

**GOVT. OF INDIA
MINISTRY OF EXTERNAL AFFAIRS
JNB BHAWAN, NEW DELHI**

BID DOCUMENT

**INVITATION FOR BIDS FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF
MEDICAL EQUIPMENTS AND CSSD EQUIPMENTS FOR
200 BEDDED
NEPAL- BHARAT MAITRI EMERGENCY AND TRAUMA CENTRE (NBMETC),
KATHMANDU, NEPAL**

INTERNATIONAL COMPETITIVE BIDDING

BID REFERENCE: IFB No. HSCC/PUR/NEPAL/2013-14/1 Dated 06.07.2013

HSCC (I) LTD.
(Consultants & Engineers for Mega Hospitals & Laboratories)
Plot No. 6A, Block-E, Sector-1, NOIDA (U.P.) – 201 301.
Tel: 0120-2542436-40, 2540153, 2540216
Fax : 0120-2542447.

**GOVT. OF INDIA
MINISTRY OF EXTERNAL AFFAIRS
JNB BHAWAN, NEW DELHI**

**INVITATION FOR BIDS FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF
MEDICAL EQUIPMENTS AND CSSD EQUIPMENTS FOR
200 BEDDED
NEPAL- BHARAT MAITRI EMERGENCY AND TRAUMA CENTRE (NBMETC),
KATMANDU, NEPAL
INTERNATIONAL COMPETITIVE BIDDING**

BID REFERENCE: IFB No. HSCC/PUR/NEPAL/2013-14/1 Dated 06.08.2013	
Item Description	Supply, installation, testing & commissioning of various medical equipments for 200 bedded Nepal- Bharat Maitri Emergency and Trauma centre (NBMETC), Kathmandu, Nepal (The complete list of the equipments is available on detailed IFB on the web sites http://www.hsccltd.co.in or http://www.mea.gov.in or http://www.eprocure.gov.in
Date of Commencement for download / sale of Bid document.	July8, 2013
Date & Time for Pre – bid conference.	Jul18, 2013 at 14.00 Hrs IST
Last date for download/ sale the Bid document.	Refer detailed Invitation of Bid
Last date & time for receipt of Bids along with Bid security & Bid Document Fee.	Refer detailed Invitation of Bid
Date & time for Techno –Commercial Bid opening.	Refer detailed Invitation of Bid
Price Bid opening Date & time	Shall be intimated later.
Venue of Pre –bid conference	All India Institute of Medical Science - AIIMS, Ansari Nagar, New Delhi (Please contact HSCC on 16.08.2013 for exact location in AIIMS)
Venue of Pre –bid conference, Sale of Bid Document, Bid Document fee, Techno-Commercial Bid opening & Price Bid opening.	HSCC (I) LTD. (A Govt. of India Enterprises) Plot No. 6-A, Block-E, Sector-1, NOIDA (U.P.) – 201 301. Tel: 0120-2542436-40, 2540153, 2540216 Fax: 0120 – 2542447
Type of Bid	2 Single stage two part bid system / Public opening, ICB

Date: 08/07/2013

FORWARDING LETTER

To,
(Prospective Bidder).....
.....
.....

Our Ref.: **BID REFERENCE: IFB No. HSCC/PUR/NEPAL/2013-14/1 Dated 06.07.2013**

Your ref: _____

SUBJECT: INVITATION FOR BIDS FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF MEDICAL EQUIPMENTS AND CSSD EQUIPMENTS FOR 200 BEDDED NEPAL- **BHARAT MAITRI EMERGENCY AND TRAUMA CENTRE (NBMETC), KATHMANDU, NEPAL**

Sir

1. Enclosed please find bid document for various Items.
2. The date for the Bid receipt and opening will be as per IFB. However, in the event of the day of receipt and opening of tender being declared a holiday, the due date of receipt and opening of tenders will be the following working day at the same time.
3. The bidder is eligible to quote only for the **Item(s)** for which the payment of Bid Document Fee is made as per the Clause 9[B] of Instructions to Bidders.
4. **Pre-bid meeting on Techno-Commercial conditions shall be held on 18/07/2013 at 1400 hrs. at All India Institute of Medical Science -AIIMS, Ansari Nagar, New Delhi. Bidders are requested to bring with them any clarifications required in writing and submit the same during the Pre-bid meeting/discussions. Response to the queries, amendments, if any shall be displayed on the HSCC's/ MEA websites <http://www.hsccltd.co.in> or <http://www.mea.gov.in> or <http://www.eprocure.gov.in> by within one week from the date of Pre- bid conference.**

Kindly acknowledge the receipt of the Bid Document.

Joint Secretary DPA-III

- Encl: 1. Annexure-A – Important Clauses in brief.
2. Invitation For Bid (IFB).
3. Invitation For Bids (IFB) – Details
4. Section-I - Instructions To Bidders (ITB)
5. Section-II - General Conditions of Contract (GCC)
6. Section-III - Special Conditions of Contract (SCC)
7. Formats
8. Description & Specifications

CONTENTS OF THE BIDDING DOCUMENT

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Important Clauses in Brief, For Quick Reference only, (BIDDER MUST REFER ALL TERMS & CONDITIONS ETC. ENCLOSED WITH THE BID DOCUMENT IN DETAILS)

Instruction to Bidders (ITB)

1. **Bid Security Amount** - As given in IFB Details.
2. **Price Bid** - Please refer Clause 6 of ITB. Quoted price must include cost of 3 years Comprehensive Warranty with spares and 3 years comprehensive AMC Charges with spares thereafter.
3. **Statutory Variation** - As per Clause 6.4 of ITB. Any variation in the Statutory Levies / Taxes/ Duties/ Cess or any new Levies/ Taxes/ Duties/ Cess on end product shall be payable at actual provided documentary evidence of the prevailing rate quoted at the date of submission of bid and changes at the time of actual supplies (within stipulated delivery period) is furnished.
4. **Optional Items** - As per Clause 6.6 of ITB. Bidder in their own interest should quote separately for any Optional Items of the Technical Specifications. In case the Optional items of the Tender Specifications are not quoted explicitly, then the rate quoted shall be considered for the tendered main item and accordingly price comparison shall be done. No benefit shall be considered for inclusion of Optional Items in the Tendered Item.
5. **Manufacturer's Authorization** - As per Clause 7.2 (a) of ITB. In case of an item comprises group of items, then Bidder may give Manufacturer's authorisation for main equipment from the Principals and other equipment from other manufacturer's of his choice (indigenous/ imported) for which Bidder shall submit Manufacturer's Authorization as per the Tender format.
6. **Bid Document Fee** - See Clause 9 [B] of ITB.
7. **Bid Validity** - **180** days as per Clause 10.1 of ITB
8. **Amount of Performance Security-** 10% as per Clause 24 of ITB.
9. **Preliminary Examination** - As per Clause 17.4 of ITB. The Bid Form, signed by the Bidder which stipulates acceptance of all the terms & conditions of tender document, shall supersede all other terms & conditions given in the tender by the Bidder.

General Conditions of Contract (GCC)

- 10. **Delivery and installation** - 8 - 12 weeks as per Clause No.9 of GCC.
- 11. **Insurance** - 110% of Order Value as per Clause No.10 of GCC.
- 12. **Payment Terms** - 80% & 20%, as per Clause No. 12 of GCC.
- 13. **Liquidated Damages** - 0.5% per week upto 10% of the contract price as per Clause No.15 of GCC.
- 14. **Warranty** - As per Clause 26 of GCC

Special conditions of Contract (SCC)

15. Minimum Qualification Criteria

- As per Clause 4 A iv of SCC. Bidders should have in the past 5 years, satisfactory executed for the **Item** offered, at least one single order of like nature of item(s) and quantity not less than 25% or two orders of 12.50% of quantity of **Item** offered by bidder rounded to the next whole number. The Bidders shall furnish “End User Certificate” indicating contract details i.e. name of person, phone/fax /mobile nos. etc.

16. Other eligibility requirements

- As per Clause 4 B ii) of SCC. The Bidder should submit audited balance sheet and Profit & Loss Account along with audited report for the last 3 years to enable the purchaser to assess the financial capability of the bidder or positive net worth of the bidder.

16. Bid Form

- To be submitted as per Clause 6 of SCC in the given format.

17. Components & Quantities

- All components/ quantities of the Item must be quoted as per Clause 9 of SCC.

18. Turnkey activities

- The offer should be on turn-key basis including all costs incidental to the same as per Clause 12 & 15 of SCC.

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**GOVERNMENT OF INDIA
MINISTRY OF EXTERNAL AFFAIRS**

**INVITATION FOR BIDS (IFB)
FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF MEDICAL
EQUIPMENTS & CSSD EQUIPMENTS**

BID REFERENCE: IFB No. HSCC/PUR/NEPAL/2013-14/1

Dated 06.07.2013

Joint Secretary DPA-III, Ministry of External Affairs, Government of India on behalf of President of India through HSCC (India) Ltd., invites sealed bids in Single stage two bid system for Supply, Installation, Testing & Commissioning of various Medical Equipment Orthopaedic, Clinical Pathology, Clinical Biochemistry, Blood Bank, Imaging, Operation Theatre & CSSD Equipment for 200 Bedded, Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.

For detailed IFB and downloading of Bidding Documents please log on to www.hsccltd.co.in or www.me.gov.in or www.eprocure.gov.in. The Bidding Document can be downloaded from 8th July 2013. A complete set of Bidding Document in English may also be purchased as per the schedule specified in the detailed IFB by any interested bidder from 1000 Hrs. IST to 1630 Hrs. IST on all working days on the submission of a written request to the HSCC (I) Ltd., Plot No. E-6 (A), Sector- 1, NOIDA, U.P. The schedule of sale of Bidding Documents, date of submission and opening of bids has been given in the Bidding Document.

The detailed IFB, corrigendum/modification/amendments, if any, will only appear on websites www.hsccltd.co.in or www.me.gov.in or www.eprocure.gov.in .

Joint Secretary –DPA-III

**GOVERNMENT OF INDIA
MINISTRY OF EXTERNAL AFFAIRS
INVITATION FOR BIDS (IFB) - DETAILED**

BID REFERENCE: IFB No. HSCC/PUR/NEPAL/2013-14/1

Dated 06.07.2013

Joint Secretary- DPA III, Ministry of External Affairs, Government of India on behalf of President of India through HSCC (India) Ltd., invites sealed bids from manufacturers only in Single stage two bid system for Supply, Installation, Testing & Commissioning of various below mentioned Medical Equipments for 200 Bedded **Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.**

Item No.	Name of Instrument	Qty	Bid Security in INR	Start date of Sale of Bid Document	Last date of Sale of Bid Document	Last date & time of submission of bids
1.	General Orthopedic Instruments set No. 3 (Quantity revised)	2	120000	08.07.2013	06.08.2013 (item no.1 -16)	07.08.2013 by 1430 hrs (Item no.1-16)
2.	Anterior Spinal Fixation System (thoracic & Lumbar)	1	60000			
3.	Posterior thoracic & Lumbar Spinal Fixation System	1	40000			
4.	Cervical Spinal Fixation System	1	50000			
5.	Anterior Spinal Fixation System	1	50000			
6.	Intramedullary Nailing	3	48000			
7.	Instruments and Implants for 4.5 mm Cannulated screws	1	18000			
8.	Instruments and Implants for 7.0mm Cannulated screws	2	16000			
9.	Mini Instrument Set	1	12000			
10.	High Speed Electric Motor (Spine & neuro surgery)	3	180000			
11.	Large fragment Instrument set	4	64000			
12.	Digital X ray Machine	2	800000			
13.	Ultrasound Machine	2	160000			
14.	Multi Channel Automatic Analyzer	1	300000			
15.	Blood Gas Analyzer	1	10000			
16.	Automatic urine Analyser	1	6000			
17.	Refrigerated Centrifuge	1	30000		07.08.2013 (item no.17 - 32)	08.08.2013 by 1430 hrs (item no.17 - 32)
18.	Platelet Agitator	1	10000			
19.	Cell Separator Apheresis machine	1	24000			
20.	Height Adjustable Transport trolleys	4	29420			
	Theatre Supply Storage and Distribution Cart	1				
	Linen Distribution Trolley	1				
	Mobile trolley with auto loading and unloading	1				
	Trolley Wash systems	1				

	Height Adjustable work table	1			
	Racks for CSSD	6			
21.	Operating Microscope (OT)		60000		
22.	Cautery OT	5	100000		
23.	Fiber operative Bronchoscope-OT	1	20000		
24.	Neurosurgery - OT Tables	2	200000		
25.	Orthopedic - OT Tables	2	200000		
26.	General - OT Tables	2	130000		
27.	Ceilings OT Light – Twin LED Lights)	5	220000		
28.	Thoracoscopy	1	120000		
29.	Thoracotomy Set	1	50000		
30.	Anesthesia Work Station (OT)	5	320000		
31.	Rapid Sterilizer (High Speed)	1	52000		
32.	Automatic Steam Sterilizer	3	288000		

Please log on to www.hsccltd.co.in or www.mea.gov.in or www.eprocure.gov.in for copy of Invitation for Bids, items, detailed specifications, quantity, terms & conditions of tendering, Bid Security, consignee and all other relevant details like date of bid opening, last date for submission of bids etc.

- i) Bid evaluation will be made on the basis of total "All inclusive lump sum price" to be offered for each equipment. Any part/incomplete offer in respect of a particular equipment/store shall be rejected.
- ii) Bidders may quote for any one or more Items, but must quote for full quantity of all the equipment in a Item otherwise bid of the bidder will be rejected. Bid Security should be given separately for each Item as indicated.
- iii) A specimen copy of the 'Bid Document' is kept available for inspection (Free of Cost) at HSCC (India) Ltd., Noida for the benefit of prospective bidders.
- iv) **The bidders should quote for each Item as a separate bid.**
- v) Bids shall be evaluated separately for each Item
- vi) In case of goods of import origin, a foreign manufacturer can quote through their authorized Indian agent.

A complete set of Bidding Document in English may be purchased **as per the schedule specified in the table above** by any interested bidder from 10.00 Hrs IST to 16.30 Hrs. IST on all working days on the submission of a written request to the **HSCC (India) Ltd, Plot No. E -6 (A), Sector -1, Noida, U.P.** and upon payment of non- refundable fee of Rs.2000/- in the form of cash or Demand Draft from any Nationalized Bank/ Scheduled Bank drawn in favour of HSCC (India) Ltd. Payable at New Delhi / Noida. Bidding Document requested by mail shall be promptly dispatched by courier/ Speed post on payment of an extra amount of Rs. 200/-. MEA/HSCC will not be responsible for postal delay, if any, in the delivery of the document or non receipt of the same. Bidder may also **download** the tender document

from the website www.hsccltd.co.in or www.mea.gov.in or www.eprocure.gov.in and submit its tender by utilizing the downloaded document, along with the required non- refundable fee of Rs. 2000/- in favour of HSCC (India) Ltd payable at New Delhi/ Noida. The bidders must submit the above mentioned tender document fee along with its tender failing which the tender submitted by the bidder shall be ignored. The bidder must refer ITB clause 9[B] of bid document for details regarding payment of Bid Document fee.

The last date of submission of bid is **also specified in the table above upto 14.30 Hrs IST at HSCC (India) LTD. E- 6(A), Sector-1 , Noida , U.P.** The techno- commercial bid shall be opened on the same day at **15.00 Hrs IST** in presence of bidders or their representative who choose to be present.

In the event of any of the above mentioned dates being declared as a holiday / closed day in the purchaser's organization, the Bids will be sold / received/ opened on the next working day at the appointed time.

A pre – bid conference will be held in the office of **AIIMS, Ansari Nagar, New Delhi.** on **18th July 2013 at 14.00 Hrs IST.**

In case of difficulty in downloading the Bid Document from the website, the prospective bidder(s) may please contact to the **HSCC (India) LTD. E- 6(A), Sector-1 , Noida , U.P.**

MEA reserves the right to accept or reject any or all of the tenders in full or in part including the lowest without assigning any reasons thereof or incurring any liability thereby.

The details advertisement & all subsequent updates, amendments, corrigendum's etc related to this tender will only appear on HSCC/MEA/Govt of India eprocure website.

Joint Secretary – DPA-III

SECTION-I

INSTRUCTIONS TO BIDDERS (ITB)

This bid document should be read in conjunction with the Press Tender Notice/IFB Ref. No. **IFB No. HSCC/PUR/NEPAL/2013-14/1 Dated 06.07.2013**, a copy of which is enclosed in this document and all clauses to be read in conjunction with any other instruction given else, where, in this document, on the same subject matter of the clause.

