



DR. RAM MANOHAR LOHIA INSTITUTE OF MEDICAL SCIENCES
VIBHUTI KHAND, GOMTI NAGAR, LUCKNOW
PHONES: 0522-4918555, 4918504, FAX 0522-4918506

DR. RAM MANOHAR LOHIA INSTITUTE OF MEDICAL SCIENCES
VIBHUTI KHAND , GOMTI NAGAR, LUCKNOW- 226 010
Phones: 0522-4918502, 4918505, Fax 0522-4918506 Website : www.rmlims.in

Ref. No. RMLIMS/MM(eq)/14-15/3210

Date:- 15.11.2014

Short Term Re- Tender Notice

Sealed re-tenders are invited from manufacturers/Direct importers/authorized distributors and Agents for the supply of equipment against tender no. **RMLIMS/MM(eq)/14-15/2315 dated 02.09.2014** for various departments viz, **Pathology, Surgical Oncology, Emergency Medicine, PMR** etc. and against **tender no. RMLIMS/MM(eq/MM)/14-15/2661 dated 25.09.2014** for the supply of various equipment for various department viz, **Radiology, Nephrology, Cardiology, Radiation Oncology, Anesthesiology, Pathology/Blood Bank** for superspecialities.

Details information like list of items, & their specification, earnest money deposit etc. can be downloaded from our website www.rmlims.in and www.drrmlims.ac.in and submitted with a demand draft of [Rs. 1000.00 + VAT @ 5%](Non-Refundable).

Quantity may increase or decrease in future. Start date of download of tender documents is 17.11.2014 and Last date of download of tender documents is 03.12.2014

Note:- (i) Those who have already applied in previous tender are not required to apply afresh.

(ii) Sr. no. 42 (Surgical Loupe) against tender no. RMLIMS/MM(eq)/14-15/2315 dated 02.09.2014 has been cancelled and is being re-tender with modified specification and those who have already applied for this item is required to apply afresh.

Director



DR. RAM MANOHAR LOHIA INSTITUTE OF MEDICAL SCIENCES
VIBHUTI KHAND, GOMTI NAGAR, LUCKNOW
PHONES: 0522-4918555, 4918504, FAX 0522-4918506

Short Term Re- Tender Notice Details

Sealed re-tenders are invited against tender no. **RMLIMS/MM(eq)/14-15/2315 dated 02.09.2014** from manufacturers/Direct importers/authorized distributors and Agents for the supply of equipment for various departments viz, **Pathology** (Cell Block Preparation System), **Surgical Oncology** (Euro Probe 3 for Setiel Node, Hed Light Loupe, Cystoscope with Resectoscope, Upper GI/Bariatric Cell Retracting/Abdominal Retractor), **Emergency Medicine** (Trueview Laryngoscope, Portable Dialysis Machine, Cardiac Analyzer), **PMR** (Cryo Therapy), **Neurosurgery** (Operating Table Cranial and Spine Surgery, Cortical Stimulator, Surgical Loupe, Shutoscope) and **Urology** (Camera Holding System) etc. and against **tendor no. RMLIMS/MM(eq/MM)/14-15/2661 dated 25.09.2014** for the supply of various equipment for various department viz, **Radiology** (QA Kit), **Nephrology** (Dialyzer Reprocessing System, Body Composition Analyzer and BIPAP), **Cardiology** (Cath Lab, and CPR Devices), **Radiation Oncology** (RT QA Tools, Organ Phantom, TLD and Anesthesia Workstion for LINAC & Brachytherapy), **Anesthesiology** (BIPAP and Difficult Airway Cart), **Pathology/Blood Bank** (Portable Doner Couch) for superspecialities.

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Letter No. RMLIMS/MM(eq)/14-15/

Date: 11.2014

ACKNOWLEDGEMENT

M/s.....

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Subject :- Tender Documents.

Dear Sir,

In reference to Tender No. RMLIMS/MM(eq)/14-15/3210 dated 15.11.2014. We acknowledge the receipt of Rs. 1000.00 (One Thousand) + VAT @ 5% vide D.D. No. Dated.....BankBranch towards cost of tender documents. We are pleased to forward you a set of tender documents consisting of the following:-

Please acknowledge the receipt.

Thanking You,

For Director



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Notice against Tender-Adv. No. RMLIMS/MM(eq)/14-15/3210 Date:-15.11.2014

Sealed offers are invited from reputed manufacturer/Direct Importers/Authorized Distributors/ Authorized Agents for the supply of following equipments as per conditions stipulated in the tender documents:

Sr. No.	Name of Department	Name of Equipment	Qty.	Earnest money
1	Pathology	Cell Block Preparation System	01	5,000.00
2	Surgical Oncology	Euro Probe 3 for Sentinel Node (Gamma Counter & Probes for SLNB)	01	25,000.00
3		Head Light Loupe	02	3,000.00
4		Cystoscope with Resectoscope	01	20,000.00
5		Upper GI/Bariatric Cell Retracting/Abdominal Retractor	01	5,000.00
6	Emergency Medicine	Trueview Laryngoscope	01	20,000.00
7		Portable Dialysis Machine	02	20,000.00
8		Cardiac Analyzer	01	5,000.00
9	PMR	Cryo Therapy	01	10,000.00
10	Neurosurgery	Operating Table Cranial and Spine Surgery	01	8,0000.00
11		Cortical Stimulator	01	5,000.00
12		Surgical Loupe (with modified specification)	02	4,000.00
13		Shuntoscope	01	3,000.00
14	Urology	Camera Holding system	01	1,000.00
15	Radiology	QA Kit	01 set	20,000.00
16	Nephrology	Dialyzer Reprocessing System	01	10,000.00
17		Body Composition Analyzer	01	5,000.00
18		BIPAP	01	7,500.00
19	Cardiology	Cath Lab	01	3,50,000.00
20		CPR Device (Mechanical Chest Compression Device)	01	12,000.00
21	Radiation Oncology	RT QA Tools	01 Set	5,000.00
22		Organ Phantom	01	35,000.00
23		TLD	01	40,000.00
24		Anesthesia Workstation for LINAC & Brachytherapy	01 set	20,000.00
25	Anesthesiology	BIPAP	08	60,000.00
26		Difficult Airway Cart	01	10,000.00
27	Pathology/Blood Bank	Portable Doner Couch	02	2,000.00

The tender document may download from the institute's website & submitted with a Demand Draft of [Rs. 1000.00 (Rs. One Thousand only) + VAT @ 5%] (Non-Refundable). Last date of download of tender document from website is 03.12.2014. The downloaded tender forms must accompany Demand Draft issued to prior or till 03.12.2014. The duly filled tender documents will be received till 5:00 P.M on 03.12.2014 in the JDMM camp, Ground floor of the Institute in two bid system i.e. technical bid & price bid, **in the hard copy and soft copy in MS Excel Sheet**, be kept separately. **Quantity may increase or decrease in future.** Sealed Tenders should be submitted in a two-bid system i.e. technical offer & price bid (two identical copies of each). One copy of Technical Bid shall be sealed in one envelop and another copy of Technical Bid shall be sealed in another envelop and both the copies shall be sealed in a big envelop and in the same manner one copy of Price bid shall be sealed in one envelop and another copy of Price bid shall be sealed in another envelop and both the copies shall be sealed in a big envelop. In the fifth envelop Earnest Money draft and cost of Tender Document is to be kept. All the Five envelops shall be kept in a larger envelop which is to be then sealed & posted or got received in the Institute. Tender Form has to be purchased for each item. The tender document along with Earnest Money Deposit (Refundable) for respective tenders as indicated against each item may be enclosed separately with tender documents. The Demand Draft from a **Nationalized Bank** towards Earnest Money should be in favor of the "**Finance Controller**, RMLIMS, Lucknow" payable at Lucknow. Bids will be opened in the presence of authorized representative of the bidders on scheduled date & time. The Technical bid will be opened at 12:00 P.M on 05.12.2014. Date for opening of financial bid for all rest items will be decided after opening of technical bid. If last date of the tender submission is observed as holiday, the next working day will be treated as last date. Any legal dispute for whatever reason shall be subject to the legal jurisdiction of a court of law of Lucknow (U.P) India. The Director reserves the right to accept or reject any or all tender in part or full without assigning any reason thereof. The Institute will not be responsible for any postal delay. Detailed information & specifications may be downloaded from website of the institution **www.rmlims.in/www.rmlims.ac.in**

DIRECTOR



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Tender Form No. RMLIMS/MM(eq)/14-15/

Dated: / /2014

Cost of Tender: Rs. 1000.00 + VAT @ 5%

Notice Tender-Adv. No. RMLIMS/MM(eq)/14-15/3210 Date:-15.11.2014

NAME OF EQUIPMENT _____

EARNEST MONEY Rs. _____

START DATE FOR DOWNLOAD OF TENDER DOCUMENT: 17.11.2014

LAST DATE FOR DOWNLOAD OF TENDER DOCUMENT: 03.12.2014

LAST DATE FOR SUBMISSION OF TENDER DOCUMENT 03.12.2014 TILL 5:00 P.M.

DATE FOR OPENING OF TECHNICAL BID (FOR PATHOLOGY, SURGICAL ONCOLOGY, EMERGENCY MEDICINE, PMR AND NEUROSURGERY): 5.12.2014 at 12:00 PM.

DATE FOR OPENING OF TECHNICAL BID (FOR UROLOGY, RADIOLOGY, NEPHROLOGY, CRDIOLOGY, RADIATION ONCOLOGY, ANESTHESIOLOGY AND PATHOLOGY/BLOOD BANK): 06.12.2014 At 11:00 A.M

ONLY TECHNICALLY QUALIFIED TENDERER'S FINANCIAL BID WILL BE OPENED ON THE DATE FIXED BY THE DIRECTOR, RMLIMS, GOMTI NAGAR, LUCKNOW.

The tender no. and the name of the item must be superscribed on the top of the larger envelop. The tender document along with Earnest Money Deposit (Refundable) for respective tenders as indicated against each item may be enclosed separately with tender documents. **Quantity may increase or decrease in future.** Sealed Tenders should be submitted in a two-bid system i.e. technical offer & price bid (two identical copies of each). One copy of Technical Bid shall be sealed in one envelop and another copy of Technical Bid shall be sealed in another envelop and both the copies shall be sealed in a big envelop and in the same manner one copy of Price bid shall be sealed in one envelop and another copy of Price bid shall be sealed in another envelop and both the copies shall be sealed in a big envelop. In the fifth envelop Earnest Money draft and cost of Tender Document is to be kept. All the Five envelops shall be kept in a larger envelop which is to be then sealed & posted or got received in the Institute. The Demand Draft from a Nationalized Bank towards Earnest Money should be in favour of the "Finance Controller, RMLIMS, Lucknow" payable at Lucknow. Bids will be opened in the presence of authorized representative of the bidders on scheduled date & time. Date for opening of financial bid will be decided after opening of technical bid. If last date of the tender submission is observed as holiday, the next working day will be treated as last date. Any legal dispute for whatever reason shall be subject to the legal jurisdiction of a court of law of Lucknow (U.P) India. The Director reserves the right to accept or reject any or all tender in part or full without assigning any reason thereof. The Institute will not be responsible for any postal delay.

Director



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TENDER DOCUMENT

GENERAL TERMS & CONDITIONS FOR NOTICE INVITING TENDER NO RMLIMS/PURCHASEMM(eq)/ 14-15/3210

The following terms & conditions should be complied with while submitting the tender:-

1. Tender should be submitted to the JD (MM) office or Director Camp located at Ground Floor of the Administrative Building, Ram Manohar Lohia Institute of Medical Sciences, Vibhuti Khand Gomti Nagar, Lucknow 226010, UP, INDIA under the sealed cover failing which the tender shall be disqualified.
2. The tender terms and conditions be clearly typed or legibly written giving the full name and address of the tenderers. The tenderers should quote in figures as well as in words the rates and amount tendered by him/them. Alteration, if any, unless legible and attested by the tenderers, with their full signature, shall invalidate the tender. The tender should be signed by the tenderers himself/themselves or him/their authorized agent on his/their behalf. In case the tender is signed by the agent the authority letter in his favour shall be enclosed with tender documents.
3. **VAT Registration certificate duly attested copy by a Gazetted Officer should also be enclosed. VAT, Income Tax clearance certificate along with the affidavit from a notary that the firm has never been black listed must be attached along with the tender failing which the tender will be rejected and no correspondence will be entertained in this regard. Tenderers hereby agree to all terms and conditions stipulated in N.I.T. and undertake to sign the rate Contract or Supply order within the given days from the date of order failing which Security shall be liable to be forfeited.**

The manufacturer or their Indian representative will ensure proper after sales service as per our requirements from time to time, against the guarantee/warranty clause as per the terms and conditions agreed under negotiations would be provided at our Institute without fail. Any negligence on this account shall be the sole responsibility of foreign vendor as well as Indian Agent and the liability for compensation will be fixed up by Director, Dr Ram Manohar Lohia Institute of Medical Sciences, Lucknow.

