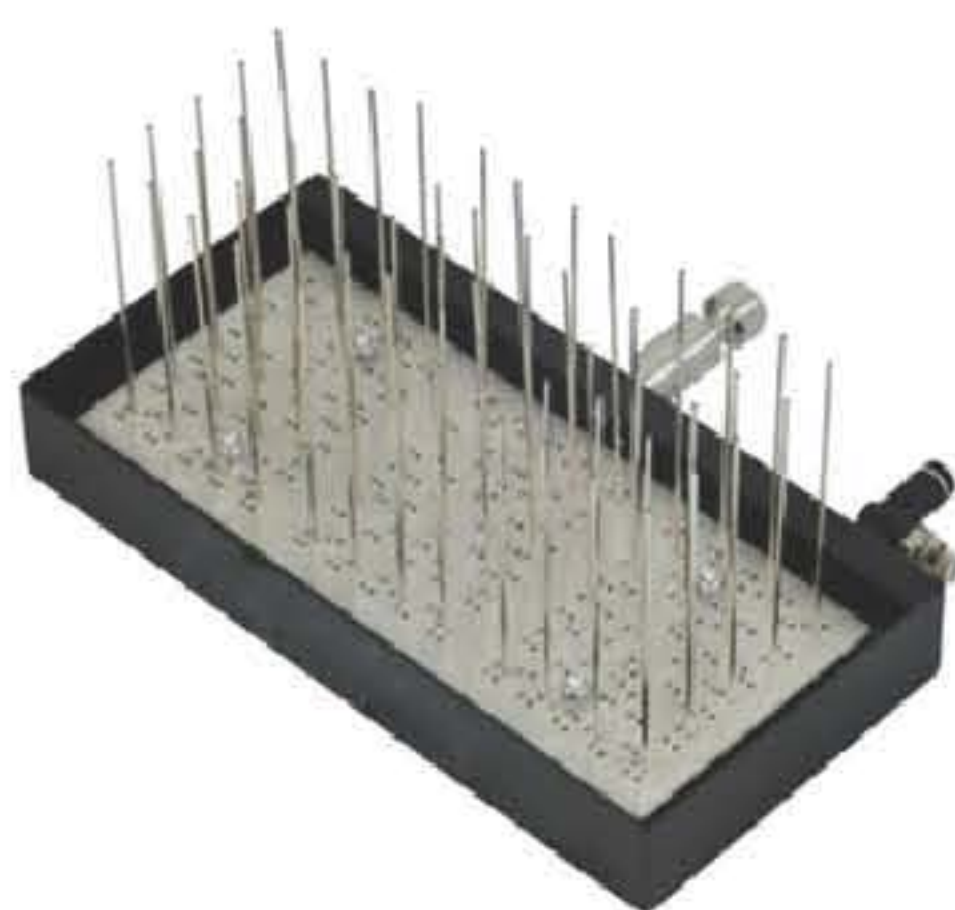
The needle guide and protection plate is another important feature for protection of the gas chamber from the corrosive vapors and guiding the needle aligned with the center of the sample vials.

There are two different types of the needles used in the Concentrator: Stainless steel and Teflon coating stainless steel needles which can resist to many chemical corrosive vapor.



## *Technical Specification:*

Model	Specifications
ABC-201	Concentrator with complete stand and the gas chamber head without needles.
ABC-202	Concentrator with complete stand and the gas chamber head for 96X0.2 without needles.





# Microplate Shaker

## Applications:

Microplate shaker are designed for mixing samples in microplates and small centrifuge tubes. Combined the high speed, small orbital distance and elastic refraining, the shakers generate the ideal shaking effect in the vial samples.

Different sizes of trays have slip-proof mat for the convenient samples handling.

There are two models for lab scale microplate shaker: Both of them are microprocessor controlled. The digital model (AMSL-2) provides digital timer with up to 9 hours setting and speed control in 1rpm increment.

The AMSL-1 model provides 2-hours timers (in 10 minute integral) and 10 steps speed control without digital display as shown in AOSM.

There are two models for mini size microplate shaker: Both of them are microprocessor controlled. The digital model (AMSM-2) provides digital timer with up to 9 hours setting and speed control in 1rpm increment. The AMSM-1 model provides 2-hours timers (in 10 minute integral) and 10 steps speed control without digital display as shown in MOS.



