

ESTEEM INDUSTRIES INC.

MINERAL WATER TESTING INSTRUMENTS

B.O.D INCUBATOR



EST-BI – 127 ESTEEM BOD INCUBATOR

Most versatile and highly reliable low temperature incubator, to make Biochemical Oxygen Demand determinations and for preservation of vaccines, insulin, liver extracts, chemicals etc.

CONSTRUCTION

Robust Construction. Outer cabinet is made of M.S. Sheet, duly pre treated & finished with epoxy powder coated paint for lasting finish. Inner chamber is made of highly polished stainless steel. It has provision for allowing wide range of shelf positions & spacing. SS trays are also provided. The outer chamber may also be provided of mat finished Stainless Steel.

Chamber is duly insulated to minimize heat loss. Two doors are provided. Outer door is insulated and is fitted with magnetic tape for air tight closing for no temperature loss. Door is provided with lock and key. Inner door is made of transparent acrylic/ glass for inspecting the specimens inside chamber, without opening the door and with minimum temperature loss.

TEMPERATURE CONTROL

The heart of the ESTEEM B.O.D. Incubator is the excellent and reliable solid state temperature controller cum indicator digital display, range from 5°C to 50°C ± 0.5°C. Hermetically sealed, Dan Foss / Emerson Copeland high performance compressor works efficiently to lower the inside chamber temperature. Heating elements are placed in the path of moving air duly insulated from the body. Cooling coils also lie in the air circulation path. Air is circulated by a double shaft self-cooled, blower to keep the uniform temp. through out the inner chamber. A safety thermostat is provided, which switches off the heaters in the event of failure of the normal temp. control system to protect the specimens from excessive heat. A highly insulated CFC free PUF System is provided to avoid loss of energy.

CONTROL PANEL

All controls and circuitry are housed at the top of the incubator and therefore protected from spillage. Separate indicator lamps for mains, heating and cooling are fitted. Temperature setting is by finger touch fine and coarse for the user to set any desired temp. A Voltmeter is provided on the panel to read the incoming voltage. Fitted with automatic built in stabilizer.

ILLUMINATION:

Our units are provided with door operated illumination system comprising of fluorescent lights.

FRONT PANEL:

Front panel of our units comprises of on/off switches heating, cooling and mains indicator lamps, temperature controllers and voltmeters.

STANDARD SIZES: INNER CHAMBER

Available in following chamber sizes :-

W × H × D Cap. Cu. ft.

455 × 605 × 415 mm 4.0

500 × 800 × 415 mm 6.1

565 × 865 × 550 mm 10.0

650 × 900 × 550 mm 12.0

700 × 900 × 650 mm 15.0

TEMPERATURE CONTROL

Temperature Sensitivity

Spatial Deviation In Temperature

Readability

Temperature range

Temperature Sensor

Temperature Controller

Display

Adjustable alarm limits

ACCESSORIES

de-icing module

Timer (999 mins)

Program (Real Time)

Data Acquisition Program

Serial Port (Printer)

Inspection window in door

Printer Report Program

2 x 24 characters LCD Display

Access Port 30 mm

UNIVERSAL DIGITAL DATA RECORDER WITH COMPUTER



DATA ACQUISITION AND CONTROL SYSTEM FOR BOD INCUBATORS.:

This is unique module which can be incorporated with our bod incubators to log in temperature and environment related data with a help of a data logger unit which has a pc connectivity by means of RS 232 C interface. This data is then analyzed and formatted with the help of our unique user friendly analysis software to enable the user to get a formatted and analyzed reports of various inputs during the full operation cycle of the equipment. This is an ideal module for pharmaceutical laboratories, process control applications and high research projects where maintaining a viable record of the performance of the equipment is very essential.

FEATURES:

- Our system incorporates multiple Devices such as in line process Indicators, environment scanners and temperature or humidity controllers.
- Provides astech cable for direct interface to any dot matrix or laser printer for online or offline data records printing
- It has Bulk data storage capacity with high data retention life.
- Facility to obtain nicely formatted print out of the logged data or records with proper headers.
- Our system provided facility to program recording interval with various options to suit individual requirements.
- It is provided with the feature to adjust or select baud rate for any serial communication port.
- Our system is provided with user friendly custom developed software which obtains and analyze the data and facilitates the user to generate reports and graphs etc.

HORIZONTAL LAMINAR AIR FLOW



ESTA-HL101 ESTEEM HORIZONTAL LAMINAR AIR FLOW

We at Esteem are manufacturers of horizontal laminar air flow in India since more than a decade. Our laminar air flows are widely used for day to day clean rooms activities, pathogen handling, and microbiology and biotechnology applications in various laboratories. We specialize in both standard and customized models, specifically designed to meet the challenging demands of various scientists for individual and specialized research applications. Over a short period of time ESTEEM brand have been established as reliable exporters of horizontal laminar air flow in India, catering to the vast markets in South East Asia, Middle East, Africa and Europe.

Apart from that we are supplying our laminar air flows in India , catering to a variety of customers ranging from Defence Installations, Research Laboratories, Educational Institutes and various R& D laboratories of leading national and multinational companies.

