HAUK TECHNOLOGY & DEVELOPMENT LTD

Focus on

Sample Preparation

Product Catalogue

2024

HAUK Technology & Development Limited is a UK-based corporation wholly owned by Tianjin Heng'ao Technology Development Company. We offer 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.

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

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Extraction and Concentration

Sample Homogenisation

Microbiological Sample Preparation

General Laboratory Equipment

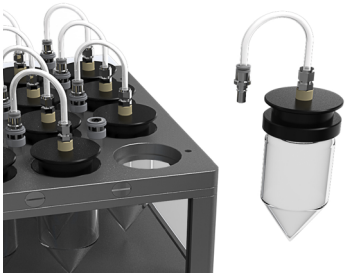
HPE PARALLEL EVAPORATOR

HPE-16B

The concentration of samples is a mandatory step in sample analysis. HAUK's Parallel Evaporators allow for several samples to be simultaneously heated, depressurised and rotated to completely evaporate them or concentrate to a specific volume. Multiple experiments can be run simultaneously. Each of our 4 models are specialised in different ways, making sure that all experimental requirements are covered.

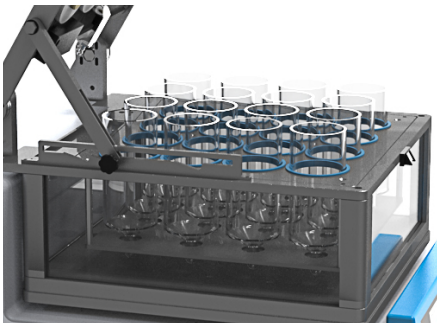
AUTOMATED, HIGH-THROUGHPUT TESTING

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.



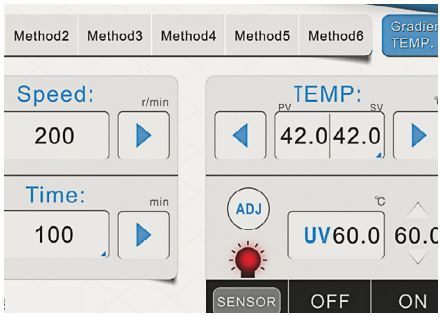
INDEPENDENT SAMPLE CONTROL

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.



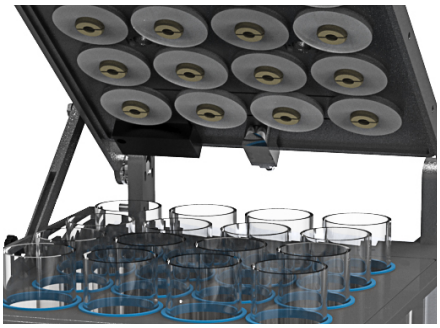
UNOBSTRUCTED VIEW OF SAMPLES

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).



FULL TOUCHSCREEN CONTROLS

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.



INDIVIDUAL HEATED COVERS

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

- 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-6B

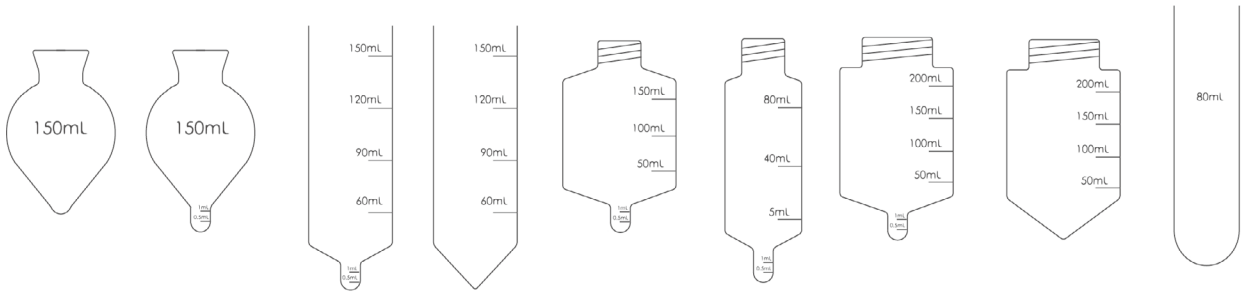
HPE-B series

- 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.