4. Sealed Tenders should be submitted in a two-bid system i.e. technical offer & price bid (two identical copies of each). One copy of Technical Bid shall be sealed in one envelop and another copy of Technical Bid shall be sealed in another envelop and both the copies shall be sealed in a big envelop and in the same manner one copy of Price bid shall be sealed in one envelop and another copy of Price bid shall be sealed in another envelop and both the copies shall be sealed in a big envelop. In the fifth envelop Earnest Money draft and cost of Tender Document is to be kept. All the Five envelops shall be kept in a larger envelop which is to be then sealed & posted or got received in the Institute. Separate Tender Form has to be purchased for each Item.
5. The tenderers should take care that the rates and amounts are written in such a way that interpolation is not possible. No blank space should be left, which would otherwise make the tender liable for rejection.
6. All Quotes shall be FOR DRRMLIMS. Delivery schedule with definite date of delivery at destination (taking into cognizance of transit facilities) must be indicated. This contractual delivery date/period should be inclusive of all the lead-time.



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7. The tenderers should clearly state whether he/they are manufacturer, accredited agents, or sole representative (indicating the name of Principal) on the top of the Bid and the authority letter must be attached with technical bid, **but authorization as Agent/Distributor/Representative for this tender only will not be accepted.**
8. The tenderers submitting his/**her** tender would be deemed to have considered and accepted all the terms and conditions. No Enquiries, verbal or written, shall be entertained in respect of acceptance or rejection of the tender.
9. **The offer shall be unconditional. Any conditional price bid will not be entertained and the tender will be treated as cancelled.**
10. The quantity shown in the Schedule may be increased or decreased to any extent depending upon the actual requirement.
11. The tenderer shall specify regarding after sales services within the Guarantee/Warranty period.
12. (a) The tenderer shall also confirm the Installation, Commissioning, Demonstration and Training to the concerned persons of this Institute.
12. (b) **The Institute reserves the right to reject or accept the tender after reviewing the previous experience to the services given by the vendor in the equipment already supplied by him.**
13. The tenderer shall submit the pre-requisite information like Civil works/Electrical details etc. within 2 weeks from the date of receipt of order or establishment of letter of credit as the case may be, if not asked for in the tender itself.
14. The Institute reserves the right to cancel/reject in full or any part of the tender which generally do not fulfill the conditions stipulated in the tender without assigning any reason.
15. The Tenderer shall quote for the latest model of their machine available within required technical specification.
16. Any action on the part of the tenderer to influence anybody of the Institute will make his/their tender liable to rejection.
17. The tenderers shall submit the offer in original copy of the tender documents duly signed on each page. Item-wise rates may be indicated on letter head of the firm (If any taxes are require, please write clearly percentage) .
18. In the case of placement of Purchase Order, the vendor (the tenderers whose tender is accepted) shall have to confirm the purchase order within 7 days from the date of the dispatch of purchase order otherwise it will be deemed that offer is acceptable to the firm. Notwithstanding any other provision, the terms & conditions and any other items given in the Purchase order will be treated as binding with "Errors & omission excepted" basis. However, if the supplier notices any discrepancy in the order, he/they must bring the same to the notice of the Institute and seek clarifications. Supplier will have to bear the responsibility for failure to take this action.
19. The Institute may, in writing, make any revision or change in the purchase order including additions or subtractions from the quantities originally ordered in the specifications or drawings. If any such revisions/changes affect the price or delivery, the same shall be subject to the adjustment of price/delivery, where required on a reasonable basis by mutual agreement in writing which should be communicated.



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20. **PBG:-** The tenderer shall also furnish performance bank guarantee of @15% of the order value before Taxes or (FOB) value at the time of shipment or supply of goods and this will be released after the successful completion of warranty period (The Period of PBG will start from Date of Installation of the Machine to the Date of end of Warranty Period).
21. The Institute reserves the right to cancel the purchase order or any part thereof and shall be entitled to revise the contract wholly or in part by a written notice to the vendor, if:-
 - The Vendor fails to comply with the terms of the purchase order including specifications and other technical requirement.
 - a. The vendor becomes bankrupt or goes into liquidation
 - b. The vendor fails to deliver the goods in time and or does not replace the rejected goods promptly.
 - c. A receiver is appointed for any of the property owned by the vendor.
22. Upon receipt of the said cancellation notice, the vendor shall discontinue all works of the purchase order and matters connected with it.
23. Earnest Money be paid in shape of DD, TDR, FDR, drawn in favour of the "Finance Controller, Dr Ram Manohar Lohia Institute of Medical Sciences, Lucknow", payable at Lucknow, U.P. India as mentioned in the tender notification.
24. Unless otherwise specified in the order, the order price shall remain firm and will not be subject to escalation of any description during the pendency of the order, notwithstanding the change in the cost of materials, labour and/or variations in taxes, duties and other levies on raw materials and components may take place while the order is under execution even if the execution of the order is delayed beyond the completion date specified in the order for any reason whatsoever.
25. The price should be on F.O.R. RMLIMS basis inclusive of all levies and duties wherever applicable which should be indicated clearly. The rates of VAT should be clearly indicated wherever chargeable. The RMLIMS is not eligible to issue 'C' or 'D' Form, of U.P. commercial tax department however the concessional rate of Central Sales Tax admissible to Research Institutions on purchase of Scientific Instruments/Equipments etc. from certain States like Maharashtra, Delhi, West Bengal etc. is applicable to this Institute. **(Please quote price in Format enclosed as annexure-C)**
26. Prices will be quoted on F.O.B. as well as estimated CIP New Delhi basis for imported goods, Indian Agency commission/rebate payable to Indian Agent, if any, shall be shown separately and that will be payable in equivalent rupee directly to Indian Agent .The Indian Agency commission will be calculated on the exchange rate prevailing on the last date of submission of Tender. The Tenderer must quote the taxes levied, if any, on the Indian Agency commission. The supplier shall be responsible to get the goods air –freighted/sea freighted & air insured/marine insured up to the Institute. **(Please quote price in Format enclosed as annexure-D)**
27. Declare separately the FOB and CIP prices.
28. The offer of the tenders shall remain valid for a period of at least 180 days from the date of opening of the tender.
29. All goods or materials shall be supplied by the tenderers whose tender is accepted, strictly in accordance with the specifications, drawings, data sheets, other attachments and conditions stated. Any alterations of those conditions shall not be made without the consent of the Institute in writing which must be obtained before any work against the order is commenced. All material furnished by the seller pursuant to this order (irrespective of whether engineering, design data or other information has been furnished, reviewed



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or approved by the Institute) will be guaranteed to the best quality of their respective kind (unless otherwise specifically authorized in writing by the Institute) and shall be free from faulty design (to the extent such design is not furnished to the Institute) workmanship and materials, and to be of sufficient size and capacity and of proper materials so as to fulfill in all respects with all operating conditions, if any, specified in this order.

30. The Equipment supplied shall carry a warranty of 60 months from the date of satisfactory Installation and commissioning of the equipment. If any trouble or defect originating with the design, materials, workmanship or operating characteristics of any materials arise at any time from the date of Installation, the same shall as promptly as possible make such alteration, repairs and replacement as soon as notified thereof, the seller shall at his own expenses and as promptly as may be necessary to permit the materials function in accordance with the specification and to fulfill the foregoing guarantee/warranty.
31. The Institute may at its option, remove such defective materials at the seller's expense in which event the seller shall, without any cost of the RMLIMS and as promptly as possible, furnish and install proper materials, repaired or replaced materials shall be similarly guaranteed for a period of not less than 30(thirty) months from the date of shipment.
32. In the event that the materials supplied do not meet the specifications and are not in accordance with the drawings, data sheets or the terms of this order, rectification is required at site, the RMLIMS shall notify to the seller giving full details of differences. The seller shall attend the site, within seven days of receipt of such notice, meet the representative of the RMLIMS and action required to correct the deficiency.
33. If the seller fails to attend the fault within the prescribed time the Dr. RMLIMS, Lucknow shall immediately get the same rectified on costs of the seller/supplier.
34. **Payment Terms :-**
 - In case of Indian goods, 100% payments may be released within 30 days from the date of satisfactory installation.
 - In case of imported goods/equipment, the payment schedule will be as follows.
 - A - 75% against shipment
 - B - 25% against satisfactory installation
35. The mode of payment will be through irrevocable letter of credit. However, Indian Agency Commission or Technical Services charges would be paid in Indian rupee after satisfactory receipt & installation of goods at site. Indian Agency Commission will be declared in the price/bid. **If Indian agency commission is not mentioned in the price bid no claim for it shall be admissible after ward.**
36. Delivery Time as mentioned in Purchase order shall be the essence of the order and no variation shall be permitted except with prior authorization in writing from the Purchaser.
37. In the event of delay in making delivery on the part of the vendor, it will be at purchaser's discretion to receive delivery with a reduction in price of the article/or equipment.
38. Force majeure shall mean and be limited to the following:
Any war/hostilities



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1 Any riot or civil Communication

Any earthquake, flood, tempest, **lightning** or other natural disaster

Any strike, or lock-out (only those exceeding ten continuous day in duration) **or other conditions** affecting the performance of the seller's obligations.

The seller shall advise the RMLIMS by registered letter duly certified by Local Chamber of Commerce of Statuary authorities the beginning and end of the above causes of delay within 7(seven) days of occurrence and cessation of such Force Majeure conditions, in the event of delay lasting over one month, if arising our causes of Force Majeure, the RMLIMS reserves the right to cancel the order and the provisions governing termination state under articles shall apply.

For delays arising out of Force Majeure, the seller shall not claim extension in completion date for a period exceeding the period of delay attributable to the causes of Force Majeure and neither the RMLIMS nor the seller shall be liable to pay extra costs provided it is Mutually established that Force Majeure conditions did actually exist.

The seller shall categorically specify the extent of Force Majeure conditions prevalent in his works (such as power restriction etc.) at the time of submitting the bid and whether the same have taken into consideration or not in the quotations.

In the event of delay **in** delivery and/or unsatisfactory manufacturing progress and supply, the RMLIMS has the right to cancel the purchase order as whole or in part without liability of cancellation charges.

In the event of rejection of non-**conforming** goods the vendor shall be allowed, without any extension of delivery time to correct the non-conformities, should however the vendor fail to do so within stipulated time, the RMLIMS may cancel the order.

39. No payment shall be made for rejected material nor would the tenderer be entitled to claim for such items.
40. Rejected items would be removed by the tenderer from the site within two weeks of the date of rejection at their own cost. In case they are not removed they will be auctioned at the risk and responsibilities of the suppliers without any further notice.
41. **Penalty Clause :-**
(A) In the case of not honoring the supply order, Ram Manohar Lohia Institute of Medical Sciences, will forfeit his EMD.

(B) In the case of non-supply of stores within stipulated period, **in case of indigenous goods** it will be at the discretion of the Ram Manohar Lohia Institute of Medical Sciences to accept delivery with late delivery clause @ 1% per week maximum to the extent of 10% of the ordered value for delayed supply, after 10 weeks the purchase order will be cancelled (The delivery period will be calculated from the date of dispatch of purchase order to the date of receipt of material in the Institute) . In the case of imported goods, the late delivery clause will be imposed @ 0.5% per week subject to the maximum of 5% of FOB value, after 10 weeks cancellation of order may be considered. (The delivery period will be calculated from the date of opening of letter of credit to the date of receipt of material at the Indian Port).