PRODUCT OVER VIEW:

Our laminar air flows are conceptualized to provide a work area completely bathed in high efficiency perfect air which is free from any kind of particulate contamination or impurities. These units are ideally suited in all the applications requiring protection of biological specimens or products from the possible contamination during the process or test. Our laminar air flow bench is fast gaining popularity in other fields, such as pharmaceutical production, electronic industries and various other manufacturing applications.

PROCESS EXPLANATION: LAMINAR AIR FLOW TECHNOLOGY

Laminar air flow are clean benches which have their own supply of highly purified air in which the total air present in the enclosure moves in a uni directional velocity flowing in parallel lines, which is free from macroscopic fluctuations. The horizontal laminar air flow units directs the air in mono direction which is away from the specimen and towards the user, giving ultimate protection to the product, which is susceptible to contamination induced by diffusion of contaminated air carrying air transported contaminants from the outside environment.

CLASSIFICATIONS: LAMINAR AIR FLOW

All the laminar air flows are classified into three broad categories as per US Federal Standards 209 B Ans 209 E (latest revision on 11.09.92). As per this standard the particle count in the existing air around the work table is taken into account.

LAMINAR AIR FLOW CLASS 100

These laminar air flow units are those where the particle count of size 0.5 micron and larger is less than one hundred particle/ cubic feet, in the area of work.

LAMINAR AIR FLOW CLASS 10,000

These laminar air flow units are those where the particle count of size 0.5 micron and larger, is less than ten thousand particle per cubic feet or sixty particle per cubic feet of dimension larger than five micron and bigger size in the area of work

LAMINAR AIR FLOW CLASS 1,00,000

These laminar air flow units are those, where the particle count of size 0.5 micron and larger is less than one lac particle per cubic feet or seven hundred particles per cubic feet of dimensions five micron or larger. In the area of work.

CONSTRUCTION DETAILS OF HORIZONTAL LAMINAR AIR FLOW

BASIC CONSTRUCTION:

Our horizontal laminar air flow bench are designed to conform to the united states federal standard 209B/BS5295 and meets the class 100 conditions. Our units are fabricated of industrial grade wooden boards covered with mica sheets. The inner portion of all our laminar air flows are painted with epoxy paint coating for extra long life. The working table is made of heavy gauge stainless steel sheet of grade ss-304. The side panels made out of heavy plexi glass sheets are mounted on anodized aluminum frames. The whole unit is supplied with differential manometer to gauge the pressure drop in the unit while operation, beside the gas cock, power socket etc. WE ALSO MANUFACTURE LAMINAR AIR FLOW BENCH COMPLETE OF STAINLESS STEEL. THE INNER PORTION IS SATIN FINISHED AND OUTER MAT FINISHED.

FILTER ASSEMBLY

All our laminar air flows are fitted with fully washable synthetic pre-filter units and secondary high efficiency perfect air filters made of mini pleated non woven fabric. The efficiency of our filters have a rating of better than 99.99% at DOP (cold) and 99.97% at DOP (Hot). Our units have the capacity to hold all suspended particles of size greater than 0.3 micron.

MOTOR AND BLOWER ASSEMBLY

All our laminar air flow units are provided with perfectly balanced (Static as well as dynamic) motor and blower motors bearing ISI mark. The rating of the assembly is 1/5 HP. Our high efficiency pumps which have life log lubricated bearings ensure a trouble free operation for a long time.

ILLUMINATION:

All the units are provided with adequate illumination at the work table by means of fluorescent lights panel concealed at the upper portion of the unit. This light arrangement conforms to the guidelines laid down in US federal standard. The illumination at the work table is approx 800 lux.

ULTRA VIOLET LIGHT

Optimal wattage ultra violet light is incorporated in the illumination panel of our laminar air flow to take care of the sterilization of the existing air present in the enclosure, thus ensuring the high standard of cleanliness in our equipment before the commencement of actual working.

NOISE LEVEL:

Our laminar air flow bench are designed to ensure that the work enclosure have minimum possible vibration levels and noise level is also contained below 55 db.

SALIENT FEATURES:

- Ergonomic Design
- Versatile Usage
- Low Noise And Vibration Levels
- Conforms to US Federal Standard 209 B
- Calibration And Protocol Documentation

APPLICATIONS:

Our Vertical laminar air flows have a variety of applications such as

- Quality control labs of pharmaceutical Industries
- Quality control labs of food processing industries
- Quality control labs of micro circuit and electronic assembly and manufacturing applications.
 - Deoxy Ribonucleic Acid Thermo cycling
 - General Laboratory applications in Biotechnology
 - General Laboratory applications Microbiology
 - General Laboratory applications Tissue Culture
 - General Laboratory applications Genetic engineering

TECHNICAL MATRIX: VERTICAL

CONSTRUCTIONS

Table

Pre Filter

HEPA Filters

Air Flow

Air Flow Control

Blower Assembly

Illumination

Noise level

ADD ON FEATURES

Power Requirements

Internal Work Space

Nominal voltage

Frequency

USED IN THE FOLLOWING:

- Hospitals.
- Pharmaceutical.
 - Food.
 - Beverage.
- Electronic Industries.

FEATURES

- Convenient
 - Clear view through transparent acrylic sheet.
 - Front door with full and semi opening option.
- Variable air flow speed to suit individual requirements.

STURDY

- Epoxy painted inner chamber for longer life.
- Decolam covered ISI marked plyboard cabinet.
- Sealed filler seat for leak resistant operations.