Compatible with various range of concentrator tubes

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~95°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 HPE Parallel Evaporators.

HVS-03

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.

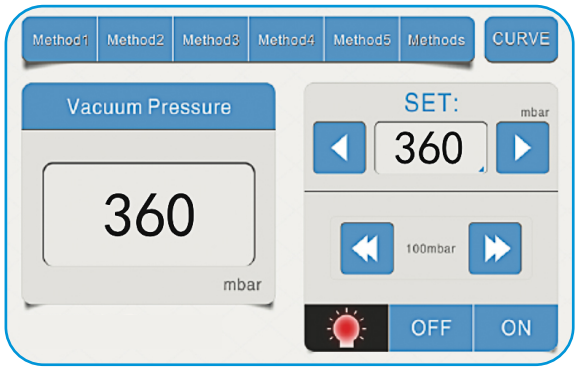
Increased recovery rate

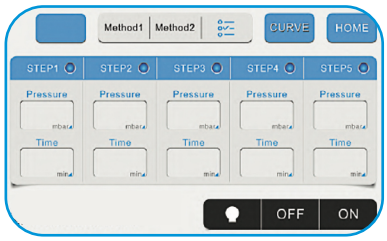
Increases recovery rate of solvents when used with our parallel evaporators.

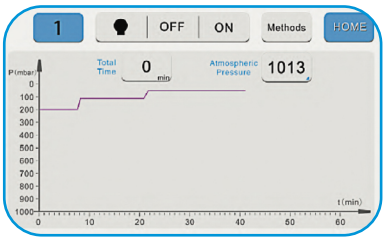
5-inch Touchscreen

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

- Prevents harmful organic waste gas from escaping into the atmosphere
- 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

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-I/A/B/D

HAC PARALLEL NITROGEN CONCENTRATOR

HAC-I/A/B/D

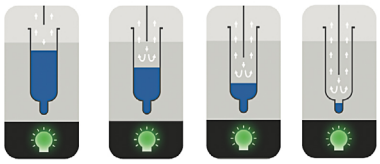
High through-put concentration

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

The HAC is capable of **adjusting the angle** of the nitrogen needles. This enables vortex flow in the sample, increasing the surface area and making the heating process more efficient.

Collective Removal of Waste Gasses

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.



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.

7-inch Touchscreen Display

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.

Transparent Covers and Interior Lights

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

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 - 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 - 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.

HAC - B series

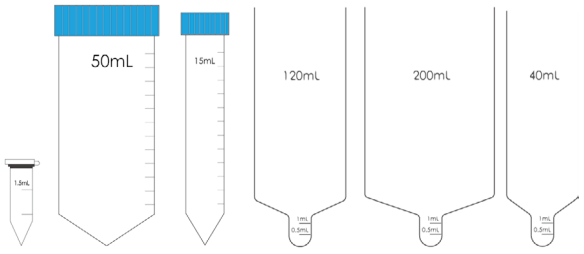
- Can process **up to 24 samples.**
- Much more precise temperature control to a degree of ±0.1°C due to built-in water bath circulation.
- Fibre-optic volume quantification function.
- Optional automatic water resupply feature.

HAC - 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

Compatible with various tube and tube rack



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	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	±0.5°C	±0.5°C			±0.1°C			±0.1°C	±0.5°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

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-Ai and HSC-Ai series are equipped with auto needle height adjustment.**

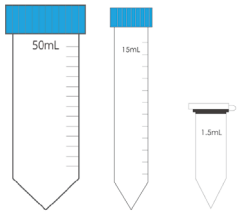
Intuitive User Interface

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, 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-24B series can control the nitrogen flow rate for each needle independently.

