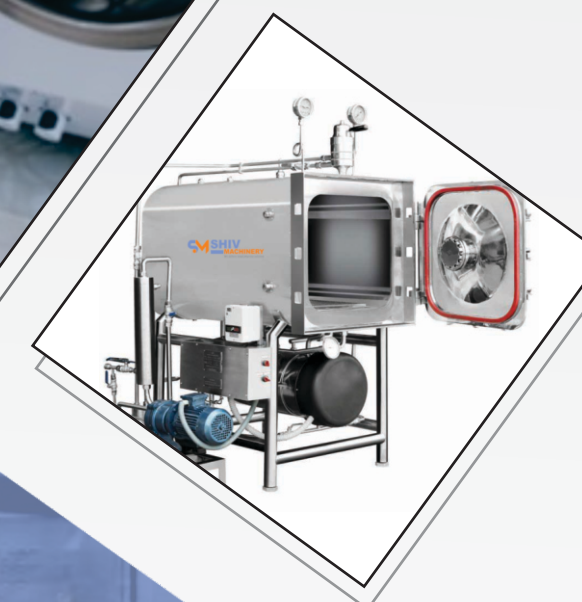


Mfg. & Exporter of : Pharmaceutical Machinery & Spares

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www.shivmachinery.in

STERILIZERS

Specially designed for all your specialized need



HORIZONTAL HIGH PRESSURE CYLINDRICAL STEAM STERILIZER

Handsomely Made For Long Service and to provide easier and surer Sterilization for use in Hospitals, Nursing Homes, Pharmaceutical Industries and Laboratories.

CONSTRUCTION: Both chambers, back plate, ring and steam generator are made of strong 304 G / 316 stainless steel. All joints are strongly argonwelded and completely leak proof. The outer jacket is thickly insulatedwhich prevent heat loss due to radiation and covered with stainless steelsheet for elegance. All sterilizers are hydraulically tested upto 2.5 times of working pressure. By mean of steam under pressure of 5 to 22 PSI ± 3 PSI (Adjustable). The unit is fitted with PID controller, timer alarm, **Automatic pressure control switch, water level indicator, Temperature gauge, vacuum breaker and vacuum drying facility with Moisturizing trap.** Mounted on tubular M.S. frame with ground levelling flanges.

SAFETY DOOR: Provided with a positive radial locking safety door with neoprene rubber/ silicon gasket which cannot be opened while the chamber is under pressure and disengages automatically when chamber is exhausted. This affords complete safety to the working personnel against explosive opening.

Model	Inner Dimension	Capacity Ltr.	Heater Load	Sterilization Temp & Pressure	Operating Pressure
SM-75	16" x 24"	75	6 kW	1.2 Kg/cm2 (15-18psi) at 121°C	From 10 psi to 20 psi
SM-175	20' x 36"	175	18 kW		
SM-235	20" x 48"	235	18 kW		
SM-295	20" x 60"	295	24 kW		
SMDD-235	20" x 48"	235	18 kW		
SMDD-295	24" x 60"	295	24 kW		

Note: Working sterilization °C/134°C Power Supply 440V, 3 Phase Power supply, Single phase, 220V AC on request

NOTE: CUSTOMIZED SOLUTION ALSO AVAILABLE ON REQUEST

HORIZONTAL (RECTANGULAR) HIGH PRESSURE STEAM STERILIZER

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 fromchoking. 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 case of vacuum forma condensation.