1. THE BIDDING DOCUMENTS:

CONTENT OF BIDDING DOCUMENTS:

1.1 The Goods required, bidding procedures and tender & contract terms are prescribed in this Bidding Document and includes (i) IFB, (ii) IFB (Details), (iii) Section I (ITB), (iv) Section II (GCC), (v) Section III (SCC), (vi) Formats for Bid form ,Consignee receipt, Consignee Acceptance, Manufacturer's Self Authorisation form & Manufacturer's Authorization form (for Equipments of Imported origin), Performance Statement Proforma, Price Schedule, Bid Security, Performance Security, Check list, Agreement Form, (vii) Item Description & Specifications) with Consignee details for equipment placement.

1.2 The Bidders are expected to examine all instructions, terms, specifications etc. in the Bidding Documents. Failure to furnish information required by Bidding Documents or submission of a Bid not in compliance to the Bidding Documents will be at the Bidder's risk and may result in rejection of its Bid.

1.3 COST OF BIDDING:

The Bidder shall bear all costs associated with the preparation and submission of its Bid, and Ministry of External Affairs(MEA), Govt. of India acting through their Consultants, M/s HSCC (I) Ltd., hereinafter referred to, as "The Purchaser" will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

2. CLARIFICATION IN BIDDING DOCUMENTS:

A prospective Bidder requiring any legitimate clarification of the Bidding Documents may notify the Purchaser in writing at the Consultant's mailing address indicated in the Invitation for Bids. The Purchaser will respond to any request for clarification of the Bidding Documents that it receives **no later than fifteen(15 days) prior to the deadline for the submission of bids.** Purchaser's response (including explanation of the query but without identifying the source of inquiry) will be displayed on the website www.hsccltd.com or www.mea.gov.in or www.eprocure.gov.in.

3. **AMENDMENT OF BIDDING DOCUMENTS :**

- 3.1 At any time prior to the deadline for submission of Bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder modify the Bidding Documents by amendment.
- 3.2 The amendment will be notified on the www.hsccltd.com or www.mea.gov.in or www.eprocure.gov.in.
- 3.3 In order to afford prospective Bidders reasonable time to take the amendment into account in preparing their Bids, the purchaser may, at its discretion, extend the deadline for the submission of Bids.

4. **LANGUAGE OF BID :**

- 4.1 The Bid prepared by the Bidder and all correspondence and documents relating to the Bid exchanged by the Bidder and the purchaser, shall be written in the English language, provided that any printed literature furnished by the Bidder may be written in another language so long as it is accompanied by an English translation of its pertinent passages in which case, for purposes of interpretation of the Bid, the English translation shall govern.

5. **DOCUMENTS COMPRISING THE BID :**

The two-part Bid, that is, Techno-commercial bid and Price bid prepared by the Bidder shall comprise the following:

- a) Techno-commercial Bid (un-priced bid): This should interalia include the following:
- i) Bid Security furnished in accordance with Clause 9. Bid Form as per the format given in the bid document.
 - ii) Detailed technical specifications of **Item** quoted and if applicable, along with Catalogue / Literature fabrication drawings, make and model of the equipment offered with prices blanked (without indicating the prices).
 - iii) Statement of Deviations parameter wise from Tendered Commercial conditions, if any.
 - iv) Statement of Deviations parameter wise from Tendered Technical specifications (Compliance statement) if any;
 - v) Authority Letter from manufacturer in case Bid is submitted by Agents;
 - vi) Bidders to indicate Name and Address of their Bankers; and
 - vii) Current ITCC and balance sheet in original or a Photostat copy thereof.

- viii) Documentary evidence established in accordance with Clause 7 that the Bidder is qualified to perform the contract if its Bid is accepted and clause 4 of SCC the minimum qualification criteria.
 - ix) Performance Statement along with relevant copies or orders and end user's satisfaction certificates.
 - x) Documentary evidence established in accordance with Clause 8 that the Goods and Ancillary to be supplied by the Bidder are eligible Goods and Services and conform to the Bidding Documents;
 - xi) Proof of payment of Bid Document Fee as per clause 9[B].
- b) Price Bid: The information given at Sr. No. 5 (a) (ii) above should be reproduced but with prices indicated. The prices shall be all inclusive lumpsum prices as per description given at Clause No. 6.

N.B.

1. All pages of the bid should be page numbered and indexed
2. It is the responsibility of the bidder to go through the bid document to ensure furnishing all required documents in addition to above, if any.

6. BID PRICE :

6.1 (a) The Price bid for the **Item** to commensurate with scope of supply indicated against the **Item** and should indicate all inclusive lump sum price offered for each equipment/store including cost of the stores, freight, insurance, transit insurance, packing forwarding, VAT, Sales Tax, Excise duty, Basic Custom Duty upon production of **CDEC**, Inspection/Inspection certificate charges (ISO certified inspection agencies), road permit costs etc. and including charges whatsoever applicable, for equipment installation and commissioning with all the men and material required for the same and including charges, for three years comprehensive warranty service with spares with downtime not more than 48 hours, regular maintenance plans & wherever applicable including charges for three years **Comprehensive Annual Maintenance Contract (CAMC) with service tax, with spares**. The all inclusive lump sum price should be on **CIP destination** (i.e. Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal), for the above and inclusive of all charges stated herein above. **The all inclusive lump sum price needs to be accompanied by a statement indicating a clear “break up” of all inclusive lump sum price of its various components constituting it along with values/amount indicating against each of such components adding to arrive at all inclusive lump sum price.** The prices are to be kept valid for acceptance up to 180 days from the date of the opening of bids. No other charges in addition will be payable on any account over and above the lump sum price quoted. The prices should be given both in figures and words. Offers with price variation clause will not be accepted, the rates quoted in ambiguous terms such as “freight on actual basis” or “taxes as applicable extra” or “packing forwarding extra” will render the bid liable for rejection. Sales Tax will be local Sales Tax, VAT or applicable CST (for inter state sales), whichever applicable will be incorporated in the above all inclusive lump sum price. *Custom duty exemption certificate and octroi exemption certificate will be issued by consignee and price to be quoted accordingly.*

Bidders in their own interest shall ascertain the eligibility of whatsoever concessions and exemptions eligible and applicable and shall advise the purchaser and quote accordingly. Bidders shall indicate the actual amount of octroi, excise duty, normal sales tax, basic custom duty, etc. which becomes otherwise payable in the extreme event of consignee not in a position to release certificates like CDEC, Octroi Exemption Certificate, etc.

6.1(b) **Offer for Import Origin Goods**

Offers for Import origin goods shall clearly indicate firm, "All inclusive lump sum price" and giving its break up of as FOB (Free on Board), Insurance, **CIP** (Carriage and Insurance paid to, named placed of destination), custom duty, custom clearance charges, examination, stamp duty, local transportation and Insurance etc. and all other charges for services to be rendered as explained under offer for Indigenous goods. Customs handling & clearance will be the responsibility of Bidder/Indian agent at his cost. CDEC will be provided by MEA.

6.1 (c) The payments to both indigenous supplies as well as import supply shall not exceed the All Inclusive lump sum price.

6.2 The purchaser will evaluate Bids based on all inclusive lump sum prices quoted for each **Item**.

6.3 The All inclusive Lump sum price will include wherever applicable charges for 3 years **Comprehensive Annual Maintenance Contract (CAMC) with spares** as required for the purpose of evaluation and the payment to prospective suppliers will not include payment of CAMC charges at the time of payment for delivery/receipt of goods. The quantum of 3 years AMC charges with spares should be clearly indicated in the break up lump sum price and this is payable at the end of 1st year, 2nd year & 3rd year after initial three years comprehensive warranty with spares.

6.4 **Any variation in the Statutory Levies / Taxes/ Duties/ Cess or any new Levies/ Taxes/ Duties/ Cess on end product shall be payable at actual provided documentary evidence of the prevailing rate quoted at the date of submission of bid and changes at the time of actual supplies (within stipulated delivery period) is furnished.**

6.5 The bidder shall bear all taxes / duties/ incidental charges for the parts replaced or supplied during the Warranty period.

6.6 **Bidder in their own interest should quote separately for any Optional Items of the Technical Specifications. In case the Optional items of the Tender Specifications are not quoted explicitly, then the rate quoted shall be considered for the tendered main item and accordingly price comparison shall be done. No benefit shall be considered for inclusion of Optional Items in the Tendered Item.**

7. **DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATION:**

7.1 The Bidder shall, furnish, as part of its Bid, documents establishing the Bidder's qualifications to perform the contract if its Bid is accepted.

7.2 The documentary evidence of the Bidder's qualifications to perform the contract if its Bid is accepted, shall establish to the Purchaser's satisfaction:

- a) That, in the case of a Bidder offering to supply Goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorised by the Goods manufacturer or producer to supply the Goods. In this regard, the Bidder should submit an Authority letter from their manufacturers.

In case of an Item comprising group of items, then Bidder may give Manufacturer's authorisation for main equipment from the Principals and other equipment from other manufacturer's of his choice (indigenous/imported) for which Bidder shall submit Manufacturer's Authorization as per the Tender format.

- b) The Purchaser will determine to his satisfaction whether the Bidder selected is qualified as per requirement of minimum qualifying criteria to satisfactorily perform the contract;
- c) The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder as well as such other information as the Purchaser deems necessary and appropriate;

Notwithstanding anything stated above, the Purchaser reserves the right to assess the capability and capacity of the Bidder to perform the contract, should the circumstances warrant such as assessment in the overall interest of the Purchaser.

8. **DOCUMENT ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS:**

8.1 The Bidder shall furnish, as part of its Bid, documents establishing the eligibility and conformity to the Bidding Documents of all Goods and services that the Bidder proposes to supply under the contract.

8.2 The documentary conforming evidence of the Goods' and Services' conforming to the Bidding Documents may be in the form of literature, drawings and data, and shall comprise of:

- a) a detailed description of the Goods essential technical and performance characteristics;

- b) **a clause-by-clause commentary on the Purchaser's technical specifications demonstrating the Goods and Services substantial responsiveness to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.**

8.3 For purpose of the commentary to be furnished pursuant to clause 8.2(b) above, the Bidder shall note that standards for workmanship, material and equipment, and reference to brand names or equipment, and reference to brand names or catalogue numbers designated by the Purchaser in its Technical Specification are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its Bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions are substantially equivalent or superior to those desired & designated in the Technical Specification.

9. **BID SECURITY**

9.1 **The Bidder shall furnish, as part of its Bid, Security as indicated in Invitation for Bids (IFB)/ Press Tender Notice, in a separate single sealed envelope and shall be marked as given under clause 12.0 of this ITB.**

9.2 The Bid Security is required to protect the Purchaser against the risk of Bidder's conduct, which would warrant the security's forfeiture, pursuant to para 9.7.

9.3 **The Bid Security shall be in the form of a demand Draft drawn in favour of “Pay & accounts officer, Ministry of External Affairs, New Delhi, payable at New Delhi from a Nationalised/Scheduled bank.** Bid Security can also be in the form of Bank Guarantee drawn in favour of Ministry of External Affairs, Govt. of India from any Nationalized Bank/Scheduled Bank, payable at New Delhi. Bid Security shall remain valid for a period of 45 days beyond the bid validity period. EMD/Bid Security Form has been enclosed in Formats

9.4 Any Bid not secured in accordance with paras 9.1 to 9.3 will be rejected by the purchaser as non-responsive pursuant to Clause 17 and following which both the techno-commercial & price bid will be treated as invalid.

9.5 Unsuccessful Bidder's Bid Security will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of Bid Validity prescribed by, clause 10.

9.6 The successful Bidder's Bid Security will be discharged upon the Bidders furnishing the performance Security, pursuant to Clause 23 & 24.

9.7 The Bid Security may be forfeited:

- a) if a Bidder withdraws or modifies its Bid during the period of Bid validity; or
- b) in the case of a successful Bidder, if the Bidder fails :
 - i) to sign the contract in accordance with Clause 23 ;

- ii) to furnish Performance Security in accordance with Clause 24.
- iii) if the bidder does not accept an error correction pursuant to clause 17.2

9.8 No interest will be payable by the Purchaser on the Bid Security.

9 [B] **Bid Document Fee:**

Bid Document Fee is Rs.2000/-. Bid Document Fee paid is non-refundable and the Bid Documents are non-transferable.

Bidders will deposit the Bid Document Fee at HSCC office at Noida. Fee can be deposited either in cash or through crossed account payee Demand Draft drawn in favour of HSCC (I) Ltd. drawn on any Nationalized/Scheduled bank payable at NOIDA/New Delhi, before date & time of submission of bid. The Bids will not be accepted without proof of payment of the Bid Document Fee.

A bidder can quote for one or more items by paying just once for the bid document fee of Rs.2000/-.

However, separate bid shall be submitted for each Item.

The bidder can contact Consultant, for any clarification in the matter.

10. **PERIOD OF VALIDITY OF BIDS:**

10.1 **Bids shall remain valid for 180 days** after the date of Bid opening prescribed by the Purchaser, pursuant to Clause 13. A Bid expressed to be valid for a shorter period may be rejected by the Purchaser as non-responsive.

10.2 In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing or by cable. The Bid Security provided under Clause9 shall also be extended suitably. A Bidder may refuse the request without forfeiting its Bid Security.

A bidder granting the request will not be required nor permitted to modify its bid.

11. **PREPARATION AND SIGNING OF BID:**

11.1 The Bidder shall prepare single stage Two part bids, i.e. Techno Commercial Bid (un-priced) in duplicate and Price Bid in duplicate clearly marked as 'original' and 'copy' in addition shall enclose Bid Security in a single sealed third envelope.

11.2 The Bid shall be typed or written in indelible ink and shall be signed by the Bidder or persons duly authorised, to bind the Bidder to the contract. The authorisation shall be indicated by written power-of-attorney accompanying the Bid. All pages of the Bid, except for un-amended printed literature, shall be initialled and stamped by the person or persons signing the Bid.

11.3 The Bid shall contain no inter- lineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Bid.

12. **SUBMISSION OF BIDS:**

12.1 **SEALING AND MARKING OF BIDS:**

The Bidders shall seal the Bid in an inner and an outer envelope duly marking the envelopes, separately as “Techno-commercial Bid (un-priced)”, “Price Bid” and “Bid Security & Copy of Proof of payment of Bid Document Fee” in a third envelope and all these three envelopes enclosed in another sealed envelope duly marked.

12.2 The inner and outer envelopes shall be:

- (a) Addressed to **Joint Secretary –DPA-III, at Ministry of External affairs, JNB Bhawan, Opposite National Museum, New Delhi** as indicated in IFB:
- (b) bear (the Project name), the Press Tender Notice reference, and the words "DO NOT OPEN BEFORE....."

12.3 The inner envelope shall indicate the name and address of the Bidder.

12.4 If the outer envelopes is not sealed and marked as required in Para 12.2, the Purchaser will assume no responsibility for the Bid's misplacement or premature opening.

13. **DEADLINE FOR SUBMISSION OF BIDS i.e. TECHNOCOMMERCIAL BID (UNPRICED) AND PRICE BID INCLUDING BID SECURITY**

13.1 As indicated in the Press Tender Notice/IFB.

13.2 Bids must be received by the Purchaser at the address specified on the date and time as mentioned in the Bid document. In the event of due date being declared a closed holiday then the due date for submission of Bids and the opening of Bids will be the following working day at the appointed time.

13.3 The Purchaser may at its discretion extend this deadline for the submission of Bids by amending the Bidding Documents in accordance with clause 3, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

14. **LATE BIDS & MODIFICATIONS/WITHDRAWAL OF BIDS**

14.1 Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser, pursuant to clause 13 will be rejected.

- 14.2 The Bidder may modify or withdraw its bid after the bid's submission provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of bids.
- 14.3 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of ITB Clause 12. A withdrawal (but not modification) notice may also be sent by cable or fax but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.
- 14.4 No bid may be modified subsequent to the deadline for submission of bids.
- 14.5 No bid may be withdrawn or modified in the interval between the deadline for submission of bids and the expiry of the period of bid validity withdrawal or modification of a bid during this interval may result in the Bidder's forfeiture of its security, pursuant to ITB Clause 9.7.

