

Focus on

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Sample  
Preparation

HAUK Technology & Development Limited is a UK-based corporation offering a host of industry-leading laboratory equipment focused on sample preparation that are developed and manufactured in-house and designed with a philosophy of efficiency and convenience in mind. It is our aim to provide you with professional expertise and sound customer service, making sure that you are able to maximise your laboratory's potential with our products.

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# HPE PARALLEL EVAPORATOR

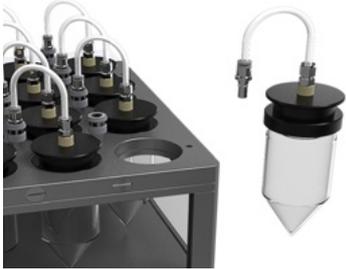


HPE-16EB

Sample concentration is an essential step in many analytical workflows. HAUK Parallel Evaporators enable multiple samples to be heated, depressurised, and rotated simultaneously, allowing complete solvent evaporation or accurate concentration to a defined final volume. This parallel processing supports higher throughput and improved efficiency across routine and research applications. Our four models are optimised for different use cases, ensuring a suitable solution for a wide range of experimental requirements.

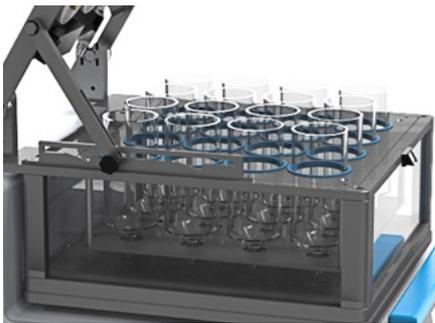
## AUTOMATED & HIGH-THROUGHPUT TESTING

Run multiple repeatable experiments simultaneously using different volume of test tubes. With built-in memory for up to six programmable settings, the system streamlines method repetition, boosts efficiency, and offers the flexibility to meet specific application requirements..



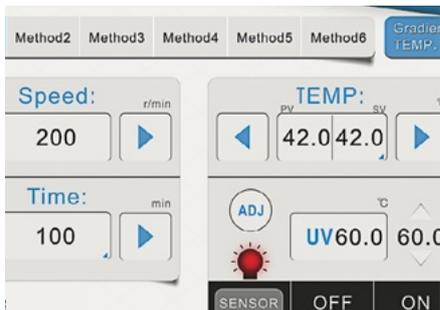
### INDEPENDENT SAMPLE CONTROL

Rapid, independent valve switching on HPE-EB series models allows each sample to be controlled in isolation. This enables multiple methods with different time requirements to run in parallel without interruption.



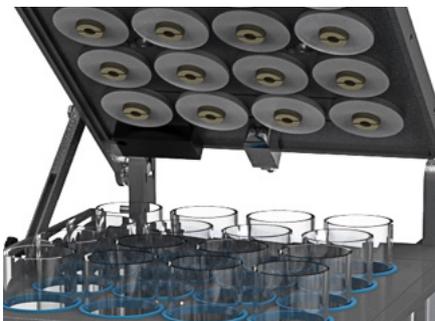
### UNOBSTRUCTED VIEW OF SAMPLES

Clear test tubes and water bath tank provide a full, unobstructed view of each sample throughout the run. Endpoints can be set manually via the timer, or determined automatically using the concentration quantification function (HPE-EAVD series only).



### FULL TOUCHSCREEN CONTROLS

Precisely set temperature, rotation speed, and run time via the full touchscreen interface. Advanced temperature gradient programming and experiment data storage support repeatable, traceable workflows.



### INDIVIDUAL HEATED COVERS

Each sample is sealed with its own heated cover to support continuous evaporation while reducing reflux condensation and helping prevent cross-contamination.

# CHOOSE BETWEEN

## HPE-EB, D, K



HPE-12E

### 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-6EK

### HPE-K series

- 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.
- Customised test tubes eliminates the need for sample transfer.
- Under optimal conditions, the recovery rate can reach over 80%.



HPE-6EB

### HPE-EB series

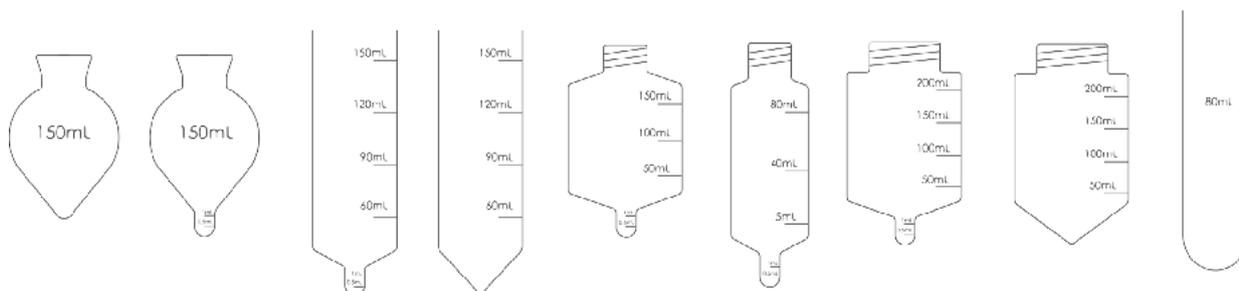
- 360°, unobstructed view of experiments with our circular, transparent water bath.
- Rapid, independent valve switching allows for the manipulation of any sample in isolation from other samples.
- Compatible with a wide variety of test tubes.



HPE-16ED

### HPE-ED 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 ( $\pm 1\text{mL}$  or  $\pm 0.5\text{mL}$ ).
- Optional automatic water refill and drainage function.



Compatible with various range of concentrator tubes

#### Included:

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

Series	HPE			HPE-EB		HPE-EK	HPE-ED
Model	HPE-6E	HPE-12E	HPE-24E	HPE-6EB	HPE-16EB	HPE-6EK	HPE-16ED
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~95°C ( $\pm 0.5^\circ\text{C}$ )						
Heating Method	Water Bath Heating						
Heat Cover Temp. Range	Room temp+5°C~70°C ( $\pm 5^\circ\text{C}$ )						
Rotation Speed	0-500r/min						
Memory capacity	6 presets						
Volume Quantification	-	-	-	-	-	-	✓
Rapid valve switching	-	-	-	✓	✓	✓	-

# VACUUM CONTROL 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 HPE Parallel Evaporators.



HVS-03E

## Extract strong acids and alkali

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.