Model	Inner Dimension	Capacity Ltr.	Heater Load	Sterilization Temp & Pressure	Operating Pressure
SMHR-180	18" x 18" x 36"	180	12 kW	1.2 Kg/cm2 (15-18psi) at 121°C	From 10 psi to 20 psi
SMHR-240	18" x 24" x 36"	240	12 kW		
SMHR-320	24" x 24" x 36"	320	15 kW		
SMHR-430	24" x 24" x 48"	430	18 kW		
SMHR-540	24" x 24" x 60"	540	22 kW		
SMHR-650	24" x 24" x 72"	650	36 kW		
SMHR-1000	30" x 36" x 60"	1000	45 kW		

NOTE: CUSTOMIZED SOLUTION ALSO AVAILABLE ON REQUEST



Operating Temperature and Pressure
Sterilizing Temp. : 121°C.
Sterilizing Pressure : 1.2 to 1.5 kg/Cm2, (15 psi to 22 psi)

VERTICAL AUTOCLAVE (DOUBLE WALL)

Salient features

Used for sterilization under saturated steam pressure at any selected point between15 to 22 psi (adjustable), however this can be used for higher pressure up to 30 psi.0

Working temperature of 121C.

These double walled units have inner chamber (Boiler) made of stainless steel SS 304 / SS 316 grade (as per demand).

Outer wall is covered with stainless steel sheet.



Model	SMVA-22	SMVA-35	SMVA-50	SMVA-85	SMVA-100
Volume (Liters)	22	35	50	85	100
Heater load (KW)	1.5	2	3	4	5
Internal dimension (dia x height mm)	250 x 450	300 x 500	350 x 550	400 x 600	460 x 600

NOTE: CUSTOMIZED SOLUTION ALSO AVAILABLE ON REQUEST

WASHER DISINFECTOR

Leveraging on our in-house manufacturing unit, we manufacture, export, distribute, wholesale and supply a wide assortment of Washer Disinfector. These washer disinfectors are applauded by large number of clients owing to its high quality and durability. The offered washer disinfectors are designed at our state-of-the-art manufacturing unit with highly advanced technologyunder the keen observation of our competent professionals by using the finest quality raw material. These washer disinfectors are available in market on various specification at nominal rates.

Features

Designed with excellence, High performance, Durability





ETO STERILIZER

Features

Highly Efficient, Impeccable finish, Sturdiness

Standard Chamber Dimension:

SME-2	12" (H) x 12" (W) x 24" (D)	300 x 300 x 600 mm
SME-4	12" (H) x 12" (W) x 48" (D)	300 x 300 x 1200 mm
SME-5	15" (H) x 18" (W) x 36" (D)	375 x 450 x 900 mm
SME-8	18" (H) x 18" (W) x 42" (D)	450 x 450 x 1050 mm

NOTE: CUSTOMIZED SOLUTION ALSO AVAILABLE ON REQUEST

Specification

1. Main Vessel * Inner Seal : The chamber will be fabricated with a complete argon welded SS 316 nonmagnetic sheet.
2. Heating : Surface heaters mounted on the chamber.
3. VACUUM: Vacuum pump/ventury for vacuum pulsing and air wash is used.
4. Automation : The machine is provided with PLC based automation along with an LCD HMI which allows the operator to :

- (a) Change and set the parameters.
- (b) Run the cycle according to pre-selected cycles.
- (c) Monitor various phases / individual parameters during the Process.
- (d) View on/off status of the various components of the machine while the cycle is in progress.

Software for controlling, monitoring and recoding of various parameters is provided.

This makes it is possible to operate and monitor the machine by connecting it with any computer where the SCADA software is loaded, apart from running it from the machine itself.

The above devices control and regulate all the function of the machine. It makes the system user friendly and allows the operator to change the process parameters as and when necessary.

The advantage of the above is that the system can carry out multiple programs. It includes features like

- (1) Password protection for unauthorized access.
- (2) Analog input of process pressure/vacuum.
- (3) Digital/Analog input for temperature. Temperature is indicated in the sterilization area, by the use of a temperature sensor.
- (4) One pressure/vacuum sensor for display of the current pressure/vacuum, that the load is subjected to, at all times during the process.