15. **OPENING OF BIDS BY PURCHASER:**

- 15.1 The Purchaser will open the Techno-commercial bid only, in the presence of Bidder's representatives who choose to attend, in the HSCC Office, on the due date and time as mentioned in the IFB. The Bidder's representatives who are present shall, sign a register evidencing their attendance. **The Bidders' representatives shall furnish letter of Authority from their principals to attend the Bid opening.**
- 15.2 The Bidders' names, the presence or absence of the requisite Bid Security and such other details in brief as the Purchaser, at its discretion, may consider appropriate will be announced at the opening.
- 15.3 Price Bid of bidders whose offers (Techno-commercial bid) are found technically and commercially suitable and comply with the Bid Documents will only be opened on a date to be intimated later to these bidders.
- 15.4 Bids that are not opened and read out at bid opening shall not be considered further for evaluation irrespective of the circumstances. Withdrawn bids shall be returned unopened to the bidders.
- 15.5 **Non-submission of Bid Security & Bid document fee by any bidder will render the bidder invalid and such bidder's bid will not be opened.**

16. **CLARIFICATION OF BIDS:**

- 16.1 To assist in the examination, evaluation and comparison of Bids the Purchaser may, at its discretion, ask the Bidder for clarification of its Bid. Bidder shall be given only 5 working days to provide the required clarification/ details/documents etc. In case all the required clarification/ details/documents are still not provided the final reminder to the bidder intimating the pending clarification/ details/documents will be given and the bidder shall submit the required clarification/ details/documents within 4 working days. After the final reminder if still the required documents are not submitted, the bid will be evaluated based on the documents submitted by the bidder and the contents of the bid.

16.2 Clarifications sought & reply received to be all in writing, no change in price or substance of Bid permitted.

17. PRELIMINARY EXAMINATION:

17.1 The Purchaser will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, stamped and whether the Bids are generally in order.

17.2 Arithmetical errors will be rectified on the following basis: - If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected (unless in the opinion of the purchaser there is an obvious error in the unit rate, in which case the total price against item would prevail and unit rate shall be corrected accordingly). If the supplier does not accept the correction of the errors, its Bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.

17.3 The Purchaser may waive any minor informality or non-conformity or irregularity in a bid, which does not constitute a material deviation, provided such a waiver does not prejudice or offers the relative ranking of any Bidder.

17.4 Prior to the detailed evaluation, pursuant to ITB Clause 18, the Purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Without prejudice to the generality of the foregoing deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 6) Warranty (GCC Clause 26). Force Majeure (GCC Clause 17), Applicable law (GCC Clause 22) and Taxes & Duties (GCC Clause 24) will be deemed to be a material deviation. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself.

Contents of the bid form in the format stipulated in the invitation of the bid, signed by the bidder shall supersede deviation(s) if any mentioned in any other part of the bid.

17.5 In normal circumstances if a bid is not substantially responsive, it will be rejected by the purchaser.

18. EVALUATION AND COMPARISON OF BIDS:

18.1 The Purchaser will evaluate and compare the Bids on the basis of techno-commercial evaluations followed by price bid evaluation.

19. CONTACTING THE PURCHASER:

19.1 Subject to Clause 16, no Bidder shall contact the Purchaser on any matter relating to its Bid from the time of the Bid opening to the time the contract is awarded.

19.2 Any effort by a Bidder to influence the Purchaser in the Purchaser's bid evaluation, Bid comparison or contract award decisions may result in the rejection of the Bidder's Bid.

20. **AWARD OF CONTRACT:**

20.1 **AWARD CRITERIA:**

Subject to Clause 22, the Purchaser will award the contract to the successful Bidder whose Bid has been determined to be techno commercially acceptable and lowest, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

21. **PURCHASER'S RIGHT TO VARY QUANTITIES AT TIME OF AWARD:**

The Purchaser reserves the right at the time of award of contract to increase/decrease the total quantity of Goods and services for which bids have been invited by up to 25% of their value (rounded to the next whole number).

22. **PURCHASER'S RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS:**

The Purchaser reserves the right to accept or reject any Bid and annul the Bidding process and reject all Bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds of the purchaser's action. The purchaser is not bound to accept the lowest or any bid.

23. **NOTIFICATION OF AWARD AND SIGNING OF CONTRACT:**

23.1 Prior to the expiry of the period of Bid validity, the Purchaser will notify the successful Bidder by registered post/fax that its Bid has been accepted by enclosing detailed order copy in duplicate. This will constitute the formation of the contract and date of the contract shall be the date of each notification.

23.2 Upon the successful Bidder's returning back one copy of the order within 10 days duly stamped and signed as token of acceptance of the order on the said laid out terms and conditions and also furnishing to Performance Security i.e. Security Deposit pursuant to Clause 24, the Purchaser will promptly discharge Bid Security of successful bidder, pursuant to Clause 9, and also discharge Bid Security of unsuccessful bidders, pursuant to clauses 9.5.

24. **PERFORMANCE SECURITY:**

24.1 Within 10 days of the date of notification under Clause 23.1 the Successful Bidder shall furnish the Performance Security/Security Deposit for 10% of the contract price in the form of a Demand Draft/Bank Guarantee drawn in favour of "Pay of Accounts officer, Ministry of External Affairs, New Delhi" payable at New Delhi from a Nationalised/ 1st Class/ Scheduled bank.

24.2 Failure of the successful Bidder to comply with the requirement of Clause 23 and Clause 24 shall constitute sufficient grounds for the annulment of the award and the Contract and forfeiture of the Bid Security, in which event the Purchaser may call for new Bids.

25. **LOCAL CONDITIONS:**

It will be imperative on each Bidder to fully acquaint himself of all the local conditions and factors that would have any effect on the performance of the contract and cost of the Goods. The Purchaser shall not entertain any request for clarifications from the Bidder regarding such local conditions. No request for the change of price, or time schedule of delivery of Goods shall be entertained after the Purchaser accepts the Bid.

SECTION-II

GENERAL CONDITIONS OF CONTRACT (G.C.C.)

1. **DEFINITIONS:**

- 1.1 In this contract, the following terms (whether or not spelled with an initial capital letter) shall unless the context otherwise requires be interpreted as indicated.
- (a) "The contract" (or "this contract") means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein and includes the Instructions to Bidders (ITB).
 - (b) "The Contract Price/All inclusive lump sum Price" means the price payable to the supplier under the contract for the full and proper performance of its contractual obligations;
 - (c) "The Goods" means all of the equipment, machinery, and/or other materials, which the Supplier is required to supply to the Purchaser under the contract;
 - (d) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services;
 - (e) "The Purchaser" means the organisation purchasing the Goods i.e., Ministry of External Affairs, Govt. of India.
 - (f) "The Supplier" means the individual or firm supplying the Goods and services under this contract;
 - (g) "Consignee" means where the Goods are required to be delivered at the destination, i.e. Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.

2. **APPLICATION:**

- 2.1 These General "Conditions" shall apply to the extent that provisions in other parts of contract do not supersede them.

3. **STANDARDS:**

- 3.1.1 The Goods supplied under this contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods and such standards shall be the latest issued by the concerned institution.

4. **USE OF CONTRACT DOCUMENTS AND INFORMATION:**

- 4.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the contract or any provision thereof, or any specification, plan, drawing, pattern sample, or information furnished by or on behalf of the Purchaser in connection there with, to any person other than a person employed by the Supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.
- 4.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any documents or information enumerated in para 4.1 except for purposes of performing the contract.
- 4.3 Any document, other than the contract itself enumerated in para 4.1 shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the contract if so required by the Purchaser.

5. **PATENT RIGHTS:**

- 5.1 The Supplier shall indemnify the Purchaser against all third party claims of infringement of patent, trademark, or industrial design right arising from use of the Goods or any part thereof.

6. **CONTRACT PERFORMANCE SECURITY (SECURITY DEPOSIT):**

- 6.1 Within 10 days after the Supplier's receipt of award notification and order copies of the contract, the Supplier shall furnish performance Security to the Purchaser in the amount specified (IFB) in the document.
- 6.2 The Performance Security as deposited by the supplier shall be used by the purchaser as compensation for any loss or any dues recoverable from the supplier (including liquidated damages where applicable) resulting from the Supplier's failure to complete its obligations under the contract. The Purchaser may retain the whole or such part of it as it considers being sufficient compensation for such loss. In such an event the balance amount (if any) shall be returned to the supplier not later than the expiry of the period stated in clause 6.3.
- 6.3 The Performance Security unless deposited under GCC clause 6.2 will be discharged by the purchaser not later than 30 days following the date of completion of the suppliers performance obligations, including the warranty obligations under the contract.

7. **INSPECTION & TESTS:**

- 7.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the contract. The Special Conditions of Contract and/or the Technical Specifications specify what inspection and tests the Purchaser requires and

where they are to be conducted then such specification shall be complied with for the Goods to which it applies. The Purchaser shall notify the Supplier in writing of the identity of any representative retained for these purposes.

- 7.2 The inspection and tests may be conducted on the premises of the Supplier or its Sub-Supplier (s) at point of deliver and/or at the Goods' final destination. Where conducted on the premises of the Supplier or its Sub-Supplier(s), all reasonable facilities and assistance including access to drawings and production data - shall be furnished to the inspectors at no charge to the Purchaser.
- 7.3 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject them and the Supplier shall either replace the rejected Goods or make all alterations necessary to meet specification requirements free of cost to the Purchaser.
- 7.4 The Purchaser's right to inspect, test and where necessary reject the Goods after the Goods' delivery to the Consignee shall in no way be limited or waived by reasons of the Goods having previously been inspected, tested and passed by the Purchaser or his representative prior to the Goods, shipment.
- 7.5 Goods accepted by the purchaser/consignee and/or its inspector at initial inspection and in final inspection in terms of the contract shall in no way dilute purchaser's/consignee's right to reject the same later, if found deficient in terms of the warranty clause of the contract, as incorporated under GCC clause 26.

Nothing in Clause 7 shall in anyway release the Supplier from any warranty or other obligations under this contract.

8. **PACKING:**

- 8.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the contract. The packing shall be sufficient to withstand without limitation, rough handling during transit and exposure to extreme temperature, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate the remoteness of the Goods' final destination and absence of heavy handling facilities at all points in transit.
- 8.2 The packing marking shall show the description of quantity of contents, the name of the consignee and address, the gross weight of the packages, the name of the supplier with a distinctive number of mark sufficient for purposes of identification. Each package shall contain:
 - (a) a packaging note quoting the name of the purchaser
 - (b) the number and date of order
 - (c) nomenclature of the goods
 - (d) schedule of parts for each complete equipment giving part number with reference to assembly

8.3 Notwithstanding anything stated in this clause, the supplier shall be entirely responsible for loss, damage, deterioration, and depreciation of the goods due to faulty protective & insecure packing and shall arrange for prompt replacement.

9. **DELIVERY:**

9.1 **Delivery, Installation and commissioning of the Goods upto the site (Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal) shall be made by the Supplier within 12 weeks from the date of contract (or from the date of establishing Letter of Credit in favour of the Principals in case of imported origin Goods) unless specified in IFB.** In case spare parts and tools are also ordered with the Goods, the Bidder will undertake to offer spare parts and tools for delivery, along with the main Goods only and not before. **The name of consignee: Director, NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.**

10. **INSURANCE:**

10.1 The Goods supplied under the contract shall be fully insured including transit insurance against various risks as required or approved by the Purchaser arising out of transportation, storage, delivery, erection, installation, testing and commissioning at his cost up to delivery, installation and commissioning at site. Insurance policy shall be valid upto date of installation and commissioning. Proof of Insurance shall be made available before issuance of dispatch clearance.

10.2 For delivery ,installation and commissioning of goods at site, the insurance shall be obtained by the supplier in an amount equal to 110% of the value of the goods from "Ware house to ware house" (final destination) on "all risks" basis including war, risks, strikes, erection, storage etc. In any event the Goods are at the suppliers risk until delivery , installation and commissioning at site.

11. **TRANSPORTATION:**

To be arranged by the supplier up to consignee duly insured.

12. **PAYMENT:**

Both for Indian origin goods and for import origin goods. To be read in conjunction with clause 6.0 of ITB.

12.1 The Supplier's request (s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing as appropriate, the Goods delivered and Services performed and by shipping documents, such Goods to be duly certified and wherever applicable supported with documentary evidence in support there of Satisfactory installation duly certified by authorised personnel of **Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal/MEA** authorities shall accompany for release of balance payment.

12.2 **FOR INDIGENOUS GOODS & IMPORTED ORIGIN GOODS QUOTED IN INDIAN RUPEES:**

Both, for Indian origin goods quoted directly by Indian manufactures only as well as for imported origin goods quoted in Indian Rupees by Indian Agents duly authorized by foreign manufacturers as per tender conditions. To be read in conjunction with clause 6.0 of ITB.

i) **80% of the invoice value** will be made within 30 days as per provisions in Clause GCC 15 on receipt of following necessary documents:

- 1). Country of Origin Certificate.
- 2). Quality & Quantity Certificate.
- 3). Packing List.
- 4). Internal Factory Inspection Report.
- 5). Warranty Certificate.
- 6). ISO 13485 & 9001 Certificates.
- 7). Copy of Airway Bill/Bill of Lading (in case of imported goods).
- 8). Copy of Bill of Entry (in case of imported goods).
- 9). Insurance certificate valid up to installation & commissioning of equipment at site
- 10). ISO Certified Third Party Inspection Report for conformity to contract specifications.
- 11). Invoice.
- 12). Dispatch Clearance Certificate of MEA/HSCC.
- 13). Consignee Receipt Certificate from Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.
- 14). Transportation Invoice.

ii) **Balance 20% payment** subjected to clause 6.1 of ITB will be released within 30 days, upon receipt of satisfactory Installation & Commissioning Certificate from consignee/MEA Invoice as per provisions in Clause GCC 15.

All such Invoices/Certificates/Reports as mentioned above shall be addressed as:

Embassy of India at Kathmandu, Nepal

12.3 **FOR IMPORT ORIGIN GOODS:**

Payment will be made by opening of Irrevocable Letter of Credit (LC) in favour of the Foreign manufacturer, covering 100% of the Net FOB value of the equipment with the condition of remittance of **80% of net FOB value + Freight & Insurance charges** through LC on shipment and on submission of the following necessary documents from foreign manufacturer:

- 1) Country of Origin Certificate
- 2) Quality & Quantity Certificate
- 3) Packing List
- 4) Internal Factory Inspection Report

- 5) Warranty Certificate
- 6) ISO 13485 & 9001 Certificates
- 7) Airway Bill/Bill of Lading
- 8) Insurance certificate valid up to installation & commissioning of equipment at site
- 9) ISO Certified Third Part Inspection Report for conformity to contract specifications
- 10) Invoice of LC amount
- 11) Dispatch Clearance Certificate of MEA/HSCC

Balance 20% of the net FOB value shall be released to foreign manufacturer through Irrevocable Letter of Credit after receipt of satisfactory Installation & Commissioning Certificate and Consignee Receipt Certificate from Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.

For equipment quoted in foreign currency, payment shall be made through LC at an exchange rate prevailing on the date of negotiation of LC. The LC will be opened by the Embassy of India, Kathmandu through its accredited bank at Kathmandu.

Indian Agency Commission along with other charges (wherever applicable) towards turnkey activities, local supplies, custom duty, custom clearance, local transportation, Installation etc. shall be released in Indian Rupees within 30 days upon after receipt of following necessary documents:

- 1). Satisfactory Installation & Commissioning Certificate and Consignee Receipt Certificate from **Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal/MEA.**
- 2). Transportation Invoice
- 3). Bill of Entry
- 4). Proof of Custom Duty & Custom clearance charges
- 5). Invoice
- 6). Warranty Certificate

All such Invoices/Certificates/Reports as mentioned above shall be addressed as:

Embassy of India at Kathmandu, Nepal

Indian Agency Commission shall be paid considering the exchange rate prevailing on the date of placement of Order/Notification of Award.

- 12.4 **The stores (both Indian & Import origin goods) should be despatched only after ensuring prudent inspection carried out from ISO Certified third party Inspection Agencies viz. LLOYDS/SGS/CSIO/ERTL etc. and proof of such documents submitted to MEA for the goods inspected. Inspection Agency shall carry-out testing of equipment and submit test reports along with confirmation of point-wise technical compliance of the equipment with respect to tender specifications. MEA/HSCC on receipt of such documents shall issue Dispatch Clearance Certificate.**

To enable MEA to issue Despatch Clearance Certificate, supplier/manufacture is to furnish following documents:

1. Country of Origin Certificate
2. Quality & Quantity Certificate
3. Packing List
4. Internal Factory Inspection Report
5. Warranty Certificate
6. ISO 13485 & 9001 Certificates
7. ISO Certified Third Party Inspection Report for conformity to contract specifications

All such Invoices/Certificates/Reports as mentioned above shall be addressed as:

Embassy of India at Kathmandu, Nepal

After scrutiny, if the documents found in order, **Dispatch Clearance Certificate** shall be issue to the supplier.

