YSI

industry
dental
steam
care
steel
hygiene
medical
sterilization
medicine
health
sterile
clean
sterilizer
clinic
machine
surgery
hospital
instrument
autoclave
research
professional

YORCO

SALES PVT. LTD.



YSI



## MODEL NO.: YSI-400

### YSI DRESSING DRUMS SHALLOW STERILIZER

- As per IS - 3831

Seamless made of S.S. -As per IS-3831Dressing Drums are made of Stainless Steel sheet by deep draw process & confirm to ISI specifications. These are ideal for sterilization of Gauges, Dressing Cotton, Gloves, surgical instruments used in operation theatres and emergency wards.

Sizes :

225 x 225 mm
275 x 240 mm
275 x 130 mm
350 x 240 mm
350 x 130 mm

## MODEL NO.: YSI-900

### YSI INSTRUMENT STERILIZER

—As per IS : 5022-1989

Made of Seamless S.S. Sheet of grade-304 (18 Cr-8 Ni). Suitable for 220V, 50 Hz, Single Phase, AC Supply.


Available in Following Sizes :

| L | x | W | x | H | Power |
|---|---|---|---|---|---|
| 300 | x | 150 | x | 125 mm | 1.00 KW |
| 430 | x | 200 | x | 150 mm | 1.50 KW |
| 510 | x | 200 | x | 150 mm | 2.00 KW |


## MODEL NO.: YSI-401

### YSI PORTABLE AUTOCLAVE

- As per IS - 8462

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 Safely 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 mains plug & cord.

Suitable to work on 220/230 Volt, single phase, 50 Hz, AC supply.

Size : 350 x 300-325 mm

Optional Accessories :

- Dressing Drum

## MODEL NO.: YSI-618

### YSI PORTABLE AUTOCLAVE WITH SYRINGE RACK

Elegant, non-electrical, made of thick aluminum/St.Steel seamless sheet. The equipment is designed to attain a pressure of PSI and is tested with greatest care. Complete with safety value, weight value, dial pressure gauge, 2 racks for syringes and with a spare gasket and safety plug

| | | | |
|---|---|---|---|
| Size : | 230(0) | x | 230mm (Depth) |
| | 300(0) | x | 300mm (Depth) |





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YSI



## MODEL NO.: YSI-402

## YSI VERTICAL AUTOCLAVE

—Vertical

High pressure, electrically heated vertical steam sterilizer is used for sterilization of surgical instruments, dressing material, linen, rubber, plastic material by means of saturated steam under pressure of 15 to 20 psi. (adjustable). Apart from Health Services it is also used in Scientific Research Institutions and Universities.

Sturdy double walled construction with (boiler) inner chamber made of stainless steel of 18 SWG sheet AISI-304 Grade . Outer shell is also made of thick Stainless steel.

The boiler and outer shell is provided with air insulation. Lid is made of stainless steel plate and is tightened all-around by wing nuts. Moulded, joint less gaskets are made of Neoprene rubber. Sterilizer is hydraulically tested upto 40 psi.

Autoclaves are fitted with water level arrangements to indicate water position inside the boiler, pressure gauge, Air/steam release cock, spring loaded safety valve which can be set at any selected point from 10 psi. to 20 psi ± 3 psi. and drain. ISI marked immersion type heating element heats the water to generate steam to desired pressure & corresponding temperature .

Supplied complete with S.S. basket, cord and plug to work on 220 Volts, 50 cycles AC supply.

Available in following chamber sizes :

| | dia | x | depth | load |
|---|---|---|---|---|
| a) | 250 | x | 450 mm | 1.5 kw |
| b) | 300 | x | 500 mm | 2.0 kw |
| c) | 350 | x | 550 mm | 3.0 kw |
| d) | 400 | x | 600 mm | 4.0 kw |
| e) | 450 | x | 600 mm | 4.0 kw |
| f) | 550 | x | 750 mm | 5.0 kw |


Optional Accessories :

- Automatic Low Water level cut off device
- Pressure control switch
- Can be supplied with Pedal Lifting Device at extra cost
- Digital temperature indicator can be supplied in lieu of dial thermometer
- Digital Temperature Controller with timer can be fixed at extra cost. Once temperature is attained, it will automatically start the timer. It raises an alarm.
- Digital Pressure & Compound gauges can be provided in lieu of analog gauges.

N.B. Size (e) & (f) will be supplied with pedal lifting device. Radial locking system can be provided in sizes (e) and (f) on request.


## MODEL NO.: YSI-402D

## YSI VERTICAL AUTOCLAVE

—Vertical (Digital)- Microprocessor Controlled Fully Automatic Basic Specifications are same as YSI-402 but Microprocessor Controlled.

The Sterilizer Vertical is robust standing type, built, sturdy construction designed for easy operation for sterilizing culture media, glass-wares, utensils, instruments, tools etc. with steam under pressure. It is suited to various purposes in Laboratories, Hospitals & Industries. It is single door vertical type.

working Pressure is 1.2 to 1.5 Kg / CM2 or with 2.3 Kg/CM2 Approx, operating temperature is selectable from ambient to 134°C on Microprocessor Digital Temperature Controller cum Indicator. Alarm is built in to the PID Temp.

Controller for temperature overshoot and low water level. Low water cut off is provided.

Works on Single Phase 220 Volts, 50 cycle AC Supply.

Available in following chamber sizes :

| | dia | x | depth | load | |
|---|---|---|---|---|---|
| a) | 250 | x | 450 mm | 1.5 kw |
| b) | 300 | x | 500 mm | 2.0 kw |
| c) | 350 | x | 550 mm | 3.0 kw |
| d) | 400 | x | 600 mm | 4.0 kw |
| e) | 450 | x | 600 mm | 4.0 kw |
| f) | 550 | x | 750 mm | 5.0 kw |

Optional Accessories :

- Automatic Low Water level cut off device.
- Pressure control switch.
- Can be supplied with Pedal Lifting Device at extra cost.
- Digital temperature indicator can be supplied in lieu of dial thermometer Digital.
- Temperature Controller with timer can be fixed at extra cost. Once temperature is attained, it will automatically start the timer. It raises an alarm.
- Digital Pressure & Compound gauges can be provided in lieu of analog gauges.

N.B. Size (e) & (f) will be supplied with pedal lifting device. Radial locking system can be provided in sizes (e) and (f) on request.



YSI



## MODEL NO.: YSI-403

## YSI H.P. STERILIZER

—Vertical

High pressure electrically heated vertical steam sterilizer used for sterilizing of surgical instruments, dressing material, linen, rubber, plastic material, injection liquids by means of steam under pressure of 15 to 20 psi. (adjustable).

Construction :

Triple chamber with inner chamber and steam jacket made of thick stainless steel. Jacket is insulated by high grade glass wool to minimise the temperature loss. All sterilizers are hydraulically tested upto 2.5 times of working pressure. Outer chamber made of thick stainless steel sheet. Lid is made of thick stainless steel single piece plate and closed by wing nuts arrangement. Joint less neoprene gasket does not allow any leakage.

Fitted with double safety valve, water level indicator, water inlet and drain valves. Supplied complete with cord and plug but without dressing bins. Suitable to work on 220 volts, 1 ph 50 Hz, Ac supply.

Available in following chamber sizes :

| | dia | x | depth | load |
|---|---|---|---|---|
| (a) | 300 | x | 500 mm | 2 kw |
| (b) | 400 | x | 600 mm | 4 kw |


Optional Accessories :

- Automatic low water level cutoff device
- Pressure control switch
- Dressing Bins (Drums)

(a) 275 x 225 mm (11" x 9") For size (a)

(b) 375 x 275 mm (15" x 11") For size (b)

- Can be supplied with Pedal Lifting Device at extra cost
- Digital temperature indicator can be supplied in lieu of dial thermometer.
- Digital Temperature Controller with timer can be fixed at extra cost. Once temperature is attained, it will automatically start the timer. It raises an alarm.
- Digital Pressure & Compound gauges can be provided in lieu of analog gauges.

## MODEL NO.: YSI-403Ex

## YSI H.P. STERILIZER

—Vertical

High pressure electrically heated vertical steam sterilizer used for sterilizing of surgical instruments, dressing material, linen, rubber, plastic material, injection liquids by means of steam under pressure of 15 to 20 psi. (adjustable).

Construction :

Triple chamber with inner chamber and steam jacket made of thick stainless steel. Jacket is insulated by high grade glass wool to minimise the temperature loss. All sterilizers are hydraulically tested upto 2.5 times of working pressure. Outer chamber made of thick stainless steel sheet. Lid is made of thick stainless steel single piece plate and closed by wing nuts arrangement. Joint less neoprene gasket does not allow any leakage.

The sterilization process is carried & controlled by a programmable logic controller. This model is very accurate and give consistent results.

Fitted with double safety valve, water level indicator, water inlet and drain valves.

Supplied complete with cord and plug but without dressing bins. Suitable to work on 220 volts, 1 ph 50 Hz, Ac supply.

Available in following chamber sizes :

| dia | x | depth | load |
|---|---|---|---|
| (a) 300 | x | 500 mm | 2 kw |
| (b) 400 | x | 600 mm | 4 kw |


Optional Accessories :

- Automatic low water level cut off device
- Pressure control switch
- Dressing Bins (Drums)
  (a) 275 x 225 mm (11" x 9") For size (a)
  (b) 375 x 275 mm (15" x 11") For size (b)
- Can be supplied with Pedal Lifting Device at extra cost
- Digital Pressure & Compound gauges can be provided in lieu of analog gauges



YSI



## MODEL NO.: YSI-404

## YSI H.P. CYLINDRICAL VERTICAL STERILIZER

Bearing IS! Mark : IS-3829 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 jacked 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 operatorfor 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 22PS1) |
| 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



YSI

## MODEL NO.: YSI-405

## YSI H.P. CYLINDRICAL HORIZONTAL STERILIZER

—Bearing ISI Mark : IS-3829I

Introduction :

The sterilizer is based on the principal that microbiological organism are killed or made inactive by maintaining high temperature for related time. The medium use for raising the temperature is dry saturated steam. The steam also displace the air under the gravity effect out of the chamber resulting efficient sterilization.

Robust and rigid construction, designed for all types of bulk sterilization which are commonly needed in Medical, Agricultural and Pharmaceutical Institutions.

Suitable for Sterilizing hospital dressings, linen, rubber, plastic goods, surgical instruments, glass wares, utensils etc. Construction :

Triple walled with steam jacket and separate boiler Inner chamber and steam jacket are made up of Heavy gauge S.S. Sheet with leak proof argon-arc welding.

The sterilizer has single piece door made of steel plate lined with S.S. from inside and back plate and ring is also made of thick stainless steel sheet. All the sterilizers are hydraulically tested to withstand 2.5 times the working pressure. Door is grooved to hold EPDM or silicon (Optional) gasket to securely rest on front facia of door ring for easy & perfect leak proof locking.

Mounted on tubular steel frame with ground leveling screwed flanges. The Outer jacket is wrapped with insulation material to minimise the heat losses due to radiation and is covered by polished stainless steel sheet for elegant appearance.

Steam Generator : Made of heavy stainless steel sheet and provided in unique design with minimum joints and bolted parts thus reduces the chances of leaks. Suitable capacity heating elements and low water level cutoff system to protect the former from burning out dry are provided. Main hole provided on heater plate provides for easy cleaning of the deposited scale inside the generators for better efficiency. Fitted with gauge glass assembly with shut off valves (to avoid spillage of hot water in case of glass tube breakage) for water level indication, water inlet and outlet valves.

