HAUK TECHNOLOGY & DEVELOPMENT LTD

# Focus on

# Sample Preparation

Product Catalogue

2023

HAUK Technology & Development Limited is a UK-based cooperation funded by Tianjin Heng'ao Technology Development Company. Since 2000, we have been offering a host of industry-leading laboratory equipment focused on sample preparation. They are developed in-house by our dedicated R&D team and designed with efficiency and convenience in mind. Our aim is to provide you with professional expertise and sound customer service, making sure your laboratory is reaching its maximum potential using our cutting-edge machines.

Feel free to contact us at anytime using the details below if you have any queries:

**info@hauktech.co.uk**
**www.hauktech.co.uk**

HAUK Technology & Development Co., Ltd
63-66 Hatton Garden
London
England
EC1N 8LE

# HPE PARALLEL EVAPORATOR


HPE 16B

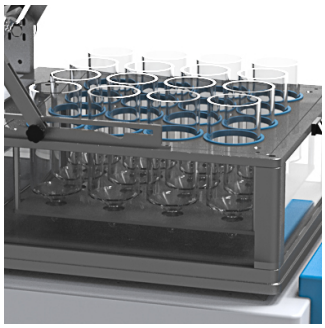
The concentration of samples is a mandatory step in sample analysis, with uses in chemistry laboratories, forensic science, material science, environmental sciences, etc. Parallel evaporators ensure that several samples are simultaneously heated, depressurised and rotated to completely evaporate them or concentrate to a specific volume. These machines do not require supervision, increasing experimental efficiency, precision and repeatability.

# HIGH THROUGHPUT TESTING

Simultaneously run several repeatable experiments with different sizes of test tubes and in-built memory for 6 different settings, increasing experimental efficiency through easier repetitions and flexible enough to cater to specific requirements.

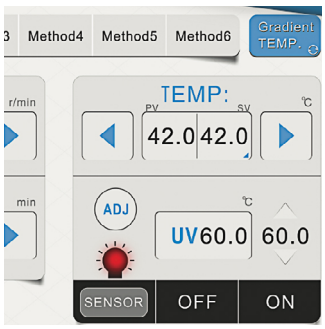
## INDEPENDENT SAMPLE CONTROL

Rapid, independent valve switching on our HPE-B series models means any sample can be manipulated in isolation, allowing for multiple experiments with different time restraints to run simultaneously without interruption.



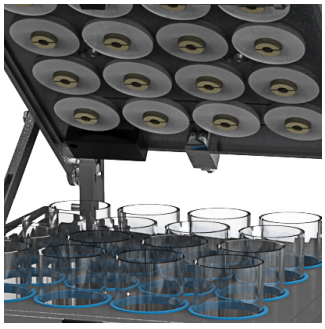
## PRECISE MEASUREMENT

Clear test tubes allow for a full, unobstructed view of each sample. End points for the experiment can be set manually with the timer, or automatically with the concentration quantification function (HPE-A/D series only).




## SIMPLE USER OPERATION

Accurately control the temperature, rate of rotation and time of the experiment using our full touch-screen controls, complete with complex temperature gradient settings and experimental data storage.



## ELIMINATES CROSS-CONTAMINATION

Each sample is sealed with its own heated cover, enabling continuous solvent evaporation whilst preventing cross-contamination via reflux condensation.

# CHOOSE BETWEEN

## HPE B D K

HPE-12

### HPE series

- Customisable capacity - 6, 12 or 24 samples.
- Interchangeable heating modules.
- Fully transparent design allows for clear observation of experiments.
- Each sample is independently sealed, eliminating cross contamination.
- Covers for each sample can be individually heated, preventing reflux condensation.
- Digital timer function allows experiments to run without supervision.
- Adjustable rotation speed for more precise experiments.

HPE-6K

### HPE-K series

- Customised test tubes eliminate the need for sample transfer.
- Effectively reduces the samples' volatility during concentration experiments.
- Particularly suitable for low boiling point samples, such as anilines, PAHs and other substances with low recovery rates.
- Under optimal conditions, the recovery rate can reach over 80%.

HPE-6B

## HPE-B series

- 360°, unobstructed view of experiments with our circular, transparent water bath.
- Rapid, independent valve switching allows for the manipulation of any sample in isolation from other samples.
- Compatible with a wide variety of test tubes.

HPE-16D

## HPE-D series

- Able to process up to 42 samples with high efficiency and repeatability.
- Large 280mL test tubes suitable for the concentration of samples from a variety of different fields.
- Fully transparent water bath allows for unobstructed view of the experiments.
- Optional automatic volume quantification function (±1mL or ±0.5mL).
- Optional automatic water refill and drainage function.

**Included:**

Parallel Evaporator x1, Test Tube Set (various configurations) x1, Rubber Tube (1m) , Power Cable x1, Instruction Manual x1

| Series | HPE | | | HPE-B | | HPE-K | HPE-D |
|---|---|---|---|---|---|---|---|
| Model | HPE-6 | HPE-12 | HPE-24 | HPE-6B | HPE-16B | HPE-6K | HPE-16D |
| Samples | 6 | 12 | 24 | 6 | 16 | 6 | 9/16/42 |
| Volume/test tube (mL) | 100/200 | 150 | 80 | Customisable, graduated test tubes | | | 850/280/80 |
| Temperature Range | Room temp+5°C~100°C (±0.5°C) | | | | | | |
| Heating Method | Water Bath Heating | | | | | | |
| Heat Cover Temp. Range | Room temp+5°C~70°C (±5°C) | | | | | | |
| Rotation Speed | 0-500r/min | | | | | | |
| Memory capacity | 6 presets | | | | | | |
| Volume Quantification | - | - | - | - | - | - | ✓ |
| Rapid valve switching | - | - | - | ✓ | ✓ | ✓ | - |

# VACUUM COUNTRAL SYSTEM

Vacuum control systems are vital in the evaporation, distillation, crystallisation and drying processes of chemical, biological or pharmaceutical research. They are perfect companions for our parallel evaporators.

HVS-03

### Chemical Inertness

- The pump head, diaphragm and valves are made of PTFE, which maintains chemical inertness and allows for the extraction of strongly acidic and basic gases.

### Precise control over your experiments

- Our system allows for fine adjustments in vacuum level with 5-stage gradient control.

### Increase in efficiency

- Increases recovery rate of solvents when used with our parallel evaporators.

### Environmentally Friendly

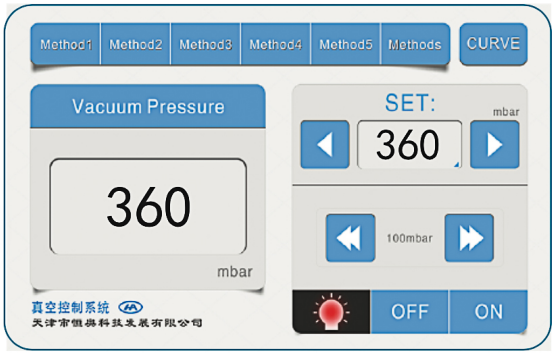
- Prevents organic waste gas from escaping into the atmosphere.

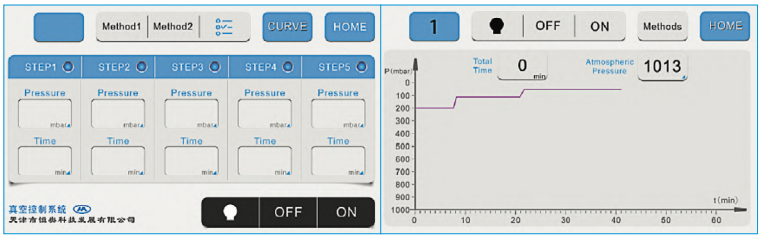
### Easy User Operation

- Memory space for over 30 different settings, perfect for repeatable experiments. Control using a 5-inch touchscreen with an adjustable viewing angle.

### Optional bumping-prevention feature

- Instant, automatic adjustment in pressure to protect the sample.