ECONOMICAL

- Best quality at a reasonable price.
- True value for money.

SPECIFICATIONS:

PARAMETERS	MODEL HLF-1	MODEL HLF-2	MODEL HLF-3	MODEL HLF-4
Work table size (usable space) Feet	2 x 2	3 x 2	4 x 2	6 x 2
Chamber height Feet	2.5 FEET FOR WORK BENCH AND TOTAL HEIGHT 5 FEET IN HORIZONTAL MODEL			

ESTEEM SPECTROPHOTOMETER



ESTA-SM101 ESTEEM SPECTROPHOTOMETER

Spectrophotometry involves the use of a spectrophotometer. A spectrophotometer is a photometer (a device for measuring light intensity) that can measure intensity as a function of the color, or more specifically, the wavelength of light. There are many kinds of spectrophotometers. Among the most important distinctions used to classify them are the wavelengths they work with, the measurement

techniques they use, how they acquire a spectrum, and the sources of intensity variation they are designed to measure. Other important features of spectrophotometers include the spectral bandwidth and linear range. There are two major classes of spectrophotometers; single beam and

double beam. A double beam spectrophotometer measures the ratio of the light intensity on two different light paths, and a single beam spectrophotometer measures the absolute light intensity. Although ratio measurements are easier, and generally stabler, single beam instruments have advantages; for instance, they can have a larger dynamic range.

The ESTA-SM101 Esteem spectrophotometer has a symmetrical double beam spectrophotometer, with an 8 cell changer, has a 1.8nm optical bandwidth and is ideal for dissolution measurements. Its stability of, ± 0.0001 A / hour, approximately ten times better than single beam instruments, makes it ideal for extended measurements such as sustained release monitoring. Full cell and wavelength programming together with wavelength scanning make the instrument ideal for dissolution applications and may, when required, be used as a high quality scanning double beam spectrophotometer for other applications.

- Range 340 to 960 nm.
- Dual Digital Display for Wavelength and Data.
- Wavelength resolution 1 nm.

ESTA-SMUV101 ESTEEM SPECTROPHOTOMETER



MAIN FEATURES AND BENEFITS

We have a wide range of Spectrophotometers to meet today's demand for laboratory challenges. From basic compact model to comprehensive research grade UV-Visible Spectrophotometer, FTIR Spectrometer and Atomic Absorption Spectrophotometer satisfy the demand of high precision & high reliability for variety of applications.

The Esta-smuv101 is a high performance, true double beam UV/Visible spectrophotometer

with parallel sample and reference beams and is supplied with two x 10mm precision cell holders as standard. Two silicon photodiodes are used for measuring the two beams simultaneously, thereby ensuring the measurement accuracy and stability. The reference beam is especially useful for measuring samples where the reference solution changes with time. The Esta-smuv101 uses an easy-to-replace tungsten-halogen lamp and a pre-aligned, long-life Hamamatsu deuterium lamp. The specification is as expected from a top-of-the-range instrument designed for both research and routine use.

USER INTERFACE

The user interface is almost the same as that of the popular Esta-smuv101 single beam scanning spectrophotometer and includes:

- Basic Mode - Absorbance, %T, Concentration
- Quantitative Mode - Concentration calibration curves
- Wavelength Scanning Mode
- Kinetics Mode - Including time/drive
- DNA/Protein Analysis Mode

The Esta-smuv101 stores up to 50 methods / results. In Basic Mode, the result is continuously displayed, i.e. no need to "press to read".

PC CONTROL

The Esta-smuv101 has a bi-directional RS232C serial interface for transfer of results to a PC

and for PC control of the Esta-smuv101. Comprehensive Camspec Application consumables is available, together with a number of small PC programs dedicated to specialist tasks.

ACCESSORIES

An extensive range of sample compartment accessories (which can also be used with the

Esta-smuv101) is available and includes:

- Test tube V-type holder (100mm or 120mm diameter tubes)
- Adjustable micro-cell holder
- 4 x 10mm manual cell changer
- 4-cell holder for 5 to 50mm cells
- 4-cell holder for 100mm cells
- 100mm cylindrical cell holder
- Thermostatted single cell holder (requires external water bath)
- Automatic 6-position carousel cell changer (M550 only)
- Sipper system, processor controlled
- Peltier system for 10mm cells, 15 to 40°C
- Combined peltier / sipper system
- Cell stirrer for 10mm cells
- Specular reflectance accessory (5° incident angle)
- Integrating sphere for diffuse transmittance and reflectance applications
- Calibration standards for wavelength, absorbance, stray light - traceable to NPL
- Pharmacopoeia compliance certificated test set - UKAS accredited

PHARMACEUTICAL ANALYSIS

The Esta-smuv101 is European Pharmacopoeia 5.2 compliant and passes the following tests:

- Potassium Chloride solution stray light test
- Toluene in Hexane solution resolution test
- Holmium Perchlorate solution wavelength test
- Potassium Dichromate solution absorbance test

Esteem Industries INC is an ISO 9001:2000 company and all instruments are individually checked using wavelength and absorbance standards calibrated by the National Physical Laboratory. The Esta-smuv101 fully complies with CE requirements for safety and ESD / EMC emission and susceptibility.

