

DEPARTMENT OF PLANT MOLECULAR BIOLOGY
University of Delhi South Campus
New Delhi-110021

Quotation Invitation Letter

Ref. No.: UDSC/PMB/UGC-CAP/AUTOCLAVE/2019

Dated: 16.2.2019

The Department of Plant Molecular Biology, University of Delhi South Campus invites e-tenders (in 2 covers) for one unit of RECTANGULAR HORIZONTAL AUTOCLAVE. Following are the specifications:

1. The inner chamber should be made of thick 304/316 grade steel and jacket is made of rolled steel.
2. Size of inner chamber should be at least 600 mm (width) x 600 mm (height) x 900 mm (depth).
3. Sterilizers will have single door made out of rolled steel lined with S.S. sheet on both sides. All the sterilizers are hydraulically tested to withstand 2.5 times the working pressure.
4. Operating temperature is 121°C and pressure is 15-22 psi.
5. The Outer jacket is wrapped with asbestos sheet or glass wool to minimize the heat losses due to radiation and is covered by polished stainless-steel sheet for elegant appearance.
6. The autoclave should be mounted on heavy mild steel stand duly painted with corrosion resistant paint.
7. The autoclave should be equipped with a water gauge for water level indication, of high-quality safety valves, water inlet and drain valves and low water level cut off device.
8. The steam generator should be fitted under the autoclave and should have ISI marked heaters. The heaters should be easily replaceable. Flanged type, immersion heating elements is made of high-grade material and duly ISI marked.
9. The steam pressure in the boiler should be displayed on a separate pressure gauge. There should be 3 safety valves that can be adjusted to release steam in case of min valve failure. These valves should be set at 20, 25 and 30 psi, respectively.
10. Self-locking safety door should be provided which cannot be opened when the chamber is under pressure. Doors & ring should be made of thick stainless-steel plate with radical locking system instead of nuts that prevent opening of door while steam is inside the chamber.
11. Heat-resistant gasket of neoprene/silicone rubber should also be provided.
12. Automatic Piezostat (pressure control switch) which is electrically operated.
13. Complete sterilizing cycle is controlled from one point with the help of "Multi port valve" fitted at front top. Two speeds of exhaust are available for evacuating.
14. Two separate valves provided for evacuating air and steam from inner chamber and jacket as and when desired. A steam trap is fitted in the chamber discharge line to eliminate the condensate automatically.
15. Houses the Pressure control switch, Main switch, Pilot lamps, relays etc. and mounted on the stand of the sterilizer for easy operation.
16. **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.
17. A powerful Ejector (for drying sterilized linen) circulates air through the chamber. The circulating air passes through a corrosion resistant metal wool filter.
18. A PLUG SCREEN prevents the discharge line from choking. The plug is easily removable for routing cleaning.
19. The autoclave should be designed in such a manner that on achieving the desired pressure the pressure control switch cuts off the current to heaters and restarts it when the pressure drops.
20. Automatic so that once the desired pressure is attained in the outer chamber, steam should automatically be released in the inner chamber. Once the desired pressure is achieved in the inner

chamber, countdown timer should start automatically. On completion of the time, depending on the type of cycle, the steam should be released automatically.

21. The control panel should have display for the temperature, time and pressure. Additionally, the panel should be fitted with on/off switch, pressure control switch, pressure gauge, air/steam releasing valve, indicating lights to show when the pressure control is cutting off current to heaters & spring-loaded safety valve.
22. The autoclave should be equipped with a multiport operating valve for dry sterilization and steam exhaust. Additionally, to maintain uniform temperature and pressure a powerful ejector should be present that can circulate the air through the chamber.
23. For removal of residual air and condensation a steam trap should be provided. The autoclave should have an option for vacuum drying.
24. Automatic vacuum breaker is provided to break vacuum in case of formation of vacuum due to steam condensation.
25. The autoclave should have an option of self-feeding with water whenever the water level falls below a critical limit. A separate pipe from boiler to the drain should be provided so that the pipeline can be easily cleaned.
26. Power requirement is 440 V, should work with 3 phase supply, 50 Hz, AC supply, at least 12 kW.
27. Provided with 5-year warranty on the equipment.

PAYMENT TERMS:

The first preference is payment against delivery and successful installation. In case the invoice could not be raised by March 15, 2019, 100% advance payment against 110% bank guarantee can be considered depending on the approval from the competent financial authority.

Instructions to Suppliers:

- The bidder should be manufacturer/authorized partner/reseller and a letter of authorization from the manufacturer for the same and specific to the tender should be enclosed.
- Separate technical and financial bids should be uploaded.
- Technical bid must contain Technical Compliance Sheet along with the copy of published catalogue containing technical specifications of the equipment.
- The bidder must not be black-listed by University of Delhi.
- The supplier should provide quotation or tender through e-procurement site.

No Commitment to Accept Lowest or Any Tender:

- Institute reserves the right to order equipment with better quality and suitability over lower price and to accept or reject any or all quotations without assigning reasons thereof.
- University of Delhi shall be under no obligation to accept the lowest or any other offer received in response to this tender notice and shall be entitled to reject any or all offers.
- University of Delhi will not be obliged to meet and have discussions with any vendor, and or listen to any representations.


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