**Included:**

Vacuum Control System x1, Cooling Tower x1, Collection Flask (1000mL or 2000mL) x1, Locking Clamp x1, Rubber Tube (1.5m), Power Cable x1, Instruction Manual

| | |
|---|---|
| Extraction rate | 50L/min |
| Maxium vacuum | 20mbar |
| Opening size | 8mm |
| Pump material | PTFE |
| Receiver flask capacity | 1000mL / 2000mL |
| Memory Capacity | 30 presets |
| Rated power | 100w |
| Dimensions | 500x205x600mm |

# HAC PARALLEL NITROGEN CONCENTRATOR

HAUK's Parallel nitrogen concentrators focus on automating an originally-complex process to increase your experiment efficiency and make it more user-friendly, especially when compared to standard nitrogen evaporators.

# HAC PARALLEL NITROGEN CONCENTRATOR

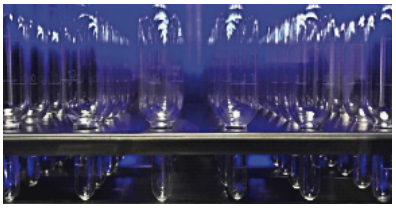
HAC-I/A/B/D

## High through-put concentration

Flexible choices catered to your experimental needs. Choose between 6x200mL / 12x100mL / 24x40mL capacities, allowing several large samples to be tested at the same time.

## Environmentally friendly

A completely sealed inner chamber prevents waste gasses from escaping into the atmosphere by pumping them out of the concentrator collectively. Also prevents reflux condensation by removing water vapour immediately. The gas is expelled in a vortex manner, minimising air flow and, therefore, splashing.

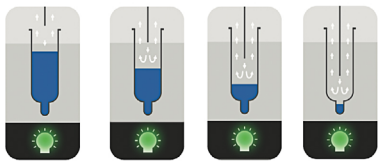


## Clear observation

The machine is equipped with transparent front and top covers and interior lights, making observations of the samples clear and convenient.


## User-friendly interface

Image-based, touch-screen 7-inch display allows for simplified human-computer interactions and shows detailed live information about the current temperature, pressure and concentration of the samples.



## Automated nitrogen purg

When the temperature of the machine approaches the set temperature, it automatically begins the nitrogen purging process, eliminating the need for human intervention.

## Automatic Volume Quantification

Through the use of fibre-optic sensors, the machine is able to automatically stop the concentration process of samples, eliminating the need for supervision. The HAC-36C series can have the needle follow the decreasing volume of the sample, thereby achieving sample-specific volume quantification rather than relying on elapsed time.

## HAC - D series

- Can hold up to 10x 200mL and 40mL test tubes, catering to many specific experiments.
- Each sample can be set an ending volume, which will be automatically quantified by the machine.
- Temperature control to a degree of ±0.5°C

## HAC - B series

- Can process up to 24 samples.
- Much more precise temperature control to a degree of ±0.1°C due to built-in water bath circulation.
- Fibre-optic volume quantification function.
- Optional automatic water resupply feature.

## HAC - A series

- Can process up to 24 samples, with a maximum volume of 200mL.
- Precise temperature control to a degree of ±0.5°C
- Advanced fibre-optic sensor automatically quantifies the volume of the samples to 1mL or 0.5mL, powers off the machine and triggers an alarm to stop the experiment.

## HAC - I Series

- Can process up to 50 samples at once (1-15mL)
- Fits many different customisable test tube racks.
- Temperature control to ±0.5°C


HAC-36C

## HAC - 36C

- Able to process up to 36 samples simultaneously and automatically shut down when volumes reach a desired level.
- Control and monitor the machine remotely using our mobile phone and tablet app.
- Bidirectional, balanced flow of air into the machine, forming repeatable conditions for experiments.
- Three transparent panels allowing for clear observation of the reaction.
- Optional feature for nitrogen needle to follow the surface level of the sample until it reaches desirable volume. Otherwise, normal 36C models will have the needle lower based on time elapsed.
- Sample-specific volume quantification allows for many different experiments to be run at the same time.

**Included:**

Parallel Nitrogen Concentrator x1, Test Tube Rack (various configurations) x1, Test Tube Set (various configurations) x1, Exhaust Tube x1, Silicon Tube x1, Power Cable x1 Instruction Manual x1

| Series | HAC-I | HAC-A | | | HAC-B | | | HAC-D | HAC-36C |
|---|---|---|---|---|---|---|---|---|---|
| Samples | 50 | 6 | 12 | 24 | 6 | 12 | 24 | 10 | 36 |
| Volume/Test tube (mL) | 1.5 / 5 / 15 | 200 | 100 | 40 | 200 | 100 | 40 | 40/200 | 40 |
| Volume Quantigication | - | ✓ | | | ✓ | | | ✓ | ✓ *for each sample |
| Temputure control Precision | ±0.5°C | ±0.5°C | | | ±0.1°C | | | ±0.1°C | ±0.5°C |
| Temperature control Duration | 0-999mins | | | | | | | | |
| Input Method | 7" Touch Screen | | | | | | | | Touch Screen + App |
| Power | 800W | | | | | | | | |
| Dimensions (mm) | 580x365x320 | | | | | | | | 460x440x490 |

# NITROGEN EVAPORATOR

### Simple operation
The height of the needle rack can be adjusted and it can be rotated around the machine, making test-tube collection a breeze. Both the HGC-A and HSC-A series are equipped with automatic height adjustment.

### Intuitive user interface
Use the touch-screen to control the time, temperature and pressure of the experiments. The HSC-24B series is equipped with a separate touch-screen, allowing the machine to be placed in a fume cupboard and the touch-screen outside of it for easier operation.

### Flexible configuration
Heating blocks can be customised to fit any different shapes and sizes of test-tubes, catering the machine to your experiment. The nitrogen needles can be used individually or as a group. The HSC-24B series can control the nitrogen flow rate for each needle independently.

## HGC - A / HSC - A
- Automatic height adjustment function.
- Maximum of 36 samples tested simultaneously.
- Large temperature range of room temp to 150°C


HGC-A / HSC-A


HSC-24B

## HSC - B
- Touch-screen control panel separated from main machine. Machine can be inside fume cupboard whilst control panel is outside.
- Nitrogen flow rate for each needle can be independently adjusted.

**Included:**
Nitrogen Evaporator x1, Rubber Tube (1.5m), Nitrogen Needle x12/x24, Power Cable x1, Instruction Manual x1

**Optional:**
Heating Module: Hole depth 45mm; hole diameter default Φ 17mm (can mix and match between Φ 15mm, Φ 17mm, Φ 21mm)
Nitrogen Needle: Length 158mm (stainless steel)

| Series | HGC-A | | | HSC-A | | HSC-B | |
|---|---|---|---|---|---|---|---|
| Samples | 12 | 24 | 36 | 12 | 24 | 12 | 24 |
| Heating Mothod | Heating Block | | | Water Bath | | | |
| Automatic Height Adjustment | ✓ | | | ✓ | | - | |
| Temputure Control Precision | ±1°C | | | | | | |
| Temperature Control Range | Room Temperature ~ 150°C | | | Room Temperature ~ 100°C | | | |
| Dimensions (mm) | 340x230x380 | | 340x310x380 | 340x230x380 | 340x310x380 | Φ 250x820 | Φ 360x720 |

# SOLID PHASE EXTRACTION

Solid Phase Extraction (SPE) is a sample preparation technique regularly used in analytical laboratories. It enables the extraction, cleanup and concentration of analytes prior to their quantification. SPE prevents most problems encountered with liquid-liquid extraction and improves quantitative recovery yields.

HSE-12D/24D

## HIGH EFFICIENCY

Our SPE equipment provides high yields and high enrichment of analytes

## EASY USER OPERATION

Prevents cross-contamination and condensation by maintaining a tight seal with a vacuum chamber

## SPECIALISED HARDENED TEMPERED GLASS

Resistant to acids, bases and high-temperatures.

