



Government of West Bengal  
Office of the Principal  
Nil Ratan Sircar Medical College  
Kolkata – 700014; Phone: 033-2286-0033  
Website: [www.nrsmc.edu.in](http://www.nrsmc.edu.in); e-mail: [principalnrsmc@gmail.com](mailto:principalnrsmc@gmail.com)

Memo No. NMC/STORE/ 4273

Date: 31.8.2019

**E-TENDER NOTICE (NIT No: 29/ 2019-20) FOR PURCHASE AND INSTALLATION OF  
EQUIPMENTS FOR DIFFERENT DEPARTMENT OF  
NIL RATAN SIRCAR MEDICAL COLLEGE, KOLKATA - 700014.  
(Through Pre-qualification)  
(Submission of Bid through NIC e- tender portal)**

The Principal, Nil Ratan Sircar Medical College, Kolkata – 700014, is going for e-Tender on behalf of the Health & Family Welfare Department, Government of West Bengal for obtaining the rate of equipment as per list from bonafide Manufacturer/Direct Importer/Authorized Distributors. Necessary earnest money to be submitted for participation in the Tender is appended in the table below. Exemption of EMD is applicable to agencies having valid, item specific certificate issued by appropriate authority of Govt. of West Bengal.

1)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Heart Lung Machine	CTVS	01 pc	Rs. 30000.00

2)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Portable Colour Doppler Ultrasound Unit	Anesthesiology, Chest, Neurosurgery, Plastic Surgery	05 pcs	Rs. 30000.00

3)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Micro Drill	Neurosurgery	01 pc	Rs. 30000.00

4)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Neuro Navigation	Neurosurgery	01 pc	Rs. 30000.00

5)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Operating Microscope	Neurosurgery, Plastic Surgery	02 pcs	Rs. 30000.00

6)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Choledochoscope	General Surgery	01 pc	Rs. 20000.00

7)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	USG Machine with Echocardiography probe, curvilinear probe	Respiratory Medicine	01 pc	Rs. 20000.00

8)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	OT Light with Camera	Different Dept.	05 p	Rs. 30000.00

9)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	OT Table	Different Dept.	07 pcs	Rs. 30000.00

10)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	OT Table with Ortho Attachment	Orthopedic	2 pcs	Rs. 30000.00

11)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	OT Table with Neuro Attachment	Neurosurgery	2 pcs	Rs. 30000.00

12)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Surgical Diathermy	Plastic surgery and different Dept.	04 pcs	Rs. 30000.00

13)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Real Time PCR	DBT Nidan Kendra	01 pcs	Rs. 30000.00



14)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	-80° refrigerator	DBT Nidan Kendra	01 pcs	Rs. 10000.00

15)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Gel Documentation System	DBT Nidan Kendra	01 pcs	Rs. 30000.00

16)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Reciprocating Saw with all attachment	Orthopaedic	01 pcs	Rs. 20000.00

17)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	High flow nasal Cannula	Pediatrics Different Department	04 pcs	Rs. 20000.00

18)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Penta head Microscope	Pathology and hematology	02 pcs	Rs. 20000.00

All bidders must complete their technical demonstration of their quoted items within ten (10) days from the date of opening of technical bid to the concern Department.

#### 1. General Instructions:

In the event of e-filing, intending bidder may download the tender documents free of cost from the website: <http://wbtenders.gov.in> directly with the help of Digital Signature Certificate or from the Health & Family Welfare Department's website [www.wbhealth.gov.in](http://www.wbhealth.gov.in).

#### 2. Submission of Bids:

Both Technical Bid and Financial Bid are to be submitted concurrently duly digitally signed, in the website <http://wbtenders.gov.in>. All papers must be submitted in English language.

#### 3. Time Schedules:

The time schedule for obtaining the bid documents, pre bid meetings, registration with the tendering authorities, the submission of bids and other documents etc. will be as per the list provided in clause no 23 as given below.

#### 4. Eligibility for Quoting:

Only Manufacturers/direct Importers/Authorized Distributors are eligible for quoting. The price is to be quoted in Indian Rupees including cost of insurance, packing, forwarding, freight charges, clearing charges and installation of the new instrument and exclusive of GST and other taxes which are to be quoted separately in the BOQ. Agency commission is not permissible.

**5. Submission of Tender:**

The tender is to be submitted in Two Bid System (Technical Bid or Bid A & Financial Bid or Bid B).

(A) **Technical Bid or Bid A:**

**"BID A": PART I**

**File containing Technical Bid only - single file with multiple scanned pages containing Statutory and My documents separately.**

**(a) STATUTORY** Cover containing the following documents:

(SINGLE FILE MULTIPLE PAGE SCANNED)

Essential Requirements of the Tendering Firm for participation" shall contain all papers related to the essential requirements of the Renderer for participation in the tender viz.

Sl. No.		Page no
1	<b>Duly filled in CHECK LIST in the prescribed format. Page number of documents must be mentioned in the check list before uploading the same.</b>	
2	Application in the prescribed format given in Annexure I	
3	Authorization letter of signatory from Company in Annexure II	
4	Copy of agreement between the manufacturer and the Distributor in Annexure III	
5	No conviction certificate in the form of an Affidavit as per Annexure-IV	
6	A Proof of submission of applicable END	



**(b) NON STATUTORY/MY DOCUMENTS** Cover Containing the following documents:  
Essential Requirements of the Tendering Firm for participation" shall contain all papers related to the essential requirements of the Renderer for participation in the tender viz.

Sl. No.	Category	Sub Category	Sub Category Description	Page No
A	Certificates	A1. Certificates	PAN Card of the authorized signatory	
			Professional Tax Registration certificate	
			PUC in respect of the manufacturing unit	
			GST Registration certificate	
B.	COMPANY DETAILS	B1. COMPANY DETAILS 1	Certificate of country of origin	
			Registration with Registrar of Companies	
			Trade License in the name of participating firm	
C.	CREDENTIAL	C1: CREDENTIAL 1	Manufacturing License with validity	
			Import License with validity (for importers)	
		C2 : CREDENTIAL 2	Manufacturer's guarantee(in case of Distributors and Direct Importer, to be obtained from manufacturer)	
			A declaration in respect of existence of a fully equipped service centre in or around Kolkata in respect of the relevant item. List of purchaser in Govt. Institutions of repute, for last two years	
D.	FINANCIAL INFO	PAYMENT CERTIFICATE 1	Income Tax Returns submitted for the last three years	
		Audited P/L & BALANCE SHEET		
		P/L & Balance sheet of the last three years		

**BID A": PART II**

Technical specifications of Instrument (in PDF/Excel format. Must mention Make, Model, exact features of the offered item against each point given in the specification chart). **Improper filling &/or suppression of facts/false statement will lead to disqualification and penalty in the form of permanent black listing.**

**(B) Financial Bid B**

**COVER "B":** Separate file containing financial document only.

(a) Financial Bid: BOQ in INR (in excel sheet)

The folder marked as "Financial Bid" shall contain ALL INCLUSIVE PRICE in INR only and should include base price along with the cost of allied works and services which are to be undertaken (like installation, commissioning of equipment or PC etc.), cost of insurance, packaging, forwarding, delivery



charges, clearing charges of the new instrument to be purchased. **GST and any other applicable tax should be quoted separately. Five years CAMC rate should also be quoted separately** in the template for Bill of Quantities (BOQ). However, the L1 will be determined on base price plus admissible taxes only. GST quoted will be directly remitted to Government account as per existing norms of Finance Department.

The tenderers are required to submit the hard copies of Cover A (Transaction document of EMD , General Documents and Technical Specifications) as per schedule described in the time line vide clause 23, preferably by **speed post/ courier**, to the office of the Principal, NRS Medical College, Kolkata. Submission of hard copy of Cover A to the office of the Principal, Nil Ratan Sircar Medical College, Kolkata, is for reference only while examining the technical bid on line and will not be treated as substitute for on line submission. **Submission of hard copy of Bid B is totally prohibited.**

#### **6. Evaluation of Tender:**

During tender evaluation process, "Bid A" will be opened first. Those tenderers who would qualify the Statutory & Non-Statutory requirements on the basis of technical and commercial documents will be identified and "Bid B" i.e. financial bid of only those qualified bidders will be opened. Verification of hard copies of the audited balance sheet and Profit & Loss Accounts of the Tenderers for the last three years will be made if deemed necessary before opening the Financial Bid (Bid B) of the technically qualified bidders. If found suitable on the basis of above pre-qualification, the tenderer quoting the lowest rate, will be considered as successful.

