



MODEL NO.: YSI-404
YSI H.P. CYLINDRICAL
VERTICAL STERILIZER

As per IS-3829 Part-III

The YSI Vertical — New Autoclave is very compact and designed to give best operational performance with economy. Conforms to the requirements as specified under IS: 3829 Part III with its latest amendments. Suitable for sterilization in which the probability of occurrence of a viable micro-organism in a medical product is reduced to less than 10 log.

Principle :

The steam is generated in the jacket and inbuilt the pressure upto set value. Pre pulsing is done to remove the trapped air and steam is supplied from jacket as and when required to chamber to heat the sterilization load. After sterilization hold period, the steam is exhausted followed by vacuum drying simultaneously maintaining pressure in the jacket and can be used again for load after load thus make optimum use of the Electric/Steam, very economic in running cost.

Chamber:

The chamber is made of heavy gauge stainless steel fitted with stainless steel forged ring and forged lid. Chamber is fitted with two safety valve of stainless steel, pressure gauge, water outlet valve and Air inlet valve, stainless steel steam condenser, tube with stainless steel ejector.

Steam Generator:

The steam is generated inside the jacket electrically. The steam generator is made out of stainless steel heavy gauge fitted with pressure gauge and water drain valve.



The electrical safety standards for steam generation conforms to IS 302 to the extend applicable.

Outer Cover :

The outer cover is made out of stainless steel, to cover the high density mineral wool insulation provided between cover & jacket.

Lid Gasket : One piece jointless moulded steam resistant, made of resilient material like neoprene and capable of effectively sealing the door against internal pressure upto the hydrostatic test pressure, durable enough to withstand the working temperature over long periods.



Design :

The equipment is designed to operate on Steam which is generated inside the jacket by means of electric power. The sterilizer is capable of performing the following operation constituting one full cycle of sterilization.

- (a) Generate Steam and build up working pressure in the jacket without admitting it to the chamber.
- (b) Admit steam to the chamber and allow it to build upto working pressure and temperature and maintaining the working pressure for at least 2 hours
- (c) Exhausting the chamber pressure while retaining the jacket pressure
- (d) Drying the load in chamber (if required) through the circulation of dry, filtered air entering through a drying system

The jacket is insulated with thick Mineral / Glass wool and covered with stainless steel outer cover to minimize the heat losses and avoid burns to skin.

Individual valves to control the cycle of sterilization, namely.

- a) Admitting steam to the chamber.
- b) Exhausting the chamber steam.
- c) Circulating dry filtered air for drying the chamber.
- d) Exhausting the jacket steam.

Safety :

- A pressure switch to control steam press along with one spring loaded safety valve to the jacket are provided.
- Safety valve also acts as relief valve to regulate the operating pressure, an additional spring loaded safety valve is provided, which will prevent an increase in the steam pressure of more than 10 percent of the working pressure.
- Temperature control and measurement provision is also made to incorporate one or more thermocouples in different zones of the chamber of the sterilizer.

Steam Supply :

- The steam is generated inside the jacket electrically. The electric load will be 4KW/6KW, (440V — 3 phase 50c/s). Fully meets the safety requirement for steam generator as per IS : 302

Low Water Protection :

- Low water protection for heaters are provided, to cut-off electric supply to heaters through a contactor if the water level runs below the heater level.

Pressure Control :

- Working Pressure is controlled through a pressure switch connected to the jacket

Switch Box : The contactor, switches and pilot lights located in one box mounted on the stand of the sterilizer

Jacket Drain : Suitable connection with valve is provided for draining the jacket Water.

Powerful ejector is provided to remove air from the chamber which results in effective sterilization.

Gauge glass assembly with inbuilt shut off valves facilitates to monitor the water level and avoid accidents in case of breakage of gauge glass.

High quality pressure gauges, temperature gauge are provided to monitor the process.

The whole unit is supported by stable die cast legs. Available Models :

Standard : The autoclave is manually operated

Semi Automatic : The process is controlled by programmable logic controller & is user friendly. Four fixed sterilization cycles take care of hospital sterilization needs. The automation avoids the human errors and interference thus assures quality sterilization. This unit can be handled by unskilled person and need not to be attended all the time thus sparing the operator for other work

Fully Automatic : This is the upper version of semi automatic machine with five fixed and one variable parameter cycles. Man machine interface is provided to monitor the process parameters, set the desired parameters and to get online printing of the process to keep records for future reference.

Operating Temperature & Pressure :

Sterilization Temperature : 121°C

Sterilization Pressure : 1.2 to 1.5 Kg/cm' (15PSI to 22PSI)

Power Requirement : Suitable to operate on 440 V, 3 ph, 50 Hz. AC Supply

Available in following Sizes/capacities :

dia	x	depth	load
300	x	500 mm	4 kw
400	x	600 mm	6 kw

Spare accessories (YSI-402, 403,404):

- Pressure gauge/compound gauge
- Water level gauge glass
- Wing nuts for vertical autoclave
- Neoprene Rubber jointless gaskets

Dia : 250mm, 300mm, 350mm, 400mm, 450mm, 550mm

Heating elements : "L" type (Vertical Autoclave) 1.5 Kw, 2.0 Kw, 3.0 Kw, 4.0 Kw