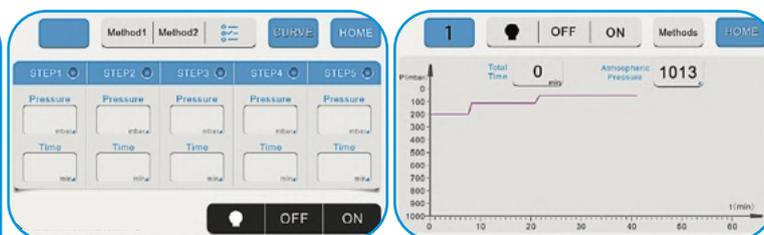
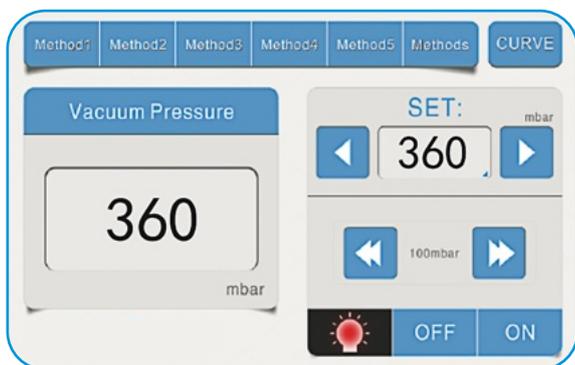
## Increased recovery rate

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

## 5-inch Touchscreen

Store over 30 programmable settings for fast, repeatable runs. Operate via a 5-inch touchscreen with an adjustable viewing angle.

- Prevents harmful organic vapours from being released into the atmosphere.
- Optional anti-bumping function: automatically and instantly adjusts pressure to help protect samples and ensure stable evaporation.



### Included:

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

Extraction rate	50L/min
Maximum 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

Our Parallel Nitrogen Concentrators focuses on automating an originally-complex process to increase your experiment efficiency and make it more user-friendly, especially when compared to standard nitrogen evaporators.



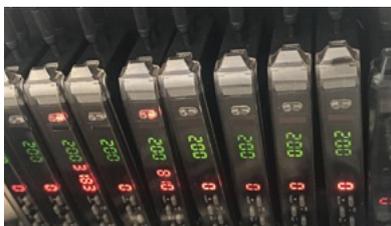
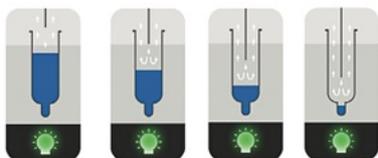
HAC-EI/A/B/D

# HAC PARALLEL NITROGEN CONCENTRATOR



HAC-EI/A/B/D

The HAC enables **adjustable nitrogen needle angles** to generate a vortex flow within the sample. This increases the effective surface area, improving heat transfer and enhancing evaporation efficiency.



## High through-put concentration

Flexible configurations to suit your workflow. Choose from 6 × 200 mL, 12 × 100 mL, or 24 × 40 mL capacity, enabling multiple high-volume samples to be processed simultaneously.

## Collective Removal of Waste Gasses

A fully sealed chamber prevents waste gases from escaping by extracting them from the concentrator as a single stream. Rapid removal of water vapour also helps minimise reflux condensation. Exhaust gas is discharged in a controlled vortex flow to reduce turbulence and minimise splashing.

## Automated nitrogen purg

As the system approaches the set temperature, nitrogen purging starts automatically—reducing manual intervention and improving repeatability.

## 7-inch Touchscreen Display

A 7-inch image-based touchscreen provides intuitive operation and displays real-time process information, including temperature, pressure, and sample concentration status.

## Transparent Covers and Interior Lights

Transparent top and front covers, combined with internal lighting, provide clear visibility for convenient sample observation during operation.

## Automatic Volume Quantification

Fibre-optic sensors enable automatic end-point detection, allowing the system to stop concentration at the target volume without continuous supervision. On HAC-36EC models, the needle height can track the falling liquid level, enabling sample-specific volume control rather than relying solely on elapsed time.

## HAC - ED 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  $\pm 0.5^{\circ}\text{C}$ .

## HAC -E A series

- Can process up to **24 samples, with a maximum volume of 200mL**.
- Precise temperature control to a degree of  $\pm 0.5^{\circ}\text{C}$
- 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 - 36EC

- 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

## HAC - EB series

- Can process **up to 24 samples**.
- Much more precise temperature control to a degree of  $\pm 0.1^{\circ}\text{C}$  due to built-in water bath circulation.
- Fibre-optic volume quantification function.
- Optional automatic water resupply feature.

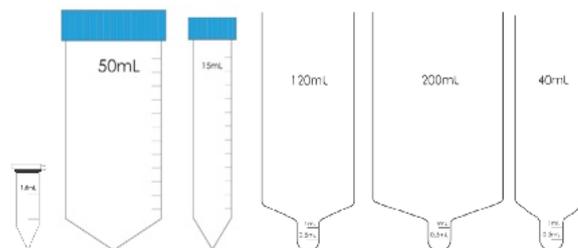
## HAC - EI Series

- Can process **up to 50 samples** at once (1-15mL)
- Fits many different customisable test tube racks.
- Temperature control to  $\pm 0.5^{\circ}\text{C}$ .



HAC-36EC

Compatible with various tube and tube rack



Series	HAC-EI			HAC-EA			HAC-EB			HAC-ED	HAC-36EC
Samples	50			10	12	24	10	12	24	10	36
Volume/Test tube (mL)	1.5 / 5 / 15			200	100	40	200	100	40	40/200	40
Volume Quantification	-			✓			✓			✓	✓ *for each sample
Temperature control Precision	$\pm 0.5^{\circ}\text{C}$			$\pm 0.5^{\circ}\text{C}$			$\pm 0.1^{\circ}\text{C}$			$\pm 0.1^{\circ}\text{C}$	$\pm 0.5^{\circ}\text{C}$
Temperature control Duration	0-999mins										
Display	7" Touch Screen									Touch Screen + App	
Power	800W										
Dimensions (mm)	580x365x320									460x440x490	
Compatibility	25: 50mL 50: 1.5/5/15mL			10 Samples: 20/100mL 12 Samples: 100mL or 24 Samples: 40mL			10: 200 / 40mL			Customisable	

# NITROGEN EVAPORATOR

## Intuitive User Interface

Use the touch-screen to control the time, temperature and pressure of the experiments. The HSC-24EB 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.

