



GEMERIK

*COMPLETE RANGE OF
STERILE PROCESS EQUIPMENTS*



❖ COMPANY PROFILE

We are the manufacturers of sterile process equipment's for the Pharmaceutical, Hospital and Food Industry.

Specialist in:

- Autoclaves / Steam Sterilizers.
- Terminal sterilizers.
- Bung Processors.
- Super-Heated Water Spray Sterilizers.
- Dry Heat Sterilizers.
- Vertical autoclaves.
- Pure Steam Generators / Clean Steam Generators.
- Multi Column Distillation Plant.
- Sterile Manufacturing Vessels.

We are marketing associates and channel partners for various organization for:

- Ointment / Cream plant.
- Liquid / syrup plant.
- Tablet / Capsule Plant.
- Purified Water system.
- Lab Instruments.
- Clean room Furniture's.
- Pharma Consultancy.



Apart from Manufacturing we also provide cost effective solution to customers for:

- Providing services to existing Autoclaves / PSG / MCDP of any brand.
- Repairing and refurbishing work of existing old autoclaves / PSG / MCDP.
- Attending VLT failures problems / overshoot problems / Scaling effect of PSG and providing training to user / Engineering team with building the confidence to attend the repetitive issues.
- Spares like gaskets, valves, grease, switches, electric heaters, are readily available in stock for fast customer service.
- Client has appreciated our work comparing the quality with the top most Horizontal Steam Sterilizer suppliers.

The reason behind our success is:

- Quality in terms of operation / finishing / standard quality bought outs / Easy maintenance.
- Competitive Pricing to build up confidence in our product.
- Strong Service team support with vast experience in the respective core field.
- Design Technical / Documentation support with latest cGMP norms.
- Electrical / Automation team with proven functional knowledge of system.
- Experienced and Precise fabrication team for error free job.

Our dream is to provide **“WORLD CLASS QUALITY STERILIZERS AT AN AFFORDABLE RATES”**

We are focused to deliver the latest solutions on all the above products which are supported by the latest US FDA, EU and cGMP norms. We value our customers and understand their need for quick and reliable services..

❖ AUTOCLAVES / STEAM STERILIZER

Basic features:

- Chamber MOC SS316L
- Volume / Capacity 180ltr to 10000ltr.
- Designed with curved edges and self draining type.
- Reinforced with SS304 jacket having temperature and pressure monitoring system.
- Insulation and cladding done to protect from internal heat loss and human safety.
- Chamber facilitated with shelves or carriage & trolley arrangement for ease of material insertion.
- Stand mounted / Skid mounted with complete paneling from all sides.



- Door MOC SS316L for contact parts.
 - Single door or double autoclaves with Vertical / Horizontal automatic sliding doors with interlocks and door opening safety.
 - Traditional Radial arm hinged door can be provided.
 - Vacuum system with condenser. Inbuilt steam generator with electric heaters and pressure safety.
 - Fully Automatic operation of autoclave with 10 nos. recipe, inbuilt R232 port, 3 level password protection.
 - Option for 21 CFR compliance software provided.
 - Basic inbuilt programs – VLT cycle, Pressure leak Test, Bowie Dick Test, Gravity displacement program or standard cycle, HPHV cycle with Vacuum drying.
- Documentation: DQ, IQ, OQ, Test certificates and calibration reports provided
With operation and maintenance manual. .



Additional features:

- Rapid Cooling system.
- Jacket cooling System.
- SIP facility for Air filter.
- Vacuum pump with water saving / Recirculation system.
- Utility monitoring system.
- Air detector system.
- Diaphragm Valve package for high accuracy.
- Pressure Reducing Valve for Utility steam.
- Pure Steam Sampling system.
- Pure steam bypass.
- Drain Condenser
- PID valve for accurate operation.

❖ BUNG PROCESSORS

Basic features:

- All in One process i.e. washing, rinsing, siliconization, sterilization and drying without touching the bungs during the whole process.
- Rotating carriage with view glass is with auto unloading system.
- Sampling system in drain.
- In built Clean In Place system (CIP).
- The BUNG PROCESSOR is designed for dual operation.



❖ STANDARD SIZES AND SELECTION CRITERIA

Width (mm.)	Height (mm.)	Depth (mm.)	Volume (Lts)	Bungs capacity (20 mm dia.)
450	450	900	182	10000
600	600	900	324	15000
600	600	1200	432	20000
750	750	1200	675	30000
750	750	1500	845	40000
900	900	1200	972	50000
900	900	1500	1215	60000
900	900	1800	1458	75000
1200	1200	1200	1728	100000
1200	1200	1500	2160	125000
1200	1200	1800	2592	150000

Options provided

- Single door / Double Door
- Automatic sliding door / Radial Arm door.
- Cabinet enclosure / open
- SS316L Rotary Drum
- SS316L Carriage
- SS304 Trolley

Utilities required

- Pure Steam for chamber.
- Plant steam for Jacket.
- Instrument air.
- Soft Water for vacuum pump.
- Processed / Filtered air
- DM Water.
- WFI/ Distilled water.
- Silicon emulsion.
- Detergent.