#### **7. Earnest Money:**

The earnest money of the tenderer is liable to be forfeited if the tenderer withdraws his tender as a whole or for any particular item or items at any stage after opening of the tender or fails/refuses to enter into written agreement for any or all of the items of his accepted bid within the time specified when requested to do so or fails to furnish Performance Bank Guarantee within the stipulated time. **EMD should be deposited online in the Pooling Account of Government of West Bengal maintained at ICICI Bank, RN Mukherjee Road Branch in the manner as prescribed in Government Order no. 3975-F(Y) dated 28/07/2016. (Order copy is available at the site-[www.wbfin.nic.in](http://www.wbfin.nic.in))** Hard copy of Bid A should reach the office on or before the stipulated date as mentioned in clause 23.

#### **8. Rate:**

The price is to be quoted in INR only including cost of insurance, entry tax, packaging, forwarding, delivery charges, clearing charges and installation of the new instrument. The basic rate should be furnished inclusive of Transportation Cost, Insurance, Testing Charges, Incidental Charges etc. but excluding GST and any other applicable taxes etc. which should be quoted separately in the template for Bill of Quantities (BOQ).

#### **9. Order & Supply:**

The tendering authority has the liberty to ask for **performance demonstration** of any item during any stage of the tender process, before placing order for supply. In case of dissatisfaction, the authority will have the right to disapprove the offer of L1 bidder and go for the next bidder. Orders for supply of the approved products will be placed with the successful tenderers after execution of agreements and such supply shall have to be made in such installments as may be fixed or spread over the period to be specified in the supply orders to be made in pursuance of the agreements. The equipment is to be



transported in such packaging so as to avoid damage to primary package of manufacturer. The successful tenderer will have to supply within the specified time schedule that had been assured at the time of selection as supplier.

**The tendering authority will be at liberty to enhance the quantity of the item tendered up to 40% of the original required quantity. Bidder will have to consider the same while bidding as supply of the enhanced quantity will be mandatory as the original one.**

**10. Withdrawal /Cancellation & Purchase Policy of Tendering Authority:**

The tendering authority reserves the right to withdraw any item from the tender at any stage. The selection of such item, if already made in favour of any tenderer, shall be treated as cancelled. The tendering authority reserves the right to reject or accept any tender or part thereof at any stage or to split any tender without assigning any reason. Withdrawal of tender or any revision after submission of tender by the tenderer will not be allowed.

Purchase will, however be made following the existing purchase policy of the Govt. of West Bengal and its amendment(s) made from time to time. The purchase policy of the State Government as provided in the West Bengal Financial Rules, the policy of price preference in particular incorporated under Notification No. 10500-F dated 19.11.04, 5400-F(Y) Dated 25/06/2012 and subsequent relevant orders should be observed in considering the tenders.

**11. Important Instruction with regard to Submission of Tender:**

The rate should be quoted in Indian Rupees for a particular brand or model (model no. of the offered item only must be mentioned in the appropriate column of the 'Tender Form'. Alternative offer will not be accepted). The tender shall be cancelled for the quotation of item without its brand name, model, model no. etc. Detail information regarding the manufacturer and the item quoted in the 'Tender Form' should be furnished.

**12. Spare Parts:**

The Bidder will undertake that supplies of necessary maintenance equipment and spare parts will be made available for all items/equipment and the complete system for at least five years on a continuing basis. However, this does not relieve the supplier of any warranty obligations under the contract.

**13. Guarantee / Warranty Period:**

i) The machine/Instrument should be covered by free on-site comprehensive Warranty for one year after successful installation. The tenderers must quote for 5 (Five) years' comprehensive on-site AMC of entire system (including all spares & labour) after the date of completion of free warranty period. The CAMC charges for 5 years to be quoted in the BOQ, will however be determined on extant Govt. rules in this regard.

ii.) All faults appearing and their rectification shall be periodically advised to the institute, the period being not more than two weeks.

iii.) Any lacuna or lacunae noticed in the functioning of the installation as a result of any design or other feature shall be rectified by the supplier free of cost within 72 hours of call log.

**14. After Sales Services and Maintenance Contract:**

After sales service must be provided by the supplier, during and after warranty period of the equipment. Selected vendor will remain liable to attract penalty for violation of machine downtime as per agreement. The selected vendor or his authorized servicemen has to attend the machine within 72 hours of Call Log. It is desirable to have a fully equipped service centre in or around Kolkata.

**15. Delivery, Installation and Commissioning**

i. Delivery of the goods at the purchaser's premises shall be completed by the Supplier in accordance with the terms specified by the purchaser.



ii. The installation, testing and commissioning of the proposed system shall be completed in accordance with the order.

iii. All items are to be delivered within six weeks from the date of placement of order.

iv. In case of distributor, the firm should be direct distributor of manufacturing unit. **Sub distributor authorization by distributor will not be accepted at all.**

**16. Penalty Clauses:**

**PENALTY FOR FORMATION OF CARTEL OR FURNISHING OF FRAUDULENT/ MISLEADING DOCUMENTS:** If during the tender process or at any stage during the validity of the tender period, it is found that a tenderer(s) has formed a cartel in what so ever form or name to fix up the rates or suppliers to the detriment of the fairness of the tender process, penal measures shall be initiated. Similar penal measures shall also be initiated against those tenderers who have submitted false/ misleading/ fraudulent documents or made incorrect declarations. The penal measure will be forfeiture of Earnest Money, forfeiture of Performance Bank Guarantee if enlisted as a supplier in addition to any other legal action against the firm.

**17. Appeal:**

Appeal against the decision of the Principal, Nil Ratan Sircar Medical College, Kolkata and then to impose such a penalty will lie with Tender Selection Committee. Review against the decision of the Tender Selection Committee (TSC) will lie with Health & F.W. Dept. of the Govt. of W.B. The Special Secretary/Secretary/Principal Secretary will be the appellate authority within the Department of Health & Family Welfare, Government of West Bengal. Before imposing any penalty as per clauses 20, 21 and 22 the concerned supplier may appeal to the authority citing the proper reasons for non- imposing the penalty as stated.

**18. Agreement:**

On a tender being accepted, intimation of acceptance will be forwarded to the tenderer by Principal, Nil Ratan Sircar Medical College, Kolkata. After communication of the same, the tenderer will have to execute agreement in the prescribed form with the Principal, Nil Ratan Sircar Medical College, Kolkata. In case any direct purchasing unit wishes to go for a separate agreement, the head of the purchasing unit must get written permission to that effect from his controlling authority. This present document and the tender forms filled in by the tenderer or copies thereof in so far as they are not inconsistent with these terms & conditions will be incorporated as part of the agreement. Such agreement will be binding on the tenderer.

**19. Validity Period of Agreement:**

The contract period will be for a period 01 (one) years from the date of finalization of tender **which can be extended for a further period of 6 months if Tender Selection Committee feels necessary.**

**20. Performance Bank Guarantee:**

The performance bank guarantee will be mandatory for all suppliers and will not be waived in any case. The successful tenderers shall be required to furnish the 'Performance Bank Guarantee' from any Nationalized/Scheduled Bank acceptable to Govt. of West Bengal for One year @ 10% of quoted base rate per item for which the tenderer has been selected as supplier. The performance bank guarantee will have to be renewed after completion of Free Warranty period, for additional 5 (Five) years under the paid CAMC period before transfer of the CAMC amount to bidder's account. Mentioning of West Bengal Government Pooling Account for Performance Bank Guarantee No. 000605030134 IFS Code ICIC0000006 MICR 70229002 at ICICI Bank, RN Mukherjee Road Branch, Kolkata on the body of Performance Bank Guarantee is made mandatory vide Finance Department GO No. 2691-F(Y) dated 02/05/2017.

**21. Inspection:** Before submitting the tender, the intending tenderers should thoroughly get acquainted themselves with the proposed supply and installation by local inspection of site and take into



consideration the site condition and other criterion for effecting smooth supply. No claim whatsoever will be entertained afterwards.

## 22. Payment Terms:

Payment will be made electronically by Govt. of West Bengal approved system after execution of due supply and successful installation as ordered, subject to :

- i. Submission of Performance Bank Guarantee in terms of Clause 20 and subject to penalty clause in terms of Clauses 16.
- ii. Supply of the materials as per specification as provided in the tender documents and the catalogue. Supply of the materials must be made within the stipulated period as specified in the work orders.
- iii. On being selected, the successful vendors will have to submit one application to the Principal, Nil Ratan Sircar Medical College, Kolkata stating the name of the payee/recipient, Bank account no with IFS code of the payee/recipient for making e-payment. Payment will only be released after satisfactory installation and verification of following items-
  1. Supplier's invoice in original
  2. Challan and installation certificate
  - 3 Any other thing of importance on the discretion of College Authorities

## 23. Dates & Information:

S. No	Items	Dates
1	Date of uploading of N.I.T. Documents (online) from this end.	04.09.19, 9.00 A.M.
2	Documents download start date (Online)	04.09.19, 10.00 A.M.
3	Date of hoisting of documents at Departmental Website ( <a href="http://www.wbhealth.gov.in">www.wbhealth.gov.in</a> )	04.09.19, 9.00 A.M.
4	Date of Pre Bid Meeting and workshop with the intending bidders at the office of the Principal of NRS Medical College	06.09.2019, at 1.00 P.M
5	Bid Submission starting (On line)	07.09.2019 9.00 A.M. onwards
6	Bid Submission closing (On line)	21.09.2019 at 4 P.M.
7	Bid opening technical bid(online) (Bid A )	23.09.2019 at 4.00 P.M.
8	Date of uploading list for Technically Qualified Bidder (online)(Bid A)	24.09.2019 10 A.M. onwards.
9	Date & for opening of Financial Proposal (Bid B) (Online)	To be declared later
10	Date of uploading of list of bidders along with the approved rate	To be declared later.