## HGC-A / HSC-A

- Maximum 36 samples tested simultaneously
- Wider temperature range of room temp to 150°C
- Heated using a block heater
- With the HGC-A series, up to 36 samples could be evaporated simultaneously.



HSC-24EBA

## Adjustable Needle Rack

The needle rack's height can be adjusted and it can be rotated around the machine, making test-tube collection a breeze. Both the HGC-EAi and HSC-EAi series are equipped with auto needle height adjustment.

## Flexible, Modular Configuration

Heating blocks can be customised to fit many 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-24EB series can control the nitrogen flow rate for each needle independently.



HGC-EA / HSC-EA

Compatible with more tubes

## HSC - 24EBA

- 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.
- **HSC-24EBA compatible with micro- low rate adjustment**

### 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  $\Phi$  17mm (can mix and match between  $\Phi$  15mm,  $\Phi$  17mm,  $\Phi$  21mm), Nitrogen Needle: Length 158mm (stainless steel)

Series	HGC-EA			HSC-EA		HSC-EB		HSC-24EBA
	Ai Models Equipped with Auto Needle Height Adjustment					-		-
Samples	12	24	36	12	24	12	24	24
Heating Method	Heating Block			Water Bath				
Automatic Height Adjustment	✓ (for Ai model)			✓ (for Ai model)		-		-
Temperature Control Precision	±1°C							
Temperature Control Range	Room Temperature ~ 150°C			Room Temperature ~ 100°C				
Dimensions (mm)	340x230x380	340x310x380	340x230x380	340x310x380	$\Phi$ 250x820	$\Phi$ 360x720	360x360x720	

# SOLID PHASE EXTRACTION SYSTEM



HSE-08EC



## HIGH-THROUGHPUT

Allows simultaneous processing of up to 8 samples. The HSE-08EC series has a maximum flow rate of 60mL/min. The precision pump of the HSE-08ED can completely automate the conditioning, rinsing and elution parts of the SPE process.

## FINE-TUNE YOUR EXPERIMENTS

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-EC series has memory space for 5 settings, and the HSE-08ED has space for 30.

## GREAT RESULT RELIABILITY

Tightly sealed and a highly consistent liquid flow speed and rotation speed. The HSE-08ED is also equipped with a nitrogen purge system, which can be used to purge and dry SPE cartridges.

### 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-08EA	HSE-08EC
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, rotary control	Full touch-screen

# SOLID PHASE EXTRACTION SYSTEM

## HSE-08ED

### VERSATILE

Two independent sample-loading mechanisms with dedicated pumps:

Infusion pump for sample volumes below 100 mL, delivering loading accuracy of  $\pm 2\%$ .

Peristaltic pump for large-volume samples (100 mL to 5,000 mL), delivering loading accuracy of  $\pm 5\%$ .

### NITROGEN PURGE

Integrated nitrogen purge system capable of purging up to 8 columns simultaneously. It can also be used to purge and dry SPE cartridges.

### USER-FRIENDLY

Stores over 30 user-defined presets, enabling quick setup and repeatable operation.



HSE-08ED

The **HSE-08ED** is an upgraded version of our HSE-08EC automated solid phase extraction (SPE) system. It features two independent Sample/Solvent-loading mechanisms, significantly increasing overall loading capacity and application flexibility. One loading system is optimised for high-throughput operation, making it ideal for processing large-volume samples (e.g., drinking water and other aqueous matrices). The second, a high-precision infusion pump, enables fully automated conditioning, rinsing, and elution steps for improved control and repeatability throughout the SPE workflow.

Series	HSE-08ED	
Loading System	Intrinsic Pump (small volume)	Peristaltic Pump (large volume)
Tracks	8	
Capacity (mL)	1~999 per column	100~500
Flow Rate (mL/min)	0.11~60.0	1~30
Loading Accuracy	$\pm 2\%$	$\pm 5\%$
Duration Range (min)	0~999	
Memory Capacity	30 presets	
Nitrogen Purge System	Yes	
Control and Display	Full touchscreen	

# 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-12ED/24ED

## High yields and Enrichment

Our SPE equipment provides high yields and high enrichment of analytes.

## Reliable Results

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

## Specialised, Hardened 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:

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



Works with HPD Vacuum Pump

Series	HSE-EB		HSE-ED	
Samples	12	24	12	24
Collecting Method	Pumped into collection flask		Collection flask below equipment	
Dimensions (mm)	270x160x110	332x156x165	∅ 120x240	∅ 160x400

# BALL MILL



HMM-400EA



## Customisable Grinding Jars

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

Through utilising the grinding stations' 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.



## LED Display

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. Jars are tightly sealed so samples are protected from cross-contamination.

Model	HMM-400EA
Maximum input sample size	6mm
Output sample size	5µm
Grinding Chamber size	25mL, 35mL
Maximum sample size	10mL
Grinding duration	0~99 min
Frequency	3~20Hz
Memory capacity	6 presets
Power	180W
Dimensions	421x350x218mm

## Included:

Ball Mill x1, Grinding Jar (variable material) x2, Grinding Ball (variable material) x2, 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

## Efficient Homogenisation

The motor features slanted stators and rotors, delivering enhanced shear efficiency for faster, more consistent homogenisation..

## Minimal Sample Damage

Rapid processing reduces overall run time while limiting heat build-up and sample exposure, helping to minimise degradation and reduce the risk of contamination.

## Stainless Steel

All wetted/working components are manufactured from 316L stainless steel for excellent durability and corrosion resistance, and for easier cleaning and routine maintenance.



HFJ-10/18/25E

## Hand-held or Desktop

Our homogeniser blades are available in a range of shapes and configurations. The HFJ is a fully hand-held model with an integrated body and blade for simple, convenient operation. Larger desktop models offer greater flexibility, with interchangeable blade sizes to suit different sample types and deliver the required homogenisation performance.



### Included:

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

Series	HFJ		
Models	HFJ-10E	HFJ-18E	HFJ-25E
Samples	1		
Auto Height Adjustment	-		
Rotation Speed	5000-35000	1000-25000	
Blade Diameter (mm)	10	18	25
Memory Capacity	-	-	-
Power (W)	200	550	550
Maximum Sample Size (mL)	500	5000	5000

# MULTI FUNCTION DILUTOR

## Simple 2-step dilution

### Multi-function

Supports self-calibration, automatic tare, rapid calculations, and bag weight recording, among other functions..

### Built-in scanner

Enables automatic data capture and printing of key information, including sample ID, weight, dilution ratio, and time stamp after dilution.

