



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

Memo No. NMC/STORE/ 3609

Dates: 02.09.2020

**Re-E-TENDER NOTICE (NIT No: 1/ 20-21) 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	Fluorescence Microscope with Karyotyping and FISH cytogenetics software	Hematology	01 pcs	Rs. 50000.00

2)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Trans cranial Magnetic Stimulator	Neurology	01 pc	Rs. 50000.00

3)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Wall mounted Virtual touch fully interactive Table	Anatomy	02 pc	Rs. 100000.00

4)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Semirigid Uretero-Renoscope 4.5-6F with all accessories	Urology	1 pc	Rs. 5000.00

5)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Heart Lung Machine	CTVS	1 pc	Rs. 100000.00

6)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Image Guided Neuro Navigation System with Ultra Sound	Neurosurgery	1 pc	Rs. 100000.00

7)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	32 Channel Interoperating Monitoring System	Neurosurgery	1 pc	Rs. 50000.00

8)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	High end Endoscopic Equipment along with high end electrosurgical unit	Gastroenterology Unit	1 pc	Rs. 100000.00

9)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Fluorescence Microscope with Karyotyping and FISH cytogenetics System	MRU	01 pcs	Rs. 50000.00

10)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Video Bronchoscope	Chest	01 pcs	Rs. 20000.00

11)

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Cardiac Biomarker Test System	Cardiology	01 pcs	Rs. 20000.00

12

Serial No	Name of equipment	Department	Quantity	Earnest Money
1	Micro Reciprocating Saw with Electric Motor Control Unit	Plastic Surgery & Orthopedic	2 pcs	Rs. 30000.00

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.

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

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	Duly filled in CHECK LIST in the prescribed format. Page number of documents must be mentioned in the check list before uploading the same.	
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)** 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.	07.09.2020, 4.00 P.M.
2	Documents download start date (Online)	07.09.2020, 4.00 P.M.
3	Date of hoisting of documents at Departmental Website (www.wbhealth.gov.in)	07.09.2020, 4.00 P.M.
4	Date of Pre Bid Meeting and workshop with the intending bidders at the office of the Principal of NRS Medical College	9.09.2020, at 1.00 P.M
5	Bid Submission starting (On line)	10.09.2020 4.00 P.M. onwards
6	Bid Submission closing (On line)	03.10.2020 at 4 P.M.
7	Bid opening technical bid(online) (Bid A)	05.10.2020 at 4.00 P.M.
8	Date of uploading list for Technically Qualified Bidder (online)(Bid A)	06.10.2020 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.

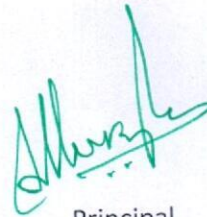
Principal, Nil Ratan Sircar Medical College, Kolkata, **reserves the right to change the above schedule in case of any exigencies after putting up a notice in the departmental website and Notice Board of N R S Medical College, Kolkata.**

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	PI 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(if applicable)		
13	Certificate of country of origin		
14	Registration with Registrar of Companies		
15	Valid Manufacturing License(if applicable)		
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

Fluorescence Microscope With Karyo-FISH Cytogetetics System Specification

MICROSCOPE SYSTEM:

- **Optical System:** Infinity corrected Optical System.
- **Microscope Stand:** Infinity corrected Optical System Trinocular (three step light path divider) Research Upright Microscope with True Koehler Illumination highly ergonomic Design for user comfort. Microscope should be upgradable to DIC function in future.
- **Nose piece:** Removable 7 position revolving nosepiece with a slot for analyzer slider.
- **Observation tube:** 30° inclined Trinocular Observation tube, light path selector between eye port and camera port 100:0; 0:100; 20:80. (FOV 22mm)
- **Mechanical Stage:** Hard Ceramic coated XY mechanical with coaxial stage right hand low drive XY control with dual glass slide holder.
- **Condenser:** Swing-out condenser with built-in Iris Diaphragm (NA 0.9).
- **Illumination:**, powerful transmitted 12-14 watt or more LED illumination with built-in-Koehler illumination, light intensity LED indicator with Light intensity Manager switch.
- **Accessories:** Low auto fluorescence 30 ml immersion oil

- **Objectives:** (FOV at least 22mm)
 - Plan Achromat objective 4X, (NA- 0.10)
 - Plan Semi Apochromat objective 10X, (NA-0.30)
 - Plan Semi Apochromat objective 20X (NA 0.50)
 - Plan Semi Apochromat objective 40X (NA 0.75)
 - Plan semi Apochromat objective 100X (NA - 1.30, Oil immersion)
 -
- **Reflected Light Fluorescence:** 130 watt mercury lamp with 2000hrs life time for fluorescence observation with 8-10 position filter turret and the following fluorescence filters-
 - DAPI Filter (for blue)
 - Spectrum Green or FITC Filter
 - Spectrum orange or TRITC or Texas red Filter.
 - Dual Exciter Filter for Spectrum Green/Spectrum Red.
 - 0.5 X adapter

ACQUISITION SYSTEM:

- Acquisition of only required region. Adjustable region of Interest in acquisition
- Capturing by one mouse click and the whole process is performed under the same software platform.
- Automatic camera and image capture control with manual override function.
- Display optimization for maximum display contrast.
- Gallery of recently acquired metaphases available within the capture/ application window
- Automatic image enhancements.

