



**GOVERNMENT OF GOA
Medical Store Depot (MSD),**

Directorate of Health Services, Campal, Panaji, Goa 403 001

Email: msddhsgoa@yahoo.in

Ph. Nos. 2225646/5540/5668

No.102/PT/DHS/MSD/2023-24/1599

Dated: 16/02/2024

TENDER NOTICE

(E-Tendering Mode Only)

1. E-tenders are invited by the Director, Directorate of Health Services Campal, Panaji Goa on behalf of the Governor of Goa up to **22/04/2024 till 5.00 p.m.**, for supply of Machinery, Equipment and Instruments as listed in the Annexure attached.
2. The tender forms with terms and conditions and list of the items, can be viewed and downloaded online on the website <https://eprocure.goa.gov.in>.
3. The tender "Quotation for Tender no. 102/PT/DHS/MSD/2023-24/1599 dated 16/02/2024 should be submitted online. **Last date and time for submission of quotation online is 22/04/2024 at 5.00 pm. Submission of bids beyond the stipulated date and time will not be entertained.**
4. The following payments to be made online through e-payment mode via NEFT/RTGS/Net banking (Axis Bank) with pre-printed challans available on e-tendering website and directly credit the amount to ITG account as generated by challan and the copy of NEFT/RTGS/Net Banking (Axis Bank) challan is to be scanned and uploaded along with the bid on the website prior to submitting the hard copies before **22/04/2024 by 5.00 pm.**

Note: For any query please contact NIC help desk available on "Contact Us" Section on the portal <https://eprocure.goa.gov.in>

Cost of tender document in Rs.	* Earnest Money Deposit (EMD) in Rs.	Tender processing fee in Rs.
Rs. 2,500.00	Rs.15,00,000/- or 3 % of the cost of items that are quoted by the bidder whichever is lower	Rs. 6,000.00

*** Earnest Money deposit to be submitted @ Rs. 15,00,000/- or 3% of the cost of the items quoted whichever is lowest. Bidders submitting EMD @ 3% of the cost of the items quoted should upload Self -declared letter/ certificate mentioning the amount of EMD submitted. Same will be checked after opening of Financial bid and non-submission of correct amount of EMD will be disqualified. Failing to pay the EMD will lead to disqualification of the bidder from the tender.**

5. **The technical bids will be opened online on 24/04/2024 at 10.30 a.m. in the presence of the Purchase Committee members. .**
6. Hard copies of technical bids and financial bids of all the uploaded documents in two separate envelopes should also be submitted to this office separately along with the copy of

processing fees on or before 22/04/2024 by 5.00 p.m. Catalogues of all machinery/equipments should be submitted along with the technical bid.

7. The quotation should be submitted online as per the annexure attached, along with the required documents/certificates. Hard copies of the same to be submitted to this department before the stipulated date and time.
8. The offer should be firm. Conditional offer will not be considered.
9. The rate should be quoted F.O.R. Destination. Taxes to be mentioned separately. Additional taxes if any can be mentioned in the remarks column of Financial Bid.
10. The rates quoted should be valid for a minimum period of 36 months from the date of placement of first order.
11. The delivery of the goods should be made within a period of one month or earlier from the receipt of the firm order, failing which the order will be treated as cancelled without further notice and Earnest Money Deposit will be forfeited in favor of the Government.
12. The supplier may insure the goods at his own cost to safeguard the delivery of such goods dispatched by him to the consignee, as this Department will not be responsible for the damage or pilferage of goods during transit.
13. The Director of Health Services reserves the right to accept the supply made by the supplier after the expiry of the stipulated delivery period in genuine cases.
14. The Director of Health Services is free to find the market rate of the product that it intends to procure. Final order will be placed to the successful bidder only after a thorough study and comparison of market rate of the product vis a vis the rate quoted by the lowest bidder is done.
15. All applications for the Refund of Earnest Money and the Security Deposits furnished with the tender should be made only to The Director of Health Services with all the details of the e-payments made along with date and tender number for which it was submitted.
16. The quantities of the items listed in the Annexure are likely to increase or decrease. Orders will be placed depending on the need/requirements of the department, at that point of time. The Directors decision in this regard will be taken as final.
17. Tenderers who do not agree with the Terms and Conditions mentioned herein may not submit their bids.
18. If the Tenderer requires interpretation of any clause, the decision of the Director of Health Services should be taken as final.
19. The nationality of the Tenderer should be specifically mentioned in the Tender.
20. Hands on working demonstration/Samples may be required before opening of the financial bid. Unsatisfactory performance at demonstration will disqualify the Tenderer. In exceptional cases the technical committee will have the power to waive the demonstration.

The Tenderer should deliver and install the equipment in the concerned department of the Hospital/health centre, give the demonstration, and train the staff of the department free of cost. Delivery should be made as per the requirement anywhere in the state of Goa as mentioned in the order.

