ESTEEM INDUSTRIES INC.

BIO-TECH LABORATORY EQUIPMENT

AUTOCLAVE VERTICAL (DELUXE MODEL)ESTA-106A

FEATURES OF AUTOCLAVE VERTICAL (DELUXE MODEL) ESTA-106A

- Steam Stock Provision
- Versatile usage
- Stainless steel construction
- Ergonomic Design
- Energy Efficient
- Double Safety Radial Locking Arrangement
- Double Safety Valve Protection
- Hydraulic Testing Upto 2.5 times the working pressure
- Calibration And Protocol Documentation
- Pressure switch
- Safety Valve

CONSTRUCTION:

The construction as per ESTA-106 but the unit comprises of steam jacket electrically heated inner lid made of stainless steel work on 3-phase 440A/C 50HZ supply fitted with automatic pressure control switch safety valve etc Chamber:- The chamber is made of 16SWG304 SS. Pressure gauge, water outlet valve and air inlet valve, SS steam condenser, tube with SS eject valve. Steam Generator:- The steam generator is made out of SS heavy gauge fitted with pressure gauge and water draining valve. Outer cover:- The outer cover is made out of SS duly insulated with high density mineral wool from the inner chamber and fitted with stable legs. Principle:- The steam generates from the jacket and gets condensed by the help of the eject valve which goes through condensing tube the dry steam gets into the chamber to penetrate into the packs contained in the chamber.

Our dry vertical autoclave are triple walled units. Outer body of our autoclave is constructed out of thick gauge stainless steel sheet of SS-304 grade. The inner chamber is also made of heavy gauge stainless steel sheet of SS-304 grade. The middle wall is also constructed from the strong and sturdy stainless steel sheet of ss-304 grade s stainless steel sheet. These are steam stocking models connected with a three way valve to control the sterilization cycle inside the autoclave.

Our autoclaves are air insulated from inside, however we may incorporate mineral glass wool insulation if the customer desires so. The strong lid constructed out of thick stainless steel plate has a double safety radial locking arrangement , which ensures an easy and smooth opening and closing operation for all our autoclaves. Our deluxe vertical autoclaves are ideally suited for Bio-Tech laboratories, hospitals and research labs where safety is the first priority of the users, since it is equipped with a double safety steam release valve. At the same time we test all our autoclaves for up to 2.5 times the standard working pressure to ensure maximum safety and protection from any unfortunate incident. All our triple walled vertical autoclaves are supplied complete with pressure gauge, pressure release valve and stainless steel basket as a standard feature.

HEATING:

The heating process in our triple walled vertical autoclave is done through specially designed water heaters of suitable wattage to ensure optimum sterilization time in every sterilization cycle.

WORKING TEMPERATURE:

As per the international standards and guidelines our triple walled vertical autoclave have a working temperature of 121oc. ,however for specific requirements our autoclaves can be upgraded to be used for up to 134o c.

WORKING PRESSURE:

Working pressure for our standard dry sterilization model vertical autoclave is 15 psi, however this can be upgraded to be used for higher pressures of up to 30 psi..

PRESSURE RANGE:

The normal pressure range of our autoclave is 5 psi to 20 psi

PRESSURE CONTROL:

The pressure inside our vertical autoclave is controlled through a semi automatic electro mechanical device called piezostat, which controls the pressure inside the chamber and cuts of the current from the heater whenever the pressure exceeds the set pressure value of the autoclave, thus making it very safe and energy efficient.

TECHNICAL FEATURES OF DELUXE VERTICAL AUTOCLAVE

- Hi-tech radial lock locking mechanism for ultimate ease of operation and safety.
- Steam Release valve of Stainless Steel ensuring a long life of the equipment.
- Huger grade spring loaded safety valve of brass, duly chrome plated.
- Water Indication Gauge with stainless steel enclosure
- High accuracy and reliable pressure gauge.
- Lid opening mechanism: Foot operated (Paddle) lift

STANDARD STANDARDS MODELS (INNER DIMENSIONS)

Diameter (mm)	**Height (mm)**	**Volume (Liters)**
250 mm	450 mm	22Ltrs
300 mm	500 mm	50 Ltrs
350 mm	550mm	78 Ltrs
400 mm	600mm	98 Ltrs
550 mm	750mm	152 Ltrs

UPGRADES (STANDARD)

LOW WATER PROTECTION DEVICE:

This automatic system can be incorporated with our vertical autoclaves to give protection against the low water scenario under prolonged usages.