No goods (both Indians & Import origin goods) shall be despatched before issue of Dispatch Clearance Certificate by MEA.

- 12.5 Payment for turnkey activities, local supplies, custom duty, custom clearance, local transportation, Installation etc. (wherever applicable) shall be released as per Clause GCC 12.3.

13. **PRICES:**

- 13.1 Prices charged by the Supplier for Goods delivered and Services performed under the contract shall not vary from the prices quoted by the Supplier in its Bid.
- 13.2 In receipt of offer in foreign currency, the exchange rate prevailing on the date of opening of bid (Techno Commercial bid) shall be taken for comparison of bid prices.

14. **DELAYS IN THE SUPPLIER'S PERFORMANCE:**

- 14.1 The time and the date specified in the Contract for the delivery of the Goods shall be deemed to be the essence of the Contract.
- 14.2 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser.
- 14.3 An unexcused delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to any or all of the following sanctions, forfeiture of its Performance Security in accordance with Clause 6.2, imposition of liquidated damages and/or termination of the Contract for default.
- 14.4 If at any time during performance of the Contract, the Supplier or its sub-Supplier (s) should encounter conditions impeding timely delivery of the Goods and performance of the Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice the Purchaser shall evaluate the situation and may at its discretion extend

the supplier's time for performance by such period as the purchaser may think fit and shall in the case of Force Majeure extend such time by such period as the Purchaser shall consider fair and reasonable. Clause 14.1 stands extended to include this.

15. **LIQUIDATED DAMAGES:**

15.1 Subject to force majeure, if the Supplier fails to deliver any or all of the Goods or perform the Services within the time period(s) specified in the Contract the Purchaser shall, without prejudice to its other remedies under the Contract or extended under clause 14.3, deduct from the Contract price, as Liquidated Damages, a sum equivalent to **0.5% of the price of the delayed Goods or unperformed Services for each week of delay until actual delivery or performance, up to a maximum deduction of 10% of the value of the contract.** Once the maximum is reached, the Purchaser may consider termination of contract.

16. **TERMINATION FOR DEFAULT:**

16.1 The Purchaser may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, terminate the Contract in whole or in part.

(a) If the Supplier fails to deliver any or all of the Goods within the time period(s) specified in the Contract, or any extension thereof granted by the purchaser pursuant to Clause 14, or

(b) If the Supplier fails to perform any other obligation(s) under the Contract.

16.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to para 16.1, and without prejudice to the Purchaser's other remedies, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered or unperformed and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods. However, the Supplier shall continue performance of the Contract to the extent not terminated.

17. **FORCE MAJEURE:**

17.1 Notwithstanding the provisions of Clauses 6,14,15,16, the Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

17.2 For purposes of this clause and clauses 14.3, 15.1 & 17.3 "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault of negligence and not foreseeable. Such events may include but are not restricted to, acts of the Purchaser either in its sovereign or contractual capacity, wars or sovereign or contractual capacity wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

17.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the

Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practicable and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

17.4 In case of Force Majeure event, the Purchaser is unable to fulfil its contractual commitment and responsibility, the purchaser will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub- paragraph. In such an event, supplier shall not raise any claim against the Purchaser.

18. **TERMINATION FOR INSOLVENCY:**

18.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, without compensation to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent (which events shall of themselves be a breach of the contract on the part of the supplier), provided such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

19. **TERMINATION FOR CONVENIENCE:**

19.1 The Purchaser may, by written notice sent to the Supplier, terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of work under the contract is terminated and the date upon which such termination becomes effective.

19.2 The goods that are complete and ready for shipment within 20 days after the Supplier's receipt of notice of termination shall be purchased by the Purchaser at the Contract terms and prices. For remaining Goods the Purchaser may elect:

- (a) To have any portion completed and delivered at the Contract terms and prices; and/or
- (b) To cancel the reminder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

20. **RESOLUTION OF DISPUTE**

20.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

20.2 If, after thirty (30) days from the commencement of such informal negotiations, the Purchaser and the Supplier have been unable to resolve amicably a Contract dispute either party may require that the dispute be referred for resolution to the Arbitration by Indian Council of Arbitration in accordance with the Arbitration & Conciliation Act 1996 with latest amendments if any. The number arbitrator shall be one and the decision of the arbitrator shall be final and binding on the parties.

20.3 Venue of Arbitration shall be at Delhi.

20.4 The language of the Arbitral proceeding shall be English.

21. **GOVERNING LANGUAGE:**

21.1 The Contract shall be written in the language of the Bid (English Language) as specified by the Purchaser. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in that same language.

22. **APPLICABLE LAW:**

22.1 The Contract shall be interpreted in accordance with the laws of India.

23. **NOTICES:**

23.1 Any notice given by one party to the other pursuant to the contract shall be sent in writing or by telegram or cable and confirmed in writing to the address specified for that purpose in the Special Conditions of Contract.

23.2 A notice shall be effective when delivered or on the Notice's effective date, whichever is later.

24. **TAXES AND DUTIES:**

24.1 Supplier shall be entirely responsible for all taxes, duties, license fees etc. incurred until delivery of the contracted Goods to the Purchaser.

25. **The Bid Security of successful tenderers will be released after receipt of contract performance security and contract formation under clause of 23.1 of ITB.**

26. **WARRANTY (For Equipment, Accessories, Software & Hardware):**

26.1 The supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent of current models and incorporate all recent improvements in design and materials **both in Hardware and Software**, unless other wise provided in the Contract. The supplier further warrants that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied Goods in the conditions prevalent in India.

26.2 This comprehensive warranty shall remain valid (subject to clause 26.4) for 36 months after the Goods have been satisfactorily installed & commissioned and three months satisfactory functioning as duly certified by the appropriate authority. The comprehensive Warranty shall include free services and free provision of spares. It shall be the responsibility of supplier (or their principal) to ensure all consumables/reagents/necessary spares are available continuously without interruption.

26.3 The Purchaser shall promptly notify the supplier in writing of any claim arising under this warranty.

- 26.4 Upon receipt of such notice, the supplier shall, with all reasonable speed, repair or replace the defective Goods or parts thereof, free of cost at the site. The Supplier shall take the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the purchaser for the replaced parts thereafter. The warranty period will stand extended accordingly. The supplier shall ensure a minimum uptime guarantee of 95% for the equipment.
- 26.5 If the Supplier having been notified fails to remedy the defect (s) within a reasonable period, the purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract or in Law.
- 26.6 The Purchaser reserves the right to reject any set of equipment found defective within 30 days after the date of acceptance of equipment. The cost towards replacement will have to be borne by the supplier.
- 26.7 During the Warranty period, the supplier is required to visit the consignee's site at least once in 6 months commencing from the date of installation for preventive maintenance of the goods.
- 26.7 Nothing in this clause 26 shall affect the Purchaser's other rights under the Contract or in Law.

27. INSPECTION & TEST PROCEDURES:

- (i) The Stores will be inspected at MEA's sole discretion before packing at the manufacturer's premises and on receipt at site by MEA/HSCC nominated representatives. The decision of MEA/HSCC (I) Ltd. in the matter of acceptability of the stores will be final and binding. In case MEA/HSCC desires, the demonstration/inspection and trials/testing will have to be got conducted at site at no extra cost.

28. SUPPLY, INSTALLATION AND COMMISSIONING AND WARRANTY SERVICING;
(IN RESPECT OF EQUIPMENTS)

The Supply, Installation and Commissioning of the equipment & trial run have to be done at site by the supplier/or his authorised agent. No additional charges for installation and commissioning will be paid. The Supplier and Indian agent shall be liable for this service for goods of import origin.

29. TRAINING: (If required)

Free demonstration, operational and maintenance training will have to be provided at the site of installation to the assigned personnel, during trial period.

For high End Equipment like CT, MRI training should be provided for two radiologists and two technicians for a period of 3 months at the expense of the supplier. The training can be organised at AIIMS, New Delhi or any other suitable hospital/Institute.

30. MANUALS:

The Supplier has to provide **three sets** of operation manuals and maintenance manuals along-with each equipment to each consignee and one set of Operation & Maintenance Manual is to be provided to Purchaser while claiming 80% payment. The maintenance manual should give details up to component level and the faultfinding procedure with detailed illustrations.

31. Deleted

Special Note: (Forming part of SCC).

- i) MEA is not bound to accept the lowest tender or any tender or to assign any reasons for non-acceptance.
- ii) MEA reserves right of selection of equipment without restrictions to price factor alone.
- iii) Deleted

Joint Secretary –DPA-III

SECTION-III
SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever, there is a conflict, the provisions herein shall prevail over the General Conditions of Contract.

1. The Performance Security unless deposited under GCC Clause 6.2 will be discharged by the purchaser not later 30 days following the date of completion of the supplier's performance obligations, including the Warranty obligations under the contract.
2. Insurance: For delivery of goods at site, the insurance including transit insurance shall be obtained by the supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destination) on "all risks" basis including war, risks, strikes, erection, storage etc. In any event the Goods are at the Supplier's risk until delivery and installation and commissioning at site.
3. For Import origin goods quoted, the Supplier or the Indian agent shall have to arrange at his own cost for all import/custom clearance handling formalities. Purchaser upon advance notice from supplier shall only provide the *CDEC (Custom Duty Exemption Certificate)*, Octroi Exemption Certificate, etc. wherever required.
4. **A. Minimum Qualification Criteria (For Equipments):**

Qualifying Minimum Requirements:

(To be supported with documentary evidence strictly as per instructions given as foot-note under Proforma for Performance Statement)

- i) Bidder should be a regular manufacturer or an authorised Indian agent for the type of stores offered.
- ii) An authorized Indian agent could be for (a) an imported origin equipment duly authorized by the foreign principal quoting through the Indian agent (b) an Indian origin equipment duly authorized by the Manufacturer
- iii) Indigenous Manufacturers to quote themselves or through their duly authorized Agent
In case of an items comprising group of items, then bidder may give Self Manufacturer's authorisation for main equipment and associated equipment from other manufactures of his choice (indigenous/ imported) for which Bidder shall submit Manufacturer's Authorisation as per the tender format.
- iv) Bidders should have in the past 5 years, satisfactory executed for the Item offered, at least one single order of like nature of item and **quantity not less than 25% or two orders of 12.50%** of quantity of the equipment as tendered against each items subject to a minimum of one quantity. The Bidders shall furnish "**End User Certificate**" which shall indicating end users contact details i.e. name of hospital, doctor, phone/ fax/ mobile nos. etc. Bidders shall also certify that they have not supplied equipment with similar specification to any other organisation, at prices lower than the rates offered in response to the present IFB.
- v) Foreign bidder's performance report shall include same Indian agent by which this current bid is quoted.

vi) Deleted

B. Other eligibility requirements:

i) Bidder should have a present installed capacity/sales capacity to match the delivery requirements.

ii) **The Bidder should submit audited balance sheet for the last 3 years duly signed and stamped by Chartered Accountant with their Membership number and Profit & Loss Account along with audited report for the last 3 years to enable the purchaser to assess the financial capability of the bidder or positive net worth of the bidder.**

Notwithstanding anything stated above, the purchaser reserves the right to assess the capability and capacity of bidder to perform the contract.

iii) Clause 13 shall apply for the relevant items.

Note: The purchaser reserves the right to ask for a free demonstration of the quoted equipment at a predetermined place acceptable to the purchaser for technical acceptability as per the tender specifications, before the opening of the price bid.

5. **Five years Performance Statement:** Bidders should give performance statement of orders for similar items satisfactorily executed to sizeable value both in quantity & cost in comparison to items offered in the price bid.

6. **Bid Form: To be submitted by all bidders as per format enclosed. In case Bid Form is not submitted by the Bidder as per format, their bid shall be liable for rejection.**

7. In respect of equipment, the charges for 3 years Comprehensive Annual Maintenance Contract with spares (CAMC) (after initial 3 years comprehensive warranty period) year wise should be indicated separately & this will be included in the all inclusive lump sum price for purpose of evaluation of bids.

8. **Bidders have to purchase/ download one set of bid document. The Bidders shall deposit the requisite bid Document fee as per Clause 9(B) of Instructions to bidders.**

9. **Miscellaneous:**

a) While quoting for the Items, all components and quantities specified in the Item must be quoted. The purchaser will evaluate bid on an individual Item wise basis. **The bid shall stand rejected if all the components and quantities specified in any Item are not quoted.**

b) **Evaluation will be made on the basis of total all inclusive lump sum price value offered for the Item.**

c) The break up of “all inclusive lump sum price” of the Item; is also to be furnished in the price offered by bidder.

- d)
 - i) Bidders are requested to quote for the proven and time tested renowned brands of equipment/accessories having countrywide reputation and acceptance. The Purchaser, however, reserves the right to decide on it's own as to which of the brand/makes quoted by the bidders are to be considered or not to be considered as proven/reputed, for the purpose of evaluation.
 - ii) No bidder for the purpose of offering lowest price shall quote for local brands/refurbished/ reconditioned stores, which are not time tested, as these would be liable for rejection.
 - iii) Although bidder may quote for more than one brand for the same price, the purchaser shall have the right to select the brand amongst alternatives quoted and its decision will be binding on the bidder.
 - iv) **Bidder in their own interest can quote for items and services separately if in the view of bidder, the purchaser unknowingly omitted or expressly not indicated the requirements of items/services without which, the commissioning or acceptance or otherwise of the equipment of the bidder will be a doubtful proposition.**
 - e) The Supplier directly or through his Indian agent wherever applicable will be liable for the contractual obligation including delivering the ordered goods and for undertaking satisfactory installation and commissioning etc. including warranty servicing and CAMC.
10. Bidders are to inspect the site premises and the proposed place of installation of equipment and certify their satisfaction that the proposed site is suitable and compatible for the installation of the offered unit. Bidder may take up with consignee for their site visit.
 11. Bidders are to ascertain normal power supply fluctuation range and to certify that it is compatible with the offered unit of equipment. A guarantee to such effect should be offered by each bidder along with details of electrical appliances proposed to be deployed for taking care of such fluctuation.
 12. Bidder's offer should be on a "Turn Key" basis for inclusion of all costs incidental to the same.
 13. For X-Ray and related equipment such of those bidders who have the approval/authorisation of BARC/AERB or equivalent as per the local statutory conditions shall only be considered and this clause to be read in conjunction with qualifying criteria clause.
 14. The substantial responsiveness of bidder will be determined as per MEA's own qualitative internal assessment in consultation with consignee, and with reference to bidders reasonable level of compliance to various stipulated terms and conditions in the Bid Document, Compliance to submission of various documentary supporting evidence, other related information along with the bid, the degree of performance status, and high order value execution for prestigious good clients etc. weight age given to bidder on qualitative basis by the evaluation committee, besides other merits of the bidder such as proven source market reputation, past experience and feed back gained in respect of bidder etc. Accordingly, in with the above, the purchaser reserves the right as not liable to bidder on account of this prudent internal assessment and that bidder shall have no claims whatsoever.

15. Bidders must take into consideration in its bid, costs to be incurred for any additional work pertaining to civil, Electrical, Plumbing, sanitary, Radiation protection as per Govt. regulation, furniture, servo stabilisers, U.P.S. etc. required for successful installation testing and commissioning of the system and the “All inclusive lump sum price” should include all such costs, each **Item** is to be considered a package in itself and suppliers to execute the order package on a “turn key basis” including all civil, electrical, air – conditioning & allied requirement for the equipment, at the site.
16. Every effort has been taken to put forth general specifications in this bid documents. If inadvertently, any of the specification drawn happens to match with the specifications of any one particular firm’s product only, in respect of critical parameters, than it will not automatically mean that this particular firm’s offer is only technically suitable. In general, the specifications offered by other firms will be assessed in their own entirety to ascertain whether or not the board functions in general expected of the equipment are available with reasonable tolerance on the desired requirements of the purchaser and accordingly the offers would be considered based on prudent assessment of the purchaser.
17. Bidders who have paid the Bid Document Fee as per Clause 9[B] of ITB are only eligible to quote.
18. The supplier/manufacturer shall be made responsible for organising timely clearance/delivery of the equipment from the custom authorities by appointing custom agent, if necessary, and shall also arrange to transport the equipment to the destination including installation and commissioning of the same. Necessary insurance shall also be arranged by the supplier/manufacturer covering all these activities including transit insurance from destination to destination.
19. To ensure timely completion of project, in the event of receipt of only one bid or few bids received for any **Items** not fully meeting all tendered conditions, then the tender committee constituted could take prudent decision to accept the offer(s) which first comply by legitimately relaxing any one non stringent condition without affecting major functional requirement.
20. **The following clause needs to be read in conjunction with Clause 6 of ITB and Clause 26.2 of GCC & will prevail upon the description given for warranty elsewhere in the tender document/ with Equipment Specifications:**

Warranty for Medical Equipments:

“Supplier/ Manufacturer should provide 3 years full onsite comprehensive warranty with spares and 3 years Comprehensive Annual Maintenance Contract (CAMC) (with spares) for the 4th, 5th & 6th year after expiry of initial three years satisfactory comprehensive warranty with spares. Warranty will start only from the date of final acceptance of the machine at the department and price quoted inclusive of these criteria.