Principal, Nil Ratan Sircar Medical College, Kolkata, reserves the right to change the above schedule in case of any exigencies after putting up a notice in the departmental website and Notice Board of N R S Medical College, Kolkata.

**24. Validity of Tender:**

- i. The tender will remain valid up to 1 (one) year from the date of finalization of tender **which can be extended for a period of 6 months**. Any objection raised by any bidder in this respect will not be entertained. No informal tenderer will be entertained in the bid further.
- ii. During the scrutiny, if it comes to the notice of tender inviting authority that the credential or any other paper found incorrect/ manufactured/ fabricated, that bidder would not be allowed to participate in the tender and that application will be out rightly rejected without any prejudice.
- iii. Prospective bidders must take training from authorized agencies before submission of their bids.
- iv. The Tender Selection Committee reserves the right to cancel the N.I.T. due to unavoidable circumstances and no claim in this respect will be entertained.

**25. NO- CONVICTION CERTIFICATE:**

No conviction certificate in the form of An Affidavit is to be submitted in the prescribed Pro-forma as Annexure-IV attached herewith from Notary Public/ Judicial Magistrate/Executive Magistrate.



Principal  
NRS Medical College  
Kolkata-14



**CHECK LIST (MUST BE PROPERLY FILLED)**

**NOTE: For Non applicability for some documents please mention "NA" in the check list.  
Must be mention page number in the check list.**

S. No	Item	Pl put tick or NA	Page No.
1	Application submitted in Annexure I		
2	Annexure II (Authorization letter of signatory from the Company)		
3	Annexure III (Copy of agreement between the Manufacturer and the Direct Importer/Distributor)		
4	No conviction certificate in the form of an Affidavit as per Annexure-IV.		
5	Income Tax Returns submitted for the last three Assessment years		
6	GST Registration certificate(not provisional)		
7	PAN Card of the organization and authorized signatory.		
8	Manufacturer's guarantee (in case of Distributors and Direct Importer, to be obtained from manufacturer)		
9	Audited P/L & Balance sheet of last three years		
10	Technical specifications of Instrument (in PDF/Excel format. Must mention Make, Model, exact features of the offered item against each point given in the specification chart).		
11	Trade License in the name of participating firm		
12	PUC in respect of the manufacturing unit		
13	Certificate of country of origin		
14	Registration with Registrar of Companies		
15	Valid Manufacturing License		
16+	Import License with validity (for importers)		
17	List of purchaser in Govt. Institutions of repute, for last two years		
18	A declaration in respect of existence of a fully equipped service centre in or around Kolkata in respect of the relevant item.		
19	A Proof of submission of applicable END		

ANNEXURE-I

APPLICATION FORMAT

(To be furnished in the Company's official letter pad with full address and contact no etc)

To The Principal, Nil Ratan Sircar Medical College, Kolkata-700014.

Sub: Tender No.-----Dt.----- (Name of the Item -1)-----2)-----  
-----3)-----4)-----

----) for purchase and installation of equipment for department of ....., Nil Ratan Sircar Medical College, Kolkata-700014.

Ref:-

Sir,

Having examined the pre-qualification & other documents published in the N.I.T, I /we hereby submit all the necessary information and relevant documents for evaluation:

1. That the application is made by me / us on behalf of.....

In the capacity of.....duly authorized to submit the offer. The authorization letter from the Company is attached in Annexure II.

2. We accept the terms and conditions as laid down in the NIT mentioned above and declare that we shall abide by it for throughout the tender period and its extensions, if any.

3. We are offering rate for the following item /items and assured supply to the Health & Family Welfare Department, Government of West Bengal as per Table-1 (Instrument Specification)

4. a. We propose that the order and bill should be raised in our name.

For liasoing, we have appointed M/S ..... having its office at ..... (Address, contact no and e mail address) as C&F agent /Liasoner /Contact person/..... Others (strike out whichever is not applicable) as per clause ..... of the NIT

b. The agreement between ourselves and the distributor/C&F/Liasoner & other documents as prescribed is attached in annexure III

5. In the event of being selected, supply will be made within the stipulated period excepting the condition which is beyond our control.

6. We understand that:

(a) Tender Selection Committee/ H&FW Dept can amend the scope & value of the contract bid under this project.

(b) Tender Selection Committee/ H&FW Dept reserves the right to reject any application without assigning any reason.

Date :-

Signature of applicant including title  
and capacity in which application is made.

Contact details -

Mobile:

E mail ID:



**Annexure II**

Authorization letter in favour of the applicant (other than Managing Director/ Proprietor) –  
from the competent authority.  
FORMAT

(To be furnished in the Company's official letter pad with full address and contact no, E mail  
Address etc)  
(TO WHOM IT MAY CONCERN)

This is to certify that Mr./Mrs. ....(Name),  
an employee of this Organisation as ..... (Official  
Designation) is hereby authorized to submit tender online , Vide NIT  
No....., Dated..... on behalf of the Organisation.

Signature of the  
competent authority with Seal

.....

(Signature of the Authorized Person)

Signature of Mr./Mrs. ....

.....is hereby attested.

## **Annexure- III**

- a. Copy of agreement between the Manufacturer and the Direct Importer/Distributor in Annexure -III



**ANNEXURE-IV**  
Draft Affidavit Proforma

I, Sri/Smt. ....  
The Managing Director/Proprietor (etc.) of the Firm.  
..... (Name of the firm)  
At (address).....  
P.O. ....  
P.S.....Dist.....  
do hereby solemnly affirm and declare as follows:

- a. That I am not under conviction of any offence making myself liable to be disqualified to supply of Surgical Equipments/Instruments etc. to any Govt. or Govt. undertaking Organization /Institution in the State of West Bengal or other State or States.
- b. My Firm has not been blacklisted at present as a whole or for any item/ items as quoted in this tender by any Govt. or Govt. undertaking Organization /Institution in the State of West Bengal or other State or States in India.
- c. That no case is pending against me or against my Firm in any criminal court of law in connection with the supply of Surgical/hospital equipment/Instruments to the Govt. or Govt. undertaking Organization / Institution in the State of West Bengal or other State or States ( If any case is pending, pl state the details ).
- d. *That, I declare that the item or items quoted by me confirms the specification given in the NIT document or higher standard relating to the specification is provided.*
- e. The duly authenticated Technical Data Sheet is uploaded conforming to the prescribed standard.
- f. That, I also declare that if any information subsequently found incorrect or false will it automatically render the tender submitted by me cancelled and make me liable for penal/legal action as per law of the country.
- g. That I do further affirm that the statements made by me in this tender are true to the best of my knowledge and belief and all the documents attached are genuine & correct.


