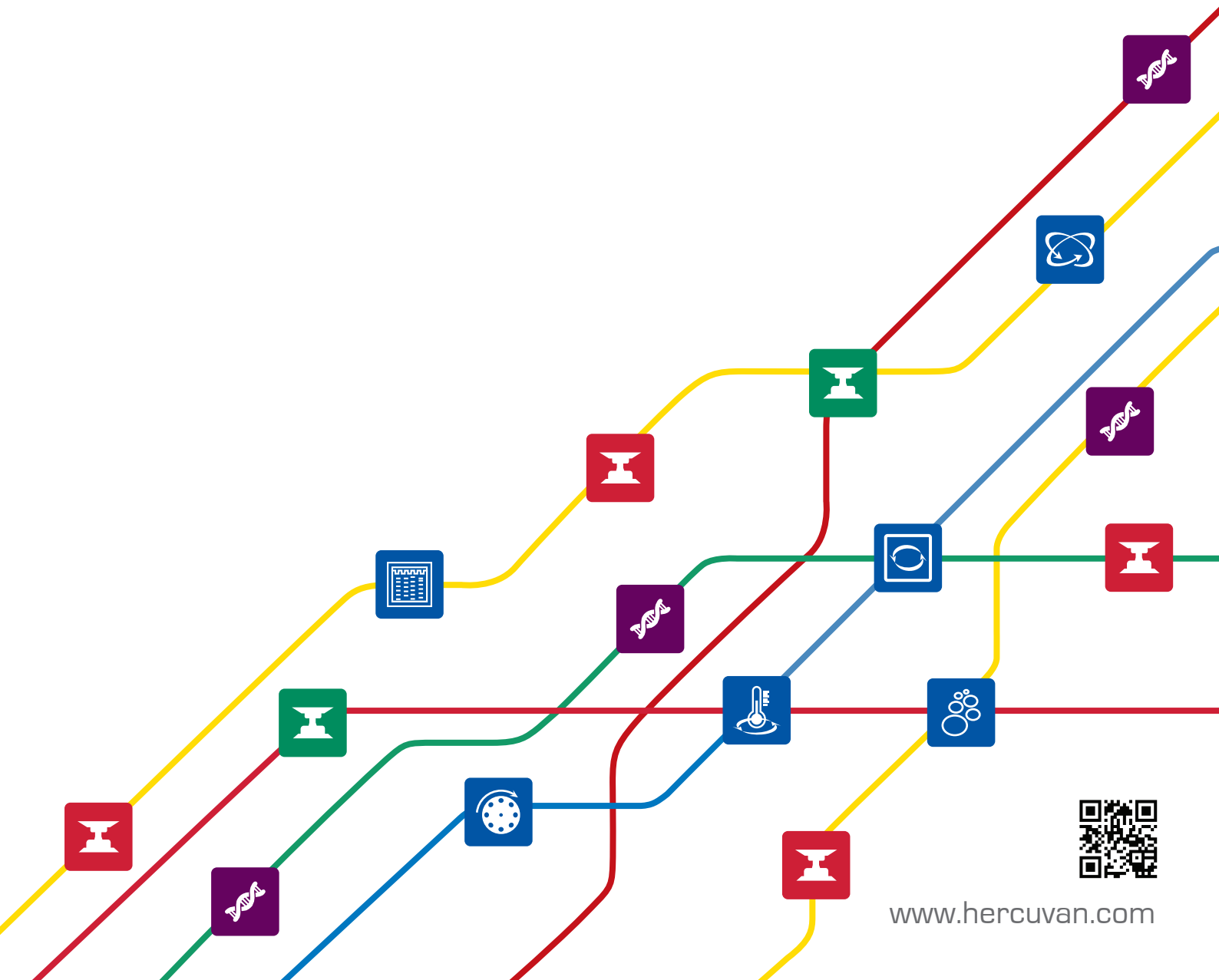


*delivering innovative laboratory supply
for advanced scientific discoveries*



Welcome to Hercuvan

Dear Valued Customer,

We have been constantly developing and delivering innovative products and solutions in areas of liquid handling, sample pretreatment, temperature control, sample handling, microvolume spectrophotometer and thermal cyclers for applications in the field of laboratory, analytical and life science research.

We have one core mission in our heart: to make your workflow in the lab easier and more streamlined at much lower cost.

New in our catalog

Hercuvan catalog is now included new product information which recently launched in 2016. The seven new products have led to a more comprehensive product portfolio added to our product lines.

From sample preparation to sample handling, quality lab equipment is one of the key to quality results

Our Table Top Series product line covers laboratory equipment such as centrifuges, rockers & shakers, thermo shakers, shaking incubator, liquid handling, dry bath incubators, vortex mixers, sample concentrators, sterilizers, homogenizers, electrophoresis system and transilluminator. They are designed to save space, intuitive and improve work flow efficiency.

The newly added products are Shaking Incubators, Transilluminator, Electrophoresis System, Vortex Mixer and Glass Bead Sterilizer – all assist in getting your research done quickly and effectively.

Precision and quality of excellence in microvolume spectrophotometer

Our Nano Series product line witnesses the creation of newly enhanced model, the ND-3800-OD Nano DOT Microspectrophotometer. With the enhanced features of 7-inch touchscreen design for easy navigation and operation plus the new OD₆₀₀ application, it enables measurement of bacteria concentration to monitor the growth of bacterial cultures within finger tips.

High performance and accuracy in every PCR experiments

Our Gene Series product line undergoes a transformation. The Gradient Touch Thermal Cycler has been given a new stylish look. The new GS-96 PRO Gradient Touch Thermal Cycler is designed with HexaPRO block which comprises 6 temperature zones using the latest technological advances, allowing you to optimize 6 reactions precisely in a single run.

For up-to-date information on Hercuvan products, visit www.hercuvan.com where you can access:

- Product information
- Technical datasheet
- Product catalogue
- Latest news

Any questions or suggestions? You can reach your local contact or drop us a line to info@hercuvan.com. We are looking forward to hearing from you!

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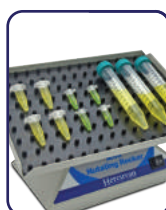
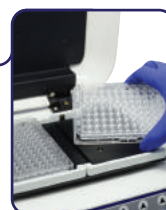
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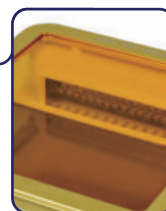
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Product Line Example/ General InformationProduct Line Example **54**General Information **55**

New Products



TT-60-SI

TT-60-SI Shaking Incubator (pg 10-11)

TT-60-SI Shaking Incubator is a compact benchtop shaking incubator designed for mixing, incubation and cultivation of biological liquids according to set programme in a tightly sealed growth chamber.

The unit features large LED display for speed, temperature and timer. Built-in microprocessor controls for temperature and speed adjustment enables smooth and stable temperature control and shaking function. A wide variety of interchangeable platforms allows for using with different shapes and sizes of common lab vessels.



TT-254-VM

TT-254-VM VeloTEX Vortex Mixer (pg 25-26)

TT-254-VM VeloTEX Vortex Mixer is a versatile variable speed vortex mixer intended for gentle mixing to vigorous vortexing of samples in various types of commonly used tubes ranging from 0.2 ml up to 50 ml and microplate.

Two modes of operation available:

- i) Continuous mode when using accessory attachments or foam tube stands
- ii) Touch mode which activates mixing when depressing the standard cup head



TT-HES-1

TT-HES-1

MiniGEL Electrophoresis System (pg 44-45)

TT-HES-1 MiniGEL Electrophoresis System is a compact, easy to use all-in-one electrophoresis system. It is completed with all components required to cast and run horizontal gels, including gel trays, combs, casting stand, gel tank and digital power supply. The power supply attaches directly to the gel tank without requiring power cables and save valuable bench space.

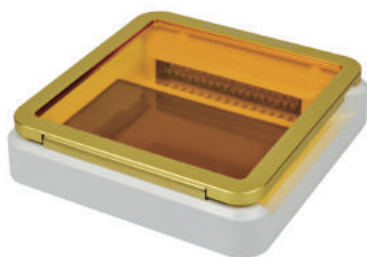
Double sided combs are included in the system. The smaller tooth combs are compatible with multichannel pipettes. The gel tray features a dark contrast strip to aid in visualizing wells while loading and lines that fluoresce under UV or blue light to keep track progress of the run.



TT-300-GBS

TT-300-GBS Glass Bead Sterilizer (pg 47)

TT-300-GBS Glass Bead Sterilizer offers a fast and effective method to decontaminate solid metal and glass implements in seconds. It works by heating the glass beads to about 300°C to effectively destroy all microbes and spores. Suitable for sterilizing forceps, scissors, scalpels, needles and inoculating loops.



TT-BLT-470

TT-BLT-470 SafeViewer Blue Light Transilluminator (pg 46)

TT-BLT-470 SafeViewer Blue Light Transilluminator is a compact, portable and high intensity blue light transilluminator used as a safer, less toxic alternative to UV transilluminators for viewing wide range of blue light-excitable nucleic acid stains.

The ultra slim TT-BLT-470 SafeViewer Blue Light Transilluminator emits a high intensity LED array at wavelength of 470 nm which illuminate wide range of "safe" dyes in oppose to toxic Ethidium Bromide. This method prevents exposure of users to harmful UV radiation and minimizes DNA damage caused by UV light.



GS-96 PRO

GS-96 PRO Gradient Touch Thermal Cycler (pg 49 - 50)

GS-96 PRO Gradient Touch Thermal Cycler is the upgraded version of GS-96 model that is engineered with HexaPRO Block that have 6 temperature zones for PCR optimization. With six separate Peltier blocks, you can control and optimize 6 reactions precisely.

6 x 16 x 0.2 ml
HexaPRO block

ND-3800-OD

ND-3800-OD Nano DOT Microspectrophotometer (pg 51 - 53)

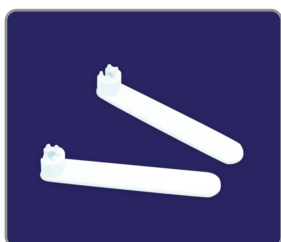
ND-3800-OD Nano DOT Microspectrophotometer is a robust microspectrophotometer that provides full spectrum UV-Vis analysis. The newly added application of OD₆₀₀ measurement with cuvette mode enables measuring of bacteria concentration in liquid suspension to monitor growth of bacterial cultures. Enhanced with 7-inch touch screen design and built-in Android system, it allows quick navigation of application modules, easy operation and access of data without requiring connecting to a computer.

It is an integrated system that delivers fast and reliable quantification of nucleic acid and protein with microvolume samples as little as 0.5 µL.

Table Top Series TT-EP ElitePro Single Channel Adjustable Volume Pipette



TT-EP-CS



TT-EP ElitePro Single Channel Adjustable Volume Pipette series is the latest innovation based on ergonomics, comfort and accuracy aspects of liquid handling research. ElitePro is a well-balanced perfect module that comes in nine models with full adjustable volume ranging from 0.2 μ L to 10 mL. Built with robust yet ergonomic construction, it is fully autoclavable at 121°C for complete sterility. The AccuLock brake feature helps to protect against accidental volume changes while the digital micrometer display is always visible. ElitePro is a premium pipette range that is lightweight and ergonomically designed, exhibits unsurpassed accuracy and extremely comfortable even after prolonged use.

Features

■ Maximum Pipetting Comfort

Reduced Pipetting Forces

Spring pressure is engineered to minimize actuation forces to only 4.0 Newtons

Ergonomically Contoured Tip Ejector Button

Button is contoured and angled to protect against discomfort and reduce pressure on the thumb, minimize fatigue after prolonged use

Hybrid Hook Design

The 130° hook is positioned for an ergonomic finger rest and reduces tension while holding it

Slim and Rounded Handle Design

Handles are thin, rounded and smooth for comfortable fit in either the right or left hand

■ Exceptional Accuracy and Reproducibility

Adjustable Volume & Locking Wheel

Continuously adjustable digital micrometer for volume setting and optional locking wheel positioned at the top of the handle protect against unintentional volume change

Air-jacketed Handle

Eliminates volume expansion due to hand heat transfer

Finely Polished Stainless Steel Piston & Chemical-resistant, Maintenance-free Seals

Both features serve as precision ground and to ensure accurate performance, provide exceptional piston and seal life

■ Versatility

Compatible with a wide range of tips and most commonly used lab tubes

■ Calibration Tool Included

Free calibration tool supplied with each ElitePro Pipette. The unique open-ended design allows the wrench to be used without any disassembly and without removing the plunger button

Table Top Series

TT-EP ElitePro Single Channel Adjustable Volume Pipette



AccuLock system locks your volume selection precisely.

- The “teeth” of this error-proof arrestment device force your exact selection into position precisely.
- No more “eyeballing” the tiny increment lines of the volumeter.
- When you hear it click into place, you know your selection is correct, precise & secure!

Technical Data

Cat. No.	Volume Range	Accuracy	Reproducibility
TT-EP-2U	0.2 - 2 μ L	\pm 12.0 - 1.5%	\leq 6.00 - 0.70%
TT-EP-10U	1 - 10 μ L	\pm 2.5 - 1.0%	\leq 1.50 - 0.40%
TT-EP-20U	2 - 20 μ L	\pm 2.5 - 1.0%	\leq 1.50 - 0.30%
TT-EP-50U	5 - 50 μ L	\pm 2.0 - 1.0%	\leq 1.50 - 0.25%
TT-EP-100U	10 - 100 μ L	\pm 1.8 - 0.8%	\leq 0.50 - 0.15%
TT-EP-200U	20 - 200 μ L	\pm 1.8 - 0.8%	\leq 0.50 - 0.15%
TT-EP-1M	100 - 1000 μ L	\pm 1.5 - 0.8%	\leq 0.30 - 0.15%
TT-EP-5M	1 - 5 mL	\pm 1.2 - 0.6%	\leq 0.30 - 0.15%
TT-EP-10M	1 - 10 mL	\pm 2.5 - 0.6%	\leq 0.30 - 0.15%

Ordering Information

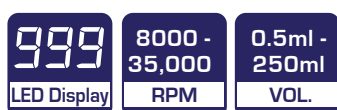
Cat. No.	Single Channel Adjustable Volume Pipette
TT-EP-2U	ElitePro Single Channel Adjustable Volume Pipette TT-EP-2U, 0.2-2 μ L
TT-EP-10U	ElitePro Single Channel Adjustable Volume Pipette TT-EP-10U, 1-10 μ L
TT-EP-20U	ElitePro Single Channel Adjustable Volume Pipette TT-EP-20U, 2-20 μ L
TT-EP-50U	ElitePro Single Channel Adjustable Volume Pipette TT-EP-50U, 5-50 μ L
TT-EP-100U	ElitePro Single Channel Adjustable Volume Pipette TT-EP-100U, 10-100 μ L
TT-EP-200U	ElitePro Single Channel Adjustable Volume Pipette TT-EP-200U, 20-200 μ L
TT-EP-1M	ElitePro Single Channel Adjustable Volume Pipette TT-EP-1M, 100-1000 μ L
TT-EP-5M	ElitePro Single Channel Adjustable Volume Pipette TT-EP-5M, 1-5 mL
TT-EP-10M	ElitePro Single Channel Adjustable Volume Pipette TT-EP-10M, 1-10 mL

Optional Accessories

Cat. No.	Carousel Stand
TT-EP-CS	ElitePro Carousel Stand For Up to 6 Pipettes
Cat. No.	Pipette Tips
TT-EP-T5M	Tips, 5 mL, 250 ea / pack
TT-EP-T10M	Tips, 10 mL, 150 ea / pack



TT-30K Digital Handheld Homogenizer



TT-30K Digital Handheld Homogenizer is a powerful handheld homogenizer designed to rapidly homogenize, disperse and disintegrate biological samples in 10-30 seconds with adjustable speed ranging from 8,000 rpm up to 35,000 rpm. The homogenizer is ideal to use with samples from 0.5 ml to 250 ml with three types of generator probes available for different sample volume range. It is lightweight to be handheld with one hand operation and also can be mounted to a stand for fatigue-free and longer operation.