Pressure Control : The " PIEZOSTAI" (Pressure Control Device) is incorporated in all electrically operated sterilizers. It economizes on power consumption and control the steam generation to set value depending on the temperature for sterilization

Safety Door : Sterilizer has hinged self locking single piece thick steel plate lined with S.S. from inside door and cannot be opened when under pressure. The self locking device automatically engages the clutch mechanism when the chamber is pressurized to avoid opening of the door thus eliminates the chances of any accident.

Single Point Control : Complete sterilizer cycle is controlled from one


point with the help of " Multiport valve" fitted at the top. Two speeds of steam exhaust are available, fast and slow. Drying of the sterilized load can also be done.

Easily readable jacket and chamber pressure gauges are mounted along the multi port valve. A steam trap is fitted in the chamber discharge line to drain the condensate automatically. Switch Box:

Houses the PIEZOSTAT, main switch, pilot lamps, relays etc. and mounted on the stand of the sterilizerfor easy operation.

Other Features:

- TRIPLE SAFETY: The Sterilizer is provided with the triple safety features. At the boiler level by a PIEZOSTAT which automatically limits the pressure to the required set value and a spring loaded safety valve in case of its failure which releases the steam to keep pressure within the safety limits. At the chamber level, a spring loaded safety valve and a dead weight release valve to release the steam in case the pressure exceeds the safety limit. All these safety features function independent of one another and subsequently i.e. one takes over the charge in case of other's failure.
- A plug screen prevents the discharge line from choking. The plug is easily removable for daily cleaning.
- Powerful Ejector for drying sterilized linen circulates air throughout the chamber. The circulating air passes through a corrosion resistant metallic wool filter.
- A dial thermometer is provided to show the chamber temperature.
- Automatic Vacuum breaker is provided to break vacuum in case of formation of vacuum due to steam condensation.

Operating Temp. & Pressure :

Sterilizing Temp : 121°C

Sterilizing pressure : 1.2 to 1.5 kg/cm2 (15 psi to 22psi)

Power Requirement : Suitable to operate on 440Vvolts, 3 ph, 50 Hz, Ac supply

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 parameters cycles. Main 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.

Material of Construction :

| | Std. | Optional |
|---|---|---|
| Chamber | -S.S.304 | S.S.316/S.S.316L/S.S.316Ti |
| Jacket | -S.S.304 | S.S.316/BQ MS |
| Door | -BQ MS | S.S.304/S.S.316 |
| Steam Generator | -S.S.304 | S.S.316 |
| Outer Cover | -S.S.304 | ----- |
| Stand | -ERW M | S S.S.304 |
| | Tubes | |

Optional Accessories :

- Digital Temperature Indicator can be supplied in lieu of dial thermometer.
- Digital Temperature Controller with timer can be fixed at an extra cost. Once the temperature is attained it will automatically start the timer. It raises an alarm at a set time, so that operator is alerted & he can perform balance operations
- Automatic water feed system can be incorporated in the boiler, so that at higher level it switched off the water pump and restart it at lower level automatically
- In addition to vacuum dry provided in the MPV an extra ejector can be provided in the autoclave for better drying of the load.
- Digital Pressure & Compound gauges can be provided in lieu of analog gauges.
- POP type safety valve can be installed in lieu of spring load safety valve, for more accurate & better performance if required, at an extra cost.
- Dressing Drums
- Parisian for Direct steam supply from centralized boiler
- Temperature recorder
- High pressure High vacuum model
- Additional door (Double door) model.
- Fully automatic micro processor controlled model

Spare Accessories :

- Pressure gauge/Compound gauge
- Water level gauge glass
- Dial thermometer
- Non return valve
- Moisture trap
- Jointless Gasket : Neoprene/silicon rubber, Size : 400mm & 500mm
- Heating elements (Flange Type) Rating kw 6.0, 9.0

Various level of automation is available to suit customer need.

(1) Steri micro 50 - Four process cycles provided are with fixed parameters and takes care of all sterilization need.
- No display is available.
- No online data printing

(2) Steri Micro75 - Four process cycles with fixed parameter.
- No display
- Online process printing is available.

(3) Steri Micro100 - Four process cycles with fixed parameters.
- Display (Two line)
- Online process printing

(4) Steri Micro150 - Five fixed and one flexible process cycles are provided.
- Display (Four line)
- Online printing

(5) Steri Micro 200 - Five fixed and one flexible process cycle.
- Display (four line/ Touch Screen) Online printing
- High end PLC is provided to take

Available in following capacities :

| dia | | depth | load |
|---|---|---|---|
| 400 | x | 600 mm | 6 kw |
| 400 | x | 1100 mm | 9kw |
| 500 | x | 900 mm | 9kw |
| 500 | x | 1200 mm | 9kw |
| 600 | x | 900 mm | 9kw |
| 750 | x | 1100mm | 18 kw |



YSI




## MODEL NO.: YSI-406

## YSI ETHYLENE OXIDE STERILIZER

Ethylene Oxide Sterilizer suitable for sterilization of Catheters Disposable. The unit is made out of stainless steel 304 chambers. Stainless steel back plate as well as S.S./M.S. door. The unit is having individual valves for exhaust, allowing gas in the chamber and for vacuumising. The unit is having vacuum pump, chamber heating and control system. Table top model suitable for 2 Nos. Sterilizing Baskets. The unit is having fascia panel. All accessories pump etc. are enclosed with stainless steel cover. Gauges and controls are provided in the fascia panel. This model is specially designed for Hospitals and Research Lab. The unit is suitable for 10 : 90 EO : $CO_2$, or 12 : 88 EO : F-12 mixture.

Table top model are having following sizes :

- Cylindrical Model
  300 mm (Dia) x 500 mm (Depth)
  450 mm (Dia) x 450 mm (Depth)
- Rectangular Model
  250 (H) x 300 (W) x 550 (D) mm.
  250 (H) x 300 (W) x 800 (D) mm.

These highly sophisticated and rugged can be suitably use for

- Medical Industry
- Pharmaceutical Industry
- Spices & Herbal Industry
- Cosmetic Industry
- Electronics Industry

Complete range of Product & Services.

- Sterilizers
- Accessories &Ancillary Equipment
- EO Gas Mixture Cylinders / Disposables Cartridge
- Design of Exhaust &Aeration System
- Process Validation as ISO / CE Norms
- Calibrations

| | Ethylene oxide | Diluent gas | Flammability |
|---|---|---|---|
| E0 | 100% | Nil | Flammable |
| 12E0:88F | 12% | 88% Freon | Non Flammable |
| 10E0:90C | 10% | 90% $CO_2$ | Non Flammable |
| 20E0:80C | 20% | 80% $CO_2$ | Non Flammable |
| 80E0:20C | 80% | 20% $CO_2$ | Flammable |
| 90E0:10C | 90% | 10% $Co_2$ | Flammable |

## MODEL NO.: YSI-406

## YSI ETHYLENE OXIDE STERILIZER

Free standing bulk model : Suitable for large Hospitals & for small manufacturing units. Suitable for 10/90 EO/CO2 mixture or 90/10 EO/CO2.

The System can be provided with manual and automatic Systems with single or double door combination. Low cost automation along with data logging facility can also be incorporated to maintain process stability and hard copy evidence.

Table top model are having following sizes :

- Cylindrical Model
  400 mm (Dia) x 600 mm (Depth)
  500 mm (Dia) x 1200 mm (Depth)
- Rectangular Model
  600 (H) x 600 (W) x 1200 (D) mm.
  900 (H) x 600 (W) x 1500 (D) mm.
  Other sizes on request.

These highly sophisticated and rugged can be suitably use for

- Medical Industry
- Pharmaceutical Industry
- Spices & Herbal Industry
- Cosmetic Industry
- Electronics Industry

Complete range of Product & Services.

- Sterilizers
- Accessories &Ancillary Equipment
- EO Gas Mixture Cylinders / Disposables Cartridge
- Design of Exhaust &Aeration System
- Process Validation as ISO / CE Norms
- Calibrations

| | Ethylene oxide | Diluent gas | Flammability |
|---|---|---|---|
| E0 | 100% | Nil | Flammable |
| 12E0:88F | 12% | 88% Freon | Non Flammable |
| 10E0:90C | 10% | 90% $CO_2$ | Non Flammable |
| 20E0:80C | 20% | 80% $CO_2$ | Non Flammable |
| 80E0:20C | 80% | 20% $CO_2$ | Flammable |
| 90E0:10C | 90% | 10% $Co_2$ | Flammable |



YSI



## MODEL NO.: YSI-407

## YSI H.P. HIGH SPEED CYLINDRICAL HORIZONTAL STERILIZER

As per IS-3829 II

Introduction :

The sterilizer is based on the principal that microbiological organism are killed or made inactive by maintaining high temperature for related time. The medium use for raising the temperature is dry saturated steam. The steam also displace the air under the gravity effect out of the chamber resulting efficient sterilization.

Robust and rigid construction, designed for all types of bulk sterilization which are commonly needed in Medical, Agricultural and Pharmaceutical Institutions.

Suitable for Sterilizing hospital dressings, linen, rubber, plastic goods, surgical instruments, glasswares, utensils etc.

Construction :

Triple walled with steam jacket and separate boiler Inner chamber and steam jacket are made up of Heavy gauge S.S. Sheet with leak proof argon-arc welding.

The sterilizer has single piece door made of steel plate lined with S.S. from inside and back plate and ring is also made of thick stainless steel sheet. All the sterilizers are hydraulically tested to withstand 2.5 times the working pressure. Door is grooved to hold EPDM or silicon (Optional) gasket to securely rest on front facia of door ring for easy & perfect leak proof locking.

Mounted on tubular steel frame with ground levelling screwed flanges. The Outer jacket is wrapped with insulatoin material to minimise the heat losses due to radiation and is covered by polished stainless steel sheet for elegant appearance.

Steam Generator : Made of heavy stainless steel sheet and comes in unique design with minimum joints and bolted parts thus reduces the chances of leaks suitable capacity heating elements and low water level cutoff system of protect the former from burning out dry are provided. Main hole provided on heater plate provides for easy cleaning of the deposited scale inside the generators for better efficiency. Fitted with gauge glass assembly with shut off valves (to avoid spillage of hot water in case of glass tube breakage) for water level indication. Water inlet and outlet valves.


Pressure Control : The " PIEZOSTAI" (Pressure Control Device) is incorporated in all electrically operated sterilizers. It economizes on power consumption and control the steam generation to set value depending on the temperature for sterilization.

Safety Door : Sterilizer has hinged self locking single piece thick steel plate lined with S.S. from inside door and cannot be opened when under pressure. The self locking device automatically engages the clutch mechanism when the chamber is pressurized to avoid opening of the door thus eliminates the chances of any accident.

Single Point Control: Complete sterilizer cycle is controlled from one point with the help of " Multi port valve" fitted at the top. Two speeds of steam exhaust are available, fast and slow. Drying of the sterilized load can also be done.

Easily readable jacket and chamber pressure gauges are mounted along the multi port valve. A steam trap is fitted in the chamber discharge line to drain the condensate automatically.

Switch Box:

Houses the PIEZOSTAT, main switch, pilot lamps, relays etc. and mounted on the stand of the sterilizerfor easy operation.

Other Features :

- TRIPLE SAFETY : The Sterilizer is provided with the triple safety features. At the boiler level by a PIEZOSTAT which automatically limits the pressure to the required set value and a spring loaded safety valve in case of its failure which releases the steam to keep pressure within the safety limits. At the chamber level, a spring loaded safety valve and a dead weight release valve to release the steam in case the pressure exceeds the safety limit. All these safety features function independent of one another and subsequently i.e. one takes over the charge in case of other's failure.
- A plug screen prevents the discharge line from choking. The plug is easily removable for daily cleaning.
- Powerful Ejector for drying sterilized linen circulates air throughout the chamber. The circulating air passes through a corrosion resistant metallic wool filter.
- A dial thermometer is provided to show the chamber temperature.
- Automatic Vacuum breaker is provided to break vacuum in case of formation of vacuum due to steam condensation.