ATOMIC ABSORPTION SPECTROPHOTOMETER

What it does: Atomic absorption Spectrophotometry provides accurate quantitative analyses for metals in water, sediments, soils or rocks. (Samples are analyzed in solution form, so solid samples must be leached or dissolved prior to analysis.)

HOW IT WORKS:

Atomic absorption units have four basic parts: interchangeable lamps that emit light with element-specific wavelengths, a sample aspirator, a flame or furnace apparatus for volatilizing the sample, and a photon detector. In order to analyze for any given element, a lamp is chosen that produces a wavelength of light that is absorbed by that element. Sample solutions are aspirated into the flame. If any ions of the given element are present in the flame, they will absorb light produced by the lamp before it reaches the detector. The amount of light absorbed depends on the amount of the element

present in the sample. Absorbance values for unknown samples are compared to calibration curves prepared by running known samples.

INSTRUMENT STATISTICS:

Our system is a microprocessor-controlled double beam spectrophotometer with a graphite furnace attachment for flameless analysis. Both acetylene and nitrous oxide fuel mixtures can be use to allow for the analysis of a wide range of elements.



DESCRIPTION

We offer Atomic Absorption Spectrophotometer with following product specification:-

Grating: 1800 lines/mm

Blaze wavelength: 250nm

Focus length: 300mm

Bandwidth: 5 steps automatic

FEATURES:-

Fully controlled by PC. Compatible with MS window XP and user-friendly graphical user interface. Automatic Setting of: Wavelength set-up, Slit switching, Lamp current, Gain, Switching and control of 6 lamps turret, Flame ignition, Flow control for gases and Gas lead detention.

Floating optical system to ensure stable performance. Titanium burner head and Nebulizer are protect against corrosion and oxidation. D2 Lamp and Self Absorption background correction methods.

ACCESSORIES:-

Hydride Generator, Auto sampler for flame/furnace, Chiller etc.

For any further information feel free to contact us.

SPECIFICATIONS

Display	1/4 VGA - 320 x 240 pixels, backlit LCD
Light Sources	Tungsten-Halogen and Deuterium
Monochromator	Littrow type with 1200 lines/mm grating
Detector	Two Silicon Photodiodes
Wavelength Range	190 - 1100nm
Wavelength Accuracy	± 0.3nm
Wavelength Resolution	0.1nm
Wavelength Repeatability	± 0.05nm
Bandpass	1.8nm
Photometric Range	-0.3 to 3.0A, 0 to 200%T and 0 to 9999 Conc
Photometric Accuracy	Better than 1% @ 0.5A, 1A and 2A
Scan Speed	Up to 2500nm / min (return 3000nm / min)
Noise	Less than 0.0001A @ 500nm 0A
Zero Drift	Less than 0.001A per hour after warm-up

Baseline Flatness	± 0.002A
Stray Light (ASTM)	Less than 0.05%T @ 220nm and 340nm
Printer Interface	Centronic parallel - for A4 HP and Epson Printers
Computer Interface	Bi-directional RS232C for PC control
Power Requirements	110/120V AC, 220/230V AC, 50/60Hz, 110VA
Dimensions	(W) 630mm x (D) 410mm x (H) 280mm (24 Kg. Weight)

ATOMIC EMISSION SPECTROPHOTOMETER

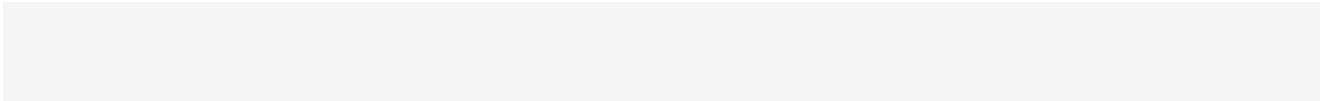



FEATURES :

- Reasonable design and perfect performance.
- Rapid analysis, perfect repeatability and stability.
- High integrated data collection, control system and high automatic degree.
- Used for many kinds of matrix analysis :Fe, Co, Ni, Ti, Cu, Al, Pb, Mg, Zn, Sn etc.
- High repeatability & stability excitation source is adopted. Excitation frequency can change in 150 ~ 600 Hz range.
- Computer software is user-friendly and easy to operate.

- Database is built in. User can transfer data through the internet, convenient and quick.
- Shake-protection performance is strong, and there is no need to make shake-protection base.
- Local constant-temperature technique is adopted to ensure the normal operation, minimizing requirement to environmental conditions.
- Operations and maintenance are easy, convenient and maintenance cost is low.