22. Price: The Tenderer shall note the scope of work viz. Supply, Installation & Commissioning of Machinery & Equipment, with delivery at site and shall furnish detailed price for machines and accessories as per Schedules attached. (I to VI) in the financial bid.
23. The tenderer should note that the scope of the work comprises of Supply, Installation and Commissioning of the mentioned Machinery & Equipment, Electrification. Safety equipments if required may be quoted separately. However decision of the committee to purchase the same will be final.
24. The Director of Health Services reserves the right to reject any or all tenders without assigning any reasons.
25. The Director of Health Services will not entertain any correspondence with regards to the tender once the lowest bidder is selected.

26. **Completion Period**

The entire work of supply, Installation and Commissioning of the machine ordered including Mechanical & Electrical Works shall be completed in all respects within one month or earlier from the date of placement of the Order, failing which the successful tenderer will be liable for penalty of one fourth percent of the total value of the Order for each day of delay, subject to the maximum of 10% of the total value of the Order. The Director reserves the right to make risk purchase from the next highest Tenderer in case the successful Tenderer fails to execute the order to the satisfaction of the Director within the time limit specified in the order, in which case the first successful tenderer shall be liable to liquidate damages, to compensate for the losses including price difference. The Director however reserves the right to waive the penalty/risk purchase in genuine and deserving cases.

27. The Tenderer should state whether the machine and its accessories offered is
 - a. Manufactured by them in India.
 - b. Machine parts imported and assembled by them in India.
 - c. In either case the tenderer should furnish the following details.
 - i. Full address of the factory where the machine is manufactured or assembled.
 - ii. The description of the machinery installed for the purpose.
 - iii. Name, Age & Qualifications and experience of the person employed for the purpose.
 - iv. The documentary evidence by the way of License, Registration Certificate or Any other document issued by a Competent Authority in state Government or Government of India authorizing the Tenderer or the principal to manufacture the machine or assemble the machine as the case may be.
 - v. Name & Address of the Hospital / Diagnostic Centre where the quoted machine has been supplied.
28. The Tenderer shall indicate whether they have got facility for undertaking major repairs of the machines and if so the following details may be furnished.
 - i. Full address of the place where repairs would be undertaken.
 - ii. Description of the machinery installed for the purpose.
 - iii. Name, Age, Qualifications and experience of the persons employed for the purpose along with their contact number.

The Tenderer shall ensure that the machine remains in working condition throughout 24 hours and accordingly quote their down time. They should indicate in details duly supported by facts and figures in what way and how they are going to keep the down time to the minimum. If the breakdown time exceeds 72 hrs then the tenderer will be liable for penalty @ Rs. 500/- per day, for each day of delay till the machine is put in working condition.

30. GUARANTEE/ WARRANTY PERIOD.

- I. The successful Tenderer shall guarantee the entire system which they will install such as Machine, proper accessories, Electrical gadgets etc; for trouble free performance for a period of two Years from the date of commissioning of entire work satisfactorily. Any defects noticed during the guarantee/ warranty period shall be rectified free of cost including free replacement of parts having manufacturing defects and or faulty workmanship.
- II. The Tenderer shall clearly indicate the number of visits both "Demand" – (Emergency) and "Routine" for servicing/ Check-up which they will undertake for replacement of spares etc. free of cost during guarantee/ warranty period.
- III. The Tenderer shall certify that they will undertake/ enter into a 5 years Annual Maintenance Service Contract for a periodical check up/ servicing and Repairs of the Machine supplied, installed and commissioned by them for its full life span.
- IV. The Annual Maintenance contract should include minimum 3 visits i.e. one visit in every 4 months, in addition all break down calls to be attended on top priority.
- V. The tenderer should indicate the value of 5 (Five) years maintenance contract (after sales Service), individually for each year as a figure (INR) for unit machine and not as a percentage for a period commencing from the date of the expiry of the guarantee/ warranty period of TWO years. The same is mandatory and will be considered for gradation.

31. UPDATING OF THE MACHINE:

The Tenderer shall specify life span of the machine which they quote and undertake to incorporate future development to update the machine as and when required. The difference in price of the replaced parts will be paid by the Directorate at manufacturer's price.

32. UNDERTAKING FROM MANUFACTURERS /PRINCIPALS:

The Tenderer shall furnish along with the tender, an undertaking from their Principal/manufacturer of the machine, that in the event their association/relations with their Principals/manufacturers of the machine either by the way of sole agency/exclusive distributorship or their representative is terminated or discontinued for one reason or the other by the manufacturers/principals or the tenderer themselves during the life span of the machine, then they would take over/assume or make arrangement to take over/assume to the full satisfaction of the Director of Health Services, the commitments and other obligations which the tenderers have made to the Director of Health Services.

33. TAX, EXCISE DUTY, AND OTHER LEVIES: Taxes as applicable and as amended by Government from time to time should be specifically mentioned, failing which no claim for taxes etc. will be entertained at a future date.

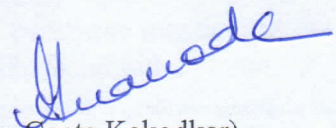
34. INSURANCE: This being Government institution equipment will not be insured by us. They have to be insured by the successful tenderer at their own cost to ensure reaching of the equipment dispatched by them at the destination.

