

Rectangular Autoclave Sterilizer



MEDIPHARM
THE STERILIZER PEOPLE

STEAM STERILIZERS

APPLICATIONS :

Sterilization in Hospital, Nursing Homes and Laboratories for,

- ◆ Instruments, utensils, vessels, empty glass ware, Rubber articles etc.
- ◆ Solutions in glass such as ampule, vials, glass bottles etc.

STEAM STERILIZERS(H.P/H.V.)

This technique uses air removal with the help of a vacuum pump (water ring or water jet ejectors) and offers several advantages over standard sterilization cycle.

- ◆ Near 100% air removal from the sterilizer.
- ◆ Better temperature uniformity in the chamber due to elimination of cold spots.
- ◆ Good penetration of steam in porous products.
- ◆ Vacuum drying at the end of the sterilization hold on period ensures quick drying of the sterilized material.

APPLICATIONS :

- ◆ Porous material like garments, fabrics etc.
- ◆ Instruments, rubber bungs, vessels, machine parts, change parts etc.

CONSTRUCTION

THE CHAMBER

The sterilizer chamber is usually double walled- a inner SS 316 chamber and an outer carbon steel or SS 304/316 jacket. The jacket in addition to improving the temperature uniformity in the sterilization zone also reinforces the chamber. Various features have now been incorporated to improve product value.

- ◆ For complete condensate removal, sterilization chambers are provided with a sloping bottom.
- ◆ For faster cycle times and better temperature uniformity, adequate condensate line is provided.
- ◆ Backing SS Strips are welded in between the jacket and chamber to ensure special reinforcement pattern to eliminate direct welding of Carbon Steel with the inner chamber.
- ◆ TIG welding ensures elimination of welding defects.
- ◆ Various chamber sizes are available in addition to standard sizes.

INTRODUCTION

The ever growing demand for more efficient and advanced hospital, pharmaceutical, industrial and scientific equipment with better performance and higher capacity, providing very effective and efficient steam sterilization, has led the development of "Medipharm" sterilizers throughout the years.

Established in 1989, Medipharm sterilizers offer maximum reliability in terms of material, quality and operation.

APPLICATION

Medipharm autoclave is a sterilizer designed to cover a wide range of applications in hospital, laboratories, pharmaceutical and Bio Technological industries. The autoclave operates with saturated steam as the sterilization agent, working up to 2.2 kg/cm² corresponding to temperature up to 134° C, special temperature settings are available on request.

STANDARDS

All our sterilizers are manufactured in accordance with Bureau of Indian standards specification IS:3829:Part-I under their licence and also bear the ISI making on our products.

STEAM STERILIZERS(STANDARD)

Standard sterilization cycle has been the workhorse in Hospitals, Pharmaceuticals Industries and Research Institution for the last century. 'Medipharm' now offers this system with advanced and latest engineering to meet all norms of CGMP as regards process, documentation and validation. The technique used is the method of air removal by gravity to ensure uniform steam distribution and penetration.

Steam traps equipped with air vent ensure maximum air removal.



THE DOOR

Depending upon the process and space availability 'Medipharm' offers the user following options.

- ◆ Conventional radial arm door with hinge.
- ◆ Sliding door (both vertical & horizontal)

Doors are provided with safety features which prevent

- ◆ Simultaneous opening of both doors.
- ◆ Opening the door when the process is on.

Double Door units are provided with the following:

- ◆ A Flush Mounted panel to isolate the sterile side from the non sterile side.
- ◆ Door Interlocking system to prevent both the doors from being opened simultaneously.

A.D.01 micron sterile air filter for vacuum break is installed on the sterile side.

PIPING

The pipe and fillings are stainless steel 316 / 304.

INSULATION

The sterilizer insulated with resin-bonded glass wool for better temperature uniformity and reduction of heat losses. The insulation is covered with SS 304 cladding.

SIZES

RECTANGULAR			
Sr. No.	Details		Model kw
1	450 mm H X 450 mm W X 800 mm D	45 RS/E	9
2	600 mm H X 600 mm W X 1200 mm D	60 RS/E	18
3	600 mm H X 900 mm W X 1500 mm D	90 RS/E	36
4	900 mm H X 900 mm W X 1800 mm D	90 LB/E	72
5	1050 mm H X 1200 mm W X 2400 mm D	100 LB/ DS	---

NOTE : Other sizes are available custom made on request.

INSTALLATION

The sterilizer are mounted on Mild Steel or Stainless Steel stand with level adjuster. No foundation is required.

AUTOMATION

PLC based / Micro computer based control system ensures precise control of process parameters. The process control by micro computer is on the basis of temperature signal from the PT-100 sensor installed inside the chamber. This system eliminates the human error.

Generally the following 8 preset programs are provided in this automatic PLC system.

a) Fabrics b) Instruments c) Liquid d) Bowie - Dick e) Vacuum Leakage test

Generally MITSUBISHI or equivalent make PLC along with operator panel and thermal panel mounted 80 column Dot Matrix Printer is provided to record the various process parameters like batch no, program no, temperature, time etc.

- ◆ All PLC system automation provided with pneumatic valves which are actuated by solenoid valves.
- ◆ This system has efficiently overcome the problem associated with electric fitted on high temperature process steam line.
- ◆ Bypass valves are provided for manual operation in addition to switches on the control panel (semi - automatic mode) in event of system failure. Hence the sterilizer is operate in :
A) Fully automatic mode B) Semi automatic mode C) Manual mode

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