TECHNICAL SPECIFICATIONS



MODEL		
Spark Source	Input power	1.0 KVA
	Charge capacitance	Pre-burn 7 μ f, Expose 1.5 μ f
	Discharge Inductance	Pre-burn 35 μ h; Expose 70 μ h
	Peak current	Pre-burn 100A; Expose 35A
	Peak voltage	300V
	Ignite circuit	Amplitude of pulse +15 KV
	Auxiliary gap	5mm
	Discharging frequency	300 Hz/150Hz or 400Hz/200Hz
Optical Unit	Spectrum range	175-450 nm
	Optical channels	up to 36 channels
	Concaved grating	Focus length 750 nm
	Groove density	2400 lines /mm
	Ruled area	30 mm \times 50 mm
	Blaze wavelength	300 nm
	Linear dispersion	0.55nm/mm
	Width of entrance slit	20 μ m
	Width of exit slit	50 μ m, 75 μ m
	Constant temperature	30 \pm 0.1 $^{\circ}$ C

	Gas supply pressure	0.01~0.02MPa
Readout Unit	Readout mode	Subsection integration
	Repeatability	≤ 0.2%
	Integrate capacitance	0.047 μf
PMT HV power supplies	Voltage	1000V
	Stability	≤ 0.5% (8 hours)
	HV adjustment Change	Through computer software
Data Processing Unit	Hardware	Computer embedded system, CPU main frequency 300MHz Display industrial 12.1 inch LCD Printer 24 pins
	Software	Windows Application Software
Physical Data	Mainframe (LxWxH) mm	1500 × 1100 × 1200
	Weight	Approx. 450 kg

ESTEEM PH METERS

EST-PH 101 ESTEEM PH METER (DIGITAL)



EST-PH101 PH meter is a device used for potentiometric pH measurements. pH can be measured using either pH indicators (like phenolphthaleine) - in form of solution or pH strips - or using potentiometric method. Strips are very useful when all you need is 0.5-1 pH unit accuracy. When you need higher precision, pH meter is the only way to go. In potentiometric methods you measure potential difference between known reference electrode and the measuring pH electrode. The latter depends on the activities of ions you want to measure. This dependence is described by Nernst equation, thus once the potential has been measured you can calculate the activity. pH meter is nothing else but precise voltmeter, connected to the pH electrode, and scaled in such a way that it displays not the measured potential, but ready pH value. EST-PH101 PH meter digital ph meter is direct reading, two point calibration instrument. And is useful where temperature compensation is needed and is mainly used in measuring acidity or alkalinity of a solution. It is adopted in numerous other industries like chemical, pharmaceutical, sugar, food, cosmetic and other industries where ph monitoring is required. They are suitable for potentiometric measurement with appropriate electrode. Its technical specifications are as follows: Display: Digital 12 mm Red LED Range; pH: 0.000 to 14.00pH mV: 0to±1999mV. Accuracy: 0.01 pH, ± 1mV, ±1 Count Slope Adjustment: 80 to 120% at 25°C. Temp. Compensation: • Manually adjustable setting on Calibrated dial between 0°C to 100°C. Input impedance: 10¹² Electrode Connector: BNC type for combined pH electrode. Dimension: 180Wx180Dx80mmH

FEATURES :

- Field mountable IP-65 enclosure
- Compatible for any pH Electrode
- Economical, Simple to operate
- Local LED Display

SPECIFICATION :

- Range : 0.00 to 14.00 pH
- Resolution : 0.01pH
- Accuracy : $\pm 0.02\text{pH} \pm 1$ digit (Without Electrode)
- Operating temp : 0 to 50 °C
- Operating Humidity : 10 to 90% RH

ESTEEM WATER BATH



DESCRIPTION

ESTW-410 Esteem Water Bath Serological as per : IS - 6593. True to its name, Serological Water baths are versatile enough to handle any clinical procedure, Incubation, Inactivation, Agglutination, as well as most serological, pharmaceutical, biomedical procedure. Heating Elements Immersion heating elements made of high grade materials are fitted at bottom with different ratings for different sizes.

TEMPERATURE CONTROL

Temperature is generally controlled by "IMPORTED" capillary type THERMOSTAT from ambient to $80^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$. Temperature control knob is graduated in centigrade degrees. Control Panel The equipment is provided with a panel having a thermostat control knob, ON/OFF switch, two pilot lamps. Supplied with cord and plug. Power Requirement Suitable to operate on 220 v, single phase, 50 Hz, AC supply.

SIZE OF INNER CHAMBER :-

W H D load 300 × 250 × 150 mm for 2 racks 1 kw 330 × 300 × 150 mm for 4 racks 1.5 kw 455 × 300 × 150 mm for 6 racks 2 kw 605 × 300 × 150 mm for 8 racks 3 kw 250 × 125 × 125 mm with lid 0.5 kw
Optional Accessories • Test Tube Rack made of Stainless Steel 3 Tier with Lifting Handle 13mm Dia 24 Hole or 16mm Dia 18 Hole • Digital Display temp. indicator in lieu of Thermometer. • Digital Display temp. controller-cum-indicator in lieu of thermostat & thermometer • Microprocessor based PID temperature controller cum indicator in lieu of thermostat & thermometer. • Stirrer with 1/20 hp motor with S.S rod & blades

SALIENT FEATURES

- Versatile usage.
- Ergonomic Design
- Energy Efficient
- Long life
- Low Maintenance
- Calibration And Protocol Documentation

CONSTRUCTION:

Our water baths are double walled convection heated units. Outer body of our water baths are constructed out of thick PCRC steel sheet, duly pre-treated with primers for rust proofing and painted with air drying paint/stove enamel/powder coating. The inside chamber of the unit is made of heavy gauge stainless steel sheet of grade SS-304. The unit is provided with top opening cover, made of stainless steel with steel concentric rings. The unit is provided with one stainless steel rack to hold six/twelve flasks. THE WATER BATHS CAN BE SUPPLIED WITH OUTER CHAMBER OF MAT FINISHED SS.