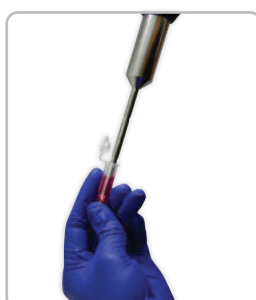
TT-30K Digital Handheld Homogenizer works by drawing the sample material into the generator probe with variable speed rotor. The material is repeatedly cycled and drawn through narrow slits in the generator probe where the extra shearing and disintegration action taken place to reduce the particle size of the sample. Complete homogenization of tissues (muscle, liver, breast tissue, etc.) is generally achieved in a few seconds.

Features

- Ideal for shredding and homogenizing samples
- Adjustable speed control from 8,000 rpm up to 35,000 rpm with easy-to-read LED display
- Practical for small samples ranging from 0.5 ml to 250 ml
- Light weight and comfortable for one hand operation
- Autoclavable generator shaft is made up of 316L stainless steel
- Interchangeable generator probes are easily disassembled for cleanup
- Optional H-type stand with adjustable height and angle available for more convenient and lengthier operation

Applications

- Tissue homogenization (liquid/solid mixture)
- PCR, RNA and DNA sample preparation
- Food and plant analysis
- Environmental, biological, pharmaceutical, microbiological research



Technical Data

Specifications	TT-30K Digital Handheld Homogenizer
Speed control range	8,000-35,000 rpm (digital display, 1000 rpm increment)
Sample volume range	0.5 ml – 250 ml
Noise level	72 dB
Electrical supply	AC 220-240V, 50Hz
Power (Input/Output)	160W/100W
Dimension (W x D x H)	46 x 55 x 230 mm
Weight	0.7 kg
Permissible ambient temperature	5 – 40°C
Permissible relative humidity	≤70%

Optional Accessories

Generator Probes



Interchangeable Generator Probes

Type	Sample Volumes	Outer Diameter	Inner Diameter	Length	Min. / Max. Immersion Depth
TT-30K-GPA	0.5 - 50 ml	6 mm	3.9 mm	150 mm	20 / 90 mm
TT-30K-GPB	1 - 100 ml	8 mm	6.1 mm	167 mm	20 / 107 mm
TT-30K-GPC	1 - 250 ml	10 mm	7.9 mm	180 mm	20 / 120 mm

Ordering Information

Cat. No.	Digital Handheld Homogenizer
TT-30K-240V	Digital Handheld Homogenizer TT-30K, AC 220-240V
Cat. No.	Accessories
TT-30K-GPA	Generator probe for TT-30K, volumes 0.5 - 50 ml, Ø6 mm x L 150 mm
TT-30K-GPB	Generator probe for TT-30K, volumes 1 - 100 ml, Ø8 mm x L 167 mm
TT-30K-GPC	Generator probe for TT-30K, volumes 1 - 250 ml, Ø10 mm x L 180 mm
TT-30K-ST	H-type stand for TT-30K Digital Handheld Homogenizer

Table Top Series

TT-60-SI Shaking Incubator




TT-60-SI

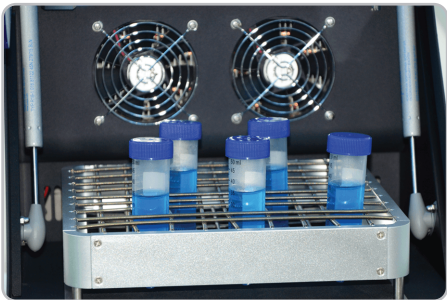
50-300
RPM

R.T.
+5-60
Temp. (°C)

1min -
99h59min
Timer



Orbit



TT-60-SI Shaking Incubator is a compact benchtop shaking incubator designed for mixing, incubation and cultivation of biological liquids according to set programme in a tightly sealed growth chamber.

The unit features large LED display for speed, temperature and timer. Built-in microprocessor controls for temperature and speed adjustment enables smooth and stable temperature control and shaking function. A wide variety of interchangeable platforms allows for using with different shapes and sizes of common lab vessels.

Features

- Large LED display for speed, temperature and time setting
- Horizontal circular 20mm orbit for mixing
- Microprocessor controls for temperature and speed adjustment
- Wide-angled cover lid enables easy sample loading and unloading
- Units stops automatically when cover lid is lifted
- Audio alarm sounds when time reaches zero
- Independent temperature alarm system, heating function off when temperature exceed limit
- Maintenance-free, brushless DC motor permits a long service life
- Unique speed control feature helps to prevent sudden start to eliminate splashing of vessel contents
- Adjustable fan speed eliminates sample evaporation

Applications

- Growing cell cultures
 - Bacterial suspensions
 - Extracting tissue samples
 - Solubility studies
 - Staining/destaining
 - Gel washing
 - General mixing
 - General incubation

Table Top Series TT-60-SI Shaking Incubator

Technical Data

Specifications	TT-60-SI Shaking Incubator
Speed control range	50-300 rpm
Orbit	20mm (circle)
Temperature control range	R.T. + 5 - 60°C
Temperature setting range	5 - 60°C
Temperature display accuracy	0.1°C
Temperature stability at 37°C	≤±0.3°C
Digital time setting	1min - 99h 59min or continuous
Voltage	AC 110V/ AC 220V, 50/60Hz
Power	40W
Fuse	250V, 3A/5A, Ø5x20
Dimension (WxDxH)	360 x 435 x 320 mm
Net Weight	18.7 kg

Optional Accessories



TT-UP-12



TT-P6-250



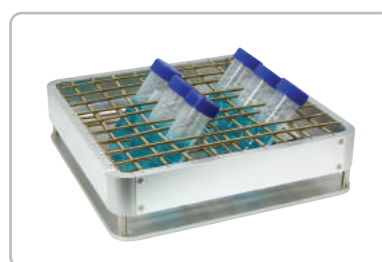
TT-P12-100



TT-PP4



TT-PP4A



TT-UP-260

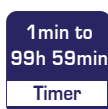
Ordering Information

Cat. No.	TT-60-SI Shaking Incubator
TT-60-SI-110V	Shaking Incubator TT-60-SI, 50-300 rpm, R.T. +5-60°C, 20 mm, AC 110V
TT-60-SI-220V	Shaking Incubator TT-60-SI, 50-300 rpm, R.T. +5-60°C, 20 mm, AC 220V
Cat. No.	Accessories
TT-UP-12	Universal platform with adjustable bars
TT-P6-250	Platform with clamps for 250-300 ml flasks
TT-P12-100	Platform with clamps for 100-150 ml flasks
TT-PP4	Flat platform with non-slip rubber mat
TT-PP4A	Two-level flat platform with non-slip rubber mat
TT-UP-260	Universal platform with spring





TT-100H / TT-100C



Each Standard Set Includes Tube Holder



1 x TTC/H-100-MIX A [96 x 0.2 ml]



1 x TTC/H-100-MIX B [24 x 0.5 ml]



1 x TTC/H-100-MIX C [24 x 1.5ml/ 2.0 ml]

Table Top Series TT-100H/ TT-100C Thermo Shaker Incubator

TT-100H/TT-100C Thermo Shaker Incubator is designed for mixing/shaking and temperature control (heating only or heating and cooling) of samples in microtubes or PCR plates.

Available with mutual interchangeable blocks to hold PCR plates, tubes ranging in size from 0.2 ml up to 50 ml.

The mixing and heating/incubation operation can be performed either combined or independently. The device can work as:

- ① Thermo-shaker
- ② Shaker (without temperature control)
- ③ Thermostat (without shaking/mixing)

3-in-1 Module: Shaking and Temperature Control

- Plate (shaking and mixing)
96-well and 384-well PCR plate, 96 and 384 deep well plates, MTP plates
- Tube Holder (shaking and mixing)
0.2 ml PCR tubes and PCR strip tubes, 0.5 ml microtubes, 1.5/2.0 ml microtubes
- Blocks (shaking, mixing and incubating)

Features

- Adjustable mixing speed, temperature and time with programmable features
- Simultaneous indication of set and actual temperature, speed and time
- Various block options
- Built-in temperature calibration
- With short mix operation mode
- Quiet motor operation

Application

- Denaturation of DNA, RNA and proteins
- Lysis reactions at 100°C
- Plasmid/RNA/DNA purification
- Extraction of DNA fragments from agarose gels
- Biochemical study of enzymatic reactions and processes (eg. DNA restriction digestion, Proteinase K digestion and ligation)
- Extraction of lipids and other cell components
- Extraction of metabolites from cellular material
- Bacterial growth in micro-reaction vessels, deep well plates



Table Top Series TT-100H/ TT-100C Thermo Shaker Incubator

Technical Data

Specifications	TT-100H Thermo Shaker Incubator	TT-100C Thermo Shaker Incubator
Speed range	300-1,600 rpm (Standard) 300-2,000 rpm (Turbo mix)	300-1,500 rpm (Standard)
Orbit diameter	3 mm (horizontal)	3 mm (horizontal)
Temperature setting range	5°C - 100°C	0-100°C
Temperature control range	R.T. +5°C - 100°C	0-100°C
Temperature stability	≤ ±0.3°C	≤ ±0.3°C
Block temperature uniformity	≤ ±0.3°C	≤ ±0.3°C
Temperature display accuracy	0.1°C	0.1°C
Heating speed	≤15min (20°C to 100°C)	≤15min (20°C to 100°C)
Cooling Speed	N/A	≤30min (R.T. to R.T. -20°C) at 26°C
Digital time setting	1 min to 99h 59min or continuous	1 min to 99h 59min or continuous
Voltage	AC 110V or AC 220V, 50/60 Hz	AC 110V or AC 220V, 50/60 Hz
Power	200W	200W
Fuse	250V, 2A/3A, Ø5x20	250V, 2A/3A, Ø5x20
Dimension (W x D x H)	196 x 270 x 170 mm	196 x 270 x 170 mm
Net weight	8.2 kg	8.8 kg
Permissible ambient temperature	5 - 30°C	5 - 30°C
Permissible relative humidity	≤70%	≤70%

Ordering Information

Cat. No.	Thermo Shaker Incubator
TT-100H-110V	Thermo Shaker Incubator TT-100H, Heating, R.T. +5-100°C, AC 110V
TT-100H-220V	Thermo Shaker Incubator TT-100H, Heating, R.T. +5-100°C, AC 220V
TT-100C	Thermo Shaker Incubator TT-100C, Cooling, 0-100°C, AC 100-240V



Extended height cover lid



PV: Present value
SV: Set value

Tube holder for
24 tubes 1.5/2.0 ml

Tube holder for
24 tubes 0.5 ml

Tube holder for
96 tubes 0.2 ml



Deepwell plate

Microplate

PCR plate



Thermo Shaker

13

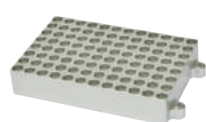
Optional Accessories

Cat. No.	Block for Thermo Shaker Incubator	Diameter of block well	Bottom shape of block well	Dimension
TTC/H-100-1	96 x 0.2 ml	6.7 mm	Cone bottom	107 x 71 x 20 mm
TTC/H-100-2	54 x 0.5 ml	8.0 mm	Cone bottom	107 x 71 x 25 mm
TTC/H-100-3	35 x 1.5 ml	10.8 mm	Cone bottom	107 x 71 x 32 mm
TTC/H-100-4	35 x 2.0 ml	10.8 mm	Round bottom	107 x 71 x 32 mm
TTC/H-100-5	20 x 0.5 ml + 15 x 1.5 ml	8.0 mm/ 10.8 mm	Cone bottom	107 x 71 x 32 mm
TTC/H-100-6	24 x dia. ≤ 12 mm	12.0 mm	Flat bottom	107 x 71 x 32 mm
TTC/H-100-7,	32 x 0.2 ml + 25 x 1.5 ml	6.1 mm x 10.8 mm	Cone bottom	107 x 71 x 32 mm
TTC/H-100-8	32 x 0.2 ml + 10 x 0.5 ml + 15 x 1.5 ml	6.1 mm/ 8.0 mm/ 10.8 mm	Cone bottom	107 x 71 x 32 mm
TTC/H-100-9	Water bath block	103 x 67 x 30 mm	Flat bottom	107 x 71 x 32 mm
TTC/H-100-10	Flat bottom plate	69 x 107 x 12 mm	Flat bottom plate	116 x 71 x 15 mm
TTC/H-100-11	24 x 5 ml	13.5 mm	Flat bottom	107 x 71 x 32 mm
TTC/H-100-12	12 x 15 ml	16.9 mm	Flat bottom	107 x 71 x 100 mm
TTC/H-100-13	6 x 50 ml	29.5 mm	Flat bottom	107 x 71 x 100 mm

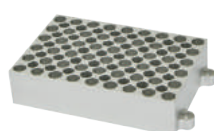
Note: Maximum speed for shaking blocks TTC/H-100-11, TTC/H-100-12 and TTC/H-100-13 are 600 rpm.

Cat. No.	Tube Holder for Thermo Shaker Incubator	Dimension
TTC/H-100-MIX A	Tube Holder for Thermo Shaker Incubator, 96 x 0.2 ml	122 x 80.5 x 35 mm
TTC/H-100-MIX B	Tube Holder for Thermo Shaker Incubator, 24 x 0.5 ml	122 x 80.5 x 41 mm
TTC/H-100-MIX C	Tube Holder for Thermo Shaker Incubator, 24 x 1.5 ml/ 2.0 ml	122 x 80.5 x 41 mm

Cat. No.	Cover lid
TT-100-CLA	Cover Lid for Thermo Shaker Incubator, Standard Height, For Block TTC-H-100-1 to 8, 10
TT-100-CLB	Cover Lid for Thermo Shaker Incubator, Extended Height, For Block TTC/H-100-9, 11 to 13



TTC/H-100-1



TTC/H-100-2



TTC/H-100-3



TTC/H-100-4



TTC/H-100-5



TTC/H-100-6



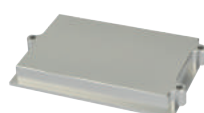
TTC/H-100-7



TTC/H-100-8



TTC/H-100-9



TTC/H-100-10



TTC/H-100-11



TTC/H-100-12



TTC/H-100-13



TT-100-CLA



TT-100-CLB



TTC/H-100-MIX A



TTC/H-100-MIX B



TTC/H-100-MIX C

Table Top Series

TT-70-2-S/ TT-60-4-S Microplate Thermo Shaker Incubator



TT-70-2-S



TT-60-4-S

TT-70-2-S/ TT-60-4-S Microplate Thermo Shaker Incubator is designed to provide orbital shaking and maintaining constant temperature of liquid sample in standard microplates.