Operating Temperature & Pressure :

Sterilization Temperature : 134°C - 138°C
Sterilization Pressure : 1.2 to 2.4 Kg/cm2 (30 PSI to 35 PSI)
Power Requirement : Suitable to operate on 440 V, 3 ph, 50 Hz. AC Supply.

Available Models :

Standard : The autoclave is manually operated. All the functions are carried out with the help of multiport valve.

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 operatorfor other work

Fully Automatic : This is the upper version of semi automatic machine with five fixed and one variable parameter cycles. Main 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.

| Capacity: | Dia | x | Depth | Load |
|---|---|---|---|---|
| | 400 | x | 600 mm | 18 kw |
| | 500 | x | 900 mm | 36 kw |

Material of Construction :

| | Std. | Optional |
|---|---|---|
| Chamber | -S.S.304 | S.S.316/S.S.316L/S.S.316Ti |
| Jacket | -S.S.304 | S.S.316/BQ MS |
| Door | -BQ MS | S.S.304/S.S.316 |
| Steam Generator | -S.S.304 | S.S.316 |
| Outer Cover | -S.S.304 | ----- |
| Stand | -ERW MS Tubes | S.S.304 |

Optional Accessories :

- Digital Temperature Indicator can be supplied in lieu of dial thermometer.
- Digital Temperature Controller with timer can be fixed at an extra cost. Once the temperature is attained it will automatically start the timer. It raises an alarm at a set time, so that operator is alerted & he can perform balance operations
- Automatic water feed system can be incorporated in the boiler, so that at higher level it switched off the water pump and restart it at lower level automatically
- In addition to vacuum dry provided in the MPV an extra ejector can be provided in the autoclave for better drying of the load.
- Digital Pressure & Compound gauges can be provided in lieu of analog gauges.
- Pop type safety valve can be installed in lieu of spring load safety valve, for more accurate & better performance if required, at an extra cost.
- Dressing Drums
- Provision for Direct steam supply from centralized boiler
- Temperature recorder
- High pressure High vacuum model
- Additional door (Double door) model.
- Fully automatic micro processor controlled model

Spare Accessories :

- Pressure gauge/Compound gauge
- Water level gauge glass
- Dial thermometer
- Non return valve
- Moisture trap
- Jointless Gasket :¬ Neoprene/silicon rubber, size :-400mm & 500mm
- Heating elements (Flange Type) Rating kw 6.0, 9.0

Enquire for latest micro processor based fully automatic sterilizers. We also undertake Equiping of C.S.S.D. with equipments like Glove Washers, Dryers, Powders, Gauge Cutting Machine, Ultrasonic Cleaners, Scrub Stations, Sorting Tables, C.S.S.D. Racks, Baskets, Basket Racks and Distribution Trollies.



YSI

## MODEL NO.: YSI-408

## YSI H.P. RECTANGULAR HORIZONTAL STERILIZER

Bearing ISI Mark : IS — 38291

Introduction : The sterilizer is based on the principle that microbiological organism are killed or made in active by maintaining high temperature for related time. The medium used for raising the temperature is dry saturated steam. The steam also displaces the air under the gravity effect out of the chamber resulting efficient sterilization and is most economical way of bulk sterilization as required by medical pharmaceutical and agricultural institutes. These sterilizers are available as high pressure sterilizers and High Pressure High Vacuum sterilizers. In HPHV sterilizers forced vacuum is created to remove the trapped air from packs so that steam penetration is effective resulting proper sterilization. Suitable for sterilization of hospital dressing, linen, rubber plastic goods, surgical instruments, glassware and utensils etc.

Construction : The sterilizer's design is robust, energy efficient with high stability. The even steam circulation all around the material placed inside the chamber and even heating (no air pockets) is the overruling point of this design. Inner chamber is made out of thick plate of non magnetic stainless steel of grade SS 304/SS 316 fully. TIG welded. Jacket is of BQ steel as per IS 2002 /SS 304/ SS 316 Channel jacket usually preferred which is designed to give high pressure strength as well as to save energy.

The sterilizer will have single /(optional) double door made out of BQ steel lined with S.S. from inside or complete S.S. 304/316 (Optional). The door will be radial arm hinged door or (Optional) pneumatically operated vertically /horizontally sliding door. The shell is insulated with mineral/glass wool covered with CRCA sheet duly painted/ SS 304/ Aluminium. All the sterilizers are hydraulically tested to withstand 2.5 times the working pressure.

Steam Generator : Made of heavy stainless steel sheet and comes in unique design with minimum joints and bolted parts thus no chances of leaks. Suitable capacity heating elements and low water level cutoff system to protect the former from burning out dry are provided. Main hole provided on heater plate provides for easy cleaning of the deposited scale inside the generator for better efficiency. Fitted with gauge glass assembly with setoff valves (to avoid spillage of hot water in case of glass tube breakage) for water level indication, water


inlet and outlet valves.

Pressure Control : The "PIEZOSTAT" (pressure control device) is incorporated in all electrically operated sterilizers . It economizes on power consumption and control the steam generation to set value depending on the temperature for sterilization.

Safety Door : Doors have self pressure locking safety device and cannot be opened when under pressure. The self locking device automatically engages the clutch mechanism when the chamber is pressurized to avoid opening of the door thus eliminates the chances of any accident. The sliding door has (optional) inbuilt retraction mechanism which avoids any accident caused due to obstruction during its movement.

The doors are sealed with chamber by heat resistant EPDM / Silicon / Neoprene rubber gaskets.

Single Point Control : Complete sterilizer cycle is controlled from one point with the help of Multi port Valve "fitted at the top. Two speeds of steam exhaust are available fast and slow. Drying of the sterilized load can also be done. An additional ejector is also provided for better drying of the sterilized load. Easily readable jacket and chamber pressure gauges are mounted along the multi port valve. A steam trap is /fitted in the chamber discharge line to drain the condensate automatically.

Switch Box : Houses the Pressure control switch, Main switch, Pilot lamps, relays etc. and mounted on the stand of the sterilizer for easy operation.

Other Features :

- Triple Safety : The sterilizer is provided with triple safety.
  (a) By a pressure control switch which automatically limits the pressure to the required set valve.
  (b) Two spring loaded safety valves one each at chamber and boiler level.
  (c) A dead weight safety valve at chamber level.
- A Plug Screen: Prevents the discharge line from choking. The plug is easily removable for routing cleaning.
- A powerful Ejector (for drying sterilized linen) circulates air through the chamber. The circulating air passes through a corrosion resistant metal wool filter.
- A Dial thermometer is provided to show the chamber temperature.
- Automatic Vacuum Breaker is provided to break vacuum in case of vacuum formation due to steam condensation in the jacket.

Operating Temperature and pressure :

High Pressure Sterilizer

- Sterilizing Temp. : 121°C
- Sterilizing Pressure : 1.2 to 1.5 kg/Cm2(15 psi to 22 psi)

Material of Construction :

| | Std. | Optional |
|---|---|---|
| Chamber | -S.S.304 | S.S.316/S.S.316L/S.S.316Ti |
| Jacket | -BQ MS | S.S.304/S.S 316 |
| Door | -BQ MS | S.S.304/S.S.316 |
| Steam Generator | -S.S.304 | S.S.316 |
| Outer Cover | -CRCA MS | S.S 304/Aluminium |
| Stand | -ERW MS Tubes/MS Channel | S.S.304 |

Available in following capacities :

| W | H | D | Load |
|---|---|---|---|
| 450 | 450 | 900 | 18Kw |
| 600 | 600 | 1200 | 18Kw |
| 600 | 900 | 1500 | 36Kw |
| 900 | 900 | 1500 | 36Kw |
| 900 | 1050 | 2100 | 72Kw with auto water feeding (or direct steam operated) |
| 1050 | 120 | 2100 | 72Kw with auto water feeding (or direct steam operated) |

Various level of automation is available to suit customer need.

(1) Steri micro 50 -Four process cycles provided are with fixed parameter and takes care of all sterilization need.
-No display is available.
-No online data printing

(2) Steri Micro75 -Four process cycles with fixed parameter.
-No display
-Online process printing is available.

(3) Steri Micro] 00 -Four process cycles with fixed parameters.
-Display (Two line)
-Online process printing

(4) Steri Micro] 50 - Five fixed and one flexible process cycles are provided.
-Display (Four line)
-Online printing

(5) Steri Micro 200 - Five fixed and one flexible process cycle.
-Display (four line/ Touch Screen)
-Online printing
-High end plc is provided to take care of process parameter like Fo Value etc.

Option a /Accessories :

- Chamber/Jacket of S.S. 316
- Door of S.S. 304/316
- Additional Tray/Shelves
- Carriage &Trolley
- Parisian for direct steam supply from centralised boiler
- Temperature recorder
- High pressure High vacuum model
- Additional door (Double door) model.
- Fully automatic micro processor controlled model

Spare Accessories :

- Pressure gauge/Compound gauge
- Water level gauge glass
- Dial thermometer
- Non return valve
- Steam trap
- Jointless Gasket : Neoprene/Silicon rubber
- Heating elements (Flange Type) Rating kw 6.0, 9.0

**All models can have Box Type (European Style) design for elegant look (Optional)
**All other higher sizes as per requirement of the customer and will be direct steam (from centralized sources) operated.



## MODEL NO.: YSI-408HPHV

## YSI HIGH PRESSURE HIGH VACCUM HORIZONTAL RECTANGULAR STEAM STERILIZER

Bearing ISI Mark : IS-3829 I

Construction :

- The chamber is sq. / rectangular in shape constructed of heavy duty stainless steel 304 / 316, door is also made of stainless steel 316L/316.Steam Channel jacket is made of Boiler grade steel sheet IS 2001or S.S. 304 Grade (Optional) Proper wall re-inforcement is provided on the chamber.
- The pipes and fittings are of stainless steel and bronze, the valves are ball type. Each sterilizer is mounted on a sturdy tubular type stand made of M.S. duly powder coated or (Optional) S.S.304 or modern type cubical panel (Optional)with easy access to servicing.
- All other construction details are as per IS 3829 Part-11999. Design :
- YSI Autoclave YSI-408 (HPHV) are designed as per International Standard
- Chamber of the autoclave is designed & tested as per ASME Std of hydraulic test pressure, two times the working pressure & jacket for 21/2 times or the working pressure performance as per BS & IS Standards
- Working pressure of autoclave is from 1.2 to 2.1 kg/cm2 corresponding of the temperature of 121°C to 134°C and vacuum upto 26" HG (with built in vacuum pump arrangement) with necessary condenser etc.

Pulsating Deep Vacuum :

- High efficiency vacuum pump for mechanical air removal for excellent steam penetration even in fabric loads.
- Post sterilization vacuum drying treatment to ensure the load is dry on unloading.
- The chamber is designed and tested as per American Society of Mechanical Engineers standards.

Doors :

- Available Single and double door model offers the customer two door options - hinged door and automatic sliding door (Optional). All doors have stainless steel contact parts and temperature resistant silicon rubber gasket.

Recording System (Optional)

- Single point strip chart recorder for recording the process temperature, date and time.