HGC-A / HSC-A



Compatible with more tubes

HGC - A / HSC - A

- Maximum of 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-24BA

HSC - 24BA

- 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-24BA compatible with micro-flow rate adjustment**

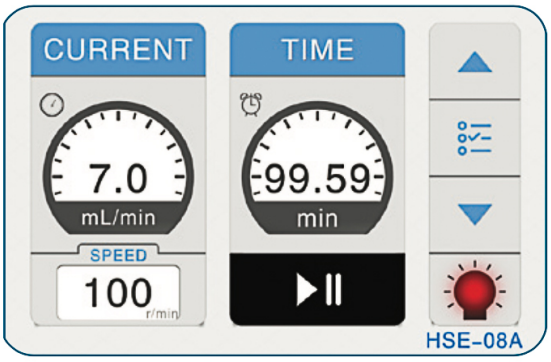
Included:
Nitrogen Evaporator x1, Rubber Tube (1.5m), Nitrogen Needle x12/x24, Power Cable x1, Instruction Manual x1

Optional:
Heating Module: Hole depth 45mm; hole diameter default 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		HSC-24BA
	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)		-		-
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	360x360x720

SOLID PHASE EXTRACTION
SYSTEM

HSE-08A



HIGH-THROUGHPUT

Allows simultaneous processing of up to 8 samples. The HSE-08C series has a maximum flow rate of 60mL/min. The precision pump of the HSE-08D 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-C series has memory space for 5 settings, and the HSE-08D has space for 30.

GREAT RESULT RELIABILITY

Tightly sealed and a highly consistent liquid flow speed and rotation speed. The HSE-08D 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-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

SOLID PHASE EXTRACTION SYSTEM

HSE-08D

VERSATILE

Two independent loading mechanisms with two different pumps.

The first is an infusion pump for samples of volumes below 100mL. This provides a greater sample loading accuracy of ±2%.

The second is a peristaltic pump designed for large volumes (100mL to 5000mL) of samples at a loading accuracy of ±5%.

NITROGEN PURGE

Equipped with a nitrogen purge system capable of purging up to 8 columns simultaneously.

This can also be used to purge and dry SPE cartridges.

USER-FRIENDLY

Memory capacity for over 30 preset user settings.

HSE-08D

The **HSE-08D** is an upgraded version of our HSE-08C automated solid phase extraction (SPE) system. It is equipped with two independent loading mechanisms, greatly increasing its potential loading capacity. One of the loading systems is designed for high-throughput usage, making it perfect for testing large volumes of samples, such as from drinking water or other sources. The other, more precise infusion pump can completely automate the conditioning, rinsing and elution parts of the SPE process.

Series	HSE-08D	
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	±2%	±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-12D/24D

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, 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:

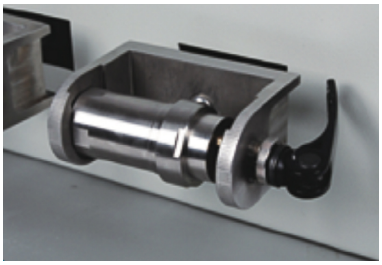
Büchner Flasks (1000mL)
Large Sample Volume Tube Adapters SPE Cartridges
Oil-Free Vacuum Pumps

Works with HPD Vacuum Pump

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

BALL MILL

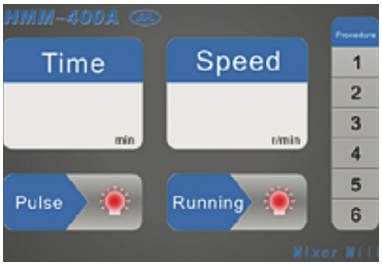
HMM-400A



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-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
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
Our motors have slanted stators and rotors which provide more effective sample homogenisation.

Minimal Sample Damage
The homogeniser maintains a fast processing time, simultaneously limiting heat generation and sample exposure, preventing sample damage and contamination.

Stainless Steel
Effective parts of the homogeniser are made from 316L stainless steel, making them durable and easier to clean and maintain.

HFJ-10/18/25

Hand-held or Desktop
Our homogenisers come in many shapes and forms. The HFJ is completely hand-held, with a combined body and blade. Others are bigger and customisable, with different blade sizes to achieve different results and process different samples.

Φ 25mm

Φ 18mm

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

Series	HFJ		
Models	HFJ-10	HFJ-18	HFJ-25
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
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.