❖ DRY HEAT STERILIZERS

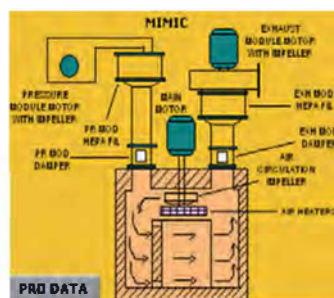
- The Dry Heat Sterilizer uses air as a sterilization medium at a temperature of upto 250 degree C.
- The air is heated electrically by heating elements by a re-circulation blower.
- Application: Glassware (ampoules, vials, bottles), Containers and metallic components, Machine and change parts, Tanks and vessels, Hygroscopic pharmaceutical products, Powders, Oils, Fats etc..



❖ STANDARD SIZES AND SELECTION CRITERIA

Options provided

- Single door / Double Door.
- Class 10000 / Class 100 DHS.
- Cooling coils.
- SS316L Carriage
- SS304 Trolley



❖ Super Heated Water Shower Sterilizer / Hot Water Spray Sterilizer

- Application: For LVP / SVP / IV Bags / Glass Bottles / Plastic Bottles / Pouches.
- Forced water circulation in a closed loop system through Heat exchanger with over pressure counter balancing inside containers during sterilization avoiding and cracking / breaking leakage / deformation of PP bottles due to internal pressure developed by the liquid product.
- Water is heated upto 121degC in a heat exchanger (shell & tube type) and circulated in the chamber. Water acts as a sterilizing medium in a closed loop system.
- The compressed air is purged in the chamber to maintain the chamber pressure equal to the container pressure throughout the process. This support pressure is totally controlled automatically by the P.L.C.
- Thus heating – hold – cooling sequence is carried out with precision on both the vital parameters like temperature and pressure.
- The system follows counterbalancing of overpressure formed inside the containers during sterilization, avoiding breakages and deformation.

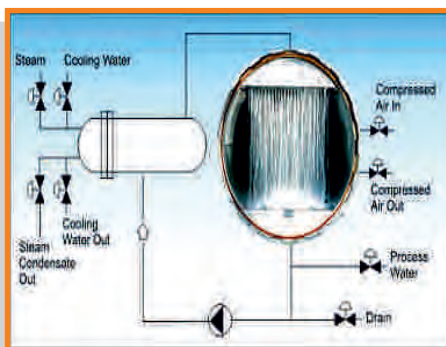


❖ STANDARD SIZES AND SELECTION CRITERIA

Diameter (mm.)	Long (mm.)	Volume (Lts)
1050	1500	810
1450	2100 to 5800	-
1750	2000	2880
1750	3200 to 9750	
2050	7850	12600
2050	8850	14400
2050	9850 to 12850	
2150	5000	9900
2150	10500	20790

Options provided Utilities required

- | | |
|---|--|
| <ul style="list-style-type: none"> • Single door / Double Door • SS316L Carriage • SS304 Trolley • Additional shelves. • Vacuum system. • Transfer system. • Chain conveyor system | <ul style="list-style-type: none"> • Plant steam. • Instrument air. • Cooling water • Soft Water for vacuum pump. • Processed / Filtered air • DM Water. • Electricity. |
|---|--|



❖ VERTICAL AUTOCLAVES



- Vertical Top opening with soft hydraulic system to enable smooth operation of door.
- Separate Jacket with heating system to enable fast heating of chamber.
- All valves are electrically operated type hence pneumatic connection is avoided.
- Semi automatic / fully automatic system with recorder and printer
- Option for 21 CFR part 11 complaint system design.
- Easy access to Utility connections and validation ports .



❖ STANDARD SIZES AND SELECTION CRITERIA

Diameter (mm.)	Long (mm.)	Volume (Lts)
400	600	75
450	500	80
450	600	95
450	700	111
500	600	117
500	700	140
550	700	166
550	760	180
600	700	200



Options provided

- Chamber with SS304 & SS316L.
- Vacuum system
- Automatic Water feeding.
- Manual / Semi / fully Automatic operation.
- SS Baskets.



❖ PURE STEAM GENERATOR

- Capacity range 25 to 1500 kg/h.
- External evaporator, ease of maintenance.
- CGMP double tube sheet heat exchanger, ensuring there is no cross contamination of liquids.

PSG Options

- Fin Aqua / Hauffer Design.
- Clean Steam / Pure Steam
- Electric operated / Steam operated.
- Degassing system.
- Manual / Semi / fully Automatic operation.
- PID controller.
- Auto Halt and purging facility.