CMC (Labour + Spares) and AMC (Labour only) rates beyond the above period need not be quoted by bidder but contact details of the organization should be provided so that the option can be executed by **Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal** for availing AMC/ CMC services.”

The Purchaser/User shall enter into tripartite agreement with the principal manufacturer and the agent for warranty and CAMC services as per Annexure I. The principal Manufacturer and the agent shall adhere to it.

21. **Bidders should provide list of consumables and standard spare parts separately in the Techno-commercial Bid along with details of source of supply.**
22. The warranty will be governed by the clause 26 of GCC read with clause 20 of SCC of the bidding document, unless until specifically specified in the technical specifications. **Where ever there is specific mention of Warranty in the technical specifications the same will prevail.**
23. Where ever the word “**Line Item**” is appearing in the Bidding Documents the same will be replaced by the words “**Items**”
24. **MEA reserves the right to accept /place order for part item(s) of a item.**

Joint Secretary – DPA-III

FORMATS

BID FORM

To: (Name and address of Purchaser)
IFB Ref.:.....
Item Ref.:

Having examined the Bidding Documents including if any Addenda Nos. issued _____ , the receipt of which is duly acknowledged, we, the undersigned, offer to supply and deliver..... (Description of Goods and Services) in conformity with said bidding documents.

We, undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified.

If our bid is accepted, we will submit performance security in a sum of equivalent to 10% of the Contract Price for the due performance of the contract.

We agree in consideration of Rs.100/- if demanded to abide by this bid for a period of 180 (one hundred eighty) days after the date fixed for bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal contract is prepared and executed, this bid together with your written acceptance thereof shall constitute a binding contract between us.

We enclose our Comprehensive Maintenance Contract for three years, which forms part of our bid.*

We confirm that stipulated Bid Security is enclosed herewith as a part of bid.

We understand that you are not bound to accept the lowest or any bid you may receive.

We accept all your terms and conditions stipulated in this tender document without deviations, both technical & techno-commercial.

Dated this..... Day of.....
200.....

* Applicable for Equipments only.

(Signature) (In the capacity of)

Duly authorised to sign Bid for and on behalf of

Signed

CONSIGNEE RECEIPT CERTIFICATE

(To be given by consignee's authorised representatives)

The following Goods (Quantity mentioned against each) has/have been received in good conditions along with a copy of inspection report.

Name of items supplied

Against P.O. ref. dated.....

Suppliers Name

Consignee name and Address
with telephone No. & Fax No.

Description of the Item

Make & model:

Quantity:

Date of receipt:

Date:

Place:

(Authorised Representative)/ Consignee

Name and Designation of the officer

Phone No.:

CONSIGNEE ACCEPTANCE CERTIFICATE
(To be issued by Consignee's authorised representative)

The following goods/equipment, supplied by the Supplier at this Hospital are as per the specification mentioned in the Purchase Order/ Contract and have been successfully installed, tested and commissioned by the Supplier including imparting training:

1. Description of the item(s) supplied :

2. Name of Supplier :

3. a) Quantity Supplied :

- b) Quantity supplied in
 damaged condition, if any :

4. Name and address of Consignee :

5. Date of receipt of Consignee :

6. Date of Installation, Demonstration
and Training by Supplier :

7. Signature of the Director
of Hospital with date :

8. Name of the Director

9. Seal of Consignee :

- Telephone Number of Consignee :

- Facsimile Number of Consignee :

10. Contract No.

MANUFACTURERS' SELF AUTHORIZATION FORM

No. _____ dated _____.

To

Dear Sir,

IFB NO. _____.

We _____ who are established and reputable manufacturers of _____ (name and description of goods offered) having factories at _____ (address of factory) do hereby submit a bid, and sign the contract with you against the above IFB. No.....

No company or firm or individual other than M/s _____ (name of the manufacturer) are authorised to bid, and conclude the contract in regard to this business, against this specific IFB.

We hereby extend our full guarantee and warranty as per Clause 26 of the General Conditions of Contract & CMC for the goods and services offered for supply by us against this IFB.

Yours faithfully,

(Name)

(Name of Manufacturers)

Note:- This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the Bidder in its bid.

MANUFACTURERS' AUTHORIZATION FORM

No. _____ dated _____.

To

Dear Sir,

IFB.No. _____.

We _____ who are established and reputable manufacturers of _____ (Name and Description of Goods offered) having factories at _____ (Address of Factory) do hereby authorize M/s _____ (Name & Address of the Agent) to submit a bid, and sign the contract with you against the above IFB. No.....

No company or firm or individual other than M/s _____ (Name of the Agent) are authorised to bid, and conclude the contract in regard to this business, against this specific IFB.

We hereby extend our full guarantee and warranty as per Clause 26 of the General Conditions of Contract for the goods and services offered for supply by the above firm against this IFB.

Yours faithfully,

(Name)

(Name of Manufacturers)

Note:- This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the Bidder in its bid.

Proforma for Performance Statement (for a period of last five years) (Please read foot-note below)

Name of Item offered _____ Date of Opening _____ Time _____ Hours _____

Name of the Firm _____

Order placed by (full address of Purchaser)	Order No. and date	Description and quantity of Goods ordered	Value of order	Date of completion of delivery as per contract	Remarks indicating reasons for late delivery if any	Has the stores been satis- factorily supplied? (Attach a certificate from the Purchaser\ Consignee)	8
1	2	3	4	5	6	7	

Signature and seal of the Bidder _____

Note: This form will be considered complete only if duly filled and supported with proof of order copies, satisfactory order execution certificates from client and other relevant details enclosed with this form and same shall be applicable for assessing single order execution criteria as per SCC clause 4A (iv) of this document.

Technical Compliance Statement Format

This information to be filled in as per the following format by all the bidders for each equipment bid by them and duly signed and to be submitted alongwith the techno-commercial bid:

Schedule Ref. (1)	Name of the Equipment with Tender Specifications (2)	Compliance of parameter/ specification (3)	Non-Compliance of parameter/ specification (4)	Remarks for Sr.No.(4) (5)

The information given above is factual & based on product specification details as per the latest catalogues/ product data sheets and technical literature enclosed.

Signature of the bidder & seal:

SAMPLE PRICE SCHEDULE
A) PRICE SCHEDULE FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN LOCATED
WITHIN INDIA

1	2	3	4	5							6
				Price per unit							
Item	Brief description of goods	Country of origin	Qty (No's)	Ex - factory/ Ex - warehouse /Exshowroom /Off - the shelf	Excise Duty (if any) [%age & value]	Sales Tax/CST against Form D/ VAT/ CENVAT (if any) [%age & value]	Packing and Forwarding charges	Inland Transportation, Insurance loading/ unloading and Incidental costs till consignee's site	Incidental Services (including Insurance, Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site	Total Unit Price =a+b+c+d+e+f	Total Price (Rs.)
				5 (a)	5 (b)	5 (c)	5(d)	5(e)	5 (f)	5(g)	4 x 5(g)

Total Tender price in Rupees: _____

In words: _____

Note: -

1. ***If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.***
2. ***The Bidder will be fully responsible for the safe arrival of the goods at destination (consignee site) in good condition.***

Signature of Bidder _____
Name _____
Business Address _____
Seal of the Bidder _____

Place: _____

Date: _____

SAMPLE PRICE SCHEDULE
B) PRICE SCHEDULE FOR GOODS TO BE IMPORTED FROM ABROAD

1	2	3	4	5							6
				Price per unit							
Item	Brief description of goods	Country of origin	Qty (No's)	FOB price at port/ airport of Loading	CIP price at port/ air port	Custom Duty amount with CDEC & NMIC if applicable (To be reimbursed by the purchaser)	**Customs Clearance & Handling	**Inland Transportation, Insurance loading/ unloading and Incidental costs till consignee's site	**Incidental Services (including Insurance, Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site	Total Unit Price =a+b+c+d+e+f	Total Price (Rs.)
				5 (a)	5 (b)	5 (c)	5(d)	5(e)	5 (f)	5(g)	4 x 5(g)

** To be paid in Indian Currency (Rs.)

Total Tender price: _____

In words: _____

Note: -

1. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.

2. The Bidder will be fully responsible for the safe arrival of the goods at destination (consignee site) in good condition.

Indian Agency Commission - ____% of FOB (included/excluded above)

Custom Duty with CDEC & NMIC if applicable: ____% of CIF value [Column 5 (c)]

Signature of Bidder _____

Name _____

Business Address _____

Seal of the Bidder _____

Place: _____

Date: _____

SAMPLE PRICE SCHEDULE

C) PRICE SCHEDULE FOR COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT AFTER WARRANTY PERIOD

1	2	3	4			5
Item No.	Brief description of Goods	Qty (No's)	Comprehensive Annual Maintenance cost with spares for each unit year wise after warranty period			Total CAMC cost for 3 years [(col. 3 x (4a+4b+4c)]
			1st	2nd	3rd	
			a	b	c	

- After completion of Warranty period

NOTE: -

1. In case of discrepancy between unit price and total prices, THE UNIT PRICE shall prevail.

Place: _____

Date: _____

Signature of Bidder

Name

Business address _____
Seal of the Bidder _____

BID SECURITY FORM

Whereas1 (*hereinafter called "the Bidder"*) has submitted its bid dated (*date of submission of bid*) for the supply of (*name and/or description of the goods*) (*hereinafter called "the Bid"*).

KNOW ALL PEOPLE by these presents that WE (*name of bank*) of (*name of country*), having our registered office at (*address of bank*) (*hereinafter called "the Bank"*), are bound unto **Ministry of External Affairs, Govt. of India** (*name of Purchaser*) (*hereinafter called "the Purchaser"*) in the sum of _____ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ____ day of _____ 20__.

THE CONDITIONS of this obligation are:

1. If the Bidder

- (a) withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
- (b) does not accept the correction of errors in accordance with the ITB; or

2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity:

- (a) fails or refuses to execute the Contract Form if required; or
- (b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders;

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and **including forty five (45) days after the period of the bid validity**, and any demand in respect thereof should reach the Bank not later than the above

Date: (Signature of the Bank)

Name of Bidder

PERFORMANCE SECURITY FORM

To: Ministry of External Affairs, Govt. of India (Name of Purchaser) **WHEREAS**
..... (Name of Supplier) hereinafter called "the Supplier"
has undertaken , in pursuance of Contract (Purchase order) No..... dated,..... 2013 to
supply.....(Description of Goods and Services)
hereinafter called "the Contract".

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall
furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security
for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of
the Supplier, up to a total of (Amount of the
Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand
declaring the Supplier to be in default under the Contract and without cavil or argument, any sum
or sums within the limit of (Amount of Guarantee) as aforesaid, without your
needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until theday of.....20.....

Signature and Seal of Guarantors

.....
.....
.....
Date.....20.....

Address :
.....

CHEKCLIST

Fill up the Check List for Bidders and enclose with the Bid

1. The Bidder should furnish specific answers to all the questions/issues mentioned in the Checklist. In case a question/issue does not apply to a bidder, the same should be answered with the remark “not applicable”
2. Wherever necessary and applicable, the bidder shall enclose certified copy as documentary proof/ evidence to substantiate the corresponding statement.
3. In case a bidder furnishes a wrong or evasive answer against any of the question/issues mentioned in the Checklist, its bid will be liable to be ignored

CHECKLIST

Name of Bidder:

Name of Manufacturer:

Sl.No	Activity	Yes/No/N A	Page No. in bid	Remarks
1.a	Have you enclosed EMD of required amount for the quoted Items?			
b	Have you enclosed Bid document fee of required amount in case the Bid document has been downloaded from websites? In case the Bid document fee has been paid in cash at HSCC office, have you enclosed the receipt?			
2.a	Have you enclosed duly filled Bid Form as per format?			
b	Have you enclosed Power of Attorney in favour of the signatory?			
3.a	Have you enclosed clause-by-clause technical compliance statement for the quoted goods vis-à-vis the Technical specifications?			
b	In case of Technical deviations in the compliance statement, have you identified and attached the list of deviations?			
4.a	Have you submitted satisfactory performance certificate as per the Proforma for performance statement in Bid document in respect of all orders?			
b	Have you submitted copy of the order(s) and end user certificate?			
5	Have you submitted manufacturer's authorization as per format?			
6	Have you submitted prices of goods, turnkey (if any), AMC etc. in the Price Schedule?			
7	Have you kept validity of 180 days from the Techno-Commercial Bid Opening date as per the Bid document?			
8	Have you intimated the name and full address of your Banker (s) along with your Account			

	Number			
9	Have you fully accepted payment terms as per Bid document?			
10	Have you fully accepted delivery period as per Bid document?			
11	Have you submitted the certificate of incorporation?			
12	Have you accepted the warranty as per Bid document?			
13	Have you accepted all terms and conditions of Bid document?			
14	Have you furnished documents establishing your eligibility & qualification criteria as per Bid documents?			
15	Have you furnished Annual Report (Audited Balance Sheet and Profit & Loss Account) for last three years prior to the date of Bid opening?			

N.B.

1. All pages of the Bid should be page numbered and indexed.
2. The Bidder may go through the checklist and ensure that all the documents/confirmations listed above are enclosed in the Bid and no column is left blank. If any column is not applicable, it may be filled up as N A.
3. It is the responsibility of bidder to go through the Bid document to ensure furnishing all required documents in addition to above, if any.

(Signature with date)

(Full name, designation & address of the person duly authorized sign on behalf of the Bidder)
For and on behalf of

(Name, address and stamp of the Biding firm)

Tripartite Agreement

Whereas the agreement is made this day of
..... 200 between _____ Director NAMS for Nepal- Bharat Maitri
Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal. (Hereinafter called the first
party), _____ Principal Manufacturer (hereinafter called the second Party) and
_____ Agent (Third party)

1. That this contract shall be effective from the date of satisfactory installation of _____ equipment(_____) to (_____) i.e the warranty period and the through Comprehensive annual Maintenance contract for two years beyond the Warranty period, which may, if the parties hereto mutually agreed to extend from time to time
2. The first party has entered into an agreement with the second and third party for supply of _____ equipment against order No. _____ for supply, installation, Warranty and comprehensive Annual Maintenance contract as per the terms and conditions of the tender document No. _____
3. The second and third party should provide 3 years full onsite comprehensive warranty with spares and 3 years comprehensive Annual Maintenance Contract (AMC) (with spares) for the 4rd, 5th & 6th year after expiry of initial three years satisfactory comprehensive warranty with spares. Warranty will start only from the date of final acceptance of the machine at the department.
4. The comprehensive Warranty shall include free services and free provision of spares. It shall be the responsibility of Second party to ensure all consumables/reagents/necessary spares are available continuously without interruption.
5. The First party shall promptly notify the second or third party in writing of any claim arising under this warranty. Upon receipt of such notice, the second or third party shall, with all reasonable speed, repair or replace the defective Goods or parts thereof, free of cost at the site. The second or third party shall take the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the first party for the replaced parts thereafter. The warranty period will stand extended accordingly. The warranty period will stand extended accordingly. The second or third party shall ensure a minimum uptime guarantee of 95% for the equipment.
6. If the second or third party having been notified fails to remedy the defect (s) within a reasonable period, the first party may proceed to take such remedial action as may be necessary, at the Second party's risk and expense and without prejudice to any other rights which the first party may have against the second party under the Contract or in Law.
7. The First party reserves the right to reject any set of equipment found defective within 30 days after the date of acceptance of equipment. The cost towards replacement will have to be borne by the second or third party.
8. During the Warranty period, the second or third party is required to visit the consignee's

site at least once in 6 months commencing from the date of installation for preventive maintenance of the goods. Besides this, the second party or third party will also depute their engineer on the receipt of letter or telephonic message and shall arrange to repair the equipment immediately.

