TECHNICAL SPECIFICATIONS : HIGH PRESSURE AUTOCLAVE

1- Horizontal Rectangular High Pressure High Vacuum steam Sterilizer.
2- Chamber size shall be minimum of 2 feet width x 2 feet height x 4 feet length.
3- Should be operated on 400-440V, 3 phase with neutral, AC power supply.
4- Chamber volume shall be minimum of 420 liters.
5- Steam generator volume shall be minimum of 60 liters and should be fitted with suitable electrical heater load of 18KW, to produce steam to sterilizer.
6- The sterilizer shall have single door (Hinge type) with radial locking using shooting bolts having high pressure locking safety facility and made of good quality stainless steel 304 quality . Should provide heat resistant SILICON door gasket withstand upto 140 Deg. C.
7- The sterilizer shall have to draw the water, automatically, when needed in the inbuilt boiler.
8- Thickness of chamber of sterilizer shall be minimum 6mm and to be made of stainless steel 316 quality is capable to withstand the negative pressure (vaccum) of 24-26''Hg created by the vaccum pump.
9- Thickness of door of sterilizer shall be minimum of 12mm and to be made of stainless steel 316 quality.
10- Sterilizer jacket shall be made of Boiler quality steel plate with a material thickness of 6-8mm.
11- Glass wool insulation thickness shall be 50mm. Insulation cover shall be made of good quality stainless steel 304 quality.
12- All connecting pipes shall be made of good quality stainless steel.
13- Stand shall be made of Mild steel with anticorrosion paint.
14- The unit shall be fitted with suitable water ring Vacuum pump, motor capacity: 3 HP, to create high vacuum of 26"hg for efficient drying and sterilization of loads. The sound level of vacuum pump shall be <80DP and no vibration. Vacuum pump. Fitted with suitable stainless steel condenser, piping's and pipes to enable efficient drying with the use of the Vacuum pump.
15- Pressure gauge range shall be 0 to 6 Kg./cm2 .
16- Compound gauge range shall be – 1 to 6 Kg/cm2.
17- Safety valve range shall be 0.3 to 3.5kg/cm2.
18- The unit shall be capable of being stored continuously in ambient temperature of 0-50 Deg.C and relative humidity of 15-90%.
19- Suitable validation port shall be provided.
20- Working temperature of sterilizer is 121-134 Deg. C and the corresponding pressure is 1.2-2.1 kg/cm2.
21- Safety features of sterilizers: Door locking facility, Low water protection system, Pressure cut off facility and all other necessary safety features.
22- Equipment shall have no sharp edges, will be securely mounted and would provide adequate protection against moving and electrically energized parts.
23- Controls (e.g. switches, knobs) shall be visible and clearly identified.
24- Labels and markings shall be clear and visible.

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25- Equipment shall be simple to use, operate and maintain (User friendly). It shall be designed for easy access to serviceable parts.

26- AUTOMATIC OPERATION WITH PRINTER:

(A) The sterilizer shall be fitted with suitable PLC (Microprocessor) for fully automatic cycle operation instead of manual operating valve with following Features:

(i) PLC based microprocessor which is incorporated with the sterilizer.

(ii) Digital displays of Chamber Pressure, temperature, cycle no., Batch no., Time & date, alarm indicator, Low water indicator.

(iii) Provision of 'error code analysis' inbuilt, Leak test, Bowie & Dick and Standard Process.

(B) Printer: Printer that shall automatically and continuously monitor and record dates, time of day, load, identification no. and operating parameters.

(C) The system shall be designed, primarily, for carrying out the following:

- Leak test cycle
- Bowie & Dick Process
- Standard Process
- High pressure and High Vacuum Process – vacuum holding.

27- STANDARDS & SAFETY:

(A) The unit should be manufactured as per IS specifications Mark ISI:3829 and also should bear the certification.

(B) Electrical safety shall conforms to standards for electrical safety IEC-60601-2-25 Safety of electrocardiograms (OR EQUIVALENT BIS Standard).

(C) Electrical safety shall conforms to standards for electrical safety IEC-60601/IS-12450

(D) Equipment performance should not be affected by electro magnetic interference radiated or conducted through power lines from another device.

(E) Necessary operational training / day-to-day maintenance training shall be imparted to our staff after commissioning of the equipment at site.

28- AFTER SALES SERVICE:

(A) After-sales-service/ maintenance shall be provided from your factory trained engineer.

(B) Response time from time of lodging the complaint shall be 24-36 hours and total uptime in a year shall be not less than 97% including PPM.

(C) Back to back warranty to be taken by the supplier from the principal to supply spares for a minimum period 10 year.

(D) Should have service facility. The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.

29- SPARES AND ACESSORIES TO BE PROVIDED ALONG WITH EQUIPMENT:

(A) Spare fuses 10nos.shall be provided, if fuses are used.

(B) Spare water reading glass and washers shall be provided

(C) One number single water still (distillation) with following features: Electrically operated water still capable of providing 10 liter / hour pyrogen free distilled water, made of stainless steel, having immersion water heater(heating coils) with low water protection(low water cut off device).

(D) 60 liter plastic tank to store distilled water, fitted with two outlet taps to withdraw water.

30- DOCUMENTATION – SHALL BE PROVIDED AT THE TIME OF DELIVERY:

(A) Operator's / instruction/ user manual in English should be provided.

(B) Installation qualification

(C) Operation qualification

(D) Design qualification

(E) Performance qualification

(F) Hydraulic test certificate

(G) Material test certificate

(H) Gauge calibration certificate

(I) Master gauge calibration certificate

(J) Warranty certificate

31- Vendor has to support the specifications with manufacturer's brochure failing which offer may be rejected. Vendor has to demonstrate the equipment at Hyderabad, within specified time limit, if asked for; failing which offer will be rejected.

32- Installation(Erection & commissioning) and training to be provided by vendor .