### Dilute Multiple Samples

Up to three weighing scales can be connected and used with the dilutor, allowing multiple samples to be diluted simultaneously.



HDP-E01



HDP-EB

This instrument automatically completes sample dilution. Once started, it dispenses the required volume of diluent into the sample to achieve the set dilution ratio, typically within 15–20 seconds, significantly reducing hands-on operator time.

### Included:

Multi-function Dilutor x1, Power Cable x1, Instruction Manual x1

### Optional:

Homogeniser Bags, HDP-EB Weighing Scales (up to 3)

Model	HDP-E01
Weighing Range	0-3000g
Weighing Accuracy	0.01g
Dilution Ratio	1/2 - 1/99
Dilution Accuracy	>98%
Pump Heads	2

# PADDLE BLENDER HOMOGENISER



HBM-E400G

This instrument is designed for the sterile homogenisation of samples. Its gentle yet rapid blending action helps minimise cell and tissue damage while maintaining high processing efficiency. It also features an integrated status indicator light for clear, at-a-glance operation monitoring.



## Easy Maintenance

The removable front-loading door provides straightforward access for cleaning. Only stainless-steel surfaces come into contact with the sample bag, making the system easy to clean, disinfect, and maintain.



## Touch-screen display

A user-friendly touchscreen allows blending time and speed/frequency to be adjusted easily, and displays key parameters and real-time operating status. The system can store up to 6 preset programmes, supporting repeatable, consistent workflows.



## Leakage Alarm

A built-in leakage alarm helps reduce the risk of sample contamination. If leakage is detected, the system automatically stops operation to protect the sample and equipment. (HBM-E400G)



HBM-E400B

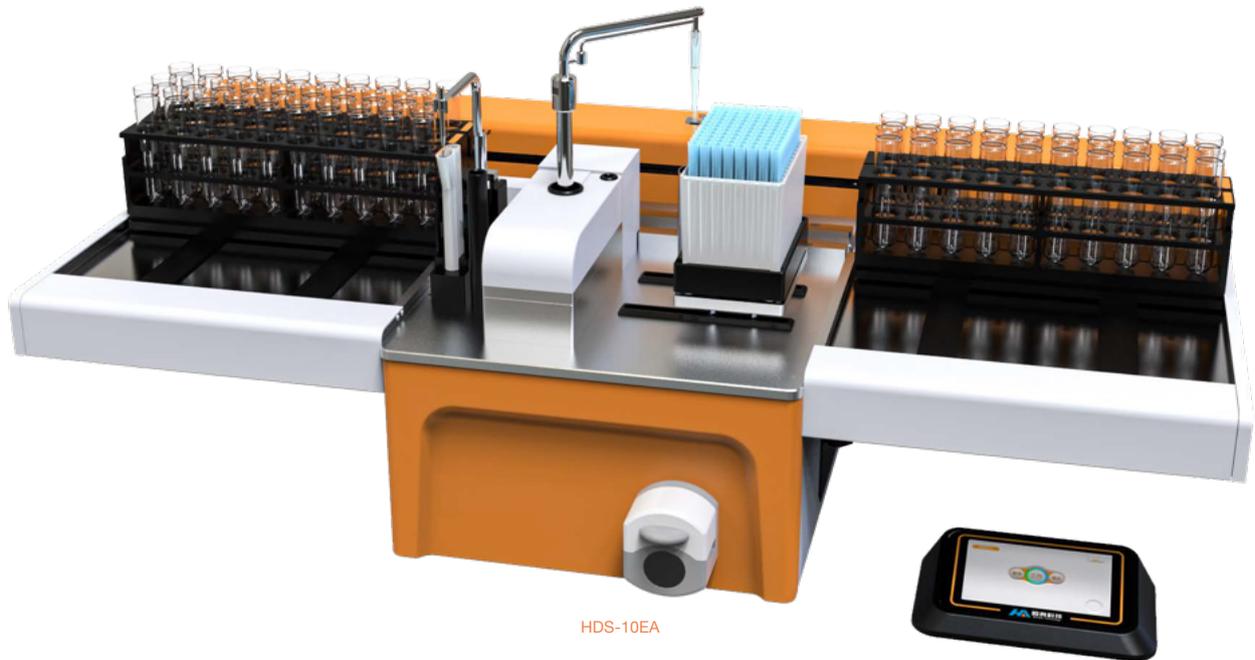
### Included:

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

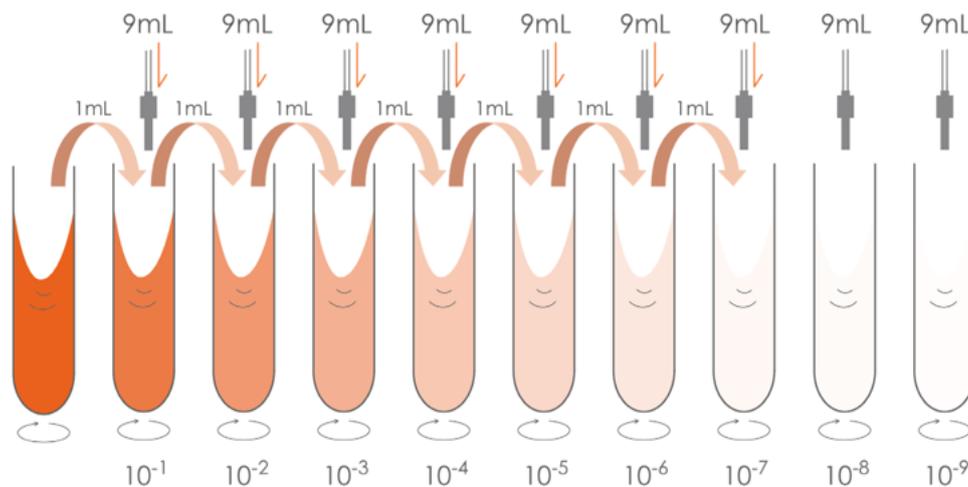
Series	HBM	
Models	HBM-E400B	HBM-E400G
Control Mode	Touch-screen	
Blender Distance Adjustment	Manual	Auto (touch-screen)
Digital Timer Range	10, 30, 60, 90, 120, 180, 600s, continuous	0-60min, continuous
Speed Range	6-9 strokes/sec	4-10 strokes/sec
Memory Capacity	6 presets	
Sample Volume	50-400mL	
Leakage Alarm	-	✓
Weight (kg)	16.5	
Dimensions (mm)	410x270x290	
Sterile Bag Dimensions (mm)	300x185	