9. If the second party cancel/terminate/expire the agency contract with the third party. The Second party will be liable for the contractual obligation including delivering the ordered goods and for undertaking satisfactory installation and commissioning etc. including warranty servicing and CMC.
10. In Case of any defaults, the First party shall be authorised to levy a penalty not exceeding Rs.1000/- for each default and in case of three consecutive defaults may forfeit the performance security in part or full at the discretion of the Director NAMS for Nepal-Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.
11. In Case, the second party fails to comply with the terms & conditions of the contract or fails to carry out the servicing/maintenance the first party shall be entitled to forfeit the security money.
12. The second or third party shall attend to any number of break down calls without extra payment and the call will be attended immediately.

First Party

**Director NAMS
for Nepal- Bharat Maitri
Emergency and
Trauma Centre
(NBMETC)
Kathmandu, Nepal**

Second Party

Principal Manufacturer

Third Party

Agent

Description & Specifications

SCHEDULE OF REQUIREMENT

Item No.	Name of Instrument	Qty
1.	General Orthopedic Instruments set No. 3 (Quantity revised)	2
2.	Anterior Spinal Fixation System (thoracic & Lumbar)	1
3.	Posterior thoracic & Lumbar Spinal Fixation System	1
4.	Cervical Spinal Fixation System	1
5.	Anterior Spinal Fixation System	1
6.	Intramedullary Nailing	3
7.	Instruments and Implants for 4.5 mm Cannulated screws	1
8.	Instruments and Implants for 7.0mm Cannulated screws	2
9.	Mini Instrument Set	1
10.	High Speed Electric Motor (Spine & neuro surgery)	3
11.	Large fragment Instrument set	4
12.	Digital X ray Machine	2
13.	Ultrasound Machine	2
14.	Multi Channel Automatic Analyzer	1
15.	Blood Gas Analyzer	1
16.	Automatic urine Analyser	1
17.	Refrigerated Centrifuge	1
18.	Platelet Agitator	1
19.	Cell Separator Apheresis machine	1
20.	Height Adjustable Transport trolleys	4
	Theatre Supply Storage and Distribution Cart	1
	Linen Distribution Trolley	1
	Mobile trolley with auto loading and unloading	1
	Trolley Wash systems	1
	Height Adjustable work table	1
	Racks for CSSD	6
21.	Operating Microscope (OT)	
22.	Cautery OT	5
23.	Fiber operative Bronchoscope-OT	1
24.	Neurosurgery - OT Tables	2
25.	Orthopedic - OT Tables	2
26.	General - OT Tables	2
27.	Ceilings OT Light – Twin LED Lights)	5
28.	Thoracoscopy	1
29.	Thoracotomy Set	1
30.	Anesthesia Work Station (OT)	5
31.	Rapid Sterilizer (High Speed)	1
32.	Automatic Steam Sterilizer	3

Delivery , Installation and commissioning (GCC 9)

Delivery, installation and commissioning of the Goods upto the site (Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.) shall be made by the Supplier within 12 weeks from the date of contract (or from the date of establishing Letter of Credit in favour of the Principals in case of imported origin Goods) unless specified in IFB

Name of consignee: Director NAMS for Nepal- Bharat Maitri Emergency and Trauma Centre (NBMETC) Kathmandu, Nepal.

TECHNICAL SPECIFICATIONS

BID REFERENCE: IFB No. HSCC/PUR/NEPAL/2013-14/1 Dated 06.07.2013

Item No. 1 General Orthopedic Instrument – Set No. 3

Specification: Following items manufactured to international Standards by reputed multinationals firm

S. No.	Description	Quantity
1	Bone Rongeur - Double Action Small size 18 cm Medium Size 23 cm Large size 27 cm	10 10 10
2	Bone Cutter Small size 18 cm Medium Size 23 cm Large size 27 cm	10 10 10
3	Stienmann Pin Cutter cutting capacity up to 6 mm	10
4	Bone curette Double Ended Round / Oval Small 13 cm Medium 16 cm Large size 20 cm	10 10 10
5	Wire Bending cum cutter plier length 15 cm	10
6	Osteotomes, straight with tufnol handle, 10 each of size 7,10,15,20 mm width	40
7	Gouzes, straight with tufnol handle, 10 each of size 4,6,8,10,12 mm width	50
8	Chisel, straight with tufnol handle, 5 each of size 7,10,15,20 mm width	20
9	Retractor Wullstein-Weitlaner Self – Retraining Retractor 3 X 3 Teeth Blunt Length 13 Cm Weitlaner Self – Retraining Retractor 3 X 4 Teeth Blunt Length 16.5 Cm Weitlaner Self – Retraining Retractor 3 X 4 Teeth Blunt Length 26 Cm Adson Self – Retraining Retractor 3 X 4 Teeth Blunt Length 26 Cm Gelpi Self – Retraining Retractor with Balls, Blunt Length 26 Cm	20 20 20 20 20
10	Elevator Farabeuf Periosteal Elevator, straight 13 mm length 15 cm Farabeuf Periosteal Elevator, curved 13 mm length 15 cm Lambotte Periosteal Raspatory and Elevator, curved 10 mm length 21 cm Mc Donald Elevator double ended curved 6/6 mm length 19 cm Cobbs Elevator medium 13mm with long handle Cobbs Elevator large 19mm with long handle	20 20 20 15 10 10
11	Jacobs Chuck with Handle Jacobs Drill three Jaw Chuck with key, Max Dia 6.35mm length 14 Cm	15
12	Awls With T Handle Length 14 Cm With Round Handle Length 14 Cm	10 10
13	Skin Grafting Handle with Blades	20

N.B Only complete set should be quoted and sample to be produced for evaluation

Item No. 2 Anterior Spinal Fixation System (thoracic & Lumbar)

Name of the Item:

Purchase of Anterior Spinal fixation system for Thoracic & lumbar spine (1 set)

Following items manufactured to International Standards by reputed multinational firms.


Modular, Multisegmented Anterior spinal fixation providing screw rod system with options for single or double rod fixation. The system should have 'top loading' titanium implants and have versatility for short & long constructs.

A Complete Instrumentation set for the system is required with autoclavable compartmentalised box to hold the instrument & implants. The set should have these instruments.

- i) Instruments for clearing/preparing intervertebral disc spaces and or corpectomy including vertebral spreaders.
- ii) Instruments for making entry & seating of screws of sizes 4,5,6 min diam.
- iii) Instruments for insertion of staples-single & double.
- iv) Instruments for measuring, contouring cutting ,aligning & reducing the rod into the screw heads.
- v) Instruments for manipulating the construct – compression, distraction & rotation.
- vi) Instruments for insertion ,cutting/trimming & impacting spacers/cages of different sizes & types.

B. Implants (Titanium)

1. Single and double holed staples	30
2. Screw – Mono/uniaxial assorted diam. & lengths	30
- Poly/Multiaxial assorted diam. & length	20
3. Locking devices (corresponding to the total no. of screws)	50
4. Transverse connectors	20
5. Rods – 5 – 5.5 m diam (400 to 500 mm Long)	20


Assistant Professor (Ortho)
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Item No.3: Posterior Thoracic & Lumbar Spinal Fixation System

Name of the Item : Purchase of Posterior Thoracic & Lumbar Spinal Fixation System (1 Set)

Following items manufactured to International Standards by reputed multinational firms.

Modular multisegmental spinal fixation system for spinal fixation of thoracic & lumbar spine. The system should have pedicular screws, hooks, rods, transverse connection of various sizes and should have implants made of Titanium. The system should be top loading with dual locking system for the screw hook rod, short & long constructs. The system should have provision for linkage with the posterior cervical fixation to be able to make a cervico-thoracic construct when needed.

A Complete Instrumentation set for the system is required with autoclaveable compartmentalised box to hold the instruments and implants. The set should have these minimum instruments.

- a) Instruments for making the entry & seating pedicular screws of 4 mm, 5mm and 6 mm diam.
- b) Instruments for making the slot & seating the hooks of various sizes & types viz. Pedicular, transverse & off set hooks.
- c) Rod holding, measuring/cutting/contouring & reduction devices.
- d) Linking & locking instruments for hooks screws in the rod and torquing instruments.
- e) Staple holder & drivers.
- f) In situ bending & cutting instrument for the rod.
- g) Instruments to facilitate reduction of vertebral dislocations/displacements.
- h) Instruments for compression, distraction & rod rotation.
- i) Two Universal Ratchet handles & two conventional handles.
- j) Instruments for preparation of interbody space & insertion of bone graft and or spacer /cages for interbody fusion.
- k) Instruments for inserting & tightening the pin-nut/Cap nut locking device.
- l) Instruments for holding, trimming/cutting,introducing& impacting Titanium mesh Cages.

B. Implants – (Titanium) for the System

- | | | |
|----|--|----------|
| 1) | Hooks – Assorted – Pedicular, Laminar – narrow & Broad blade: Offset hooks | 10 |
| 2) | Screws – Mono/Uniaxial assorted (diam.5/5.5mm & 6/6.5mm & lengths –25 to 50mm)
Poly/ Multiaxial assorted(diam.4/4.5mm5/5.5mm & 6/6.5mm
& lengths 25 to 50mm) | 30
20 |
| 3) | Locking devices – dual locking (corresponding to the total no. of hooks & screws) | 60 |
| 4) | Transverse connectors | 20 |
| 5) | Rods – 5 / 5.5 m diam (400 to 500 mm length) | 20 |
| 6) | Staples – Single & double holed | 20 |
| 7) | Pin-nut (cap nuts) | 10 |
| 8) | Titanium mesh cage (vertical) | |
| a) | Diam. 10,12,14,16 22,30mm
(cylindrical) variable lengths for interbody fusion & also reconstruction work | 20 |
| b) | Oval 18,22,28 mm varied lengths | 10 |
| c) | Straight PLIF/TLIF cages (PEEK material) | 10 |

Dr. ...
Professor (Ortho.)
JPNATC
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Item No.4: Cervical Spinal Fixation System

Name of the Item: Purchase of Occipital – Cervical Spinal Fixation System (1 Set)

SPECIFICATION: Following items manufactured to International Standards by reputed multinational firms.

A comprehensive, versatile, modular, segmental posterior cervical screw-rod wiring system, which can be linked to the occiput & to the Thoracic spine fixation system.

A Complete Instrumentation set with for the system to be used as mentioned above, with autoclavable compartmentalized box to hold the instruments & implants.

- i. Instruments for making entry and seating 3.5mm screws into cervical lateral mass and pedicles. Should have a accurate, stable & jig/sleeve for instrumentation devices.
- ii. Rigid straight as well as flexible drilling and tapping instrumentation should be provided
- iii. Instruments for measuring accurately desired depth of screws in lateral mass/pedicle
- iv. Instruments to bend and cut the rod
- v. Instruments to approximate /manipulate rod to screw
- vi. Instruments to compress and distract
- vii. Instruments to hold, contour, and fix the rod to plate/screw/cable/wire.
- viii. Instrument to gauge, make entry, drill holes, insertion, and seating of screws in the occipital region.
- ix. Instruments to hold, contour, and seat plates of different shape and sizes in the occipital region.
- x. Instruments for introducing , crimping , cutting of titanium double cables/wires in the cervical region
- xi. Instruments to bend and cut the rod

B. Implants:

- i. Should allow secure rigid secure, rigid fixation.
- ii. Should be low profile and made of Titanium (Ti 6AL 4V) mini screw-rod construct (3.5mm) with variable screw angulation and colour coded
- iii. Should have interface with other thoraco-lumbar systems.

Screws with locking device for lateral mass fixation assorted sizes (3.5mm diameter , length 14,16,18,20,22,24,26,28 in mm)	30
- Screws for occiput (assorted sizes 4mm -5.5mm dia , length 6-12mm)	12
Occiput plates T & Y (3 each)	6
- Slotted connectors-(3/4 mm,4/5mm,3/5.5mm)	10
- Rod diameter 3mm	10
- Stepped rods diameter 3 mm to 4 mm	4
- Stepped rods diameter 3 mm to 5.5mm	4
- Stepped rods diameter 4 mm to 5.5 mm	4
- Transition rod (occipito-cervical)3/4/3 x 250-300mm	4
- Titanium cables/wires	10
- Axial connectors 3 m to 4 m, 4 m to 5 m, 3m to 5 m	10
- Outer nuts for anchoring the rod to the occipital plate	12



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Item No.5: Anterior Spinal Fixation System

Name of the Item: Purchase of Anterior Cervical Spine Fixation System (1Set)

SPECIFICATION: Following items manufactured to International Standards by reputed multinational firms.

Anterior cervical spine fixation system of different sizes of titanium plates- with locking, varied angle screws that can be used for fixation & reconstruction of bodies of cervical spine – unisegmental Or multisegmental.

A Complete Instrumentation set is required with compartmentalized autoclavable to hold the instruments & implants.

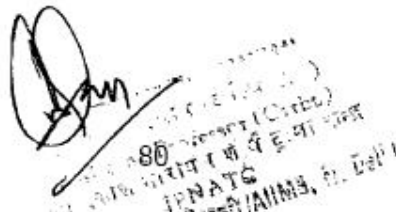
The set should have the following minimum instruments:

- 1) Instruments for measuring the required length of the plate in site.
- 2) Instruments for contouring/bending and holding the plate.
- 3) Instruments for making drill holes –
 - (a) Variable depth and variable angle
 - (b) Should have jig for stabilising/anchoring drill over the plate hole
 - (c) Should have guard/ block for fixing the exact depth of the hole-12mm-24mm
 - (d) Option of fitting the drilling devise to powered drill or a manual handle.
 - (e) Appropriate detachable handles to be provided
- 4) Instruments for accurately measuring the depth. and tapping the hole.
- 5) Instruments for selecting, insertion and 'locking' of the screw.
- 6) The instrumentation making the drill hole, tapping, insertion of screw should be jig oriented , stabilised over the plate/bone.
- 7) Instruments & screw should be color coded for different size of the screws.
- 8) Instruments for preparation & distraction of inter body space.
- 9) Instrumentation for measurement, cutting/trimming & insertion of spacer/cages for inter body fusion & or reconstruction of corpectomy defects

B Implants (Titanium)

- | | |
|--|----|
| i) Anterior cervical plates – variable size
(Single/Double/Three Level fixation) | 10 |
| 2) Screws – variable sizes | 60 |
| 3) Vertical mesh cages – various size for cervical spine reconstruction (8mm. To 22mm diam) | 10 |

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Item No.6: Intramedullary Nailing Set

2. INTRAMEDULLARY NAILING SET WITH REAMERS:

Serial no	Name of the instrument	Quantity
1	Drill Bit 3.2mm,225/200mm,2Flut,quick coupling	2
2	Pin Wrench,4.5mmdia,120mm long	1
3	Tissue Protector, for Medullary nailing	1
4	Small Awl, for medullary reaming	1
5	T-Handle with quick coupling , 85mm long	1
6	Holding Forceps for reaming Rod 2.5mm	1
7	Removing Tool	1
8	Reaming Rod 2.5mm dia , 1150mm long	4
9	Flexible Shaft, 7.0mm dia, reaming depth to 470mm	1
10	Cleaning Brush for 3.6mm Flexible Shaft , 600mm long	1
11	Reduction Head Straight	1
12	Reduction head , displacement 2.5mm	2
13	Reamer head, 8.5mm , 9.0mm ,9.5mm,10.0mm,10.5mm 11.0mm,11.5mm,12.0mm,13.0mm,13.5mm,14.0mm	2 of each
14	Hand Reamer 8mm	2 of each
15	Cannulated Socket Wrench 11mm, Curved Driving piece	1 of each
16	Driving head	1
17	Cannulated Guide Rod	1
18	Ram	1
19	Flexible Grip for cannulated guide rod	1
20	Insertion Handle for tibial nails	1
21	Conical Bolt for tibial nails	1
22	Knurled Nut for tibial nails	1
23	Insertion Handle (femoral Nails 9-12mm)	1
24	Conical bolt (femoral Nails 9-12mm)	1
25	Knurled Nut (femoral Nails 9-12mm)	1
26	Distal Aiming Device	1
27	Protection Sleeve 11.0/8mm,4.5mm	1 of each
28	Drill Sleeve 3.2mm,trocar 8mm, Depth Gauge	1 of each
29	Drill bits 4.0/4.5mm,225/200mm long	1 of each
30	F – tool	1

Item No.7: Instruments and Implants for 4.5mm Cannulated Screws

3. INSTRUMENT AND IMPLANTS FOR 4.5MM CANNULATED SCREWS:

Serial no	Name of the instrument	Quantity
1	Guide were 1.6mm dia with spade point	10 nos.
2	Drill bit 1.5mm dia , 110/85mm	1
3	Drill 3.2 /1.75mm dia , 110/85 mm	2
4	Drill sleeves 7.0/3.2, 3.2/1.6, double drill sleeve 4.5/3.2	1 each
5	Instrument for insertion of 4.5mm Cannulated screws including tap, countersink, Measuring device , stylet , screw driver , Sleeves holding clips etc.	Total 13 instruments
6	Cannulated screws 4.5mm self Drilling / tapping 20-25in 2mm increment	3 each
7	Cannulated screws 4.5 self Drilling/tapping 54-72 in 4 mm increments	3 each
8	Washer 10.0/4.6 mm dia, for 4.5 mm screws	5

The instruments should be made of bio compatible, high quality stainless steel with proven safety and efficacy(imported).