Deponent



**Technical Specification for Heart Lung Machine with Integrated Electronic Gas Blender and Standard Accessories .**

**( Advance Version )**

SN	Technical Specification
<b>Heart Lung Machine</b>	
1	Heart Lung Machine is an apparatus, through which blood is temporarily diverted, during heart surgery, to oxygenate it and pump it throughout the body, thus maintaining circulation until the heart and lungs are able to return to normal functioning.
2	Central Control Monitors: All roller pumps ,safety control (Pressure, Levels, timers and temperature) and monitoring should be controlled through one touch screen colour monitor
3	Central Control Monitor should provide 12 different customize perfusion screens
4	System Should have the following features: 2 Large roller pumps(Flow range 0-10 LPM), 2 small single roller pumps (Flow range 0-4 LPM) and Centrifugal pump-1 no.
5	Roller pumps and Centrifugal pump should be controlled through central control monitor and manually (Single operation will not be accepted)
6	HLM base should support 8 pumps (6 should be controlled through Monitor and 2 can be controlled manually)
7	Pump raceway should be rotatable and lock at every 15 degree
8	System Should have master follower feature
9	Should be provided with 2 pressure monitoring
10	Should be provided with the level detector with holder
11	Should have 1 bubble detector (3/8)
12	Roller pump should be able to deliver pulsatile flow.
13	Should have electronic venous occluder controlled by the central monitor (No manual venous occluder will be accepted)
14	Self adjusting tubing insertors should be provided with all the pumps ( Should not need to change tubing Insertors for different size of tubings)
15	Cardioplegia pump should have display of total volume of each infusion along with delivery time. It should have the master and follower control with different CPG delivery concentration( 1:1,1:2,1:4,1:8,1:16)
16	The unit should be supplied with a Battery backup for all pumps for a minimum of 60 minutes. Switch over from main power to battery backup should be automatic and immediate. The battery unit should be built in to the pump base and it should be recharged automatically when the system is operating with main power supply.
17	Individual roller pump heads should have Horse shoe Roller pumps with universal tubing inserter in which all types of tubings can be fitted.
18	Individual pump heads should have display in digital –The total infusion volume in liters and delivery time, the flow rates in LPM and in
19	Each Pump should have easy mechanism for occlusion setting for different thickness of tubes available in the market. Occlusion should be done with the running roller pump, occlusion setting should be 0.010
20	Should have Unidirectional hand crank facility as a critical safety feature hand crank loading should be from top for faster access.
21	Roller pump should have a self diagnostic circuit with provision to detect and display critical alarm conditions. Optional Pulsatile module which can be mounted on any of the blood pump.
22	The roller pumps occlusion mechanism with audible feedback can be adjusted while the pump is running.
<b>Electronic Air-Oxygen</b>	
23	Integrated Electronic Air- Oxygen Blender with hoses and Flow meter
24	Should have USFDA approved

  
Dr. Pares Bandyopadhyay  
Professor and Head  
Dep't of CTVS  
NRS Med. College & Hospital,  
Kolkata



Technical specification of portable color Doppler Ultrasound Unit.

A state of art fully digital, compact Color Doppler Ultrasound machine (weight <5 kg) is required with pinless connector technology and following technical features:

1. Unit should be able to give very high image quality with advance technologies like compound imaging for better contrast resolution, tissue differentiation and edge detection, equivalent to high end cart based systems. Please specify the technology.
2. System should be able to support speckle reduction imaging for better tissue differentiation and edge enhancement please specify the technology.
3. The system shall have the ability to enhance tissue margins and improve contrast resolution by reducing artefacts and improving visualization of texture patterns & needle tip within the image, please specify the technology.
4. System should have both online (read) as well as offline (Write) zoom facility.
5. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Continues wave Doppler, Power Doppler must be available on all cardiac transducers.
6. System must have fast start up to scanning in less than 30 seconds from off condition, for use in critical and emergency situations.
7. System should support transducer technologies like phased array, convex, linear, TEE and Hockey stick probe for future upgradeability.
8. The system shall process a dynamic range that is at least 165db. The system must display at a maximum depth of 35 cm.
9. The system must have a dedicated cardiac calculation package with PISA, TDI calculation packages, vascular calculation package.
10. The unit must be compact, portable and lightweight, weighing less than 5 kg including battery.
11. Unit must be sturdy, resistant to breakage & damage on fall/ hit against the wall or hard surface for use in emergency situations.
12. Flat LCD/ TFT monitor of at least 10 inches or more with flicker free image.
13. Alphanumeric soft keys keyboard with easy access scans controls, facility to sanitize the system keyboard to avoid cross contamination in ICU environment.
14. The system must have the ability to function by AC/DC or battery power with the same degree of functionality, the battery life (run time) shall be at least 2 (Two) hours, this need to be demonstrated.
15. The system must have in-built nonvolatile flash memory of at least 15 GB for storing Patient data & studies. It should have atleast 2 USB slote, which allow for direct sharing of image (JPEG)and clip (AVI) to a PC.

  
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16. Data Transfer facility should be available as standard, to transfer images etc. easily onto another system/ computer etc.
17. The system shall support the all DICOM functionality, Storage, Print, and Work List, also ready to connect to PACS.
18. System should possess software for enhanced Needle Visualization to track the needle clearly at steep angles during the procedures while maintaining striking image quality of the target structures and the surrounding anatomy with simple On/Off functionality on both convex & linear transducers.
19. Onsite Product training and access to online education material must be provided post installation of the system.
20. The equipment should be mountable on trolley & locking mechanism should be inbuilt into the trolley for safety & security of the system.
21. The main system & transducer should be covered with comprehensive onsite warranty for 5 (Five) year commencing from the date of installation certificate.
22. System should have both European CE and US FDA quality certification.

**Transducers/items to be supplied as standard:**

1. 2-5 (+/-1) MHz multi-frequency broadband curved array transducer for general purpose. abdominal, deep nerve access applications
2. 6-13 (+/-1) MHz multi-frequency, broadband linear array transducer for vascular, nerve imaging with less than 40 mm size for vascular access, small parts, vascular, musculoskeletal applications. Higher frequency will be preferred.
3. Mobile cart with transducer holder and space for printer
4. Triple Transducer Connector with electronic switching facility to toggle between transducers.

**Optional Transducers :-**

1. 1-5 MHz (+/- 1 Mhz) Multi- frequency broadband phased array transducer for abdominal, cardiac, lung & OB applications.
2. 6-13 MHz multi-frequency broadband linear array hockey stick liner transducer for vascular, nerve imaging with less than 26 mm size..

  
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Technical Specifications of High Speed Neurosurgical Craniotome with Drill and Microdebrider System

HIGH SPEED NEUROSUGICAL DRILL (ELECTRICAL) WITH CRANIOTOME AND MICRODEBRIDER:

1. Drill should be electrically operated; drilling speed range of 10,000 - 80,000 rpm or more with high power. Should be of very low noise during operation.
2. Hand piece: Light weight (120 gm or so). Ergonomically designed so that minimise surgeons hand fatigue. Must not wobble at the highest speed and torque. Loading and unloading of drill bits should be easy and user friendly. Should be both straight and angled of different lengths long and short.
3. It is preferable if there is integrated irrigation pump for precise adjustment of irrigation fluid during surgery.
4. Foot switch control with pedals for clockwise and anti clockwise rotation. Connection cables should be provided along with the unit.
5. The craniotome should also be user friendly. Assembling and dismantling of perforator chuck (having provision for preventing Dura injury), steering Dura guard and tapered Router (Craniotomy saw) should be easy. Connecting cable for craniotome should also be provided.
6. Hand pieces and connecting cables for detachable and reusable Reciprocating, Oscillating saw, Sagittal saw must be provided. The following types of hand pieces must be included within the supplied package –
  - Cranial perforator handpiece – at least 2 such
  - Side cutting drill (craniotome) handpiece – at least 2 such
  - Microdrill handpiece which should take all cutting/diamond burr sizes – at least 2 such
  - Long bayoneted jacketed microdrill handpiece for use in transsphenoidal or skull base procedures – at least 1 such
  - Oscillating saw handpiece – at least 1 such
7. The main unit should provide for easy control of drill settings and must have visual display. A console based emergency switch may be provided as fail-safe in the event of a footswitch malfunction.
8. Mobile stand for the main unit must be provided.
9. Microdebrider Hand piece compatible with main console should be provided; and the microdebrider handpiece should meet the following specifications -
  - Should be compatible with main console.
  - Should be able work up to the speed of 12000 RPM in forward rotation and 5000RPM in oscillation mode.
  - Should have finger tip control to rotate only the tip of the blade up to 360 deg.
  - Should have straight suction path to reduce clogging and allow efficient tissue removal.
  - Should have integrated blade locking system to lock the blade tip rotation.
  - Should have integrated side grooves and cable clips to provide better tubing management.
  - Should have Titanium body to avoid rusting.
  - Should be light in weight and ergonomically designed.
  - Should be able to operate 120 Degree curved blade for Maxillary Sinus Application.

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- Should be compatible to operate Endoscopic Skull Base Bur at 30,000 rpm speed.

Local availability of the accessories must be there.

A comprehensive accessories package including perforators, tapered router/cutting tool, acorn burrs, match head burrs of cutting/diamond configurations as required for 100 cases should be provided along with the unit.

Terms:

1. Unit must be USFDA approved.
2. Should have warranty of 2-5 years and CMC of 5-8 years (Total 08 – 10 year's coverage).
3. Manufacturers must have direct presence in India & maintenance centre at Kolkata. Not through dealer.
4. Demonstration of the unit before placing order

In addition, there should also be provision of the following (MANDATORY)

- a) After installation support, including but not limited to repair/replacements/routine maintenance for at least 10 years
- b) Provision for smooth procurement of accessories and consumables of drill such as drill bits and tools of all sizes and configurations, microdebrider blades, perforators and handpieces etc from same vendor.
- c) Provision for manpower support and technical support whenever required, for the duration of function of the equipment.