## Technical Specification:

Type	Lab Scale		Mini Size	
Model	AMSL-1	AMSL-2	AMSM-1	AMSM-2
Speed range (rpm)	10 integral selection, 250 to 1250	Digital, 250 to 1250	10 integral selection, 250 to 1250	Digital, 250 to 1250
Motion	Orbital			
Timer (min)	Digital with LED indicators, 120, step	Digital, 540	Digital with LED indicators, 120, step	Digital, 540
Orbit (mm )	0.7			
Maximum load (Kg)	1			
Platform	306x306mm		220x220mm	
Dimensions	360x420x160mm		240x300x160mm	
Operational temperature	+4°C to +40°C			
Maximum humidity	80%			
CO2 Environment Safe	YES			
Net weight (Kg)	10		6	
Power supply	230V, 50Hz, 50W			



# Orbital Shaker

## Applications:

Orbital shakers which provide a smooth orbital shaking action with an orbit of 16mm and speed range of 30 to 300rpm. These lab scale shakers have powerful shaking but with smooth, quite motion for long term use and widely used in most culturing/aeration applications and can be used in environmental chambers and CO2 incubators.

Various tray/platforms are available: The carrier type platform has four rubber cushioned horizontal securing bars with quick release handles and can be easily adjusted both vertically and horizontally to hold most sizes and types of vessel, including flasks, bottles and beakers; The flask tray can hold different sizes of the flask by changing the type of clamps.

There are two models for lab scale orbital shaker: Both of them are microprocessor controlled. The digital model (AOS-2) provides digital timer with up to 9 hours setting and speed control in 1rpm increment. The AOS-1 model provides 2-hours timers (in 10 minute integral) and 10 steps speed control without digital display.

There are two models for mini size orbital shaker: Both of them are microprocessor controlled. The digital model (AOSM-2) provides digital timer with up to 9 hours setting and speed control in 1rpm increment. The AOSM-1 model provides 2-hours timers (in 10 minute integral) and 10 steps speed control without digital display.



## Technical Specification:

Type	Lab Scale		Mini Size	
Model	AOS-1	AOS-2	AOSM-1	AOSM-2
Speed range (rpm)	10 integral selection, 30 to 300	Digital, 30 to 300	10 integral selection, 30 to 300	Digital, 30 to 300
Motion	Orbital			
Timer (min)	Analog, 120	Digital, 540	Analog, 120	Digital, 540
Orbit (mm )	16			
Maximum load (KG)	10			
Platform	335x335mm		220x220mm	
Dimensions	360x420x270mm		240x300x160mm	
Operational temperature	+4°C to +40°C			
Maximum humidity	80%			
CO2 Environment Safe	YES			
Net weight (KG)	11		6	
Power supply	230V, 50Hz, 50W			



# Circular Mixer Incubator

## *Application:*

The new Circular Mixer Incubators ACMI-005 and ACMI-006 are developed to help meeting the needs of most biological and chemical labs in a controlled temperature environment while mixing the samples.

The ACMI comes with digital LED displays showing temperature and mixing speed (maximum 60°C/300 rpm). The incubator comes with many features for convenient use and safety: the clear acrylic doors provide users easier monitoring in the mixing process; sliding platform design aids in the process of placing sample flasks; the digital timer can be set to up to 9 days. The safety features including automatic motion cut off when the door opens.

The incubators accommodate different sizes of Erlenmeyer flasks. With optional accessories, it can also hold different size test tubes.

The incubators accommodate different sizes of Erlenmeyer flasks. With optional accessories, it can also hold different size test tubes.

The ACMI-006 has user process calibration capability and is easy to set up. With the aid of a external thermometer, you can calibrate the compartment temperature and even the temperature of the flask solution.



## *Technical Specification:*

<b>ACMI-005 Circular Mix Incubator</b>	
<b>ACMI-006 Circular Mix Incubator with calibration Capacity</b>	
Temperature range (°C )	Ambient+5 - 60
Temperature display resolution (°C )	0.1
Temperature precision (°C )	±0.5
Temperature fluctuation (°C )	±0.5
Temperature variation (°C )	<0.5
Speed range (rpm)	30 -300
Platform size (mm)	335x335
Internal dimensions (mm, w x d x h)	422x408x297
Maximum vessel height (mm)	250
Maximum load (KG)	10
Overall dimensions (mm, w x d x h)	450x474x522
Net weight (Kg)	30
Heater power (W)	250
Power supply	230V,50Hz,300W





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# 3D Gyration Rocker

## Application:

The 3D gyration rockers are designed to generate in three dimension rocking motion with smooth and full mixing action. The rockers are ideal for low foaming agitating, and widely used in DNA extractions, staining and de-staining procedures.