Safety :

- Door safety to prevent starting of the process unless the door is closed and opening of the door when the chamber is pressurized (optional).
- Insulated chamber to avoid scalding to the operator.
- Safety valves for over-pressure safety.
- Pressure vessels hydro-tested for maximum quality assurance.
- Provided with two locks one automatic and another is manual. The automatic lock operates when pressure gauge reads 0.30-0.37kg/cm2 in the chamber

Source of Steam Generation :

Following combination of heating models are available.

- Electrically operated
- Steam operated
- Combination of electric & steam operation

Steam Generator:

A stainless steel electric boiler is provided under the shell with interconnecting steam pipes. The boiler is supplied with 6 KW immersion heaters mounted on stainless steel plate and electric controls would comprise of an air break contactor, automatic pressure controller, low water protection. The boiler is also additionally provided with one independent spring - loaded safety valve, pressure gauge, gauge glass assembly with protector, water drain and water inlet valves.



Other Features :

- Two Nos. Mechanical ejectors
- Self Sterilizing vacuum drier
- Safety valve spring loaded and vacuum breaker
- Screen plug and Dial Thermometer for chamber's discharge line which is provided with steam trap and swing check valve
- Manual single point operation to operate manually as per IS 3829 Part-I
- Door safety -when the chamber is under pressure self locking device automatically locks and unlocks when chamber pressure is falls below 0.35 k.g./cm2.
- Built in steam generator made of S.S. 304 with Low water cut out water level indicator self locking gauge glass valve.
- The equipment is provided with S.S. 304 railing and carriage with MS Trolley (Optional).
- Provided with vacuum system, low water cut off system.
- Suitable to run on in built electric Boiler as well as from centralized steam supply available nearto equipment @ 2.1 to 2.5 kg/cm'
- Working temperature 134°C.

Utilities & Environment Conditions :

Supply Voltage 380/415 V3 Phase 50 Hz.

(for power refer chart)

- Feed Water : Soft water/ DM Water.

Sizes Available :

| Width (mm) | Length (mm) | Height (mm) | Electric Load (K.W.) |
|---|---|---|---|
| 500 | 500 | 950 | 18Kw |
| 600 | 600 | 1200 | 18Kw |
| 600 | 900 | 1200 | 36Kw |
| 910 | 910 | 1200 | 36Kw |
| 600 | 900 | 1500 | 36Kw |

Other sizes as per customer requirement.

Various level of automation is available to suit customer need.

(1) Steri micro 50 - Four process cycles provided are with fixed parameter and takes care of all sterilization need.
- No display is available.
- No online data printing

(2) Steri Micro75
- Four process cycles with fixed parameter.
- No display
- Online process printing is available.

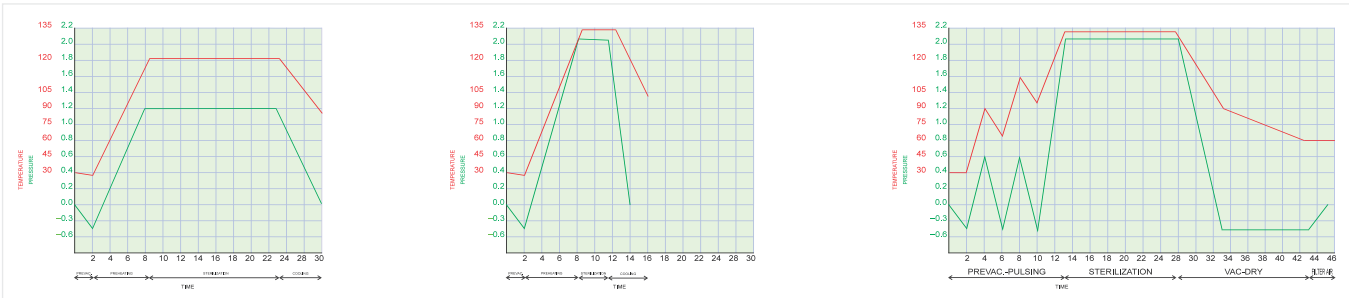
(3) Steri Micro100
- Four process cycles with fixed parameters.
- Display (Two line)
- Online process printing

(4) Steri Micro150
- Five fixed and one flexible process cycles are provided.
- Display (Four line)
- Online printing

(5) Steri Micro 200
- Five fixed and one flexible process cycle.
- Display (four line/Touch Screen) Online printing
- High end plc is provided to take care of process parameter like Fo Value etc.

Other Optional Accessories :

- Sterilization Tray.
- Sterilization Basket.
- Carriage.
- Transfer Trolley.
- Air Compressor
- Audio visual alarm for low water level.
- Auto feed water system.
- Temperature recorder.
- Thermograph or Printer for documentation
- Others as per requirement of the customer.





## MODEL NO.: YSI-605

## YSI H.P. CYLINDRICAL HORIZONTAL STERILIZER

Construction:

- The Chamber is cylindrical in shape constructed out of heavy duty stainless steel 304/316 door and jacket of stainless steel 304 (316L or 316Ti-optional)
- The Pipes and fittings of stainless steel and bronze, the valves are ball type. Each sterilizer is mounted on a M.S/S.S sturdy stand. The outside panelling is made of M.S Powder coated or S.S to give elegant look. Hinged panels on sides makes it friendly for service purpose. All other construction details are as per IS 3892 Part 1.

Design :

- YSI autoclave (YSU-605) are designed as per international standard.
- Chamber of the autoclave is tested for hydraulic test pressure, performance as per BS & IS standards.
- Working pressure of auotclave is from 1.2 to 2.1 kg. cm2 and vacuum upto 26"HG (with built in vacuum pump arrangement.
- Door gasket is expansion type silicon and jointless.
- The heating system provided is energy efficient and reduces running cost to great extent.
- Sterlization process is controlled by programmable logic controller with high accuracy & takes care of all user requirements.

Pulsating Deep Vacuum :

- High efficiency vacuum pump for mechanical air removal for excellent steam penetration even in fabric loads.Post sterilization vacuum drying treatment to ensure the load is dry on unloading.
- The chamber is designed and tested as per American Society of Mechanical Engineers standards.

Doors :

- Available Single and double door model offers the customer two door options - hinged door and automatic sliding door (Optional). All doors have stainless steel contact parts and temperature resistant silicon rubber gasket.

Recording System (Optional):

- Single point strip chart recorder for recording the process temperature, date and time.

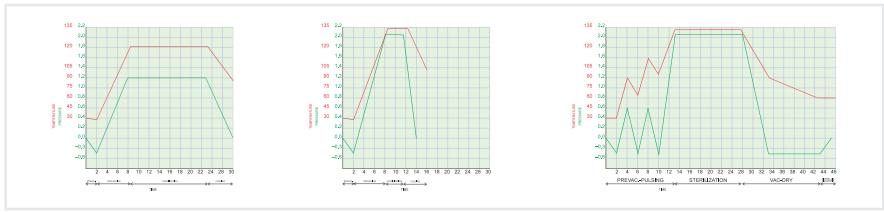
Safety :

- Door safety to prevent starting of the process unless the door is closed and opening of the door when the chamber is pressurized (optional).
- Insulated chamber to avoid scalding to the operator.
- Safety valves for over-pressure safety.



YSI





- Pressure vessels hydro-tested for maximum quality assurance.
- Provided with two locks one automatic and another is manual. The automatic lock operates when pressure gauge reads 0.30-0.37kg/Cm2d in the chamber.

Salient Features :

- Accurate in sterilization time and temperature.
- Door interlocks in case of double door sterilizer.
- Over heat protection
- Excess pressure safety valve.
- Self Diagnosis fault message.
- Safety against electric overload.
- Visual and audio alarm for easy operation.
- Process online print for records.
- Assured sterilization followed by complete dying of load.

Sources of Steam Generation:

Following combination of heating models are available.

- Electrically operated
- Steam operated (Optional)
- Combination of electric & steam operation.

Steam Generator:

A stainless steel electric boiler is provided under the shell with interconnecting steam pipes. The boiler is supplied with 6 KW immersion heaters mounted on stainless steel plate and electric controls would comprise of an air break contactor, automatic pressure controller, low water protection. The boiler also additionally provided with one independent spring - loaded safety valve and a pressure gauge. The boiler is also incorporates a gauge glass assembly with protector, water drain and water inlet valves are also provided.

Other Features :

- Two Nos. Mechanical ejectors
- Self Sterilizing vacuum drier
- Safety valve spring loaded and vacuum breaker
- Screen plug and Dial Thermometer for chamber's discharge line which is provided with steam trap and swing check valve
- Manual single point operation to operate manuallyas per IS 3829 Part I (Optional).
- Door safety - when the chamber is under pressure self locking device automatically locks and unlocks when chamber pressure falls below 0.35 k.g./cm2.
- Built in steam generator made of S.S. 304 with Low water cut out water level indicator self locking gauge glass valve.
- The equipment is provided with S.S. 304 railing and carriage with MS Trolley (Optional).
- Provided with vacuum system, low water cut off system.
- Suitable to run on inbuilt electric Boiler as well as from centralized steam supply available near to equipment @ 2.1 to 2.5 kg/cm2
- Working temperature 134°C.

Utilities & Environment Conditions :

- Supply Voltage 415 V, 3 Phase 50Hz power.
- Feed water : Soft water /DM Water/Good Water.
- Temperature range of +5°C to +45°C
- Maximum relative humidity of 80% for temperatures upto 31°C, decreasing linearly to 50% at 40°C.
- Main supply voltage fluctuation of + 5% of nominal.
- Provided with all piping connectors of SS:304

Automatic Process Control :

- Microprocessor based programmable logic controller is used to control the Process. Manual operation is also provided to avoid inconvenience in case of automation failure.

Programs Provided :

- Liquid cycle at 121°C
- Instrument Cycle 134°C
- Pre-Vaccum pulsating cycle
- Vacuum Leak Test.
- Bowie Test
- Flexible cycle from 105 to 134°C to suit users requirement.

Sizes available :

| Dia | x | Depth | Load |
|---|---|---|---|
| 400 | x | 600 mm | 6 kw |
| 400 | x | 1100 mm | 9kw |
| 500 | x | 900 mm | 9kw |
| 500 | x | 1200 mm | 9kw |

- Other sizes as per customer requirement

Other Optional Accessories :

- Sterilization Tray. Sterilization Basket.
- Carriage. Transfer Trolley.
- Air Compressor Audiovisual alarm for low water level.
- Autofeed water system. Temperature recorder.
- Thermograph or Printer for documentation
- Others as per requirement of the customer.

## MODEL NO.: YSI-606

## YSI ETHYLENE OXIDE GAS STERILIZER

Introduction :

Sterilization by ETO involves alkylation of Micro organisms i.e. alternation of genetic cell material

Process variables that play an important role in the process are

- ETO Concentration
- Relative Humidity
- Temperature
- Exposure time

These factors are carefully monitored in order to ensure complete sterilization.

Applications of Gas Sterilization :

- In the health product and medical fields :
- Fiberoptic endoscope, surgical telescopes and other optical medical equipment.
- Ophthalmic instrument.
- Dental instruments.
- Plastic instruments (e.g. specula's, syringes,)
- Oxygen tenets anesthesia masks and circuits,.
- Artificial kidney machines, heart lung machines, cardiac pacemakers.
- Rubber and plastic tubing (e.g. catheters), surgical gloves, sheets, tubing.
- Cotton balls and pads, swabs and bandages.
- Electrical equipment (e.g. drills, pumps, motors).
- Respirator and inhalation therapy supplies.
- Surgical staplers /staples, sutures, sharps.

Salient Features :

- Cubical cabinet type model easy to install, less space requirement, elegant in look.
- The chamber is sq. / rectangular in shape constructed of heavy duty stainless steel 304 / 316.
- Specially designed coils to maintained uniform temperature in the chamber.
- Compact hot water circulation system.
- Humidification arrangement.