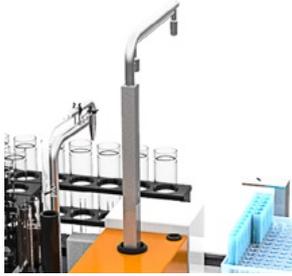
# AUTOMATIC BIOLOGICAL DILUTION SYSTEM

## TIYA



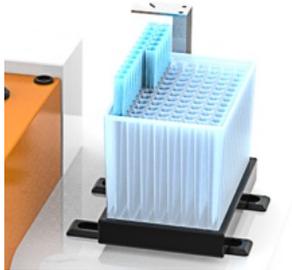
This biological dilution system, named Tiya after the Greek goddess of brilliance Theia, is designed for the continuous gradient dilution or addition of microbiological samples. Tiya provides a high-throughput solution to a complex set of processes and greatly improves efficiency and repeatability. It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





### AUTOMATIC CALIBRATION

Automatically calibrates pipetting volume on start-up. The combination of a high-precision syringe (injection) pump and a high-precision peristaltic pump ensures accurate, repeatable performance for both extraction and dilution



### CONTAMINANT-FREE OPERATION

A dedicated sample-transfer platform with in-situ mixing and transfer helps minimise aerosol generation. TIYA also uses a separate sealed waste box for automatic pipette-tip ejection and disposal. Its compact footprint allows installation inside most laminar flow cabinets..



### HIGH EXPERIMENTAL EFFICIENCY

No upper limit on input sample volume. Samples can be automatically diluted to a selected gradient of 10<sup>-1</sup>, 10<sup>-2</sup>, 10<sup>-3</sup>, 10<sup>-4</sup>, 10<sup>-5</sup>, 10<sup>-6</sup>, 10<sup>-7</sup>, 10<sup>-9</sup> or 10<sup>-10</sup>. **A 10 million fold dilution can be completed in as little as 118 seconds**, significantly improving throughput and reducing hands-on time. The HDS-10A model is equipped with a conveyor belt to support higher sample capacity.



### VARIETY OF DIFFERENT MODES

One-button start-up with several selectable modes, including **gradient dilution, MPN, disinfection**, and pipette cleaning.



HDS-08E

Series	HDS	
Models	HDS-06/08/10E	HDS-06EA/08EA/10EA
Injection Precision	1mL accuracy: ±0.01mL 9mL accuracy: ± 0.1mL (optional: 0.05mL)	
Sample Volume	Unlimited	
Conveyor belt	-	✓
Mixing time	Automatic or 0.5 - 99s	
Dilution time	118s per 10 dilutions	
Dilution type	Aqueous solution (weak acid, weak base solution, non-organic reagent)	
Compatible Pipettes	1mL; QSP; TF112-1000-Q	
Dimensions (mm)	530x320x390	880x410x390

# AUTO COLONY COUNTER

The automatic colony counter is an advanced instrument in microbiology testing, widely used in testing bacteria in food, pharmaceutical, biological, cosmetics and hygienic products. There is only one switch on the instrument, which enhances device longevity. The whole colony-counting process is completed on the software on the PC. The HCC-90EA and EB series have a separate laptop included.

## Flexible Usage

Applicable on different culture medium such as PetriFilm™, MC-media Pads™, Compact Dry™, Easy Plate™, etc. The counters can be used with traditional pour, surface, spiral, circle mode plated dishes, etc.

## Good result repeatability and accuracy

Can automatically correct disruption from the petri dish and cut up flaky colonies.

## CMOS camera

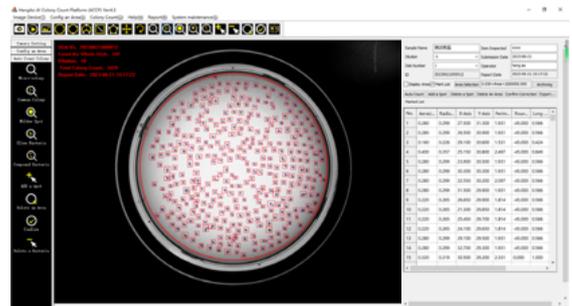
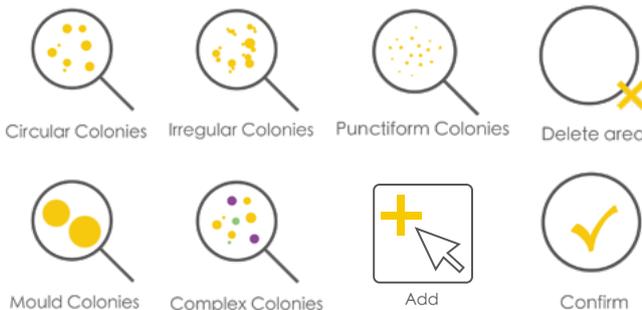
Produces images with high definition and accuracy. Optional combinations of light sources and background colours. Transmission light is adjustable.

## Data Export

Data can be exported to Excel and printed as a data report. Colony pictures and results can be searched using dates.



HCC-90EA/EB



## Included:

Auto Colony Counter x1, Laptop (\*HCC-90EA/EB only)(Software Included) x1, Power Cable x1, Instruction Manual x1

Model	HCC-90EA	HCC-90EB
Camera Resolution	5 MP	12 MP
Petri Dish Size	90mm	
Background	Black/White/Multi-Colour	
Colony Resolution	<0.1mm	
Light Source	LED	
Counting Time	<0.5s	
Weight	0.8kg	
Dimensions	320x230x230mm	
Connectivity	USB	
PC requirement	Intel(R)Core i7, RAM 8GB Laptop included for HCC-90A/B	

Colony Technology Test Report	
Sample No:	Item Insp:xxxx
Inspection Unit:	Submission:2023-06-01
Dish No:10230621000012	Dilution: -1
Inspect Method:	
Inspection results	
Colony Image	Counted Image
Colony Cnt: 347	
Total Cnt: 3470	
Operator: lang oo	

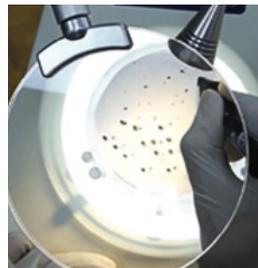
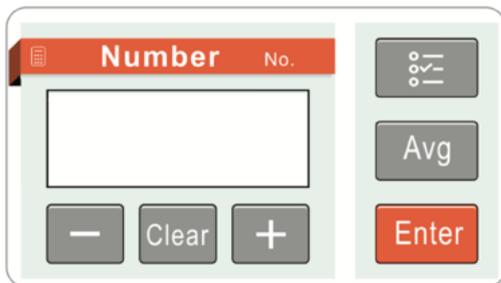
# COLONY COUNTER

This colony counter supports manual counting while reducing the risk of human error. Place the Petri dish on the electronic pressure-sensor mat, then use a touch pen to mark colonies in the desired sequence. Counts are registered automatically and displayed in real time on the screen. Audible feedback confirms each count, with selectable sound options to suit user preference. The system is compatible with a wide range of touch pens, and sensitivity is fully adjustable.