The tilted angle can be adjusted manually from 3 to 12 degree.

With a large platform, the rockers can accommodate large vessels such as culture flasks, petri dishes etc. The non-slip matt on the tray can prevent vessels slipping away during agitation.

Rockers are often used in conjunction with incubators and environmental chambers and can be used in temperatures up to 40°C and humidity up to 80%.



## Technical Specification:

Type	Lab Scale		Mini Size	
Model	AGRL-1	AGRL-2	AGRM-5	AGRM-6
Speed Range (rpm)	5 to 70		35 to 70	
Rocking Type	3D gyration			
Platform Dimensions	355x355mm		235x235mm	
Tilting Angle (degree)	3-12			
Angle Adjustable	YES			
Timer (min)	120	Digital 540	120	digital, 540
Speed Control Mode	10 integral selection	digital in 1 rpm increment	10 integral selection	digital in 1 rpm increment
Maximum Load (KG)	10			
Dimensions (mm, WXLXH)	360x420x210		240x300x210	
Operation Temp. Range (°C )	+4 to +40			
Maximum Operation Humidity	80%			
Net Weight (KG)	10		6	
Power Supply	230V, 50Hz, 50W			



# See-saw (wave) Rocker

## Application:

Different from 3D gyration motion, this rocker use a see-saw motion to create wave-like mixing process. These rockers are suitable for mixing various flat bottles, such as culture flasks, Petri dishes etc.

With smaller footprint, but the high driving force, more platforms can be added by stacking two more platforms to accommodate more samples.

There are two models for lab scale rocker: Both of them are microprocessor controlled. The digital model (ASRL-4) provides digital timer with up to 9 hours setting and speed control in 1rpm increment. The ASRL-3 model provides 2-hours timers (in 10 minute integral) and 10 steps speed control without digital display as shown in AOSM.

There are two models for mini size rocker: Both of them are microprocessor controlled. The digital model (ASRM-8) provides digital timer with up to 9 hours setting and speed control in 1rpm increment.

The ASRM-7 model provides 2-hours timers (in 10 minute integral) and 10 steps speed control without digital display as shown in AOSM.



## Technical Specification:

Type	Lab Scale		Mini Size	
Model	ASRL-3	ASRL-4	ASRM-7	ASRM-8
Speed Range (rpm)	5 to 70			
Rocking Type	See-saw, wave			
Platform Dimensions	355x355mm		235x235mm	
Tilting Angle (degree)	7			
Angle Adjustable	No, fixed at 7°			
Timer (min)	120	Digital 540	120	Digital 540
Speed Control Mode	10 integral selection	digital in 1 rpm increment	10 integral selection	digital in 1 rpm increment
Maximum Load (KG)	10			
Dimensions (mm, WXLXH)	360x420x180		240x300x180	
Operation Temp. Range (°C )	+4 to +40			
Maximum Operation Humidity	80%			
Net Weight (KG)	10			
Power Supply	230V, 50Hz, 50W			





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# Vortex Mixer

## *Applications:*

Simple, safe, full function and economic are the core of our design philosophy. AVT-501 is designed to meet most of the requirement of many lab users. It is simpler, safe, rugged, and has most of the functions of those sold in the market, but with the lowest cost and high quality.

The direct motor drive design makes the mixer more compact and portable. The plastic case can have different colors and may cosmetic appearances to meet individual preferred.



## *Technical Specification:*

Model	AVT-501	AVT-502
Speed (rpm)	1000 in continuous mode and 2800 in touch mode	2800
Orbit. (mm)	4.2	
Action Type	Touch and continuous	Touch
Type of Accessories	1 rubber cup and plastic adapter	1 rubber cup
Maximum Load (kg)	1	1
Net Weight (kg)	3.2	3.2
Power Supply	AC-DC Adapter, UL and rated AC input: 90-230V, DC output: 6V,3A	



Accessory Code	Description
AVT-01	Rubber Cup
AVT-02	Plate Adapter with Rubber Disc
AVT-03	Plain Adapter Foam
AVT-04	Foam with 96X0.2 well
AVT-05	Foam with 60X0.5 well
AVT-06	Foam with 12mm well
AVT-07	Foam with different well.