- Camera : 5 MP or higher camera with pixel size of 3.45 µm and 35 fps, USB, Firewire or Gigabit ethernet interface. PC should come from the the manufacturer except the monit

Computer Specifications:	
Standard Features	Mini-tower orientation or compatible.
Processor	Intel® Core® Processor i5-3550 (3.3GHz, 6MB)
Memory	Memory : 4GB (1x4GB) 1600MHz DDR3 Non-ECC
Hard Drive	500GB (7200RPM) 3.5inch Serial ATAII 3Gb/s
Optical Drives	16x DVD+/-RW Drive
Video	Intel® Integrated Graphics
Speakers	Internal Business Audio Speaker
Power Supply	Standard 275W
Mouse	3 Button USB Scroll Optical Mouse
Keyboard	(QWERTY) USB keyboard
Operating System	Microsoft® Windows® 7 Professional 64Bit English Operating Systems
Power cord	US / Europe (as defined in order)
Media	MUI Windows 7 Professional (64Bit OS) Resource DVD.
Monitor	25" TFT Monitor

DATABASE:

- Single database for all applications .
- Modern paperless laboratory design management software should be included.
- Workflow oriented database user interface, includes all the information about the patient demographics, images, results, etc.
- Centralized server with better network accessibility and data integrity.
- Capable to integrate with LIS (Laboratory Information System) of the institute/organization.
- Multi-site connectivity: Single database can support multi-site installations without the need to transfer data between workstations.
- Ability to assign levels of security for user access.
- Ability to associate with any external documents (pdf,word,xml etc).
- Combined gallery view of all image types capture for a case, giving the user the ability to choose multiple images side by side viewing.
- Any replaced or new image added should be updated in the gallery and in the database.
- Capable to export acquired image as clipboard image.
- Capable to import external images.
- Image processing history to be saved with date and time of each modification .Audit trails and logging is required for case, slide and cell status modification
- Ability to migrate cases from various versions.
- Search mechanism by any case or slide field or combination of any fields even when archived.
- User notification of the next "To Do" item according to roles & permissions.

- Ability to generate highly configurable customized reports with hiding sex chromosomes (for prenatal tests).
- Easy and unlimited data archival and retrieval.
- Automated data maintenance.


KARYOTYPING SOFTWARE:

- Software licence for multi species for karyotyping of different animal species.
- Ability to handle G-,R-,Q- banding, polyploid cells and markers
- Ability for multiple users to perform analysis on individual images within the same case simultaneously, for faster analysis of an urgent case
- Support of ISCN ideogram with 300, 400, 550, 700 and 850 band resolutions.
- Ability to work in any workspace .
- Machine learning algorithm for the classification of each chromosome and arrangement in the karyogram per laboratory samples.
- It Should be FDA approved.
- Should have magic tool . A single tool must be used to select, de-select, separate touching and overlapping chromosomes, cut, join, delete or add parts of chromosomes, rotate or move the chromosomes etc in metaphase as well as in karyotype workspace.
- Merge as many regions or chromosomes as required with automatic detection of chromosome contours to be added.
- Easy to Move chromosomes. Drag and drop chromosomes to desired locations . Drag all chromosomes of a class at once.
- Simple chromosome Rotation using the mouse scroll wheel.
- Localise Marker Chromosomes in Karyotype view
- Automatic counting of chromosomes with minimal adjustment to complete full chromosome count . Additional tools for counting chromosome. Incorporate the sex chromosomes within the count tool for a display of both the model number and sex.
- Annotate chromosomes as well as ideograms. Free text annotation, and markups, with different colors and shapes can be added to metaphase and karyogram images.
- Ability to prepare the customised ideograms.
- Ability to perform chromosome segmentation operations within a single tool without additional key board strokes or mouse clicks to switch to a different tool function, with more than 10 different operations.
- All contour editing and segmentation operations, including addition of missing telomere regions, can be done within the karyotype window.
- System can automatically present a single karyotype of multiple patients (like family members) with all chromosomes included side by side for each class.
- Karyotype arrangement is adjusted automatically based on content of chromosomes, even if chromosome size is larger than standard size of the group or 10 or more chromosome are in the same class
- Expand or shrink specific chromosome boundaries by keyboard short key
- Accurately estimate the band resolution of metaphase.
- Case Report summarizing karyotype of all cells aberrations for immediate view of clones and common aberration.

- Should support various species karyotype and be open system to add more species as and when required.

FISH SOFTWARE:

- Support of motorized microscopes (filter block, change focusing, shutter).
- Acquisition of only required region.
- Up to 12 fluorochrome channels per image.
- Handles metaphase, interphase and tissue samples with two, three or more probes.
- Automated background correction.
- Real time focus control.
- Extended focus image generation from focus image series.
- Immediate true color image display.
- Easy combination of transmitted light and fluorescence information in color image.
- Image registration of color components, automatic or interactive.
- Annotation capabilities, text and arrows.
- Distance and area measurement functions.
- Integrated fluorescence intensity measurement.
- Color modification and reassignment functions.
- Full Karyotyping capabilities for karyotyping of FISH probes.
- Pseudo color display functions for simultaneous display of more than 3 fluorochromes.
- Integrated with powerful bioinformatics management with simple, easy, quick and reliable manual analysis of FISH sample. Quality results leveraging double blind multiple technologists scoring. Efficient classification of signals with audible feedback.
- Ability to measure intensities of telomeric probes.
- Should be FDA approved.
- Same system should be upgradable to IHC imaging and analysis.


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Trans Cranial Magnetic Stimulation System

- Compact System having built in TFT 8,4" Interactive Color Display for easy user interface. Overall weight of the system should not exceed 30 Kg.
- System should have Up to **100Hz** of Stimulation Frequency
- System should have Two Channels MEP Module from the same manufacturer.
- System should have Footswitch Trigger Input
- System should have Dedicated Trolley with Coil's Arm Support, Retractable Draw and Printer Shelf
- System should have PC Interface for Protocol Management

Characteristics

- System should have **Monophasic, Biphasic and Sinusoidal Waveforms**
- System should have **Burst and Theta Burst Stimulation**
- System should have **Double Stimulation Function (BI Option)**
- The system must be upgradable to add Neuro-Navigation with features like MRI Import with automatic classification of scalp, white matter and gray matter volumes for 3D image creation - High spatial resolution optic tracking system for accurate stimulation of the planned part of the brain.

