

## HORIZONTAL AUTOCLAVE - CYLINDRICAL



We are manufacturers of triple walled horizontal autoclave India since 1984. Our horizontal autoclave are widely used for day to day mass scale sterilization procedures and in various bulk laboratory applications, where dryness of the sterilized medium is of paramount importance, given the fact that semi dry sterilized media is prone to various micro-bacterial and viral infections. 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 autoclave in India, catering to the vast markets in South East Asia, Middle East, Africa and Europe. Apart from that we are supplying our autoclave 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.

## **SALIENT FEATURES OF OUR TRIPLE HORIZONTAL AUTOCLAVE (DRY)**

- ✘ 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

### **CONSTRUCTION:**

Our horizontal cylindrical 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 insulated by generous mineral glass ass wool insulation . 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. The steam generator of the autoclave is also constructed from stainless steel sheet of grade ss-304.

Our horizontal autoclaves are ideally suited for 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 horizontal autoclaves are supplied complete with pressure gauge, pressure release valve automatic pressure control switch, vacuum breaker and steam trap as a standard feature. The unit is mounted on a tube stand constructed of high grade steel, which is duly pre treated with primers for rust proofing and painted with stove enamel.

#### **HEATING:**

The heating process in our triple walled horizontal 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 horizontal autoclave have a working temperature of 121oc. ,however for specific requirements our autoclaves can be upgraded to be used for up to 134° c.

#### **WORKING PRESSURE:**

Working pressure for our standard dry sterilization model horizontal 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 horizontal 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.
- ✘ Multiple operating valve for the control of the sterilization cycle.
- ✘ Accidental Vacuum Break Device: Ensuring vacuum break due to power failure or any other usage
- ✘ Water Level Cut Off Device
- ✘ CUT Hammer contractor for long trouble free usage
- ✘ Specially designed ISI marked stainless steel heaters
- ✘ Plug screen to prevent line choking due to sediment discharge
- ✘ Highly accurate temperature and pressure gauges for boiler chamber and jacket

### **STANDARD STANDARDS MODELS (INNER DIMENSIONS)**

#### **Diameter (mm)**

250 mm

300 mm

350 mm

450 mm

550 mm

#### **Height (mm)**

450 mm

500 mm

550 mm

600 mm

750 mm

**Volume (Liters)**

22 ltrs

50 ltrs

78 ltrs

98 ltrs

152 ltrs

**Note:**

The above mentioned sizes are of our standard deluxe horizontal autoclave. However we are fully capable to cater to the demand of any customized size for any special application.

**UPGRADES (STANDARD)**

**1. LOW WATER PROTECTION DEVICE:**

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

**2. TIMER WITH ALARM SYSTEM:**

This semi automatic device can be incorporated with the standard models of our horizontal 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.

### **3. DIGITAL TEMPERATURE INDICATOR:**

A solid state digital temperature controller cum indicator can be incorporated with our basic horizontal 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.

### **4. PROGRAMMABLE TEMPERATURE CONTROLLER:**

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

### **5. 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 horizontal 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

### **6. 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 horizontal 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 horizontal 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 horizontal 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 HORIZONTAL CYLINDRICAL AUTOCLAVE

This is unique module which can be incorporated with our Horizontal- 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 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.

## PAYMENT TERMS COMMON FOR ALL THE MODELS

### PAYMENT TERMS :

#### Who are our Bankers and what are our Banking particulars?

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#### 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.