# Rotatory Mixer

## Applications:

The rotatory mixers are designed to mix samples by rotating the samples platform in 360 degree through a single axis. With different platform designs, the mixers generate two types of mixing actions:

1.) The up-to-down action: when samples place along the radius direction of the sample tray, i.e. Parallel to the platform, the mixers perform up-to-down mixing action;

2.) The rolling action: when the samples place against the radius of the sample tray, i.e. perpendicular to the platform, the mixer perform a rolling effect on the samples. To prevent the fall off of the samples during rotation, the head of the rotator can be adjusted in certain angle.

The ARM-801 and ARM-802 can be used in some biological samples which need gentle manner to avoid the disruption of the cells, such as blood samples etc.

The mixers can be operated in environment with temperature 4 – 60 degree There are two models for this type of the mixer: Both of them are microprocessor controlled. The ARM-802 provides digital timer

with up to 9 hours setting and speed control in 1rpm increment. The ARM-801 model provides 2-hours timers (in 10 minute integral) and 10 steps speed control without digital display as shown in AOSM.

The ARM-801 model provides a good safety feature: when the motor stalled or overload, the unit will stop, beep and show error message in the LED display.



## Technical Specification:

Model	ARM-801	ARM-802
Speed range (rpm)	2 - 40	
Timer (min)	120	540
Operation Mode	Digital without LED Display	Digital
Operation temp. range (°C )	4 - 60	
Dimensions, mm (w x L x h)	200 x 270 x 230	
Net weight (KG)	3.2	
Power supply	230V, 50Hz, 50W	

## Accessories Information:

Part Number	Description
ARM-01	Micro-tube holder, suits 10-11.5 diameter tubes
ARM-02	Test tube holder, suits 9-20 dismeter tubes
ARM-03	50ml centrifuge tube holder, 25-35mm diameter
ARM-04	Test tube holder, 12mm, hole depth 80mm
ARM-05	Test tube holder, 16mm, hole depth 80mm
ARM-06	Test tube holder, 26mm, hole depth 80mm



# Tube Roller Mixer

## Applications:

The Tube Roller Mixers mix samples through the simultaneously rolling action of the tubes and the carried vessels (bottles, test tubes etc.). As the tubes rolling, the vessels are rolling too, causing continuous mixing of the liquid inside the vessels. The most advanced features are the convenient sample handling and the accommodation of various types of vessels in the mixer without adding any adapters or accessories compared to other types of mixers.

There are two types of action on the tube rolling mixers:

1. With a slightly tilted angle on the axes of the tubes, a gently rocking action happens when tube rolling. It helps the mixing efficiency of some viscous samples in gentle mode. And it is ideal for mixing blood samples, viscous substances and liquid-solid suspensions where minimum aeration is required or for aiding de-frosting of samples.

2. A rolling action without rocking effect. Samples are mixed with the continuous rolling action. There are two models for the rollers: Both of them are microprocessor controlled. The digital model provides digital timer with up to 9 hours setting and speed control in 1rpm increment. The ATRL-1/3/5/7 model provides 2-hours timers (in 10 minute integral) and 10 steps speed control without digital display.

The ATRL-2/4/6/8 model provides a good safety feature: when the motor stalled or overload, the unit will stop, beep and show error message in the LED display

The ALTR series are having nine rollers which suitable for large vessels and tubes. And the ATRL-5/6/7/8 series are smaller version with six rollers. The loading capacity is 10 KG for the above mixers.



## Technical Specification:

Model	ATRL-1	ATRL-2	ATRL-3	ATRL-4	ATRL-5	ATRL-6	ATRL-7	ATRL-8
Action Mode	Rocking/Rolling		Rolling only		Rocking/Rolling		Rolling only	
Number of Rollers	9				6			
Speed	5 to 60 rpm,10	5 to 60 rpm, Digital	5 to 60 rpm,10	5 to 60 rpm, Digital	5 to 60 rpm,10	5 to 60 rpm, Digital	5 to 60 rpm,10	5 to 60 rpm, Digital
Maximum Load	10kg							
Controls	Digital							
Timer	120min	540min	120min	540min	120min	540min	120min	540min
Roller Size	340X30,mm (LXD)							
Dimension	565X360X110mm							
Net Weight	7kg				5kg			
Power Supply	230V, 50Hz, 50W							



# Sterilizer

## Application:

The **Bacti-Cinerator Sterilizer** sterilizes microorganisms utilizing infrared heat produced by a ceramic core element. The ceramic element contains no asbestos and ensures maximum sterility without splatter across the work surface area. Complete sterilization occurs within 5-7 seconds at optimum sterilizing temperature of 1500°F (815.6°C). The small footprint makes the Bacti-Cinerator Sterilizer an ideal instrument for anaerobic and aerobic chambers alike. Several user friendly accessories are also available for the Bacti-Cinerator sterilizer.