HSE-12B/24B

**Included:**

SPE Glass Tank (Cabinet/Round) x1, Waste Collection Tank (Round only) x1, Weight Ring (Round only) x1, Sealing Lid x1, Sealing Lid Supports (Cabinet only) x4, Test Tube Rack x1, Rubber Tube, Stopcocks x12/x24, Plastic Needles x12/x24, Instruction Manual x1

**Optional:**

Büchner Flasks (1000mL)
Large Sample Volume Tube Adapters SPE Cartridges
Oil-Free Vacuum Pumps

| Series | HSE-B | | HSE-D | |
|---|---|---|---|---|
| Samples | 12 | 24 | 12 | 24 |
| Collecting Method | Pumped into collection flask | | Collection flask below equipment | |
| Dimensions (mm) | 270x160x110 | 332x156x165 | Φ 120x240 | Φ 160x400 |

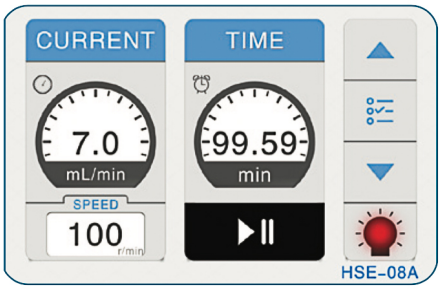
# SOLID PHASE EXTRACTION SYSTEM

Solid Phase Extraction (SPE) systems support the entire SPE process. It uses digitally-controlled pumps to regulate the pressure for each SPE column, thereby adjusting the flow rate of liquid for each of them according to the current program. This allows for a more efficient extraction of target analytes. The system also prevents cross contamination by transferring each column to the elution rack under uniform positive pressure for rapid elution.


HSE-08C

## High-throughput

Allows simultaneous processing of up to 8 samples. The HSE-08C series has a maximum flow rate of 60mL/min.




## Intuitive User-interface

LED display (HSE-A) or full touch-screen display (HSE-C) shows live readings from the system, and allows you to fine-tune every step of the way through easy-to-use controls. The HSE-C series also has memory space for 5 settings, further increasing experimental efficiency.

HSE-08A

## Great reliability

Tightly sealed and a highly consistent liquid flow speed and rotation speed.

**Included:**

SPE System x1
Pump Tube x8
Waste Tube x24
Waste Tube Adapter x36
16-slot Solution Collection Rack x1
Power Cable x1
Instruction Manual x1

| Series | HSE-08A | HSE-08C |
|---|---|---|
| Tracks | 8 | |
| Flow Rate (mL/min) | 0.1~0.7 | 1.0~6.0 |
| Duration Range (min) | 0~999 | |
| Memory Capacity | - | ✓ 8 presets |
| Power | 200w | |
| Dimensions (mm) | 400x370x470 | 450x400x470 |
| Control and display | LED digital display, control knob | Full touch-screen |

# BALL MILL

Through utilising the grinding chambers' horizontal movement, the grinding balls within can grind samples into particles as small as 10μm. This grinding process can be dry or wet; it is mainly used on samples which are very hard but brittle.

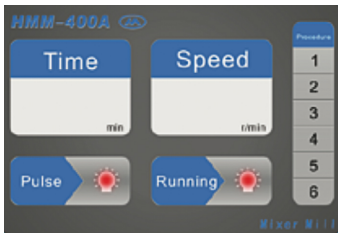
HMM-400A

## Versatile

The grinding chambers are customisable and can be made from many different materials. This allows them to adapt to different types of samples from different fields.

## High-throughput

Both chambers can be used simultaneously, doubling the efficiency of the grinding process




## Intuitive User Interface

LED screen displays the pulse rate, time, speed and current conditions of the machine, all of which can be changed by the user. It has a memory capacity for 6 different settings for more convenient repeat testings.

## Sample protection

Grinding time is kept to a minimum to stop samples from heating up and, as a result, change properties. Chambers are tightly sealed so samples are protected from cross-contamination.

| Model | HMM-400A |
|---|---|
| Maximum input sample size | 6mm |
| Output sample size | 5μm |
| Grinding Camber sise | 25mL, 35mL |
| Maximum sample size | 10mL |
| Grinding duration | 0~99 min |
| Frenquency | 3~20Hz |
| Menory capacity | 6 presets |
| Power | 180W |
| Dimensions | 421x350x218mm |

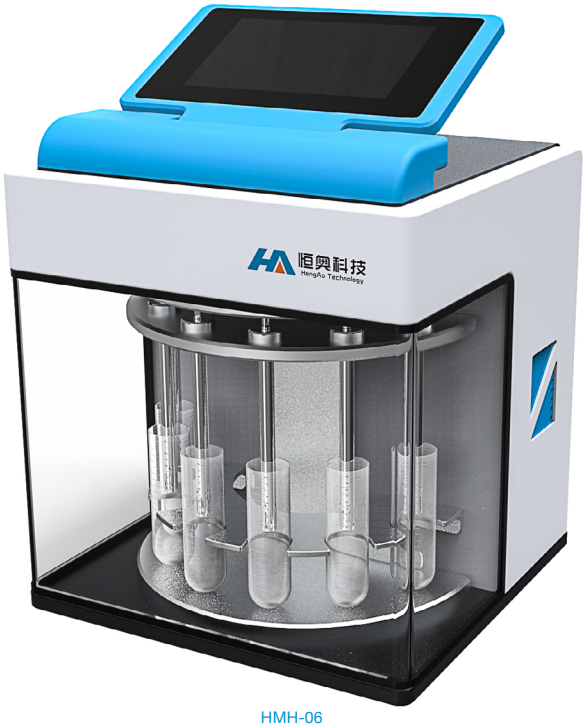
**Included:**

SPE System x1, Pump Tube x8, Waste Tube x24, Waste Tube Adapter x36, 16-slot Solution Collection Rack x1, Power Cable x1, Instruction Manual x1

**Note:**

When choosing the material for the grinding chambers and balls, avoid materials that will react with the sample being ground. Both the grinding chamber and ball must be made of the same material. The greater the mass and density of the grinding balls, the greater the grinding effect.

# MODULAR HOMOGENISER




HMH-06

## High repeatability

The HMH-06 has a memory capacity of 6 different settings, allowing for convenient repeats.

## Effective homogenisation

Blades are slanted to provide better homogenisation of samples. The HMH-06 has automatic test-tube elevation so that the blades reach every part of the sample.

## User-friendly

The HMH-06 is equipped with a height adjustment feature and the viewing angle for the touch-screen controls can be adjusted.

HFJ-10/18/25

## Versatile and flexible

Our homogenisers come in many shapes and forms. Some are hand-held, trading capacity with portability. Others are bigger and customisable, with different blade sizes to achieve different results and process different samples. The HMH-06 is able to process up to 6 different samples at the same time.

Φ 25mm Φ 18mm

**Included:**
Modular Homogeniser x1, Blade x1, Coupler x1, Removing Tool x2, Power Cable x1, Instruction Manual x1

| Series | HFJ | | | HMH |
|---|---|---|---|---|
| Models | HFJ-10 | HFJ-18 | HFJ-25 | HMH-06 |
| Samples | 1 | | | 6 |
| Auto Height Adjustment | - | | | ✓ |
| Rotation Speed | 5000-35000 | 1000-25000 | | 500-25000 |
| Blade Diameter (mm) | 10 | 18 | 25 | 10 |
| Memory Capacity | - | - | - | ✓ 6 presets |
| Power (W) | 200 | 550 | 550 | 450 |
| Maximum Sample Size (mL) | 500 | 5000 | 5000 | 6x (10 - 50) |

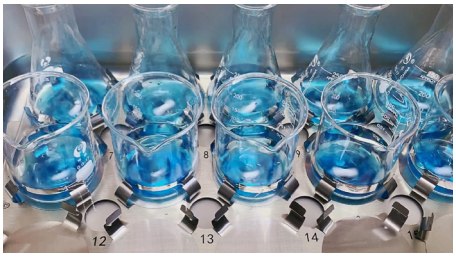
# MULTI-POINT MAGNETIC STIRRER

Multi-point magnetic stirrers are regular instruments used to heat and stir samples in laboratories. Their ability to maintain constant temperature and high sample capacity means that they are prevalent in biological, chemical and pharmaceutical fields of study.