Dilute Multiple Samples
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. 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
Weighing Range	0-3000g
Weighing Accuracy	0.01g
Dilution Ratio	1/2 - 1/99
Dilution Accuracy	>98%
Pump Heads	2

PADDLE BLENDER HOMOGENISER

HBM-400G

This instrument specialises in the sterile homogenisation of samples. The gentle yet rapid blending action minimises cell and tissue damage whilst maintaining efficiency.

Easy Maintenance

Front loading door is removable, and only stainless steel makes contact with the sample bag, making the whole machine easy to clean and maintain

Touch-screen display

Adjustable blending time and frequency. Shows parameters and current conditions of the machine. Memory for 6 different settings, making experiments repeatable.

Sterile bag

Reduces risk of sample cross-contamination.

HBM-400B

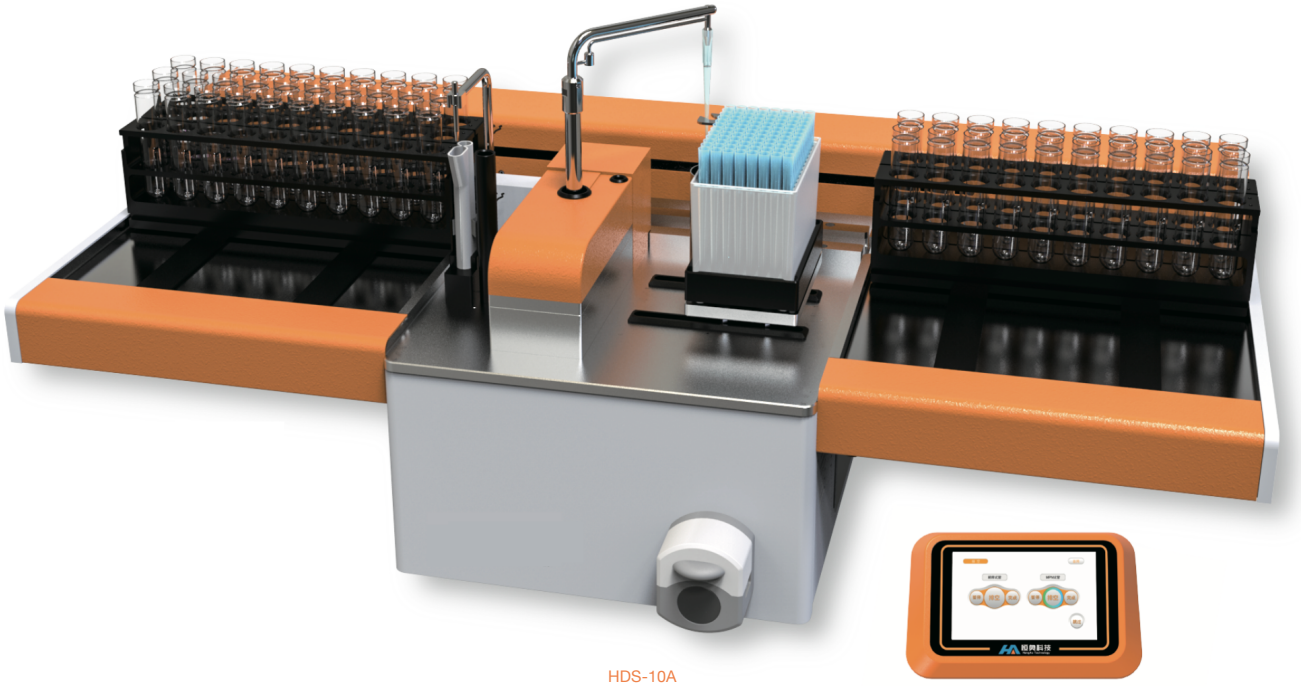
Included:

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	
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	