## Features:

1. Sterilizes needles, loops, and culture tube mouths in five to seven seconds at optimum sterilizing temperature of 815.6°C (1500°F).
2. Ceramic funnel tube enclosed in stainless-steel perforated guard and stainless-steel support stand. For AC220V 50/60Hz

## Specification:

Model	BCS-14	BCS-35
Center High Temperature	825°C±50°C	
Max.Diameter of Sterilizer Goods	Φ14	Φ35
Length of Sterilizer	150mm	100mm
Dimensions (DXWXH)	185X100X190mm	162X98X192mm
Power	170W	320W
Net Weight	1.5kg	

**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 240°C-260°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.

## Specification:

Model	GBS-10
Crucible size	40mm Φ80mm Depth
Preset Temperature Range	240°C-260°C
Initial Stabilization Time	10 minutes
Weight of Glass Bead	40g
Material of Lid	Stainless
Wattage	50 W Single Phase
Input	220V/ 50 Hz or 110V/ 50 Hz
NOTE: Temperature Range can be set according to customers requirements	







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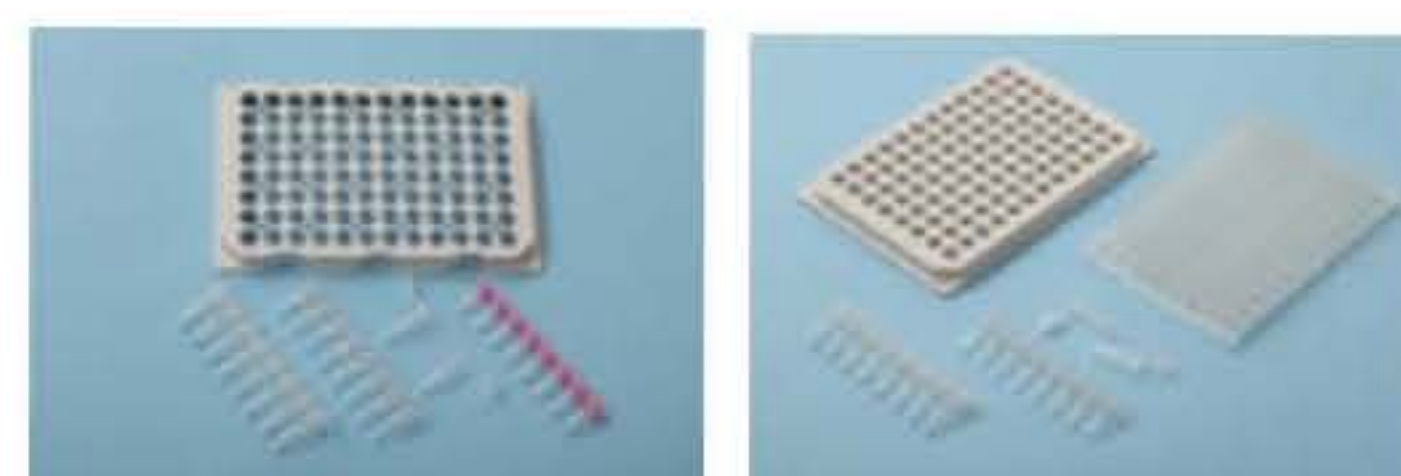
# Mini-Plate Centrifuge

## *Application:*

Mini-Plate Centrifuge is the first one adopted an unique design for the horizontal rotor centrifuge (Patented) in the world. The plate or tubes set into the rotor with 2pcs slope-rotor-shelf. It can quickly spin down droplets and condensation and is for use before and after thermal cycling to improve PCR yield and other tests. The MPC-22 combines functionality, easily operation and comfort – a lot of “high” qualities to come standard in one compact micro-centrifuge

## *Features:*

1. Unique design for the horizontal rotor (Patented).
2. It can accept below formats:
  - PCR standard plates with skirted, non-skirted.
  - Elisa Plates.
  - 8x0.2ml PCR strip tubes.
  - 0.2ml PCR tubes.
3. Braking time from max.speed: lower than 30sec.
4. Timer can be set up to 10minutes.
5. Short-spin and timing of two operations make the tests more convenient.
6. Streamline design with more compact shape and transparent PC lid.