❖ STANDARD SIZES AND SELECTION CRITERIA

PSG SIZE	PLANT STEAM (Dry & Saturated)			FEED WATER (Purified Water)			COMPRESSED AIR (Dry & Lubricated)			ELECTRICITY
	STEADY DEMAND	PRESSURE	LINE SIZE	STEADY DEMAND	PRESSURE	LINE SIZE	PEAK DEMAND	PRESSURE	LINE SIZE	POWER
Kg/Hr	Kg/hr	Kg/Sq. Cm	NB	LPH	Kg/Sq. Cm	OD	M3/min	Kg/Sq. Cm	NB	HP
25	31.75	3 to 4	1/2"	28.75	3.00	3/4"	0.20	6 To 7	1/2"	0.5 HP
50	63.50	3 to 4	3/4"	55.00	3.00	3/4"	0.20	6 To 7	1/2"	1 HP
80	101.60	4 TO 5	3/4"	92.00	3.00	3/4"	0.20	6 To 7	1/2"	1 HP
100	127.00	4 TO 5	1"	115.00	3.00	3/4"	0.20	6 To 7	1/2"	1 HP
150	190.50	4 TO 5	1"	172.50	3.00	3/4"	0.20	6 To 7	1/2"	1 HP
200	254.00	4 TO 5	1 1/2"	230.00	3.00	3/4"	0.20	6 To 7	1/2"	1 HP
300	381.00	4 TO 5	1 1/2"	345.00	3.00	3/4"	0.20	6 To 7	1/2"	1 HP
400	508.00	4 TO 5	2"	460.00	3.00	1"	0.20	6 To 7	1/2"	1 HP
500	635.00	4 TO 5	2"	575.00	3.00	1"	0.20	6 To 7	1/2"	1 HP
600	762.00	4 TO 5	2"	690.00	3.00	1"	0.20	6 To 7	1/2"	1 HP
750	952.50	4 TO 5	2 1/2"	862.50	3.00	1 1/2"	0.20	6 To 7	1/2"	1 HP
800	1016.00	4 TO 5	2 1/2"	920.00	3.00	1 1/2"	0.20	6 To 7	1/2"	1 HP
1000	1270.00	4 TO 5	2 1/2"	1150.00	3.00	1 1/2"	0.20	6 To 7	1/2"	1.5 HP
1300	1651.00	4 TO 5	3"	1495.00	3.00	1 1/2"	0.20	6 To 7	1/2"	1.5 HP
1500	1905.00	4 TO 5	3"	1725.00	3.00	1 1/2"	0.20	6 To 7	1/2"	1.5 HP

❖ MULTI COLUMN DISTILLATION PLANT

MCDP Options

- Capacity range 25 to 1500 LPH .
- Fin Aqua / Hauffer Design.
- Pure Steam Generation option.
- Electric operated / Steam operated.
- Degassing system.
- Manual / Semi / fully Automatic operation.
- PID controller.
- MS and PRV station.



❖ STANDARD SIZES AND SELECTION CRITERIA

MCDP SIZE	No. of Columns	PLANT STEAM @ 3 bar (Dry & Saturated)			PLANT STEAM @ 6 bar (Dry & Saturated)			ELECTRICITY
		STEADY DEMAND	COOLING WATER @ 25 deg C	PLANT STEAM LINE SIZE	STEADY DEMAND	COOLING WATER @ 25 deg C	COOLING WATER LINE SIZE	POWER
LPH	Nos.	Kg/hr	LPH	NB	LPH	LPH	OD	HP
50	1							
80	4	37	140	3/4"	55	210	1/2"	0.75 + 0.75
150	4	70	225	1"	105	345	3/4"	0.75 + 0.75
300	4	140	420	1"	215	645	3/4"	0.75 + 0.75
500	5	135	650	1 1/2"	205	975	1"	0.75 + 0.75
700	5	190	910	1 1/2"	270	1300	1"	1.5 + 1.5
1000	5	270	1300	1 1/2"	420	2015	1"	1.5 + 1.5
1500	5	405	1950	2"	610	2925	1 1/2"	1.5 + 1.5
2000	6	460	1500	2"	715	2325	1 1/2"	2 + 2
3000	6	700	2160	2 1/2"	1035	3240	2"	2.5 + 2.5
5000	6	1150	3000	2 1/2"	1785	4650	2"	3 + 3

SERVICE AND SPARES ASSISTANCE



VALIDATION PORT



GAUGES



Y TYPE ANGLE VALVES



PRESSURE TRANSMITTER



RTD SENSORS



SILICON DOOR GASKET



FLOAT SWITCH



WATER IMMERSION HEATERS



LIMIT SWITCH



SAFETY VALVE



FOOD GRADE GREASE



VP MECHANICAL SEAL

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