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42. The firm has to submit an undertaking that the equipment is of latest model & version, and has the latest state-of-art technology. The spare parts will remain available for at least next ten years. Software upgradation for next ten years from the installation will be included in the cost.
43. List of installations for the quoted model in India should be provided with the tender.
44. All disputes and questions, if any, arise between the Institute and the bidder out of or in connection with the terms and conditions contained herein or as to the construction of application thereof, or the respective rights and obligations of the parties there under or as to any clause or thing herein contained or by reason of the supply or failure or refusal to supply any material or as to any other matter in any way relating to these presents shall be decided by the Director of the Institute and when the decision would not be accepted by the bidder, then the matter shall be referred to the chairman of the Institute as sole Arbitrator. The chairman of the Institute may appoint any suitable Arbitrator whose decision dully approved by the Chairman of the Institute shall be final and binding upon both parties and subject to adjudication of Lucknow Court. Place for arbitration shall be at Lucknow (U.P.), India. Venue of such arbitration proceedings shall be the Institute. Arbitration and conciliation Act 1996 and rules made there under shall be applied to the proceedings under this clause.
45. A minimum of 95% uptime of equipment is to be maintained during warranty period and also after warranty period during comprehensive maintenance contract for the next five years.
46. **CMC :-**
- The supplier should provide comprehensive maintenance contract (with spare/consumables /Accessories including laborer charges) inclusive of customs and all taxes for the next 5 years (i.e. years 6 to 10 inclusive). **The CMC Rate for the sixth year should not be more than 5% of FOB and escalation in next year CMC should also not be more than 5%.**
 - **Service Tax on CMC will be treated as inclusive if the firm has not mentioned service tax separately.**
47. The price bid will be opened in the presence of authorized representative of technically qualified tenderer within reasonable time.
48. The price ranking will be carried out as under:
- i. **For Foreign Goods the exchange rate of foreign currency will be the prevailing rate on the last date of submission of Tender .**
- ii. **The prices for optional items if not required in Technical Specification will be excluded for ranking purpose .**
- iii. The ranking will be determined as under
- Total Price (Cost) = Price with all accessories as per technical specifications along with Custom duty, Clearance charges, insurance + **Cost of indigenous items if any** CMC Price (with spares & labor charges) for five years after warranty + taxes as applicable currently+ Turnkey (if applicable).
49. **Custom Duty and Custom Clearance Charges :-** The supplier will get the equipment/consignment cleared from the custom. The Custom Duty and clearance charges shall be paid by the supplier which will be reimbursed to them as actual on production of bill which shall not be more than quoted in the price bid. Freight charges will be borne by the manufacturer/Indian representative. Also the insurance will be paid and arranged by the firm effective from port of shipment to Central Store, RMLIMS, LUCKNOW.



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The Rate of Custom Duty and Custom Clearance charges must be mentioned in the price bid. If Custom Duty and Custom Clearance Charges is not mentioned in the price bid, for the purpose of L-1 calculation .

- **Custom Duty & Clearance & other Charges will be calculated @ of 15% of FOB Value or 12% of CIF/CIP value. However the payment shall be made on actual but not more than this Rate.**
- 50. All the operating and service manuals in duplicate to be provided by the vendor at the time of handing over the machine.
- 51. The percentage (%) or amount of Indian Agency Commission must be mentioned in all offers of overseas suppliers who are offering through their Indian Agency. Authorization certificate issued by the principal in favor of Indian Agent must be enclosed.
- 52. If there is any discrepancy in terms between General Terms & Conditions of Tender Document and specification of any equipment, then the details given in General Terms & Conditions of Tender Document will be considered valid and will be binding. Accordingly, the terms of comprehensive maintenance contract will be governed by the General Terms & Conditions of Tender Documents.
- 53. EMD of unsuccessful bidder shall be returned to them in due course of time.
- 54. Catalogue, data sheet, complete module and other necessary document shall be provided in original form. In the shape of Duplicate or photocopier form of documents shall not be accepted.
- 55. In case of imported goods consignment must reach Indian port within currency of L/C.
- 56. No financial documents of any tenderer will be entertained after opening of financial bid/technical bid.
- 57. The supplier will make atleast quarterly visit for maintenance during warranty period.

Enclosed 1- Annexure A

(Specifications of the Equipment)

Enclosed 2- Annexure B

(Letter of Submission)

Enclosed 3- Annexure C

(Format for Price Bid in Indian Currency)

Enclosed 4- Annexure D

(Format for Price Bid in Foreign Currency)

Joint Director (MM)

for Director

Dr. Ram Manohar Lohia Institute of Medical Sciences

Vibhooti Khand, Gomti Nagar,

Lucknow.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Cell Block Preparation System



TECHNICAL SPECIFICATIONS FOR CELL BLOCK PREPARATION SYSTEM

- Cytocentrifuge based system.
- Capable of preparing paraffin block from cell/tissue materials like fine needle aspirates, body fluids, needle biopsies and residual sediments from other cytological preparations.
- Should be designed for easy disinfection.
- Starter kit and consumables for at least 200 cell block preparations to provided
- Should meet IEC 61010 safety standards.
- Should be CE certified.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Euro Probe 3 for Sentinel node
(Gamma Counter & Probes for SLNB)



TECHNICAL SPECIFICATIONS FOR EURO PROBE 3 FOR SENTINEL NODE
(GAMMA COUNTER & PROBES FOR SLNB)

1. Wide energy range. From 20 kev to 1Mev with different probes (with or without collimator) to sense wide variety of Radio nuclides.
2. Compton /photo-peak discrimination of energy selection; predefined nuclide setting.
3. Highest field established MTBF (mean time between failures)
4. More than one probe can be connected to the console at any time.
5. LED display, adjustable measurement time and clear visibility from different angles, bar display, adjustable measurement range.
6. Clear co-relation between count rate and sound; constant measurement range, constant measurement time and adjustable volume.
7. Compatible with main electricity power (AC).
8. Two types of curved probes, one with Cadmium Zinc Telluride and other with Cesium Iodide sensor.
9. Diameter of probes: 11mm or 16mm without collimator and 15mm or 19mm with collimator.
10. Light weight small sized probes.
11. Maximum probes option / customized probes can also be manufactured.
12. The manufacturer should quote for Breast SLN evaluation probes, Colon & cervical cancer SLN probes. Rest can be quoted as optional.
13. To quote for all probes as optional which can be needed for different purposes like pelvic surgery, breast surgery, G.I Surgery etc.
14. US-FDA approved for detecting SL, N.

Performance Criteria	Medical Demand
Sensitivity	>5,000 cps/MBq
Angular Resolution	< 40° FWHM
Spatial Resolution	< 25 mm FWHM
Side Shielding	>99.9 %

- Equipment must have
- Sufficient sensitivity:
- Radial sensitivity
- Spatial resolution
- Proper side-shielding
- Good energy resolution:
- Clear display of signal:



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Head Light Loupe



TECHNICAL SPECIFICATIONS FOR HEAD LIGHT LOUPE

BINOCULAR LOUPE 3.5X (customized)

- The Loupe designed to meet the papillary distance of individual surgeon
- Should have reduced weight and increased field size
- Fixed magnification of 3.5X with field of view should be around 100mm calibrated at individual working distance of the surgeon
- Light weight frame in Titanium, weighing not more than 75gms.
- Loupe should be light and small with clear and bright vision.
- Loupe should be made in pure titanium & strong plastic temples
- Loupe to be of Keplerian Type with a prism contained internally in the magnifier offering high resolution
- The Loupe manufacturer to have the facility to modify operating parameters as and when required by the surgeons.
- Supplied with accessories like side splash protectors, cloth for cleaning, screw with keychain, box for loupe.
- Should be manufactured by a well known international firm with CE & FDA certification

PORTABLE LED LIGHT (HEAD LIGHT)

1. LED Portable Battery Pack with small optical assembly
2. Suitable for Mounting on Surgical Loupe or Headband.
3. Suitable for Mounting on Glass Spectacles
4. High power LED with production of color rendering similar to sunlight (white light)
5. Battery Pack up to 150gms and LED assembly up to 40gms.
6. Battery pack can be clipped on to the surgeon's belt.
7. Provided with 2 battery packs for long hours of surgery.
8. Should have option to choose one light module with Illumination area @ WD 400mm with 4 times step up illumination ranging from 82mm / 74mm or 66mm.
9. Brightness at WD 400mm varying between 9,000 Lux to 38,000 Lux
10. Illumination area 80mm @ WD 400mm
11. Operation Time up to 5 Hours to 18 hours with a replaceable battery for long continuous working hours with electric Charging time up to 5 hour
12. Should be manufactured by a well known international brand with CE marking



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Cystoscope with Resectoscope



TECHNICAL SPECIFICATIONS FOR CYSTOSCOPE WITH RESECTOSCOPE

- 1) HD Video Camera** : Should have following specifications :
 - Separate module from light source.
 - Digital-to-Digital recording provision for both Still & Moving images.
 - Picture-in-Picture display for endoscopic images, fluoroscopic images etc.
 - Compatibility with High Definition / 1CCD / 3CCD Camera Heads
 - Optical image enhancement of capillary vessels and fine patterns in the superficial layer of mucosa
 - Memory Card Slot for image recording
 - Should be supplied with Autoclavable HD Camera Head, Smartmedia card, firewire cable etc.
- 2) Light Source Cable** : Should have following specifications :
 - Autoclavable type for better protection against mechanical and thermal stress
 - Light weight for better handling, less torque on the telescope, less fatigue
 - Length should be around 3 meter

This system should be compatible with following procedures :

- Saline TUR
- Conventional TUR
- Open Monopolar
- Open Bipolar
- Laparo-Monopolar
- Laparo-Bipolar

Generator specifications:

Generator should have following output modes:

Monopolar, Standard bipolar, Saline bipolar for TURP.

System should be upgradable onsite to advance bipolar facility for vessel sealing.

Generator should have saline detection facility

Frequency should not be less than 400 KHz

Maximum power should not be less than 300 W

Maximum output voltage for bipolar cut should not cross 700 Volts & 200 Volts for coagulation.

Maximum output voltage range for monopolar cut should be 750V to 1500V depending on the selected monopolar mode.

Spray coagulation facility should not exceed a maximum output voltage of 4500V

Return electrode contact should monitor resistance between 20Ω to 100Ω.

Bipolar TURP resectoscope set should be supplied with the following configuration:

30 degree Telescope 24/26Fr Inner/Outer resectoscope sheaths for continuous flow,

A compatible Optical obturator,

One Passive and one active bipolar working elements,

4 Nos of HF cables

4 Nos of Ellick evacuators,

2 Nos Toomy Syringe,

1 No Cystoscope sheath and a compatible bridge,

A light guide cable with appropriate light guide adapters for the telescopes



For saline TURP application the electrode options should be:

Bipolar electrode for resection of prostate: 20 Nos
Bipolar electrode for bladder tumor resection: 10 Nos
Special electrode for Vaporisation of prostate: 10 Nos
Bipolar Needle electrode: 10 Nos
Bipolar Ball electrode: 10 Nos

Should have different precise monopolar and bipolar modes, so that the same ESU can be used for all applications

Generator should have auto start and auto stop function for bipolar modes

Should have facility to connect any monopolar HF cable without an adapter

Should have a technology for uniform and smooth cutting even with varying tissue impedance

Should have a technology for immediate start of cutting

Should have facility to monitor the return electrode contact and should give an alarm

Should work with both split and non-split patient plate

Should have facility to connect separate monopolar and bipolar foot pedal

Should have leakage protection sensor to measure the leakage current for patient and user safety

Should have provision for automatic mist and smoke evacuation facility

Should have Graphical user interface

Should have memory function to save different procedural settings

Should give both visual and audible alarm if any error occurs

Should display error codes along with the descriptions

Generator should stop functioning if any error occurs

Boot up time of the generator should be preferably less than 10 sec

Should have regulated fan for cooling

Power Supply

Voltage range : 100 to 120 V AC / 220 to 240 V AC

Frequency: 50 / 60 Hz

Maximum input power: 1500 VA

Environmental Factors

The unit shall be capable of being stored continuously in ambient temperature of -25 to 60 deg C and relative humidity of 10 to 85%

Standards Safety

Should be FDA & CE approved product.