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## Specifications for Neuro and Spine Image Guided Surgical Navigation System

### General Specifications -

1. The system should be
  - a. An easy to set up and use,
  - b. User friendly and familiar to operate,
  - c. Intuitive system that works with Windows/Linux/UNIX operating system environment.
2. The system should be a two-cart assembly to ensure
  - a. Optimized placement of carts in OT,
  - b. Better OT workspace management.

Additionally, the system should come with two operational full HD medical grade monitors (mounted on same or separate carts) with a viewable size of at least 27" for one monitor (for surgeon viewing) and at least 21" for another monitor (for technicians or other supporting staff). Additional medical grade monitor to match given requirements must be provided along with the system in case the system comes with a single monitor in standard configuration.

3. The system should have password protection on the home screen/first screen to protect patient data.
4. The system should have the ability to record the screen activity during software operation or during navigation for minimum 30mins for storage, medico-legal or academic purpose. ( Optional )
5. The system should have the capability of navigation using both Optical Tracking Technology and Electromagnetic Tracking Technology (to ensure safe use on the neonatal patients, pediatric patients, trauma patients, old patients, and surgeries where head movement is required intraoperatively, or a patient is required to stay in awake state during surgery).
6. The system should have electromagnetic tracking based dynamic referencing so that registration is not lost even if electromagnetic emitter or the patient moves intra-operatively during the procedure. The dynamic referencing option should not hamper sterility and hence, be able to work seamlessly even when covered with regular drapes without the need of specific drapes.
7. The system should have minimum 512 GB solid-state drive, for better speed, reliability, no effect of magnetism and ensuring ample space to store examinations of patients. The system should also have at least 8GB RAM for fast performance and image manipulation, which helps faster data processing.
8. The system should have the capability of supporting cranial, skull base and neurotology surgeries using both the optical tracking technology and electromagnetic tracking technology to ensure optimum patient and technology selection.
9. The system should be supplied with universal adaptor and tracker kit to navigate a variety of already in-use surgical instruments like suction, drills, endoscopes, etc. The kit should include adapters as well as trackers of various sizes to ensure hassle free use with instrumentation of various sizes without restricting surgeon's operating and handling field.

  
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10. The trackers provided for navigating generic surgical instrumentation should be separate from trackers provided to navigate factory calibrated range of spine as well as cranial instruments to avoid confusion during use.

### **Cranial Application -**

11. The system must have point as well as surface/skin contouring registration with accuracy prediction system.

12. The system should have capabilities for head frame less neuro navigation surgery such as tumor resection suitable for adults as well as pediatrics without any compromise on sterility using electromagnetic tracking technology.

13. The system should accept image fusion correlation between multiple images from sources including CT, MRI, CTA, MRA, FMRI and PET. Additionally, the system should have ability to merge each image with reference exam instead of sequential merging to ensure accurate merge each time.

14. The system should have a fiber tracking and functional planning software to pre-plan or intra-operatively plan complex tumor surgeries when tumors are located near areas of brain responsible for important vital functions of human body. The software should allow advanced visualization of structures and seamless import of DTI unprocessed datasets and allows intraoperative tensor calculation and fibers seeding manipulation or planning and fiber tracks and fiber track visualization.

15. The said fiber tracking and functional planning software should come installed within the system or a separate fiber tracking and functional planning station should be provided to meet the requirement of complex tumor surgeries to ensure patient safety.

16. The system should have automatic 3D tumor model building.

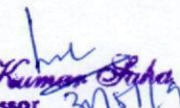
17. The system should support frameless biopsy and should come with a factory calibrated navigable biopsy needle that can be navigated till the target actual/real-time position of the biopsy needle being displayed on the system display to ensure minimum inaccuracy during the procedure.

18. The system should be able to track factory calibrated flexible shunt stylet with Electromagnetic module for procedures like shunt catheter placement, omya surgery.

19. The system should have facility to integrate with commercially available ultrasounds to calculate brain shift and depth of tumor resection intra-operatively continuously to ensure there is no or minimum inaccuracy involved due to brain shift.

20. The compatible ultrasound system of make ALOKA or PHILIPS or HITACHI or SIEMENS or GE or SONOSITE must be supplied along with a probe suitable for use in cranial procedures. The ultrasound system should come with 5 years warranty.

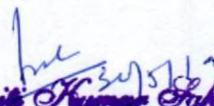
21. The system should offer total control of software from sterile field i.e., should not require any additional personnel to run the system during surgery. Total control of software from sterile field includes options such as magnify the images, go to next or back window on software workflow, take a screen shot, to change the screen layout and to respond the command prompt in case to operate the system in sterile field when no one is present on staff cart

  
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**Spine Application -**

22. The system should have a unified spine application which should allow 3D navigation for spinal procedures such as spinal fusion.
23. The system should be quoted with navigation instruments for minimal invasive spine procedures as well.
24. The system should at least have factory calibrated image guided jamshidi needle for minimum invasive spine procedures.
25. The system should have factory calibrated navigable spinal instruments like Awl, probe, pedicle feeler with straight or T-Handles options. The system should also have option to navigate conventional instruments.
26. The system should have advanced display features such as wedge which should come as virtual extension for deformity procedures such as scoliosis and kyphosis planning especially for PSO and PCO.
27. The system should have ability to show virtual picture of screw while navigating screw driver during screw placement on 2D images and 3D model.

  
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Technical Specifications of High End Neurosurgical Operating Microscope with Intraoperative Fluorescence Imaging ( Indocyanine Green Angiography )

OPERATING NEUROSURGICAL MICROSCOPE:

1. Magnification: Motorized zoom; Apo chromatic optics; 18 x magnification or more.
2. Focusing: 200 – 500 mm continuously variable working range or more. Magnification linked adjustment of focus speed; electronically adjustable depth of field. Working distance displayed on the touch screen and on the ocular.
3. Eye piece 10x or 12.5x magnetic wide field eye piece with integrated eye cups for main surgeon binocular tube with dioptr correction of +05 to – 05 D.
4. Main surgeon & for face to face attachment binocular tube tilt able 0° - 180° or better. PD adjustment range of 55 – 75 mm.
5. Stereo co observation binocular tube with minimum two joints for 180° movement. (3 Headed Setup)

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6. Multi function programmable hand grips for complete system operations. Magnetic clutches for all system axes. Central single user interface, single operation (microscope, camera, Fluorescence, XY robotic movement in 3 axes).
  7. Floor stand mobile on antistatic castor. Auto balance of microscope suspension system or entire system by single touch without the use of additional weight.
  8. Suspension system and height: counter weight suspension with capability not less than 07 kg. Height in stand by position is not less than 1889 mm.
  9. Fully integrated Video chain: Integrated 22"HD touch screen Medical grade monitor and 3 – 4K HD or FHD video camera or better. Full HD recorder with integrated HDD with HDMI input and output port / system should have Video in for external sources. All known preoperative and intra operative imaging methods ( CT,MRI, USG, PET, DSA etc) should be displayed / injected in the highest quality in the surgeon's eye pieces.
  10. Illumination: 300 Watt Xenon lamp or better with similar back up. Integrated light source & light guide. Integrated two way illuminations. Display of remaining lamp life time. Working distance light intensity.
  - 11. Should have Intra operative Fluorescence facility. Module for vascular (Infrared) supporting intraoperative ICG Angiography & tumour fluorescence with fluorescein sodium (Yellow Fluorescence) should be included. A software module for advanced tumor fluorescence (Sodium Fluorescein based) and verification of vascular clipping/anastomosis must be included.**
  12. Powersupply 110 – 260 V, 50 – 60 Hz.
  13. Microscope cover should be provided.
  14. The microscope must provide image integration and image injection facility with conventional USFDA/CE Approved Neuronavigation platforms, with facility of image superimposition on surgeon's eyepiece from Neuronavigation platforms.
- Terms: Unit must be USFDA approved.

1. Should have warranty of 2-5 years and CMC of 5-8 years (Total 08 – 10 year's coverage).
2. Manufacturers must have direct presence in India & maintenance centre at Kolkata. Not through dealer.
3. Demonstration of the unit before placing order

In addition, there should also be provision of the following (MANDATORY)

- a) After installation support, including but not limited to repair/replacements/routine maintenance for at least 10 years
- b) Provision for smooth procurement of accessories and consumables of microscope such as lamps, eyepiece lenses, hard disc drives, adapters and cables etc from same vendor.
- c) Provision for manpower support and technical support whenever required, for the duration of function of the equipment.