It has a heating platform for microplates and thermo lid to allow achieving exact set temperature of each well.

The mixing and heating/incubation operation can be performed either combined or independently. The device can work as:

- Thermo-shaker
- Microplate shaker (without temperature control)
- Thermostat (without shaking/mixing)

Features

- Simultaneous indication of set and actual temperature, time and shaking speed
- Used with microplates and cell culture plates
- Microprocessor PID controller controls time and temperature with good linearity
- Audio alarm signals upon program completion

Application

- Immunochemistry and molecular diagnostics
- Cytochemistry for in situ reactions
- Immunochemistry for immunofermentative reactions
- Biochemistry for enzyme and protein analysis
- Molecular biology for micro array analysis

Technical Data

Specifications	TT-70-2-S Microplate Thermo Shaker Incubator	TT-60-4-S Microplate Thermo Shaker Incubator
Speed range	300 -1200 rpm	300 -1200 rpm
Shaking orbit	3mm (horizontal)	2mm (horizontal)
Temperature control range	R.T.+5°C -70°C	R.T.+5°C -70°C
Temperature stability at 37°C	±0.2°C	±0.2°C
Digital time setting	1 min to 99h 59min or short mix	1 min to 99 h59min or short mix
Platform temperature uniformity	≤±0.5°C	≤±0.5°C
Temperature display accuracy	0.1°C	0.1°C
Heating speed	≤25 min (20°C to 70°C)	≤25 min (20°C to 70°C)
Sample capacity	2 plates	4 plates
Voltage	AC 110V or AC 220V, 50/60 Hz	AC 110V or AC 220V, 50/60 Hz
Power	150W	250W
Fuse	250V, 1A/2A, Ø5x20	250V, 1A/2A, Ø5x20
Dimension (W x D x H)	284 x 264 x 157 mm	284 x 264 x 157 mm
Net weight	6.7 kg	10.5 kg

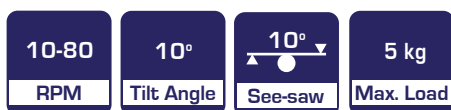
Ordering Information

Cat. No.	Microplate Thermo Shaker Incubator
TT-70-2-S-110V	Microplate Thermo Shaker Incubator TT-70-2-S, 2 x 96-well plate, AC 110V
TT-70-2-S-220V	Microplate Thermo Shaker Incubator TT-70-2-S, 2 x 96-well plate, AC 220V
TT-60-4-S-110V	Microplate Thermo Shaker Incubator TT-60-4-S, 4 x 96-well plate, AC 110V
TT-60-4-S-220V	Microplate Thermo Shaker Incubator TT-60-4-S, 4 x 96-well plate, AC 220V

TT-10-RS-1 / TT-10-RS-2 2D Rocker-Shaker



TT-10-RS-1



TT-10-RS-2

TT-10-RS-1/TT-10-RS-2 2D Rocker-Shaker provides see-saw rocking action to achieve gentle to intensive mixing of solutions or nutrient media in vessels such as culture flasks, petri dishes etc.

TT-10-RS-2 2D Rocker-Shaker is installed with dual platform doubles work surface without sacrificing bench space.

Features

- Smooth see-saw rocking motion with fixed angle 10°
- Digital speed control easily adjusts from 10-80 rpm
- Independent digital timer control up to 99 hrs 59 min
- Maximum load up to 5kg
- Maintenance-free, brushless DC motor provides quiet and reliable operation
- Non-slip rubber mat included
- Stainless steel platform for durability and easy clean up

Applications

- Gel staining/destaining after electrophoresis
- Homogenization of bioextraction media
- Biomolecule hybridization
- Washing blots
- Antibody staining
- Immunoprecipitations

Technical Data

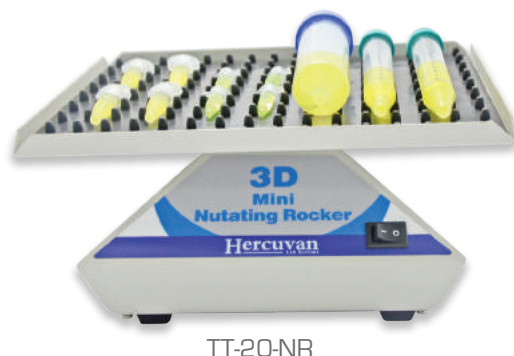
Specifications	TT-10-RS-1 2D Rocker-Shaker	TT-10-RS-2 2D Rocker-Shaker
Speed range	10-80 rpm	10-80 rpm
Rocking motion	See-saw	See-saw
Fixed tilt angle	10° / 25 mm (up & down)	10° / 25 mm (up & down)
Digital time setting	1min - 99h 59 min or continuous	1min - 99h 59 min or continuous
Maximum load	5.0 kg	5.0 kg
Platform with non-slip rubber mat supplied as standard	One-level platform with flat non-slip rubber mat	Two-level platform with flat non-slip rubber mat
Platform dimension	280 x 228 mm	280 x 228 mm
Overall dimension with platform (WxDxH)	284 x 264 x 134 mm	284 x 264 x 248 mm
Electrical supply	Input AC 100-240V, 50/60 Hz; Output DC 12V	Input AC 100-240V, 50/60 Hz; Output DC 12V
Net weight	5.2 kg	5.2 kg
Permissible ambient temperature	4 - 45°C	4 - 45°C
Permissible relative humidity	≤70%	≤70%

Ordering Information

Cat. No.	2D Rocker-Shaker
TT-10-RS-1	2D Rocker-Shaker TT-10-RS-1, One-level flat platform with non-slip rubber mat, AC 100-240V
TT-10-RS-2	2D Rocker-Shaker TT-10-RS-2, Two-level flat platform with non-slip rubber mat, AC 100-240V

Table Top Series

TT-20-NR 3D Mini Nutating Rocker



TT-20-NR



TT-20-NR 3D Mini Nutating Rocker provides three-dimensional smooth rocking action to deliver thorough, low-foam and uniform mixing of solutions in small collection tubes to larger centrifuge tubes.

The speed and tilt angle of this rocker is fixed and designed to provide optimal level of mixing samples in small containers.

It is a compact device included with dimpled mat which provides stable position to hold a variety of tubes with different sizes such as 60 x 1.5 ml tubes, 30 x 3 ml tubes, 21 x 7 ml tubes and 17 x 15 ml tubes.

Features

- Three-dimensional movement for thorough and uniform mixing
- Ideal for mixing samples in blood and centrifuge tubes
- 20 rpm fixed speed rocking motion at 20° tilt angle
- Maximum load up to 0.8 kg
- Dimpled rubber mat included to secure various tube sizes in place during operation
- Cold room and incubator safe

Applications

- Mixing blood into buffer in large centrifuge tubes
- Mixing DNAs into solution in microtubes

Technical Data

Specifications	TT-20-NR 3D Mini Nutating Rocker
Fixed speed	20 rpm
Rocking motion	3D gyratory
Fixed tilt angle	20°
Dimpled rubber mat is supplied as standard	Yes
Maximum load	0.8 kg
Platform dimension	237 x 172 mm
Voltage	AC 110V or AC 220V, 50/60 Hz
Power	45W
Overall dimension (W x D x H)	240 x 170 x 150 mm
Net weight	1.6 kg
Permissible ambient temperature	4 - 40°C
Permissible relative humidity	≤70%

Ordering Information

Cat. No.	3D Mini Nutating Rocker
TT-20-NR-110V	3D Mini Nutating Rocker TT-20-NR, with dimpled rubber mat platform, AC 110V
TT-20-NR-220V	3D Mini Nutating Rocker TT-20-NR, with dimpled rubber mat platform, AC 220V

Table Top Series TT-1500 Microplate Shaker



TT-1500



TT-1500 Microplate Shaker is designed for shaking/mixing liquid samples in microplates (96/384-well) and cell culture plates (24, 48, 96-well). The orbital shaking platform supplied able to hold up to four plates (standard or deep well) without requiring the use of clamps, springs or special tools.

Features

- Platform for 4 microplates supplied as standard
- LED display: Easy-to-read, LED display for time and speed
- DC brushless motor: Maintenance-free, stable & quiet operation
- Audible alarm: Alarm will sound when the time reaches zero
- Remaining time display: Timer will display remaining time

Application

- Mixing of biological and chemical components in all areas of medicine, biotechnology and microbiology laboratory research
- Immunodiagnosics/Immunoassay
- Shaking ELISA plates
- Staining cells for flow cytometry
- 96-well plate preparation prior to LC-MS/MS
- Plate shaking for library preparation

Technical Data

Specifications	TT-1500 Microplate Shaker
Speed range (rpm)	200 - 1500 rpm (standard microplates); 200 - 1000 rpm (deep well plates)
Shaking orbit	3 mm (horizontal)
Digital time setting	1 min - 99h 59min
Sample capacity	4 standard microplates
Voltage	AC 100-240V, 50/60Hz
Power	50W
Fuse	250V, 1A, Ø5x20
Dimension (W x D x H)	284 x 264 x 121 mm
Net weight (kg)	5.2 kg
Permissible ambient temperature	4 - 45°C
Permissible relative humidity	≤70%

Ordering Information

Cat. No.	Microplate Shaker
TT-1500	Microplate Shaker TT-1500, 200 - 1500 rpm, 3 mm, 4 x 96-well microplate, AC 100-240V

Table Top Series TT-10/ TT-20/ TT-30 Orbital Shaker

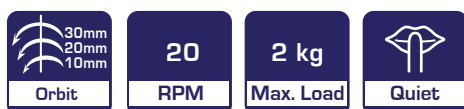


TT-10/20/30

TT-10/ TT-20/ TT-30 Orbital Shaker is a compact orbital shaker intended for shaking samples in various types of containers such as flasks, bottles, petri dishes and other laboratory vessels via efficient orbital motion. This microprocessor controlled system with brushless motor enable silent operation and provides stable, smooth and uniform shaking speed.

Features

- Choice of orbit sizes: 10 mm, 20 mm and 30 mm
- LED display: Easy-to-read, independent LED display for time and speed
- Quiet operation: Stable & low noise
- Multiple interchangeable platform options
- Audible alarm: Alarm will sound when the time reaches zero



Application

- Biotechnology and microbiology: For microorganism cultivation and extraction of biologically active substances
- Immunology and biochemistry: For agglutination and precipitation assay
- Gene engineering: For washing off electrophoretic gel
- Molecular and cell biology: for cultivation of biological liquids

Optional Accessories



TT-UP-12



TT-P6-250



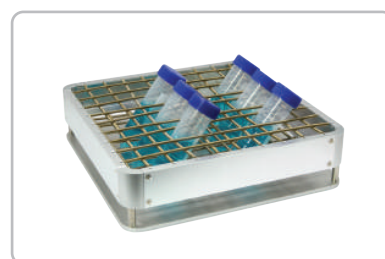
TT-P12-100



TT-PP4



TT-PP4A



TT-UP-260



Technical Data

Specifications	TT-10 Orbital Shaker	TT-20 Orbital Shaker	TT-30 Orbital Shaker
Shaking action	Orbital	Orbital	Orbital
Speed range	50 - 350 rpm	50 - 300 rpm	50 - 250 rpm
Orbit diameter	10 mm	20 mm	30 mm
Digital time setting	1 min – 99h 59min	1 min – 99h 59min	1 min – 99h 59min
Operating mode	Timer or continuous	Timer and continuous	Timer and continuous
Maximum load	2.5 kg	2.5 kg	2.0 kg
Voltage	AC 100-240V, 50-60Hz	AC 100-240V, 50-60Hz	AC 100-240V, 50-60Hz
Power	50W	50W	50W
Fuse	250V, 1A, Ø5x20	250V, 1A, Ø5x20	250V, 1A, Ø5x20
Dimension (W x D x H)	284 x 264 x 108 mm	284 x 264 x 108 mm	284 x 264 x 108 mm
Net weight	5.6 kg	5.6 kg	5.6 kg
Permissible ambient temperature	4 - 45°C	4 - 45°C	4 - 45°C
Permissible relative humidity	≤70%	≤70%	≤70%

Ordering Information

Cat. No.	TT-10/20/30 Orbital Shaker
TT-10	Programmable Orbital Shaker TT-10, 50-350 rpm, 10 mm, AC 100-240V
TT-20	Programmable Orbital Shaker TT-20, 50-300 rpm, 20 mm, AC 100-240V
TT-30	Programmable Orbital Shaker TT-30, 50-250 rpm, 30 mm, AC 100-240V

Optional Accessories

Cat. No.	Platforms for Orbital Shaker
TT-UP 12	Universal platform with adjustable bars
TT-P6-250	Platform with clamps for 250 - 300 ml flask
TT-P12-100	Platform with clamps for for 100 - 150 ml flask
TT-PP4	Flat platform with non-slip rubber mat
TT-PP4A	Two-level flat platform with non-slip rubber mat
TT-UP-260	Universal platform with springs



Table Top Series

TT-2500 Microplate Centrifuge



TT-2500



TT-2500 Microplate Centrifuge is a compact personal sized centrifuge that is ideal for quick and easy centrifugation of samples in microplates or PCR plates. It quickly spins down droplets and condensation, and is used before and after thermal cycler to improve PCR yield by providing a more homogenous sample mixture. Microplate can be inserted vertically from the top with no sample leakage caused by surface tension mechanism.

Features

■ Versatile

Accept skirted, non-skirted and all standard PCR plates

■ Accelerating efficiency

Rotor quickly accelerates to 2,500 rpm

■ Two modes

Short spin mode & timed operation mode

■ DC brushless motor

Maintenance-free, stable & quiet operation

■ Fast deceleration speed

10 seconds

■ Easy to load and remove PCR plate or microplates

Lids automatically opens up to an angle of 95° by pressing the cover lid release button

Technical Data

Specifications	TT-2500 Microplate Centrifuge
Speed	2500 rpm
G force (RCF)	500 x g
Sample capacity	2 standard PCR or microplates
Rotor	Fixed vertically
Digital time setting	1sec – 99sec or short spin
Voltage	DC 24V
Dimension (W x D x H)	190 x 219 x 186 mm
Net weight	2.7 kg
Permissible ambient temperature	4 - 45°C
Permissible relative humidity	≤70%



Ordering Information

Cat. No.	Microplate Centrifuge
TT-2500	Microplate Centrifuge TT-2500, 2500 rpm, AC 100-240V

Table Top Series

TT-14500 PRO Microcentrifuge



TT-14500 PRO



TT-14500 PRO Microcentrifuge is a compact personal sized 12-place centrifuge that achieves maximum rotation speeds of 14,500 rpm (14,000 x g) which is able to accommodate microtubes of 1.5 ml/ 2.0 ml or even smaller volumes with adapters.