Electrical safety conforms to standards for electrical safety IEC-60601-1



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Upper GI/Bariatric Cell Retracting/Abdominal Retractor



TECHNICAL SPECIFICATIONS FOR UPPER GI/BARIATRIC CELL
RETRACTING/ABDOMINAL RETRACTOR

1. US FDA approved
2. 2 Omni-Clamp Sterile Field Post, Double Joint
3. 1 Standard Cross Bar
4. 1 Hinged Cross Bar
5. 2 Angled Side Arm, 8" x 18" (20.3cm x 45.7cm)
6. 1 Doherty-Harrington Retractor Blade, 5 1/2" x 3 1/2" (14cm x 8.9cm)
7. 2 Sternal Retractor, 3" x 3" (7.6cm x 7.6cm)
8. 2 Mayo Swivel Retractor, 3 1/2" x 2 3/4" (8.9cm x 7cm)
9. 1 Blade Holder, 9" (22.9cm)
10. 1 Malleable Swivel Retractor, 2" x 6 1/2" (5cm x 16.5cm)
11. 1 Malleable Swivel Retractor, 3" x 6 1/2" (7.6cm x 16.5cm)
12. 7 Detachable clamps for ease of cleaning and maintenance
13. Box/ case for storage and autoclaving
14. Warranty/guarantee of product

OPTIONAL ATTACHMENTS

15. 1 Extension Arm 20" (51cm)
16. 4 Malleable Swivel Retractor, 3/4" x 2" (1.9cm x 5cm)
17. 4 Malleable Swivel Retractor, 3/4" x 3" (1.9cm x 7.6cm)
18. 4 Malleable Swivel Retractor, 3/4" x 4" (1.9cm x 10.2cm)
19. 1 Posterior Swivel Retractor, 1 3/4" x 3" (4.5cm x 7.6cm)
20. 1 Posterior Swivel Retractor, 1 3/4" x 4" (4.5cm x 10.2cm)
21. 1 Anterior Swivel Retractor, 1 1/2" x 3" (3.8cm x 7.6cm)
22. 1 FastSystem® Small WISHBONE® Frame



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Trueview Laryngoscope



TECHNICAL SPECIFICATIONS FOR TRUEVIEW LARYNGOSCOPE

- Optical view video laryngoscope with at least 5 stainless steel blades having sizes 0,1,2,3 and 4 to cover all age groups of patients from neonate to large adult.
- Should allow anterior vision of at least 45 degree or more from straight line of sight.
- All blades should have an oxygen port or an anti fogging mechanism which should allow oxygen insufflation during intubation.
- All blades should have an easy link up to all endoscopic systems.
- 2 LED light rechargeable handles (mini & standard) should be provided separate for adult and infant blades with a light output in excess of 2800 lux or more.
- Should provide dedicated 5 inch or more LCD display with a battery backup of at least 5 hours for magnifying the Optical Image produced by Optical View Laryngoscope by at least 300%.
- Screen should allow recording, storage and viewing of both single images and video clips taken during intubations.
- Magnetic release Camera head must have the focusing ring to obtain clear & sharp image.
- Should contain Re-usable stainless steel stylets having preformed shape (to be used with all Sizes of ET Tubes ranging from 2.5 to 9).
- Should provide stainless steel reusable articulating tip stylet for ET tubes from 6.5-8.5 sizes to facilitate intubations in extremely anterior cases.
- Blades and handles should conform to CE, US FDA and international standard ISO 7376.
- Electric current Protection – class -1.
- Certified to be compliant with IEC for safety of Electrically Operated Laryngoscope.
- Should have local 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.
- Comprehensive warranty for 5 year and provision of CMC for next 5 years.
- Certificate of calibration and inspection from the factory.
- List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service/technical manual.
- List of important spare parts and accessories with their part number and costing.
- Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist, The job description of the hospital technician and company service engineer should be clearly spelt out.
- Service manual in English.
- User manual in English.
- Must submit user list and performance report within last 5 years from major hospitals.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Portable Dialysis Machine



TECHNICAL SPECIFICATIONS FOR PORTABLE DIALYSIS MACHINE

1. Machine should be able to perform SLED and Conventional hemodialysis both.
2. The machine should have a color monitor display.
3. Blood Flow rate range should be 100-600 ml/min.
4. Automatic set up and priming is preferred.
5. Heparin Infusion facility should be available.
6. Positive and negative extracorporeal circuit pressure shall not affect the infusion rate.
7. It should have venous pressure monitoring range.
8. It should have arterial pressure monitoring range.
9. Alarm shall be activated for air bubbles and micro bubbles over the entire blood flow range. Ultrasonic sensor shall be used for preventing being affected by ambient light.
10. Dialysate Flow Rate should be as low as 200 and should reach to a maximum of 800 ml/min.
11. Temperature control range 35.0 degree C to 39.0 degree C.
12. The dialysate conductivity shall be adjusted by setting the sodium concentration.
13. Machine should have blood leak detector alarm.
14. Ultrafiltration rate should be 0 to 4L/hr given by the set values of UF volume and treatment time.
15. Treatment Time adjustable up to 9 hr 59 min in 1 min increment.
16. TMP monitoring should be displayed.
17. Isolated ultra filtration/Sequential dialysis should be possible.
18. The equipment shall have desirable feature of endotoxin retention filter and machine should have automatic program and guidance message for changing the filter.
19. Built-in device for measurement and monitor of effective urea clearance (K) dialysis dose (Kt/V) automatically during treatment.
20. The measurement of effective urea clearance (k) dialysis dose (kt/V) shall be performed in non-invasive, real time mode without additional disposable required during treatment.
21. Facility for heat, chemical disinfection and auto-switch off.
22. Machine should have battery backup for at least 30 min in case of AC power failure by backup battery.
23. Machine should work under extreme temperature conditions of lowest 5 degree C and highest 48 degree C and humidity of > 80 %.
24. Machine should carry a warranty for 5 years and another 5 year CMC.
25. Inbuilt Blood Pressure Monitoring.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Cardiac Analyzer



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TECHNICAL SPECIFICATIONS FOR CARDIAC ANALYZER

1. Cardiac analyzer should have facility to measure CPKMB, Trop T /Trop I And BNP.
2. Cardiac analyzer should have facility to also measure.
 - (a) Blood Gases.
 - (b) Electrolytes.
 - (c) Lactate.
 - (d) coagulation profile .
 - (e) RFT (Bun/Urea and Creatinine)
3. Institute will provide one room with electric facility.
4. Quoting company will have to provide one machine with one Backup machine, Manpower round the clock, Cartridge/Reagent.
5. Rate should be Quoted as per follows:-

Type of Test	No. Of sample	Quoted Rate
Ph,po ₂ ,pco ₂ ,HCO ₃ ⁻¹ , Cl ¹ ,Hb,BE,Na ⁺¹ ,K ⁺¹ ,AG,Mg ⁺² ,Ca ⁺²	<200/month	Minimum quoted Rate by company.
	<500/month	Minimum quoted Rate by company.
	>500/month	Should be as per existing SGPGI Rate.
Cardiac Markers, CPKMB, Trop T /Trop I And BNP	<100/month	Minimum quoted Rate by company.
	<200/month	Minimum quoted Rate by company.
	>200/month	Should be as per existing SGPGI Rate.
Lactate	<100/month	Minimum quoted Rate by company.
	<200/month	Minimum quoted Rate by company.
	>200/month	Should be as per existing SGPGI Rate.
Coagulation profile	<100/month	Minimum quoted Rate by company.
	<200/month	Minimum quoted Rate by company.
	>200/month	Should be as per existing SGPGI Rate.
RFT (Bun/Urea and Creatinine)	<100/month	Minimum quoted Rate by company.
	<200/month	Minimum quoted Rate by company.
	>200/month	Should be as per existing SGPGI Rate.

6. Machine should be USFDA/CE Approved.
7. Calibration of machine has to be done as to be written in user's manual and calibration certificate should be signed by faculty in charge of Department Of Emergency Medicine.
8. Signed calibration certificate will be must for payment to quoted company by The Institute. Contract will be valid for 2 year from the rate contract.
9. Company having minimum test time will be preferred.
10. If institution have any dissatisfaction with company the contract will be immediately cancelled without any notice.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Cryo Therapy



TECHNICAL SPECIFICATIONS FOR CRYO THERAPY

- The model should be used for cooling joints for healing processes.
- Applicator's treatment temperature should be adjustable.
- Applicator should be easily exchanged from leakage free plug connectors.
- Cryo cuff should be applied for operation or feedback controlled cooling with constant temperature.
- It should be possible to connect an Optional cooling head for short circle icing.
- It should work on 220V, 50 Hz and power consumption 250VA.
- Cuff cooling temperature should be approximately up to + 12 °C.
- Cooling head temperature should go approximately up to -10°C
- It should be CE Certified



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Operating Table Cranial & Spine Surgery



**TECHNICAL SPECIFICATIONS FOR OPERATING TABLE CRANIAL & SPINE
SURGERY**

PART 'A'

The OT table must be radiolucent table top suitable for Neuro- Cranial Spinal & surgical procedure with following features:

- 1 Should have a heavy & stable base which is lower in height from floor for C-Arm compatibility. It should have at least 4 swivelled castors. The base of the unit must lock onto floor through electronic (hydraulically with a provision of manual override for emergency).
- 2 Should have a powered **longitudinal slide** for at least **450 — 500 mm** better image access throughout the table top.
- 3 Should be electro-hydraulic with facility **for** various positions such as sitting, supine, prone and lateral suitable for use under the microscope & C-arm without obstructions.
- 4 Should have manual backup for various surgical position through **foot pump situated** in the base.
- 5 Must have lowest height from floor minimum of 550 mm & the maximum height should be at least 1025 mm.
- 6 Should have a top with dimensions 500mm (w) X 1950 — 1975mm (L).
- 7 The table should operate with a power source of 230 V, 50 Hz.
- 8 All movements should be possible by simply pressing the appropriate buttons on the Remote Control Unit & should become inactive after 5-10 sec for safety reasons.
- 9 Electro-hydraulic control to achieve the following movements or better through corded remote control.

Trendelenburg/ Rev.trendelenburg: -/+ 25°

Trendelenburg/ Rev.trendelenburg: -/+ 25°

Slide Tilt -/+ 25°

Back plate up +90° UP

Back plate down -40° down

Table lock & unlock facility

Provision of making sitting position.

0 There MUST be a provision to control any of these movements through a built in **unique manual Override system** in the event of failure of the power or remote controller. Movement to be selected through a dial gauge situated at base of the table with a foldable foot pedal when not in use to save space.

1 Manual tilting of Head Plate +45° UP

-90° Down

2 Manual movement of leg plates +15° UP; -90° down and 120° outward.

3 Should have radiolucent top to take intra operative X-Rays from either Head or leg side so that x ray plate can be inserted from any of the direction. The table design must permit a easy access of C arm Image Intensifier and particularly the base of the table must be lower in height. Please specify the height from the floor.



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4 Quoted OT table must have single button operated Auto Zero, Flex, reflex, base fix & unfit position/ movement.

5 Table should be supplied complete with the following:-

- Arm Board with cushion - (01 pair)
- Body horns for side support with clamp (1 pair)
- Anaesthesia screen with clamp (1 pc)
 - Operating chair (1 pc) preferably from same manufacturer
 - Overhead Mayo instrument trolley (2 pc)
 - Overhead L Cross bar
 - Body strap

Neuro surgical attachment from reputed manufacturer only like Mayfield, DORO, Sugita etc. bidders are requested to submit list of users of quoted attachment for reference purpose)

Headrest system for Adult & pediatric patient with necessary other attachment.

- Neurogen adaptor. 01 no.
- Base unit. 01 no.
- Swivel adaptor. 1no.
- Re usable Skull Pins (Adult) 02 sets.
- Re usable Skull Pins (Child) 02 sets.
- Horse Shoe for Adult & pediatric patient. 01 each
- Posterior cervical spine support 01 no.
- Cross bar with clamp 01 set.
- Necessary attachments for sitting position

Specifications for Spinal Attachments for OT Table
PART 'B'

Both Part 'A' & Part 'B' must be quoted by the same firm/bidder but both Part A and Part B may thereof different make.)

Radiolucent Spinal attachment for use with O.T. table as Jackson Table. The attachment must have the following specifications and features:

- (a) Adjustable wings to fit wide variety of patients and to obtain decompressed abdomen and postural various kinds of surgical intervention in prone and lateral positions.
- (b) The attachment must have height adjustable from Head end to achieve multiple positions such as flexion. Extension, Spondylolisthesis etc.
- (c) The attachment should not have any member near the floor between the table and Head end to provide unlimited and free access for Arm.
- (d) The complete attachment should be easily portable and attached to any table and move from one OT to other. Wherever require.
- (e) The patient positioning should be possible in prone (face down) and in skull clamp (May Field DORO Radiolucent attachment . The skull clamp adjustment should be easily possible in versatile manner as under:



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Lateral: 6 inch (150mm)

Height: 28 inch (710 mm)

Extension: 9 inch (230 mm)

Lateral tilt +/- (15 degree)

(f) The Supply must include one complete Radiolucent Head Clamp system which should be compatible with Spinal attachment

(g) The supplies must include the following:

Spinal table top radiolucent with 3 inch mattress /foam pad

Arm supports (one pair) for patient in supine position as well as in lateral position. Lateral supports (one pair) and security straps (2 pcs) for patient in lateral position.