HCC-E01/E02

- Semi-automatic touch count.
- Magnifications up to 3X and 6X.
- Light and shade of background can be chosen.
- Adapted to any touch 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-E01	HCC-E02
Counter Range	0-999	
Petri Dish size	60-150mm	
Light Source	LED	
Weight	2.5kg	
Dimensions	260x260x140	
USB Connectivity	-	✓

# 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-02E

## Integrated all-in-one process

Sterilisation -> heating -> stirring -> mixing -> cooling of media

## High-quality preparation

Prepares various types of media with no air bubbles.

## Measures Actual Media Temperature

The temperature probe measures the actual temperature of the culture medium with precise temperature control and rapid heating and cooling functions. Magnetic stirring to ensure that the medium is heated evenly and nutrition is spread uniformly.

## Aseptic Conditions

High-temperature steam sterilisation to ensure that the entire preparation process is carried out under aseptic conditions.

## 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).

## Automatic Protective Lock

The protective lock on the exterior cover is automatically locked when the machine exceeds 100°C, making the experimental environment safer.

## Easy Sterilisation

The external nozzle can be directly sterilised to ensure that bacteria are not introduced into the container. 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-02E
Capacity	3~10L
Sterilisation temperature	90~125°C
Sterilisation duration	1 ~ 99min
Temperature range with sample	Room Temperature ~ 80°C
Heating power	2000W
Stirring speed	40 / 80 rpm
Operational pressure	0.1~0.15MPa
Temperature precision	±1°C
Dimensions	500x560x590mm

# AUTOMATIC CULTURE MEDIA DISPENSING



HDP-150E

The automatic culture media dispensing machine uses a single-chip microcomputer control system along with multiple motors, sensors and other features such as UV lights to automatically stack plates filled with culture medium. It makes the whole dispensing process more accurate and efficient.



## Simple and intuitive

After setting the program, there is no need for supervision.

## Peristaltic Pump Design

Accurately pours liquid into the petri dishes.

## Unique Design

Easy to load and unload the petri dish, and can place petri dishes of different sizes.

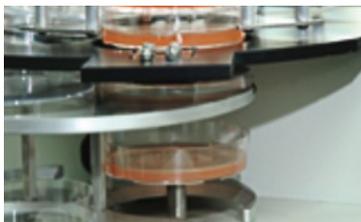


## High-Throughput

The number of petri dishes can be set manually, and a maximum of 300 petri dishes can be processed at the same time.

## Simple Cleaning and Disinfection

Petri dishes and turntables can be disassembled for cleaning and disinfection



## UV Light Sterilisation

The machines limits the exposure of the sample to the air and sterilises it using ultraviolet light. This ensure that no other bacteria will be introduced during the dispensing process

## Oscillating function

Ensures medium distribution is uniform and stable.

### Included:

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

Model	HDP-150E
Petri dish size	90mm
Dispensing speed (excluding media oscilation)	720 dishes/hr*
Dispensing speed (including media oscilation)	360 dishes/hr*
Dispensing volume	15~30mL
Dispensing capacity	300 dish
Dispensing precision	1%
Dimensions	470x340x688mm

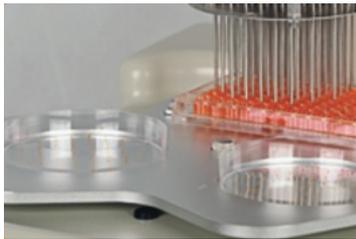
\*Dispensing speed dependents on media volume and media oscilation settings.

# 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&60E



## Eliminates Hydrophobicity

Special design and processing eliminate the inoculation pins' hydrophobicity and avoid dropping bacterial solution when sampling.



## Simple sterilisation and rapid inoculation

Increases experiment efficiency and avoids errors.

## Easy and fast to operate

Inoculation speed is fast and adjustable. The sample tray can rotate automatically to deliver precise pin-point inoculation based on the programmed settings. A foot pedal allows hands-free start/stop control. An alignment mode simplifies positioning of the inoculation needles with 96-well plates and Petri dishes.



## High-Throughput

Can process either 24 or 60 different colonies depending on the inoculation rack used. Both racks will be included.

## Full touch-screen display

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

# AIR SAMPLER

Choose between our HAS-10BP, 100C and 6A/2A series

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.



## Portable air sampler HAS-100BP

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



## HAS-100C

- Built-in vacuum flow rate controller and ensures laminar flow of air
- Can capture microorganisms from 10 - 0.4µm
- Rotating petri dish increases capture rate

## HAS-6A / 2A

- Collects aerosol, bacteria and fungi
- Simultaneously measures the quantity of polluting particles and their size distribution
- Imitates the movement of particles down the respiratory tract.



### 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-100BP

Series	HAS	
	HAS-100BP	HAS-100C
Models	HAS-100BP	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

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



HBE-E6/24



## Homogenise up to 24 samples

Simultaneously homogenise up to 24 samples in 10~40s.

## Independent Processing

Samples processed separately, avoiding cross-contamination. Ideal solution for samples difficult to process, such as tissue, bacteria, fungus, spore, hair, skeleton, faeces, soil, etc.

## Intuitive user experience

On-board memory for 6 different settings and does not require sample balancing, increasing test efficiency.

### 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-E6/24
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

# ULTRASONIC PROCESSOR



HUP-100E

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.

## Digital display

Precise control over output amplitude and switches between pulse mode and continuous output. Memory function for 5 different presets.

## Automatic, Independent Operation

Duration range is 1min~99min. The equipment automatically switches to standby mode after the set time.