Design:

Chamber

Chamber is made of stainless steel. The rectangular section of the chamber is re-inforced with U-Profile jacket welded around the chamber. The chamber is insulated by resin-bonded glasswool covered by M.S./S.S. and performance as per BS & IS standards.

- Flame — proof design of the sterilization chamber with no spark— generation devices being mounted on the machine.
- Specially designed gas scrubbers for converting Ethylene Oxide to environmentally friendly Ethylene Glycol.
- Emergency evacuation system for rapid evacuation of the gas in case of emergency.
- Autoclave working pressure of 30" Hg to 1.2 kg/cm2.
- Autoclave is designed specially for cartage type 100% EO gas with necessary safety features.
- Door gasket design is expansion type silicon.

Doors :

The unit is provided with One /Two Swing/Sliding (Optional) doors moved horizontally

Doors are provided with the following features :

- Double gasket sealing for safer operations(Optional)
- Process lock to prevent opening of the door during the process.
- Door interlocking for double door Model to prevent simultaneous opening of both doors (Optional)
- Heating jackets to ensure that the internal surface of the door have the same temperature as the chamber

Hot Water Generator

The Generator is fabricated form S.S. 304 Sheets with industrial immersion heaters. The steam generator is provided with automatic pressure control and other safety features like low water cut off to safe—guard heaters, safety valve gauge glass.

Vacuum System

Rotary vacuum pump driven by 3 phase electric motor. The other salient features are :

- Settable evacuation rate to suit packing material
- Emergency evacuation phase for fast evacuation of gas incase of emergencies



YSI



Safety:
Following safety features have been provided to ensure maximum operator safety

- Door closing and sealing as a precondition for start of the process
- Process lock to prevent opening of the door when the process in ON
- Double gasket for improved &fail proof door-sealing
- HI / LO temperature and pressure alarms

Process Control System :

- All sterilization processes are controlled by a

Microprocessor based Process control System (PCS)

- Due to the wide variety of products sterilized in our system, many of which have entirely different packaging materials or pack sizes etc. the process control must be capable of extreme flexibility. It is of great value to our machine users to be able to change and develop process programs to satisfy their needs for superior products quality at optimum running cost.
- All control system are provided with a user friendly Man Machine interface for communication with the Microprocessor. This microprocessor combines flexibility with accuracy. Some of the salient features which can be incorporated in the system are:
- Capability of storing and running upto 6 different programmes
- All process parameters can be easily changed
- Pass-word protection to prevent unauthorized access.
- RS-232 output for down—loading critical process parameters for report generation
- Data Acquisition Systems for process Log and report
- A Comprehensive selection of alarm functions are also available
- Medial failures (Gas, Water, Air, Steam, electricity)
- Temperature and pressure alarms,

Time too long for different phases.
Gas leakage in the work area,
Insufficient feeding of ETO Gas etc.
Documentation and Validation
On special request design and manufacture of sterilization plants can be done in accordance with EN-550 for CE Mark. Machines can be supplied with :

- Design Qualification Report (DQR)
- Installation Qualification Report (IQR)
- Factory Acceptance Test (FAT)
- Performance Qualification Report (PQR)
- All assistance for on site validation and audit also guaranteed.

Technical Data :

| | | |
|---|---|---|
| 1. | Main Feature | |
| 1.1 | Item | E.O. Gas Sterilizer |
| 1.2 | Chamber Size | 410 x 410 x 850 (5cft.)<br>450 x 450 x 1200 (8.5 cft.)<br>Other sizes as per customer requirement |
| 1.3 | Sterilization medium | 100%/E0 Gas (Single use disposable cartage) |
| 1.4 | Material | Chamber : SS 304 /316<br>Door : SS 304 /316<br>Piping : SS 304 /316<br>Gasket : Silicon<br>Paneling : MS Powder coated / SS 304 |
| 1.5 | Controls | Microprocessor base control<br>LCD Display : Chamber Heating, Pressure, Vacuum,<br>Humidification, Gas Injection, Sterilization, Aeration & Sterile |
| 1.6 | Program | The following programs are located in the PLC with automatic aeration cycle<br>1. Warm Cycle at 55 to 60° C for 220 to 250 Minutes<br>2. Cool Cycle at 35 to 45° C for 300 to 350 Minutes<br>3. Selectable Cycle with programmable parameters |
| 1.7 | Accessories | 1. Aeration hood built in<br>2. Sealing machine with timer up to 350mm sealing width (optional)<br>3. Air compressor (optional)<br>4. Gas exhaust treatment/ dosing unit built in<br>5. Electronic gas leakage detection system (optional) |
| 1.8 | Recording of Operational parameters | Built in printer (optional) for recording cycle parameter such as<br>Temperature, Vacuum, Batch No., Aeration time etc. |
| 1.9 | Utilities & Environment | Power supply : 230 V Single Phase 50 Hz. AC<br>Distill Water : 2 Lts. / Cycle<br>Overall Sizes : 850 x 1600 x 1120 / 1000 x 1700 x1500 (Wx H x D)<br>Air Pressure : 5 kg. /cm' max. 50 Ipm |




## MODEL NO.: YSI-608

## YSI AUTOMATIC H.P.H.V. RECTANGULAR HORIZONTAL STERILIZER

Construction :

- The Chamber is sq./rectangular in shape constructed of heavy duty stainless steel 304/316 door and jacket of stainless steel 304 (316L or 316Ti-optional)
- The Pipes and fittings of stainless steel and bronze, the valves are ball type. Each sterilizer is mounted on a M.S/S.S sturdy stand. The outside paneling is made of M.S Powder coated or S.S to give elegant look. Hinged panels on sider makes it friendly for service purpose. All other construction details are as per IS 3892 Part 1 199.

Design :

- Steri autoclave (YSU-608) is designed as per international standard.
- Chamber of the autoclave is tested for hydraulic test pressure, performance as per BS & IS standards.
- Working pressure of autoclave is from 1.2 to 2.1 kg. cm2 and vacuum upto 26"HG (with built in vacuum pump arrangement.
- Door gasket is expansion type silicon and jointless.
- The heating system provided is energy efficient and
- reduces running cost to great extent.
- Sterilization process is controlled by programmable logic controller with high accuracy & takes care of all user requirements.

Pulsating Deep Vacuum :

- High efficiency vacuum pump for mechanical air removal for excellent steam penetration even in fabric loads.
- Post sterilization vacuum drying treatment to ensure the load is dry on unloading.

The chamber is designed and tested as per American Society of Mechanical Engineers standards.

Doors

- Available Single and double door model offers the customer two door options - hinged door and automatic sliding door (Optional). All doors have stainless steel contact parts and temperature resistant silicon rubber gasket.

Recording System (Optional)

- Single point strip chart recorder for recording the process temperature, date and time.



YSI

STERILIZATION EQUIPMENT

Safety :
- Door safety to prevent starting of the process unless the door is closed and opening of the door when the chamber is pressurized (optional).
- Insulated chamberto avoid scalding to the operator.
- Safety valves for over-pressure safety.
- Pressure vessels hydro-tested for maximum quality assurance.
- Provided with two locks one automatic and another manual. The automatic lock operates when pressure gauge reads 0.30-0.37kg/cm2 in the chamber

Salient Features :
- Accurate in sterlization time and temperature.
- Door interlocks in case of double door sterlizer.
- Over heat protection
- Excess pressure safety valve.
- Self Diagnosis fault message.
- Safety against electric overload.
- Visual and audio alarm for easy operation.
- Process online print for records.
- Assured sterlization followed by complete drying of load. Sources of Steam Generation :

Following combination of heating models are available.
- Electricity operated
- Steam operated (Optional)
- Combination of electric & steam operation.

Steam Generator:

A stainless steel electric boiler is provided under the shell with interconnecting steam pipes. The boiler is supplied with 6 KW immersion heaters mounted on stainless steel plate and electric controls would comprise of an air break contractor, automatic pressure controller, low water protection. The boiler is also additionally provided with one independent spring - loaded safety valve and a pressure gauge. The boiler also incorporates a gauge glass assembly with protector, water drain and water inlet valves are also provided.

Other Features :
- Two Nos. mechanical ejectors
- Self Sterilizing vacuum drier
- Safety valve spring loaded and vacuum breaker
- Screen plug and Dial Thermometer for chamber's discharge line which is provided with steam trap and swing check valve
- Manual single point operation to operate manually as per IS 3829 Part I (Optional).
- Door safety - when the chamber is under pressure self locking device automatically locks and unlocks when chamber pressure falls below 0.35 k.g./cm2.
- Built in steam generator made of S.S. 304 with Low water cut out water level indicator self locking gauge glass valve.
- The equipment is provided with S.S. 304 railing and carriage with MS Trolley (Optional).
- Provided with settable, vacuum system, low water cut off system.
- Suitable to run on inbuilt electric Boiler as well as from centrallised steam supply available near to equipment @ 2.1 to 2.5 kg/cm2
- Working temperature 134° C.

Automatic Process Control :
- Microprocessor based programmable logic controller is used to control the Process. Manual operation is also provided to avoid inconvenience in case of automation failure (Optional).

Programs Provided :
- Liquid cycle at 121°C
- Instrument Cycle 134°C
- Pre-Vaccum pulsating cycle
- Vacuum Leak Test.
- Bowie Test
- Flexible cycle from 105 to 134°C to suit user requirement. Utilities & Environment Conditions
- Supply Voltage 415 V, 3 Phase, 50Hz, for power refer chart
- Feed water : Soft water/DM Water/Good Water.
- Temperature range of +5°C to +45°C
- Maximum relative humidity of 80% for temperatures upto 31°C, decreasing linearly to 50% at 40°C.
- Main supply voltage fluctuation of + 5% of nominal.
- Provided with all piping connectors of SS:304

Sizes available:

| Width (mm) | Length (mm) | Height (mm) | Electric Load (K.W.) |
|---|---|---|---|
| 450 | 450 | 900 | 18 |
| 600 | 600 | 1200 | 18 |
| 600 | 900 | 1200 | 36 |
| 910 | 910 | 1200 | 36 |
| 600 | 900 | 1500 | 36 |

Other sizes as per customer requirement.

Other Optional Accessories :
- Sterilization Tray.
- Sterilization Basket.
- Carriage.
- Transfer Trolley.
- Air Compressor
- Audio visual alarm for low water level.
- Auto feed water system.
- Temperature recorder.
- Thermograph or Printer for documentation Others as per requirement of the customer.




## MODEL NO.: YSI-608Ex

## YSI AUTOMATIC SLIDING DOOR HPHV RECTANGULAR H. STERILIZER

Features :

- YSI Automatic sliding door steam sterilizer
- This sterilizer is an advanced version of YSU 608 and is the ideal solution for hospitals / Pharmaceuticals / Research Institutes sterilization needs.

Engineered with people in mind :

Features enable the convenience and durability needed to operate a sterilizer with complete peace of mind. The jacketed chamber is constructed of long lasting 304/316L grade stainless steel with superior corrosion resistance. In addition, the generator and piping are constructed of stainless steel. The pneumatic valves are air pressure operated, significantly reducing maintenance. They are safe and reliable, eliminating the requirement for high voltage. To save energy, the sterilizers automatically switch to a standby mode.

Control Made Simple :

Uses an advanced microprocessor for the automated process control. Control panel is user-friendly consists of LCD and a functional touch pad. A self diagnostic system provides messages and alerts that are displayed in a clear language. Audible alerts are sounded with the messages. The LCD display provides constant cycle parameter readouts and cycle progress information. The control system is self diagnostics and provides fault messages to the operator.