35. TERMS OF PAYMENT: In Indian rupees vide ECS.

In the event of any dispute or difference between the parties hereto in relation to with this tender, the court in Goa shall have exclusive jurisdiction to adjudicate such dispute or difference.

37. Incase tenderer want to submit any additional information, same may be furnished along with supportive documents in technical bid.

38. A prebid meeting is scheduled on 12/03/2024 at 10.30 a.m. in the Seminar Hall of Directorate of Health Services, Campal, Panaji-Goa. No suggestions/querries will be entertained after this prebid meeting.


(Dr. Geeta Kakodkar)
Director of Health Services

TECHNICAL BID

The quotations should be clearly marked with Tender No.102/PT/DHS/MSD/2023-24/1599 dated 16/02/2024 (Technical Bid) uploading the following documents:-

1. An Earnest Money Deposit to be submitted @ Rs. 15,00,000/- or 3% of the cost of the items quoted whichever is lowest is to be paid online through e-payment mode via NEFT/RTGS/Net banking (Axis Bank) with pre-printed challans available on e-tendering website and directly credit the amount of ITG account as generated by challan. Any deposit sent earlier for another tender will not be considered, even if the supplies in respect of the said deposit are completed. Earnest money deposit sent in any other form will not be accepted. The firms which are registered with DGS & D should also send Earnest Money Deposit. If any exemption on this behalf is required, they should produce an attested certificate from DGS & D that they are registered for supply of the category of the items covered under the above tender opening and still continue to be registered with them till date. Bidders submitting EMD @ 3% of the cost of the items quoted should upload Self -declared letter/ certificate mentioning the amount of EMD submitted. Same will be checked after opening of Financial bid and non-submission of correct amount of EMD will be disqualified.
2. The successful Tenderer will have to submit Security Deposit of 5% of the items being ordered in the form of bank guarantee with a validity of two years from the date of installation/supply for due performance of the supply order. This security deposit will be returned only after the completion of warranty period and after the receipt of security deposit of 2% for AMC period. Earnest money deposit will be returned fully after the receipt of security deposit in case of successful tenderers. If the successful tenderer does not pay the security deposit, the invoices for the same will not be settled for payment and the order will be treated as cancelled. Also the EMD will be forfeited in favor of Government.
3. The successful Tenderer will have to submit an additional security deposit/Bank Guarantee valid for 5 years to the tune of 2 % of the cost of the equipment after completion of warranty period which will cover the entire maintenance period. If regular servicing is not carried out during the maintenance period the security deposit will be forfeited in the favour of the Government. The earlier bank guarantee of 5% will be returned after the submission of fresh bank Guarantee of 2% of the cost of the equipment, valid for 5 years.
4. As per notification no. 3/40/2003-IND(Part) dated 8th September 2011 issued by Industries Department, Government of Goa, Secretariat, Porvorim Goa, only those Micro and small Enterprises having turnover not exceeding Rs. 10.00 crores per annum for the preceeding 3 financial years and acknowledged with Entrepreneurs Memorandum Part II by Director of Industries, Trade and Commerce shall be eligible for the benefit under this scheme. A copy of the certificate may be furnished. All other SSI units will be treated on par with other firms. Micro and Small scale enterprise registered with NSIC in order to claim benefits of scheme will have to be registered with Directorate of Industries Trade and Commerce Goa.
5. The Stockist/Distributor who supplies the machinery on behalf of the Manufacturer should furnish/upload Authority letter for this particular Tender, to quote the items on their behalf wherever required.
6. After Sales Service: - The details of network of service centers in the state of Goa with complete address, phone no, fax no, e-mail ID, to be attached/uploaded.
7. The Director of Health Services reserves the right to reject any or all tenders without assigning any reasons.

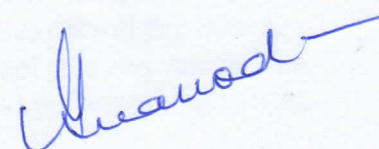
8. ISO Certificate of the manufacturer/ Company are mandatory and should be uploaded/attached.
9. CE certificate of the manufacturer/ Company is to be furnished and should be uploaded/attached for all the equipments.
10. ISI certified equipments/instruments will be accepted only if CE certificate is not available, at the discretion of the Purchase Committee. However the decision of the Director will be final.

11. Information in the following format should be submitted for items quoted:-

Sr. no	Name of the item	Manufacturer and Model quoted	Equivalent specifications quoted by the Tenderer, with the name and address of the manufacturer with model	Whether the item quoted by the Supplier is as per the specifications asked for. Indicate against each item clearly – Yes/No	If the tender quoted is not as per specification then variation/deviation should be clearly indicated against each item asked for.	Authorization Letter Yes/No	ISI Yes /No	CE Yes /No	ISO Yes /No	NSIC /SSI	Remark
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12. Name & Addresses of the Government or Private Institutions to whom such equipment's have been supplied especially in Goa, Karnataka & Maharashtra State may be indicated.

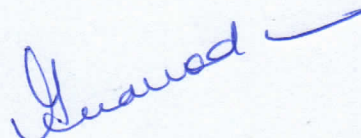
13. AMC Rates to be quoted for item no. 1, 3 and 5 only.