HMT-15

## Intuitive User Interface

5-inch touch screen displays live data from the machine, including time, temperature and stirring speed. PID technology offers automatic temperature calibration and up to 6 settings (including a hexavalent chromium- specific preset) can be stored in the machine's memory.



## High-throughput

Can hold up to 15 different samples in a compact machine, also saving laboratory bench space.

## Reliability

Uses advanced PTD heating elements which ensure stable heating and safe operation.

**Included:**

Multi-point Magnetic Stirrer x1, Positioning Frame x1, Stirrer Pack x1, Power Cable x1, Instruction Manual x1

| Model | HMT-15 |
|---|---|
| Temperature Range | Room Temperature +5°C ~ 100°C |
| Temperature Precision | ±1°C |
| Memory Capacity | ✓ 6 presets |
| Power | 800W |
| Heating Cpacity | 20L |
| Stirring Speed | 0~1800rpm |
| Pre-stirring Duration | 0~99min |
| Constant Temperature Duration | 0~999min |
| Dimensions | 600x365x490mm |

# VERTICAL SHAKER

An advanced electrical machine, these shakers make use of vibrations and high speeds to achieve liquid-liquid extraction. They ensure the consistency of sample treatment and automate the process, saving time and effort. Primarily used in food inspections, chemical extractions and other high-throughput procedures.

HVS-4M

## Flexibility

Different modules can be added to suit different test tubes.

## Easy user interface

Digital timer, continuous speed control and soft-start function means no supervision needed. Angle of the test tubes can be adjusted (tilt of 0° ~ 15°).

HVS-6

## High-throughput
## Repeatable mixing

Mix a maximum of 40 different samples simultaneously and at a consistent rate, ensuring great repeatability.

**Included:**

Vertical Shaker x1, Power Cable x1, Instruction Manual x1

| Series | HVS | | |
|---|---|---|---|
| Modela | HVS-6 | HVS-10M | HVS-4M |
| Samples | 4 / 6 | 10 | 16 / 40 |
| Rotation Speed (rpm) | 20-300 | 60-500 | 60-500 |
| Amplitude (mm) | 40 | 30 | 30 |
| Power (W) | 300 | 150 | 150 |
| Digital Timer | 0~99min or ∞ | | |
| Dimensions (mm) | 560x440x520 | 320x320x240 | |
| Weight (kg) | 52 | 35 | |

# SHAKER & MIXER

## ROTATION MIXER

- Digital timer with convenient controls.
- Compact size saves space.
- Easy mounting and dismounting of test tubes.
- Maximum of 48 samples.
- Suitable for many shapes and sizes of test tubes with the use of different mounting plates.
- Adjustable rotation speed, direction and angle.


HTR-02

HMS-310

## DIGITAL SHAKER

- Digital screen displaying time and speed.
- Brushless motor runs smoothly yet quietly.
- Compact size saves space whilst maintaining strong power output.

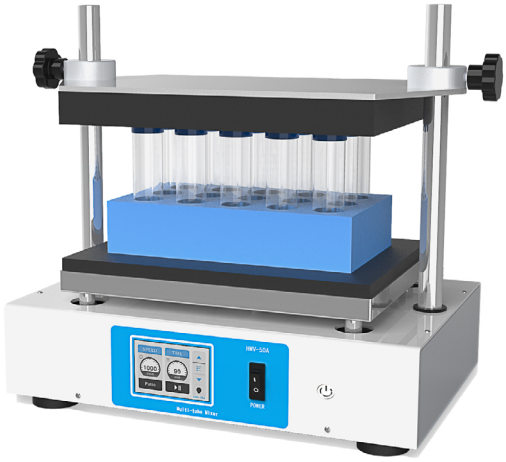
## VORTEX MIXER

- Motor feedback system gives fine speed control.
- Brushless motor runs smoothly yet quietly.
- Shaking and vortex modes.

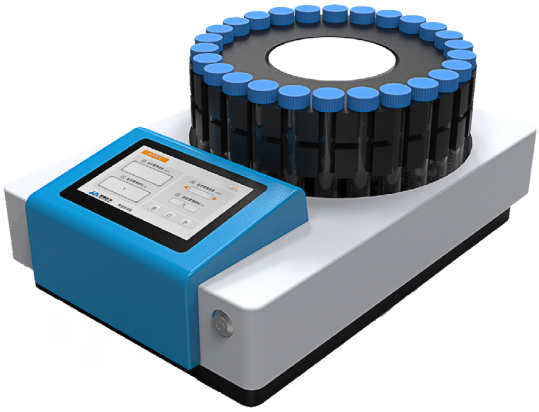

HMS-350

| Series | HMS | | HTR |
|---|---|---|---|
| Models | HMS-310 | HMS-350 | HTR-2 |
| Rotation Speed (rpm) | 0-300 | 100-3000 | 2-50 |
| Amplitude (mm) | 24 | 4 | - |
| Digital Timer Range | 0-90min | - | 0-90min |
| Dimensionns (mm) | 300x270x145 | 144x150x180 | 330x226x360 |
| Weight | 5 kg | 1kg | Centrifuge Tubes |

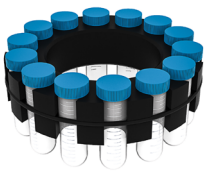
# MULTI-TUBE MIXER

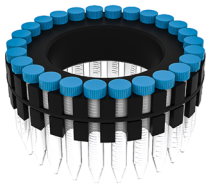


HMV-50/50A



HMV-C26





## USER FRIENDLY

Fast-acting power switch. The HMV-C26 has a local memory capacity for 6 settings, and its circular structure and spring-loading mechanism means test tubes can be accessed easily.

## HIGH THROUGHPUT TESTING

Maximum capacity of 50 samples that can be mixed simultaneously.

## GREAT REPEATABILITY

Precise control over rotation speed ensures all samples across different experiments can be treated equally.

## FLEXIBILITY

Customisable with different test tube racks. The HMC-50A has a separate pulsing or continuous mixing mode.

**Included:**

Multi-tube Mixer x1, Installation Tools, Polystyrene Test Tube Rack (variable*) x1, Power Cable x1, Instruction Manual x1
*Choose between: 50-slot, Φ 16mm, suitable for 15mL centrifuge tubes / 15-slot, Φ 29mm, suitable for 50mL centrifuge tubes

**Optional:**

50-slot Polystyrene Test Tube Rack: Φ 10mm, Φ 12mm (default) or Φ 13mm, 15-slot Polystyrene Test Tube Rack: Φ 25mm

| Series | HMV | | |
|---|---|---|---|
| Models | HMW-50 | HMV-50A | HMV-C26 |
| Samples | 50 | | 26 |
| Rotation Speed (rpm) | 200-2400 | | 200-3000 |
| Amplitube (mm) | 5 | | 3 |
| Memory Capacity | - | - | ✓ 6 presets |
| Digital Timer Range | 0-30min | 0-90min | 0-30min |
| Power (W) | 60 | | 120 |
| Dimensions (mm) | 420x260x380 | | 220x360x185 |

# MULTI FUNCTION DLIUTOR

- Simple 2-step dilution.
- Multi-function: Self-calibration, automatic peeling, rapid calculation, bag weight recording, etc.
- Built-in scanner can be used to automatically print data such as sample ID, weight, dilution ratio and time after dilution.
- Up to three weighing scales can be used in conjunction with the dilutor in order to dilute multiple samples simultaneously.

HDP-01

HDP-B

This instrument can automatically finish the dilution of any sample. The user first places the bag opener and sample bag onto the scale and sets the tare weight. They then choose the appropriate dilution ratio and add the sample into the bag. Upon starting the machine, it automatically adds the appropriate amount of diluent to the sample, thereby completing the dilution process in 15 to 20 seconds, saving operator time.