The Control system is programmed with a total of 7 programs or more (Optional) that range in temperature from 105°Cto134°C

- Programs for (unwrapped instruments)
- Programs for wrapped instruments and packs
- Slow exhaust programs.
- Test programs Bowie & Dick and vacuum Leak Test
- If needed the number of programs can be increased to take care of user requirement.



YSI



Safe Design :

Door Safety

The doors are designed with independent mechanical and electronic safety features that guarantee a safe working of the sterilizer.

- A safety device prevents the operator from opening the door when chamber is pressurized.
- Steam is not allowed into the chamber when the door is open.
- A cycle will not start if the door is open or not properly closed.
- The door cannot open until chamber pressure reaches room pressure.
- Sliding Door Safety-The sliding door will automatically stops if an obstruction is detected.
- Double Door Safety- interlocks prevent both doors from being opened simultaneously.

Genera/ Safety Features

- Double Independent Monitoring : The combined digital and mechanical monitoring provides a cross reference and guarantees accurate results. The operator has two independent means to monitor temperature and pressure.
- Safety Valves : Both the chamber and the jacket are equipped with safety valves-if the pressure exceeds the allowed limit the safety valves will discharge.
- Built-in Steam Generator Safety : A water level monitoring system maintains a constant water level and ensures safe operation of the healers.
- Emergency Shut-off : Easily accessible emergency switches for immediate and safe shut down of the sterilizer.

| | | |
|---|---|---|
| 1. | Main Feature: | |
| 1.1 | Item | HIGH PRESSURE HIGH VACUUM STEAM STERILIZER FULLY AUTOMATIC, SLIDING DOOR SINGLE/DOUBLE |
| 1.2 | Purpose | For treatment of Sterilization of O.T. Material |
| 1.3 | Chamber Size | 600 (W) x 600 (H) x 1200 (D) mm to 1200 (W) x 1500 (H)x 2400 (D) mm |
| 1.4 | Chamber Volume | 460 to 4300 Ltrs. |
| 1.5 | Working Temp. | Upto 134°C |
| 1.6 | Working Pr. | 1 to 2.2 k.g./cm2 |
| 1.7 | Chamber test Pr. | 3.5 k.g./cm2 |
| 1.8 | Jacket test Pr. | 4.8 k.g./cm2, Channel Jacket. |
| 1.9 | Source of Energy | Electrically Operated/Direct Steam Operated |
| 1.10 | Mounting | Floor Standing Horizontal Type |
| 2. | Design | |
| 2.1 | YSU-608Ex. 205 | Steri Steam Sterilizer are designed to meet the norms laid down by the "ASME, BIS, IS 302, EN issued and equivalent international standards for Steam Sterilization dedicated Autoclaves. |
| 2.2 | Level of Sterilization | Less than 10-6, over kill approach which results in total destruction of bacillus stearothermoogukys. |
| 2.3 | Standards | Shell Fabricated & tested in accordance with IS 3829 Part I & ASME Sec VIII Division I & as per other International standards. |
| 2.4 | Certification | Quality Assurance (QA) certification which compliance with requirements of ISO 9001-2000 by BSI affiliated to Ukas & ANSI-RAB, CE Marked. |

3. Construction Features

| | | | |
|---|---|---|---|
| 3.1 Cross Section | Square/ Rectangular | | |
| 3.2 Shape | Rectangular | | |
| 3.3 Welding | Butt Fusion welded (Argon Arc) | | |
| 3.4 Material | Chamber | : | AISI 304/316/316L |
| | Channel Jacket | : | Boiler Grader Steel/AISI 304/316/316L |
| | Outer Cover/ Panelling | : | AISI 304 /Aluminum |
| | Baffle | : | AISI 304 |
| | Piping | : | AISI 304 |
| | Door | : | AISI 304/316/316L |

4. Door

| | |
|---|---|
| 4.1 Type | Sliding Single or Double Door |
| 4.2 Sealing | Silicon Tubular Gasket (durable enough to with stand inside temperature & pressure as well as hydraulic test pressure) |
| 5. Steam Generator | Electrically Operated |
| 5.1 Source of Energy | |
| 5.2 Capacity | Adequate/Sufficient for complete sterilization cycles |
| 5.3 Fittings | a) Water Level Indicator/ Sight Glass<br>b) Water inlet & outlet valve |
| 5.4 Safety | a) Pressure Regulating Electric Device<br>b) Spring loaded safety valve<br>c) Low water protection for heaters to cut of the supply if water level falls below the minimum level.<br>d) Self locking gauge glass valve to protect electric circuit and human against thermal injuries in case of breakage. |

6. Piping & Fittings

| | |
|---|---|
| 6.1 SS Piping | Made of stainless steel and bronze, duly argon arc welded. |
| 6.2 Dial Thermometer | Fitted in the chamber drain line 6/10 cm diameter with ± 1.5° accuracy. |
| 6.3 Pressure Gauge | 6.5 / 7.5 cm diameter industrial type pressure gauge mounted on the jacket. |
| 6.4 Compound Gauge | 6.5 / 7.5 cm diameter industrial type Compound gauge mounted on the Chamber. |
| 6.5 Manual Operational Valve | Single Port operational valve in case of manual operation (optional). |
| 6.6 Safety | a) Relief valve for jacket<br>b) Vacuum breaker in the jacket to prevent vacuumization of jacket<br>c) Bacteria retentive filter to avoid contamination of load fitted in the drying system |

7. Vacuum Pump for Pre Post Vacuum Pulse

| | |
|---|---|
| 7.1 Type | Water-ring motorised vacuum pump, suitable for three phase electric supply. 380/50 Hz. |
| 7.2 Purpose | Pre evacuation of chamber before sterilization as per norms and for drying sterilized load. |

8. Accessories

8.1 Air Compressor (Optional) Provided of suitable capacity for all pneumatic operations.

8.2 Secondary Sterilization Device Provided with the autoclave





9. Controls

| | | |
|---|---|---|
| 9.1 | Panel | Steel/Stainless Steel cubical modular type panel incorporating various pressure gauges to indicate actual pressure in chamber jacket and on gasket. |
| 9.2 | Control Accessories | Circuit breaker, Overload relay, Transmitter, Switches, Indicator, Push Buttons & Connectors mounted inside the control panel |
| 9.3 | Process control | PLC with four line LCD or more with numeric and command key to feed alphanumeric data. |
| 9.4 | Man Machine Interface | Userfriendly Alpha-numerical / Graphical / Digital type display |
| 9.5 | Display | Cycle status Fault/Error Indication with visual alarms |
| 9.6 | Program | The following programs are loaded in the PLC with one pre vacuum pulse to purge the autoclave of all air under strict Sterilization Control cycle software program.<br>a)Temperature of not less than 121°C and a pressure of 15 psi for an autoclave residence time of not less than 20 minutes for each cycle<br>b) Temperature of not less than 135°C and a pressure of 31 psi for an autoclave residence time of not less than 7 minutes for each cycle.<br>c)Validation test program for periodic validation. |

10. Recording of Operational Parameters (Optional)

| | |
|---|---|
| 10.1 Computer Recording Microprocessor controlled | Recording of process value through a dot matrix printer on a roller paper as per real time printing device to record events during continuation of cycle. The event recording include exact hour, minute and seconds of following parameters<br>a) Chamber Temperature b) Chamber Pressure<br>c) Selected Program d) Cycle Status or Cycle Events<br>e) Date, Day, Year, Time f) Batch Identification facility<br>g) Fault & emergency massage with code |

11.Test

11.1 Each equipment is tested for fol lowing tests before dispatch and certified

a)Chemical test - A chemical indicator sterilization test as per biomedical rule-98.
b) Biological test - Bacillus stearothermophillus spore strips, with at least 1 x106 spores/m
c) Validation test - Periodic validation for recording the efficiency of the autoclave

12.Utilities & Environment Requirement

| | | | |
|---|---|---|---|
| 12.1 Supply Voltage | : | 415 + 5% Volt 3 Phase | Inner Sizes |
| 12.2 Frequency | : | 50 Hz. | 450 x 450 x 900mm |
| 12.3 Power Consumption | : | 36 KW to 72 KW | 600 x 600 x 1200mm |
| 12.4 Water Supply | : | Approx 150 Itrs to 300 Ltrs./cycle | 600 x 900 x 1500mm |
| 12.5 Environment | : | 5 to 50°C | 900 x 900 x 1500mm |
| 12.6 R.H. | : | 90% at 30°C | or any size as per customer requirement. |

13.Carriage &Trolley (Optional) : Loading Equipment Our loading equipment assists for the loading and unloading process. It is made of high quality, durable stainless steel . We offertwo options. Pull Out Trays : Stainless Steel trays equipped with rails for easy loading and unloading. The rails are designed to prevent the trays from rolling over.
Loading Carts and Transfer Carriages : The adjustable loading cart rolls from the transfer carriage onto the interior chamber tracks for easy handling of heavy loads. The trolley is equipped with revolving wheels, maximizing mobility in limited space. The wheel breaks prevent the trolleys from rolling and the carriage is equipped with a lock that prevents it from sliding.



## MODEL NO.: YSI-410

### YSI SINGLE WATER STILL

As per IS -3830
Free standing, electrically operated water still that is capable of producing Pyrogen free distilled water as per IP/BP standards. All contact parts are made of stainless steel. fitted with ISI Marked Immersion water heater, low water protection & electrical control box. It is mounted on a sturdy MS tubular stand.
Capacity: 5 Lit/ hr, 10 Lit/hr, 20 Lit/hr, 40 Lit/hr, 60 Lit/hr. Automatic version also available.

## MODEL NO.: YSI-410A

### YSI DOUBLE WATER STILL

As per IS -3830
Free standing, electrically operated double water still capable of producing Pyrogen free distilled water as per IP/BP standards. All contact parts are made of stainless steel. This comes with ISI Marked Immersion water heater, low water protection & electrical control box. It is mounted on a sturdy MS tubular stand.
Capacity: 5 Lit/ hr, 10 Lit/hr, 20 Lit/hr, 40 Lit/hr. Automatic version also available.

## MODEL NO.: YSI-410B

### YSI MULTI COLUMN WATER STILL

—Distillation
Stainless steel multi column distilled water still, generally as per the Barnstead type shell, tube evaporator; suitable for external steam operation. The unit is as per IS : 3830.
Capacity:120 Lit/hr, 200 Lit/hr, 300 Lit/hr, 400 Lit/hr, 600 Lit/hr.



YSI

STERILIZATION EQUIPMENT

## MODEL NO.: YSI-409

## YSI HOT & COLD WATER

—Sterilizer as per IS : 7455

The unit is mounted on a sturdy M.S. stand, consisting of two separate st. steel tank one is for sterile hot water and other is for sterile cold water. The unit comprises of individual control such as safety valve, pressure gauge, steam trap, self sterilizing water filter, water level indicator, air filter and draw off water valve with socket.

Each tank has an individual heater bank, low water cut off pressure controller & contactor. The unit is made as per IS standards i.e. IS : 7455 (1974). Useful in operation theaters where quick sterile hot or cold water is required.


## MODEL NO.: YSI-613

## YSI BOWL STERILIZER

Used in CSSD & Clinics to disinfect instruments. Made of AISI : 304 with hydraulically operated lid which closes the sterilizer smoothly. Lid can be lifted proportionally with paddle type device. Heating is thermostatically controlled.

Supplied with an instrument tray and a hanger system to dip the instrument completely inside water.