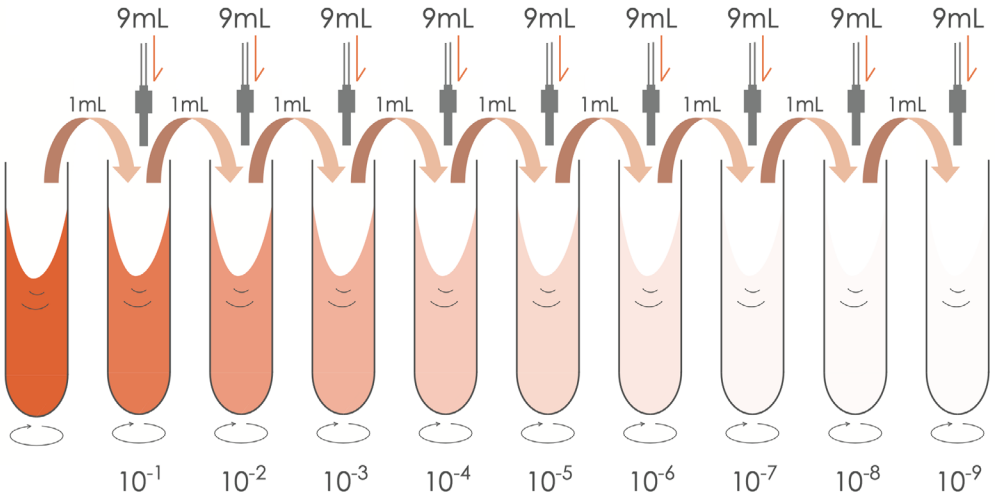
AUTOMATIC BIOLOGICAL DILUTION SYSTEM

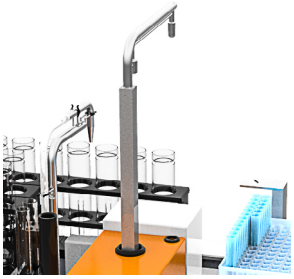
TIYA



HDS-10A

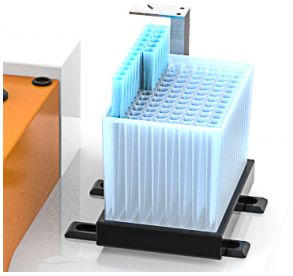
This biological dilution system, named Tiya after the Greek goddess of brilliance Theia, is designed for the continuous gradient dilution or addition of microbiological samples. Tiya provides a high-throughput solution to a complex set of processes and greatly improves efficiency and repeatability. It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





AUTOMATIC CALIBRATION

Automatic calibration of injecting liquid volume on startup. Combination of a high precision injection pump and peristaltic pump ensures repeatable and accurate extractions and dilutions.



CONTAMINANT-FREE OPERATION

Using a dedicated sample transfer platform and in-situ sample mixing and transfers reduces the formation of aerosols in the sample. Tiya uses a separate, sealed pipette tip disposal box for automatic pipette tip removal. Its small size means the machine can fit in laminar flow cabinets.

HIGH EXPERIMENTAL EFFICIENCY

No upper limit on sample volume. The sample is automatically diluted on a selected gradient of 10-1, 10-2, 10-3, 10-4, 10-5, 10-6 or 10-7. Each million-fold dilution would only take 84 seconds, significantly increasing experiment efficiency and saving valuable operator time. The HDS-06A model is equipped with a conveyor belt that allows it to handle more samples.

VARIETY OF DIFFERENT MODES

One-button startup process. Has a variety of different modes, including dilution, MPN method, disinfection and pipette cleaning modes.

HDS-06

Series	HDS	
Models	HDS-06/08/10	HDS-06A/08A/10A
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	84s per 7 dilutions	
Diultion 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-90A and B series have a separate laptop included.

Flexible Usage

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

Good result repeatability and accuracy

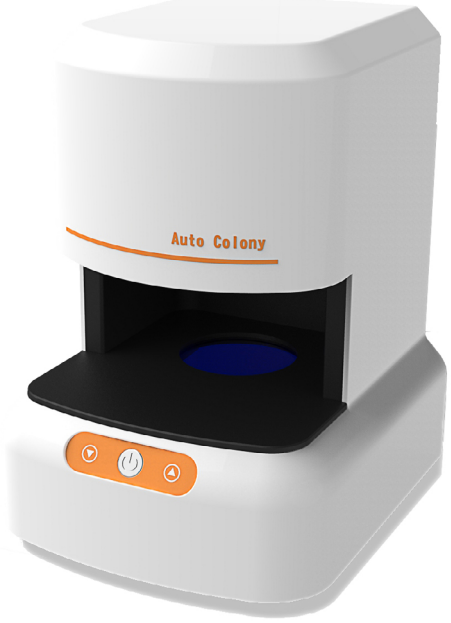
Can automatically correct disruption from the petri dish and cut up flaky colonies.

