TECHNICAL SPECIFICATIONS: HIGH PRESSURE AUTOCLAVE

1. Horizontal Rectangular High Pressure High Vacuum steam Sterilizer.
2. Should be operated on 400-440V, 3 phase with neutral, AC power supply.
3. Chamber volume shall be minimum of 400 liters.
4. Suitable Steam generator fitted with suitable electrical heater, to produce steam for sterilizer.
5. The sterilizer shall have single door (Hinged type) having high pressure locking safety facility and made up of good quality stainless steel 304 quality. Should provide heat resistant SILICON door gasket to withstand upto 140 Deg. C.
6. The sterilizer shall have to draw the water, automatically, when needed in the inbuilt boiler.
7. Thickness of chamber of sterilizer shall be minimum 6mm and to be made of stainless steel 316 quality, capable to withstand the negative pressure (vacuum) of 24-26”Hg created by the vacuum pump.
8. Thickness of door of sterilizer shall be minimum of 12mm and to be made of stainless steel 316 quality.
9. Sterilizer jacket shall be made of Boiler quality steel plate with a material thickness of 6-8mm.
10. Glass wool insulation thickness shall be 50mm. Insulation cover shall be made of good quality stainless steel 304 quality.
11. All connecting pipes shall be made of good quality stainless steel.
12. Stand shall be made of Mild steel with anticorrosion paint.
13. The unit shall be fitted with suitable water ring Vacuum pump, 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.
14. Pressure gauge range shall be 0 to 6 Kg./cm² or more.
15. Compound gauge range shall be – 1 to 6 Kg/cm² or more.
16. Safety valve range shall be 0.3 to 3.5kg/cm² or more.
17. The unit shall be capable of being stored continuously in ambient temperature of 0-50 Deg. C and relative humidity of 15-90%.
18. Suitable validation port shall be provided.
19. Working temperature range of sterilizer 121-134 Deg. C or more and the corresponding pressure is 1.2-2.1 kg/cm² or more.
20. Safety features of sterilizers: Door locking facility, Low water protection system, Pressure cut off facility and all other necessary safety features.
21. Equipment shall have no sharp edges, will be securely mounted and would provide adequate protection against moving and electrically energized parts.
22. Controls (e.g. switches, knobs) shall be visible and clearly identified.
23. Labels and markings shall be clear and visible.
24- Equipment shall be simple to use, operate and maintain (User friendly). It shall be designed for easy access to serviceable parts.

25- AUTOMATIC OPERATION WITH PRINTER:
(A) The sterilizer shall be fitted with suitable Computerized (microprocessor based) facility for fully automatic cycle operation (instead of manual operating valve) with following Features:
   (i) Computerized (microprocessor based) facility incorporated with the sterilizer.
   (ii) Digital display of Chamber Pressure, temperature, cycle no., Batch no., Time & date, alarm indicator, Low water indicator.
(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.

26- STANDARDS & SAFETY:
(A) Equipment performance should not be affected by electro magnetic interference radiated or conducted through power lines from another device.
(B) Necessary operational training / day-to-day maintenance training shall be imparted to our staff after commissioning of the equipment at site.
(C) Equipment should be from internationally reputed manufacturer possessing CE/ASME certification.

27- 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 at Hyderabad. The service provider should have the necessary equipment recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
28- SPARES AND ACCESSORIES TO BE PROVIDED ALONG WITH EQUIPMENT:
(A) Spare fuses 10 nos. shall be provided, if fuses are used.
(B) Spare water reading glass and washers shall be provided.
(C) Facility for production of purified (deionized) water – One no. - Reverse osmosis system with 10 liter / hour capacity.
(D) 60 liter plastic tank to store distilled water, fitted with two outlet taps to withdraw water.

29- 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

30- 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 may be rejected.

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