5. **CYCLE RECORD:** The Software provided maintains total records required for process parameters during the sterilization cycle. These records are necessary for meeting CE or EN550 norms of sterilization.
The Software hold records in memory of the external drive for 6 months to one year. The data can easily be copied on a computer. Hence, this proves to be cost-effective as far as maintaining lengthy records is concerned. It eliminates the need for taking print-outs after every cycle and also saves on expensive thermal printing.
6. **PIPING & VALVES:** All the fitting used for the accessories and the main vessel are fabricated from SS 316 stainless steel. All the valves used in the process lines are SS 304/brass/Teflon construction ball valves.
(All standard makes).
7. **TESTING:** Pressure testing and vacuum testing as per specified standards. (1.5 time the working pressure).
8. **OPERATION:** All functions are automatic. The door closing is manual.
9. **GUARANTEE:** All the various components of the ETO Sterilizer, as listed shall carry a guarantee for the period of ONE year from the date of Invoice. The terms of this guarantee shall be specified in the accompanying documentation.

INDUSTRIAL TYPE ETHYLENE OXIDE STERILIZERS

SHIV MACHINERY is Industrial Type of Ethylene Oxide Sterilizer is the fastest way to sterilize equipment which is heat-sensitive or susceptible to moisture. Sterilization can be performed for equipment in their original packaging and does not need extra packaging. Sterilizers using EtO cylinders which are available on the market and allows loading goods by pallets. A pair of an automatic sliding door provides easy loading, unloading, let to clean the chamber by forced air circulation after the post operation and pass through option for clean room operations. To eliminate pressure risk, security lock jaws have been installed on sterilizer's door. The inflatable silicone gasket eliminates risks of gas leakage which occurs by air pressure. System testing for gas leakage under vacuum conditions per each cycle provides full security. Devices are long-lasting thanks to its stainless steel structure. SMis Industrial Type of Ethylene Oxide Sterilizers can work under negative and positive pressures. Temperature, Time, Pressure, Humidity data recording, saving and printing online. The system comes with a large set of spare parts as free.

Technical Specifications

- Material Of Case Body: Stainless Steel, Aisi 304 Polished
- Sterilizing Temperature: 0-100 °c
- Sterilizing Pressure: -0,8 / +0,8 Bar
- Pre-vacuum: -0,8 Bar
- Sterilizing Humidity: 20-100%rh
- Eo Concentration: 250-1200 Mg/l
- Sterilizing Time: 0,5-12 Hours
- Aeration Time: 0-99 Hours
- Times Of Air Change: 0-99
- Ethylene Oxide Waste Gas Treatment: Standard
- Steam Generator: 28 Kw

Main System

- Sterilization Chamber
- Heating And Hot Water Circulation System
- Vacuum System
- Humidification System
- Eo Gasifying System
- Electrically Operated Double Automatic Sliding Door And Air-
- Inflation Sealings, Pair
- Residual Gas Treatment System
- Control Panel Unit Include Alarm&safety System,
- Recorder&printer



Model	Inside Size (L x W x H) cm	Outside Size (L x W x H) cm
SM-3 / 3 mm	150 x 135 x 170	300 x 295 x 240
SM-7 / 7 mm	300 x 135 x 170	345 x 295 x 240
SM-10 / 10 mm	450 x 135 x 170	495 x 295 x 240
SM-15 / 15 mm	675 x 135 x 170	720 x 295 x 240
SM-20 / 20 mm	900 x 135 x 170	945 x 295 x 240
SM-25 / 25 mm	1075 x 135 x 170	1120 x 295 x 240
SM-30 / 30 mm	1300 x 135 x 170	1345 x 295 x 240
SM-35 / 35 mm	1500 x 135 x 170	1545 x 295 x 240
SM-45 / 45 mm	1950 x 135 x 170	1995 x 295 x 240

NOTE: CUSTOMIZED SOLUTION ALSO AVAILABLE ON REQUEST

STERILIZATION CONSUMABLES & TESTING MATERIELS

Shiv Machinery is trusted one stop solution for sterilization consumables & testing materials

ETO GAS CARTRIDGES

Shiv Machinery provides ethylene oxide gas cartridges which are engineered to provide safe systems that are easier to use than gas tank systems.