CMOS camera

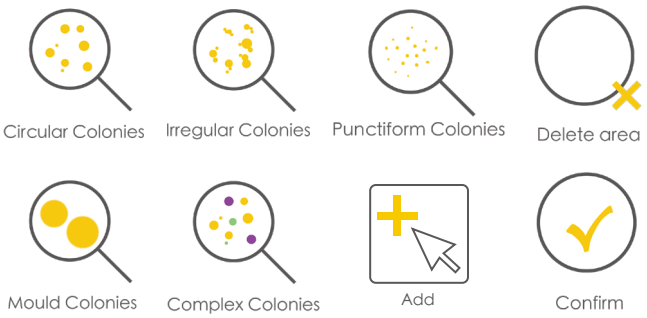
Produces images with high definition and accuracy. Optional combinations of light sources and background colours. Transmission light is adjustable.

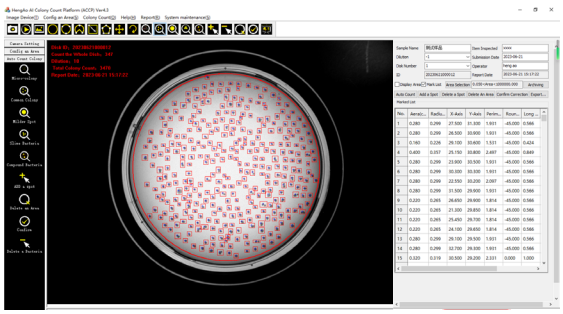
Data Export

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



HCC-90A/B

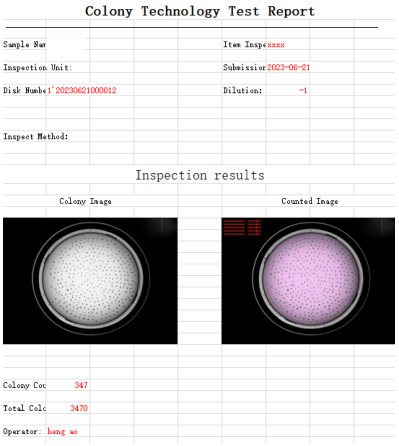




Included:

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

Model	HCC-90A	HCC-90B
Camera Resolution	5 MP	12 MP
Petri Dish Size	90mm	
Background	Black/White/Multi-Colour	
Colony Resolution	<0.1mm	
Light Souce	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	

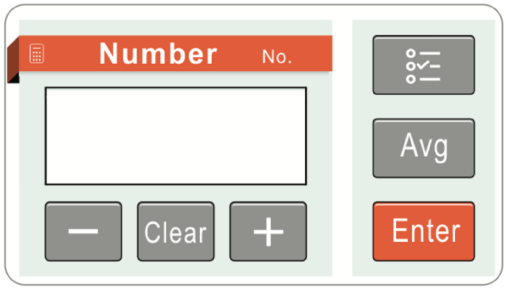


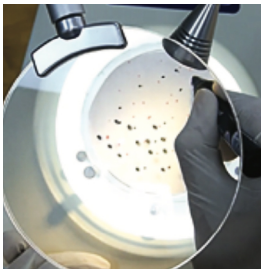
COLONY COUNTER

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-01/02

- 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-01	HCC-02
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-01

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.

