



MODEL NO. - Acm-32068- A

# CEMENT AUTOCLAVES

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We are manufacturers of cement autoclaves in India since 1990. Our cement autoclaves are widely used for analyzing estimated delayed expansion of Portland cement. Which is caused due hydration reaction of calcium oxide and magnesium oxide. These equipments are tested in accordance with the procedures laid down in ASTM C 151 standard where change in the length of the bars (test) of cement is measured for the difference in the size after exposing them to stipulated pressure and temperature for a specific time period.

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 cement autoclave in India, catering to the vast markets in South East Asia, Middle East, Africa and Europe.

Apart from that we are supplying our cement 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

- Steam Stock Provision
- Versatile usage
- 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 cement autoclaves are double walled units. Outer body of our autoclave is 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 cylinder is made of heavy gauge welded steel sheet. 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 steel plate which is lined from inside with Stainless steel sheet of ss-304 grade has a wing nut locking arrangement.

## 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 / Pressure

Working pressure for our standard model cement autoclave is between 60 -350 psi, however this can be upgraded to be used for higher pressures.

## Pressure Control

The pressure inside our cement 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

- Wing nut lock locking mechanism for ultimate ease of operation and safety.
- Conforming to ASTM C151, AASHTO T 107
- Huger grade spring loaded safety valve of brass., duly chrome plated.
- High accuracy and reliable pressure gauge.

## Standard Models (Inner Dimensions)

Diameter (mm)	Height (mm)
6-1/8"	16"

## Standard Model (Outer Dimension)

17" x 28" x 48"

## Note

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

## Upgrades (Standard)

- **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 an 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 105°C and 137°C 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 a unique module which can be incorporated with our cement autoclave to log in temperature and environment related data with the 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 report 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 printout 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 analyzes the data and facilitates the user to generate reports and graphs etc.



An ISO 9001 : 2208 | ISO 14001 : 2008 | ISO 13485

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