(h) The Spinal attachment should be compatible with OT table of any make.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Cortical Stimulator



TECHNICAL SPECIFICATIONS FOR CORTICAL STIMULATOR

Should be specifically designed to simplify intraoperative stimulation procedures.

Should be portable, battery-operated, bipolar stimulator for intraoperative cortical mapping before cortical incision or placement of depth electrodes in patients with seizure disorders.

- STIMULATE
Constant current biphasic wave
- PROBE
Malleable Probe aids in the stimulation of discrete cortical & cortical nerves.
- MAP
Direct Cortical Stimulation to recognize eloquent tissue prior to resection of epileptogenic tissue & tumours.
 - MOTOR
Locate sensorimotor cortex & descending motor. Confirm anatomic integrity of the motor pathways during & after resection.
 - SPEECH
Identify essential language site.

Should be compatible with existing nerve monitor NIM ECLIPSE

Can be used for peripheral nerve surgeries.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Surgical Loupe



TECHNICAL SPECIFICATIONS FOR SURGICAL LOUPE

- Magnification Approx : 2.5 X
- Configurations : TTL; Flip-up & TTF
- Field Width & Depth : 4”(10cm.)
- Weight: 1.6 oz (45 grams)
- Working distance

Short: 10” – 15”(26-38cm.)

Regular: 12” – 17” (30-43cm)

Long: 14” – 19”(36-48cm.)

XLong: 16”-21”(40-53 cm.)

XXLong: 18”-23”(45-58 cm.)

- Waterproof
- Hypo allergenic
- Corrosion resistant
- **Adjustable or customized as per your requirement**
- Unique adjustable nose pad
- Lightweight
- Unparalleled in strength
- It should be five year warranty
- It should be US FDA approved



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Shuntoscope



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TECHNICAL SPECIFICATIONS FOR SHUNTOSCOPE

Sr. No	Specification	Quantity
	Set for the Treatment of Obstructive Hydrocephalus, Marsupialization of the Arachnoid cysts, Colloid Cyst, Ventricular Biopsy	
	Telescope & Sheath	
1	Ventriculoscope with Wide Angle Straight Forward Telescope 6°, angled eyepiece, outer diameter 6.1 mm, length 18 cm, working channel diameter 2.9 mm, irrigation/suction channel diameter 1.6, autoclavable, fiber optic light transmission incorporated.	1
2	Forward Oblique- Telescope 0°, enlarged view, diameter 2 mm, length 26 cm, autoclavable, fiber optic light transmission incorporated.	1
4	Telescope 45°, enlarged view, 0 3.3 mm, length 25 cm, autoclavable, fiber optic light transmission incorporated.	1
5	Operating Sheath, graduated, rotating, outer diameter 6.8 mm, working length 13 cm for use with Ventriculoscope	1
6	Obturator for use with Operating Sheath	1
7	Obturator for use with optic.	1
	Hand Instruments	
8	Scissors, pointed, rotating, dismantling, with LUER-Lock irrigation connector for cleaning, single action jaws, diameter 2 mm, working length 30 cm consisting of: Metal Handle, without ratchet, Outer Sheath, with scissors insert	1
9	Biopsy Forceps, rotating, dismantling, with LUER-Lock irrigation connector for cleaning, double action jaws, diameter 2 mm, working length 30 cm consisting of: Metal Handle, without ratchet Outer Sheath, with forceps insert	1
10	Ventriculostomy Forceps, rotating, dismantling, with LUER-Lock irrigation connector for cleaning, single action jaws, diameter 2 mm, working length 30 cm consisting of: Metal Handle, without ratchet Outer Sheath, with forceps insert	1
11	Grasping Forceps, rotating, dismantling, with LUER-Lock irrigation connector for cleaning, double action jaws, diameter 2 mm, working length 30 cm consisting of: Metal Handle, without ratchet, Outer Sheath, with grasping forceps insert	1
12	Biopsy Forceps rotating, dismantling, with LUER-Lock irrigation connector for cleaning, single action jaws, diameter 2.7 mm, working length 30 cm consisting of: Metal Handle, without ratchet, Outer Sheath, with forceps insert	1
13	Ventriculostomy Forceps, diameter 1.7 mm, working length 30 cm	1
14	Forceps, for ventriculostomy, flexible, double action jaws, diameter 1 mm, working length 30 cm	1
15	Biopsy Forceps, double action jaws, flexible, diameter 1 mm, working length 30 cm	1
16	Scissors, pointed, lightly curved jaws, double action jaws, diameter 1.7 mm, length 30 cm	1
17	Ventriculostomy Forceps, diameter 1.7 mm, working length 30 cm	1
18	Scissors, single action jaws, pointed, diameter 1.3 mm, length 30 cm	1
19	Puncture Needle	1



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	Monopolar , Bipolar & cords	
20	Spatula Electrode, unipolar, flexible, diameter 1 mm, working length 45 cm	1
21	Bipolar Coagulation Electrode, diameter 1.7 mm, working length 30 cm	1
22	Bipolar Forceps, long, flat jaws, outer diameter 2.4 mm, consisting of: Bipolar Ring Handle, Outer Sheath ,Bipolar Insert, for single use, package of 5.	1
23	Unipolar High Frequency Cord, with 4 mm plug, length 300 cm, For use with HF units.	1
24	Bipolar High Frequency Cord with 2 x 4 mm banana-plug to Coagulator , length 300 cm	1
25	Bipolar High Frequency Cord, Length 300 cm.	1
	Accessories to perform Cranial endoscopy	
26	Articulated Stand, reinforced version, only, L-shaped, with one mechanical central clamp for all five joint functions, height 48 cm, operating range 52 cm, with fastene.	1
27	Socket to clamp on the operating table, for use with European and United States standard rails, also suited for rails from 25x10 up to 35x8 mm, with lateral clamping element for height adjustment of the articulated stand	1
28	Clamping Jaw, metal, for use with instrument and telescope sheaths, clamping range 4.8 up to 12.5 mm, with fastener.	1
29	Adaptor autoclavable, permits telescope changing under sterile conditions	
	Containers for Sterilization	
	Plastic Container for Sterilizing and Storage, perforated, with lid, for two-level storage, for use with 30 cm and 36 cm Click Line-instruments, external dimensions (wxdxh): 600 mm x 145 mm x 260 mm	1

	For the Optical Placement of shunt for the treatment of Hydrocephalous	
	Scope	
1	Shunt-Scope: Miniature Straight Forward Telescope 0°, diameter 1 mm, length 16 cm, semi-rigid, with remote eyepiece and light connection, LUER-Lock adaptor, fiber optic light transmission incorporated.	1
2	Examination Sheath, O.D. 1.3 mm, working length 16 cm, with blunt obturator, 1 LUER-lock adaptor, for use with miniature endoscope.	1
	Containers for Sterilization	
3	Metal Tray, for sterilization and storage of Miniature Straight Forward Telescope, perforated, lid with silicone bridges, external dimensions (w x d x h): 373 x 178 x 35 mm.	1

The system quoted should be compatible to AesculapEndovision system available in the Institute otherwise coupler/SeprateEndovision system should be quoted along with as optional.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Camera Holding System



TECHNICAL SPECIFICATIONS FOR CAMERA HOLDING SYSTEM

SALIENT FEATURES

1. Should provide Surgeon with direct and stable vision control.
2. Should enhance the quality of the endoscopic image especially during longer procedure.
3. Should reduce contacts between endoscope and patient organs.
4. Should be free an operating hand.
5. Should enable solo surgery.
6. Should suitable for –
 - Any laparoscopic procedure
 - Any surgical technique
 - Any patient positioning dorsal or lateral decubitus.
7. Should have two control modes –
 - Full voice control – hands and feet free
 - Foot control – hands free.
8. Should have full range of movements –
up/down, left/right, move in/move back.
9. Should remove Endoscope easily any time for cleaning.
10. Should have fully immersible and autoclavable Camera Driver and Passive Arm without any additional disposables or drapes.
11. Should be compatible with all endoscopes and cameras.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
QA Tool Kit



TECHNICAL SPECIFICATIONS FOR QA KIT

MULTIMETER FOR GENERAL PURPOSE QA

- a. It should be miniaturized non-invasive measuring system for absolute dosimetry and quality control in diagnostic radiology.
- b. It should be single detector technology for radiography, fluoroscopy, CT, Dental (Intra Oral & OPG) and Mammography. Multiple detectors increases exposures, therefore it should be a single detector only.
- c. It should be used for radiography, fluoroscopy, dental, dental –pan, CT and mammography application.
- d. It should measure the KVP, dose, dose rate, irradiation time, dose per pulse, pulses, frequency, total filtration and the half value layer (HVL) in one single shot of X ray exposure.
- e. It should have full TF compensation with (4----150)KV.
- f. It should facilitate the KV and dose rate waveform.
- g. It should be connected via USB directly to a laptop or PC with latest windows operating system
- h. Detector area should have independent or orientation.
- i. It should measure automatically the all parameters upon detection of radiation.
- j. It should automatically set dose and KV ranges almost in real time so that multiple exposures can be avoided
- k. The software should provide statistics functions as well as data exports as XLS, XML or CSF, PDF file with the facility to calculate the indices automatic in the output form.
- l. It should have multiple filter settings including AI & CU for low exposure ratings.
- m. The unit should be provided with two years calibration certificate.
- n. It should be medical IIB device and in accordance with IEC.
- o. Beam Alignment Test Tool, Collimator Test Tool, Focal Spot Size Test Tool, Low & High Contrast and resolution for X Ray& Mammography shall be provided.

DIGITAL DOSE METER FOR CT QA

- It should be CE marked class IIB certified device
- It should be fully compliant with IEC 61674 For QA of R/F/D/-PAN/CT/MAM X-ray units
- It should have a provision of connection of a semi-conductor probe or an ion chamber
- The dose rate and the kV waveform Provides for automatic air density correction. It should store the last 100 measurements Data export to Excel via USB or Bluetooth Software menu



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- It should be used for acceptance testing, service procedures as well as for routine quality control X-ray measurements.
- Depending on the detector connected. It can be used for all applications in diagnostic radiology Semi-conductor detectors, flat shadow-free ion chambers (no interferences with the AEC) as well as CT ion chambers can be connected
- CT ion chamber 3.14 cm³, 100mm long/CT ion chamber 9.3cm³, 300 mm long
- PMMA based CT Head & Body phantom with carrying case
- It should also measure X Ray and display it in current and charge
- All relevant parameters are captured simultaneously in a single exposure
- Touch screen operation is preferred.
- PC interface
 - o Bluetooth (R) 2.0
 - o USB 2.0 Full-Speed



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Annexure - A

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Specifications, Terms and Conditions
Dialyzer Reprocessing System



TECHNICAL SPECIFICATIONS FOR DIALYZER REPROCESSING SYSTEM

1. Semi-automatic operation for customized cleaning.
2. Ability to clean both high flux and low flux dialyzers and hemofilters.
3. Facility to test and display residual volume and membrane integrity
4. Both audible and flash alarms
5. Facility to check fiber bundle leakage at - 250mm hg
6. Facility to disinfect and sterilize dialyzer membrane
7. Should be able to use eligible and authorized disinfectant
8. Inbuilt dedicated software and facility to upgrade software
9. Facility to test blood port connection and dialyzer header cans for proper fittings.
10. Provision of disinfectant uptake assembly, drain out let pipe & drip tray.
11. Separate cycle for water sample collection center.
12. RO Water requirement should be as low as 14-18 liters per dialyzer.
13. No pre dilution of disinfectant & to use negative pressure test on fiber.
14. Should use negative pressure during reverse ultra filtration cleaning.
15. US FDA/European CE Approved.
16. In case of breakdown, should be attended within 24 hrs. & unit should be made functional within 72 hrs.
17. It should carry a warranty of five years.