Item No.8: Instruments and Implants for 7.0mm Cannulated Screws

4. Instruments and implants for 7.0mm cannulated screws:

Serial no	Name of the instrument	Quantity
1	Guide wire 2.0 mm diameter ,threaded trip, 230mm long	10 nos.
2	Drill bits 2.0mm ,4.5/2.1 mm	1
3	Double drill sleeve 4.5/3.2	1
4	Instruments for insertion of 7.0mm cannulated Screws including tap, countersink, <i>Measuring devices, forceps, drill sleeves , styletetc</i>	Total 15 instruments
5	Cannulated screws 7.0mm self drilling / tapping Thread length 16mm with following lengths 60-110mm with 5mm increments	5 each
6	Cannulated screws 7.0mm self drilling / tapping Thread length 32mm having following lengths 60-110mm with 5mm increments	5 each
7	Cannulated screws 7.0mm self drilling / tapping full Thread length with following lengths 60-110mm with 5mm increments	5 each
8	Washer 13.0/6.6 mm diameter for screws 4.5-7.0 mm	5

Item No. 9: Mini Instrument Set

4. Instruments and implants for 7.0mm cannulated screws:

Serial no	Name of the instrument	Quantity
1	Guide wire 2.0 mm diameter ,threaded trip, 230mm long	10 nos.
2	Drill bits 2.0mm ,4.5/2.1 mm	1
3	Double drill sleeve 4.5/3.2	1
4	Instruments for insertion of 7.0mm cannulated Screws including tap, countersink, <i>Measuring devices, forceps, drill sleeves , styletetc</i>	Total 15 instruments
5	Cannulated screws 7.0mm self drilling / tapping Thread length 16mm with following lengths 60-110mm with 5mm increments	5 each
6	Cannulated screws 7.0mm self drilling / tapping Thread length 32mm having following lengths 60-110mm with 5mm increments	5 each
7	Cannulated screws 7.0mm self drilling / tapping full Thread length with following lengths 60-110mm with 5mm increments	5 each
8	Washer 13.0/6.6 mm diameter for screws 4.5-7.0 mm	5

Item No.10: High Speed Electric Motor (Spine & Neuro Surgery), Qty: 3 Nos.

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Equipment Specifications for HIGH SPEED ELECTRIC MOTOR
SYSTEM FOR NEURO & SPINE SURGERY

- TWO THREE

UNSPSC Code:
ECRI Code:

1. Description of Function

The drill system is required to saw, cut dissect, curette, abrade, carve and shape the skull bones and the vertebral the vertebral bodies.

2. Operational Requirements

2.1 High speed Electric motor for micro neurosurgery is required with all the accessories.

3. Technical Specifications

- 3.1
1. Should have a screen console
 2. Motor Speed should be at least 80000 RPM and above
 3. Speed Torque foot control, Hand Control forward & reverse movement can be seen on the screen.
 4. Two Motors can be used alternatively without disconnecting.
 5. Motor should be supplied with irrigation system
 6. Irrigation spray nozzle should be supplied with each attachment.
 7. Straight attachment should be small, medium & large.
 8. Angled attachment should be small, medium & large.
 9. Pediatric & Adult Duraguard should be supplied with Craniotomy Attachment.
 10. Oscillating saw, reciprocating saw & sagittal saw should be supplied with this system along with blades for spine surgery.
 11. Cranial Perforator should be supplied with reusable perforator.
 12. Should have acceleration and stopping characteristic adjustable and also safety stop available.
 13. System should have facility of Automatic temperature Control
 14. Should have simplified mechanism for locking and unlocking burrs.

4. System Configuration Accessories, spares and consumables

- 4.1 Equipment should be supplied along with these accessories:
1. Control Unit (Console)
 2. Motor Cable
 3. Foot Switch.
 4. Craniotomy Hand piece along with Adult and Pediatric Duraguard
 5. Straight and Angled Attachment of various length should be available for Neuro & Spine Surgery.
 6. Cranial Perforator with Hudson Chuck.
 7. Micro Saw (oscillating & Reciprocating)
 8. Irrigation Accessories
 9. Mobile cart
- 4.2 Burrs for attachment (ten each) :
1. Craniotomy Burr (Adult & Pediatric)
 2. Neuro Cutter
 3. Pin Point Burr
 4. Diamond Burr
 5. Barrel Burr (for Corpectomy)
 6. Cone Burr (for Corpectomy)
 7. Rosen Burr
 8. Linder mann Burr (for grafting)

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डॉ० दीपक अग्रवाल / Dr. DEEPAK AGRAWAL
सहायक आचार्य / Asstt. Professor
शल्य चिकित्सा तथा गामा नाईफ विभाग
92 Deptt. of Neuro Surgery & Gamma Knife
जयप्रकाश नॉर्थ ट्रस्टा केंद्र, अन्वयानुसंधान, आई आई टी-28
JPNATC, A.I.I.M.S., New Delhi-29

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9. Saw Blades of different Lengths & Width

4.3 STORAGE AND MAINTENANCE:

1. Oil spray for high speed motor and hand pieces – 50 Nos.
2. Oil spray for perforator – 5 Nos.
3. Autoclavable Perforated basket with covering lid with holders for motors, all handpieces, hose, tools and all other accessories.

5. Environmental factors

- 5.1 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. Or should comply with 89/366/EEC; EMC-directive.
- 5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%
- 5.3 The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%

6. Power Supply

- 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug

7. Standards, Safety and Training

- 7.1 Should be FDA , CE,UL or BIS approved product
- 7.2 Manufacturer should be ISO certified for quality standards.
- 7.3 Comprehensive warranty for 2 years and 5 years CMC after warranty
- 7.4 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements

8. Documentation

- 8.1 User/Technical/Maintenance manuals to be supplied in English.
- 8.2 Certificate of calibration and inspection.
- 8.3 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
- 8.4 List of Important spare parts and accessories with their part number and costing.
- 8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

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Item No.11: Large Fragment Instrument Set, Qty: 4 Nos.

6. Large Fragment instrument set

Serial no	Name of the instrument	Quantity
1	Drill bits 3.2mm for quick coupling	3 nos.
2	Drill bits 4.5 mm for quick coupling	2 nos.
3	Drill bits 4.5/3.2,4.5/3.2 long , 6.5/3.2	1 each
4	Socket wrench 11 mm ,200 mm length	1
5	Drill sleeve pointed	1
6	Instruments for insertion of screws including Wrenches, bending template , screw driver , Taps, tension device , countersink etc.	Total 18 instruments

Item No.12: Digital X Ray Machine

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Technical Details for Digital Radiography with Image intensifier Machine

Technical Specifications:

Digital radiography system with image intensifier TV having exceptional image quality, superb dose mitigation efficiency and powerful penetration capabilities to cater to all types of patient categories.

The system should consist of

Bucky Table, Cassette tray, Spot-film device (Digital camera), Compression facility, Tube assembly, Removable grid

Table: Minimum requirements:

- Table height: 89 cm ,Table top: 200 X 80 cm
- Table tilt: Tilt angle + 90° / -15°
- Lateral Movement: +/- 17.5 cm
- Longitudinal Movement: ±80 cm
- Lateral Movement Speed: 4.5 cm/s
- Longitudinal Speed: 6 cm/s
- X-ray attenuation equivalent - 0.6 mm at 100 kV/2.7 mm Al HVL
- Maximum patient weight
 - For all movements: 180 kg
 - Static, in horizontal or vertical table position (incl. footrest): 200 kg
- Table top movement should be possible in maximum directions for easy patient positioning.
- It should have anti collision facility to prevent contact with the floor during tilting.

Vertical Bucky (Wall stand)

- Motorized, counter balanced adjustable height vertical Bucky.
- Removable grid for SID of 180cms for vertical bucky applications
- Automatic exposure control should be available

Generator:

- A minimum 65 kW microprocessor-controlled X-ray generator with sophisticated high-frequency inverter technology.
- Should support dose management features like Pulsed Fluoroscopy.
- Should support Automatic and Manual exposure techniques.
- Should support to regulate exposure settings during the exposure pulse.
- Tube voltage exposure: 40 to 150 kV
- Tube voltage fluoroscopy: 40 to 110 kV

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- Tube current exposure: 1 to 800 mA
- Tube current fluoroscopy: 0.2 to 6 mA
- mAs product 0.5 to 600 mAs (with AEC), 0.5 to 800 mAs (without AEC)
- Exposure times 1 ms to 4 s (with AEC)
- Dose management & Dose calculation: Display of cumulative skin dose, dose area product or percentage of a defined dose limit value should be possible.
- Safety timer for fluoro cutoff after 5-6 minutes should be available.

Tube:

High-quality Tube with the following spec

- Tube voltage: 40 - 150 kV
- Nominal focal spot values: 0.6 / 1.0 mm
- Anode heat storage capacity: Minimum 300 kHU. Higher will be preferred
- Maximum continuous heat dissipation: 150,000 HU/Min
- Maximum heat content of assembly: 2100 kHU
- Tube rotation from + 90° to - 180° should be possible for better flexibility of tube positioning
- Should have automatic X-ray beam spectrum optimization
- Automatic spectral Cu filter disk with 3 filter values
- Automatic X-ray beam collimator with motor driven rectangular and circular collimation.
- Collimation on LIH for last Fluoroscopy and last Exposure images should be possible.

Image Intensifier:

Image Intensifier/Television subsystem: X-ray imaging subsystem for fluoroscopy and digital imaging.

- 12-inch (30 cm) Image Intensifier
- Input screen, for high spatial resolution (45 lp/cm or more), high DQE of 65% or more and low dose.
- Output screen with high light-transfer efficiency and high contrast.
- Lead shields must be available for radiation protection

CCD Camera

- TV chain with 1024 x 1024 matrix CCD camera with digital output @ 10 bit depth
- Horizontal and vertical scan reversal
- Average automatic dose rate control and Automatic gain control



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Image display system

- Monochrome monitors of 17" to be provided in examination and console rooms. Monitors in examination and console rooms to be of 1 Mega pixel or more.
- Post acquisition, image processing, viewing, reprocessing, hard copy documentation and onward transmission should be possible while doing fluoroscopy or radiography.

Control Console


- All system movements of table should have facility for control by the operator at the table in the examination room and also at the console. Foot pedals should be available in examination room and at console.
- The system should have facility for edge enhancement, positive/negative image display, windowing, contrast/brightness, electronic shuttering, image/pixel shifting, vertical and horizontal image reversal, zoom functions.
- The system should have fast and direct access to all series, single images, in both examination (Remote controlled) and console room
- System should have angle/distance measurement, image labelling and patient positioning facilities.
- System should have an on-line dosimeter on the console to display actual radiation dose.

Image storage and Transmission

- Image storage capacity of at least 30,000 images in 1024 x 1024 matrix at 10 / 12 bits on the main system disk.
- The systems should support storage of images on compact discs/DVD.
- The system should be DICOM 3.0 (or higher version) ready (like send, receive, print, record on CD/DVD, acknowledge etc.) for connectivity to any network, computer/PC etc. in DICOM format.
- Vendor should connect this with existing LAN system and other laser cameras already existing in the department without any extra cost
- Easy integration and networking should be possible with any other existing/future networking including other modalities, HIS and RIS and PACS

Accessories

1. One Dry Chemistry, Multiport, multiple films (14"x17", 11"x 14" and 8"x 10") camera with resolution of 500 DPI or more, DICOM ready and online. At least three size film trays should be active. The vendor should connect this camera with other existing cameras in department of Radiodiagnosis
2. DICOM Software with fast speed DVD Combo (Reader and Writer separately).
3. Lead glass of size 100x 150 cm or more for console room.
4. Two light weight 'zero lead' aprons, two thyroid shields, paediatric gonadal shields (All sizes both for male and female).
5. Radiation protection flaps.


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6. Suitable UPS with complete back up for the computer system for at least 30 minutes.
 7. Minimum necessary furniture like chairs, table etc.
 8. Fire extinguisher system to be connected to central system by vendor.
 9. Hand grip
 10. Foot step
 11. Patient fixing belts and compression device (for performing excretory urography)

Installation

- Complete turn key project : The cost of alteration and preparation in a specified built in area on turn key basis which will include civil, electrical and air conditioning, is to be borne by the firm.
- This work should be done in consultation with the Department of Radio-diagnosis and Engineering Section of AIIMS.
- Power supply and AC requirements to be clarified and approved.

Warranty/After Sale Service

- Five year comprehensive on site warranty of entire system (Spares and labour) including X-ray tube, civil, electrical and air conditioning works and all accessories (including dry chemistry camera, UPS etc.). This will be followed by 5 years comprehensive AMC.
- 95% uptime guarantee should be given. In case down time exceeds 5%, penalty in the form of extended warranty, double the number of days for which the equipment goes out of service, will be applied

Instruction to the supplier

- The tender should be in two bids. Technical and price bid should be provided in separate sealed covers.
- All the information in the tender document must be supported by original product data sheets. All information asked must be provided under heading give above. Incomplete and haphazard information will not be accepted.
- On site Training should be provided.
- Mention the number (with addresses and phone numbers) of installations of quoted unit in New Delhi and in India.
- NOC and Type approval certificate from AERB to be submitted.
- ISO certification for service of medical devices to be submitted.


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Item No.13: Ultrasound Machine

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Specifications for an Ultrasound machine with Colour Doppler

System configuration

1. The system should be capable of high resolution 2D, PW, 3D with Multiplanar Reformatting, M mode, Color flow imaging and power Doppler angio imaging mode.
2. The system should have 20,000 or more digital processing channels.
3. The system should be capable of high resolution 2D, PW, 3D with Multiplanar Reformatting, M mode, Color flow imaging and power Doppler angio imaging mode.
4. The system should have 15,000 or more digital processing channels.
5. The system should have 256 Gray shades or more.
6. Transducers should be of broad band or multifrequency technology.
7. The system should have a dynamic range of 170 dB or above. Higher dynamic range will be preferred.
8. The system should have a frame rate of 300 frames per second or above.
9. The system should have tissue Harmonic imaging facility with pulse inversion technology.
10. It should be possible to upgradable the system to 4D, later if required. Please confirm.
11. System should be able to do volume acquisition of 33 volumes/sec or more.
12. System should have compound imaging of 9 lines per steering or more.
13. The system should have Pan Zoom facility (up to 6 times or more magnification) with high resolution results in both real time and frozen images.
14. The system should have imaging depth of 25 cm or more.
15. The system should have Cine loop facility; both frame by frame and in cine mode, with a memory for at least 500 2D color images review and at least 30 seconds of Doppler and M mode data.
16. The system should have facility of Panoramic Imaging or equivalent for extended field of viewing. The system should have Real-time Compound Imaging with at least nine lines of sight for achieving excellent image quality.
17. The system should have auto optimization features for ease of use and automatic quantification of Doppler parameters in Real-time & freeze modes.
18. The system should have an easy to use control panel and also be rotated sidewise more than 180 degrees. Should have an alphanumeric keyboard with illuminated keys and status display.
19. The system should have a High resolution Non Interlaced Flat Panel Monitor of 17 inches or more.
20. Should have minimum 3 active ports with direct switching from console.


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- 21. The system should be DICOM 3.0 (or higher version) ready (like send, receive, print, record on CD/DVD, acknowledge etc.) for connectivity to any network, PC/computer etc in DICOM format.
- 22. System should have extensive calculation packages for general, vascular and obstetric measurements.
- 23. Foot switch operation for freeze and expose facility to be available.