(Dr. Geeta Kakodkar)
Director of Health Services

FINANCIAL BID

The quotation should be clearly marked as Envelope no 2 along with Tender No 102/PT/DHS/MSD/2023-24/dated¹⁶02/2024 and should be quoted for as per the Schedules I to VI attached. 1599 ^

1. Should contain any/all documents including any price.
2. The Price should be quoted in Indian Rupees on turnkey basis which should also indicate all taxes FOR destination separately.
3. While filling the respective annexure, if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder in the assigned column rate of such item shall be treated as "0" (ZERO) & will be treated as incomplete tender & will be rejected outright. Kindly enter the name of the bidder in the respective cell.
4. Safety equipments if required for machinery & equipment, to be quoted separately. However Director reserves the right to reject the purchase of the safety equipment. Director's decision in the matter will be deemed final.
5. Taxes as applicable and as amended by Government from time to time should be specifically mentioned, failing which no claim for taxes etc. will be entertained at a future date.
6. The rate quoted should be valid for minimum period of 36 months from the date of placement of first order.
7. Rates of AMC after the stated warranty period along with the number of visits, to be quoted showing **yearly prices of unit machine separately up to 5 years (Year wise) for item no. 1, 3 and 5 only**. Rates to be quoted in Indian Rupees as a figure and not as a percentage. The 5 years AMC rates only for item no. 1, 3 and 5 will be considered while computing cost of the equipment.
8. Prices of spare parts / consumables required for the machine should be quoted separately.
9. The Financial bid of all the tenderers, whether technically selected or rejected can be viewed online. However, the technically rejected items/bids will not be taken into consideration for gradation.
10. The Director of Health Services reserves the right to reject any or all tenders without assigning any reasons.


(Dr. Geeta Kakodkar)
Director of Health Services

ANNEXURE - I

ADDITIONAL QUESTIONS FOR IMPORTED EQUIPMENT MACHINERY

1. Please indicate here prices on the following basis:
 - i. F.O.R.
 - ii. F.A.S. Port of Shipment of your Principals/ Manufacturers.
 - iii. C.I.F. Indian Port.
 - iv. F.O.R. Station of dispatch. (also indicate the Station of dispatch)
2. For F.O.B./ F.A.S. quotation please indicate here separately :
 - i. Net ex-factory price.
 - ii. Net F.O.B. /F.A.S Prices exclusive of profit/ commission.
3. In case you are a foreign firm quoting direct please indicate:-
 - i. The name and address of your Indian Agents/Associates/Representative for servicing in India.
 - ii. Net F.O.R./F.A.S. price inclusive of the amount or remuneration or commission for the Indian Agents/ Associates.
 - iii. Commission/remuneration payable to the Indian agents/ associates in Rupees.
4. Please indicate the following particulars:-
 - i. The precise relationship between the foreign manufacturers/Principals and their Indian Agents/Associates.
 - ii. The mutual interest which the Manufacturer/principals and the Indian Agents/Associates have in the business of each other.
 - iii. Any payment which the Agents/Associates receive in India or abroad from the manufacturer/principals whether commission for the contract or as a general retainer fee.
 - iv. Indian Agents Income Tax Permanent Account Number.
 - v. The foreign suppliers Income Tax Permanent Account Number.

(SIGNATURE OF TENDERER)

ANNEXURE – II

(TENDERER SHOULD FURNISH SPECIFIC ANSWERS TO ALL THE QUESTIONS GIVEN BELOW: TENDERERS MAY PLEASE NOTE THAT IF THE ANSWERS FURNISHED ARE NOT CLEAR AND/OR EVASIVE, THE TENDER QUOTED WILL BE LIABLE TO BE IGNORED)

- 1) Tender No.----- Due Opening on -----
- 2) Offer is open for acceptance for 3 years from the placement of the first order.
- 3) whether the stores offered fully confirm to the technical particulars and specification/ drawings, specified by the purchaser in the schedule to tender, if not mention here details of deviations.
- 4) Brand of Stores offered.
- 5) Name and address of the manufacturer:
- 6) Station of manufacturer:
- 7) Please confirm that you have offered packing :
- 8) What is your permanent Income Tax Account Number & TIN No.
- 9) a) Are you registered with DGS & D for the item quoted, if so, indicate whether there is any monitory limit of registration.

b) In case you are registered with NSIC under Single point Registration Scheme for the item quoted, confirm whether you have attached a photocopy of the registration certificate indicating the items for which you are registered.
1. If you are not registered either with NSIC or with DGS & D, Please state whether you are registered with Directorate of Industries of State Government Concerned.
2. Please furnish your performance statement.
3. Business name and constitution of the firm . Is the firm registered under:
 - i. The Indian Companies Act, 1956.

- ii. The Indian Partnership Act 1932
(please give full names and address).
 - iii. Any Act, if not, who are the owners
(Please give full names and address).
4. Whether the tendering firm is /are:
- i. Manufacturer
 - ii. Manufacturer's authorized agents.
 - iii. Manufacturer's stock of the stores
tendered for.