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Specifications, Terms and Conditions
Body Composition Analyzer



TECHNICAL SPECIFICATIONS FOR BODY COMPOSITION ANALYZER

- Should be Multi-frequency segmental body composition analyser. Employ latest bioimpedance spectroscopy technique covering the entire beta-dispersion information
- Raw data Impedance, Phase angle, Resistance, Reactance, Capacitance measurement.
- Calibrated for Children, Adults, Older population, Normal, Lean, obese patients
- Calibrated for different ethnicity.
- Large colour display.
- Bluetooth.
- Certified medical isolated USB
- Store 1000 patients' results.

DIRECT ASSESSMENT IN ANY CONFIGURATION:

- Single assessment
- Continuous monitoring.
- Real time monitoring.
- Segmental direct monitoring.
- Abdominal direct monitoring.
- Pre — defined testing monitoring
- 2 Segment assessment
- 5 Segment assessments.
- 3 Segment assessments.
- Star Assessment.

Parameters in Following Category:

- Dry weight for renal patient
- Body cell mass (BCM).
- Glomerular filtration rate (GFR) using plasma Creatinine.
- Fluid status (ECW/ICW and interstitial -fluid extravascular etc.)
- Body composition
- Nutritional status
- Mineral
- Protein
- Creatinine clearance
- Malnutrition screening

Abdominal composition.

- Visceral, subcutaneous fat.
- Visceral, subcutaneous fat. Depth.
- Metabolic syndrome risk
- One side full body assessment
- Both right/left full body assessment
- Both right/left full body differences
- Multi-segmental muscle volume, muscle mass, for upper and lower arms, torso, upper and lower legs assessment.
- Multi — segmental ECW and ICW for upper and lower arms, torso, upper and lower legs assessment.
- Upper arms cross sectional area of muscle, fat and bone
- Upper and lower arms, torso, upper and lower legs Multi — Segmental assessment.
- Z score
- Vector analysis
- Statistical analysis
- Complete with software
- Equipment should be easy to use and the Interactive console shall guide the user through the personal data input and measurement process without specialist assistance
- Battery Backup of 4-5days with level indicator



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- Easy Maintenance & cleaning
- Provide reference ranges based on a healthy population that allows identification of patients needing special attention
- Should have a client identity feature allowing continuous measurement and data be collected for each client effortlessly. The feature should allow large anonymous data sets to be collected for research studies
- Should be US FDA/ European CE approved
- Any fault should be attended within 24 hrs. and unit should be made functional within 72 hrs.
- It should carry a warranty of five years



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Annexure - A

Tender Document
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BIPAP



TECHNICAL SPECIFICATIONS FOR BIPAP

1. It should be suitable for Adult and Pediatric patients over 13 Kg of body weight.
2. It should use a high performance turbine flow generator for better pneumatic performance.
3. It should have an LCD monitor
4. It should have monitoring facility for Tidal Volume, RR, Minute ventilation, I:E ratio, Leakage.
5. Should have Assured Tidal volume delivery using pressure-support.
6. Technical Specifications:
 - a. Operating pressure range. 4 to 30 cm H₂O
 - b. Pressure measurement tolerance +0.5cm H₂O + 4% of the measured reading
 - c. MODES: - S, ST, T, PC, Volume Assured Pressure Support (to ensure Alveolar ventilation) IPAP - 4 to atleast 30 cm H₂O (measured at the mask) EPAP — 4 to atleast 25 cm H₂O (measured at the mask)
 - d. CPAP mode 4 to 20cm H₂O (measured at the mask)
 - e. Sensitivity settings(automatic/manual) Should have different trigger & cycle settings.
 - f. Backup Respiratory rate 5 to 30 BPM adjustable
 - g. Ti Control Ti Max 0.3 — 3 seconds.
 - h. Weight < 1.5 Kg (Weight can be relaxed for machine with an in-built battery for backup). Should have battery backup for minimum 2 hrs.
 - i. Peak flow capacity >150 LPM at 20 cm H₂O.
 - j. Alarms Range of Alarms for high pressure, apnea, Low Mv, Low VTe, High Leak, Power off.
 - k. RAMP Feature 0-45 minutes
7. Should be provided with a easy to carry travel bag.
8. Accessories: Power cord, silicon Reusable (Autoclavable) 2 small size Full face masks, 2 medium size Full face masks, 1 large size Full face mask and 2 medium size nasal masks, oxygen connector.
9. Should be USFDA/ European CE approved.
10. It should be supplied with integrated Heated Humidifier.
11. Upgradeable to SpO₂ Module & Data Module.
12. Should have a provision to download data via cable or SD card.
13. Automatic leak detection and compensation for atleast 30 Litres.
14. Supplied with a set of patient tubings, mains leads and carry bag. The filter should be washable and reusable. The tubes should be preferably heating tubes.
15. Operating voltage 220-240 v, 50 HZ.
16. Five-year comprehensive warranty.
17. Comprehensive CMC for 5 years after completion of warranty for spare parts/accessories used during maintenance
18. In case of malfunction/breakdown, the company should provide temporary back-up support within 24 hrs of registering the complaint till the time machine is repaired and returned.
19. The company should give the certificate that the model quoted is the latest and not Obsolete; and spares will be easily available for next 5-7 years.
20. List of Consumables with price frozen for 5 years should be quoted separately.



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Annexure - A

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Specifications, Terms and Conditions
Cath Lab



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TECHNICAL SPECIFICATIONS FOR CATH LAB

Sl. No.	Tender Technical Specifications of Single Plane Cath Lab
	Expected function of the System
	Dedicated flat panel detector angiography system with DSA for all angiographies and interventional procedures (cardiac). The system should be the state of the art model to be quoted with feature equivalent to the latest model launched at RSNA 2013 or later
1	Technical Specifications:
A	Gantry:
i	The system should be a ceiling suspended C-Arm/G-Arm System. The C-Arm/G-Arm should move
ii	It should be possible to pre-program the gantries for at least two examination positions.
iii	All movements of the gantry should be controllable from the table side.
iv	Should have multiple knobs with differentiation for each functionality of the Gantry, IITV, Table, etc.
v	The system should have an in-built collision protection.
vi	The gantry should have fast speed for angulations at least 15- degrees/sec
vii	RAO/LAO Angle should be for at least +/- 110 degrees
viii	Cranio/Caudal movement should be at least +/- 45 degrees
ix	Isocentre to floor distance for frontal C arm should be at least 105 cm.
B	Table:
I.	Floor mounted floating top: Tabl top length should be at least 280 cm. Width at least 45 cm
II.	Should have motorized longitudinal, vertical and horizontal movement. Must have radiolucent carbon fiber table top or equivalent. Transverse travel at least +/- 10 cm. Longitudinal travels at least 100 cm. Facility for bolus chase must be there.
III.	Accessories for the table should include head fixing aids, mattress, four radiolucent carbon fiber arm supports, drip stand, peripheral filter set and catheterisation arm support.
C	Generator:
I	Max power at least 100 KW. Maximum KVp at least 125 KVp.
II	Radiographic KVp range to be 40-125 KVp or more. FluroscopyKVp range to be 60-120 KVp or more. Output at 100 KVP to be 1000 mA or more
III	Should have automatic exposure control device for radiographic fluoroscopy and angio mode.
IV	Should have an overloading protection.
D	Tube
I	a) X-ray tube should have secondary grid switching to reduce the soft X-ray to patient and Cardiologist/Operator. b) Anode heat dissipation should be $\geq 8000W$
II	Small focal spot not more than 0.6mm with power of at least 30 KW
III	Large focal spot not more than 1.0 mm with power at least 75 KW
IV	Anode heat storage capacity 2.4 MHU or more, with advanced cooling mechanism
V	Maximum continous heat dissipation rate not less than 3 kW.
VI	At least 3 selectable programmable cu filters for reducing the dose to the patient
E	Detector of the C ARM/G Arm



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I	Detector size should be 24cm diagonally or more with at least 3 zoom fields.
II	At least 3 zoom fields, the smallest being 11 cm or less
III	Acquisition: speed of at least 25 frames per sec. Acquisition speed for DSA should be 0.5 frames/sec to 6 frames/sec or higher
IV	Pixel size not more than 190 microns. Matrix at least 1 K x 1K, in 12/14-bit depth
V	Detector quantum efficiency at least 65%
F	Collimator: At least one collimator per plane to be provided, preferably with IRIS/square type arrangement
I	Should have facility for dose measurement chamber in order to display the skin radiation dose on the monitors in the lab
II	Collimator should have facility for copper pre filtration for reducing the x-ray dose
III	Software controlled, integrated special filters should be present in collimation assembly
IV	Radiation free positioning of primary and semitransparent collimators via graphic display on live monitor.
G	LCD/TFT image monitors
I	Examination room: at least 4 monitors, at least 17" monochrome LCD/TFT or more. Two monitor each Plane Live and roadmap. Monitor for Physiology Display
II	Must be mounted together on a ceiling suspension to allow free positioning at any location. Height adjustment should be possible.
III	Control room: One LCD/TFT monitors of 17" or more for data and image viewing. Brightness should be at least 500 Cd/m ² . These monitors should have the facility for all review post processing and quantification of coronary and ventricular function for training and teaching.
H	Digital imaging system with digital angiography and pulse fluoroscopic acquisition capabilities.
I	The system should be capable to do automatic dual-axis rotational Coronary angiography to gather more information with less X-ray and contrast medium dose. The system should acquires simultaneous RAO/LAO cranial-caudal views in just one acquisition run by moving the C arm in a curved trajectory around the patient instead of multiple acquisitions
II	High resolution imaging capable of acquiring, processing, storing, displaying and reviewing in upto at least 1024x1024 matrix.
III	Continuous acquisition with digital storage in the digital mass storage device at 1024 x 1024 matrix at 12/10 bit, with real time instant access to all required images.
IV	Real time image processing algorithm applicable for both fluoroscopy and acquisition
V	Road mapping and ladsclaping facility should be available
VI	Disc storage capacity of at least 100000 uncompressed image of 1024 x 1024 matrix at a minimum of 10-bit/pixel
VII	Post processing software facilities with real time edge enhancement, positive/negative image display windowing, electronic shuttering, roaming, image reversal, zooming and magnifying with text and annotation junctions.
VIII	Rotational angiography facility at a speed of at least 55 degrees per second with acquisition frame rate of at least 25 frames per second in 1 k matrix with facility for display of subtracted and un subtracted image in the examination room
IX	The possibility of acquiring 3D Coronary Arteriography package along with the stent enhancement package. Stent enhancement with lumen subtraction facility will be preferred.



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X	The complete digital system should be networked and connected to a DICOM compatible laser/thermal camera
XI	Complete cardiovascular computation software package. This should include clinically validated coronary, ventricular quantification software packages (QCA, LVA)
XII	Algorithm/software for real time stent visualization should be possible. An easy to operate rapid calculation software for offline coronary quantification should be available
XIII	Should have dose measuring capacity
XIV	DICOM 3 ready and PACS connectivity should be feasible without any additional hardware/software requirement
XV	The system should be supplied with DICOM CD recorder for storing DSA runs, photo file images and it should be possible to review the same in any PC.
2	Essential accessories.
A	Footswitch for fluoroscopy and acquisition to be provided
B	Pressure injector compatible with the system Medrad AVANTA with 500 sets of consumables
C	Lead aprons: of standard state of the art make, light weight, with a lead equivalent of 0.5 mm. Should be double sided, 12 such aprons to be provided 6 of which should be two piece and 6 should be single piece. Design should be wrap around.
D	Thyroid guards: Twelve to be provided
E	Lead Spectacles: Four to be provided
F	Lead lined gloves: Two pairs to be provided
G	Focused ceiling mounted light with a handle for positioning the light. This handle should be removable.
H	Ceiling suspended radiation shield
I	Additional Table mounted radiation shield to be provide
J	Hemodynamic recorder/system with 12 channel ECG, and 4 number of Pressure transducer with recording & printing system
Essentials	
I	Installation should be on turnkey basis (that includes lead glass, lead lights, tiles etc.)
II	Should have FDA/CE approved & AERB NOC
III	Breakdown time 48 hours
IV	Suitable UPS to support the whole system for at least 30 minutes
V	Suitable servo voltage & frequency stabilizer for whole sysem



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Annexure - A

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Specifications, Terms and Conditions
CPR Devices (Mechanical Chest Compression Device)



**TECHNICAL SPECIFICATIONS FOR CPR DEVICE (MECHANICAL CHEST
COMPRESSION DEVICE)**

1. Battery Driven Mechanical External Chest Compression for delivering effective, Uninterrupted and consistent chest compression at a rate of 100 compression/min, at a compression depth of minimum 4-5 cm (2 inch) and Compression/Decompression Duty Cycle: $50 \pm 5\%$ as per 2010 AHA/ERC guidelines.
2. Should be capable of using for PCI procedures in cath lab.
3. It should allow to defibrillate patient while chest compression in AED & Manual mode.
4. Deployment of device should be easy and fast
5. Should work on AC & DC source
6. Should have two modes of compression (a) 30:2, (b) Continuous.
7. Weight of the device should not be more than 8 Kg.
8. Should be able to use on adult patient with sternum height 19-30.3 Cm & sternum width of 45 cm
9. Should have IP classification of 44
10. The unit should have US FDA & CE Certificate
11. Any disposable required other than energy source should be quoted separately for minimum 5 years from the date of supply. It will be added the cost of the equipment.