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**TEHNIICAL SPECIFICATION FOR CHOLEDOCHOSCOPE WITH FULL HD ENDOVISION SYSTEM  
WITH INTEGRATED USB RECORDING FACILITY**

**SPECIFICATIONS**

1. It should have direction of view 0°,
2. It should have angle of view 90°,
3. It should have working length 50 cm,
4. It should have working channel inner diameter 3.6 Fr.,
5. It should have distal tip outer diameter 7.5 Fr.,
6. It should have deflection up/down 160°/120°
7. The scope should be chip on tip fibro scope

**Following accessories should be included:**

1. Carrying Case
2. Grasping Forceps, 3 Fr., length 75 cm
3. Biopsy Forceps, 3 Fr., length 75 cm
4. Stone Basket, sterile, for single use, 2.5 Fr., length 120 cm 10 units
5. Pressure Compensation Cap
6. Leakage Tester
7. Cleaning Brush
8. Applicator and Guide Tube, for use with trocars size 6 mm
9. LUER-Adaptor, with seal
10. Seal, for working channel, package of 10
11. Sealing Cap, drill hole diameter 1.2 mm
12. Cleaning Adaptor
13. LUER Cone Set

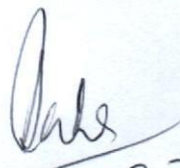
  
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**Specifications for Full High Definition Endoscopic Camera System**

The system should be truly Digital HDTV endoscopic video camera. The system should have minimum Resolution of 1920 X 1080 pixels, progressive scan and the consistent use of 16:9 formats for Input & Output to guarantee genuine HDTV.

**The system should have Special Features:**

- **Visibly Improved Imaging:** CCD sensing chip should optimizes image quality & Digital Source Sampling thus maximizing hi-fidelity image transmission.
  
- **Optimizes to Any Size: The system should have** Optical Zoom with 2x par focal zoom lens to enhance the quality of Image size & cross specialty standardization of the camera system, regardless of the telescope used.
  
- **Plug and Go:** The system should automatically optimize all settings. The system should be ready- to- use as soon as it is connected to the camera control unit.
  
- **Color Spectrum:** Compatible with systems with integrated, innovative visualization technology for surgery/ Video endoscopy by shifting the color spectrum and via homogeneous illumination and contrast enhancement.
  
- **USB Port for Capturing FULL HD Videos/ HD Still Pictures:** Captured digital images in format 16:9 can be displayed on Wide View monitors in the same full HD format without being converted. This prevents a loss if image quality caused by image stretching.
  
- Integrated digital imaging processing module for a 5 level brightness regulation and 2 electronic anti-moirée filter for fiberscopes.
- Parallel live display of visualization modes besides white light mode (picture-in-picture).
- Side-by-side live display of visualization mode next to white light image (picture-in-picture).
- Integrated picture-in-picture mode of two different camera modules in five different display sizes available.
- Primary and secondary signal source change in picture-in-picture mode can be performed easily via camera head button.
- In combination with a compatible three-chip FULL HD camera head the following modes can be activated without special light sources or filters:
  - Color inversion by spectral color shift. Brightening of dark areas in the endoscopic image.
  - Chromo Endoscopy Mode
  
- Changes in visualization modes, device control, digital zoom, brightness, video capture, still image capture and direct print orders, picture-in-picture mode, image direction, white balance and setup settings can be performed in sterile area via camera head buttons.
- Possibility of 180° image rotation.
- Possibility of vertical and horizontal image mirroring.

  
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- **Modular design: Digital FULL HD camera module should be compatible for use with video flexible chip on tip endoscopes as well as RIGID Scopes for other procedures**

**Technical Specifications:**

Image sensor:	3X1/3" CCD-Chip.
Pixels	1920 x 1080 (minimum)
AGC:	Microprocessor controlled
Lens: zoom)	Integrated Zoom Lens f = 15-31 mm (2x optical
Minimum light sensitivity:	1.17 Lux (f = 1.4 mm)
Control buttons:	3 (2 of them freely programmable).
Video output:	2 x DVI-D output, 1 x 3G-SDI output, 3 x camera input for communication with compatible camera modules, LAN connection, 4 x USB connection (2 x front, 2 x back).
Input:	Keyboard input for character generator. 5-pole DIN socket.
Power Supply:-	100-240 VAC 50/60 Hz
Certified to :	IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL 2601 and CE according to MDD, protection class1/CF

**HDTV 16: 9 widescreen Monitor LED- 26 Inches or more**

The monitor should have:

HDTV display in original 16: 9 HDTV format.

1080 p/ 50 & 1080 p/60 displays possible.


LED crystal display.

Minimum Resolution of 1920 X 1080.

Screen diagonal – 26" / 27"

Desk top with pedestal.

Should have the facility of PIP mode.

  
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### Specifications

HD Flat Screen Monitor with stand size 26" or more

Aspect Ratio 16:9 HD format

**Video Inputs** : 2\* DVI-D , 2\* 3G SDI, 1\* S Video , Composite 1\* RGB/VGA , 1\* RS 232 , 1\* RJ 45 Interface.

**Output:** 1\* DVI , 1\* 3G SDI, 1\* S-Video

Accessories External 24VDC Power Supply, Mains Cord, Pedestal.

Certified to : EN 60601-1, protection class IPX 1

### LED Light Source 175 watts

- Lamp type:- LED 175 Watt based on Light Emitting Diode technology
- Color Temperatures 6000K
- Light Outlets – 1
- Light Intensity Adjustment :- Continuously adjustable either manually or automatically by cameras video output signal. The light source should be compatible with OR integration systems.
- Intelligent cooling management
- Certified To :- IEC 601-1 & UL 544 CE According to MDD , protection class 1/CF
- Lamp Life – 20,000 hrs or more
- Should be future ready with facility for system upgrades in case of future version software upgrades.


### THE LIGHT INTENSITY CAN BE CONTROLLED FROM THE CAMERA HEAD

**Fibre Optic Light Cable.**

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Thickness 4.5mm TO 5 mm Length 300 cm.

**ALL THE ITEMS SHOULD BE FROM THE SAME COMPANY TO ENSURE BETTER SYSTEM COMPATIBILITY AND SHOULD BE USFDA APPROVED.**

  
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Specification

USG machine with Echocardiography probe, linear probe, curvilinear probe

**Operational Requirements**

Latest generation electronic phased array Doppler system with minimum 1000 electronic independent channels. System should be DICOM ready.

All new software should be upgraded free of cost for at least 3 years free of cost on site.

**Technical Specification**

Latest generation electronic phased array Doppler system with minimum 1000 electronic independent channels.

256 gray sets for sharp contrast resolutions.

Adult transthoracic cardiac probe to be supplied which should be latest generation broadband transducer.

Harmonic imagine – on all probes

Automated gain control for additional level of flexibility to image quality control.

Real time high frequency 2D for higher resolution.

**Modes** 2D M mode, anatomical M mode, Colour M mode PW, CW, colour flow imagine.

Monitor should be 15inch. or more, high resolution colour monitor.

Tissue colourisation (B-Colour) for improve contrast resolution.

High frame rate review for better clarity of playback image study in slow motion.

Minimum 250 GB hard drive for image storage.

2 or more transducer port.

USB port for recording

**System Configuration Accessories, spares and consumable**

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**Transducers**

2-4 MHz broadband phased array transducer.

3-12 MHz broadband linear array transducer.

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**DVD recorder with DICOM media transfer.**

**Environmental factors**

Unit shall be capable of operating continuously in ambient temperature of 30 degree and relative humidity of 80%.

**Power supply**

Power input 220-240VAC, 50 Hz, fitted with Indian plug.

Suitable servo control stabilizer.

**Standard safety and training**

Should be FDA or CE approved.

Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.


Class 1 degree protection against electric shock for ultrasounds probes types BF.

Manufacturer / supplier should have ISO certification.

**Maintenance and serviceability**

Minimum 2 years onsite comprehensive guarantee.

Optional service agreement after guarantee period.



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## Technical Specification for Ceiling Mounted LED OT Light: -

### Basic Features :

1. Product should be USFDA or European CE certified.
2. It should have 2 light heads with multiple LED lamps.
3. The operating light should have adjustable light luminous intensity.
4. The light field may be oval or round.
5. The light head design should be compact and facilitate laminar flow.
6. Should have integrated controls for intensity and light field in the light dome.
7. In case of single LED lamp fusing, only that lamp may be changed not complete light head.
8. Should be camera ready for future upgradation whenever required (internal wiring should be prepared by the manufacturer)
9. Battery back-up : Minimum 5 hours or more (if external UPS is provided, it should be "online UPS" of a good company having its own or authorized service setup in the city of installation. Minimum backup should be of 5 hours or more)
10. Protection class acc. to IEC 601
11. Degree of protection: suspension system- IP30
12. Degree of protection: light head – IP42

### Specification for Primary & Secondary Light Head :

1. Minimum illumination at 1 meter distance: 1,60,000 lux or more + 1,60,000 lux or more for each dome
2. LED lamp service life of 60,000 hours or more.
3. Circular or oval light field : Minimum diameter 22 cm or more.
4. Color temperature adjustable : 3600 – 4800 K or better.
5. Color rendering index : 98% & above
6. Dimming range of major light head intensity : 30 – 100%.
7. Backlight (during endoscopy) dimming range of 5 – 29%.
8. Light head suspension: Fully Cardanic.