**Included:**
Multi-function Dilutor x1, Power Cable x1, Instruction Manual x1
**Optional:**
Homogeniser Bags, HDP-B Weighing Scales (up to 3)

| Model | HDP-01 |
|---|---|
| Weight Range | 0-3000g |
| Weight Accuracy | 0.01g |
| Dilution Ratio | 1/2 - 1/99 |
| Dilution Accuracy | >98% |
| Pump Heads | 2 |

# PADDLE BLENDER HOMOGENISER

This instrument specialises in the sterile homogenisation of samples. First, place the sample and liquid in a sterile bag. Then slide the bag into the blender. The gentle, yet rapid, blending action minimises cell and tissue damage whilst maintaining efficiency.

HBM-400G

HBM-400B

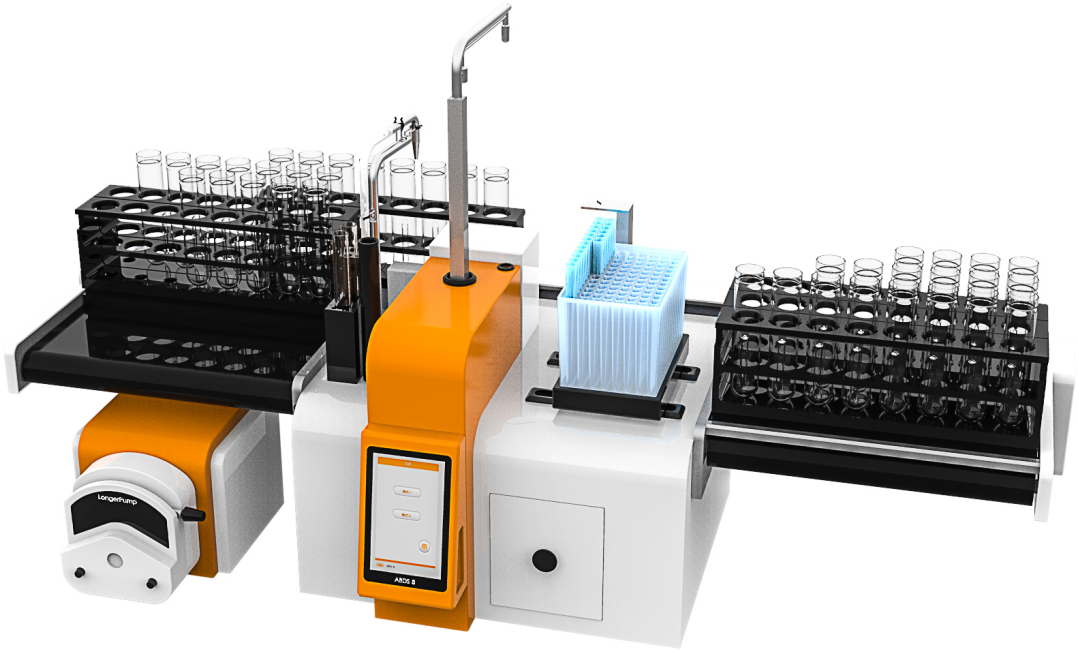
- Adjustable blending time and frequency.
- Front door is removable, and only stainless steel makes contact with the sample bag, making the whole machine easy to clean and maintain.
- Sterile bag reduces risk of sample cross-contamination.
- Touch-screen display shows parameters and current conditions of the machine.
- Memory for 6 different settings, making experiments repeatable.

**Included:**
Paddle Blender Homogeniser x1, Homogeniser Bags x25, Rod Clamp File x5, Water Catching Plate x1, Power Cable x1, Instruction Manual x1

| Series | HBM | |
|---|---|---|
| Models | HBM-400B | HMB-400G |
| Control Mode | Touch-screen | |
| Automatic Blender distance adjustment | - | ✓ |
| Digital Timer Range | 10,30,60,90,120,180,600s,continuous | 0-60min, continuous |
| Speed Range | 6-9 strokes/sec | 4-10 strokes/sec |
| Memory Capacity | 6 presets | |
| Sample Volume | 50-400mL | |
| Leakage Alarm | - | ✓ |
| Weight (kg) | 16.5 | |
| Dimensions (mm) | 410x270x290 | |

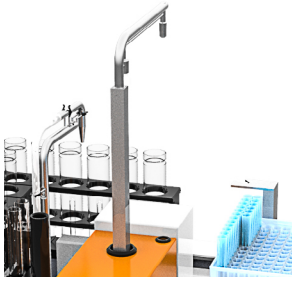
# AUTOMATIC BIOLOGICAL DILUTION SYSTEM

# TIYA



HDS-06A

This biological dilution system, named Tiya after the Greek goddess of brilliance *Theia*, is designed for the continuous gradient dilution or addition of microbiological samples. Tiya provides a high-throughput solution to a complex set of processes and greatly improves efficiency and repeatability. It is widely used in microorganism sample dilution in food safety investigations, probiotic product evaluations, disinfectant effectiveness assessments, environmental studies, etc.

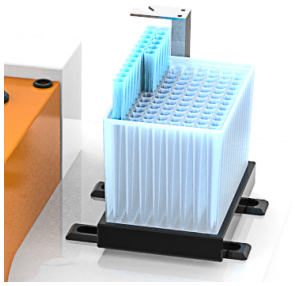


## PRECISION

Automatic calibration of injecting liquid volume on startup. High precision injection pump and peristaltic pump ensures extraction and dilution repeatability and accuracy.

## INTUITIVE USER INTERFACE

5 dilution settings can be stored in the machine. Full touch screen controls. Sample and operator information can be saved and exported via USB storage, which can easily be traced back.

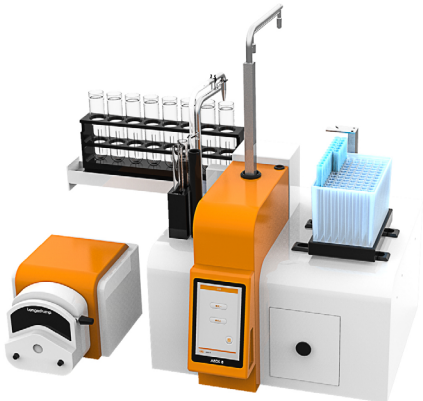


## HIGH PERFORMANCE

One-button startup process. Has a variety of different modes, including dilution, disinfection and spear cleaning modes. Small size means machine can fit in laminar flow cabinets.

## HIGH EFFICIENCY

No upper limit on sample volume. The sample is automatically diluted on a gradient. 7 million-fold dilutions would only take 84 seconds, significantly increasing experiment efficiency and saving valuable operator time. The HDS-06A series is equipped with a conveyor belt that allows it to handle more samples.



HDS-06

| Series | HDS | |
|---|---|---|
| Models | HDS-06 | HDS-06A |
| Injection Precision | 1mL accuracy: ±0.05mL<br>9mL accuracy: ± 0.5% | |
| Sample Volume | Unlimited | |
| Conveyor belt | - | ✓ |
| Mixing time | Automatic or 0.5 - 99s | |
| Dilution time | 84s per 7 dilutions | |
| Diultion type | Aqueous solution<br>(weak acid, weak base solution, non-organic reagent) | |
| Dimensions (mm) | 530x320x390 | 880x410x390 |

# AIR SAMPLER

Our air samplers are able to monitor microbial and aerosol in the air, which is useful in many different fields of study. This includes environmental studies, workplace safety, etc.

HAS-100B

## HAS-100B

- Our portable air sampler, its small size and compact design allows it to be taken everywhere Easy to operate thanks to its clear matrix-type LCD screen.
- Sampling head can be removed for cleaning and sterilisation.
- High-capacity batteries with long service life; can be used for 8 hours per charge.
- Automatic shut-down after 5mins of inaction; screen backlight turns off in 30 seconds.
- Delayed start minimises environmental effects on results.
- Optional tripod for outdoor use.