TEMPERATURE RANGE:

Temperature range of our standard water bath models are 5°C ambient to 90° c. However we have the capacity to modify the same to suit the individual specialized requirements of our customers

EST.CI 108- HIGH PRECISION WATER BATH



We are manufacturers of high precision water bath in India since 1984. Our high precision water baths are widely used for day to day bacteriological and varied laboratory applications requiring incubation as well as general tests and procedures in variety of research and testing laboratories. Apart from that, these high precision water baths have a variety of usages in tissue culture applications, enzyme reaction studies, growth observation studies, fermentation analysis and various other general and specialized applications in various laboratories. We specialize in both standard and customized models, specifically designed to meet the challenging demands of various scientists for individual and specialized research applications. Over a short period of time esteem brand have been established as reliable exporters of High precision water bath in India, catering to the vast markets in South East Asia, Middle East, Africa and Europe.

Apart from that we are supplying our high precision water bath in India, catering to a variety of customers ranging from Defence Installations, Research Laboratories, Educational Institutes and various R& D laboratories of leading national and multinational companies.

SALIENT FEATURES

- Versatile usage.
- Ergonomic Design
- Energy Efficient
- Long life
- Low Maintenance
- Calibration And Protocol Documentation

CONSTRUCTION DETAILS HIGH PRECISION WATER BATH:

Our serological water baths are double walled convection heated units. Outer body of our serological water baths is constructed out of thick PCRC steel sheet, duly pre-treated with primers for rust proofing and painted with air drying paint/stove enamel/powder coating. The inside chamber of the unit is made of heavy gauge stainless steel sheet of grade ss-304. The unit is provided with top opening cover, made of stainless steel with steel concentric rings. The unit is provided with one stainless steel racks

HEATING:

Indirect heating system is provided in our water bath, comprising of air heaters made of high grade Kanthal A-1 wires of suitable wattage.. The temperature is evenly distributed throughout the chamber through natural water convection mechanism, ensuring a very good temperature sensitivity.

STIRRING:

The unit is fitted with a high efficiency stirrer motor of 1/20 HP, so as to maintain the uniform temperature of our high precision water bath.

TEMPERATURE RANGE:

Temperature range of our standard water bath models are 5°c ambient to 90° c. However we have the capacity to modify the same to suit the individual specialized requirements of our customers.

TEMPERATURE SENSITIVITY:

Temperature inside our water bath are controlled with a sensitivity of + 0.2° c or better.(With PID Controller)

FRONT PANEL:

Front panel of our water bath comprises of on/off switches heating and mains indicator lamps and temperature controller.

DATA ACQUISITION AND CONTROL SYSTEM FOR HIGH PRECISION WATER BATH

This is unique module which can be incorporated with our high precision water bath to log in temperature and environment related data with a help of a data logger unit which has a pc connectivity by means of RS 232 C interface. This data is then analyzed and formatted with the help of our unique user friendly analysis software to enable the user to get a formatted and analyzed reports of various inputs during the full operation cycle of the equipment. This is an ideal module for pharmaceutical laboratories, process control applications and high research projects where maintaining a viable record of the performance of the equipment is very essential.

ESTEEM CENTRIFUGE



EST-CF101 ESTEEM CENTRIFUGE

We offer a wide range of Centrifuges for varying application in Clinical & Pathological Labs, Blood Banks, R & D Establishments, Pharmaceutical and Chemical Industries etc. This range of Research Centrifuges are designed for varying centrifuge applications with higher volume tube capacities. Different types and capacities of tube sizes are offered to choose from. This range of equipment are available in refrigerated and non-refrigerated models.

SPECIAL FEATURES:

Easy Lid lock, Stepless speed regulator, Safety Fuse, Elegant front panel. With a wide choice of rotor heads and adaptors, this unit is truly versatile.

SPECIFICATIONS

SPECIFICATIONS		ESTEEM MODEL	
		EST-CF101 ESTEEM CENTRIFUGE	
Max. Speed	RPM	5000	
Max. RCF	x g	7250	
Lowest Temp.	°C	NA	
Max. Capacity	ml	1200	
Width	mm	450	
Depth	mm	460	
Height	mm	460	
Weight	Kg	35	
Connected Load	Kva	0.75	

LABORATORY FREEZER



EST-LF-201 ESTEEM FREEZER

EST-LF-201 ESTEEM is providing freezer 300liter, frozen and canned door locked. Electronic controls and digital alarm Equipment designed for Research Laboratories Inner Chamber of S. Steel Outer GI Powder Coat finish or S. Steel Extremely efficient Insulation; sufficiently thick to minimize heat loss. Chest type available Horizontal/Vertical Version. Inner toughened door to avoid temperature-loss.

TEMPERATURE RANGE:

- a) Deep Freezer - 20C/-30C
- b) Ultra Low Freezer (with Cascade Freezer System)

Temperature Control :

- a) Thermostat/Digital Controller.
- b) Micro Processor Digital Temperature Controller cum indicator.

Instructions :

To be stored in A.C. Rooms & Use of AVS/Servo Controlled Voltage Stabilizer is strongly recommended.

CONSTRUCTION

Inner Chamber is made of SS sheets and is insulated with high density expanded polyurethane (PUF) insulation for minimum temperature loss. Outer M.S. Sheet body pretreated & duly power coated.