It is intended for separating aqueous solution and suspensions in test tubes.

Features

- Compact & small foot print conserves benchtop space
- Anodized aluminium rotor
- Simplified operation with clear LED display
- Separate short spin key for quick spin
- Autoclavable rotor (at 121°C for 20 minutes)
- Simple setting of rpm and RCF
- Timer can be set up to 99 minutes
- Fast acceleration & deceleration speed

Each Standard Set Includes

- 12-place microtubes rotor for 1.5 ml/ 2 ml tubes
- 12 adapters for 0.5 ml tubes for customized use
- 12 adapters for 0.2 ml tubes for customized use



Microtubes rotor



Adapter for 0.5 ml tubes



Adapter for 0.2 ml tubes

Technical Data

Specifications	TT-14500 PRO Microcentrifuge
Maximum rotational speed	14,500 rpm
Relative centrifugal force (RCF)	14,000 x g
Digital time setting	20sec – 99min
Acceleration time to max. speed	17sec
Braking time from max. speed	15sec
Voltage	100V or 240V, 50/60 Hz
Power	100W
Dimension (W x D x H)	230 x 270 x 155 mm
Weight with rotor (kg)	4.8 kg
Permissible ambient temperature	5 – 30°C
Permissible relative humidity	≤70%

Applications

- Nucleic acid purification
- PCR cleanup
- Plasmid mini-prep
- Protein processing



Ordering Information

Cat. No	Microcentrifuge
TT-14500 PRO-100V	Microcentrifuge TT-14500 PRO, AC 100V
TT-14500 PRO-240V	Microcentrifuge TT-14500 PRO, AC 240V
Cat. No	Replacement Adapter
TT-14500-A02	Adapter for 0.2 ml tubes, (pack of 12)
TT-14500-A05	Adapter for 0.5 ml tubes, (pack of 12)

Table Top Series TT-6000 / TT-3K-10K Mini-Centrifuge



TT-6000

6000	2000	1sec - 9999min
RPM	Max. RCF	Timer



TT-3K-10K

3000-10000	5300	1sec - 999min
RPM	Max. RCF	Timer

TT-6000 Mini-Centrifuge is a fixed speed 6,000 rpm personal mini-centrifuge that is designed for quick spin downs of microsamples. Operation is simple and fast by loading the sample tubes, close the lid and the rotor accelerates to 6,000 rpm. This speed range is ideal for bringing small droplets to the bottom of the tubes, for micro-filtrations and basic separation applications.

The similarly **TT-3K-10K Mini-Centrifuge** allows adjustable quick spins ranging from 3,000 rpm to 10,000 rpm in 1,000 rpm increment. This indicates a single unit is equivalent to eight mini-centrifuges!

Both units feature compact design with a small footprint with its ergonomically designed lid that are specially designed to fit in the palm for ease of repeat opening and use.

Features

- Interchangeable rotors: Two interchangeable rotors to accommodate PCR tubes and PCR strips;
- Easy and quick exchange of rotors without any tools
- Lid automatically opens up to an angle of 95° by pressing the cover lid release button
- Simple & Fast: Spin is activated by closing the lid
- Ergonomic: Compact design, small foot print with ergonomically designed lid that is designed to fit in the palm for ease of repeat opening & use
- Adjustable digital timer
- Low noise

Application

- Facilitates microfiltration
- Low-speed centrifugation of tubes and strips
- Quick spin-downs from the walls and caps of tubes

Each Standard Set Includes

- Eight-place microtube rotor for 1.5 ml/ 2.0 ml tubes
- Eight-places PCR tube strip rotor for two 0.2 ml PCR tube strips or 16 single tubes
- Eight adapters for 0.5 ml tube for customized use
- Eight adapters for 0.2 ml tube for customized use



Technical Data

Specifications	TT-6000 Mini-Centrifuge	TT-3K-10K Mini-Centrifuge
Speed	6,000 rpm	3,000 – 10,000 rpm (increment: 1000 rpm)
Relative centrifugal force (RCF)	Approx. 2,000 x g	Approx. 500 g – 5,300 x g
Rotor capacity	8 x 1.5/ 2.0 ml tubes 8 x 0.5 ml/ 8 x 0.2 ml tubes (using adapter) Two 8 x 0.2 ml tube strips 16 x 0.2 ml tubes	8 x 1.5/ 2.0 ml tubes 8 x 0.5 ml/ 8 x 0.2 ml tubes (using adapter) Two 8 x 0.2 ml tube strips (use only when ≤6,000 rpm) 16 x 0.2 ml tubes strips (use only when ≤6,000 rpm)
Digital time setting	1sec – 9999min	1sec – 999min
Noise	≤45 dB	≤55 dB
Voltage	AC 110V or AC 220V, 50/60 Hz	AC 110V or AC 220V, 50/60 Hz
Power	≤45W	≤45W
Fuse	250V, 1A, Ø5x20	250V, 1A, Ø5x20
Dimension (W x D x H)	156 x 176 x 121 mm	156 x 176 x 121 mm
Net weight	1.5 kg	1.5 kg
Permissible ambient temperature	4 - 45°C	4 - 45°C
Permissible relative humidity	≤70%	≤70%

Ordering Information

Cat. No.	Mini-Centrifuge
TT-6000-110V	Mini-Centrifuge TT-6000, 6,000 rpm, AC 110V
TT-6000-220V	Mini-Centrifuge TT-6000, 6,000 rpm, AC 220V
TT-3K-10K-110V	Mini-Centrifuge TT-3K-10K, 3,000-10,000 rpm, AC 110V
TT-3K-10K-220V	Mini-Centrifuge TT-3K-10K, 3,000-10,000 rpm, AC 220V

Accessories

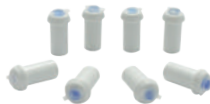
Cat. No.	Replacement Accessories
TT-RT-815	Microtube rotor for Mini-Centrifuge, 8 x 1.5 ml
TT-RT-802	Strip tube rotor for Mini-Centrifuge, 2 x 8 x 0.2 ml
TT-AP-802	Adapter for 0.2 ml tubes, (Pack of 8)
TT-AP-805	Adapter for 0.5 ml tubes, (Pack of 8)



TT-RT-815



TT-RT-802



TT-AP-802



TT-AP-805

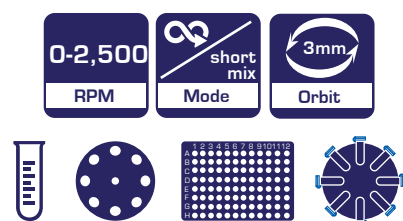


Table Top Series

TT-254-VM VeloTEX Vortex Mixer



TT-254-VM



TT-254-VM VeloTEX Vortex Mixer is a versatile variable speed vortex mixer intended for gentle mixing to vigorous vortexing of samples in various types of commonly used tubes ranging from 0.2 ml up to 50 ml and microplate.

Two modes of operation available:

- Continuous mode when using accessory attachments or foam tube stands
- Touch mode which activates mixing when depressing the standard cup head

Features

- Adjustable speed control: 0-2500 rpm, allows slow shaking up to high vortexing
- “Continuous” or “Touch” operation
- “No-walk” suction feet prevent excessive movement and vibration during operation
- Various optional platforms and foam tube holders to hold different types of tubes or containers

Each Standard Set Includes

- A standard head, for tubes and vessels with diameter <30 mm [Cat. No: TT-VM-1]
- A standard platform to hold foam tube holder [Cat. No: TT-VM-P]

Standard Accessories



1 TT-VM-1



2 TT-VM-P

Applications

- General - Resuspension of cell or chemical pellets
- Life Science - deproteinisation of DNA/protein complexes, mixing of immunostained cells, purification of low molecular DNA/RNA fragments
- Biopharmaceutical - solubilising powders

Technical Data

Specifications	TT-254-VM VeloTEX Vortex Mixer
Speed control range	0-2,500 rpm
Orbit	3 mm
Shaking mode	circle
Control	Speed knob with scale indication
Operation mode	Continuous or touch (short mix)
Voltage	AC 110V/AC 220V, 50/60Hz
Power	60W
Fuse	250V, 1A, Ø5x20
Dimension (WxDxH)	132 × 156 × 150 mm
Net weight	2.4 kg



Ordering Information

Cat. No.	VeloTEX Vortex Mixer
TT-254-VM-110V	VeloTEX Vortex Mixer TT-254-VM, 0-2500 rpm, 3 mm, AC 110V
TT-254-VM-220V	VeloTEX Vortex Mixer TT-254-VM, 0-2500 rpm, 3 mm, AC 220V

Cat. No.	Accessories
TT-VM-P	Standard platform to hold foam tube holder
TT-VM-1	Standard head, for tubes and vessels with dia. <30 mm
TT-VM-2	Convex pad, for tubes and vessels with dia. <99 mm, use with TT-VM-P
TT-VM-3	Foam tube holder, for 0.2 ml tubes, 70 holes, use with TT-VM-P
TT-VM-4	Foam tube holder, for 0.5 ml tubes, 36 holes, use with TT-VM-P
TT-VM-5	Foam tube holder, for 1.5/2.0 ml tubes, 20 holes, use with TT-VM-P
TT-VM-6	Foam tube holder, for 15 ml tubes, 8 holes, use with TT-VM-P
TT-VM-7	Foam tube holder, for 50 ml tubes, 4 holes, use with TT-VM-P
TT-VM-8	Tube holder platform, for 1.5/2.0 ml tubes x 22
TT-VM-9	Tube holder platform, for 15 ml tubes x 4
TT-VM-10	Tube holder platform, for 50 ml tubes x 2
TT-VM-11	Plate holder platform, for all standard plates
TT-VM-12	Universal platform for tube holders and all standard plates
TT-TH-A	Tube holder for TT-VM-12 platform, 96 x 0.2 ml tubes
TT-TH-B	Tube holder for TT-VM-12 platform, 24 x 0.5 ml tubes
TT-TH-C	Tube holder for TT-VM-12 platform, 24 x 1.5/ 2.0 ml tubes

Optional Accessories



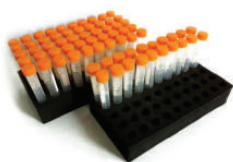


Table Top Series

TT-2500-VM Multi-Tube Vortex Mixer



TT-2500-VM



TT-2500VM Multi-Tube Vortex Mixer is a high capacity vortex mixer designed to provide gentle to vigorous mixing of reagents up to 50 test tubes simultaneously.

The vortexing action is created by holding the top of the vessel securely in place and moving the bottom tray freely in a defined orbit.

Features

- Hands-free mixing up to 50 tubes at a time
- Gentle to vigorous mixing in every tube at adjustable speed of 500-2,500 rpm
- Easy-to-read LED speed and time display
- Variety of tube frames available to hold different sizes of test tubes
- Short mixing and timed mixing operation modes
- With microprocessor controller for digital programming of speed & time
- Maintenance-free brushless DC motor

Application

- General micro test tube mixing
- Mixing tissue samples
- Vortexing cells suspensions
- Mixing chemical reagents
- High throughput testing in clinical, environmental and chemistry labs

Each Standard Set Includes

- One tray pad set (Cat. No.: TT-2500VM-H)

Technical Data

Specifications	TT-2500-VM Multi-Tube Vortex Mixer
Speed range	500 - 2500 rpm
Speed accuracy	±10 rpm
Orbit diameter	4 mm
Operation mode	Digital timer, short mix or continuous
Digital time setting	1sec – 9999min
Maximum load	5.0 kg
Voltage	AC 100-240V, 50/60Hz
Power	60W
Fuse	250A, 1A, Ø5 x 20
Dimension (W x D x H)	250 x 426 x 480 mm
Net weight	15 kg
Permissible ambient temperature	4 - 45°C
Permissible relative humidity	≤70%

Ordering Information

Cat. No	Multi-Tube Vortex Mixer
TT-2500-VM	Muti-Tube Vortex Mixer TT-2500-VM, 500-2500 rpm, 4 mm, AC100-240V

Accessories

Cat. No.	Accessories	Dimension
TT-2500VM-10	50 x Ø10 mm foam tube holder	245 x 132 x 45 mm
TT-2500VM-12	50 x Ø12 mm foam tube holder	245 x 132 x 45 mm
TT-2500VM-13	50 x Ø13 mm foam tube holder	245 x 132 x 45 mm
TT-2500VM-16	50 x Ø16 mm foam tube holder (15 ml Falcon tube)	245 x 132 x 45 mm
TT-2500VM-25	15 x Ø25 mm foam tube holder	245 x 132 x 45 mm
TT-2500VM-29	15 x Ø29 mm foam tube holder (50 ml Falcon tube)	245 x 132 x 45 mm
TT-2500VM-H	Tray pad set (upper and lower)	305 x 178.5 x 25 mm

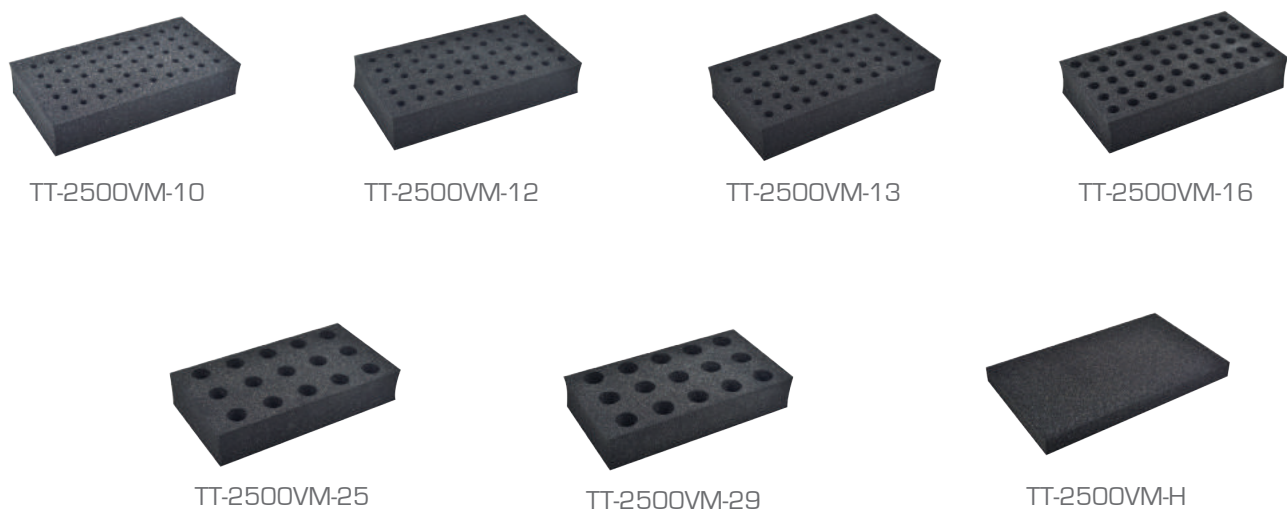


Table Top Series TT-3000 Smart Mixer



TT-3000

300 - 3000 RPM	3500rpm Touch Vortex	<50dB Noise Level
999 LED Display	1sec - 99hrs 59min Timer	3mm Orbit

3-in-1 Module Mixer

Allow mixing of aqueous solutions in various types of plates, tubes and vortex mixing

1. Plates

- PCR plates (skirted, semi-skirted, unskirted)
- 384-well PCR plate
- 96 and 384 deep well plates
- MTP

2. Tubes

- 0.2 ml PCR tubes and PCR strips
- 0.5 ml microtest tubes
- 1.5 ml / 2.0 ml microtest tubes

3. Vortex



TT-3000 Smart Mixer is designed to mix and vortex aqueous solutions and suspensions in various types of micro test tubes and micro test plates.