## HAS-100C

- Built-in vacuum flow rate controller.
- High specificity 0 can capture microorganisms from 10 - 0.4μm
- Ensures laminar flow of air.
- Rotating petri dish increases capture rate.

**Included:**
Air Sampler x1, Power Cable x1, 15V Charging Adapter x1, Petri Dish Removal tool x1, Petri Dish x1, Instruction Manual x1
**Optional:**
Tripod for HAS-100B

| Series | HAS | |
|---|---|---|
| Models | HAS-100B | HAS-100C |
| Rate of air flow (L/min) | 100 | 28.3 |
| Sample Volume (L) | 0 ~ 1000 | 0 ~ 2800 |
| Delayed Start | 0 ~ 30min | ✓ |
| Petri Dish Rotation | - | 0 ~ 4rpm |
| Battery Capacity | 8 hours (full charge) | Mains Power |
| Timer | - | 0 ~ 99min |
| Weight (kg) | 2.0 | 6.5 |
| Dimensions (mm) | 300x110x105 | 240x238x294 |

# BIOLOGICAL SAMPLE HOMOGENISER


HBE-6/24

The Biological Sample Homogeniser is a multifunctional and high-throughput instrument. It combines grinding, splitting and homogenising into one product. Through 3D, high-speed rotations (6800rpm) and grinding beads, samples can be quickly disrupted.

- Simultaneously homogenise up to 24 samples in 10~40s.
- Samples processed separately, avoiding cross-contamination.
- Saves operator time and effort, whilst maintaining high repeatability, precision and accuracy between batches.
- Ideal solution for samples difficult to process, such as tissue, bacteria, fungus, spore, hair, skeleton, faeces, soil, etc.
- Does not require sample balancing, increasing test efficiency.
- Intuitive user interface including memory for 6 different settings.

**Included:**
Biological Sample Homogeniser x1, Tray (24 or 6 spaces) x1, Grinding Tube (24x2mL or 6x7mL), Grinding Ball x24/x6, Power Cable x1, Instruction Manual x1

**Optional:**
Extra Grinding Tubes (2mL or 7mL), Zirconia Grinding Balls

| Model | HBR-6/24 |
|---|---|
| Speed Range | 4.0 - 7.0 m/min |
| Samples | 24x2mL or 6x7mL grinding tubes |
| Cycle Duration | 1 ~ 99s |
| Pause time | 1 ~ 99s |
| Memory capacity | 6 presets |

# AUTOMATED CULTURE MEDIA PREPARATION

This automatic culture medium preparation machine utilises an integrated program of processes such as disinfection, heating, stirring and cooling, defined by simple parameter setting on the control panel. High temperature water vapour is used to sterilise the machine in order to ensure the reliability of the entire process.

HMP-01

## FEATURES

- Integrated all-in-one process of sterilisation -> heating -> stirring -> mixing -> cooling of media.
- High-quality preparation of various types of media with no air bubbles.
- The temperature probe measures the actual temperature of the culture medium, with precise temperature control and rapid heating and cooling functions.
- High-temperature steam sterilisation to ensure that the entire preparation process is carried out under aseptic conditions.
- The external nozzle can be directly sterilised to ensure that bacteria are not introduced into the container.
- Magnetic stirring to ensure that the medium is heated evenly and nutrition is spread uniformly.
- Good data traceability. Can be connected to a computer to print data for the entire process. This includes tracking and monitoring temperature change during the sterilisation process, culture medium batch number, sterilisation temperature and time, filling time and medium capacity (optional)
- The exterior cover is automatically locked when the machine exceeds 100°C, making the experimental environment safer.
- The container can be easily disassembled, replaced and sterilised independently.

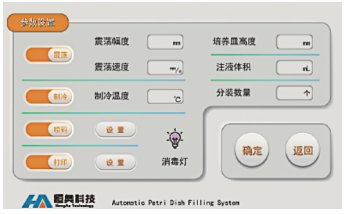
**Included:**
Automated Culture Media Preparation Machine x1, Power Cable x1, Instruction Manual x1

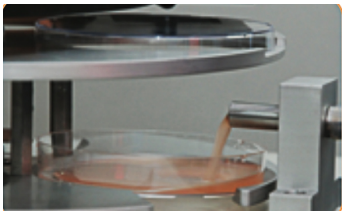
| Model | HMP-01 |
|---|---|
| Capacity | 3~10L |
| Sterilisation temperature | 90~125°C |
| Sierilisation duration | 1 ~ 99min |
| Temperture range with sample | Room Temperature ~ 80°C |
| Heating power | 2000W |
| Stirring speed | 40 / 80 rpm |
| Operational presure | 0.1~0.15MPa |
| Temperature precision | ±1°C |
| Dimensions | 500x560x590mm |

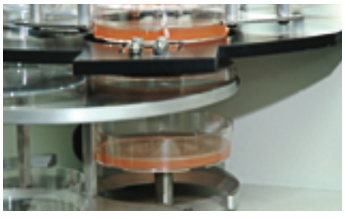
# AUTOMATIC CULTURE MEDIA DISPENSING

HDP-150

The automatic culture dispensing machine uses a single-chip microcomputer control system along with multiple motors and other advanced dispensing technology to automatically stack culture media. It makes the whole dispensing process more accurate and efficient.





## FEATURES

- The controls are simple and intuitive. After setting the program, there is no need for supervision.
- The peristaltic pump design is used to accurately pour liquid into the petri dishes.
- Its unique design makes it easy to load and unload the petri dish, and can place petri dishes of different sizes.
- The number of petri dishes can be set manually, and a maximum of 105 petri dishes can be processed at the same time.
- Petri dishes and turntables can be disassembled for cleaning and disinfection.
- The oscillating function makes medium distribution more uniform and stable.
- The sample is only exposed in the air for 10s, and is sterilised by ultraviolet light to ensure that no other bacteria will be introduced during the whole process.
- With an optional add-on, the medium can be cooled after pouring.

**Included:**

Automatic Culture Dispensing Machine x1, Power Cable x1, Instruction Manual x1

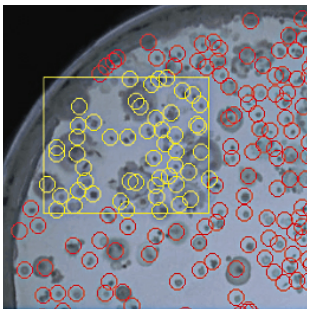
| Model | HDP-150 |
|---|---|
| Petri dish size | 90mm |
| Dispensing speed | 360 dish/hr |
| Dispensing volume | 15~30mL |
| Dispensing capacity | 300 dish |
| Dispensing precision | 1% |
| Dimensions | 470x340x688mm |

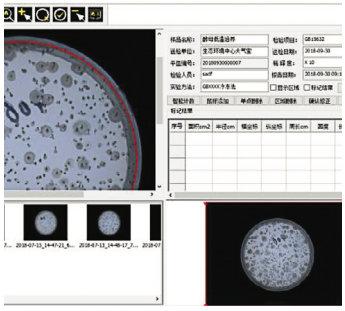
# AUTO COLONY COUNTER

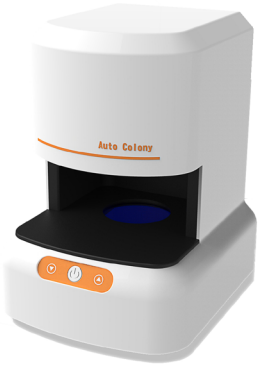
There is only one switch on the instrument, which enhances working life. The whole colony-counting process is completed on the software on the PC. The HCC-90A and B series have a separate laptop included, whereas the HCC-90C has an in- built software complete with keyboard and mouse, eliminating the need for a separate PC.