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Radiation Oncology



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Annexure - A

Tender Document
Specifications, Terms and Conditions
RT QA Tool



TECHNICAL SPECIFICATIONS FOR RT QA TOOL

Radiotherapy Quality Assurance tools compatible with QA requirements of high end Linacs and low energy Linac in the department

1. RT QA Tools:

- i. **Pocket dosimeter-2**
- ii. **Beam Profile check tool for daily QA(flatness for photon and electron)-1**
- iii. **Composite environment check tool-3 (wall mounted)**
- iv. **Iso-align device-2**
- v. **Aneroid atmospheric pressure measuring tool-1**
- vi. **D₂₀/D₁₀QA phantom-1**
- vii. **Water phantom of 30x30x30 cm³ for absolute dosimetry(Imported)-1**

2. QA for routine calibration and check of Linear Accelerator:

Smart quality assurance (QA) platform that integrates all of a radiotherapy department's QA needs into a single software system. It should deliver an instant update showing the status of all plan verification, machine QA and commissioning tests within the clinic. This could be accessed from anywhere in the clinic via devices including smartphones and tablets. For treatment plan verification, the system should enable to input a treatment plan, perform a measurement with the quality ion chamber array and compare results with the expected plan.

The system module should offer complete machine QA and is pre-installed with TG-142 specifications.

3. Advance plan-verification System or equivalent. A patient anatomy-centric platform for verifying advanced rotational and intensity-modulated radiotherapy plans. The system should bring together two evaluation tools into the same software: independent calculation-based verification of the treatment planning system (TPS) and measurement-based QA.

The first of these tools performs treatment-plan verification based on the patient's anatomy. Including 3D anatomical information (taken from a CT scan) into dose calculations enables the verification system to account for individual patient geometry and inhomogeneities, as well as removing the need for a QA phantom. After each plan is created in the TPS, it could be imported directly via DICOM, where an independent check could be performed using a Collapsed Cone or equivalent algorithm. The consistency between the TPS and the independently recalculated plan could be assessed.

It should facilitate second process involves checking the impact of the actual delivery in the patient anatomy. The ion chamber array attached to the Linacs gantry and response could be acquired on a segment-by-segment basis. If any deviations between the TPS-planned delivery and the real Linacs delivery are observed, then this measurement can be used to recalculate the dose in the patient anatomy prior to treatment delivery.

It should facilitate checking of the complete treatment chain every time. It should quickly verify any problem in the TPS calculation, accurate delivery, accuracy of plan transfer and that the Linacs.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Organ Phantom



TECHNICAL SPECIFICATIONS FOR ORGAN PHANTOM

Whole Body Phantom compatible with external and internal RT plan evaluation requirements.

Whole body phantom for QA for Comprehensive verification of the complete treatment planning sequence and doseimtry.

The Phantoms should provide the detailed mapping of dose distribution that is essential for evaluating radiotherapy treatment plans. The models for standard Man and Woman be supplied as per ICRU guide lines.. Breast accessories should be available for both men and women models. The Sectional Phantoms, Phantoms should be constructed with an equivalent skeleton cast inside material that is radiologically equivalent to soft tissue, bone fat etc. The lungs should be moulded to fit the contours of the natural human rib cage. The lower-density material in the lungs be designed to simulate human lungs in a median respiratory state

Phantom should be Designed for maximum flexibility, and maximum applications.

Dose measurements could be obtained by using film, TLD or individual dosimeters. To facilitate dose mapping, Phantoms should be sliced into 2.5cm sections. Optional hole grids should be drilled through the phantom's soft tissue material provided that the holes do not pass through bone. These grids allow a variety of dosimeters to be used. The Phantom should be equipped with standard, close-fitting Mix D plugs inserted in the holes. However, The Phantom vendor should also provide optional Mix D plugs made to hold TLD chips, as well as, special Thermo luminescent Capsules for Lithium Fluoride Powders



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Annexure - A

Tender Document
Specifications, Terms and Conditions
TLD (Thermo Luminescence Dosimetry system)



TECHNICAL SPECIFICATIONS FOR TLD (THERMO LUMINESCENCE DOSIMETERY SYSTEM)

TLD Reader

Most modern auto TLD Reader includes a sample drawer for a single element TLD dosimeter, a linear, programmable heating system and a cooled photomultiplier tube with associated electronics to measure the TL light output and dose calibrations.

- Planchet heating incorporates welded thermocouple for best temperature reproducibility
- Heating profile includes pre-heat, acquire and anneal cycles
- Easy to operate, service and maintain
- Heating temperature capability up to 600°C (1112°F)
- Seven decade glow curve acquisition range
- Optional neutral density filter to extend the high measurement range
- Thermoelectric PMT cooler for maximum gain stability
- Measurement quality assurance
- Freely selectable alarm limits
- Automatic background subtraction capability
- Compact and attractive

Dosimetry Performance Using LiF;Mg,Ti Chips, rods ,powder or Ca So₄:Dy (TLD-100)

- Tissue equivalence: nearly tissue equivalent
- Fading: <20% in 3 months without thermal treatment; <5% in 3 months using preheat or glow curve deconvolution
- Batch uniformity: $\pm 15\%$ std. dev. from the batch mean, tighter on special request
- Residual TL signal: <0.2% of reading, over the range, without annealing
- Reuse: more than 500 per dosimeter with <10% sensitivity change
- Threshold: <10 μ Gy (0.1 mrad) based on 2.26 std. dev. of 10 repeat readings of an unexposed dosimeter

Computer requirements (minimum): Pentium latest speed and RAM minimum 500 MB free disk space; CD-ROM drive; SVGA color monitor (800 x 600), keyboard and mouse; latest Windows*; One serial port for connection to TLD reader and one parallel port for printer and ink jet color laser printer

Compatible with: TLD dosimeters, TLD Materials, TLD Accessories and meeting the requirements of the reader.

Suitable for

- Radiotherapy planning verification
- Total body irradiation dose verification
- Skin irradiation dose verification
- Stereotactic beam output factor measurement
- Critical organ dose verification
- Diagnostic dose studies
- CT dose measurement for quality assurance
- Environmental dosimetry
- Testing for irradiated food
- Radioactive dating
- High dose verification for electronic components



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Specifications for auto /Manual Reader

Radiation	Photon, energies >5 keV; Neutron, thermal to 100MeV; Electron/beta, energies >70 keV
Measurement Ranges	10 μ Gy to 10 Gy (.1 mrad to 1000 rad) linear; 1 Gy to 20 Gy (100 rad to 2000 rad) supralinear
Repeatability	for 1 mGy (100 mrad) ¹³⁷ Cs doses, <2% STD DEV of 10 sequential measurements

- 5 years extended comprehensive warranty
- The equipment should be latest in the market
- Should have established such systems at least in top research and medical institutes in the country.
- List to be provided of the installations
- Literature of the system
- Certificate of performance from 3 major users



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Anesthesia Workstation for LINAC & Brachytherapy



TECHNICAL SPECIFICATIONS FOR ANESTHESIA WORKSTATION FOR LINAC
AND BRACHYTHERAPY

SPECIFICATIONS FOR ADVANCED ANAESTHESIA WORKSTATION

1. Should be three gas integrated anaesthesia workstation for ultra-modern and super-speciality surgical workplaces.
2. Should offer ICU quality ventilator, single user interface of 10.0" colour display and electronic gas dosing suitable for adult, children & neonates.
3. Single user interface should control and display all parameters, including control of modes, display of cylinder pressures etc.
4. The machine should be suitable for low and minimal flow anesthesia application.
5. The machine should have automatic calculations and presetting of patient specific ventilation settings via ideal body weight.
6. The machine should have fully automatic menu drive self-test and user check list. In case of emergency it should be possible to bypass the self-test completely.
7. The anaesthesia machine, vaporizer and patient monitor should be manufactured by same company
8. It should have configurable screen layouts for individual screen set ups.
9. System should be US FDA/European CE approved and should conform to EN 60601-2-13 standards/requirements for safety and essential performance of anesthesia system.
- 10 **Gas delivering system :**
 - Unit should have primary connection for Central gas supply for Air, O₂ & N₂O and, as a backup, machine should also have provision for connecting oxygen and nitrous oxide pin index cylinders; i.e. machine should be compatible and ready to receive central gas supply, as well as pin index cylinders.
 - Machine should have fresh Gas delivery & monitoring system with automatic switch-over to air in case of failure of Oxygen.
 - Audio - visual alarm for failure of Oxygen is required.
 - Control of minimum 25% Oxygen in fresh gas up to Flow > 1L/min. and at least 250 ml of Oxygen concentration for minimal flow application (fresh gas flow < 1L/min) should be standard features. No basal flow.
 - Integrated Oxygen flush with self-returning valve.
 - O₂ safety flow adjustable from 0 to 12 L/min, running through the Vaporiser for emergency backup use.
 - Machine should also have an independent fresh gas outlet for connection to Bain's or Magill circuit.
 - Fresh gas flow setting from 50ml/min to 12 L/min is required.
 - Electronic fresh gas flow – econometer to display efficiency of fresh gas usage.
- 11 **Breathing system :**
 - Compact breathing system suitable for minimal flow anaesthesia, with least patient circuit volume including absorber etc. approx. 3 L (excluding bag) for fast response to change in fresh gas composition.
 - Fresh gas decoupled / compensated breathing system for adult and children.
 - Integrated warmer for breathing gas conditioning and avoidance of condensation.
 - APL valve with direct setting of release pressure.



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12 Integrated Ventilator :

- Electronically controlled electrically/pneumatically driven ventilator; should not require any driving gas.
- Ventilator should be suitable for both adults and children without changing of bellow.
- Automatic breathing circuit Compliance correction. Light weight bellow that should not offer any constant PEEP.
- Spontaneous Breathing should be possible.
- Manual Ventilation should be possible.
- Pressure controlled ventilation.
- PCV and VCV.
- High peak inspiratory flow up to 150 LPM.
- Tidal volume adjustment range 20 ml to 1400 ml.
- PEEP from 0 to 20 mbar; should be electronically adjustable.
- Respiratory frequency from 3 to 100 per min.
- I:E : max 5:1 to 1:99.
- Should have Desflurane compensation.
- Should be able to ventilate with atmospheric air, in case of Oxygen and power failure.

13 Ventilator monitoring :

- Monitoring of Volume, Pressure & Oxygen.
- Should monitor patient compliance.
- Should curves & Loops with fast analysis of change in lung mechanics provided by simultaneous display of reference & real time loops.
- Should display EtCO₂, O₂ as well as anaesthetic agent and automatic identification of agent.
- Bar graph display of volumeter, tidal volume, and the difference of inspiratory and expiratory tidal volume.
- Trending for alarms and measured values with graphic trend display.
- The machine should calculate agent consumption and agent uptake by patient on a case by case basis and display of fresh gas consumption in the unit logbook.

14 Alarms:

- The machine should have adjustable alarm limits for all the parameters with auto set alarm function.
- The machine should have automatic display of MAC values and automatic activation of low agent alarm.
- Airway pressure low limit should automatically changes with the PEEP setting changes.

15 Machine should have 3 nos. RS 232 connectivity port for interface to patient monitor / HIS for automatic data acquisition.

16 Following upgrades should be offered – (Quote unit prices in price bid)

- Pressure Support, PS with CPAP, PS with PCV, VCV, SIMV with minimum Tidal Volume up to 5 ml.

17. Vaporizers :

- Temperature / pressure compensated and flow independent Isoflurane vaporizer. Vaporizer should have extended delivery range from 0 to 6 Vol. %. Vaporizer should have transport lock to provide hermetic sealing of agent chamber during transport & storage.
- The vaporiser design should be maintenance free.