TIMER WITH ALARM SYSTEM:

This semi automatic device can be incorporated with the standard models of our vertical autoclave which helps the user to set the sterilization time of the system and do other tasks without bothering to monitor the sterilization cycle. This device cut off the current from the main system when the set value for a given sterilization cycle is attained and gives a loud audio alarm.

DIGITAL TEMPERATURE INDICATOR:

A solid state digital temperature controller cum indicator can be incorporated with our basic vertical autoclave models for ease of monitoring the temperature of the autoclave from a distance through its large LED display, which is visible from quite a distance.

PROGRAMMABLE TEMPERATURE CONTROLLER:

A programmable micro processor based temperature controller cum indicator can be incorporated in our basic vertical autoclave models to pre program the sterilization cycle temperature with high amount of accuracy and reliability.

CHART RECORDER:

This a semi automatic self contained easy to use recording device, which permanently records the temperature is any given sterilization cycle of our vertical autoclave on a graph sheet., with the help of a bimetallic strip transducer chip incorporated in the unit

TECHNICAL FEATURES:

Chart size:4" dia Accuracy:2% (FSD) Response time: 12 minutes

PLC CONTROL SYSTEM:

Our standard plc control system is based on the hi-tech state of the art micro-processor circuit technology, ensuring a complete automatic operations along with high efficiency and great reliability. This computerized logic control system ensures a 100% automatic operation throughout the sterilization cycle of our vertical autoclave. No intermediary human intervention is necessary after choosing the parameters and initiating the sterilization process in our autoclaves.. The primary cycle phase and the actual parameters of our vertical autoclave and along with set values are displayed on the LCD panel during the entire cycle progress.

The main parameters of the process such as, temperature, pressure, time are controlled and displayed, on the LCD panel of the system. The ergonomically designed keyboard located on the front level enables the user to choose the desired program, initiate and terminate the cycle, and allows a trained technician to preset the main parameters using an access code. Our PLC control system is extremely easy to use, user friendly and fully programmable.

For a elaborate and presentable documentation of cycle process, our logic control unit is provided with a diligent wipro/epson dot matrix printer, which is connected to the central microprocessor system..

The printer generates a hard copy of the printout of the relevant or desired information relating to the cycle operation like the pressure , sterilization time, temperature at any given/pre set time interval, vacuum, and drying time, number of cycles, number of pulsing etc. The standard vertical autoclave with PLC control system is designed to operate up to six standard sterilization programs between 105oC and 137oC and two test programs optional. The desired programs can be easily selected by using the numeric keypad, provided at the front level, Apart from that other parameters such as air removal, sterilization and drying stages can be programmed with utmost ease.

UNIVERSAL DIGITAL DATA RECORDER WITH COMPUTER

DATA ACQUISITION AND CONTROL SYSTEM FOR VERTICAL AUTOCLAVE

This is unique module which can be incorporated with our vertical autoclave 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 our 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

ESTEEM WATER BATH

DESCRIPTION

ESTW–410 Esteem Water Bath Serological Bearing ISI Mark : 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. First time in India, Serological Water bath have been granted ISI mark due to its unmatched performance and quality raw material used. 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°C ± 0.5°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.

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.

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 + 0.5° 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.

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 Weiber 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 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, lever 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 high polished stainless steel/aluminium (anodized). It has provision for allowing wide range of shelf positions & spacings. SS/Aluminium trays are also provided.

Chamber is duly insulated to minimise heat loss. Two door 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.

FURTHER CONSTRUCTION

Esteem-ESTA-BI 127 Incubators are double walled convection heated units. It is Robust in specification and Outer body of our incubators are constructed out of thick PCRC sheet duly pre-treated with primers and rust proofing and painted with long lasting stove enamel or elegantly powder coated.. The inner chamber is made of heavy gauge stainless steel sheet of SS-304 grade. The gap between the walls is filled high grade mineral glass wool, which ensures maximum thermal efficiency in our bod incubators. The unit is provided with two doors , the inner door is made of thick plexi glass/float glass, to view the specimens without disturbing the temperature of the chamber. This door is provided with magnetic door closer. The outer door is made of mild steel sheet lined with stainless steel from inside.. This door is provided with lock and key arrangement. The unit is mounted on a sturdy steel frame and provided with cator wheels for easy movement inside the laboratory. The unit is provided with three stainless steel shelves. The triple walled back of our bod incubators are provided with two air circulation fans for uniform maintenance of the temperature throughout the chamber.