HCC-90C

- Good result repeatability and accuracy.
- Applicable to all kinds of culture media.
- Can automatically correct disruption from the petri dish and cut up flaky colonies.
- Can be used with traditional plating inoculation, spiral inoculation, etc.
- Uses a CMOS camera, which produces images with high definition and accuracy.
- Optional combinations of light sources and background colours.
- Transmission light is adjustable.
- Data can be exported to Excel and printed as a data report. Colony pictures and results can be searched using dates.



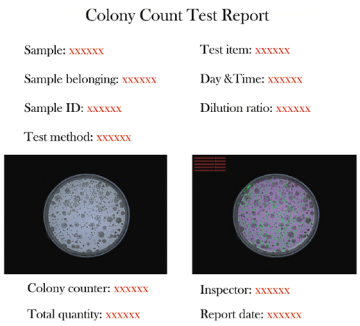





HCC-90A/B

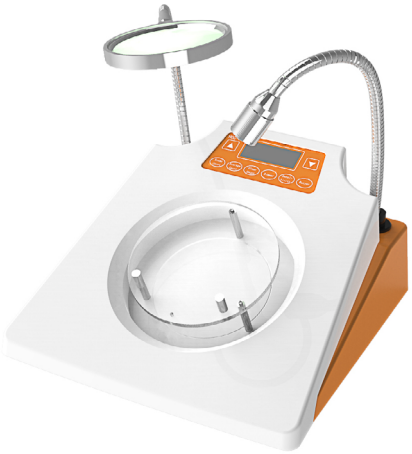
**Included:**
Auto Colony Counter x1, Laptop (*HCC-90A/B only)(Software Included) x1,Power Cable x1,Instruction Manual x1

| Model | HCC-90A | HCC-90B | HCC-90C |
|---|---|---|---|
| Camera Resolution | 5 MP | 12 MP | 12 MP |
| Petri Dish Size | 90mm | | |
| Background | Black/White | | |
| Colony Resolution | <0.1mm | | |
| Light Souce | LED | | |
| CMOS Resolution | 5 Mege Pixels | | |
| Counting Time | <0.5s | | |
| Weight | 0.8kg | | |
| Dimensions | 320x230x230mm | | |
| Connectivity | USB | | |
| PC requirement | Intel(R)Core i7, RAM 8GB<br>Laptop incuded for HCC-90A/B | | Built-in system for HCC-90C |



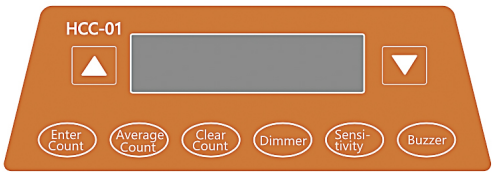
# COLONY COUNTER

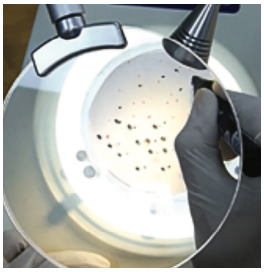
This colony counter enhances manual counting and reduces the rate of human error. Place the petri dish on the electronic pressure sensor mat then touch colonies through the mat with the touch pen according to priority. Count results will be automatically displayed on the screen. There are sound effects to ensure the counting is correct. (Sounds can be chosen according to demand). This instrument suits for many kinds of touch pens. The sensitivity can be adjusted.



HCC-01

- Semi-automatic touch count.
- Magnifications up to 3X and 6X.
- Light and shade of background can be chosen.
- Adapted to any pen.
- Return to zero function.
- Adjustable sensibility of touch surface and counting beeps.
- The HCC-02 can be connected to the computer. Data can be exported to Excel.




**Included:**
Colony Counter x1, Magnifying Glass Attachment x1, Lamp Attachment x1, Gel Pen x1, Petri Dish x1, Petri Dish Rack x2, Power Cable x1, Instruction Manual x1

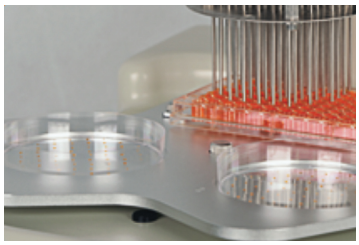
**Optional:**
Multi-colour light source remote control

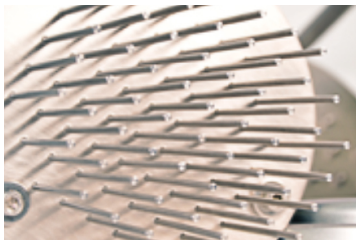
| Series | HCC | |
|---|---|---|
| Models | HCC-01 | HCC-02 |
| Counter Range | 0-999 | |
| Petri Dish size | 60-150mm | |
| Light Source | LED | |
| Weight | 2.5kg | |
| Dimensions | 260x260x140 | |
| USB Connectivity | - | ✓ |

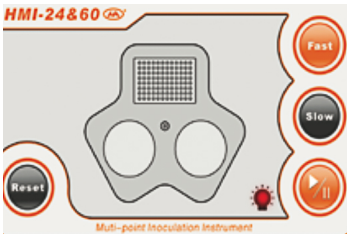
# MULTI-POINT INOCULATOR

The HMI series multi-point inoculator is an instrument designed for testing bacterial resistance (agar dilution). It can automatically finish inoculating in 9 seconds. The whole process is simple, fast, and accurate.

HMI-24&60








- Special design and processing eliminate the inoculation pins' hydrophobicity and avoid dropping bacterial solution when sampling.
- Simple sterilisation and rapid inoculation, increasing experiment efficiency and avoids errors.
- Easy and fast to operate. The inoculation speed is fast and adjustable. Sample tray can rotate automatically to achieve pin-point inoculation Foot pedal can be used to switch machine on and off.
- Can process up to 60 different colonies.
- Full touch-screen display featuring a reset function and current inoculation progress.

**Included:**
Multi-point Inoculator x1, Inoculation Rack (24 slot) x1, Inoculation Rack (60 slot) x1, Rotating Inoculation Platform x1, Inoculation Rack Stop Button x1, Power Cable x1, Instruction Manual x1

| Models | HMI-24&60 |
|---|---|
| Power | 120W |
| Timer | 9s or 12s |
| Volume | 50μL / 1μL |
| Petri Dish size | 90mm |
| Pin Diameter | 3mm / 1.5mm |
| Weight | 12kg |
| Dimensions | 335x250x415mm |

# ULTRASONIC PROCESSOR

The Ultrasonic Processor consists of an ultrasonic probe assembly and a power supply. They work well in processing a wide range of sample types and volumes across many different fields. Main applications include cell disruption, acceleration of catalytic reactions and the extraction of serums, toxins, enzymes and viruses from various organic sources.

HUP-100

- Digital display offers precise control over output amplitude and switches between pulse mode and continuous output.
- Duration range is 1min~99min. Once over the set time, the equipment switches to standby mode.
- Portable-type ultrasonic processor could adjusted by hand, making them easy to operate, especially when handling smaller samples.
- Tips of the processors are made of titanium; inert and durable.

HUP-400A

**Included:**
Ultrasonic Transducer x1, Tool Head x1, Controller x1, Bottom Plate Supports Set (non-handheld only) x1, Power Cable x1, Instruction Manual x1

| Series | HUP | |
|---|---|---|
| Models | HUP-100 | HUP-400A |
| Power | 80W | 400W |
| Required Probe | 1/8" | 1/2" |
| Sample Volume | 1~100mL | 10 ~1000mL |
| Pulse Range | 20 / 40 / 60 / 80 / 99% | 1%~99% |

# ULTRASONIC CLEANER

Ultrasonic cleaners emit high-frequency sound waves that become alternating high-and-low-pressure waves inside the its chamber. These create tiny bubbles or cavities that eventually burst. The bursting action provides gentle scrubbing known as cavitations. During cavitations, soiled surfaces are cleaned as they come in contact with the bubbles.