Equipped with 0-180 minutes electric timer.

| Size : | Length | x | Width | x | Depth | Electric Load |
|---|---|---|---|---|---|---|
| | 600 | x | 400 | x | 300mm | 4.5 KW |
| | 600 | x | 600 | x | 500mm | 6.0 KW |

## MODEL NO.: YSI-609

## YSI DISINFECTOMAT WASHER DISINFECTOR


General:

Hospital infection control is a serious problem which no Hospital Administrator can afford to ignore. Proper attention needs to be focused on the system of Cleaning, Disinfection, Packaging, Sterilization and Storage of different surgical appliances and instruments.

The continuous advancements made in the field of Biomedical Engineering have resulted in development of a range of surgical appliances and apparatus with very intricate and delicate profiles. Any sterile supply chain must have a system which can clean and disinfect these components with a high degree of accuracy and repeatability.

Steri "DISINFECTOMAT" Washer Disinfectors have been designed with just that in mind. The system is not only flexible, but is also very user friendly to take care of your every needs.

Salient Features :

- Ergonomic design.
- Suitable for efficient treatment of Large quantities of medical items in a centralized sterile supply department Convenient front loading.
- User friendly controls.

High Impact Cleaning System

The Disinfectomat is provided with three rotary spray arms. The design and location of the arms ensure that every surface of the load is uniformity cleaned. The unit is constructed with out any angles in order to prevent dirty breeding grounds. The rotation of the arm is activated by the water pressure which eliminates any mechanical drive system

- Inbuilt Disinfection System

The unit is incorporated with an in-built electric water heater. The hot water here is used to disinfect the load at a temperature of 90°C (i.e. hemodisinfection) after thorough cleaning and rinsing.

- Flexible Loading System

Steri Disinfectomat comes with a range of standard accessories for different surgical appliance & Kidney Trays, Bottles, Tubings and instruments. Additional loading cassettes are available as optional

- Automatic Detergent Dozing

The machine is incorporated with an automatic detergent dozing system to doze the required amount of detergent in the rinse water.

User Friendly Program Menu

The Disinfectomat has a Microprocessor Controlled operating system. The operating Console is provided with a membrane key pad and electronic display unit of easy operation and monitoring of the process. Up to 3 pre-programmed processes give the user fantastic flexibility for cleaning and disinfecting a wide range of load configurations

In-Built Heating System

In Hospitals where hot water is not available the Disinfectomat is equipped with an electric heating system. This heats the water to a temperature of 90°C for higher cleaning efficiency.

Fully Sanitary Construction

The body is fabricated from non-corrosive 304 Grade Stainless Steel with high quality argon welding. All corners are rounded for easy cleaning and to avoid contamination. The door is provided with a food grade silicone gasket. All piping and valves are of stainless steel construction with silicon seals.

Installation

The Disinfectomat is available in both single door and double door options to suit different CSSD configurations and requirements.

The machine requires no installation. It has to be connected to the different supply lines and drain to start operation



YSI



## MODEL NO.: YSI-609Ex

## YSI DISINFECTOMAT WASHER DISINFECTOR


SALIENT FEATURES : -

- Cycle pump with large flux can wash utensils efficiency
- The cycle water can be heated to 90oC and disinfect goods primarily
- 6 washing program automatically
- High efficiency dry performance
- Auto adding detergent
- Intelligent control system
- Auto heating function
- Auto water discharging
- Safety door device with chain control
- Temperature insulate
- Washing chart with large volume (Optional)

Designed with large storage surface. An excellent complement to the existing installation. Takes over the connection of existing old appliances and can be extended by means of accessories such as Bed Pan and Urine Bottle shelves to complete the hospital cleaning center. Most suitable for emptying, cleaning and disinfector care utensils such as Bed Pan urine bottle, commode buckets, receptacles etc. All Technical parameters are same as YSU-609 but with Double.

- High Impact Cleaning System:

The Disinfectomat is provided with three rotary spray arms. The design and location of the arms ensure that every surface of the load is uniformity cleaned. The unit is constructed with out any angles in order to prevent dirty breeding grounds. The rotation of the arm is activated by the water pressure which eliminates any mechanical drive system

- Inbuilt Disinfection System:

The unit is incorporated with an in-built electric water heater. The hot water here is used to disinfect the load at a temperature of 90°C (i.e. hemodisinfection) after thorough cleaning and rinsing.

- Flexible Loading System:

Steri Disinfectomat comes with a range of standard accessories for different surgical appliance & Kidney Trays, Bottles, Tubings and instruments. Additional loading cassettes are available as optional

- Automatic Detergent Dozing:

The machine is incorporated with an automatic detergent dozing system to doze the required amount of detergent in the rinse water

- User Friendly Program Menu:

The Disinfectomat has a Microprocessor Controlled operating system. The operating Console is provided with a membrane key pad and electronic display unit of easy operation and monitoring of the process. Up to 3 pre-programmed processes give the user fantastic flexibility for cleaning and disinfecting a wide range of load configurations

- In-Built Heating System:

In Hospitals where hot water is not available the Disinfectomat is equipped with an electric heating system. This heats the water to a temperature of 90°C for higher cleaning efficiency.

- Fully Sanitary Construction:

The body is fabricated from non-corrosive 304 Grade Stainless Steel with high quality argon welding. All corners are rounded for easy cleaning and to avoid contamination. The door is provided with a food grade silicone gasket. All piping and valves are of stainless steel construction with silicon seals.

- Installation:

The Disinfectomat is available in both single door and double door options to suit different CSSD configurations and requirements.
The machine requires no installation. It has to be connected to the different supply lines and drain to start operation

## MODEL NO.: YSI-614

## YSI BED PAN WASHER

YSI bed pan washer is widely used in modern hospitals for washing and disinfecting bedpan urinals, commodes, urine sample containers, kidney-shaped basins, drainage collection bottles and other health containers.

Steri bed pan washer is user friendly:

Hospital nursing and maintenance personnel find it easy to use and maintain this appliance and is also comfortable for the patients and their attendant.

Inner Chamber and the outer wall is made out of AISI 304 stainless steel with sturdy tubular load-bearing frame and Stainless Steel removable outer panels for easy servicing

- Front-opening doors with thermal and acoustically insulated double wall.

Spring system to facilitate opening and closing:

- Totally automatic emptying of container contents when the door is being closed.
- Hook for articles being washed fastened to the inner wall of the door with bayonet connection. The hook can be replaced by other types of hooks.
- Washing jets fixed and that rotate in a large circle. Jet positions ensure thorough washing of articles being washed and also of the inside of the wash basin.
- Electric water pressure booster pump to achieve perfect cleaning of the dirty containers being washed.

Total microprocessor control :

All wash program parameters can be regulated.

Complete with wash programs :

1. Normal for solid waste
2. Shortfor liquid waste
3. Intensive for tough waste and Chamber Rinse to automatically clean the inside of the wash basin using cold water and no disinfectant, or: Circular Rinse of the dump basin for circular wash of the dump basin in Sanitary Centers.

- Door interlock (Optional) : The appliance has a door interlock safety device that prevents the door from being opened during the entire operating cycle.
- Simple maintenance : All technical components are accessible by opening the doors.

Trouble-shooting and repair are greatly simplified by the operating malfunction test system.


Utilities :

- Electric supply 230 V single phase 50Hz, Load 4 KW. Water supply 20 NB (3/4 Inch.) line with 3 Kg. pressure. Drainage 100 NB (4 Inch.) connection to sewage.

STERILIZATION EQUIPMENT



YSI



## MODEL NO.: YSI-615

## YSI ASEPTIC SCRUB STATION

YSI Scrub Station made of complete 304 grade S.S. and high grade mat finish to maintain hygienic condition. Scientifically designed to ensure prevention of any kind of liquid for aseptic condition.

The unit comes in 1,2 or 3 station for use and is provided with elbow operated taps or can be operated by means of proximity detector, which senses the presence and allows controlled warm water to flow through solenoid valve.

The water is stored in an in-built gyser, which has provision for quick warming & is controlled with the help of a thermostat (Supplied along with this unit). Flow & quantity of liquid soap / disinfectant is controlled with the help of a foot switch.

In case the automatic controls fail (e.g. electricity) elbow operated taps are provided for water and knee or foot operated dispenser is provided for soap / disinfectant.

Any other features can be incorporated to meet users requirement (s)

- Salient Feature :

Corrosion Free Rigid Construction

SS304 STAINLESS STEEL

Complete unit is made of Corrosion resistant Stainless Steel 304 with #4 finish for a longer life time and easy cleaning.

All welds are made with stainless steel filler and ground smooth and re-grained to match #4 finish.

Plumbing

All plumbing and electrical work is accomplished at the factory for ease in installation and is ready to use.


Technical Specification :

- Electric Supply : 230 V, Single ph. 50 Hz.
- Water Inlet Connection : 1/2" BSP
- Drain Connection : 2: BSP

Available in following models :

- One Station Two Station Three Station

Optional Accessories :

- 2 Micron Pre-filteration.
- Automatic Thermostatic Mixer for centralised hot water at user end.
- UV Sterilization of water.
- Eye wash station.
- Hand held spare with flexible holes and on / off control lever on the handle.


Options:

SS316 STAINLESS STEEL

Complete unit made of Seamless Corrosion resistant Stainless Steel 316 for a even longer life time and easy cleaning.

Fully Automatic water & soap dispensing units are also available.

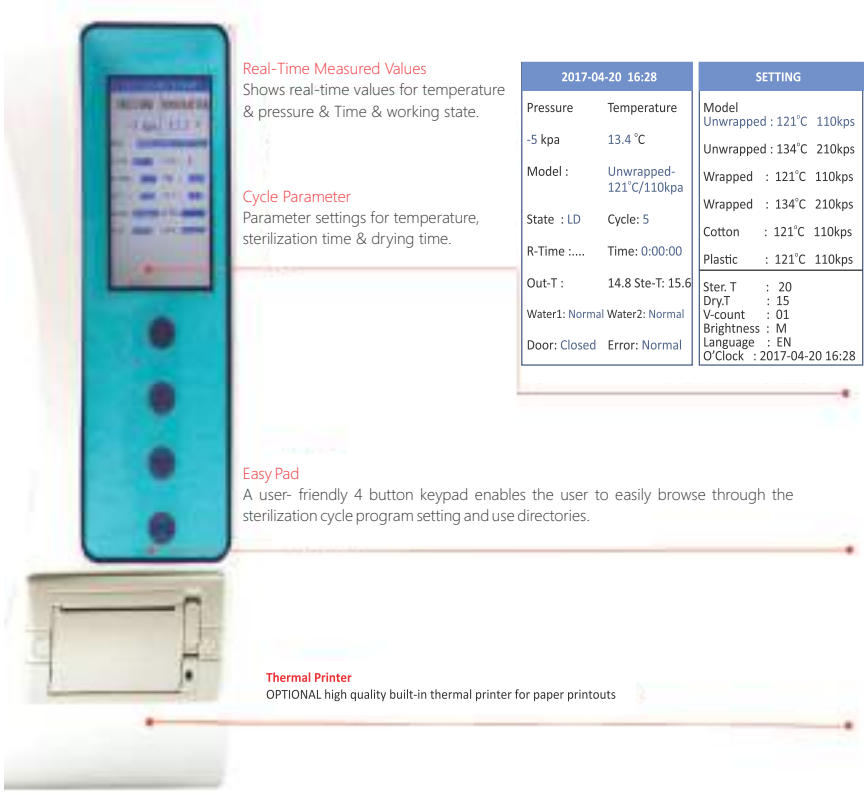
Wall Hanging Option as shown are available.