Compliance / Regulatory Standards:-

The quoted model must be US FDA and European CE compliant, Certificates to be enclosed with the bids. The manufacturer must be ISO- 13485 Certified.

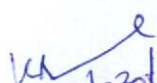
Each System **MUST** include one each of the following :

- Main unit with 2 channel MEP module
- Dedicated Trolley with Coil's Arm Support and Printer Shelf
- Circular 90mm Integrated Controls and Display
- Butterfly 120° 90mm Integrated Controls and Display
- Butterfly 70mm, Air Cooled
- Butterfly 70mm, Placebo Air Cooled
- Consumable if any for at least 10 patients and separate prices for the consumable should be enclosed with the bids.

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TECHNICAL SPECIFICATION FOR Virtual Anatomy and Visualization table

S.N.	Tender Technical Specification
	Technical Specification of PACS Based Virtual Anatomy and Visualization
1	Virtual Dissection Table with single or more monitor screen more than 60", ultra thin with capacitive touch screen and group learning.
2	The table should have adjustable height to accommodate students / teachers of different Progamable table position and free slectable tilting board position up to 90 degree.
3	It should contain a fully labeled intractive body atlas, 3D models anatomy education functionally like rotating, zoom in and out idntityfication of individual structure with clinical application of that structure and the ability to do a layer by layer disection structures.
4	Should have complete anatomical educational curriculam.
5	Should offer cadaver based 3D models with ability to identify, desect any part Going through the whole layers.
6	Should be able to slice cadaver in transverse, sagittal and coronal planes and 3D model with the sectional anatomy in these planes and with radiological images Ray and ultrasound.
7	Should have an inbuilt picture archiving and communication system (PACS) workstation for 3D medical imagining and the ability to connect through LAN to domain or DICOM base.
8	In order for students to be able to learn using localised cases it should allow import on CT & MRI deta and automatically reconstruct and visualised 3D model from Realtime.
9	Should allow for multi planner 3D reconstruction from CT/MRI data
10	Manual or semi automatic bone segmentation should be possible.
11	The visualization system should be able to import and view any DICOM image.
12	It should have all typical 2D tools used by the radiologist.
13	Should be able to annotate 2d & 3d images.
14	Body structures should freely roated in all three access (X,Y,Z).
15	The work station should offer connectivity to an internet cloud platfrom data, Anatomical CT and MR lybrary- allowing proffesros and students to access Cases save their work and share their cases with other users .
16	It should contain educational portal with acces to other cases preffered by specilist world
17	IT Should be possible to connect the table to any LCD projector.
18	Should be possible to acess data from any desktop, Laptop, tablet , smart phone.
19	Service center must be locally available.


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5. SEMIRIGID URETERO-RENSCOPE 4.5 -6 Fr WITH ALL ACCESSORIES.

12° and 4.5/6 Fr one step, conical, length 43cm.

Should be autoclavable.

Should be angled eyepiece, fibre optic light transmission incorporated,

Should have 2 lateral irrigation ports and 1 working channel of 3 Fr.

Should be supplied with tray cleaning and sterilization and storage.

Should be provided with path finder.

Accessories:

Double action jaws, 3 Fr rigid , length 60 cm – 2 pcs.

Triprong jaws, 3Fr , rigid ,length 60 cm – 2 pcs.


Tapan Kumar Mandal
20/1/2020

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

(Advance Version)

SN	Technical Specification
Heart Lung Machine	
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.
Electronic Air-Oxygen	
23	Integrated Electronic Air- Oxygen Blender with hoses and Flow meter
24	Should have USFDA approved


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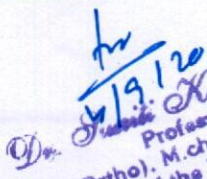
Technical Specification *with ultrasound*

SPECIFICATION FOR IMAGE GUIDED NEURO NAVIGATION SYSTEM FOR BRAIN SURGERIES

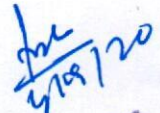
SN	SPECIFICATION
1	The system should have monitor/screen size of at least 27"
2	The system should have compatibility with common multi-touch gestures like pinch for zoom, drag for scrolling; two fingers drag for pan etc.
3	System should have the ability to record the screen activity during software operation or during navigation for
4	System should have option for both the optical and Electromagnetic navigation technology
5	The Electromagnetic Tracking Technology should enable the system to be used safely on pediatric and old patients
6	System should support DICOM data import and processing.
7	The system must have active CD /DVD drive , USB ports and wifi enabled for Data import and export
8	System should have password protection in the home screen/first screen
9	System should be dual cart assembly with two monitors to ensure a). optimized placement of the carts in OT and b). Better OT workspace management.
10	System should have power back up for at least 10mins
11	System should have HDMI o/p to share the screen to bigger monitor for better resolution during conferences
12	The system should be a high performance Image-Guided Surgery System that works with Windows/Linux/Unix Operating system Environment.
13	The system should offer hybrid-tracking technology with Active and Passive instrumentation.
14	The navigation system should have a 360 degree articulating arm for camera positioning
15	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 shots, 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.
16	The system should be able to integrate/interface with intra operative imaging system for image transferring.
17	System should have 1 terabyte solid-state drive which ensures ample space to store examinations of patients
18	System should have at least 16GB RAM for fast performance and image manipulation
19	The system should allow customer to define the level of security for user authentication, antivirus protection, encryption, and firewall protection.
20	The system should have low/economical recurring disposables cost.
21	Live demonstration must be given in a Neuro surgery case in neurosurgery O. T. At NRS MCH