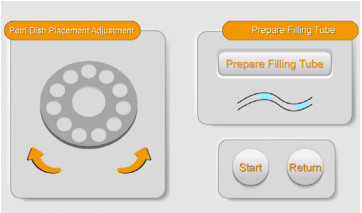
Included:
Automated Culture Media Preparation Machine x1, Power Cable x1, Instruction Manual x1

Model	HMP-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

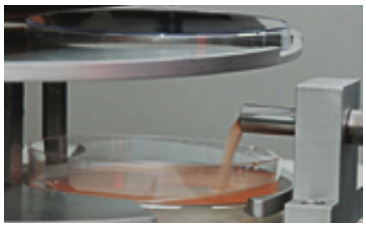
The automatic culture media dispensing machine uses a single-chip microcomputer control system along with multiple motors, sensors and other features such as UV lights to automatically stack plates filled with culture medium. It makes the whole dispensing process more accurate and efficient.



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

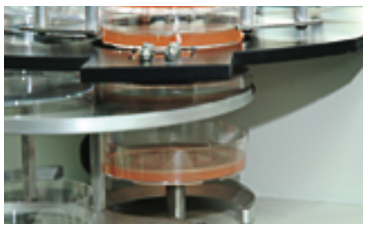
Peristaltic Pump Design
Accurately pours liquid into the petri dishes.

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

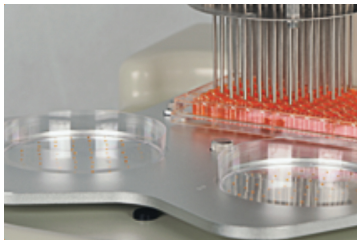
Model	HDP-150
Petri dish size	90mm
Dispensing speed (excluding media osciliation)	720 dishes/hr*
Dispensing speed (including media osciliation)	360 dishes/hr*
Dispensing volume	15~30mL
Dispensing capacity	300 dish
Dispensing precision	1%
Dimensions	470x340x688mm

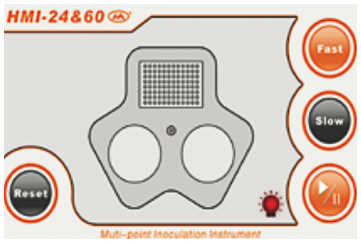
*Dispensing speed dependents on media volume and media osciliation settings.

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&60





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

The inoculation speed is fast and adjustable. Sample tray can rotate automatically to achieve pin-point inoculation based on prior user input. Foot pedal can be used to switch machine on and off.

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

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.

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

HAS-100B

Portable air sampler HAS-100B

- 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 repository 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-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

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-6/24

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-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

ULTRASONIC PROCESSOR

HUP-100

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-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%

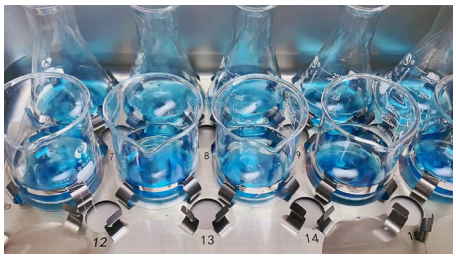
MULTI-POINT MAGNETIC STIRRER

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-15

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

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

Advanced PTD Elements

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

Included:

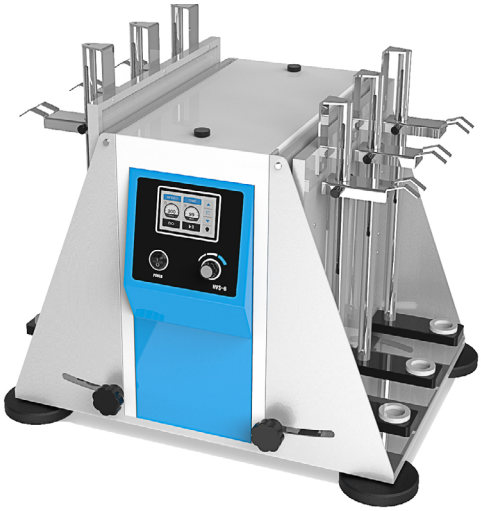
Multi-point Magnetic Stirrer x1, Positioning Frame x1, Stirrer Pack x1, Power Cable x1, Instruction Manual x1

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

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

HVS-4M



HVS-6

Low Disruption

Small size and runs smoothly with a low noise level.