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HD OT Light Mounted Surgical Camera Specification

Image sensor	1/3" CMOS
Resolution	1920 x 1080
Contrast	excellent
Aspect ratio	16:09
Optical Zoom	10x & Above
Digital zoom	10x & above

Full HD Medical Grade Display for Surgical Camera Specs – Should be on third arm integrated with the lights arm

Specs:

Size : 25" & above

Resolution : 1920 x 1080,

Response time : 9 ms and below

Format : 16:9

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1

DESCRIPTION

ELECTRO-HYDRAULIC TABLE

(with PMP MATTRESS with micro-processor control with the following standard accessories)

General Construction Features :

- X-ray Transparent Table Top for Fluoroscopy & C-arm
- Head Rest – can be raised, lowered and removed manually
- Back Plate – can be raised and lowered electro-hydraulically
- Arm Boards – Integral quick disconnect side-rail clamp designed seat plate
- Foot Plates – can be raised, lowered, horizontal positioned and removed manually
- Table top longitudinal sliding – 350mm to 1 foot
- Auto Table Top Leveling
- Flex/Reflex Positioning
- Floor Locking
- In built battery backup

Specifications

Table Top Length (with Extendable head rest)	2000mm(78.7') – 2060mm (81.1")
Table Top Width (without side rails)	500mm
Table Top Height (without pad)	685mm(27") – 1135mm (44.7")

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2

Trendelenburg / Reverse Trendelenburg	30° / 30°
Lateral Tilt (Left/Right)	20° / 20°
Head Rest (Up/Down)	60° / 90°
Back Plate (Up/Down)	80° / 40°
Foot Plates (Up/Down)	15° / 90°
Horizontal Positioning	15° / 90°
Longitudinal Sliding	350mm (13.8")
Flex	220°
Reflex	100°
Internal Battery Power Supply	As a secondary source
Patient Weight Capacity	273kg
Accreditation	CE & FDA approved

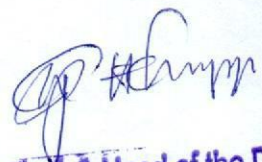
#### Ortho Accessories

1. TED 07 Orthopaedic Traction Set –
  - a. Extension Main Frame
  - b. Knee Support
  - c. Accessory Fixture
  - d. Pelvis Support
  - e. Extension Clamp
  - f. Lower Leg Support
  - g. Traction Device
  - h. Extension Device Trolley
  - i. Traction Boots
  - j. Fixture Rail Extension for Leg Crutch
  - k. Counter Traction Posts for Femur
2. Shoulder Support with 2 pcs of side-rail lock
3. Leg Crutches With Side-Rail Clamp
4. Knee Positioning Device with side-rail clamp
5. Condyle Fixation for Tibia & Fibula with Side-rail clamp

#### General Accessories

1. Fixed Anaesthesia Screen Frame with Side Rail Clamp
2. Restraint Strap
3. Raised Arm Rest with Side-Rail Clamp
4. Lateral Support with 2pcs of Side-Rail Lock

#### Neuro-Accessories

  
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1. GENERAL PURPOSE U-TYPE HEAD REST – The horseshoe shaped padded head should be able to be positioned up or down as necessary and also should have a swivel mount to permit additional positioning latitude. The attachment rods should fit into the head rest mounting holes.
2. NEURO ADAPTER FOR FRAME SYSTEM – The adapter should be able to be clamped into the head rest mounting holes with 20mm holes centred 190mm apart.



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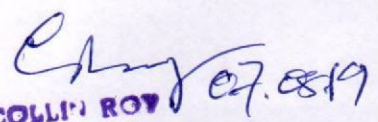
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## Surgical Diathermy

1. It should be a multipurpose Electro Surgical generator, having both Monopolar & Bipolar coagulation and Monopolar and Bipolar cutting
2. Automatic Power Regulation
3. Automatic response to change in tissue impedance resulting in minimal thermal damage
4. Digital Display for power settings
5. 3 different modes of Monopolar Coagulation
6. Soft/desiccade, forced/fulgrade and spray coagulation
7. Bipolar Coagulation with/without auto start facility
8. 1 or more programmable power settings on front panel can be saved and recalled for various applications
9. Monopolar cut: From 1 to 300 watts or more in increment of 1 watt
10. Bipolar Coagulation: From 1 to 40 watts in increment of 1 watt
11. Max. HF voltage (Bipolar cut) 700V peak to peak
12. Safety class & type (IEC 601.1)
13. It should have soft, spray and forced coagulation in Monopolar coagulation mode with the following outputs.
14. Soft /desiccade - 50 watts or more at 200 ohms
15. Settings from 1 to 50 watts in increment of 1 watt
16. Spray - 50 watts at 300 ohms
17. Settings from 1 to 120 watts in increment of 1 watt
18. Forced/fulgrade - 120 watts at 300 ohms
19. Setting from 1 watts to 120 watts in increment of 1 watt
20. Output power indication by 3 digit display
21. Output power limitation: 1 watt increment
22. Should have automatic patient plate detector, which indicates the absence of neutral electrode by LED with acoustic alarm when activated.
23. Time Limit: LED glows if activated for more than 10 sec and shuts off the HF Power after total 15 sec
24. Exact Power limitation automatically controlled.
25. Maximum power consumption 800 VA Max
26. Length/Breadth/Height - 430/440/175 mm
27. Weight - 12.5 Kg Max
28. Impact line voltage 230 V + 15%, 50 Hz
29. Equipment Classification Degree of mobility for portable
30. Power Supply:
  - 30.1. Power input to be 220 -240 V AC, 50 Hz.

  
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31. Standards, Safety And Training:

- 31.1. Should be FDA and CE approved product.
- 31.2. All accessories should be US FDA approved product
- 31.3. Manufacturer should have ISO certification for quality standards.
- 31.4. On Site Comprehensive training for staff and support services till customer satisfaction with the system.

32. Documentation:

- 32.1. User/Technical/Maintenance manuals to be supplied in the English.
- 32.2. Certificate of calibration and inspection.

33. Following consumable items are to be supplied along with machine,

- a) Long Spatula Electrode-150 nos.
- b) Disposable pad-100 nos. (Adult-60 nos., Paediatric-30 nos. & Neonates-10 nos.)
- c) Pencil with electrode-100 nos.
- d) Reusable Bipolar Forceps-20 nos.
- e) Disposable Bipolar Cable-100 nos.

34. After the use of the consumables mentioned at point no. 34 above, the rate for the following items should be quoted in Form 9a & 9b respectively for future use.]

Sl. No.	Item (pack size to be consider)
1.	Long Spatula Electrode
2.	Disposable pad for Adult
3.	Disposable pad for Paediatric
4.	Disposable pad for Neonates
5.	Pencil with electrode
6.	Reusable Bipolar Forceps
7.	Disposable Bipolar Cable

If any other consumables which are not included in the above list, but require for patient treatment, (if any) also to be in the above mentioned forms respectively.

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07.08.19



#### 4) Real-Time PCR System (96-well, 0.2 mL block)\*

- Latest generation Peltier-based thermal cycling system,
- accommodates standard 96-well plates .
- Reaction volume : 10  $\mu$ l to 100  $\mu$ l
- Supports both Standard and Fast (40-cycles<30 min.)mode without change in the sample block or plastic-wares
- Six color detection for flexible applications
- Intuitive, flexible **Licensed** software and wizards guide
- **System must supports a variety of analysis methods, including**
- Quantitative real time PCR applications including Gene Expression analysis using relative standard curve and comparative CT (??CT) for relative quantitation and standard curve for absolute quantitation
- Qualitative, post-PCR detection for automated allelic discrimination (SNP genotyping) assays and presence/absence (plus/minus) assays that use internal positive controls
- The emission filters must be optimized for use with FAM/SYBR Green I, VIC/JOE, and ROX dyes NED/Tamara/ABY/CY3/JUN/ TEXAS RED/MUSTANG PURPLE CY5/LIZ/CY5.5 dyes.
- The system must be readily calibrated for these dyes **Supports TaqMan and SYBR Green Chemistries, Passive reference ROX for normalization of the Non-PCR related fluctuations**
- Touch screen LCD for PC-free operations
- Ready to use USB drive to easily back up your data—simply plug in a USB drive and follow the on-screen prompts to back up your data simply and effortlessly.
- Power: 230 Volts, 50 Hz operations/Single phase.

#### Additional requirements

Notebook - 32 x 26 x 3 and 2.1 Kg,  
2KVA UPS with 30 min back up.