## Easy to operate

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-400EA

## 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-100E	HUP-400EA
Power	80W	400W
Required Probe	1/8"	1/2"
Sample Volume	1~100mL	10 ~1000mL
Pulse Range	20 / 40 / 60 / 80 / 99%	1%~99%

# MULTI-POINT MAGNETIC STIRRER

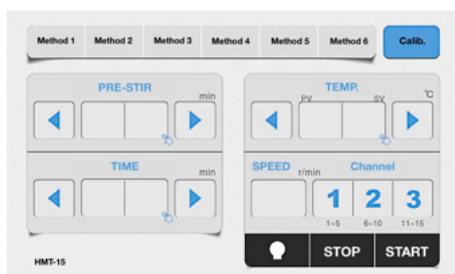


Our multi-point magnetic stirrers can maintain constant temperatures using a water bath and have high sample capacity. They are prevalent in biological, chemical and pharmaceutical fields of study.

HMT-15E

## Automatic Temperature Calibration

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.



## Simultaneously process 15 samples

Process up to 15 samples in a compact footprint, helping to maximise throughput while saving valuable bench space.



## Advanced PTD Elements

Advanced PTD heating elements provide stable, uniform heating and support safe, reliable operation.

### Included:

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

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

# VERTICAL SHAKER

These shakers use high-speed vibration to support efficient liquid-liquid extraction. They deliver consistent, repeatable sample treatment while automating mixing to reduce hands-on time and effort. Ideal for food testing, chemical extraction workflows, and other high-throughput laboratory applications.



HVS-4EM



HVS-6E

## Low Disruption

Small size and runs smoothly with a low noise level.

## Click & Start

Digital timer, continuous speed control and soft-start function means no supervision needed.

## Up to 40 Samples

With our HVS-4EM shakers, mix a maximum of 40 different samples simultaneously and at a consistent rate, ensuring great repeatability. They are specifically designed for QuEACHERS.

## Choose from the following models:

### HVS-4M

- Exclusive modules for multiple centrifuge tubes, specifically designed for **QuEACHERS**.
- Process up to 40 samples (15mL) and up to 20 samples (50mL).

### HVS-E6

- Suitable for separation funnels from 500mL to 1.5L (optional modular stand for 2L funnels required).
- Adjustable angle from 0° to 15°

### HVS-6EA

- Includes an additional function to remove gases present in the sample.

### HVS-10EM

- Extreme small size suitable for smaller desk spaces.
- Rotation speed up to 500rpm.
- Suitable for use with centrifuge tubes, measuring cylinders and volumetric flasks of volume 10mL to 100mL.

## Included:

Vertical Shaker x1, Power Cable x1, Instruction Manual x1

Series	HVS		
Model	HVS-6E	HVS-10EM	HVS-4EM
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
- Compact size saves space whilst maintaining strong power output
- Brushless motor runs smoothly yet quietly

## VORTEX MIXER

- Motor feedback system gives fine speed control
- Brushless motor runs smoothly yet quietly
- Shaking and vortex modes
- Continuous and touch modes, allowing pulsing or continuous mixing of samples



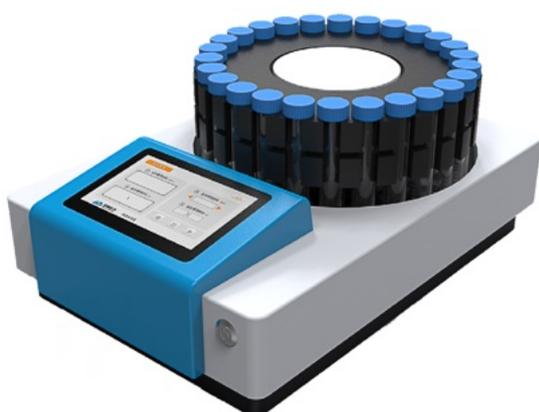
HMS-350

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
Dimensions (mm)	300x270x145	144x150x180	330x226x360
Weight	5 kg	1kg	Centrifuge Tubes

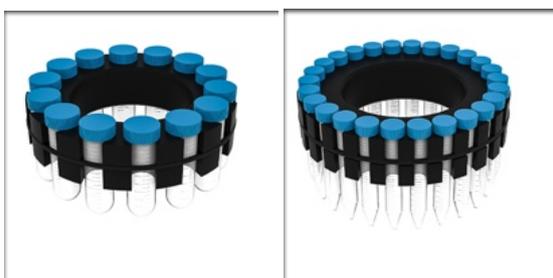
# MULTI-TUBE MIXER



HMV-50E/50EA



HMV-C26E



## Included:

Multi-tube Mixer x1, Installation Tools, Polystyrene Test Tube Rack (variable\*) x1, Power Cable x1, Instruction Manual x1

\*Choose between: 50-slot,  $\Phi$  16mm, suitable for 15mL centrifuge tubes / 15-slot,  $\Phi$  29mm, suitable for 50mL centrifuge tubes

Series	HMV		
	HMV-50E	HMV-50EA	HMV-C26E
Models	HMV-50E	HMV-50EA	HMV-C26E
Samples	50		26
Rotation Speed (rpm)	200-2400		200-3000
Amplitude (mm)	5		3
Memory Capacity	-	-	✓ 6 presets
Digital Timer Range	0-30min	0-90min	0-30min
Power (W)	60		120
Dimensions (mm)	420x260x380		220x360x185

## CAPACITY FOR 50 SAMPLES

Maximum capacity of 50 samples that can be mixed simultaneously.

## SPRING-LOADING MECHANISM

A fast-acting power switch supports quick operation. The HMV-C26E stores up to six settings in local memory, and its circular layout with a spring-loading mechanism allows easy access to test tubes.

## PRECISE ROTATION SPEED

Precise control over rotation speed ensures all samples across different experiments can be treated equally. The HMC-50EA has a separate pulsing or continuous mixing mode.

## MODULAR AND CUSTOMISABLE

Customisable with different test tube racks:

HMV-50E/50EA: Equipped with 1x  $\Phi$  12mm 50-space tube rack by default, also choose between:

- 50-space foam rack:  $\Phi$  10mm or  $\Phi$  13mm (15mL or 50mL centrifuge tubes)
- 15-space foam rack:  $\Phi$  25mm (50mL tubes)

# MULTIPLE VACUUM FILTRATION

- High-quality, Borosilicate glass or 316L stainless steel with a high pressure endurance, great interchangeability and well-proportional walls.
- Individual control for each channel.