Cranial Application:

1	The system should have point as well as surface registration capabilities with accuracy prediction system and also combination of registration should be possible
2	The system should be provided with user friendly and intuitive software.
3	The system should be provided with a software that is easy to maintain and support
4	The system should accept image fusion correlation between multiple CT, MRI, CTA, MRA, FMRI and PET images
5	System should merge each image with reference exam not the sequential merging
6	The system should have option to integrate directly with imaging system for direct import of FMR/DTI image to station via CD DVD, PACS, and USB with tract overlays designed.
7	The system should be able to view to see 3-D image patient anatomy.
8	The system should have annotation capability and which can be seen during surgery.
9	The system should give audio feedback during registration.
10	The system should incorporate rescue points to recover navigation registration during surgery in case of registration accuracy loss during surgery.
11	The system should be able to mark danger areas and surgeon should be able to visualize the same on surgeon monitor.
12	Automatic 3D model building for brain model should be possible
13	Point seeding feature should be available for quick tumor building model
14	The system should have neuro workflow oriented sequences.
15	The system should provide easy and fast registration process.
16	The system should have capabilities enabling surgeon to be able to do 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.
17	The system should be allow patient positioning (supine, prone etc.) and procedures including but limiting to frontal, occipital, lateral, and temporal approach.
18	The system should be capable of doing following procedures Craniotomies, Endonasal approach, Biopsy (Frameless), Trans Nasal, lateral & anterior Skull base surgeries, and Neurology procedures.
19	The system should have advanced auto segmentation and semi-auto segmentation capabilities and should be able to perform following segmentation:-


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21	The system should support surgeries in following positions:- <ul style="list-style-type: none"> • <input type="checkbox"/> Supine • <input type="checkbox"/> Prone
22	The system should support frameless biopsy and pre-calibrated biopsy needle should navigate till the target
23	The software should have capability to fuse axial, sagittal and coronal image sets of different modalities.
24	The system should have the features of following registrations: <ul style="list-style-type: none"> • Should have facility for fiducial marker-less registration.
25	The system should interface with intraoperative imaging systems including microscope, endoscope thereby streamlining visualization workflows.
26	The system should have dedicated software for performing functional neurosurgery including DBS.
27	System should have ability to make multiple plans and define them different color using colormap
28	System should have ability to see the virtual projection or tip extension up to 300mm and option to navigate instrument tip and to navigate virtual projection both has to be active
29	Reverse projection should be available for use
30	Virtual craniotomy feature has to be there to visualize the optimum craniotomy size for better planning in 3D model or 2D images
31	Look ahead view should be in there with customized increments for the 2D images
32	Endoscopic view should be active for use
33	The system should have facility to integrate with commercially available ultrasounds to calculate brain shift and depth of tumor resection intraoperatively continuously to ensure there is no or minimum inaccuracy involved due to brain shift.
34	The compatible ultrasound system of make ALOKA or PHILIPS or HITACHI or SIEMENS or ALPINION or GE or SONOSITE must be supplied along with a probe suitable for use in cranial procedures. The system should come with a warranty for 5 years.
Instrumentation:	
1	The system should be supplied with factory calibrated navigable instrumentation designed specifically for image guided surgery.
2	The system should have both the active and passive factory calibrated navigable instruments.
3	Along with factory calibrated navigable Instruments, the system should be supplied with universal adapter kit to navigate a variety of already in-use surgical instruments like suction, drills, etc. The supplied universal adapter kit should include at least one each of small, medium and large adapters.
4	The system should have the option of Electromagnetic based dynamic referencing so that registration is not lost even if camera and patient moves.
5	The Electromagnetic Navigation module should be available for upgradation to support cranial, skull base and neurology surgeries.
6	The Electromagnetic factory calibrated navigable instruments should include flexible tip tracking.
7	The system should include a frameless biopsy kit with a Biopsy needle that can be tracked or navigated till the target inside the brain. Biopsy needle (Optional, Price to be quoted separately.)
8	The system should be both USFDA and CE approved for both Electromagnetic and Optical system for Neurosurgery applications.
9	The system should have instruments that are auto clavable ensuring durability.
10	Validation of navigable instruments can be done easily.
11	The system should provide recalibration of factory calibrated navigable range of instruments in case instrument alignment is out.
12	System software should support inferior to superior trajectory for epilepsy procedures, depth electrode placement
13	System should have fully navigable shunt stylet in both optical and EM


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Specification for 32 Channel Interoperating Monitoring System

1. 32 Channel with 64 inputs multi-modality monitoring: free-run EMG, EEG, MEP, SSEP, AEP, VEP, pedicle screw test, train-of-four (TOF).
2. Should have 8-channel electrical stimulator for NCS and SSEP (1-100 mA)
3. Should have 4 transcranial electrical stimulator for MEP (up to 1000 V)
4. Should have 2 channels for low-current stimulator for direct nerve stimulation (1-10 mA)
5. Should have 2 channels for auditory stimulator for AEP
6. Should have upto 2 ES detector
7. Should have visual stimulator (LED goggle) for VEP.
8. Should have acquisition pod and stimulator pod up to 5 mtr length.
9. Should have special electrode junction units and Medusa cables allows placing lead and stimulation electrodes properly even if the patient is up to 5 meters away from the Machine.
10. Should have software for intraoperative monitoring. The software controls the operation of all amplifiers and stimulators, and also displays traces for all above-mentioned modalities
11. The System should be a compact and lightweight provided with a carrying case and it takes only a few minutes to make system ready for operation.
12. Should have European CE/USFDA Certificate.
13. Adjust parameters to perform neuromonitoring on pediatric patients
14. Electronic data storage of the entire procedure including EMG audio
15. Electro-surgery unit (ESU) interference muting
16. 32 channel neurological monitoring for intraoperative applications
17. Comprehensive EEG, EP and EMG monitoring with up to 32 independent channels
18. All EP modalities including SSEP, MEP, AEP, BAEP, VEP.
19. Should be capable of delivering atleast 1000V or more for MEP recordings in pediatric patients
20. Stimulators run all electric modalities should be supply.
21. Should be able to review video capturing from any camera (upto 3 cameras) device.
22. Should be supply standard electrode/accessories kit.
23. EMG audio is able to be recorded and reviewed.
24. Should have automatic report generate facility in MS word.