It can hold from 0.2 ml PCR tubes to 2.0 ml micro test tubes as well as PCR plates, MTP & DWP at a maximum mixing frequency up to 3,000 rpm.

Variable speed control and optional tube holders make this mixer ideal for a wide range of mixing applications.

Features

- **Pre-programmed soft keys:** Allow selection of pre-set mixing parameters
- **Stable:** Remain stationary even at maximum mixing speed
- **Touch vortex:** 3,500 rpm
- **Universal holder:** Universal holder with steel springs hold plates and tube holder firmly in place even at 3,000 rpm mixing speed
- **LED display:** Clear display for ease of setting and reading

Application

- Controlled mixing of PCR, restriction or other enzyme reactions
- Resuspension of DNA, RNA, protein or cell pellets in tubes and in plates
- Vortexing in micro test tubes and in 15 ml/ 50 ml screw-cap tubes

Each Standard Set Includes

- ① TTC/H-100-MIX-A 96x0.2 ml tube holder
- ② TTC/H-100-MIX-B 24x0.5 ml tube holder
- ③ TTC/H-100-MIX-C 24x1.5 ml/ 2.0 ml tube holder

96-well skirted PCR plates, 384-well PCR plates and deep well plate can be loaded into the universal holder without requiring any tube holder.



Softkeys for preset optimized mixing parameters

Softkey	Speed (rpm)	Time (s)	Tube / Plate	Fill Level (%)
384	2000	15	MTP and DWP (384-well)	10-60
PCR 384	2600	15	PCR Plate (384-well)	10-50
96	1000	30	MTP (96-well)	5-60
PCR 96/ 0.5	1650	30	PCR plates & DWP (96-well), PCR tubes (0.2 ml) and micro test tubes (0.5 ml)	5-50
1.5/ 2.0	1400	60	Test tubes (1.5/2.0 ml)	5-80

Technical Data

Specifications	TT-3000 Smart Mixer
Speed range	300 - 3000 rpm
Touch vortex speed	3500 rpm
Orbit diameter	3 mm
Operation mode	Timer, touch vortex and continuous operation
Digital time setting	1sec – 99h 59min
Noise Level	<50 dB
Voltage	AC 100-240V, 50/ 60Hz
Power	45W
Fuse	250A, 1A, Ø5x20
Dimension (W x D x H)	196 x 270 x 170 mm
Net weight (kg)	7.7 kg
Permissible ambient temperature	4 - 45°C
Permissible relative humidity	≤70%

Ordering Information

Cat. No.	Smart Mixer
TT-3000	Smart Mixer TT-3000, 300-3,000 rpm, 3 mm, AC 100-240V

Standard Accessories

Cat. No.	Tube Holder for Smart Mixer
TTC/H-100-MIX-A	Tube holder for Smart Mixer, 96 x 0.2 ml
TTC/H-100-MIX-B	Tube holder for Smart Mixer, 24 x 0.5 ml
TTC/H-100-MIX-C	Tube holder for Smart Mixer, 24 x 1.5 ml/ 2.0 ml



TTC/H-100-MIX-A



TTC/H-100-MIX-B



TTC/H-100-MIX-C



Table Top Series

TT-2800-VVM Mini Vortex Mixer



TT-2800-VVM



TT-2800-VVM Mini Vortex Mixer is an ultra-compact vortex mixer that provides touch mode operation and variable speed control for gentle to vigorous vortexing of reagent in tubes. The unique concave cup design accepts tubes and vessels with diameter up to 30 mm or maximum 50 ml.

Features

- Vortexing for tubes with diameter up to 30 mm
- Variable speed control from 0 to 2,800 rpm allows slow to high speed vortexing
- Vacuum suction feet hold to the work surface and prevent the mixer from movement
- Sturdy base safely secure mixer in place during operation

Applications

- Resuspending pellets
- Vortexing cell suspensions and biological or chemical liquid components

Technical Data

Specifications	TT-2800-VVM Mini Vortex Mixer
Speed range (rpm)	0 - 4,000 rpm
Mixing motion	Circular (vortexing)
Orbit diameter	4.5 mm
Run Type	Touch operation
Mixing module for tubes	From 1.5 ml to 50 ml
Maximum mixing volume	35 ml
Voltage	Input AC 100-240V, 50/60Hz; Output DC 12V
Power	12W
Dimension (W x D x H)	110 x 110 x 86 mm
Net weight	1.2 kg
Permissible ambient temperature	0 - 40 °C
Permissible relative humidity	≤70%



Ordering Information

Cat. No.	Mini Vortex Mixer
TT-2800-VVM	Mini Vortex Mixer TT-2800-VVM, Variable speed, AC 100V-240V

Table Top Series

 TT-100F/HT/HL/CL/CTL Mini Dry Bath Incubator



TT-100F/HT/CL



TT-100F/HT/HL/CL/CTL Mini Dry Bath Incubator is a compact personal incubator designed for maintaining constant temperature of small volume sample in microtubes up to 2.0 ml.

TT-100F Mini Dry Bath Incubator has a built-in fan to cool down sample rapidly while TT-100HL and TT-100-CTL Mini Dry Bath Incubator have additional heated lid to prevent sample evaporation.

Features

- Available with heat only or heat & cool models
- Compact palm size design, saving crowded bench space
- Various blocks options for exchange
- Digital time and temperature display
- Nine programmable programs
- Link two consecutive segments
- Built-in temperature calibration
- Custom blocks available upon request

Application

- PCR analysis
- Extraction of DNA and RNA from cell cultures



TT-100HL/CTL



Optional Accessories



TT-100-Block A



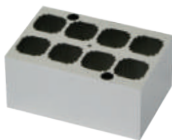
TT-100-Block B



TT-100-Block C



TT-100-Block D



TT-100-Block E



TT-100-Block F



TT-100-Block G

Table Top Series

TT-100F/HT/HL/CL/CTL Mini Dry Bath Incubator

Technical Data



Specifications	TT-100F	TT-100HT	TT-100HL	TT-100CL	TT-100CTL
Temperature control range	R.T. +5-100°C	R.T. +5-100°C	R.T. +5-100°C	-10-100°C	-10-100°C
Temperature stability at 100°C	≤±0.5°C	≤±0.5°C	≤±0.5°C	≤±0.5°C	≤±0.5°C
Temperature stability at 40°C	≤±0.3°C	≤±0.3°C	≤±0.3°C	≤±0.3°C	≤±0.3°C
Block temperature uniformity	≤±0.3°C	≤±0.3°C	≤±0.3°C	≤±0.3°C	≤±0.3°C
Temperature display accuracy	0.1°C	0.1°C	0.1°C	0.1°C	0.1°C
Heating speed	≤15 min (20-100°C)	≤15 min (20-100°C)	≤15 min (20-100°C)	≤15 min (20-100°C)	≤15 min (20-100°C)
Cooling speed	Fan cooling	Natural cooling	Natural cooling	≤30 min (from R.T. to R.T.-20°C) at 26°C	≤30 min (from R.T. to R.T.-20°C) at 26°C
Thermo Lid	No	No	Yes	No	Yes
Digital time setting	1sec – 999sec or 1min – 999min	1sec – 999sec or 1min – 999min	1sec – 999sec or 1min – 999min	1sec – 999sec or 1min – 999min	1sec – 999sec or 1min – 999min
Voltage	DC 24V	DC 24V	DC 24V	DC 24V	DC 24V
Power	60W	60W	60W	120W	120W
Dimension (W x D x H)	110 x 156 x 103 mm	110 x 156 x 92 mm	110 x 156 x 97 mm	110 x 156 x 103 mm	110 x 156 x 108 mm
Net weight	1 kg	1 kg	1 kg	1.4 kg	1.4 kg
Permissible ambient temperature	5 – 30°C	5 – 30°C	5 – 30°C	5 – 30°C	5 – 30°C
Permissible relative humidity	≤70%	≤70%	≤70%	≤70%	≤70%

Ordering Information

Cat. No.	Mini Dry Bath Incubator
TT-100F	Mini Dry Bath Incubator TT-100F, Cooling Fan, Transparent Lid, AC 100-240V
TT-100HT	Mini Dry Bath Incubator TT-100HT, Heating, Transparent Lid, AC 100-240V
TT-100HL	Mini Dry Bath incubator TT-100HL, Heating, Heated Lid, AC 100-240V
TT-100CL	Mini Dry Bath Incubator TT-100CL, Cooling, Transparent Lid, AC 100-240V
TT-100CTL	Mini Dry Bath Incubator TT-100CTL, Cooling, Heated Lid, AC 100-240V

Optional Accessories

Cat. No.	Block for Mini Dry Bath Incubator	Diameter of block well	Bottom shape of block well	Dimension
TT-100-Block A	40x0.2 ml or 8 x 0.2 ml strip	6.1 mm	Cone bottom	71 x 47 x 32 mm
TT-100-Block B	24x0.5 ml	8.0 mm	Cone bottom	71 x 47 x 32 mm
TT-100-Block C	15x1.5 ml	10.8 mm	Cone bottom	71 x 47 x 32 mm
TT-100-Block D	15x2.0 ml	10.8 mm	Round bottom	71 x 47 x 32 mm
TT-100-Block E	8x (dia. 8-12.5) mm cuvette	8-12.5 mm	No bottom	71 x 47 x 32 mm
TT-100-Block F	4x15 ml (not compatible with cover)	16.9 mm	Flat bottom	71 x 47 x 82 mm
TT-100-Block G	2x50 ml (not compatible with cover)	29.2 mm	Flat bottom	71 x 47 x 82 mm



Table Top Series

TT-100-DHT/ TT-100-DHC Dry Bath Incubator



TT-100-DHT/DHC

TT-100-DHT/ TT-100-DHC Dry Bath Incubator is designed for maintaining constant temperature (heating only or heating and cooling) of sample in small volume tubes and PCR plate.

Features

- Available with heat only or heat & cool models
- Various blocks options for microtubes, PCR plates and other small vessels
- Simultaneous indication of set and actual temperature and time
- Up to 5 consecutive multiple program setting
- Built-in temperature calibration
- Custom blocks available upon request



Application

Sample preparation during enzyme reactions, hybridization reactions, DNA analysis



Technical Data

Specifications	TT-100-DHT Dry Bath Incubator	TT-100-DHC Dry Bath Incubator
Temperature control range	R.T. +5 -100°C	-10°C – 100°C
Temperature stability at 100°C	≤±0.5°C	≤±0.5°C
Temperature stability at 40°C	≤±0.3°C	≤±0.3°C
Block temperature uniformity	≤±0.3°C	≤±0.3°C
Temperature display accuracy	0.1°C	0.1°C
Heating speed	≤15 min (20°C to 100°C)	≤15 min (20°C to 100°C)
Cooling speed	N/A	≤30 min (R.T. to R.T. -30°C) at 26°C
Time range	1min – 99h 59min or continuous	1min – 99h 59min or continuous
Voltage	AC 110V or AC 220V, 50/60 Hz	AC 110V or AC 220V, 50/60 Hz
Power	150W	150W
Fuse	250V, 1A/2A, Ø5x20	250V, 3A, Ø5x20
Dimension (W x D x H)	196 x 270 x 170 mm	196 x 270 x 170 mm
Net weight	2.2 kg	3.5 kg
Permissible ambient temperature	5 – 30°C	5 – 30°C
Permissible relative humidity	≤70%	≤70%

Table Top Series

TT-100-DHT/DHC Dry Bath Incubator

Ordering Information

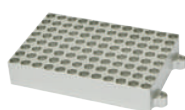
Cat. No.	Mini Dry Bath Incubator
TT-100-DHT-110V	Dry Bath Incubator TT-100-DHT, Heating, R.T. +5-100°C, AC 110V
TT-100-DHT-220V	Dry Bath Incubator TT-100-DHT, Heating, R.T. +5-100°C, AC 220V
TT-100-DHC	Dry Bath Incubator TT-100-DHC, Cooling, -10-100°C, AC 100-240V

Optional Accessories

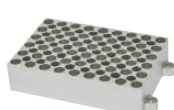
Cat. No.	Block for Thermo Shaker Incubator	Diameter of block well	Bottom shape of block well	Dimension
TT-100-DH-Block-A	96 x 0.2 ml	6.7 mm	Cone bottom	107 x 71 x 20 mm
TT-100-DH-Block-B	54 x 0.5 ml	8.0 mm	Cone bottom	107 x 71 x 25 mm
TT-100-DH-Block-C	35 x 1.5 ml	10.8 mm	Cone bottom	107 x 71 x 32 mm
TT-100-DH-Block-D	35 x 2.0 ml	10.8 mm	Round bottom	107 x 71 x 32 mm
TT-100-DH-Block-E	20 x 0.5 ml + 15 x 1.5 ml	8.0 mm / 10.8 mm	Cone bottom	107 x 71 x 32 mm
TT-100-DH-Block-F	24 x dia. ≤ 12 mm	12.0 mm	Flat bottom	107 x 71 x 32 mm
TT-100-DH-Block-G	32 x 0.2 ml + 25 x 1.5 ml	6.1 mm x 10.8 mm	Cone bottom	107 x 71 x 32 mm
TT-100-DH-Block-H	32 x 0.2 ml + 10 x 0.5 ml + 15 x 1.5 ml	6.1 mm / 8.0 mm / 10.8 mm	Cone bottom	107 x 71 x 32 mm
TT-100-DH-Block-I	Water bath block	103 x 67 x 30 mm	Flat bottom	107 x 71 x 32 mm
TT-100-DH-Block-J	Flat bottom plate	69 x 107 x 12 mm	Flat bottom plate	116 x 71 x 15 mm
TT-100-DH-Block-K	24 x 5 ml	13.5 mm	Flat bottom	107 x 71 x 32 mm
TT-100-DH-Block-L	12 x 15 ml	16.9 mm	Flat bottom	107 x 71 x 100 mm
TT-100-DH-Block-M	6 x 50 ml	29.5 mm	Flat bottom	107 x 71 x 100 mm

Note: Maximum speed for shaking blocks TT-100-DH-Block-K, TT-100-DH-Block-L and TT-100-DH-Block-M are 600 rpm.