## MODEL NO.: YSI-616

## YSI FLASH FRONT LOADING STERILIZER


Feature

- Open-type water tank design, easy to clean.
- LED/LCD display all the details of cycle.
- High density filter.
- Fully automatic processor based control.
- High quality vacuum pump.
- Build-in steam generator.
- Optional Printer
- Over temperature and Over pressure protect.
- Double door safety lock.
- Color : Blue.
- Inner chamber made of St. steel 302/304/316.
- Silicon gasket joint less.
- Elegant & safe door locking.




| YSI-616 | |
|---|---|
| Volume | 12L |
| Chamber Size | Ø200x360mm |
| Display | LCD |
| Product Size | 560x450x410mm |
| N.W/G.W. | 45/49KG |
| Printer | Optional |

| YSI-616 | |
|---|---|
| Volume | 18L |
| Chamber Size | Ø250x350mm |
| Display | LCD |
| Product Size | 560x450x410mm |
| N.W/G.W. | 48/50KG |
| Printer | Optional |

| YSI-616 | |
|---|---|
| Volume | 23L |
| Chamber Size | Ø250x450mm |
| Display | LCD |
| Product Size | 680x450x410mm |
| N.W/G.W. | 50/55KG |
| Printer | Optional |

| PROG | Unwrapped | Unwrapped | Wrapped | Wrapped | Cotton | Plastic | B &D test | Vacuum test |
|---|---|---|---|---|---|---|---|---|
| Temp. (°C) | 134 | 121 | 134 | 121 | 121 | 121 | 134 | 105 |
| Pressure (KPA) | 210 | 110 | 210 | 110 | 110 | 110 | 210 | 20 |
| Time (min) | 4-20 | 15-30 | 4-20 | 15-30 | 15-30 | 15-30 | 3.5 | 5 |



YSI




## MODEL NO.: YSI-617

## YSI TABLE TOP PORTABLE AUTOCLAVE

Elegantly designed for use in Hospitals, Clinics, Dispensaries, Pharmaceuticals, and R & D Department to Sterilize the surgical instruments/items during operation, media, culture etc or to inactivate the bacteria from reproduction at various stages.

This Sterilizer is specially designed for causality O.T. &for dental department by seeing the present demand.

Fitted with automatic devices for time and temperature selection. Various control for Boiler Temperature/Pressure Controller are also provided alongwith manual chamber relief valve in case of power failure, buzzer sound to indicate sterilization cycle is over.

Construction : S.S. 304 Chamber, Steam Generator & Jacket alongwith Chamber Lid.Outer body made of M.S. duly powder coated or SS. Fitted with 1/2" BSP male connection for drain and 1/2" BSP mail connection for exhaust

Suitable to work on 230 Volts, Single Phase, 3 K.W. power supply 50 Hz, AC supply.

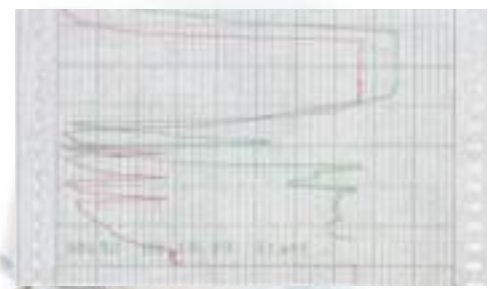
Available in various chamber sizes.

Chamber capacity - 14 Lt.

| | | |
|---|---|---|
| Size | : | 210 Dia x400 mm D |
| Power | : | 230 VAC 50 Hz, 2 KW |

Chamber capacity - 19 Lt.

| | | |
|---|---|---|
| Size | : | 210 Dia x550 mm D |
| Power | : | 230 VAC 50 Hz, 4 KW |



## MODEL NO.: YSI-617A

## YSI PORTABLE HIGH SPEED FLASH AUTOCLAVE


Salient Feature :

Ideal design for sterilizing of materials with pressurized steam in laboratories of hospitals, biology, veterinary and agriculture departments of the universitities, dentistry, microbiology, quality control laboratories and research lab.

Suitable for sterilization for unwrapped instruments using moist heat technique.

Construction :

The chamber is cylindrical / rectangular in shape constructed of high quality stainless steel 316 for heat conductivity, implements good durability by protecting its corrosion. The door and trays are also made of stainless steel.

The cabinet is zinc coated stainless steel stove enameled for easy clening and insulated to prevent high temperature on external surfaces.

The pipes and fittings are of stainless steel and bronze. Each sterilizer is mounted on a modern type cubical panel with easy access to service.

Design:

Steri Portable High Speed Flash Autoclave (YSU-617A) designed as per international standard.

Chamber of the autoclave is tested for hydraulic test pressure, performance as per BS/IS/International standards.

Autoclave is working pressure of -1 to 2.2 kg/cm2. Door gasket design is expansion type silicon. Display of stage cycle, temperature and pressure. Safety Feature :

Auto air purging facility.

Door interlock switch for safety lock.

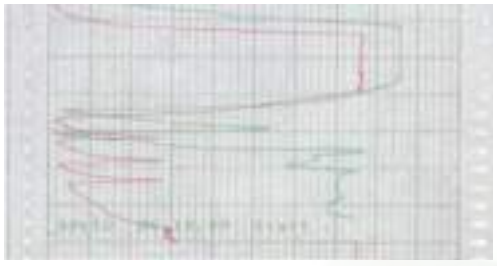
is Full safety pressure and temperature lock door.

Over heat protection through forced air cooling. Alarm indicator for error situation.

Pressure safety valve.

Process Control :

User Friendly Microprocessor based programmable sequence controller used to control the programs with operator interface panel.

Flexi Programs :

| | | |
|---|---|---|
| 1st Program | : | Pre Vac 121°C for 20 minutes sterilization with slow exhaust. |
| 2nd Program | : | 121°C for 20 minutes sterilization with fast exhaust. |
| 3rd Program | : | Pre Vac 134°C for 7 minutes sterilization slow exhaust with Vac Dry 3 min. |
| 4th Program | : | 134°C for 4 minutes sterilization with fast exhaust. |
| 5th Program | : | Flexi Program as per customer requirement (if required) |

Available in various chamber sizes.

| | | |
|---|---|---|
| Chamber capacity | : | 14 Lt. |
| Size | : | 210 Dia x400 mm D |
| Power | : | 230VAC 50 Hz, 2 KW |
| Chamber capacity | : | 19 Lt. |
| Size | : | 210 Dia x 550 mm |
| D Power | : | 230VAC 50 Hz, 4 KW |

Other Optional Accessories :

- Sterilization Tray.
- Carriage.
- Temp & Pr. Recorder through printer.
- Others as per requirement of the customer.

STERILIZATION EQUIPMENT



YSI



## MODEL NO.: YSI-623

## YSI DRY STERILIZER

REDUCTION OF BACTERIAL LEVELS : Lowering of bacterial levels to a present level.
STERILIZATION : Reduction of microbial spore forms upto 12 log reduction.
DE-PYROGENATION : Denaturing of microbial end ()toxins in the material.
These sterilizers are suitable for the treatment of the following materials.

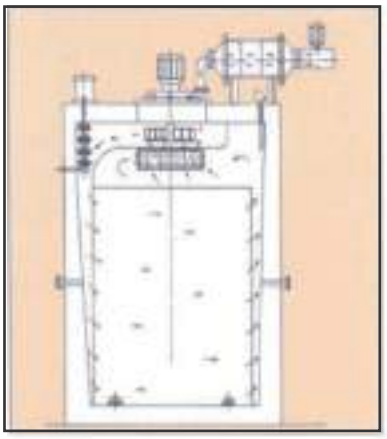
- Glassware (Containers such as ampoules, vials etc.).
- Metal trays.
- Containers and metal material.
- Machine and accessories used in production.
- Various types of humidity sensitive material.
- Basic pharmaceutical products which can withstand heat treatment at high temperatures.

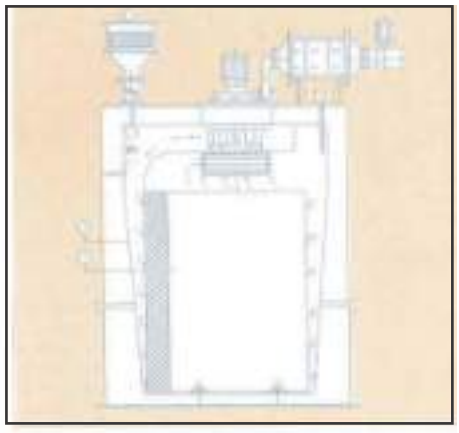
The Process :
The sterilization systems have been designed to work at a maximum temperature upto 250 °C

- The exhaust phase has been designed for moisture removal from the washed load.
- The heat-up phase increases the temperature of the load from ambient temperature to the sterilization temperature.
- The sterilization phase consists of the balancing period, the sterilization hold time and a safety period.
- The cooling phase cools the load to the desired temperature by rapid air-change convection technique.
- The unloading phase continues to maintain over-pressure in the chamber for containment barrier.
- Special air-flow technique guarantees over-pressure in chamber through-out the cycle for 100% sterile integrity of the load.

Construction :
Sterilization chambers are designed and built to conform with the most advanced technology and comply to international standards.

- Sterilization chambers in S.S. 304 or S.S. 316 Stainless Steel with argon welding.
- Chamber construction with full welding and rounded corners for easy cleaning to ensure classic hygiene.
- Advanced gasket design for positive seal and longer gasket life. Expansion compensation structure and reduced heat losses.
- Stainless steel sheathed heating elements for reduced particle generation and longer life.
- New rapid air-change convection cooling technique for faster cooling.
- Contamination seals to prevent air transfer when the sterilizer has been installed between two areas of different contamination levels.
- Specially designed pressure modules with HEPA filters (0.3 micron, 99.997% performance) for fresh air supply (Optional).





## MODEL NO.: YSI-624

## YSI DRY STERILIZER "WITH HEPA FILTER"

Comply with the latest G.M.P. & U.S. FDA norms CLASS-100 Sterilization Systems.

- High temperature HEPA filters (0.3 micron, performance 99.97%) are installed in the circulation loop to ensure Class-100 environment in the chamber.
- Differential pressure indicators for monitoring performance of HEPA filter bank.
- Improved filter seating arrangement for maximum filter surface.
- New baffle design for uniform air flow and temperature uniformity between the top-bottom and sides of the sterilization chamber.
- Optionally documentation-validation reports test certificate, calibration reports etc. can be provided to meet the stringent quality norms of the customer.

Size : As per customer requirement.

- Exhaust flap with pneumatic actuation & specially designed silicone ring seal.
- Special connectors for validation and testing.

Air Circulation System :

- The efficiency of the Dry Heat process depends on the velocity and circulation pattern of air within the sterilization zone.
- Dynamically balanced S.S. 304 or S.S. 316 impellers.
- Improved impeller drive system with high temperature bearings and motor mounting arrangement for lower vibration and sound levels.
- Air flow pattern for better temperature uniformity (±5 °C for empty chamber) between top-bottom and sides.
- Positive pressure through out the cycle for 100% Sterile Integrity of the load.
- New design for easy maintenance & servicing.

Safety Devices :

- Door interlocking to prevent simultaneous opening of both doors.
- Door process lock to prevent opening of doors when process in on.
- High temperature overload alarm.
- Circulation blower or heater malfunction alarm.
- Heater-fan interlock for operational safety.

Control System :

- Provided with Electro mechanical / Microprocessor / Computer controlled systems that allows setting, controlling, regulation and monitoring of the sterilization cycles.
- Alternative are available for recording various process parameters-circular/strip chart recorders, dataloggers etc. for single or multi-point mapping.

YORCO

SALES PVT. LTD.

YSI

STERICLEAN

YSPL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