## *Specification:*

Model	MPC-22
Capacity	2pcs PCR plates with skirt or without skirt / Elisa plates 8x0.2ml PCR strip tubes/ 0.2ml PCRTube
Rotor Speed	2200rpm
G Force	480xg
Timer	0-10min
Dimensions	290x360x140
Weight	3.6kg
Power	AC120V/220V, 50-60Hz

## ■ How to put the plates



1. Put the PCR plate



2. Put the Elisa plate



3. Put the PCR plate with skirt and without skirt



4. Put the 8x0.2ml strip or 0.2ml PCR tubes



# High-Speed Mini-Centrifuge

## Features:

1. Extremely quiet. Low noise levels.
2. LCD display. Easy-to-follow digital display.
3. Capacity: 12 x 1.5/2.0ml tubes.
4. Separate short-spin key.
5. Low sample heating (only 12°C after 30 min, at max. speed).
6. Autoclavable rotor (121 deg.C, 20min).
7. RMP/RCF setting as required.
8. Includes standard rotor made of anodized aluminum.
9. Timer can be set up to 99min.
10. The small size of the unit makes it convenient for use on the bench, under a hood or in refrigerated environments.



## Specification:

Type	MC-13	MC-14
Max. rotational speed	13,400 rpm/min	14,500 rpm/min
Relative centrifugal force (RCF)	12,100xg	14,500xg
Timer	20 sec---99min	20 sec---99min
Acceleration time to max. speed	40s	42s
Braking time from max. speed	52s	55s
Dimensions in cm (WxDxH)	24x21.2x13.8	24x21.2x13.8
Power requirement	100W	105W
Power supply	100V or 240V 50/60Hz	100V or 240V 50/60Hz

## Rotor and accessories:

1. High-strength transparent plastic cover.
2. Rotor can be autoclavable (121 °C, 20min).
3. Optional adapter accessory ---- 0.2ml PCR tube adapter ---- 0.5ml PCR tube adapter.





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# Mini-Centrifuge

## Applications:

MC-4/6 Series Mini-Centrifuge is compact and cost effective, allowing any workstation to be equipped with a "personal" mini centrifuge. It includes 2 quick release interchangeable rotors, two speed options (4,000rpm & 6000rpm). The electronic brake can reach quick deceleration to reduce handling time.

## Features

1. New rotor design for increased sample capacity.
2. Quick release rotor hub allows for easy rotor exchange.
3. The electronic braking system for rapid sample processing.
4. Two speed options: 4,000 & 6,000rpm.

## Specification

Type	MC-4/6-1	MC-4/6-2	MC-4/6-3
Capacity	8X1.5/2.0ml tube rotor 4 place PCR strip rotor	6x1.5/2.0ml 6x0.5ml tubes 2-8x0.2ml PCR strip rotor	48well 50ul PCR plate rotor 4x5ml Eppendorf-tubes rotor
Two Speed Options	4,000rpm & 6,000rpm		
Max. RCF	1,200xg (4000rpm) 2,000xg (6000rpm)	1,000xg (4000rpm) 2,000xg (6000rpm)	1,000xg (4000rpm) 2,000xg (6000rpm)
Dimensions	135x147x107mm		
Weight	1kg		
Power Supply	AC 100-240V, 50/60Hz		





# Mini-Centrifuge

## *Applications:*

The MC-6, MC-7, MC-10 is available with some different rotor configurations. The strip tube model holds two 8x0.2ml PCR strip tubes or 16 individual 0.2ml tubes. The standard model accommodates 6x1.5/2.0ml tubes directly and smaller tubes with adapters. Both 0.5ml and 0.2ml adapters are supplied with the standard unit. Operation of the centrifuge begins when the lid is closed. The rotor is quickly accelerated to 6000/7200rpm. Upon opening the lid, the rotor comes to a stop.

## *Features:*

1. Elaborate, colorful outer shell (green, red, blue).
2. Low noise.
3. Carbon fiber rotor.
4. Safe and durable.

## *Technical Specifications:*

Type	MC-6	MC-7	MC-10
Relative Centrifugal force (RCF)	2000xg	2300xg	5000xg
Max. Rotational Speed	6,000rpm	7,000rpm	10,000rpm
Rotors	6x1.5/2.0ml angle rotor 2-8x0.2ml strip rotor Rotor for slide	6x1.5/2.0ml angle rotor 2-8x0.2ml strip rotor	6x1.5/2.0ml angle rotor
Maximum noise	≤50Db		
Power Requirement	30W	30W	40W