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, Danfoss / Kirlosker 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 temp. uniform throughout 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.

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 fine and coarse knobs allow the user to set any desired temp. A Voltmeter is provided on the panel to read the incoming voltage.

HEATING:

Indirect heating system is provided in our units, comprising of air heaters made of high grade Kanthal A-1 wires of suitable wattage.. The warm air is evenly distributed throughout the chamber through efficient motor fans ensuring a very good temperature sensitivity.

COOLING:

An energy efficient cooling unit is installed in our bod incubators to enable bio chemical demand studies at lower room temperatures. We use ISI marked high end CFC free compressors of Kirloskar/Tecumseh make, conforming to latest international standards and guidelines.

TEMPERATURE RANGE:

Temperature range of our standard BOD incubator models are 5o c to 60o c. However we have the capacity to modify the same to suit the individual specialized requirements of our customers

TEMPERATURE SENSITIVITY:

Temperature inside our BOD incubators are controlled with a sensitivity of + 0.5o c or better.

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 Models (Inner Dimensions) Diameter (mm) Height (mm) Volume (Liters) 250 mm 450 mm 22 ltrs 300 mm 500 mm 50 ltrs 350 mm 550 mm 78 ltrs 450 mm 600 mm 98 ltrs 550 mm 750 mm 152 ltrs

STANDARD SIZES:

INNER CHAMBER

455x610x410 mm

505x830x415 mm

570x875x550 mm

650x900x550 mm

TEMPERATURE CONTROL

Temperature Sensitivity

Spatial Deviation In Temperature

Readability

Temperature range

Temperature Sensor

Temperature Controller

Display

Adjustable alarm limits

SAFETY THERMOSTATS

Temperature variation Adjustments

Temperature Sensors

Automatic temperature setting

Adjustable limits

LIGHT CONTROL

Readability or Set ability

Light intensity (Middle chamber)

Light intensity (Both Sides)

ACCESSORIES

de-icing module

Timer (999 mins)

Program (Real Time)

Data Acquisition Program

Serial Port (Printer)

Inspection window in door

SHELVES

Standard

Internal Dimensions

Maximum Permitted load per shelf

Maximum Permitted total load

ACCESSORIES

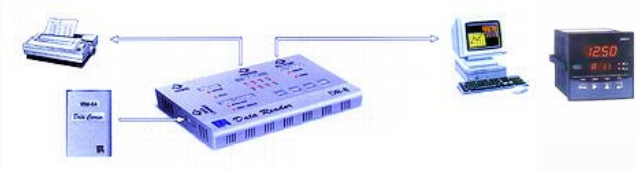
Printer Report Program

2 x 24 characters LCD Display

Access Port 30 mm

Castors, lockable

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 our 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.

SALIENT FEATURE OF EST-BI 127 BOD INCUBATOR

BOD INCUBATOR switches from heating to cooling and vice versa irrespective of the ambient temperature because of its unique design and thus is capable of working without any user intervention. Supplied complete with 3 shelves of anodized Aluminium or Stainless Steel as per the chamber, cord and plug, to work on 220 Volts, 1 Phase, 50 Hz, AC supply.

OPTIONAL ACCESSORIES:

- Interior illumination with 3 Nos. fluorescent tubes.
- Automatic cyclic timer 0–24 hrs. regulating illumination cycle.
- Arrangement for incubation carbon dioxide & air mixture.
- Carbon–di–oxide Cylinder 9 liters.
- Air compressor.
- Voltage Stabilizer 3 KVA.

. PLC Controller

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

LAMINAR AIR FLOW – VERTICAL

ESTA-LF101 ESTEEM VERTICAL LAMINAR AIR FLOW

We at Esteem Industries Incorporation specialize in both standard and customized laminar air flow models, specifically designed to meet the challenging demands of various scientists for individual and specialized research applications. Over a short period of our brand have been established as reliable exporters of vertical 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 and D laboratories of leading national and multinational companies.

PRODUCT OVER VIEW:

Our vertical 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 vertical laminar air flow units directs the air in mono direction which is towards the specimen and away from the user, giving ultimate protection to the user who is susceptible to contamination induced by diffusion of contaminated air, generated while handling hazardous pathogens, bacteria, viruses etc.