1. Easy to use, cost effective and accurate sterility.
2. Now a stage-leakage of sterilant gas.
3. Available in 40 Grams, 100 Grams, 170 Grams & 300 Grams capacity.
4. Safe to use.
5. Physical Stage: Liquid



STERILIZATION REELS

Medical grade paper available in both 60 GSM & 70 GSM.

Film is available in tinted Blue/Tinted Green, & Natural.

With two indicators for steam & ETO sterilization.

1. Multi sealing lines.
2. Reduces fiber peel and the risk of damage of sealing integrity while loading, stocking and transporting.
3. Non-Polluted Printing.
4. Certified Medical Grade Paper.
5. Meets EN868-5 Requirement of European Standards of sterilization.
6. No Shrinkage - Retort Grade CPP Films used.
7. Print with water based link, going as natural as we could be!



BOWIE-DICK TEST PACK

Pre assembled for single use test, packs designed to evaluate the performance of the air removal system of pre-vacuum sterilizers operating at 134° c for 3.5 minutes & 121° c for 15 minutes.

1. Available in A4 size paper as well as in test pack kit.
2. Disposable ready to use test packs
3. Designed for STEAM Sterilization at 134° c for 3.5 minutes & 121° c for 15 minutes.
4. Accurate Color indicator changes.
5. Can be kept as permanent record.



TYVEK REELS

TYVEK REELS are specially designed for plasma sterilization process but it can be also used ETO sterilization as well as other low temperature sterilization procedures.

1. One side tyvek (100% high - density polyethylene fibers) / One side transparent films (easy to identify the packed items)
2. Durable / Tear Resistant / Light Weight & Flexible / Water-Resistant.
3. Unique Balance of strength & softness.
4. Size as per customers requirement.



AUTOClave & ETO LABEL TAPE

1. Autoclave & ETO label tape are highly used in hospitals as well as in laboratories & pharmaceuticals to test sterilization. It will be easily pasted on load-material which is to be sterile.
2. Idea for Autoclave Sterilizer & ETO Sterilizer.
3. High contrast color change is easy to interpret.



OTHER PRODUCTS OF CONSUMABLES

1. Indicator strips for steam sterilization & ETO sterilization
2. Biological indicator for steam sterilization & ETO sterilization.
3. Packaging-Labeling gun with rolls for documentation.

ULTRA SONIC CLEANERS & BATH

Shiv Machinery is one solution offering ultra sonic products. An ultrasonicator works on the principal of ultra sound frequency (usually 20-40KHz). Here Electrical energy is converted into ultra sound waves by means of ultrasonic transducers.

Ultrasonic Cleaner is based on cavitation effect caused by high frequency ultrasonic wave vibration signal in fluid. Microscopic bubbles formed and the implosion violently that cause cavitation, which gives out great impact to the cleaning subject. It provides an intense scrubbing action on the surface of cleaning subject. Additionally, the bubbles are small enough to penetrate even microscopic crevices, cleaning them thoroughly and consistently.

Applications

- Electronics Industry for delicate parts.
- Hospitals & Medical Industry.
- Auto Industry for rugged parts.
- Industrial Manufacturing.
- Jewelry Industry for intricate parts.
- Dental Clinic & Laboratories.

Salient Features

Ultrasonic bath is designed with MOSFET / IGBT & the latest micro controller base tech.

Auto tuning with overload protection arrangement.

Imported transducers are used in our Ultrasonic Cleaner (Ultrasonic bath).

Operating frequency of 23/33KHz. Variable frequency on demand.

Digital tuning & Thermo dynamic design to ensure long life of generator.



STANDARD DIMENSION OF HOT AIR OVEN

Model	Power	Capacity Ltr.	Tank Dimension (LxWxH)
SM Ortho	500 W	17	450 x 250 x 150 mm
SM 20	500 W	20	500 x 250 x 150 mm
SM 30	600 W	30	500 x 300 x 200 mm
SM 40	750 W	40	500 x 400 x 200 mm
SM 50	1000 W	50	500 x 500 x 200 mm

NOTE: CUSTOMIZED SOLUTION ALSO AVAILABLE ON REQUEST