N.B: If manufacturers, agents, please upload with
Tender the copy of the Manufacturers authorization.

5. For partnership firms state whether they are registered or not registered under Indian Partnership Act, 1932. Should the answer to this question by a partnership firm be in the affirmative, please state further:-
- a) Whether by the partnership agreement, authority to refer disputes concerning the business of the partnership to arbitration has been conferred on the partner who has signed the tender.
 - b) If the answer to (a) is in the negative, whether there is any general power of attorney executed by all the partners of the firm authorizing the partner who has signed the tender to refer dispute concerning business of the partnership to arbitration.
 - c) If the answer to either (a) or (b) is in the affirmative copy of the partnership agreement and the general power of attorney may be furnished along with the tender, where authority to refer disputes to arbitration has not been given to the partner signing the tender, the tenders must be signed by every partner of the firm.

(Signature of the Tenderer)

SCHEDULE II

PRICE BID FORMAT FOR ACCESSORIES BOTH ESSENTIAL AND OPTIONAL (ITEMWISE)

SR. NO.	ITS SPECIFICATION (ESSENTIAL & OPTIONAL)	QUANTITY	UNIT PRICE	TOTAL
1	2	3	4	5

SIGNATURE OF THE TENDERER

SCHEDULE III

**PRICE BID FORMAT FOR ESSENTIAL SPARES AND CONSUMABLES
FOR 2 YEARS (ITEM WISE)**

SR. NO.	NAME OF THE SPARES AND CONSUMABLES ALONG WITH SPECIFICATION	QUANTITY	UNIT PRICE	TOTAL
1	2	3	4	5

SIGNATURE OF THE TENDERER

SCHEDULE IV

**PRICE BID FORMAT FOR RECOMMENDED SPARES AND
CONSUMABLES FOR TWO YEARS (ITEM WISE)**

SR. NO.	NAME OF THE RECOMMENDED SPARE AND CONSUMABLES WITH ITS SPECIFICATION	QUANTITY	UNIT PRICE	TOTAL
1	2	3	4	5

SIGNATURE OF THE TENDERER

SCHEDULE V

INSTALLATION AND COMMISSIONING CHARGES IF ANY (ITEM WISE)

SR. NO.	NAME OF THE EQUIPMENT/MACHINE INSTALLATION AND COMMISSIONING CHARGES IF ANY	QUANTITY	UNIT PRICE	TOTAL
1	2	3	4	5

SIGNATURE OF THE TENDERER

SCHEDULE VI
ELECTRICAL, MECHANICAL WORKS ETC.

SR.NO.	DESCRIPTION OF WORK	AMOUNT
1	2	3

N.B. For civil works the tenderer should quote lump sum. Works other than Civil the Tenderer shall quote item wise.

SIGNATURE OF THE TENDERER

Annexure I

(General)

Sr. no.	Items	Qty.
1.	<p>200 m.A High Frequency X-ray Machine High frequency X-ray machine suitable for general radiography</p> <p><u>X-ray Generator:</u></p> <ul style="list-style-type: none"> • High frequency X-ray Generator having frequency of 50 KHz or more should be provided. • Power output of generator should be 15 KW. • Radiographic KV range should be 40 to 125 KV. • mA Range (Rad.): 200 mA or more • Exposure time (Rad.): 1 ms to 3 sec. • mAs Range (Rad.): 1 to 200 mAs. <p><u>Control:</u> A very compact, soft feather Touch Control Panel having following functions and indications should be provided. The panel can be supplied in Floor mount with Spill Proof design. Following features should be available on the control panel.</p> <ul style="list-style-type: none"> • Machine ON/ OFF switch. • Digital display of KV & mAs. • KV & mAs increase and decrease switches. • Tube focal spot selection switch. • Ready and X-ray on switch with indicators. • Bucky selection switch. • Self diagnostic programme with indicators for Earth fault error, KV error, filament error and Tube's thermal overload. • <u>APR:</u> Anatomical Preprogrammed parameters of human anatomy upto 216 programs, which helps the user to select exposure parameters based on body part, examination view and size of the patient. <p>A dual action hand switch with retractable cord should be provided for Radiation Protection of Operator.</p> <p><u>X-ray Tube:</u></p> <ul style="list-style-type: none"> • One no. dual focus rotating anode X-ray tube thermally protected. • Anode heat storage capacity of tube should be more than 100 KHU. • One pair of 8 meter H.V. Cable. • One no. collimator with auto shut off facility should be provided. <p><u>HV Tank:</u></p> <ul style="list-style-type: none"> • A very compact H.V. Tank filled with high dielectric transformer oil should be provided. The H.V. Tank should contain H.V. transformer, Filament transformers, H.V. Rectifiers & H.V. Cable receptacles. <p><u>Tube Stand:</u></p>	01