CLASSIFICATIONS:
LAMINAR AIR FLOW

All the vertical laminar air flow benches 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.

VERTICAL 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.

VERTICAL 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.

VERTICAL 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 VERTICAL LAMINAR AIR FLOW

BASIC CONSTRUCTION:

Our Vertical 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

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 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 0.3 micron.

MOTOR AND BLOWER ASSEMBLY:

All our Vertical 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 long 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.

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 SPECIFICATIONS: VERTICAL LAMINAR AIR FLOW

Construction----------Industrial grade mica clad wooden board

Table----------Stainless steel sheet table of ss-304 grade

Pre-Filter----------Washable pre-filter unit

HEPA Filters-----Glass pleated non woven fabric filter having 99.99% efficiency 0.3 micron particle size.

Air-Flow----------Unidirectional.

Air Flow Control----------Three Step air flow speed controller

Blower Assembly----------Centrifugal lubricated bearing type ISI marked assembly

Illumination----------Fluorescent light illumination greater than 800 lux on work table

Noise Level----------Noise level less than 54 db

ADD ON FEATURES----------Gas/air/vacuum line cock

500 watts – 750 watts (Model specific)

600mmx600mmx600mm/ 900mmx600mmx600mm/

1200mmx600mmx600mm /1800mmx 600mmx600mm

220-230 Volts, 50 Hz Single Phase

HORIZONTAL LAMINAR AIR FLOW

ESTA-HL101 ESTEEM HORIZONTAL LAMINAR AIR FLOW

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.

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: **PARA METERS**	**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				

ESTEEM SPECTROPHOTOMETER

ESTA-SM101ESTEEM 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

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

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

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.

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
Weight	24 Kgs

INCUBATOR SHAKER

We are supplying our Incubator shaker 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
- CFC free cooling*
- Long life
- Low Maintenance
- Calibration And Protocol Documentation

CONSTRUCTION DETAILS:

Our incubator shakers are double walled convection heated and cooled units. Outer body of our incubator shakers are constructed out of thick PCRC sheet duly pre-treated with primers and rust proofing and painted with long lasting stove enamel or elegantly powder coated.. The inner chamber is made of heavy gauge stainless steel sheet of SS-304 grade. The gap between the walls is filled high grade mineral glass wool, which ensures maximum thermal efficiency in our incubator shakers.

The unit is provided with two doors, the inner door is made of thick plexi glass/float glass, to view the specimens without disturbing the temperature of the chamber. This door is provided with magnetic door closer. The outer door is made of mild steel sheet lined with stainless steel from inside.. This door is provided with lock and key arrangement. The unit is mounted on a sturdy steel frame and provided with castor wheels for easy movement inside the laboratory. The unit is

provided with two/three stainless steel shelves.

SHAKING PLATFORM:

The standard model of our orbital shaker has a plat form size of 500mm x 500mm and it can withhold 16-20 flasks of 250ml or 500 ml. However this can be modified to suit the individual customer's requirements.

SHAKING SYSTEM:

The efficient and diligent shaking system of our incubator shaker has a orbital shaking movement which is powered by a reliable crompton greaves motor of suitable power and wattage.

SHAKING SPEED:

The shaking speed of our standard model variable speed incubator shaker is between 80 RPM to 400 RPM. However we can customize the speeds as per the individual requirements of the user.

SPEED CONTROL:

The orbital shaking in our orbital shakers is controlled by a DC drive which in turn is controlled through micro processor based digital speed controller cum RPM indicator with great accuracy.

HEATING:

Indirect heating system is provided in our incubator shakers, comprising of air heaters made of high grade Kanthal A-1 wires of suitable wattage.. The warm air is evenly distributed throughout the chamber through efficient motor fans ensuring a very good temperature sensitivity.

COOLING:

An energy efficient cooling unit is installed in our incubator shaker to enable incubation and shaking of the specimens at lower room temperatures. We use ISI marked high end CFC free compressors of Kirloskar/Tecumseh make, conforming to latest international standards and guidelines.

TEMPERATURE RANGE:

Temperature range of our standard orbital shaker or Incubator shaker models are 5o c above ambient to to 70o c. and 5o c to 70o c. However we have the capacity to modify the same to suit the individual specialized requirements of our customers.

TEMPERATURE SENSITIVITY:

Temperature inside our incubator shaker is controlled with a sensitivity of $\pm$ 0.5o c or better.