Cat. No.	Cover lid
TT-100-DH-CLA	Cover Lid for Dry Bath Incubator, Standard Height, For TT-100-DH-Block-A to H, J
TT-100-DH-CLB	Cover Lid for Dry Bath Incubator, Extended Height, For TT-100-DH-Block-I, K to M



TT-100-DH-Block-A



TT-100-DH-Block-B



TT-100-DH-Block-C



TT-100-DH-Block-D



TT-100-DH-Block-E



TT-100-DH-Block-F



TT-100-DH-Block-G



TT-100-DH-Block-H



TT-100-DH-Block-I



TT-100-DH-Block-J



TT-100-DH-Block-K



TT-100-DH-Block-L



TT-100-DH-Block-M



TT-100-DH-CLA



TT-100-DH-CLB



Table Top Series

TT-200BI Biological Indicator Incubator

TT-200BI Biological Indicator Incubator is designed for maintaining constant temperature of Ethylene Oxide (EO) biological indicators.

Features

- Various blocks option for different sizes of biological indicator vials
- Compact palm size design, saving crowded bench space
- Digital time and temperature display
- Custom blocks available upon request
- Built in temperature calibration function

Application

Sterilization processes in food and beverage industries, medical and healthcare sectors and pharmaceutical manufacturing applications



TT-200BI



TT-200BI-Block-9



TT-200BI-Block-10



TT-200BI-Block-12



TT-200BI-Block-15



TT-200BI-Block-16

Technical Data

Specifications	TT-200BI Biological Indicator Incubator
Temperature control range	R.T. +5-100°C
Temperature stability at 56°C	≤±0.5°C
Temperature display accuracy	0.1°C
Heating speed	<6 min [20°C to 56°C]
Digital time setting	1sec – 999 sec or 1min – 999min
Voltage	DC 24V
Power	60W
Dimension	110 x 156 x 92 mm
Net weight	1 kg

Ordering Information

Cat. No.	Biological Indicator Incubator
TT-200BI	Biological Indicator Incubator TT-200BI, R.T. +5-100°C, AC 100-240V

Optional Accessories

Cat. No.	Block for Biological Indicator Incubator	Diameter of block well	Bottom shape of block well	Dimension
TT-200BI-Block-9	18 x Ø9 mm	9.5 mm	Flat bottom	71 x 47 x 32 mm
TT-200BI-Block-10	15 x Ø10 mm	10.5 mm	Flat bottom	71 x 47 x 32 mm
TT-200BI-Block-12	12 x Ø12 mm	12.5 mm	Flat bottom	71 x 47 x 32 mm
TT-200BI-Block-15	6 x Ø15 mm	15.5 mm	Flat bottom	71 x 47 x 32 mm
TT-200BI-Block-16	6 x Ø16 mm	16.5 mm	Flat bottom	71 x 47 x 32 mm

Table Top Series

TT-70-2/ TT-60-4 Microplate Incubator



TT-70-2



TT-60-4

TT-70-2/ TT-60-4 Microplate Incubator is designed for heating and maintaining constant temperature of liquid samples in microplates (96-well/ 384-well) and cell culture plates (24-well, 48-well, 96-well).

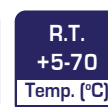
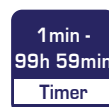
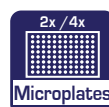
It is uniquely designed with a heating platform with holding mechanism for microplates coupled with thermo lid which allows achieving the set and actual temperature of each well.

Features

- Simultaneous display of set and actual temperature and time
- Microprocessor PID controller controls time and temperature with good linearity
- Audio alarm signals upon program completion
- User friendly operating interface

Application

- Incubation of ELISA plate, cell culture plate
- Denaturation of nucleic acids and proteins etc



Technical Data

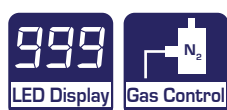
Specifications	TT-70-2 Microplate Incubator	TT-60-4 Microplate Incubator
Temperature control range	R.T. +5 - 70°C	R.T. +5 - 70°C
Temperature stability at 37°C	±0.2°C	±0.2°C
Platform temperature uniformity	±0.5°C	±0.5°C
Temperature display accuracy	0.1°C	0.1°C
Heating speed	≤25 min (20°C to 70°C)	≤25 min (20°C to 70°C)
Digital time setting	1 min - 99h 59min	1 min - 99h 59min
Sample capacity	2 Microplates	4 Microplates
Voltage	AC 110V or AC 220V, 50/60 Hz	AC 110V or AC 220V, 50/60 Hz
Power	150W	250W
Fuse	250V, 1A/2A, Ø5x20	250V, 3A/5A, Ø5x20
Dimension (W x D x H)	284 x 264 x 157 mm	345 x 310 x 178 mm
Net weight	3.3 kg	4.9 kg
Permissible ambient temperature	5 - 30°C	5 - 30°C
Permissible relative humidity	≤70%	≤70%

Ordering Information

Cat. No.	Microplate Incubator
TT-70-2-110V	Microplate Incubator TT-70-2, R.T. +5-70°C, 2 x 96-well plate, AC 110V
TT-70-2-220V	Microplate Incubator TT-70-2, R.T. +5-70°C, 2 x 96-well plate, AC 220V
TT-60-4-110V	Microplate Incubator TT-60-4, R.T. +5-70°C, 4 x 96-well plate, AC 110V
TT-60-4-220V	Microplate Incubator TT-60-4, R.T. +5-70°C, 4 x 96-well plate, AC 220V



TT-200-1-SC



TT-200-2-SC

TT-200-1-SC / TT-200-2SC Sample Concentrator is intended to provide rapid evaporation of solvents from samples in test tubes or containers. It works under the principle of solvent evaporation to concentrate samples. By heating the samples/solution in a dry block heater coupled with a stream of inert gas (nitrogen) direct to the surface of the sample, vapour is rapidly driven off and the sample is quickly concentrated.

The sample concentrator is built with gas manifold plate mounted onto a height adjustable stand which allows flexible positioning above the samples. There are 12 independent gas control valves that are used to control the gas flow towards the surface of each sample via gas needles. It is a compact device commonly used to replace high cost rotary evaporators and safe to be used in fume hood.

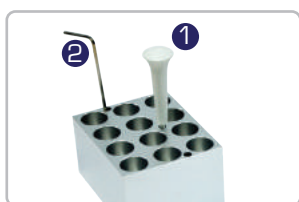
Features

- Concentrate dozens of samples simultaneously
- 12 independent gas control valves and optional flow regulating valve minimize wastage of nitrogen gas
- Can be used in fume hood when concentrating toxic solvents
- Adjustable gas needle position to suit different types of sample tubes
- Simple installation, operation and maintenance
- Built-in over temperature protection device, automatic fault detection system and alarm function
- Digital display of temperature and time
- Compact foot print, fits all standard fume hood

Application

- Molecular biology, drug screening and analytical procedures (HPLC, GCMS), hormone assays
- Remove solvent from DNA samples
- Chromatographic analysis

Each Standard Set Includes



- 1 Block lifter
- 2 Allen wrench



Easy exchange of block module with block lifter supplied

Optional Accessories



TT-SC-V

Flow regulating valve can be connected to nitrogen gas tank and inlet of gas needle to control nitrogen gas flow rate



TT-DT-01A



TT-DT-02A



TT-DT-03A



TT-DT-04A



TT-DT-05A



TT-DT-06A



TT-DT-07A



TT-DT-08A



TT-DT-09A



TT-DT-10A



TT-DT-11A



TT-DT-12A



TT-DT-13A



TT-DT-14A



TT-DT-15A



TT-DT-16A

Technical Data

Specifications	TT-200-1-SC Sample Concentrator	TT-200-2-SC Sample Concentrator
Temperature control range	R.T. +5°C – 150°C	R.T. +5°C – 150°C
Temperature stability at 40 -100°C	≤±0.5°C	≤±0.5°C
Temperature stability at 100 -150°C	≤±1.0°C	≤±1.0°C
Block temperature uniformity at 100°C	≤±0.5°C	≤±0.5°C
Temperature display accuracy	0.1 °C	0.1 °C
Heating speed	≤30 min (40°C to 150°C)	≤30 min (40°C to 150°C)
Digital time setting	1 min – 99h 59min or continuous	1 min – 99h 59min or continuous
Maximum vertical travel	285 mm	285 mm
Outer diameter of gas inlet	Ø7 mm	Ø7 mm
Nitrogen pressure	≤0.1MPa	≤0.1MPa
Nitrogen flow rate	0 – 10L/min	0 – 10L/min
Needle length	150 mm	150 mm
Sample capacity	1 standard block	2 standard blocks
Voltage	AC 110V / AC 220V, 50/60 Hz	AC 110V / AC 220V, 50 / 60 Hz
Power	200W	400W
Dimension (W x D x H)	200 x 230 x 525 mm	200 x 260 x 525 mm
Net weight	5.1 kg	6.1 kg

Ordering Information

Cat. No.	Sample Concentrator
TT-200-1-SC-110V	Sample Concentrator TT-200-1-SC, R.T.+5-150°C, Single Block, AC 110V
TT-200-1-SC-220V	Sample Concentrator TT-200-1-SC, R.T.+5-150°C, Single Block, AC 220V
TT-200-2-SC-110V	Sample Concentrator TT-200-2-SC, R.T.+5-150°C, Dual Block, AC 110V
TT-200-2-SC-220V	Sample Concentrator TT-200-2-SC, R.T.+5-150°C, Dual Block, AC 220V

Optional Accessories

Cat. No.	Block for Sample Concentrator	Diameter of block well	Bottom shape of block well	Dimension
TT-DT-01A	12 x 6 mm	6.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-02A	12 x 7 mm	7.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-03A	12 x 10 mm	10.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-04A	12 x 12 mm	12.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-05A	12 x 13 mm	13.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-06A	12 x 15 mm	15.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-07A	12 x 16 mm	16.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-08A	12 x 19 mm	19.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-09A	6 x 20 mm	20.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-10A	6 x 26 mm	26.5 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-11A	4 x 28 mm	28.5 mm	Flat bottom	95.5 x 76.5 x 50 mm
TT-DT-12A	2 x 40 mm	40.5 mm	Round bottom	95.5 x 76.5 x 50mm
TT-DT-13A	12 x 0.5 ml	8.0 mm	Cone bottom	95.5 x 76.5 x 50 mm
TT-DT-14A	12 x 1.5 ml	10.8 mm	Cone bottom	95.5 x 76.5 x 50 mm
TT-DT-15A	12 x 2.0 ml	10.8 mm	Round bottom	95.5 x 76.5 x 50 mm
TT-DT-16A	12 x 0.2 ml	6.1 mm	Cone bottom	95.5 x 76.5 x 50 mm

Cat. No.	Flow Regulating Valve
TT-SC-V	Flow regulating valve for Sample Concentrator

*Table Top Series***TT-200-96SC 96-Well Sample Concentrator**

TT-200-96SC



TT-200-96SC 96-Well Sample Concentrator is intended to provide rapid evaporation of solvents from samples in 96-well PCR plate, 96-well microplate or up to 96 x 0.2ml microtubes in a single batch. It works under the principle of solvent evaporation to concentrate samples. By heating the samples/solution in a dry block heater coupled with a stream of inert gas (nitrogen) direct to the surface of the sample, vapour is rapidly driven off and the sample is quickly concentrated.

The sample concentrator is built with gas chamber with 96 gas needles mounted onto a height adjustable stand which allows flexible positioning above the samples. It is a compact device commonly used to replace high cost rotary evaporators and safe to be used in fume hood.

Features

- Concentrate up to 96 samples simultaneously
- Optional flow regulating valve to minimize wastage of nitrogen gas.
- Can be used in fume hood when concentrating toxic solvents
- Adjustable gas needle position to suit different types of sample tubes
- Simple installation, operation and maintenance
- Built-in over temperature protection device, automatic fault detection system and alarm function
- Digital display of temperature and time
- Compact foot print, fits all standard fume hood

Application

- Molecular biology, drug screening and analytical procedures (HPLC, GCMS), hormone assays
- Remove solvent from DNA samples
- Chromatographic analysis

Optional Accessories

TT-DT-16



TT-DT-17



TT-SC-V

Table Top Series
TT-200-96SC 96-Well Sample Concentrator

Technical Data

Specifications	TT-200-96SC 96-Well Sample Concentrator
Temperature control range	R.T. +5°C – 150°C
Temperature stability at 40 -100°C	≤±0.5°C
Temperature stability at 100 -150°C	≤±1.0°C
Block temperature uniformity at 100°C	≤±0.5°C
Block temperature uniformity at 150°C	≤±1.0°C
Temperature display accuracy	0.1°C
Heating speed	≤30 min [40°C to 150°C]
Digital time setting	1min – 99h 59min or continuous
Maximum vertical travel	275 mm
Outer diameter of gas inlet	Ø 7 mm
Nitrogen pressure	≤0.1MPa
Nitrogen flow rate	0 – 10L/min
Needle length	80 mm
Sample capacity	1 standard plate block
Voltage	AC 110V / AC 220V, 50/60 Hz
Power	400W
Fuse	250V, 3A/6A, Ø5x20
Dimension [W x D x H]	220 x 260 x 445 mm
Net weight	5.5 kg
Permissible ambient temperature	5°C – 30°C
Permissible relative humidity	≤70%

Ordering Information

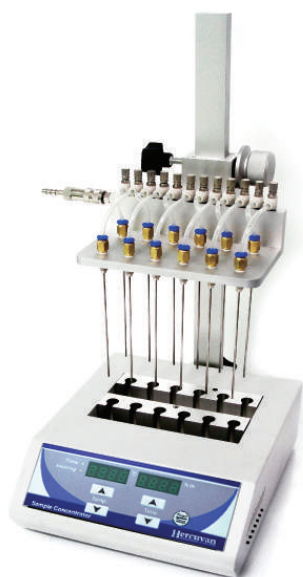
Cat. No.	96-Well Sample Concentrator
TT-200-96SC-110V	96-Well Sample Concentrator TT-200-96SC, AC 110V
TT-200-96SC-220V	96-Well Sample Concentrator TT-200-96SC, AC 220V

Optional Accessories

Cat. No.	Block for Sample Concentrator	Diameter of block well	Bottom shape of block well	Dimension
TT-DT-16	96-Well PCR plate or 96 x 0.2 ml microtubes	6.7 mm	Cone bottom	95.5 x 153.5 x 33.5 mm
TT-DT-17	96-Well microplate	76 x 116 x 4 mm [top]	Flat plate	95.5 x 135 x 22.5 mm

Cat. No.	Flow regulating valve
TT-SC-V	Flow Regulating Valve for Sample Concentrator



**TT-200-VSC Visible Sample Concentrator**

TT-200-VSC

**Optional Accessories**

TT-200-VSC-NK01



TT-200-VSC-NK02



TT-200-VSC-NK03



TT-200-VSC-NK04



TT-200-VSC-NK05



TT-200-VSC-NK06



TT-200-VSC-NK07

TT-200-VSC Visible Sample Concentrator is intended to provide rapid evaporation of solvents from samples in test tubes or containers. It works under the principle of solvent evaporation to concentrate samples. By heating the samples/solution in a dry block heater coupled with a stream of inert gas (nitrogen) direct to the surface of the sample, vapour is rapidly driven off and the sample is quickly concentrated. The unique design of the block enables sample level to be observed during operation.