SALIENT FEATURES

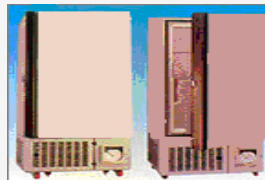
- Audio/Visual alarm provided for rise in temperature.
- Castor wheels for ease of mobility.
- Refrigeration system and electrical circuit easily serviceable.
- Suitable to work on 230V, Single Phase, 50 HZ, AC supply.

Capacity

280 Lit..

10.0 Cu. ft.

EST-LF 202ESTEEM FREEZER- 80°C



EST-LF-202 ESTEEM Presents Freezer ideally Suited for Laboratories, Research and biological and industrial applications etc. Ergonomically designed compact, elegant Ultra low temperature freezers chest model having heavy duty cascade type air cooled refrigeration system and hermetically sealed compressors with very low noise level.

TEMPERATURE RANGE

Temperature of -80°C is Tropicalized to operate under ambient conditions of -30°C . The Temperature is controlled/indicated by a specially designed solid state digital temperature controller cum indicator.

CONSTRUCTION :

Inner Chamber is made of SS sheets and is insulated with high density expanded polyurethane (PUF) insulation for minimum temperature loss. Outer M.S. Sheet body pretreated & duly power coated.

SALIENT FEATURES

Audio/Visual alarm provided for rise in temperature. Castor wheels for case of mobility. Freezer system and electrical circuit easily serviceable. Suitable to work on 230V, Single Phase, 50 HZ, AC supply.

Capacity

- 4.5 Cu.ft.
- 5.5 Cu.ft.
- 6.5 Cu.ft.,
- 10.0 Cu. ft.

EST-HM 101ESTEEM HUMIDITY METER



The EST-HM 101Esteem Humidity Meter is our most popular meter for measuring relative humidity and temperature. It features a splash-proof keyboard, direct readout of humidity on a clear and protected LCD display, and a fast response sensor on a 2m cable. Designed to be used anywhere where the benefits of an almost immediate fast response sensor are appreciated, the EST-HM 101Esteem Humidity Meter has proved popular for monitoring the status of internal structures such as museums, libraries, computer rooms and laboratories. The 2m cable length between probe and instrument make it ideal for those hard to reach areas that need to be monitored, for example in air conditioning grills and inside fume cupboards or in high humidity plant growing areas, (such as mushroom crops). Supplied complete with probe, the meter can be fitted with an optional rubber holster to offer protection against accidental drop damage.

EST-HM 101ESTEEM HUMIDITY METER



The EST-HM 101Esteem Humidity Meter provides readings with 98% precision in a very short time for both R.H. and temperature. The detachable R.H. probe is housed in a rugged ABS cylinder with a thin-film polymer humidity sensor and a signal amplifier. A perforated cap on the probe allows the air to circulate while it protects the sensitive sensor. The standard cable is 2m long (7'), and a 5 meter

(16.5') version is also available. Specially designed for internal applications such as museums, libraries, computer rooms and printing facilities. The smooth membrane keyboard has 4 keys that make operation simple and quick. A large LCD displays readings in easy-to-read digits each with a symbol next to it to identify the operating mode.

TECHNICAL SPECIFICATIONS

Range RH 10.0 to 95.0%

°C 0.0 to 60.0

°F 32 to 140

Resolution RH 0.1%

TURBIDITY METERS



EST-TM 101 ESTEEM TURBIDITY METER

The microprocessor-based waterproof EST-TM Esteem Turbidity meter is an easy-to-use turbidimeter that meets the rigor of rugged field applications. It is a "must -have" for anyone monitoring turbidity on the go. Using an Infrared light source, it delivers laboratory accuracy with a resolution of 0.01 NTU across an extended range of up to 20 NTU (Nephelometric Turbidity Units).

PRODUCT FEATURES

IP67 Waterproof and Dustproof - Cleaning and maintenance is simple. It floats!

Automatic Push-Button Calibration (4 points) for unprecedented full-range accuracy

Sturdy Carrying Kit complete with 4 calibration standards, 3 empty cuvettes, batteries and comprehensive instruction manual

Power-saving feature allows over 1200 measurements to be taken with a single set of AAA alkaline batteries

Large Easy-to-Read Display for optimum viewing of measurements with user-friendly message codes for easy troubleshooting

Meets Performance Criteria as specified by ISO 1727 (DIN EN 27027) method.

SPECIFICATION FOR TURBIDITY METER

Range: 0 - 10,000 NTU

Principle of Operation: Nephelometric

Ratio (Color Correction): Full Time ON or OFF

Accuracy: $\pm 2\%$ of reading plus 0.01 NTU (0 to 1000 NTU)

$\pm 5\%$ of reading (1000 to 4000 NTU)

$\pm 10\%$ of reading (4000 to 10,000 NTU)

Resolution: 0.0001 NTU on Lowest Range

Response Time: less than 6 seconds

Sample Size: 30 ml

Light Source: Quick connect Infrared

Operating Temperature: 0° - 50°C

Air Purge: Connection for external dry air supply

Outputs: RS-232 Serial Port

ESI-136 ESTEEM INDUSTRIAL HOT AIR OVEN---HIGH TEMPS



ESTO-111

Esteem Hot Air Oven Elegantly designed and fabricated to suit various applications in ever growing field of Medical, Agricultural and Industrial Research; for day to day heating, drying, sterilizing, baking etc., in Laboratories, Hospitals & Industries.