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18. **Scope of supply** for the nebulizer should consist of the following components:- Control module, control module cable, nebulizer unit with filler cap for the medications, T-adapter with plug, AC/DC adaptor & mountings

Scope of Supply:-

- 3 gas Anaesthesia workstation.
 - Trolley with drawer.
 - Writing surface.
 - Pin Index yokes for O₂ & N₂O.
 - Pipeline connections for all three gases.
 - Integrated Ventilator & monitor.
 - Semi-closed breathing system.
 - Adult & Paediatric autoclavable silicon patient tubings.
 - Anaesthetic mask size – Adult-4 & child-2 of different sizes.
 - Vaporisers for Sevoflurane & Desflurane.
 - Central gas supply hoses (Color coded).
 - Installation of AGSS in the operation theatres where these workstation will be installed.
 - Nebulizer control module, control module cable, nebulizer unit with filler cap for the medications, T-adapter with plug.
 - AC/DC adaptor & mountings.
 - Instruction Manual and CD/DVD for use.
-



SPECIFICATIONS OF ANESTHESIA MONITOR

1. Should be suitable for adult, paediatric neonatal patients monitoring.
2. Should display large fonts and provide access to 16 waveforms on 14'' & above display with touch screen color.
3. Should provide another 'slave' monitor at the Linac console room, which should be fully networked with the primary monitor in the treatment room.
4. Should have up to 96hours of real time trend and patient information at the bedside as standard.
5. Should have event recall minimum up to 150 events (20sec for all monitored parameter at the time of the event regardless of what is displayed on screen), drug dose calculations, alarm logs, Oxygen/ventilation & Hemodynamics calculations as standard.
6. Should have minimum ECG, NIBP, SpO2, 2 IBPs, 2 Temp. as standard . All other parameters should be through upgrades as pods or modules/ software.
7. Should have Arrhythmia detection including all life threatening arrhythmias such as Vent Fib, Asystole, Vent.Tachy, Brady as standard feature.
8. Should have manual as well as automatic setting of screen format, mini trend and should support min 10 different layout.
9. Should have user selectable parameter priority & colour selection for parameter on screen.
10. Should have excellent cable management with as minimum as possible cables at monitor & patient end for maximum comfort to patient as well as user.
11. Should have Defibrillator and ESU protection, ECG Sync, IABP interface (ECG and Arterial for triggering and deflation with a device delay of <20 millisecc).
12. Should be supplied with Wall mounts.

Should have following parameters:-

1. **ECG**
 - 5 lead or 6 lead ECG cable with facility of dual V lead display.
 - Should have single lead wire for all electrodes (RA, LA, LL, RL, V).
2. **RESPIRATION**
 - Through impedance pneumography/ Capnography method for Adult, Pediatric & Neonatal patients.
3. **SpO2**
 - Should have option for both Nellcor as well as Masimo SET technology with respective sensors.
 - Should be supplied with Masimo SET technology with Masimo sensors.
4. **NIBP**
 - By oscillometric principle of measurement with stepwise deflation.
 - Should display Systolic, diastolic, mean pressure in large easy to read display.
 - Should have manual/ stat mode or automatic mode with adjustable time intervals from 2 – 240 minutes and adjustable alarm limits.
 - Monitor should have capability for continuous beat to beat arterial pressure monitoring through non-invasive technique.
5. **IBPs** -Simultaneous monitoring of 2 IBP's should be standard.
6. **Temperature** – two temperature one core and second skin simultaneous monitoring.
7. Simultaneous monitoring of Dual temp and dual IBP should be possible.

Standard Scope of supply must include:-

- Main unit – 1 no.
- 5 lead ECG Cable – 2 cable suitable for adult patients & 1 cable suitable for pediatric patients.



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- SpO2 finger sensor with extension cable – 2 nos. per monitor suitable for adult & 2 nos. per monitor suitable for pediatric patients.
- Skin temperature Probe – 1 no. per monitor.
- Rectal / Esophageal temperature probe – 1 no. per monitor.
- NIBP Hose – 2 nos. per monitor.
- Adult & Paediatric Cuff – 2 nos. per monitor.
- IBP reusable cable for 2 IBP.
- Instruction Manual and CD/DVD for Use.



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Anesthesiology



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Annexure - A

Tender Document
Specifications, Terms and Conditions
BIPAP



TECHNICAL SPECIFICATIONS BIPAP

1. NIV for adults and pediatrics.
2. Light weight, small, user friendly and quiet device.
3. Should have the following modes.
S -T (spontaneous — timed), CPAP (Spontaneous), T (Timed), PAC (Pressure Assisted Control).
4. Should incorporate latest algorithms for leak compensation and synchronization.
5. Should have color screen for real time monitoring of minute volume/ tidal volume, respiratory rate, percentage of leak, I:E ratio, Delivered IPAP and EPAP.
6. Should be able to display real time flow and pressure curves simultaneously and the Ti bar graph.
7. Should include user adjustable alarms and essential nonadjustable fixed alarms for patient safety.
8. Should include alarms for leak, power supply failure, apnea, patient circuit disconnection, occlusion, low internal battery etc. and should have adjustable alarms for minute volume, high/low pressure, RR, apnea.
9. Should have oxygen port to accept higher flow up to 30l/min of oxygen to achieve a high FiO₂.
10. Should provide and maintain optimal humidification at patient desired temperature regardless of ambient humidity changes throughout night.
11. Pressure range: IPAP- 4/ 2-25cm H₂O, EPAP-2/4-25cm H₂O.
12. Pressure support 0-30cmH₂O.
13. Respiratory rate 5-40bpm or more.
14. Rise time upto 600msec.
15. Inspiratory time upto 3sec or more.
16. Five trigger and cycle settings.
17. Air outlet should be 22mm taper compatible with ISO 5356-1:2004 .



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18. Machine should be fitted with electrostatic fibre mesh air filter.
19. Should have built in internal battery for minimum 2 hrs of back up and should have capability to add optional external battery.
20. NIV ventilator to be supplied with patient ckt 2nos, air inlet filters, power supply pack, hospital full face mask, reusable full face mask, Oxygen connector, Fio2 monitoring accessories.
21. Power supply input 100-240v ac.
22. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Difficult Airway Cart



TECHNICAL SPECIFICATIONS DIFFICULT AIRWAY CART

It should have a Combination of LMAs, lightwands, transtracheal jet ventilation set up, tube exchangers, emergent percutaneous tracheostomy set up, light source and 2 flexible bronchoscopes

Contents

TOP SHELF

End tidal CO2 monitor

MIDDLE SHELF

Fiber optic Light Source, Bronchoscope

Kangaroo Light Source for thin fiberoptic equipment

TABLE TOP

Work area for bronchoscopy equipment

Tray for laryngoscope blades, sizes 0-4 (straight & curved)

DRAWER 1

Equipment for bronchoscope use:

1. Airway oral and nasal (all sizes)
2. Swivel adapters,
3. Fiberoptic Intubating Mask
 - Size 1 (1) 30-40-001
 - Size 3 (1) 30-50-333
 - Size 5 (1) 30-40-005

DRAWER 2

1. Thin non-flexible fiberoptic scope / retromolarfibroscope.
2. Magill forceps
 - Pediatric
 - Adult

DRAWER 3

1. Reusable Laryngeal Mask Airway all sizes
2. Tracheal Lightwand, all sizes
3. Intubating LMA all sizes, - Extra AAA Batteries for Lightwand handle -3sets
4. Combitube, all sizes
5. Halogen Headlight and power Cord (1)

DRAWER 4

Flexible Bronchoscopes 2.5 and 5 mm

DRAWER 5

1. Jet Ventilator for Transtracheal Jet Ventilation (1)
2. Accessories for Transtracheal Jet Ventilation:
 - 14 G angiocath (2)
 - Clean Adapter from a 3.5 endotracheal tube (2)
 - Clean Adapter from a 7.5 endotracheal tube (2)
3. Airway Exchange Catheter with Rapi-fit adapters
 - ID 2.3mm for endotracheal tube ID 4mm or larger (2)
 - ID 3.0mm for endotracheal tube ID 7mm or larger (2)
4. Emergency Cricothyrotomy Catheter Set (1)
 - 3.5mm ID, 3.8cm - Extra AAA Batteries for Lightwand handle (3)
5. Retrograde Intubation Set (1)
6. Tracheal tube cuff pressure monitor



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Pathology/ Blood Bank



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Annexure - A

Tender Document
Specifications, Terms and Conditions
Portable Doner Couch



TECHNICAL SPECIFICATIONS FOR PORTABLE DONOR COUCH

1. Required fully upholstered donor chair, designed to provide a comfortable position to the donor and features variable positioning for either arm as well as reclining and upright body position.
2. Metal frame epoxy coated.
3. Soft touch mechanism for adjusting position of the chair.
4. Metal bracket support on both side.
5. Lifting capacity of approx 200 kg
6. Power: 220V - 240V, 50 Hz, single phase AC.
7. Weight: 70 kg (approx)
8. Dimensions (approx):
 - Seat height: 50cm
 - Length of seat and let rest: 100 cm - 105 cm
 - Length of back rest: 67 cm
 - Width: 47 cm
 - Width of arm rest: 13 cm
 - Length of arm rest: 57 cm
9. Cushions: 2.5 inch thick
10. CE certified
11. Chair should have paper roll holder



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<u>Tender Adv. Ref No.RMLIMS/MM(eq)/14-15/</u>	
Make & Model No.	
Quoted PRICE: INR	
Accessories in INR	
Price + Accessories Amount	.....
VAT/CST (applicable as per rules)	.....
Amount (Price + Accessories Amount+ VAT/CST)	.....
CMC (From 6th to 10th Year)	.....
6 th	.....
7 th	.....
8 th	.....
9 th	.....
10 th	.....
Total CMC	.....
Service Tax on CMC (applicable as per rules )	.....
CMC Price + Service Tax	.....
Amount + CMC with Service Tax (6th to 10th yrs) in INR	
Total Cost [Amount + CMC with Service Tax (6 th to 10 th yrs) in INR]	-----



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Annexure-D	
<u>Tender Adv. Ref No.RMLIMS/MM(eq)/14-15/ Dated:</u>	
<u>EQUIPMENT Name:</u>	
Make & Model No.	
Quoted FOB PRICE: SGD/JPY/Euro/USD/YEN etc.	.....
* Accessories (if any) in Forigen Currency	.....
Price + Accessories	.....
Less Indian Agency Commission (if any)	.....
Net FOB Value	.....
Add Freight & Insurance	.....
Total CIP / CIF Value	.....
* Custom Duty	.....
* Clearence Charges	.....
* Add Indian Agency Commission	.....
Cost of Equipment + Custom Duty Charges & Custom Clearance Charges	.....
* Accessories (if any) in INR	.....
VAT/CST (applicable as per rules)	.....
Total Accessories Price (INR) + VAT/CST	.....
CMC (From 6th to 10th Year)	.....
6 th	.....
7 th	.....
8 th	.....
9 th	.....
10 th	.....
Total CMC Value	.....
Service Tax on CMC (applicable as per rules)	.....
Total CMC Price (6th to 10th yrs) + Service Tax	.....

NOTE:- (*) Conditions applied.

* **Custom Duty** will be paid on actual or Quoted rate, whichever is less.

* **Clearance Charges** will be paid on actual or maximum @ 1% of FOB Price, whichever is less.

* **Indian Agency Commission** will be paid on the conversion rate of comparative chart on which basis the P.O. will be awarded. The IAC will be paid after final installation of the machine.

* **Accessories** Detail List with Price may be annexed with this format.



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Annexure - B

LETTER OF SUBMISSION

Tender No. RMLIMS/MM(eq)/14-15/3210

Dated 15.11.2014

Full Name of the firm _____

Address _____

Phone & Fax No. _____

To,

The Director,

Dr. Ram Manohar Lohia Institute of Medical Sciences,

Vibhooti Khand, Gomti Nagar,

Lucknow.

Dear Sir,

I/We hereby offer to supply the stores detailed in the schedule hereafter or such portion there of as you may specify for the acceptance of tender and the price given in the said schedule and agreement to hold this offer open till _____. I/We shall be bound by a communication of acceptance dispatched within the prescribed time.

I/We have understood the instructions to tenderer and the conditions of contract and have thoroughly examined the specifications/drawings and / or / pattern quoted in the schedule here to and am/ are fully aware of the stores required and my/ our offer is to supply stores strictly in accordance with requirement

Yours faithfully,

(Signature of Tenderer)

Dated :