The sample concentrator is built with gas manifold plate mounted onto a height adjustable stand which allows flexible positioning above the samples. There are 12 independent gas control valves that are used to control the gas flow towards the surface of each sample via gas needles. It is a compact device commonly used to replace high cost rotary evaporators and safe to be used in fume hood.

Features

- Concentrate dozens of samples simultaneously
- Sample level of the concentrate can be observed during operation
- 12 independent gas control valves and optional flow regulating valve minimize wastage of nitrogen gas
- Can be used in fume hood when concentrating toxic solvents
- Adjustable gas needle position to suit different types of sample tubes
- Simple installation, operation and maintenance
- Built-in over temperature protection device, automatic fault detection system and alarm function
- Digital display of temperature and time
- Compact foot print, fits all standard fume hood

Application

- Molecular biology, drug screening and analytical procedures (HPLC, GCMS), hormone assays
- Remove solvent from DNA samples
- Chromatographic analysis

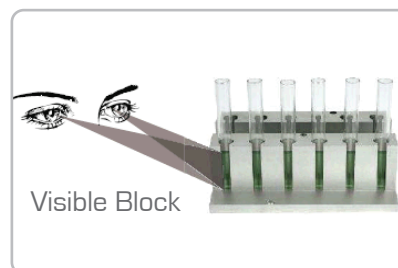


Table Top Series
TT-200-VSC Visible Sample Concentrator

Technical Data

Specifications	TT-200-VSC Visible Sample Concentrator
Temperature control range	R.T. +5°C – 150°C
Temperature stability at 40 -100°C	≤±0.5°C
Temperature stability at 100 -150°C	≤±1.0°C
Block temperature uniformity at 100°C	≤±0.5°C
Block temperature uniformity at 150°C	≤±1.0°C
Temperature display accuracy	0.1°C
Heating speed	≤30 min [40°C to 150°C]
Digital time setting	1min – 99h 59min or continuous
Maximum vertical travel	285 mm
Outer diameter of gas inlet	Ø7 mm
Nitrogen pressure	≤0.1MPa
Nitrogen flow rate	0 – 10L/min
Needle length	150 mm
Sample capacity	1 standard visible block
Voltage	AC 110V/ AC 220V, 50/60 Hz
Power	400W
Fuse	250V, 3A/6A, Ø5x20
Dimension (W x D x H)	220 x 260 x 525 mm
Net weight	5.8 kg
Permissible ambient temperature	5°C – 30°C
Permissible relative humidity	≤70%

Ordering Information

Cat. No.	Visible Sample Concentrator
TT-200-VSC-110V	Visible Sample Concentrator TT-200-VSC, R.T. +5-150°C, 1 Block Configured, AC 110V
TT-200-VSC-220V	Visible Sample Concentrator TT-200-VSC, R.T. +5-150°C, 1 Block Configured, AC 220V

Accessories

Cat. No.	Block for Visible Sample Concentrator	Diameter of block well	Bottom shape of block well	Dimension
TT-200-VSC-NK01	12 x 10 mm	10.5 mm	Round bottom	153.5 x 95.5 x 50 mm
TT-200-VSC-NK02	12 x 12 mm	12.5 mm	Round bottom	153.5 x 95.5 x 50 mm
TT-200-VSC-NK03	12 x 13 mm	13.5 mm	Round bottom	153.5 x 95.5 x 50 mm
TT-200-VSC-NK04	12 x 15 mm	15.5 mm	Round bottom	153.5 x 95.5 x 50 mm
TT-200-VSC-NK05	12 x 16 mm	16.5 mm	Round bottom	153.5 x 95.5 x 50 mm
TT-200-VSC-NK06	12 x 19 mm	19.5 mm	Round bottom	153.5 x 95.5 x 50 mm
TT-200-VSC-NK07	12 x 20 mm	20.5 mm	Round bottom	153.5 x 95.5 x 50 mm



Table Top Series TT-HES-1 MiniGEL Electrophoresis System



TT-HES-1

35V/50V/ 100V Output Voltage	0 - 99 min. Digital Timer	250 - 300 ml Buffer Volume
---------------------------------------	------------------------------------	-------------------------------------

Casting set A



Casting set B

Includes casting gel sets with
multichannel pipette compatible combs

TT-HES-1 MiniGEL Electrophoresis System is a compact, easy to use all-in-one electrophoresis system. It is completed with all components required to cast and run horizontal gels, including gel trays, combs, casting stand, gel tank and digital power supply. The power supply attaches directly to the gel tank without requiring power cables and save valuable bench space. A magnetic sensor allows current to flow to the electrodes only when the lid is in place. Current immediately shut down if the lid is removed during operation. The lid is vented to dissipate heat produced during operation.

Double sided combs are included in the system. The smaller tooth combs are compatible with multichannel pipettes. The gel tray features a dark contrast strip to aid in visualizing wells while loading and lines that fluoresce under UV or blue light to keep track progress of the run.

Features

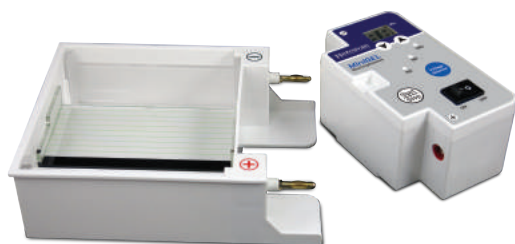
- Integrated power supply: Just plug into the gel tank and ready to cast
- Three pre-set voltage selector: 35V, 50V and 100V
- Digital timer adjustable from 0 – 99 minutes or continuous mode
- Easy ejection and reconnection of power supply
- Vented safety lid – current runs only when the lid is in place, prevent electrical hazards during electrophoresis

Each Standard Set Includes

- Main device
- Power supply
- Power cord (For TT-HES-1-110V only)
- AC transformer (For TT-HES-1-220V only)
- Casting set A for 11cm x 6cm gels: two gel trays and two combs (22*/12 teeth)
- Casting set B for 5.4cm x 6cm gels: four gel tray and two combs (18*/10 teeth)

* Multichannel pipette compatible

Table Top Series TT-HES-1 MiniGEL Electrophoresis System



Applications

- Northern and Southern blotting
- Cosmid library restriction analysis
- STS screening
- Microsatellite analysis
- PCR fragment analysis
- RFLP analysis
- DNA finger printing & high throughput analysis

Technical Data

Specifications	TT-HES-1 -110V MiniGEL Electrophoresis System	TT-HES-1 -220V MiniGEL Electrophoresis System
Input power	AC 100-120V, 50-60Hz	AC 220-240V, 50-60Hz
Output voltage	DC 35V, DC 50V or DC 100V	DC 35V, DC 50V or DC 100V
Timer	0 - 99min. or continuous	0 - 99min. or continuous
Tank dimension (WxDxH)	110 x 120 x 45 mm	110 x 120 x 45 mm
Buffer volume	250 ml - 300 ml	250 ml - 300 ml
Gel tray (WxD)	Gel Tray A: 110 x 60 mm (2pcs) Gel Tray B: 54 x 60 mm (4pcs)	Gel Tray A: 110 x 60 mm (2pcs) Gel Tray B: 54 x 60 mm (4pcs)
Double sided comb (Width x thickness x no. of teeth)	Teeth for casting set A: (1) 3 x 1mm x 22* (2) 5.6 x 1 mm x 12 Teeth for casting set B: (1) 3 x 1 mm x 18* (2) 5.6 x 1 mm x 10 *Multichannel pipette compatible	Teeth for casting set A: (1) 3 x 1 mm x 22* (2) 5.6 x 1 mm x 12 Teeth for casting set B: (1) 3 x 1 mm x 18* (2) 5.6 x 1 mm x 10 *Multichannel pipette compatible
Max. power	40W	40W
Dimension (WxDxH)	190 x 130 x 55 mm	190 x 130 x 55 mm
Net weight	0.45 kg (without AC transformer)	0.45 kg (without AC transformer)

Ordering Information

Cat. No.	MiniGEL Electrophoresis System
TT-HES-1-110V	MiniGEL Electrophoresis System TT-HES-1, AC 100 - 120V
TT-HES-1-220V	MiniGEL Electrophoresis System TT-HES-1, AC 220 - 240V

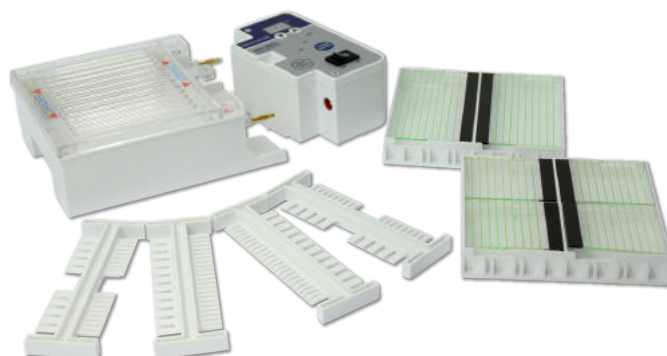
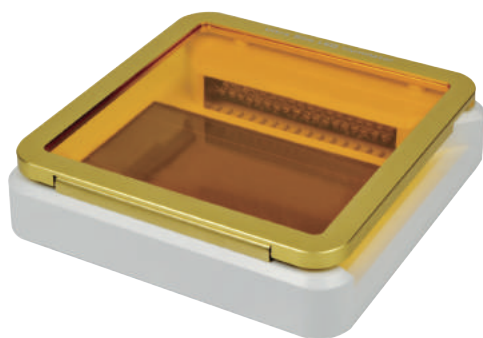


Table Top Series TT-BLT-470 SafeViewer Blue Light Transilluminator



TT-BLT-470

TT-BLT-470 SafeViewer Blue Light Transilluminator is a compact, portable and high intensity blue light transilluminator used as a safer, less toxic alternative to UV transilluminators for viewing wide range of blue light-excitable nucleic acid stains.

The ultra slim TT-BLT-470 SafeViewer Blue Light Transilluminator emits a high intensity LED array at wavelength of 470 nm which illuminate wide range of “safe” dyes in oppose to toxic Ethidium Bromide. This method prevents exposure of users to harmful UV radiation and minimizes DNA damage caused by UV light.

470nm	100mm x 150mm	108 LED	100,000 hours
Wavelength	Gel size	LED	LED Service Life



Features

- **Safe for samples and users**
 - Does not cause burn to skin and eyes
 - Diminishes damage to DNA samples
- **Exceptional performance**
 - 108 high intensity LEDs illuminate wide range of samples
 - Uniform illumination, high quality gel images
- **Portable and light weight**
 - Easy to lift, small footprint conserves bench space
- **Durable and long lasting**
 - Long service life of LEDs up to 100,000 hours

Technical Data

Specifications	TT-BLT-470 SafeViewer Blue Light Transilluminator
Wavelength	470 nm
Max. gel size	100 x 150 mm
Voltage	DC 24V
Dimension (WxDxH)	210 x 210 x 30 mm
Permissible ambient temperature	5 - 40°C
Permissible relative humidity	≤70%
Net weight	1.4 kg

Ordering Information

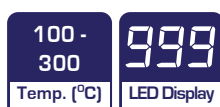
Cat. No.	Blue Light Transilluminator
TT-BLT-470	SafeViewer Blue Light Transilluminator TT-BLT-470, 470 nm, max. gel size 100 x 150 mm, DC 24V

Table Top Series

TT-300-GBS Glass Bead Sterilizer



TT-300-GBS



TT-300-GBS Glass Bead Sterilizer offers a fast and effective method to decontaminate solid metal and glass implements in seconds. It works by heating the glass beads to about 300°C to effectively destroy all microbes and spores. Suitable for sterilizing forceps, scissors, scalpels, needles and inoculating loops.

Features

- Effective sterilization of solid metal and glass implements
- Safe to use – no gases, open flames or harsh chemicals
- Digital temperature display
- Compact foot print, can be placed in Laminar Flow Cabinet



Technical Data

Specifications	TT-300-GBS Glass Bead Sterilizer
Temperature control range	100°C – 300°C
Temperature stability	≤±5°C
Heating speed	≤25 min.
Heating well volume	Ø40 mm x 80 mm
Glass bead capacity	150 g
Material of construction (cover)	Stainless steel
Material of construction (insulator)	Green mineral wool
Voltage	AC 110V/AC 220V, 50/60Hz
Power	120W
Fuse	250V, 2A/3A, Ø5x20
Dimension (WxDxH)	130 × 150 × 200 mm
Net weight	2 kg

Ordering Information

Cat. No.	Glass Bead Sterilizer
TT-300-GBS-110V	Glass Bead Sterilizer TT-300-GBS, 100-300°C, heating well volume Ø40 x 80 mm, AC 110V
TT-300-GBS-220V	Glass Bead Sterilizer TT-300-GBS, 100-300°C, heating well volume Ø40 x 80 mm, AC 220V

Table Top Series

TT-825-S/TT-825-L Infrared Micro-Sterilizer



TT-825-S



TT-825-L



Ajustable angle
heating chamber



High & low
temperature setting

TT-825-S / TT-825-L Infrared Micro-Sterilizer utilizes infrared heat that produce 825°C to incinerate organic material deep within the ceramic funnel.

Ideally used to provide complete sterilization of platinum inoculating loops, needles, glass tube or pipette mouth in 5-7 seconds.