UNIVERSAL DIGITAL DATA RECORDER WITH COMPUTER

DATA ACQUISITION AND CONTROL SYSTEM FOR WALK IN 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 our 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.

WATER B ATH INCUBATOR SHAKER (METABOLIC SHAKING INCUBATOR)

Temperature range from room temperature to 100ºC. Thermostatic control with an accuracy of ± 0.5ºC. Double walled inside made of stainless steel 304 Quality and outside Mild Steel sheet painted in epoxy powder coating. Oscillating tray is riding on ball rollers. Shaking speed range 40 to 140 rpm. Built-in L-shape thermometer. To work on 220/230 volts A.C. Supply. Without RPM Indicator.

SHAKING TRAY SIZE: INSIDE (STAINLESS STEEL 304 QUALITY)

TI-1	275x275x75 mm.	6 Ltrs.
TI-2	275x275x150mm.	12 Ltrs.
TI-3	405x300x150mm	18 Ltrs

SHAKING RACK MADE OF STAINLESS STEEL FOR TI-1 & TI-2

To hold 16 Nos. 25ML	Conical Flask
To hold 12 Nos. 50ML Conical Flask	Conical Flask
To hold 9 Nos. 100ML Conical Flask	Conical Flask
To hold 5 Nos. 250ML Conical Flask	Conical Flask

To hold 4 Nos. 500ML Conical Flask	Conical Flask
To hold 2 Nos. 1000ML Conical Flask	Conical Flask
To hold 25 Nos. 25mm Conical Flask	Conical Flask

SHAKING RACK MADE OF STAINLESS STEEL FOR TI-3

To hold	20 Nos.	25ML	Conical Flask
To hold	16 Nos.	50ML	Conical Flask
To hold	12 Nos.	100ML	Conical Flask
To hold	9 Nos.	250ML	Conical Flask
To hold	6 Nos.	500ML	Conical Flask
To hold	4 Nos.	1000ML	Conical Flask
To hold	35 Nos.	25mm	Conical Flask

OPTIONAL:-

1) Electronic Digital Temperature Controller cum Indicator.
   2) PID Controller having two ramp & two soak profile can be fitted in above instruments at an extra cost.

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.	^{o}C	NA	
Max. Capacity	ml	1200	
Width	mm	450	
Depth	mm	460	
Height	mm	460	
Weight	Kg	35	
Connected Load	Kva	0.75	

ESTEEM REFRIGERATED INCUBATOR

EST-RFI101RFERIGERATOR INCUBATOR

Made for various laboratory uses: incubating cultures of microorganisms, storing samples, determining enzymatic activity, and all uses requiring that products be kept at a constant and precise temperature. Continuous ventilation and the special microprocessor controlled AUTO-TUNING thermoregulation system ensure temperature uniformity in all points inside the chamber with continuous monitoring of the room temperature so the Set Point set is kept precisely aligned. The internal temperature is programmed and displayed digitally, with selection of the tenth degree Celsius from 5 to 50°C (stability ±0.5°C).
Can be connected to a PC using an RS232 connector for use with dedicated software. The Model EST-RFI Refrigerated Incubator is designed for applications requiring illumination and precise temperature control and uniformity over a broad temperature range. Totally microprocessor controlled, this versatile incubator features push-button temperature set-point selection, programmable heating and lighting cycles, high and low temperature protection, easy to read displays and a simple front panel calibration procedure. The unit includes jacks for connecting an external chart recorder and an RS232 interface option for

data logging. This unit comes equipped with six shelves. The door contains two fluorescent lamps that provide the chamber interior with evenly distributed 300-foot candles of light.

SPECIFICATIONS:	
Chamber Volume	10 cu. ft.
Convection	Mechanical
Temp. Control	Microprocessor
Temp. Display	Digital
Temp. Range	5 to +60° C
Chamber (LxWxH")	20 x 26.5 x 57
Maximum Shelves	5
Shipping Weight	347 Lbs

ESTEEM INDUSTRIES INC.

MEDICAL OVENS

*(AS PER **IS 6365-1971**)*

ESTO-111 ESTEEM HOT AIR OVEN
LAB MODEL WITH THREE SIDE HEATING ELEMENTS

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

UNIVERSAL DIGITAL DATA RECORDER WITH COMPUTER

DATA ACQUISITION AND CONTROL SYSTEM FOR HOT AIR OVEN:

This is unique module which can be incorporated with our Hot Air ovens 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 our 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

ESTEEM BINOCULAR MICROSCOPE

This binocular microscope is ideal for senior secondary biology. This is a high quality, versatile, durable and cost-effective microscope.

