



ESTEEM INDUSTRIES INC.



ESTEEM HOT AIR STERLIZERS

(AS PER IS 6365-1971)

LAB MODEL WITH THREE SIDE HEATING ELEMENTS



ESTO-111 ESTEEM HOT AIR STERLIZER

Esteem Hot Air Sterliser 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 \pm 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

SALIENT FEATURES

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

CONSTRUCTION DETAILS (HOT AIR OVEN):

Our laboratory ovens are double walled convection heated units. Outer body of our hot air oven 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 laboratory ovens. The unit is mounted on a sturdy steel frame and provided with castor wheels (Large Sized Models Only) for easy movement inside the laboratory. The unit is provided with one to three stainless steel shelves (As per the inner size).

HEATING:

Indirect three side 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.

TEMPERATURE RANGE:

Temperature range of our standard laboratory oven models are 50 c above ambient temperature to 250o c. However we have the capacity to modify the same to suit the individual specialized requirements of our customers.

TEMPERATURE SENSITIVITY:

Temperature inside our hot air ovens are controlled with a sensitivity of $\pm 1^{\circ}$ c or better.

FRONT PANEL:

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

TEMPERATURE CONTROL:

The temperature inside our laboratory oven is controlled either through hydraulic type german thermostat (Sensitivity $\pm 1^{\circ}$ c) or through solid state or micro-processor based temperature controllers cum indicators.

STANDARD SIZES:

Inner Chamber (W X D X H)	(Volume)
300x300x300 mm	28Ltrs
355x355x355 mm	45Ltrs
455x455x455 mm	95Ltrs
455x455x605 mm	125 Ltrs
605x605x605 mm	224 Ltrs
605x455x910 mm	252 Ltrs
605x605x910 mm	336Ltrs

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 Hot Air Sterilizer 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.



ESTEEM STEAM STERILIZER

STERILIZER VERTICAL(DELUXE MODEL)



FEATURES OF VERTICAL STERILIZER (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
- Display Digital indication for actual temperature.
- Provided with low water cut off system.
- Water level indication gauge glass with stainless steel guard.
- Fitted with cycle and alarm device.
- Fully Automatic through PLC with Dia Pharm Valves With computed
- Touch screen panel with data logging with pan drive.
- Provided With Automatic steam exaused after completion sterlizer cycle.

CONSTRUCTION

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.
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- Huger grade spring loaded safety valve of brass, duly chrome plated.
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- Water Indication Gauge with stainless steel enclosure
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- High accuracy and reliable pressure gauge.
- Lid opening mechanism: Foot operated (Paddle) lift

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.

TECHNICALFEATURES

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

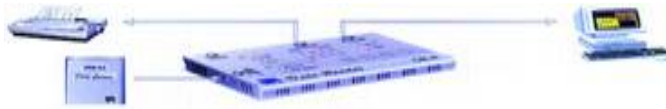
PLC CONTROL SYSTEM

ASSESORIES

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



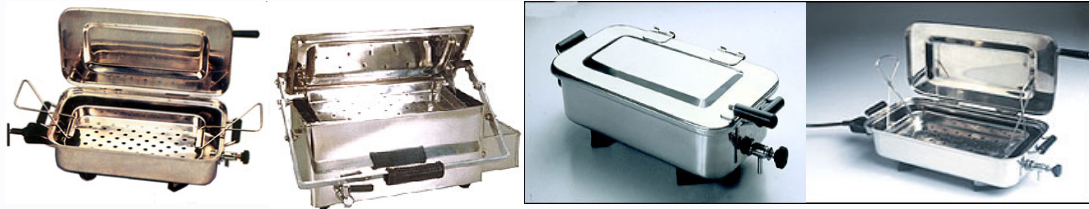
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- Our system provided facility to program recording interval with various options to suit individual requirements.
- It is provided with the feature to adjust or select baud rate for any serial communication port.
- Our system is provided with user friendly custom developed software .
- obtains and analyze the data and facilitates the user to generate reports and graphs .

ESTEEM INSTRUMENT STERILIZER



These are electrically operated table top Sterilizers made of thick Brass sheets (chromium plated) or 304 quality Stainless Steel Sheets, provided with a removable perforated tray of the same metal. An automatic lifting arrangement is provided. heating is done by immersion heater of suitable capacity, to achieve a temperature upto 150°C, which is controlled by energy regulator. The sterilizers operate on 220 Volts, A.C. Supplied with a suitable length of wire plug top.

FEATURES

Esteem Instrument Sterilizer are made to IS: 5022 standard electrically heated to boil syringes, surgical instruments, glass and china wares.

- All stainless steel seamless construction 18/* (AISI 304 grade) in 0.9 mm thickness.
- Electrically heated.
- Easily Replaceable immersion heater.
- Automatic tray lifting with opening of the lid.
- Automatic safety device against over-heating.
- Thermostatically controlled heating
- All components inter exchangeable.
- Guaranteed for One year.

SPECIFICATIONS

Model	Inside Dimensions			Loading
	Length	Width	Height	
ESTA-IS 101	510 mm	200 mm	150 mm	2 kw
ESTA-IS 102	430 mm	200 mm	150 mm	1.5 kw
ESTA-IS 103	300 mm	150 mm	125 mm	1kw

OPTIONAL:

- Non Electric Sterlizer, which is gas operated model are available in above sizes.
- Electric Sterlizer without thermostat are also available.
- Sterlizer can be supplied in lesser thickness also against specific enquiry.

STERILIZER (PRESSURE COOKER TYPE)

ESTA-104 ESTEEM AUTOCLAVE (PORTABLE STERILIZER)



The body constructed by joint less thick aluminum sheet, lid & ring made of aluminum silicon alloy die casting, provided with compound pressure and vacuum gauge self ejecting immersion heater. pressure adjustable from 5 to 15, but tested up to 20-25psi, Complete with steam release valve, inner vessel, iron stand plug connector to work on 200VAC mains. Suitable for general laboratory use as well as for field sterilization of instruments and dressings etc. Dome shaped S.S. lid is provided which seals the autoclave with neoprene joint less gasket. The lid is tightened to the body when closed. The working pressure is 1.1 to 1.2 Kg. /cm² (15-18PSI). The sterilizer is made of S.S. Sheet deep drawn to cylindrical shape.

The seamless construction allows no bacteria residue & free from dirt accumulation. It is equipped with dial pressure gauge 0-60 PSI, spring loaded safety valve, dead weight type safety valve and steam release valve. The load is held in dressing drums (optional), which is supported on a stand (tripod) the autoclave is hydraulically tested at twice the working pressure as per ISI requirement. It is fitted with ISI marked heater. Supplied complete with plug & cord. Suitable to work on 220/230 Volt, single phase, 50 Hz, AC supply. Size 350 × 300-325 mm Optional Accessories Dressing Drum

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 one of the following methods:

PAYMENT PROCEDURE FOR USD \$

PAYMENT PROCEDURE : For making SWIFT Transfer payment of US\$ _____, please provide 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 with payment.

PAYMENT PROCEDURE FOR GBP £

PAYMENT PROCEDURE : For making payment of Sterling Pound £ _____, please provide 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 your bank:

Intermediary Bank:

1. Commerz 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 payment.

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

E-MAIL : INFO@ESTEEM.IND.IN

WWW.ESTEEM.IND.IN