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### 3) Specifications of Fully Microprocessor controlled -80°C Vertical Type Ultra Low Deep Freezer

- CFC free refrigeration system for cooling.
- **Temperature range : -50°C to -86 °C**
- **Ambient temp range : 15 °C to 32 °C**
- External Dimension : 28" x 34.8" x 78" ( W x D x H)
- Internal Dimension : 17.7" x 24.4" x 51.1" ( W x D x H)
- **Capacity ( L ) : 363 Lit**
- Compressor : 2 x 1 HP
- Condenser : Enhanced finned tube, forced air cooled condenser
- Refrigerant type : Environment friendly HFC refrigerant
- Temperature controller : Digital type
- No of outer/inner door : 1/5
- Shelves :, adjustable, 4 shelves
- Max shelf load : 50 Kg
- **Fully Stainless Steel make inner surface.**
- **Antimicrobial coating** surface capable to eliminate 99.9% bacteria within 24 hrs
- Triple gasket door seal
- At least 3 individual inner doors to minimize sample exposure
- Heated pressure equalisation port with spring –assisted mechanism to prevent icing on the vent
- adjustable and lockable Caster wheels
- **Front mounted washable condenser filter**
- **Low noise of approximately 56 dBA**
- **Microprocessor controlled digital system with adjustable temperature set point, digitalTemperature display**
- **Ambient temperature range +15°C to +32°C**
- Robust adjustable, lockable heavy duty swivel caster wheels



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E -tender specification

1 ) Specification of Gel Documentation system :

**Versatile system to support wide range of applications** like- Fluorescent dye like syber green, syber safe, Western blotting, 2-D, 1-D, Dot Blotting, Nucleic acid detection ,Densitometry etc.

Should have true 12 bit CCD camera with resolution Image resolution >4 megapixels.

Image acquisition with automatic focus and iris adjustments for all applications

**Large transilluminator area 25 X 26 cm.**

**It should universal dark hood & upgradeable to chemilumnescence.**

**It should be capable of** Optimizing, saving, and quickly recalling the imaging acquisition settings

One-time installation process includes dynamic flat fielding and flat-fielding **Safe DNA Imaging without UV exposure-** using the **XcitaBlue Conversion** screen to prevent damage from UV and preserve samples for downstream protein production.

Reproducibly position or center the sample on the image platen by **using gel alignment templates.**

**Stainfree technology for faster imaging without any post gel electrophoresis staining .**

**Should come with 1 D analysis software with following feature**


- Automatic generation of customizable reports
- Snapshot tool to copy images, lane profiles, and graphs

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- Complete flexibility with automatic and manual detection of lanes and bands, using several algorithms
- Should have tri-plex image capture capability
- Should have tri-plex image analysis features.
- Easy copy/paste functionality, crop, zoom, 3D viewer, and colors.
- Publishing resolution (dpi) and publishing dimension can be specified with a one-click image export for publication. Provides functionality to produce image at user-defined dpi and dimension
- No requirement for license registration
- Mac and PC compatible software
- 16-bit and 8-bit tiff images with a one-click export option
- The Software should automatically select the appropriate filters, light sources, and camera settings for all applications. Ensures that image optimization is specific to a selected gel or blot application or can be used for a large portfolio of detection methods. Applications including: Chemiluminescent, colorimetric and multiplex fluorescent western blots, nucleic acid and protein detection via colorimetric and fluorescent stains.
- Software should have automated multi-channel image view and color-coded analysis.
- Software should have Signal Accumulation Mode (SAM) for easy optimization of exposure time for chemiluminescent detection.
- Mac and PC compatible software
- Software should not have requirement for license registration allowing unlimited installations of the software for multiple users with full functionality.

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- Software should produce customizable reports with data organized as desired, including, Lane and band identification, molecular weight or base pair evaluation. Band sizing and quantification are based on a reference band or quantity standards.
- Automated normalization for loading control for total protein as a loading control
- Should be supplied with a Suitable Computer

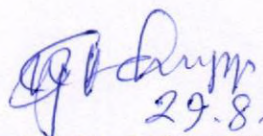
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ANNEXURE - I

Specifications of Reciprocator Saw :


- |  |    |      |
|--|----|------|
| 1. Battery Power line Reciprocator Saw Attachment II | 1  | Such |
| 2. Battery for Battery Power Line II Hand Piece      | 2  | Such |
| 3. Battery casing for Battery Power line II          | 1  | Such |
| 4. Sterile Cover for Battery Power line II           | 1  | Such |
| 5. Universal Battery Charger II                      | 1  | Such |
| 6. Reciprocator Saw Blade                            | 12 | Such |

  
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**Technical Specification – Heated Humidified High Flow Nasal Cannula system – In Adult, Infant & Paediatric**

1. The device should have integrated flow generator to deliver flows from 2 to 25 ltrs in Pediatric and 10 to 60 ltrs in Adult settings.
2. Integrated Air/oxygen blending and Fio2 monitoring with facility to deliver wide range of oxygen concentrations from 21 to 100 %.
3. Oxygen sensor does not require in field calibration.
4. Clinician menu for setting range of Fio2 and flow settings.
5. Inbuilt heated humidifier to deliver warm and humid gases to airway. The humidification chamber should have dual float with auto feed system.
6. Display to monitor temperature of humidified gas, flow rate and fio2
7. Visual and audible alarm indication for :
  - a. Tubes disconnect Leaks, tube blockages, and water out and hardware fault with error codes. Audible power failure alarm.
8. The device should have thermal disinfection mode to minimize contamination. Heated tube for sterilization of the device should be provided with the device.
9. **Accessories to be supplied with the system:**
  - Patient breathing tube with integrated heating coil and flow/temperature sensor.
  - Soft, flexible anatomically contoured nasal cannula. The cannula should be available in different sizes suitable for infant and paediatric application. It should have hydrocolloid adhesive on Velcro to secure on skin. This should be easily replaceable.
  - Air filter – 2 nos
  - Disinfection kit – 1no
  - Oxygen inlet extension tube- 1no
  - Mounting tray and pole with castors & IV hook
- 9) Supply frequency: 50/60 Hz, Supply voltage: 220-240 v
- 10) Sound pressure level 45dbA@1m
- 11) Oxygen analyzer accuracy  $\pm 10\%$  (within range of 25-80 % Fio2)
- The unit should be compliance with international standards. IEC 60601 and ISO 13485 quality standard
10. Certification: US FDA and European CE approved
11. Compliant with international standards. IEC 60601 and ISO 13485 quality
12. Suitable for use in ICU, HDU, recovery, wards and emergency department.

  
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## Specification of Penta Head Microscope.

### The instrument should be/have:-

1. Microscope for Biology & Medicine for transmitted light 100W illumination with height adjustability of focus knobs, with state carrier and centrable condenser holder for vertical adjustment, right & left hand operation and clamp screw, with adjustable height stop, mains 90-250V, commutable 50/60 Hz.
2. 3 step focus drive for coarse, medium and fine focussing, focus torque adjustment and adjustable focus stop with focus knobs coarse.
3. Objective nosepiece & objectives with M25 thread, set of focus knobs fine with standard surface for microscope.
4. Stand ground for microscope with filter magazine for 3 filters 40mm switchable. Daylight filter DLF (conversion filter), 40mm, Grey filter N16 (6.3% permeability), 40mm, Green filter panchromatic, 40mm. Filter holder for max. two filters in mount, 32 mm under condenser.
5. Lamp housing 107/2, with fixed lamp mount for halogen lamp 12V 100W, heat absorbing filter, single-lens aspherical collector, microprism diffusion filter for enhanced brightness and homogeneity of the illuminated area, cable 0.55 mm. Halogen lamp 12V 100W - 5 Nos.
6. Ergo stage for microscope right or left hand operation. Stage plate with ultra hard ceramic surface, travel range 76mm x 25mm, with vernier reading. Slide holder one hand slide change, XY - Stage control standard.
7. Obj. 5x/0.12, 10x/0.25, 20x/0.40, 40x/0.65, 100x/1.25 oil objectives.
8. Tube BDTP 25 100/50/0 with fixed port and 3 switching position: 100%:0%, 50%:50%, 0%:100%, photo - TV port, viewing angle 30°.
9. 2 nos. eyepiece HC PLANs 10x/20 Br. M.

### Multiple Viewing System : 5 Stations

1. Multiple viewing system : 5 station, LED Pointer with power supply, power cord, 2 support legs, and leg extension.
2. Standard binocular tube HC, 30° viewing angle, -4/4
3. Eyepiece HC PLAN 10x/20 BR. M - 8 Pcs
4. Dust cover for Multi viewing systems.
  - Suppliers should have very good Kolkata based after sales service-support with proven track record.
  - Supplier must ensure that the spare parts and consumables will be made available at least up to 7 years from the date of installation.
  - Good International manufacturer.
  - If require demonstration need to given.

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