**Included:**
Ultrasonic Cleaner x1, Ultrasonic Cleaner Lid x1 (D models only), Cleaning Rack x1, Power Cable x1, Instruction Manual x1

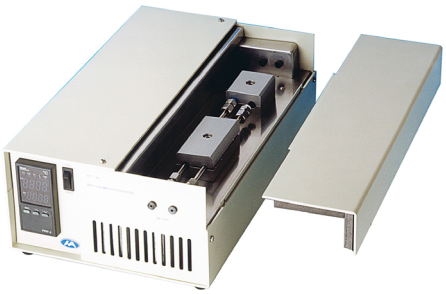
**Optional:**
Ultrasonic Cleaner Lid

HS/HU

| Model | Volume | Power | Power Control | Tank Dimension | Digital timer | Temperature | Frequency |
|---|---|---|---|---|---|---|---|
| HS2060 | 2L | 60W | - | 150x135x100mm | 0~30min | N/A | 40KHz |
| HS3120 | 3L | 120W | 50% or 100% | 235x135x100mm | 0~30min | | |
| HS6150 | 6L | 160W | | 300x150x150mm | | | |
| HU3120B | 3L | 120W | 0~100% | 235x135x100mm | 0~99min | | |
| HU6150B | 6L | 150W | | 300x150x150mm | | | |
| HU10260B | 10L | 260W | | 300x250x150mm | | | |
| HU20500B | 20L | 500W | | 500x300x150mm | | | |
| HU3120D | 3L | 120W | 0~100% | 235x135x100mm | 0~99min | Room temperture ~95°C | |
| HU6150D | 6L | 150W | | 300x150x150mm | | | |
| HU10260D | 10L | 260W | | 300x250x150mm | | | |
| HU20500D | 20L | 500W | | 500x300x150mm | | | |

# HPLC COLUMN HEATER

HT-230A



HCT-360

In HPLC analysis, the column heater is used to control the temperature of the column in order to get an exact result. The HT series column heater, with original Japanese temperature controllers and sensors, a PID intelligent self-stabilising function and TPC heating element, has enhanced product longevity and reliability.

**Included:**
HPLC Column Heater x1, Power Cable x1, Instruction Manual x1

| Model | Structure | Capacity | Temperature Contron | Power | Dimemsion | Weight |
|---|---|---|---|---|---|---|
| HT-230A | Horizontal & Vertical | 2* 300mm | Room temperature +5°C~99°C | 150W | 490x65x120mm | 3.6kg |
| HCT-360 | Horizontal | 4* 300mm | Room temperature -20°C / Room temperature +5°C~60°C | 300W | 450x260x150mm | 10.5kg |

# VACUUM PUMP

One of HA's first products, we command over a decade of experience producing vacuum pumps, constantly improving its design and functions. Our pumps are oil-free, structurally simple, easy to use and maintain, not to mention friendly to the environment.


HP Series

- All of our pumps are compact and easy to carry, sporting high quality, long-lifetime rubbers. The pump body is rigid, multi-layered and strengthened to withstand many years of heavy use.
- The HPD series of pumps allow for the configuration of vacuum level.
- The HPD-A series have vacuum levels approaching -0.1MPa through their double-pump structure.

**Included:**
Vacuum Pump x1, Power Cable x1, Instruction Manual x1

| Series | HP | | HPD | | |
|---|---|---|---|---|---|
| Model | HP-01 | HP-01D | HPD-25 | HPD-25A | HPD-50 |
| Flow Rate | 10L/min | | 25L/min | | 50L/min |
| Presure | -0.08MPa | -0.04 ~ -0.08MPa | -0.04 ~ -0.08MPa | -0.04 ~ -0.1MPa | -0.04 ~ -0.08MPa |
| Power | 20W | | 50W | 60W | |
| Weight | 2.5kg | | 5kg | 7.5kg | |
| Dimensions (mm) | 226x102x220 | | 320x140x240 | | |
| Output diameter | ϕ 7mm | | ϕ 8mm | | |

# SOLVENT FILTRATION

The solvent filtration apparatus is widely used in chemistry laboratories. Under different conditions, the operator can choose filter membranes from different materials to filter, degas and disinfect solutions. Filtering the solution can not only prolong the life-span of the apparatus and HPLC column, but also enhance measurement accuracy.

- We use high-quality, tough glass with a high pressure endurance.
- Great interchange ability and well-proportional walls.
- It endures extreme temperature differences of over 270°C.

**Optional:**
Filter membranes with variable materials: Commonly used include PVDF Resin (Hydrophobic) and Mixed Cellulose (Hydrophilic)
Suitable membrane size: Φ 50mm
Disposable single-use needle-shaped filter heads
**Included:**
Receiver Flask (1000mL or 2000mL) x1, Funnel (300mL or 500mL) x1

# DEGASSER

When the mobile phase flows into the degasser via its entrance, it works to continuously remove dissolved gas from the mobile phase, thereby eliminating flow instabilities and noisy, drifting baselines. Our degassers use advanced gas/liquid separation technology with imported sensors. The pump is equipped with auto-start capabilities. The standard attachment and the pipeline allows it to connect with any HPLE system.

**Included:**
Degasser x1, Inlet tube (200mm PTFE inlet) x1, Outlet tube x1, Inlet 200mm square-shaped adapter x1, Power Cable x1, Instruction Manual x1

| Model | | HDG-02 | HDG-03 | HDG-04 |
|---|---|---|---|---|
| Channels | | 2 | 3 | 4 |
| Degassing Efficiency (Solvent oxygen content before:after) * | Flow Rate 1mL/min | 8.0ppm : 1.8ppm | | |
| | Flow Rate 5mL/min | 8.0ppm : 4.0ppm | | |
| Vacuum Presure | | 0.085MPa | | |
| Max Flow Rate | | 10mL/min | | |
| Internal Volume | | 12mL / Channel | | |
| Dimensions | | 150x340x180mm | | |

*At 25°C

HWT-6B

# WATER BATH

The water bath is a conventional instrument in the laboratory. It is mainly used for microbial cultivation, homeothermal reactions, sample concentration and other routine laboratory tests. Our water baths use PID technology and a digital display to allow the operator to easily adjust its temperature. Their advanced PTC heating element ensures the heating process is steady and safe. The stainless steel casing has high levels of corrosion resistance.

**Included:**

Water Bath x1, Water Bath Lid x1, Test Tube Rack x1, Power Cable x1, Instruction Manual x1

| Model | HWT-2B | HWT-6B | HWT-10B | HWT-20B |
|---|---|---|---|---|
| Temperature Control Range | Room temperature ~99°C | | | |
| Precision | ±1°C | | | |
| Control model | PID | | | |
| Volume | 2L | 6L | 10L | 20L |
| Tank demensions (mm) | 150x135x100 | 300x150x150 | 300x250x150 | 500x300x150 |
| Power | 150W | 240W | 300W | 800W |
| Weight (kg) | 1.5 | 5 | 9 | 18 |

# SHAKING WATER BATH

- Uses a DC electric motor which has a low noise level, long service life and does not require maintenance.
- Touch screen controls allow for easy user operation
- High quality stainless steel has high levels of corrosion resistance.
- The shaker part and the heating part of the machine is independent of each other, making the water bath very versatile.
- V-shaped bath prevents droplets from entering the flasks.

HWT-20C

**Included:**

Water Bath x1, V-shaped Water Bath Lid x1, Power Cable x1, Instruction Manual x1

| Model | Volume | Precision | Control Mode | Temperature control range | Shaking model | Amplitude | Rotate speed | Tank Dimensions (mm) | Power |
|---|---|---|---|---|---|---|---|---|---|
| HWT-10C | 10L | ±1°C | PID | Room temperature ~99°C | Reciprocating | 0~20mm | 10~200rpm | 260x210x150 | 1100W |
| HWT-20C | 20L | | | | | 0~24mm | | 430x250x160 | 2100W |

HAUK TECHNOLOGY & DEVELOPMENT LTD

HAUK Technology & Development Co., Ltd
63-66 Hatton Garden
London
England
EC1N 8LE

Website: **www.hauktech.co.uk**
Enquires: **info@hauktech.co.uk**