Should at least support below mentioned features:-

25. Pulse Oximeter recording
26. Automated report generation for pedicle screw stimulation
27. Fully surgeon controllable from the sterile field
28. Multiple manual and triggered EMG modes of operation
29. Audible and visual surgeon feedback
30. Allow the adjustments of MEP parameters like pulse count, train mode, pulse rate and duration while running test.

The system should be supplied with:-

31. (Desktop/Laptop) Intel Core i5 processor with 4GB RAM, network card, multimedia speakers, mouse, keyboard, minimum 1TB hard disk for storing
32. Laser Printer (B/W)
33. Movable Trolley
34. Operating Manuals and user manual
35. Accessories to be provided for at least 10 surgeries and rate to be quoted separately for all accessories.
36. Live Demonstration must be given in a neurosurgical case in Neurosurgery OT, at NRSMEH.

for
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for
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Specification for Endoscopic Ultrasonography

(1) Digital Video Processor with Xenon Light source

Fully digital system : combination of Digital Signal Processing, high resolution CCD Chips and the latest digital video processors.

Illumination with a high-performance Xenon light source and digital brightness control.

Easy and intuitive data management for rapid storage and management of patient and user data.

Digital Video Processing for the most common applications.

Technical Data

- Light Source : 100 W Xenon
- Colour Temperature : $\pm 6500K$
- Brightness control : Automatic/ manual
- System : average/peak
- Colour Correction : red/blue
- Contour enhancement : Minimum 4 steps
- Data management : Minimum 30 patients / 50 users
- Outputs : 1 x RGB, 2x Y/C (S-VHS), 1 x Composite (FBAS)

approx 1 (e)

(2) Video Color CCD Ultrasound Gastroscope Longitudinal

Specifications

- Field of View : Forward oblique (45°)
- Angle of View ($^{\circ}$) : 120
- Depth of Field (mm) : 4 - 100
- Tip Deflection ($^{\circ}$) Up / Dn : 130 / 130
Rt / Lt : 120 / 120
- o Rigid Distal Width (mm) Probe : 12.5X12.3
Optic : 14.35
- o Insertion Tube Width (mm) : 12.8
- o Minimum Instrument Channel Width (mm) : 3.8
- Working Length (mm) : 1250
- Total Length (mm) : 1560
- Acoustic Frequency (MHz) : 5 - 10
- Scan Direction : Longitudinal
- Scan System : Convex
- Scan Angle ($^{\circ}$) : 120
- Scan Mode : B Mode / Color Doppler

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3) Color Medica Grade Monitor

(4) Trolley for Endoscopy System

(5) Ultrasound Scanner Diagnostic System :

Operation System : Windows XP

Basic process channel : 10240

Scan mode : Linear, Sector, Convex, 360° Radial, Trapezoidal Display (Linear probe only)

Multi-beam processing is possible

Ultrasound transmitting / receiving unit

Digital Scan Converter unit

Compound Technology : HI Com ,standard, Convex, Linear (Available on color mode)

e-Com is effective to reduce speckle noise and extract tissue borders. High image quality can be achieved. Can be used not only on linear probes, but also on convex probes. Additionally, can be used in color mode similarly to B/W mode.

Improving image quality by structural extraction and emphatic tissue. (Adaptive Filter) : HI REZ, Convex, Linear, Sector)

THI (Tissue Harmonic Imaging) . Advanced dTHI filter method /WPI (Wideband Pulse Inversion) WPI (Wideband Pulse Inversion) enables to get high-quality images keeping high resolution.

Real-time biplane : Possible

B/M. B/D Display Method : up & Down / right & left (up & down ratio : 3 steps)

Omni directional M-mode : Standard (Sector, Convex)

Zoom (scan mode) : HI Zoom - high image quality by sound optimization

Zoom (after freeze) : possible

Gain adjustment after freeze : Possible (B,M,Doppler)

M Mode Navigation : possible

Automatic image quality optimization : HI Support (B. Doppler) (possible to optimize image quality at one touch of a button)

TDI (Tissue Doppler imaging) function, Pulsed Doppler unit

Color flow mapping unit

Tissue elastography possible

Power Angio/Doppler

Automatic IMT (Intima media thickness) measurement.

Cine Memory

B-Mode : Max 19,000 frames

M-Mode / Doppler : 300 sec (average)

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layers

Digital Image Recording

Image storage Media : Built-in: HDD, FDD, CD-RW, DVD+RW, DVD-RAM, USB
External: DICOM server, PC direct

Still image recording in HDD : B/W: Approx. 72,000 images, Color: Approx. 24,000 images

Real-time motion image recording : Real-time digital memory, Capable to play back in a main unit.