## Included:

Vacuum pipe x1, Stand parts x2, Funnel (Stainless steel or Glass), Lock nut, Clamp, HPD Vacuum Pump x1, Manual x1

	Borosilicate Glass			Stainless Steel		
Model	HSF-G1	HSF-G3	HSF-G6	HSF-S1	HSF-S3	HSF-S6
Samples	1	3	6	1	3	6
Vacuum Flow	25		50L/min	25		50L/min
Receiver Flask	1000mL or 2000mL					
Volume	300mL					
Filter specs:	47 / 50mm; 0.22 /0.45 µm					

# 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 HPLC 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 Pressure	0.085MPa		
Max Flow Rate	10mL/min		
Internal Volume	12mL / Channel		
Dimensions	150x340x180mm		

\*At 25°C

# VACUUM PUMP

We command over decades 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.



HPD Series



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
- **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
Pressure	-0.08MPa	-0.04 ~ -0.08MPa	-0.04 ~ -0.08MPa	-0.04 ~ -0.1MPa	-0.04 ~ -0.08MPa
Power	60W		85W	120W	
Weight	2.5kg		5kg	7.5kg	
Dimensions (mm)	226x102x220		320x140x240		
Output diameter	Φ 7mm		Φ 8mm		

# ULTRASONIC CLEANER

Ultrasonic cleaners emit high-frequency sound waves that become alternating high-and-low-pressure waves inside 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 temperature ~95°C	
HU6150D	6L	150W		300x150x150mm			
HU10260D	10L	260W		300x250x150mm			
HU20500D	20L	500W		500x300x150mm			

# HPLC COLUMN HEATER



HT-230A

HCT-360

### Included:

HPLC Column Heater x1, Power Cable x1, Instruction Manual x1

Model	Structure	Capacity	Temperature Control	Power	Dimension	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

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.

# WATER BATH



HWT-6B

**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 dimensions (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

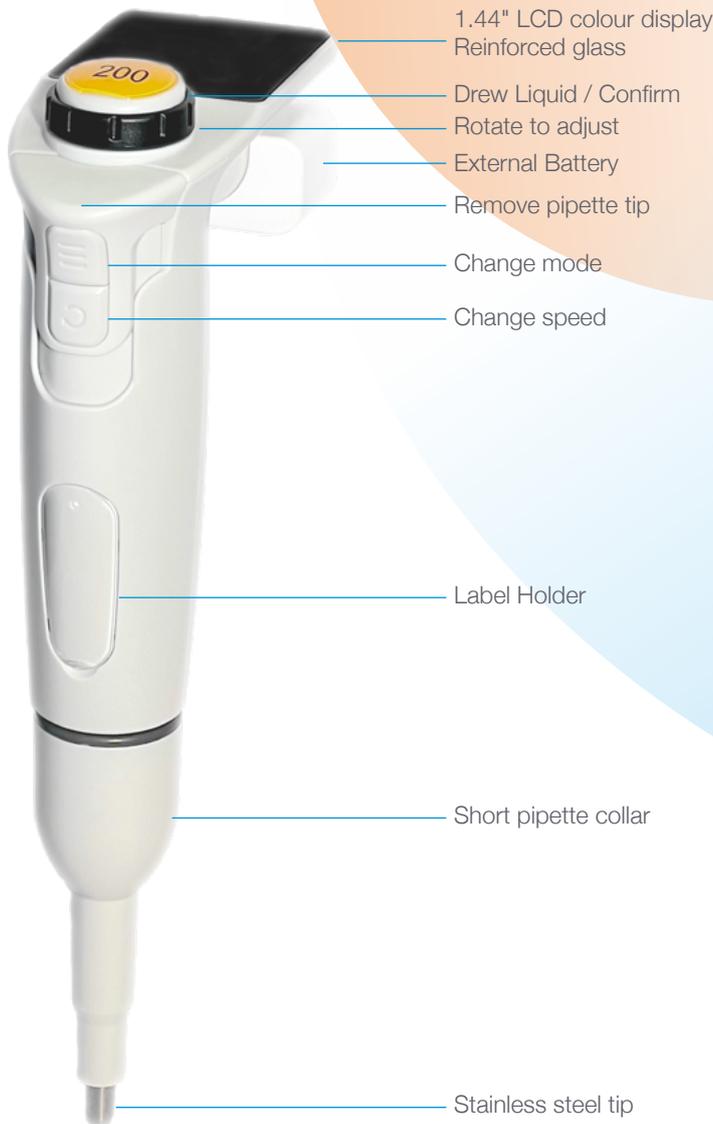
**Included:**

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

# ELECTRONIC PIPETTE

## YOUR PERFECT LAB COMPANION



HAP Series Electronic Pipette

### SUPREME PRECISION

Uses high performance electrical motors supported by innovative electronic controls ensure supreme precision and reliability.

### PERFECT SEAL

Its high repeatability is not only characterised by its precision, but also the perfect seal formed between the pipette and its tips.

### UNIFORMITY

Strict quality control limits measurement errors and ensures uniformity across all sample transfer.

### COMPACT AND PORTABLE

The pipette's small size and short length saves space and makes it easy to use in confined environments.

### RANGE OF VOLUMES

Single Channel: 0.2 - 1000µL  
Multichannel: 0.2 - 300µL



No.	Volume Range	Increment	Volume (µL)	Accuracy (±%)	Precision (±%)	Smallest Increment
HAP-81010	0.2 - 10µL	0.1µL	1	2.5	1.5	0.2µL
HAP-83020	0.5 - 20µL	0.1µL	2	7.5	2	0.5µL
HAP-84100	2 - 100µL	0.5µL	10	2	1	2µL
HAP-85200	5 - 200µL	1µL	20	2.5	1	5µL
HAP-87500	10 - 500µL	2µL	50	1.6	0.7	10µL
HAP-88001	10 - 1000µL	5µL	100	2	0.6	50µL
HAP-89005	0.1 - 0.5 mL	25µL	500	1	0.5	100µL
HAP-80010	1 - 10mL	100µL	1000	5	0.6	1mL
<b>8 Channels</b>						
HAP-88010	0.2 - 10µL	0.1µL	1	2.5	1.5	0.2µL
HAP-88100	5 - 100 µL	0.5µL	10	2	1	5µL
HAP-88300	10 - 300µL	1µL	30	2.5	0.88	10µL
<b>12 Channels</b>						
HAP-82010	0.2 - 10µL	0.1µL	1	2.5	1.5	0.2µL
HAP-82100	5-100µL	0.5µL	10	2	1	5µL
HAP-82300	10 - 300µL	1µL	30	2.5	0.8	10µL



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