CONSTRUCTION :-

Ovens are sturdy, with double walled construction. Inner Chamber made of ALUMINIUM or STAINLESS STEEL sheet. Outer chamber is made of mild steel sheet, finished with white powder coated paint. The gap between the walls is filled up with special grade glass wool for proper insulation to avoid heat losses. Inner chamber has ribs For placing the shelves at convenient levels. Supplied with 2 or 3 removable shelves. It is fitted with heavy hinges with a ball Catcher, spring loaded door closing device. Door is duly insulated.

ELEMENTS :-

Heating elements are made of high quality nickel/chrome plated nichrome wire which are put inside beads and placed at the bottom and in both the side ribs for uniform temperature all over the work space.

TEMPERATURE CONTROL :-

Temperature is controlled by imported capillary type thermostat from 50°C to 250°C ± 1°C. Temperature control knob is graduated in centigrade degrees. Ovens are supplied without thermometer.

VENTILATION :-

Air Ventilators are placed near the top of the both sides to remove Hot gases and fumes if any.

CONTROL PANEL :-

Comprising of switch to ON/OFF the power, switch to select high or low rates of heating, thermostat control knob and indicators for mains and thermostats. Supplied with cord and plug. Suitable to operate on 220 volts, 1 ph, 50 Hz, AC supply.

OPTIONAL ACCESSORIES :-

- Air Circulating Fan.
- Digital Display Temp. Indicator.
- Digital Display Temp. Controller-Cum-Indicator In lieu of thermostat.
- Micro processor based PID temp. controller cum indicator in lieu Of thermostat.
- L - shaped Thermometer (Mercury) or straight type.
 - Timer

SIZE OF INNER CHAMBER :-

W × H × D	No. of Shelves
300 × 300 × 300 mm	2
355 × 355 × 355 mm	2
455 × 455 × 455 mm	2
455 × 605 × 455 mm	3
605 × 605 × 605 mm	3
605 × 910 × 455 mm	3
605 × 910 × 605 mm	3



PAYMENT TERMS :

PAYMENT TERMS COMMON FOR ALL THE ABOVE MENTIONED MODELS

PAYMENT TERMS :

Who are our Bankers and what are our Banking particulars?

Who are our Bankers and what are our Banking particulars?

Our Bankers are:

Union Bank Of India,
SCF-3, Sector 21-C, Chandigarh,
UT, INDIA.
SWIFT CODE: UBININBBCHA

Esteem Industries INC. A/C No.: 398905010050309

May you like to Transfer Payment (T/T) to us, then depending upon the currency of remittance kindly choose one of the following methods:

PAYMENT PROCEDURE FOR USD \$

PAYMENT PROCEDURE : For making SWIFT Transfer payment of US\$ _____, please give the following information to your bank:

Intermediary Banks:

1. Citibank. New York ,Swift code: CITIUS33
2. Bank of America. New York, Swift code: BOFAUS3N
3. Bank of New York. New York, Swift code: IRUTUS3N
4. Standard Chartered Bank. New York, Swift code: SCBLUS33
5. JP Morgan Chase Bank. New York, Swift code: CHASUS33
6. American Express Bank. New York, Swift code: AEIBUS33

Beneficiary Bank:

Union Bank Of India,
SCF-3, Sector 21-C, Chandigarh,
UT, INDIA.
Swift Code: UBININBBCHA
Beneficiary: Esteem Industries INC

Account No. 398905010050309

Bank charges (fees) would be shared by buyer. Please fax us a copy of Transfer advice so that we can track payment.

PAYMENT PROCEDURE FOR GBP £

PAYMENT PROCEDURE : For making payment of Sterling Pound £_____, please give the following information to your bank:

Intermediary Banks:

1. National Westminster Bank. London, Swift code: NWBKGB2L
2. HSBC London (Midlands), Swift code: MIDLGB22

Beneficiary Bank: Union Bank Of India,
SCF-3, Sector 21-C, Chandigarh,
UT, INDIA.

Swift Code: UBININBBCHA
Beneficiary: **Esteem Industries INC**

Account No. 398905010050309

Bank charges (fees) would be shared by buyer. Please fax us a copy of Transfer advice so that we can track payment.

PAYMENT PROCEDURE FOR EURO

PAYMENT PROCEDURE : For making payment of Euro_____, please give the following information to your bank:

Intermediary Bank:

1. Commorz Bank Dusseldorf Germany, Swift code: COBADEDD
2. Bank commercial Italiana, Swift code: BCITITMM
3. Societe Generale Paris, Swift code: SOGEFRPP
4. ABN Amro Bank. Amsterdam, Swift code: ABNANL2A

Beneficiary Bank: Union Bank Of India,
SCF-3, Sector 21-C, Chandigarh,
UT, INDIA.

Swift Code: UBININBBCHA
Beneficiary: **Esteem Industries INC**
Account No. 398905010050309

Bank charges (fees) would be shared by buyer. Please fax us a copy of Transfer advice so that we can track payment.

Note: Please make sure we are INFORMED before and after sending any payment to our Bank Account.

E-MAIL : INFO@ESTEEM.IND.IN