Possible to search images

Probe Port : 3 Probes

Monitor : 17" LCD

Power consumption : Below 1500VA

(6) Video Color CCD Ultrasound Gastroscope Radial

Specifications

Field of View : Forward

Angle of View (°) : 140°

Depth of Field (mm) : 4 - 100

Tilt Deflection (°) Up / Dn : 130° / 60°

Roll Deflection (°) Rt / Lt : 60° / 60°

Ø Rigid Distal Width (mm) Probe : 12.6

Optic : 12.0

Ø Insertion Tube Width (mm) : 12.1

Ø Minimum Instrument Channel Width (mm) : 2.4

Working Length (mm) : 1250

Total Length (mm) : 1560

Acoustic Frequency (MHz) : 5 - 10

Scan Direction : Latitudinal

Scan System : Radial

Scan Angle (°) : 360

Scan Mode : B Mode / Color Doppler

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Specification for high end/~~advanced~~ ^P electrosurgical unit:

- The electro surgical generator should be a 400 Watt touch screen display with 15 digital signal processors working in parallel.
- Unit should facilitate functions of monopolar, bipolar & vessel sealer with in-built regulated power supply adapter for underwater bipolar resection.
- Unit should have a Stepguide suggesting appropriate setting configurations for every instrument and application.
- The system should make 25 million measurements / sec for enhanced tissue effect and should measure tissue impedance through power peak system.
- The system should have Wi-Fi communication interface facility to access, change and save the settings
- System should have wifi compatibility for future OR integration.
- System should have remode function to allow user to access 6 sub programmes directly from the sterile field.
- The system should have four multifunction sockets which can be replaced anytime upon requirement.
- Unit should have the facility to store 1800 programs or applications.
- Unit should have the facility to show the active instruments on the screen display.
- The generator should have an inbuilt feature of accessory assignment.
- Supply frequency should be in the range of 50 -60 Hz.
- Power consumption at Max HF power should be 550 watts with max pulse power consumption of 1600 watts.
- The generator should work on a supply voltage of 100 – 120 VAC & 220 – 240 VAC
- Power consumption in standby mode should be less than 30W.
- Each socket should support the Autostart function for bipolar instruments.
- Unit should have high cut mode for monopolar TUR-P or TUR-B.
- Unit should have Soft Coagulation mode with quick start function for any open, endoscopic or laparoscopic application
- Unit should have PreciseSect mode for optimized dissection in open or laparoscopic cases
- Should have a special Coagulation mode called "Thermoseal" with auto start function for highly vascularized tissue bundles and vessels upto 7mm diameter and min. burst 360mmHg burst pressure.
- Unit should have an AutoCut bipolar mode to facilitate bipolar cutting instruments.
- The unit should have high cut bipolar to facilitate bipolar resectoscopes for bipolar TUR-P or TUR-B cases.
- Unit should have Dry cut & Swift Coagulation mode for optimized dissection in open, laparoscopic and advanced endoscopic cases like POEM, ESD,STER.
- The unit should have Endo cut I/Endo cut Q modes for endoscopic procedures.
- The generator should be compatible with Argon plasma coagulation unit having forced APC, pulsed APC and precise APC modes for surgical as well as endoscopic procedures.

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- The generator should also be compatible with hydro jet to facilitate use of unique hybrid technology instruments for surgical as well as endoscopic procedures,
- Unit must be compatible with Intelligent smoke evacuation module, suction module and irrigation module from OEM.
- The footswitches should be 100% waterproof (IPX8) and washable in surgical washers.
- The unit should have provision to use fully reusable bipolar instruments (both lap and open) including vessel sealing instruments from the same OEM.
- Unit should support Nussy as a neutral electrode.
- The system should have neonatal function with alarm to prevent high current output(above 300mA) when using small patient plate for infants
- The system should automatically alert the user of any errors/malfunctioning through clear audio visual signal.
- The system should also store the data of any errors or malfunctioning.
- The system should have automatic monitoring of the patient plate and should measure & display the tissue impedance, it should automatically stop current in case the connection drops beyond the safe point.
- Unit should be FDA & CE approved.

Following accessories to be supplied:

- Reusable hand pencil with facility for swapping between programs 5 ps
- Disposable Electrosurgical pencil with 2 buttons 100 ps
- Reusable Thermo fusion hand instrument for open surgeries (for vasculatures up to 7mm) 2 ps
- Reusable thermo fusion hand instrument for Laparoscopic surgeries (for vasculatures up to 7mm) 2 ps
- 5mm bowel shaped sealing and cutting hand instrument with maximum of 1.1 mm thermal spread 2 ps
- Footswitch with facility for swapping between programs
- Reusable Bipolar premium forceps 1
- Patient plate disposable with equipotential ring 100
- Argon assisted cutting instrument for open & Laparoscopy surgery 1each
- Workstation trolley
- Monopolar Cable for Minimal Invasive Instruments
- Bipolar cable for forceps

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FLUORSCENCE MICROSCOPE WITH KARYO-FISH CYTOGETETICS SYSTEM SPECIFICATION

MICROSOPE SYSTEM:

- **Optical System:** Infinity corrected Optical System.
- **Microscope Stand:** Infinity corrected Optical System Trinocular (three step light path divider) Research Upright Microscope with True Koehler Illumination highly ergonomic Design for user comfort. Microscope should be upgradable to DIC function in future.
- **Nose piece:** Removable 7 position revolving nosepiece with a slot for analyzer slider.
- **Observation tube:** 30° inclined Trinocular Observation tube, light path selector between eye port and camera port 100:0; 0:100; 20:80. (FOV 22mm)
- **Mechanical Stage:** Hard Ceramic coated XY mechanical with coaxial stage right hand low drive XY control with dual glass slide holder.
- **Condenser:** Swing-out condenser with built-in Iris Diaphragm (NA 0.9).
- **Illumination:** powerful transmitted 12-14 watt or more LED illumination with built-in-Koehler illumination, light intensity LED indicator with Light intensity Manager switch.
- **Accessories:** Low auto fluorescence 30 ml immersion oil