	<ul style="list-style-type: none"> Floor to ceiling stand with counter balanced tube head (rotatable ± 180 degree), 360 degree rotatable, mounted on floor ceiling rails for convenient movements should be provided. <p><u>Table:</u></p> <ul style="list-style-type: none"> Multi position, hand tilt, five position table, 12 degree trendelenburg to vertical, motorized bucky consisting of 8:1, 103 lines/ inch grid size 17¼" X 18 7/8", stainless steel cassette tray and foot rest. <p><u>Accessories:</u></p> <p>Following accessories should be supplied with the unit</p> <ol style="list-style-type: none"> (1) Light weight lead aprons – 5 nos. (2) Chest stand (wall mount) – 1 no. (3) Lead partition – 1 no. <p><u>Power requirement:</u></p> <p>The unit should be operable on 3 phase, 440 Volts AC 50 Hz with line resist less than 0.4 Ohms. Line regulation $\pm 10\%$</p> <p><u>Other requirements:</u> The unit should be approved by AERB.</p> <p>All electrical and civil work of the room for the installation of the X-ray unit to be done on turnkey basis. Price to be quoted alongwith the machine.</p>	
2.	<p>Autoclave Horizontal</p> <ul style="list-style-type: none"> ➤ Chamber size: 600 X 600 X 1200 mm ➤ Chamber Volume:- 432 Liters ➤ Sterilizer Type: Horizontal Rectangular High Pressure Steam Type ➤ Should be suitable for operation on electricity with electric load 36 KW. ➤ Should have compact modular design, all components are easily assessable for maintenance from one side. ➤ Chamber and door material: stainless steel 316 quality. ➤ Steam jacket material: S304 quality. ➤ All piping and jacket outer cover material: stainlesssteel304quality. ➤ Stand material: SS304 quality steel. ➤ Normal working pressure: 1.2 -2.1Kg/cm2 corresponding to temperature121-134o C. ➤ Hinged doors: 02 Nos. ➤ Hinged Door Material :SS316 quality steel ➤ Sealing should be done though rigid silicone gasket. ➤ Gauges, door status indication should be provided on both the doors. ➤ Door locking should be through mechanical bellow plate. ➤ Vacuum System– Partial Vacuum in the chamber should be done through eject or assembly to remove partial air from the chamber for better sterilization. ➤ The unit should be provided with following mountings & amp; fittings: 	03

- a) Fully Automatic with pre-selected and variable programs
- b) Self sterilizing vacuum drier.
- c) Safety valve spring loaded and vacuum breaker.
- d) Pressure and compound gauge
- e) Screen plug for chamber discharge line.
- f) Chamber discharge line with steam trap and swing check valve.
- PLC based microprocessor SIEMENS make with the facility of HMI (Human-Machine-Interface) should be incorporated with the sterilizer.
- 5 pre set program Cycles and one flexible program Cycle i.e. 6 programs should be provided.
- The Sterilizer should be provided with following cycles-
 1. Instrument cycle 1340 C
 2. Linen cycle.
 3. Liquid cycle 1210 C
 4. Instrument cycle 1210 C
 5. Chamber Leak Test: This is to check the integrity of the chamber under vacuum.
 6. Bowie & amp ; Dick test: This is to check the steam penetration in the chamber.
- The Micro-Processor based control Panel (Microster) should control entire cycle of sterilization. The control panel should house the complete automatic process control arrangement including timers, relays, contactors etc.
- The digital display at front panel should show the following parameters:

Chamber Pressure

Chamber temperature

Cycle no.

Batch no.

Time & amp; Date

Alarm indicator

Error code

Low water indicator

- Printer - Pinter should automatically and continuously monitor and record dates, time of day, load identification no. and operating parameters i.e. temperature, pressure and residence time, throughout the length of the autoclave cycles.
- Inbuilt boiler material: stainless steel 304 quality fitted with 36 KW (6nos.of 6KW heaters)with low water protection for heaters, steam valve,

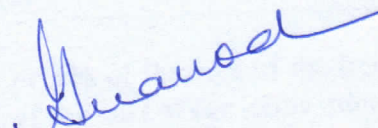
	<p>shut off valves for gauge glass etc.</p> <ul style="list-style-type: none"> ➤ The sterilizer should be provided with SPECIAL type of COPPER SENSOR and other related accessories for boiler by which can save the ELECTRIC and WATER consumption drastically and by which can save the overall cycle time. ➤ The unit should be provided with High Pressure Feed Water Pump for automatic filling of water into the steam generator when under pressure with interconnecting piping etc. ➤ Manual Operation facility with the automation should also be provided so that if the automation gets failed, can run the machine by manually by which work should not get hamper. ➤ The unit should be manufactured as per The sterilizer will be manufactured as per "IS:3829(Part1) -1999 with ISI Mark & CE. ➤ Accessories: 1No- SS316 Loading Carriage suitable for above sterilizer 2Nos - SS304 Transfer Trolley suitable for above carriage. 	
3.	<p>Anaesthesia Workstation</p> <ul style="list-style-type: none"> • Compact three gas anesthesia workstation (O₂, nitrous oxide, air) with an integrated ventilator for infants/ pediatric to adult patients, with a single power switch for the workstation. • It should have in built ventilation with coloured TFT display and integrated CO₂ absorption. <p>Technical details</p> <ol style="list-style-type: none"> 1. Anesthesia machine constructed from welded tubular/ epoxy powder painted steel. 2. Stainless steel top and at least 1 lockable drawers and electrical outlet to be provided. 3. Should have large castor wheel with foot brake. 4. The system should have an inbuilt at least 90 minutes battery backup for anesthesia machine, ventilator and gas delivery system. 5. The anesthesia system should have a integrated passive scavenging system with pressure relief valve. 6. In case of electricity and battery failure, manual ventilation, gas and agent delivery should be possible. 7. <u>Gas delivery system:</u> <ol style="list-style-type: none"> a) Should have pin index yokes for oxygen and nitrous oxide besides separate connection for central gas supply for oxygen, nitrous oxide and air. b) The machine should have separate colour coded pressure gauges for cylinders and central supply line mounted on front of anesthesia machine for better visibility. c) The gas connection should be non-interchangeable. d) Having reservoir based audible and visual oxygen failure alarm of at least 7 seconds. e) Dual cascaded flow meter for oxygen, nitrous oxide and single for compressed air, accurately calibrated with an accuracy of +2.5%. f) Should be compliant with ultra low flow anesthesia. g) Should have minimum mandatory flow of 250 ml/ min of O₂. h) Emergency oxygen flow of atleast 35-70 ltr/ min with non-lockable push 	02