No Supervision Required

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

Up to 40 Samples Processed

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

Choose from the following models:

HVS-4M

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

HVS-6

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

HVS-6A

- additional function to remove gasses present in the sample.

HVS-10M

- 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		
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
- Compact size saves space whilst maintaining strong power output
- Brushless motor runs smoothly yet quietly

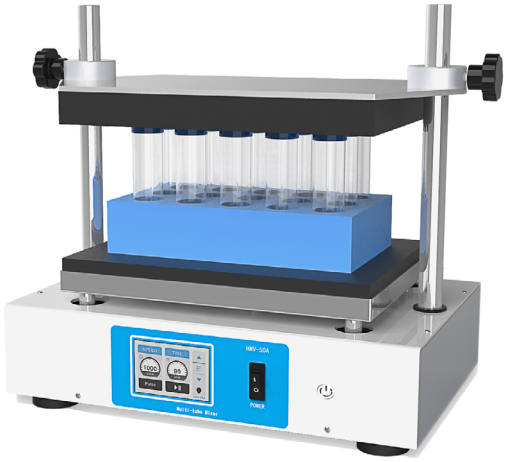
VORTEX MIXER

- 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

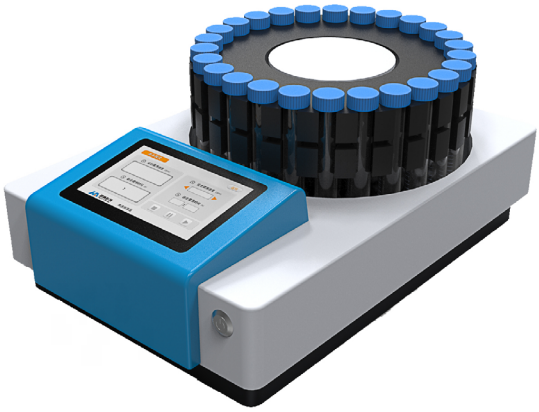
HMS-350

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

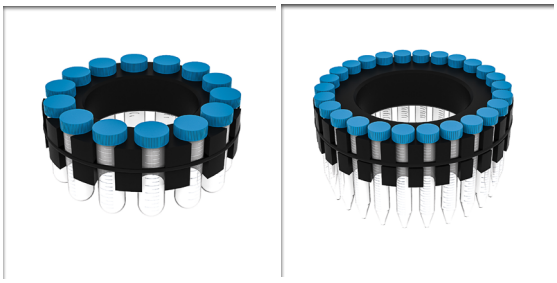
MULTI-TUBE MIXER



HMV-50/50A



HMV-C26



CAPACITY FOR 50 SAMPLES

Maximum capacity of 50 samples that can be mixed simultaneously.

SPRING-LOADING MECHANISM

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.

PRECISE ROTATION SPEED

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

MODULAR AND CUSTOMISABLE

Customisable with different test tube racks:
HMV-50/50A: Equipped with 1x Φ 12mm 50-space foam rack by default

- 50-space foam rack: Φ 10mm, Φ 12mm or Φ 13mm
- 15-space foam rack: Φ 25mm

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

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

MULTIPLE VACUUM FILTRATION

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

Included:
Vacuum pipe x1, Stand psrts 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 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

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
Presure	-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

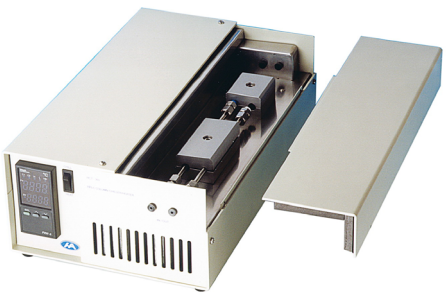
Optional:
Ultrasonic Cleaner Lid

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 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

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

ELECTRONIC PIPETTE

YOUR PERFECT LAB COMPANION

1.44" LCD colour display
Reinforced glass
Drew Liquid / Confirm
Rotate to adjust
External Battery
Remove pipette tip
Change mode
Change speed
Label Holder
Short pipette collar
Stainless steel tip

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 repeatablity 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
8 Channels						
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
12 Channels						
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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