- **Objectives:** (FOV at least 22mm)
 - Plan Achromat objective 4X, (NA- 0.10)
 - Plan Semi Apochromat objective 10X, (NA-0.30)
 - Plan Semi Apochromat objective 20X (NA 0.50)
 - Plan Semi Apochromat objective 40X (NA 0.75)
 - Plan semi Apochromat objective 100X (NA - 1.30, Oil immersion)

- **Reflected Light Fluorescence:** 130 watt mercury lamp with 2000hrs life time for fluorescence observation with 8-10 position filter turret and the following fluorescence filters-
 - DAPI Filter (for blue)
 - Spectrum Green or FITC Filter
 - Spectrum orange or TRITC or Texas red Filter.
 - Dual Exciter Filter for Spectrum Green/Spectrum Red.
 - Spectrum Aqua Filter.
 - 0.5 X adapter

ACQUISITION SYSTEM:

- Acquisition of only required region. Adjustable region of Interest in acquisition
- Capturing by one mouse click and the whole process is performed under the same software platform.
- Automatic camera and image capture control with manual override function.
- Display optimization for maximum display contrast.
- Gallery of recently acquired metaphases available within the capture/ application window
- Automatic image enhancements.
- Camera : 5 MP or higher camera with pixel size of 3.45 μm and 35 fps, USB, Firewire or Gigabit ethernet interface. PC should come from the manufacturer except the monitor

Computer Specifications:	
Standard Features	Mini-tower orientation or compatible.
Processor	Intel® Core® Processor i5-3550 (3.3GHz, 6MB)
Memory	Memory : 16GB, 1600MHz DDR3 Non-ECC
Hard Drive	2TB (7200RPM) 3.5 inch Serial ATAII 3Gb/s
Optical Drives	16x DVD+/-RW Drive
Video	Intel® Integrated Graphics
Speakers	Internal Business Audio Speaker
Power Supply	Standard 275W
Mouse	3 Button USB Scroll Optical Mouse
Keyboard	(QWERTY) USB keyboard
Operating System	Microsoft® Windows® 7/10 Professional 64Bit English Operating Systems
Power cord	US / Europe (as defined in order)
Media	MUI Windows 7/10 Professional (64Bit OS) Resource DVD.
Monitor	25" LCD/LED Monitor, High Resolution Monitor, Full HD monitor with minimum resolution of 2560 x 1440 at 60 Hz.

- 2KVA UPS with at least half an hour battery back-up should be quoted along with the system.

DATABASE:

- *Single database for all applications.*
- *Modern paperless laboratory design management software should be included.*
- *Workflow oriented database user interface, includes all the information about the patient demographics, images, results, etc.*
- *Centralized server with better network accessibility and data integrity.*
- *Capable to integrate with LIS (Laboratory Information System) of the institute/organization.*
- *Multi-site connectivity: Single database can support multi-site installations without the need to transfer data between workstations.*
- *Ability to assign levels of security for user access.*
- *Ability to associate with any external documents (pdf,word,xml etc).*
- *Combined gallery view of all image types capture for a case, giving the user the ability to choose multiple images side by side viewing.*
- *Any replaced or new image added should be updated in the gallery and in the database.*
- *Capable to export acquired image as clipboard image.*
- *Capable to import external images.*
- *Image processing history to be saved with date and time of each modification .Audit trails and logging is required for case, slide and cell status modification*
- *Ability to migrate cases from various versions.*
- *Search mechanism by any case or slide field or combination of any fields even when archived.*
- *User notification of the next "To Do" item according to roles & permissions.*
- *Ability to generate highly configurable customized reports with hiding sex chromosomes (for prenatal tests).*
- *Easy and unlimited data archival and retrieval.*
- *Automated data maintenance.*

KARYOTYPING SOFTWARE:

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- Software licence for multi species for karyotyping of different animal species.
- Ability to handle G-,R-,Q- banding, polyploid cells and markers
- Ability for multiple users to perform analysis on individual images within the same case simultaneously, for faster analysis of an urgent case
- Support of ISCN ideogram with 300, 400, 550, 700 and 850 band resolutions.
- Ability to work in any workspace .
- Machine learning algorithm for the classification of each chromosome and arrangement in the karyogram per laboratory samples.
- It Should be FDA approved.
- Should have magic tool . A single tool must be used to select, de-select, separate touching and overlapping chromosomes, cut, join, delete or add parts of chromosomes, rotate or move the chromosomes etc in metaphase as well as in karyotype workspace.
- Merge as many regions or chromosomes as required with automatic detection of chromosome contours to be added.
- Easy to Move chromosomes. Drag and drop chromosomes to desired locations . Drag all chromosomes of a class at once.
- Simple chromosome Rotation using the mouse scroll wheel.
- Localise Marker Chromosomes in Karyotype view
- Automatic counting of chromosomes with minimal adjustment to complete full chromosome count . Additional tools for counting chromosome. Incorporate the sex chromosomes within the count tool for a display of both the model number and sex.
- Annotate chromosomes as well as ideograms. Free text annotation, and markups, with different colors and shapes can be added to metaphase and karyogram images.
- Ability to prepare the customised ideograms.
- Ability to perform chromosome segmentation operations within a single tool without additional key board strokes or mouse clicks to switch to a different tool function, with more than 10 different operations.
- All contour editing and segmentation operations, including addition of missing telomere regions, can be done within the karyotype window.
- System can automatically present a single karyotype of multiple patients (like family members) with all chromosomes included side by side for each class.
- Karyotype arrangement is adjusted automatically based on content of chromosomes, even if chromosome size is larger than standard size of the group or 10 or more chromosome are in the same class
- Expand or shrink specific chromosome boundaries by keyboard short key
- Accurately estimate the band resolution of metaphase.
- Case Report summarizing karyotype of all cells aberrations for immediate view of clones and common aberration.
- Should support various species karyotype and be open system to add more species as and when required.