- button to be provided.
- i) Oxygen flush at 30-70 L/ min bypassing the vaporizer.
 - j) Hypoxia guard: It should have proven hypoxia guard design using the pin-valve mechanism or equivalent mechanism. The unit should be equipped with integrated ratio system to maintain 25 vol % O₂ in fresh gas and on accidental opening of only NO₂ flow with O₂ valve closed, the ratio system should automatically open O₂ valve to maintain 25 vol % O₂ in fresh gas.
 - k) Flow meter:
 - Dual cascade type flow meter tubes for oxygen and N₂O, single tube for air.
 - Should be suitable to use ultra low flow techniques.
 - l) Vaporizer:
 - (a) Machine should have possibility to mount two quick mount type vaporizer for easy interchangeability.
 - (ii) The vaporizer design should be maintenance free and should not require calibration for life time.
 - (iii) Vaporizer should have delivery range of 0 to 8% volume %.
 - (iv) Having latest vaporizers for Sevoflurane and Isoflurane: all should be temperature, pressure and flow compensated, with key filling arrangement and should be quick fill and mountable.
 - (v) Agent capacity should be minimum 225 ml. of free volatile anesthetic agent.
 - (vi) All sensor connection shall be internal to help prevent disconnection.
 - (vii) Vaporizer should be agent specific.
 - m) Breathing system:
 - (i) Should have fresh gas de-coupled, fully autoclavable semi closed circle absorber system.
 - (ii) Should have adjustable pressure relief valve from 5 to 75 mbar.
 - (iii) Should have change over from spontaneous to bag ventilation with single step.
 - (iv) The work station should be supplied with at least 2 sets of closed circuit, system for adult and pediatric patients each.
 - (v) Should have an external fresh gas outlet for connecting Magill/ Bain's/ pediatric circuits.
 - (vi) There should not be any collection of condensed water in breathing circuit.
 - (vii) Should be integrally fitted with at least 1.5 litre capacity reversible canisters, double chamber type of CO₂ absorber system having provision to bypass.
 - (viii) The work station should be supplied with at least 10 sets of Bains circuit and 10 sets of Jackson Rees circuits with masks for pediatric patients.
 - (ix) The firm should regularly supply CO₂ absorber soda lime for closed circuit system.
 - n) Inbuilt anesthesia ventilator:
 - i. Electronically controlled/ integrated microprocessor controlled/ pneumatically driven integrated anesthesia ventilator, should not require change of bellows for adults and infants with integrated PEEP
 - ii. Facility to change I:E ratio should be provided.

	<ul style="list-style-type: none"> iii. Alarming setting should be available for low and high tidal volume, minute volume airway pressure and apnea. iv. Modes: volume controlled (mandatory), pressure controlled (optional). v. Tidal volume: 20 – 1400 ml. vi. PEEP: 0 – 20 mbar. vii. Breathing frequency: Upto 60 BPM viii. Latex free and autoclavable bellows. ix. Compact autoclavable soda lime canisters. x. IE ratio: The unit should offer I/E ratios: 1:1, 1:1.5, 1:2, 1:2.5, 1:3, 1:4, 1:5 with I/E inverse ratios: 2:1, 3:1 & 4:1 (PCV) o) Self test: <ul style="list-style-type: none"> - It should be equipped with self test routines and automatic calibration of all sensors. - The unit should perform the leak test and sensor test on start of the unit to know the leak volume or dead space volume of tubing etc. & thus deliver exact tidal volume to the patient. p) Display: It should have a high contrast color TFT display. q) Patient module: Autoclavable modules (if any) r) Alarms: Adjustable high/ low limits with audio and visual alarms for: tidal volume, minute volume, airway pressure (including stenosis and disconnect), insp. Oxygen concentration, audio power supply fail alarm, fail to cycle warning (apnea). s) HME filters: 50 t) Power supply: Power input to be 220 – 240 V AC, 50 Hz fitted with indian plug. u) Documentation: <ul style="list-style-type: none"> - Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. 	
4.	ECG Machine 3 Channel with Trolley <ul style="list-style-type: none"> • ECG machine - 3 Channel • Simultaneously 3 channel ECG recording with 12 lead simultaneous acquisition • Should have visual alarm for open lead • Should have a digital display of 3 channel ECG • ECG machine should have 3 modes of operation- Automatic, Manual & Rhythm (Not Arrhythmia) • Should have a maintenance free digital thermal array printer • Printer should work with standard thermal paper (Should be available in local market) • Printer should be able to print ECG report and should have on/off selection • Should be compact and portable and should have carry handle for portability • Should have ECG lead annotation facility • Equipment should have sufficient battery backup for taking minimum 100 ECG without AC power • Should operate on mains (220v-50Hz) and rechargeable battery (built in) • Recording speed should be 25mm/sec and 50mm/sec • Should have defibrillation protection • CMRR should be >90dB or the sampling rate should be > 7000 	100