FEATURES

- Binocular head with 30^{o} inclination and 360^{o} rotation.
- Interpupillary adjustment range : 55-75mm
  Eyepiece : WF10x-18mm.
- Achromatic Objective : 4X, 10X, 40X(S), 100X(Oil, S).
- Double Layered Mechanical Stage : 110mm x 126mm,moving range 70 x 30mm
- Condenser : Abbe N. A. 1.25 Condenser with Iris diaphragm
- Focusing : Coaxial Coarse & Fine focus adjustment, Focusing Range : 30mm.
- Illumination : Built in halogen, or tungsten Bulb 6V/20W.

OBSERVATION HEAD.

Binocular head is equipped with standard 450 inclined observation tubes, rot table through 3600 and can be fixed in any direction with clamp screw,

interpupillary distance from 53 to 75mm & diopter adjustment are provided.

STAND

One piece die cast arm and large size rectangular, heavy stable base with transformer/electrical fittings concealed inside.

NOSEPIECE

Precise quadruple revolving nosepiece with accurate centering and positive

STAGE

click stops for smooth accurate rotation.

FOCUSSING

built in graduated mechanical stage size 135x120 mm is controlled by convenient low co-axial positioned knobs (either side as per requirement) for easy and smooth scan of the specimen slide over entire range of 50 x 75 mm.

ILLUMINATION

By vertical movement of stage, coarse adjustment by rack pinion and fine movement by screw lever mechanism having a graduated knob.

PACKING

solid state variable controlled transformer 220 or 110 volts. Mirror attachment while working in day light is also provided. Achromatic 4x - 10x - 40x sL and 100 XSL oil immersion.

ELECTROPHORESIS

EST-EP101 -ELECTROPHORESIS APPARATUS

(Paper Strip Model). Est-ep101-Electrophoroesis Apparatus It consists of a transparent Perspex sheet cabinet 40X23.75X11.25cm to accommodate 4 strips of 1 ½ "X12" with glass cover provided with safety inter look switch. The cabinet is fitted with leveling screws. The apparatus is supplied with power supply for supply from 0-400V and 0.100 milli ampere in 1 milli ampere division resp. This unit consists of a millimeter and voltmeter, polarity reversing switch and connection cable to work on 220V,50 Cycles AC mains .

ESTEEM BLOTTER

ESTEEM VACUUM BLOTTER

Ideal for rapid transfer of DNA or RNA from an agarose gel on to suitable membrane.

FEATURES:

• Built-in vacuum pump and manometer to ensure reproducible results without gel collapse

• Pump is protected by a 3 liter buffer reservoir.

• Simple-to-use clamping mechanism and easily-manipulated plastic masks ensure success on the first try.

VACUUM BLOTTER:

• Adjustable, precise control vacuum ensures perfect results.

• Transfer efficiency is nearly 100%.

• Self contained unit is very compact yet offers the largest transfer area.

• Quiet operation

• Easy to clean and maintain

INCLUDES :

• Two plastic masks

• Also available in packages of five

• Units are 12″ x 16″ x 10″ (WxDxH) and weigh 10lbs.

• Porous transfer area is 11″ x 11″ with vacuum of 0-100mbar.

- Vacuum Blotter has a two-year warranty.

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 availableHorizontal/Vertical Version. Inner Acrylic door to avoid temperature-loss.

TEMPERATURE RANGE:

a) Deep Freezer - 200C/-300C
b) Ultra Low Freezer (with Cascade Frzeer System)

Temperature Control :

a) Thermostat/Digital Controller.
b) mP (Micro) 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 G.I. 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

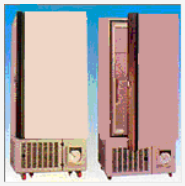
- Audio/Visual alarm provided for rise in temperature.
- Castor wheels for case of mobility.
- Refrigeration system and electrical circuit easily serviceable.
- Suitable to work on 230V, Single Phase, 50 HZ, AC supply.

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 seale 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 G.I. sheets and is insulated with higdensity 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.

PAYMENT TERMS

VISIT US : WWW.ESTEEM.IND.IN

PAYMENT TERMS COMMON FOR ALL THE ABOVE MENTIONED MODELS

PAYMENT TERMS :	**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