Features

- Safe and convenient sterilizer
- Adjustable angle heating chamber
- Safeguard users without open flame and hazardous gas
- Has lower temperature setting (480°C) that is used as standby mode to extend the shelf life of the heating chamber

Application

- Instant sterilization

Technical Data

Specifications	TT-825-S Infrared Micro-Sterilizer	TT-825-L Infrared Micro-Sterilizer
High temperature setting	825±50°C	825±50°C
Low temperature setting	480°C	480°C
Sterilization time	5-7 seconds	5-7 seconds
Heating speed to max. temperature	20min	20min
Chamber diameter	14 mm	35 mm
Heating element length	140 mm	100 mm
Input voltage	AC 110V or AC 220V, 50/60Hz	AC 110V or AC 220V, 50/60Hz
Fuse	250V, 2A/ 3A, Ø5x20	250V, 3A/ 5A, Ø5x20
Power	230 W	400 W
Dimension (W x D x H)	87 x 151 x 160mm	92 x 101 x 170mm
Permissible ambient temperature	5 - 40°C	5 - 40°C
Permissible relative humidity	≤70%	≤70%
Net weight	1.0 kg	1.1 kg

Ordering Information

Cat. No.	Infrared Micro-Sterilizer
TT-825-S-110V	Infrared Micro-Sterilizer TT-825-S, 14 mm chamber diameter, AC 110V
TT-825-S-220V	Infrared Micro-Sterilizer TT-825-S, 14 mm chamber diameter, AC 220V
TT-825-L-110V	Infrared Micro-Sterilizer TT-825-L, 35 mm chamber diameter, AC 110V
TT-825-L-220V	Infrared Micro-Sterilizer TT-825-L, 35 mm chamber diameter, AC 220V

Optional Accessories

Cat. NO.	Heating Element
TT-825-S-HE	Replacement heating element for TT-825-S Infrared Micro-Sterilizer
TT-825-L-HE	Replacement heating element for TT-825-L Infrared Micro-Sterilizer

Gene Series

GS-96/ 60/ 384/ 2x48/ 4830/ 96 PRO Gradient Touch Thermal Cycler



GS-96 / GS-60/ GS-384 / GS-96 PRO



GS-2x48/ GS-4830

GS-96/ 60/ 2x48/ 384/ 4830 Gradient Touch Thermal Cycler is a reliable gradient thermal cycler that delivers exceptional thermal performance for great accuracy and reproducibility in nucleic acid amplification with 8 Peltier elements, 4 independent temperature sensors and high ramping rates up to 5°C/sec.

GS-96 and **GS-60** models come with a standard 96-well x 0.2 ml block and 60-well x 0.5 ml block respectively while **GS-384** model comes with 384-well block format to handle high throughput PCR experiments.

GS-2x48 model is a dual-block system with two separate 48-well x 0.2 ml reaction module while **GS-4830** model comes with 48-well x 0.2 ml plus 30-well x 0.5 ml block format. User can interchange all of these reaction modules easily without requiring any special tools.

GS-96 PRO Gradient Touch Thermal Cycler is the upgraded version of GS-96 model that is engineered with HexaPRO Block that have 6 temperature zones for PCR optimization. With six separate Peltier blocks, you can control and optimize 6 reactions precisely.

Features

■ Easy to program

8 inches TFT touchscreen display and intuitive graphical programming makes navigation, protocol editing and viewing easier

■ High performance lid

The lids are engineered with unique clutch mechanism which automatically limit the lid pressure applied against sample container, thus prevent PCR tubes/plates from damage

■ Easy data output

Able to save and transfer files using USB flash drive

■ Personalized log in users and passwords

Log in feature allows users to set password for individual account to fully monitor their protocols with more privacy

■ LAN network enabled

Users able to control up to 30 thermal cyclers simultaneously via PC-controlled network

■ Free and easy software updates

Software update from USB flash makes the software updates easier

■ GLP report

GLP report completely records essential information of all PCR run

■ Incubation setting

Incubation setting module allows users to program desired incubation block temperature and hold time



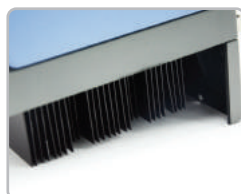
Touch screen



High performance lid



Heated lid



Cooling Fin



Interchangeable block
(GS-96/ 60/ 384/ 2x48/ 4830)



Communication ports

**GS-96/ 60/ 384/ 2x48/ 4830/ 96 PRO Gradient Touch Thermal Cycler****Technical Data**

Specifications	GS-96 / 60/ 384/ 2x48 / 4830	GS-96 PRO
Capacity	96 x 0.2 ml/ 60 x 0.5 ml/ 384 x 0.02 ml/ 2 x 48 x 0.2 ml/ 48 x 0.2 ml + 30 x 0.5 ml	6 x 16 x 0.2 ml (6 temperature zones)
Program memory	10,000 programs + USB	10,000 programs + USB
Temperature range	0 - 100°C	4 - 100°C
Temperature gradient	30°C	25°C (max. 5°C zone-to-zone)
Gradient temperature range	30 - 100°C	30 - 100°C
PCR volume range	1-100 µl	1-80 µl
Maximum heating rate	5.0°C / sec	6.0°C / sec
Maximum cooling rate	4.0°C / sec	4.0°C / sec
Temperature uniformity	±0.2°C at 30°C - 72°C ±0.3°C at 95°C	±0.2°C at 30°C - 72°C ±0.3°C at 95°C
Temperature accuracy	±0.1°C (30-100°C)	±0.2°C (30-100°C)
Ramp rate adjustable	0.1- 5.0°C / sec	0.1- 6.0°C / sec
Display	8.0" TFT color touch screen, 800 x 600 pixels	8.0" TFT color touch screen, 800 x 600 pixels
Cool samples to 4°C	Yes	Yes
Auto restart after power failure	Yes	Yes
Height adjustable heated lid	Yes	Yes
Hot lid temperature range	30°C -110°C	30°C -110°C
Max. number of steps	30	30
Max. number of cycles	100	100
Time increment / decrement	1sec - 600sec	1sec - 600sec
Temperature increment / decrement	0.1 - 10.0°C	0.1 - 10.0°C
Max. power consumption	600 Watt	600 Watt
Input voltage	AC 85-264V, 47 - 63Hz	AC 85-264V, 47 - 63Hz
Interfaces	USB, LAN	USB, LAN
Dimension (W x D x H)	270 x 390 x 255 mm	270 x 390 x 255 mm
Weight	9.0 kg	9.0 kg

Ordering Information

Cat. No.	Gradient Touch Thermal Cycler
GS-96	Gradient Touch Thermal Cycler GS-96, 96 x 0.2 ml block
GS-60	Gradient Touch Thermal Cycler GS-60, 60 x 0.5 ml block
GS-384	Gradient Touch Thermal Cycler GS-384, 384 x 0.02 ml block
GS-2x48	Gradient Touch Thermal Cycler GS-2x48, 2 x 48 x 0.2 ml block
GS-4830	Gradient Touch Thermal Cycler GS-4830, 48 x 0.2 ml + 30 x 0.5 ml block
GS-96 PRO	Gradient Touch Thermal Cycler GS-96 PRO, 6 x 16 x 0.2 ml HexaPRO block



96 x 0.2 ml block



2 x 48 x 0.2 ml block

6 x 16 x 0.2 ml
HexaPRO block**Optional Accessories**

Cat. No.	Block for Gradient Touch Thermal Cycler
GS-B962	Gradient Touch Thermal Cycler Block, 96 x 0.2 ml
GS-B605	Gradient Touch Thermal Cycler Block, 60 x 0.5 ml
GS-B384	Gradient Touch Thermal Cycler Block, 384 x 0.02 ml
GS-B482	Gradient Touch Thermal Cycler Block, 2 x 48 x 0.2 ml
GS-B4830	Gradient Touch Thermal Cycler Block, 48 x 0.2 ml + 30 x 0.5 ml
GS-B962 PRO	Gradient Touch Thermal Cycler HexaPRO Block, 6 x 16 x 0.2 ml (6 temperature zones)

Nano Series

Superior Performance in Nucleic Acid and Protein Quantification

Specially designed for the life science market, Hercuvan is offering two types of microvolume spectrophotometers for fast and accurate quantification of nucleic acid and protein.



ND-3800

Nano DOT Microspectrophotometer



ND-2800

Nano DOT Nucleic Acid Analyzer

Microvolume

Only require 0.5-2 μ L samples for analysis, save your precious samples.

Easy and Rapid

Simply pipette, measure and wipe clean. Fast measurement time of less than 10 seconds.

No Dilution

No dilution of samples required. No need expensive consumables (cuvette, absorption cells).

No Consumables

Eliminate the need of expensive consumables (cuvette, absorption cells).

No Warm Up

No more waiting time to warm up lamp.

Long Lifespan

Xenon flash lamp, 10^9 flashes (up to 10 years)

Compact

Small footprint design conserves bench space.

Flexible data output

Results can be printed with built-in thermal printer. Data can be exported via USB and SD-Ram Card.

Product Selection Guide

Applications	ND-3800 Nano DOT Microspectrophotometer	ND-2800 Nano DOT Nucleic Acid Analyzer
Full Spectral Data	■	
Measures Nucleic Acid Concentration	■	■
Measures Nucleic Acid 260/280 Ratio	■	■
Measures Nucleic Acid 260/230 Ratio	■	■
Measures Protein A280	■	■
Measures Protein BCA	■	
Measures Protein Lowry	■	
Measures Protein Bradford	■	
Measures OD ₆₀₀	■	

01



Pipette

02



Measure

03



Wipe



Nano Series

ND-3800-OD Nano DOT Microspectrophotometer /

ND-2800 Nano DOT Nucleic Acid Analyzer



ND-3800-OD

ND-3800-OD Nano DOT Microspectrophotometer is a robust microspectrophotometer that provides full spectrum UV-Vis analysis. The newly added application of OD₆₀₀ measurement with cuvette mode enables measuring of bacteria concentration in liquid suspension to monitor growth of bacterial cultures. Enhanced with 7-inch touch screen design and built-in Android system, it allows quick navigation of application modules, easy operation and access of data without requiring connecting to a computer.

It is an integrated system that delivers fast and reliable quantification of nucleic acid and protein with microvolume samples as little as 0.5 μ L.

■ Standalone

Integrated Android system eliminates the need for a separate computer

■ 7-inch touch screen

Easy and flexible operation with 7-inch color touchscreen interface

■ OD₆₀₀

OD₆₀₀ pre-defined program for measuring concentration of bacteria



ND-2800

ND-2800 Nano DOT Nucleic Acid Analyzer is a stand-alone, easy-to use and compact spectrophotometer that is ideal for quick measurement of concentration and purity of nucleic acid and purified protein samples.

Samples of 0.5 μ L to 2 μ L can be measured by pipetting directly onto lower pedestal without requiring absorption cell or cuvette and the results can be obtained in less than 10 seconds. The operation is easy and user friendly thanks to the color touch screen design and intuitive built-in controls and software.

■ Standalone (no PC required)

Designed with built-in controls and software, no computer is required. Turn on and ready to go.

■ Intuitive touchscreen interface and keypad controls

Easy and flexible operation with color touchscreen interface, entries can be made on keypad or on the optional computer mouse.

■ Flexible data output

Results can be printed with built-in thermal printer. Data can be exported via SD-RAM card or Flash.





Nano Series

ND-3800-OD Nano DOT Microspectrophotometer /

ND-2800 Nano DOT Nucleic Acid Analyzer

Technical Data

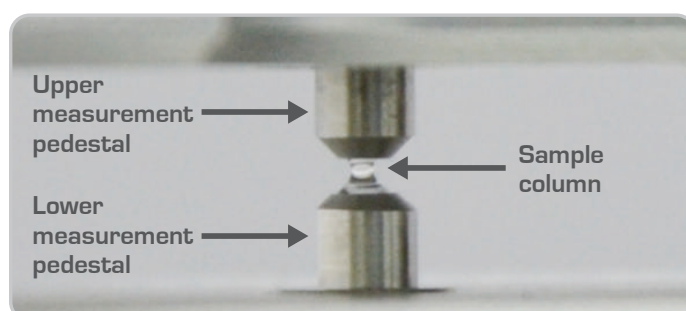
Specifications	ND-3800-OD Nano DOT Microspectrophotometer	ND-2800 Nano DOT Nucleic Acid Analyzer
Sample size	0.5 μ l - 2 μ l [2 μ l advised]	0.5 μ l - 2 μ l [2 μ l advised]
Path length	0.2 mm [high concentration] 1.0 mm [ordinary concentration]	0.2 mm [high concentration] 1.0 mm [ordinary concentration]
Light source	Xenon flash lamp	Xenon flash lamp
Detector type	3864 – element linear silicon CCD array	Silicon photodiode
Wavelength range	200 – 800 nm	230 nm, 260 nm, 280 nm
Wavelength accuracy	± 1 nm	-
Spectral resolution	≤ 3 nm (FWHM at Hg 546 nm)	-
Absorbance precision	0.003 Abs	0.002 Abs
Absorbance accuracy	1% [7.332 Abs at 260 nm]	1% [7.332 Abs at 260 nm]
Absorbance range [10 mm equivalent absorbance]	0.02 – 90 A	0.02 – 80 A
Detection range	3 – 4,500 ng/ μ l [dsDNA]	10 – 4,000 ng/ μ l [dsDNA]
Detection time	<10s	<10s
Sample pedestal material	aluminium alloy and quartz fiber	aluminium alloy and quartz fiber
Operating voltage	DC 24V	DC 24V
Operating power consumption	40W	40W
Standby power consumption	5W	5W
Dimension [WxDxH]	210 x 268 x 181 mm	210 x 268 x 181 mm
Net weight	3.0 kg	2.8 kg
Software compatibility	Android system	Win CE

OD₆₀₀ Measurement

Specifications	ND-3800-OD Nano DOT Microspectrophotometer	ND-2800 Nano DOT Nucleic Acid Analyzer
Light source	LED	-
Wavelength range	600 \pm 8nm	-
Absorbance range	0-3A	-

Ordering Information

Cat. No.	Microspectrophotometer / Nucleic Acid Analyzer
ND-3800-OD	Nano DOT Microspectrophotometer ND-3800-OD
ND-2800	Nano DOT Nucleic Acid Analyzer ND-2800



Nucleic Acid Extraction and PCR Products' Analysis

DNA/RNA Sample Pretreatment

Sample resuspension
and centrifugation

TT-6000 Mini-Centrifuge
pg 23 - 24



or similar, see TT-3K-10K
Mini-Centrifuge pg 23 - 24



Sample thermostating
and incubation

TT-100-DHT/TT-100-DHC
Dry Bath Incubator pg 34 - 35



or similar, see Mini Dry
Bath Incubator pg 32 - 33



Sample pretreatment

TT-30K Digital Handheld
Homogenizer pg 8 - 9



DNA/RNA Purification

High speed centrifugation
for DNA Extraction

TT-14500 PRO
Microcentrifuge pg 22



Centrifugation for DNA
Extraction in plates

TT-2500
Microplate Centrifuge pg 21



DNA/RNA Quantification

Analyze concentration
of DNA/RNA

ND-2800
Nucleid Acid Analyzer
pg 51 - 53



or similar, see ND-3800-OD
Microspectrophotometer
pg 51 - 53



PCR

DNA Amplification

GS-96/ 60/ 384/ 2x48/ 4830/ 96 PRO
Gradient Touch Thermal Cycler pg 49 - 50



Gel Electrophoresis

Electrophoresis

TT-HES-1
MiniGEL Electrophoresis System pg 44 - 45



Gel documentation

TT-BLT-470
SafeViewer Blue Light Transilluminator pg 46



General Information

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