	<ul style="list-style-type: none"> • Frequency response 0.05Hz to 129 Hz. • Should have a digital filter for AC and EMG • Should be supplied with following accessories: <ul style="list-style-type: none"> ➤ 2 patient cable sets ➤ 8 clip on electrodes ➤ 12 chest electrode with silicon rubber bulb ➤ 12 packets/Rolls of recording paper ➤ 1 bottle of Jelly • Should be supplied with a suitable trolley with following specifications • Trolley should be made of Stainless steel/powder coated frame with SS 304 grade top • Should be a 3-shelf (including the top) cart, one with a drawer for storing the accessories and consumables • Should have four superior castors (two with brakes) • Trolley should have atleast 30" height and the shelves should have sufficient space for storing the accessories. • Top shelves shall be surrounded by railings. • Trolley should have a suitable cable arm firmly affixed having holder for EGC cables while not in use 	
5.	Pressure Injector for CT Scanner Syringe : Single Syringe Syringe Capacity : 200 ml. Sterile Syringe Pressure limit : 50 Psi – 350 Psi in 1 psi increments Display : Real time pressure curve Alarm : Voice alarm and stop injection when over preset limit Flow rate : 0.1 ml/sec – 10.0 ml/sec in increments of 0.1 ml/sec Injection Volume : 0.1 ml – Volume of Syringe Injection Delay : 0 – 3599 sec in 1sec increments Injection Phases : 1-8 phases per injection Injection Protocols: 1000 protocols Expel Air Locked : Unable to inject unless the air is expelled Test Injection : Settable flow rate from 0.1 – 5 ml/sec, volume from 0.1 – 10 ml. Control Console : 12 inches real colour touch LCD for both local and remote Syringe heater : 35 degrees C	01
6.	Tongue Depressor S.S. Adult	500
7.	Tongue Depressor S.S. Paediatric	500
8.	Laryngoscope with blades 00 Neonates	500
9.	Laryngoscope with 4 blades Adult	500
10.	Laryngoscope with 4 blades Paediatric	500
11.	S. S. Sterilizer Medium 17" x 8" x 6"	200
12.	S. S. Sterilizer Large 24" x 12" x 12"	200
13.	S. S. Sterilizer Small 12" x 6" x 4"	200
14.	Cheatle Forceps	500
15.	Cheatle Forcep Container	200
16.	Otoscope	100
17.	Knee Hammer	100
18.	Plaster Cutting Scissor	50
19.	Gauze Cutting Scissor	200

20.	Stich removal scissor	500
21.	Cord cutting Scissors	100
22.	Sims Speculum Medium	200
23.	Cuscus Speculum Large	100
24.	Cuscus Speculum Medium	200
25.	Cuscus Speculum Small	100
26.	Hot Water Bag	200
27.	Ice Cap	50
28.	Focus Lamp (Pedestal)	50
29.	Sponge holders	100
30.	Oxygen manometer with flowmeter & humidifier bottle	1000
31.	Stethoscope Adult	1000
32.	Stethoscope Paediatric	500
33.	Sphygmomanometer without mercury	2000
34.	Mucus Sucker	200
35.	Weighing Scale Digital Adult	1000
36.	Weighing Scale Digital Baby	1000
37.	S. S. Drum small 6" x 6"	500
38.	S. S. Drum Medium 8" x 8"	1000
39.	S.S. Drum Big Size Heavy Duty 15" x 12"	1000
40.	Nebulizer	1000
41.	Male Urinals	500
42.	Female Urinals	500
43.	Foetoscope	50
44.	Baby receiving tray Enamel 18 x12 x 3	50
45.	Thermometer Digital	2000
46.	Needle Destroyer Specification: Portable Electrical Needle and Syringe Destroyer, to destroy the used injection needles. Equipments shall be destroying the needles by instant electro melting process and syringe tips by manual cutter, suitable for operation on 230V +/- 10% 50 Hz. +/- 3% A. C. supply. 1. Principal Operation: Electro-Melting types.	2000


(Dr. Geeta Kakodkar)

Director of Health Services