FISH SOFTWARE:

- Support of motorized microscopes (filter block, change focusing, shutter).
- Acquisition of only required region.
- Up to 12 fluorochrome channels per image.
- Handles metaphase, interphase and tissue samples with two, three or more probes.
- Automated background correction.
- Real time focus control.
- Extended focus image generation from focus image series.
- Immediate true color image display.
- Easy combination of transmitted light and fluorescence information in color image.
- Image registration of color components, automatic or interactive.
- Annotation capabilities, text and arrows.
- Distance and area measurement functions.
- Integrated fluorescence intensity measurement.
- Color modification and reassignment functions.
- Full Karyotyping capabilities for karyotyping of FISH probes.
- Pseudo color display functions for simultaneous display of more than 3 fluorochromes.
- Integrated with powerful bioinformatics management with simple, easy, quick and reliable manual analysis of FISH sample. Quality results leveraging double blind multiple technologists scoring. Efficient classification of signals with audible feedback.
- Ability to measure intensities of telomeric probes.
- Should be FDA approved.
- Same system should be upgradable to IHC imaging and analysis.



Broncho Videoscope

Field of View:	120 to 130 Deg
Direction of View:	0 Deg (Forward Viewing)
Depth of Field:	2 to 100mm
Outer Diameter (Distal End):	5.8 to 6.0 Deg
Range of Distal End Bending:	Up 180 Deg, Down 130Deg
Working Length:	580 to 600mm
Total Length:	800 to 870mm
Instrument Channel Inner Diameter:	2.8mm
Minimum Visible distance:	2 to 3mm from distal End
Should be laser compatibility and electro cautery	


VIDEO SYSTEM CENTRE CUM LED LIGHT SOURCE

Video Signal Output:	Y/C, RGB, VBS Composite and XGA signal, HD-SDI & DVI Output simultaneous output is possible
White Balance Adjustment:	Automatic White Balance Facility
Color Tone Adjustment:	"R" control : +/- 7 Steps "B" Control +/- 7steps
IRIS Mode Selection:	Average/Peak
Image Enhancement setting:	NBI/BLI/OE-iscan

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Technical Specification Cardiac Biomarker Test System.

1. The machine should be portable and point of care rapid test system.
2. The machine should reliably and accurately assess Myoglobin, CK-MB, Trop I, BNP, NT-proBNP and D-Dimer in the bedside.
3. It should provide the results quickly and easily after pressing a single button.
4. It should give quantitative results.
5. Quantitative results should be displayed clearly in a TFT Screen (minimum 4X4 inch) and in built in thermal printer, the printed in a strip of paper in easy to read numbers.
6. Test result should come with respective units of measurements and displayed as POSITIVE or NEGATIVE to eliminate interpretation time delay
7. Required sample volume should be minimum (≤ 1 ml) and if specialized syringe / device is required to aspirate blood sample from the patients for the test, it should come with the test strip.
8. Time taken from adding the blood sample to the test strip to the result printing should not be more than ten minutes.
9. The machine should not require any essentials other than the test strip.
10. It should have the required software for sending data to a local computer.
11. Should run on AC/DC power supply and battery. The battery should run for at least one hour. Should have inbuilt stabilizer if required.
12. Should have a minimum memory capacity 500 – 750 test result with date and time.
13. Should have an operating temperature ranging form 18 – 30 °C.
14. Initial machines should be supplied with at least 100 test strips.
15. The system should be US FDA approved or European CE marked
16. System should have essential log book and user manual in English
17. Spare parts and services should be made available in Kolkata.
18. Cost per Strip/ Cartridge should be quoted separately.


25/08/19.

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Specification for Micro Reciprocating saw with Electric Motor Control Unit

a) Electric Motor Control Unit

Qty-1

It should have:

- a. Should have touch screen display control for incorporating multifunction into systems
- b. Should have interactive icons represents system components and functions
- c. Outputs should represent in digital figures, Supply 220- 240V only 50-60Hz
- d. Should be able to identify different hand pieces with display on console
- e. Should have function of controlling brightness, contrast and alarm volumes on the console
- f. Can operate 2 hand pieces sequentially with one footswitch
- g. Should be programmable as per surgeon preference

b) Footswitch :

Qty-1:

It should have:

- a. Should have fully programmable footswitch as user need
- b. User should be able to control following functions via footswitch
 - a. Forward, Reverse, Oscillation
 - b. Switch over to high/ low speed, Increase or decrease speed

Specification for micro saw – should run from the same electric motor control unit mentioned above

A) Micro Reciprocating Saw:

Qty-1

Should run from the same Motor Control Unit meant for the ENT Drill Should cut in a Perpendicular Line, Should have Maximum speed of 14000 cpm, Dimension: Length 165-170mm, Diameter 18-20mm, Mass 0.19-0.21Kg, Excursion 3mm, Titanium Body ensuring light weight, Should run from the same motor control unit meant for ENT Drill, & at times can run sequentially.

B) Connecting Cord

Qty-1

C) Cutting Accessories :

Should have blades for saw:

Reciprocating Blade – Cutting edge – 14.5 mm, thickness - .38mm – 4 Nos

Reciprocating Blade – Cutting edge – 22.5 mm, thickness - .38mm – 4 Nos

The core Operating system like , Motor Control Unit, Foot Switch, Micro Saws, should be from single manufacturer for system compatibility & should be warranted for a period of one year. The system should be USFDA & CE certified.

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