Transducers:

Following transducers to be offered with the system:

- 1. Convex Array Transducer with frequency range of 2 to 5 MHz.
- 2. Linear Array Transducer with frequency range of 3 MHz to 12 MHz. or more
- 3. Endovaginal transducer with frequency range between 4 to 9 MHz with FOV not less than 120 degrees.
- 4. Small foot print, phased array transducer for Transfontanelle USG of neonatal head.

Image storage and Documentation devices:

- 1. Should have inbuilt hard disk for > 140,000 image storage.
- 2. Should have inbuilt CDRW facility to transfer images.
- 3. Hardcopy documentation using a multi-port DICOM compatible high-resolution laser dry chemistry camera with flexible formatting of images on 8"X10" & 14"X17" films. At least two active trays. DPI of camera should be 500 or more.

Miscellaneous:


On line UPS with 5KVA capacity for half an hour backup to support all functions of the equipment i.e. performing ultrasound procedure, exposure on to films or copy on a CD.

Upgrading requirements

A free, comprehensive software upgrade (compatible with the existing platform) guarantee for 10 years (after installation) of the ultrasound unit must be provided.

Guarantee/Warranty

- Five years comprehensive on site warranty of entire system (Spares and labour), without exclusion, including transducers and all other accessories. This will be followed by 5 years CMC to be quoted separately, year wise.
- 95% uptime guarantee should be given. In case down time exceeds 5%, penalty in the form of extended warrantee, double the number of days for which the equipment goes out of service, will be applied.


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General Instructions for the Vendor

1. Supplier must ensure availability of expertise service and maintenance at site of installation. Uninterrupted availability of spare parts and repair for next ten years must be assured.
2. Two bid system: vendor is required to make separate bids for technical and price components. These should be quoted in two separate sealed envelopes.
3. Please note that all technical features, facilities and accessories mentioned in the tender document are standard requirements and hence, these should be offered as the standard feature. None of these should be offered as optional items.
4. In price bid, cost of locally supplied items must be quoted separately in Indian currency.
5. Please respond to each specification in the same format and order as mentioned in the tender document and specify/ indicate the verification document from the product data sheet against each column.
6. Original product data sheets, complete manuals and other necessary documents should be provided. Photocopies of these documents or printouts of the email/ web pages will not be accepted.
7. When required, information other than those in the data sheets should be provided as a separate document from the principals only and should refer to the specific sections being addressed. When standard vendor data sheet disagrees with the bid response (offer/ compliance statement), clarification should accompany in the form of certificate from the principals only. In absence of this, the vendor data sheet will prevail for the purpose of evaluation and decision of the technical committee shall be final and binding on the supplier.
8. The vendor has to station one application specialist and service engineer at site for a period necessary to familiarize the medical and technical staff to the scanner protocols and enable them to achieve fast and efficient service.
9. Mention the number (with addresses, phone numbers, e mails) of installations of the quoted unit in Delhi and India.



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Item No.14: Multi Channel Automatic Chemistry Analyzer

1. System: discrete, multi-channel, fully automatic and computerized machine, truly random access, open system with onboard washing of reaction cuvettes.
If not completely open please indicate how many channels (and parameters) are closed in the equipment and cannot use internationally branded reagent from reputed firm.
2. Must be on-site upgradable to a higher throughput system for photometric and immunoassays.
3. Test modes: stat, batch, random access
4. Assay modes: endpoint, kinetic, prozone check, rate- A, B with blank
5. Channels: 40 and above
6. Throughput: 800 and more tests/hr(photometric) more than 1500 with ISE
7. Serum indices: lipemic, icteric, hemolysed
8. Reagent Volume: minimum (180-380 ul, more than 2 reagent chemistry should be possible)
9. Quality control package with Levy Jennings charts
10. Fluids which can be analysed: serum, plasma, urine, CSF and other fluids like peritoneal, pleural, pericardial etc
11. Reaction temperature: 37 degree centigrade
12. Stat positions: 15 and above
13. Cuvettes: preferably non disposable cuvettes
14. Printer: in built with use of non thermal paper
15. Samples: 250 and more positions
16. Interface: mono and bi-directional interface essential
17. Cooling: cooled compartments for reagents
18. Method types: performs routine tests, enzymes, drug assays, immunotubidimetric assays
19. Auto dilution and auto rerun during the run
20. On line water supply plant
21. Must have installation in India, preferably in government institute. Satisfactory running certificate are to be attached.
22. Should have a grating photometer with 340, 376, 415, 450, 480, 505,546, 570, 600,660,700,800 run wavelengths
23. Reagent probes and sample probe must be dedicated
24. Installation infrastructure and essential accessories for installation must be offered with the instrument. Instrument should be able to work with RO purified water as well as deionized water.
25. More than two types of reagent bottles should be adaptable into the system
26. List of consumables with their rates which would need to be purchased during warranty period should be given.
27. Start up kits / maintenance kits / wash solution / prime solution etc required to run the instrument for 3 months / till installation should be provided free of cost.

Item No.15: BLOOD GAS ANALYSER

A fully automatic upgradeable blood gas-cum-electrolyte analyzer based on liquid calibration without using gas or cartridge :

1. **Measured Parameters** : pH, pCO₂, pO₂, Ionized calcium, lactate
2. **Calculated Parameters** : Std. pH, CH⁺, HCO₃,
Std. HCO₃, O₂ Sat, BE, BE ecf, BB, O₂
Content, TCO₂, all at patient's temperature
3. **Sample container** : Should accept both syringe and capillary sample
4. **Sample volume** : Should be less than 100 µl
5. **Readout Time** : Less than 1 min
6. **Quality Control** : Instrument should have upgradeable QC Program
7. **Printer** : In-built (preferably non-thermal paper)
8. **Calibration** : Liquid based technology with automatic calibration
in cycles without use of gas and cartridge
9. **Display** : Digital display (preferably on larger screen)
10. **Electrodes** : Maintenance free electrodes with shelf-life
of not less than one year
11. **Reagent bottle** : Reagent bottle / bags should be separate &
not a single pack to avoid wastage
12. **Life of Reagents** : On-board life of reagents should be more
than three months
13. **Guarantee** : 5 years with spares (Mechanical components)
14. **C-AMC** : Rates of comprehensive AMC for next 5 years

Item No.16: Automated Urine Analyzer

1. The system should be automated with high through put and bench top urine analyzer for reading reagent strips.
2. Parameters included should be Glucose, Protein, Urobilinogen, Bilirubin, Ketones, specific gravity, occult blood, nitrate, pus cells & pH.
3. Test Measurement:
Color change measured by reflectance photometry
Dual readings at reactive and reference wavelengths
automatically adjusts for urine color
4. It should have Printed, consolidated patient report with urine test strip
5. Sample ID entry should be Manual, bar code, or downloaded from LIS
6. It should have Memory : more than 500 patient records and 200 controls
7. It should have display color LCD touch screen more than 5.0 Inches.
8. It should have External PC keyboard option/PS2 connection
9. It should have records and reports specimen color and clarity.
10. It should have electric requirement: 220-240V, 50/60 Hz
11. Guarantee – 2years guarantee, 3 years warranty with 5 years free CMC.

Item No.17: Specifications for High Speed Refrigerated Centrifuge

1. Floor model cold centrifuge with temperature setting in a range of -4°C to +40°C with CPC free condenser.
2. LCD display with imbalance detection system with safety interlock and emergency stopper/brake system.
3. Automatic rotor ID detection system.
4. Access to various angles rotors with variable capacity to adopt 250ml x 4, 120ml x 4, 50ml x 10, 15ml x10-12, 1.5mlx 18-24 and 96 well microtitre plates.
5. Autoclavable rotors and adaptors with biosafety cover lids for each rotor.
6. Noise not more than <55db
7. Should have continuous run time of 99 min or more.
8. Speed >15,000 rpm.
9. Power supplies 200-250 V, 50Hz.
10. Should provide adaptors for 15ml, 30ml both 'U' & 'V' bottom tubes.
11. Safety features to indicate imbalance, improper chosen rotor, interruption centrifuge programme, variation from set temperature.
12. Should provide suitable stabilizers.
13. Guarantee – 2yrs guarantee, 3 warranty with 5 yrs free CMC.

Item No.18: Platelet Agitator

1. It should have provision to store about 36 platelet bags or 15 Apheresis bags or bags of different sizes.
2. It should have a clear view single pane glass roll out door which should roll inside the chamber for opening of the incubator.
3. Should have removable drawers for storage of any size product
4. Should have complete air circulation across both surfaces of platelet bag.
5. Agitator should stop automatically once the door is opened.
6. It should have micro-processed controlled LCD display, temperature graph display and graphical display of agitation speed.
7. It should have stainless steel rtd sensor probes.
8. It should have provision for 4 day inkless chart recorder with battery backup for continues operation during power failure.
9. It should be able to maintain a temperature of 22 degrees.
10. It should have gentle side to side motion (1 ½ inch,38 mm) with 65 ±5 strokes per minute
11. It should have drawers with holes for complete air circulation across both surfaces of platelet bags
12. Guarantee – 2yrs guarantee, 3 warranty with 5 yrs free CMC

Item No.19: Blood Cell Separator Apheresis Machine

1. Should be fully Automatic Computerized on Line System Latest Model
2. Mobile: Easily Transportable to Patient Site for Therapeutic Usage.
3. Practical for Mobile Collections and in ICUs’.
4. Should be a donor & operator friendly unit.
5. Should have Single / Double arm procedure for all protocols.
6. Should have closed set disposable
7. Should operate on battery back up (UPS) and should operate at least 2hours on a commercially available 1 KVA UPS
8. Flow Control Algorithm with Over Pressure Detection controls and alarms. Automatic cuff inflation / deflation.
9. Should have Versatile Combination of Component Collection Protocols.
10. Should Allow Collection of up-to two units of Leucodepleted RBC Concentrates, Both Autologous and Homologous Red Blood Cells and Leuco-depleted Platelets. Red Blood Cells and Plasma in two separate bags. Leuco-depleted Platelets and Plasma in two separate bags.
11. High Yield Leuco-depleted Platelet Collection from a Single donor with minimal Plasma
12. Should have capability of collecting 3×10^{11} or more platelets from a single donor with in 60 minutes using a single arm / double arm procedure.
13. Both Autologous and Homologous Peripheral Blood Stem cell collection.
14. Bone Marrow concentration Protocol.
15. Therapeutic Plasma Exchange Protocol.
16. Platelet poor Plasma and Fresh frozen plasma.
17. Self-Loaded Centrifuge with a Variable Speed for collecting concentrated components from a single donor.
18. Guarantee – 2yrs guarantee, 3 warranty with 5 yrs free CMC

Item No.20: CSSD

Height Adjustable Transport trolleys

Size 900 X 600 X 750 including wheels (L X W X H)

The trolley shall be fully stainless steel with 1.2mm thick pre polished sheets and the frame work with 30mm dia.pipe Shall have 1 top shelf and one in the lower end and mounted on 6 inches castor wheels with 2 wheels on brakes both the ends shall have round pipe handles made out of fully S.S. 304

Theater Supply Storage and Distribution Cart

Size : 1400x750x1260 mm

- A trolley for sterile goods handling where higher than normal dust protection is required, e.g. short transports between hospital buildings. Suitable for handling baskets or containers with a total capacity of 9 STU (1 STU = 600 x 300 x 300 mm) on three solid, removable shelves (3 x 3 STU).
- Trolley should be fitted with large stainless steel wheels (Ø 160 mm) for easier maneuverability.
- Two fixed wheels and two swivel wheels with brakes.
- The fully welded stainless steel construction (minimum 18 gauges, 304) makes it suitable for cabinet washers. The doors open 270° for easy access and cleaning.
- Trolley should have lockable doors and should include handlebars.

Linen Distribution Trolley

Size : 1020x740x1750 mm

- Distribution trolleys should be ergonomically designed for convenient manual distribution of sterilized goods to the users or for returning used goods to the central processing area.
- The trolley should be flexible and easy to handle and transport modular wire baskets and/or closed tote boxes, to increase handling efficiency and improve safety for the end-user, transport staff and the surroundings.
- These trolleys should have horizontally mounted slide bars that act as supports for the baskets and/or tote boxes.
- A heavy-duty stainless steel (304) bottom plate should protect the goods during transport.
- A sturdy handle should be mounted on the bottom frame for convenient handling, even in narrow corridors.
- The handle is so designed to permit the use of disposable plastic or reusable cloth covers for further protection during distribution.
- The trolley should be made of heavy-duty polished stainless steel (304) and every detail is designed for easy cleaning and disinfection.
- The wheels (2 fixed, 2 swivel) have a diameter of 125 mm and are made of rubber with ball bearings.

Mobile Trolley with Auto Loading and Unloading

- Free Bearing roller should be provided on the top side of the trolley
- The roller at Operator's end should be getting a drive through gear motor placed on the bottom frame of the trolley
- Same roller pattern should be installed inside the sterilizer also

- The roller drive assembly on the trolley should run on 230 VAC mains external electrical supply
- On start , it either Pushes or pulls out the load from the sterilizer
- The complete roller assembly is self lubricated thereby avoiding the problem of contamination due to lubrication.
- The roller can be removed easily & sterilized
- The roller should be made of stainless steel tubular section or pharmaceutical grade polymer having resistance to wear & tear
- Dimension should be compatible with commonly used autoclaves
- Should operate on 220-240V AC mains
- Material of Construction SS 304

Trolley wash System

Wall mounted type Unit

- The trolley wash system will have a spray gun for manual wash, including hot and cold water mixing unit for any desired proportions.
- Automatic Steam shut off system provided in case of cold water supply fails , for operator safety.
- The water steam flow and pressure in controllable and specially provided lever press for effective and effortless cleaning.
- The unit has a rigged stainless steel construction with simple operations makes it an essential equipment for wash down operations.
- The unit is complete in itself with built in hose rack, control valve, check valve, water saver nozzle etc.
- The unit equipped with dial thermometer , which indicates the temperature of wash water, the user can adjust the temperature of hot water for each operation as per need.
- The unit comes with 15 mts high pressure water tube.

Height Adjustable work Table

Size (LxWxH) : 1800x850x900 mm

- Stainless steel tables specially designed for work with dry and wet goods (heavy-duty sorting of wire baskets and containers and work with dry/wet goods, inspection, and packing various sets of surgical instruments in trays) and for general purpose pre-storage.
- The work tables should have a rigid stainless steel construction which is easy to clean and without sharp edges or corners.
- The table should be ergonomically worked up, should have easy to clean robust matt-finished (to reduce reflection of light from the surface) with minimum sheet thickness of 1.5 mm stainless steel (304) worktop/surface to withstand and carry out heavy work comfortably, either sitting or standing.
- The edges along the front, back and sides should be reinforced and widened to 37 mm, giving a rigid construction.
- They are welded together and polished at all corners for good hygiene, as well as for the comfort and safety of the staff.
- The worktop should be supported by a complete assembly with full-length reinforcements along the front, back and ends, welded together at the corners.
- The worktop and support frame are bonded together with double-adhesive tape of a special, age-resistant quality to give rigidity and noise abatement.

- The support frame has to be mounted on a solid, stable floor stand, made of polished stainless steel square tubing, with horizontal braces 300 mm above floor level. An adjustable (± 25 mm) plastic foot, easy to clean, is mounted on each leg.
- The provision is to be made for a sturdy 445 mm-wide stainless steel shelf (optional) can be mounted on the horizontal braces.
- Delivered ready for assembly.
- All edges should be smooth and the rigid frame should be made up of minimum 1.5 mm sheet thickness stainless steel (304).
- There should be unobstructed access to the working space, since the only supports needed along the front of the table are the corner legs. This also facilitates cleaning of floors.

Racks for CSSD

SS Storage Racks with 5 shelves, all sides open and stainless steel bullet feet.
Overall size 1830 x 535 x1830 mm H.

Item No.21: Operating Microscope

ADVANCED OPERATING MICROSCOPE FOR NEURO SURGERY

The microscope should conform to the following specifications:

1. MICROSCOPE BASE:

- a) Rollable floor stand on base with lockable castors, carrier and swivel arms with large reach of 1.40 m or higher.
- b) Should have magnetic brakes.

2. OPTICS:

- a) Lead free optics for high quality images.
- b) Motorized zoom magnification system with ratio 1: 6 or more.
- c) Widefield eyepieces with eyecups, 10X or better magnification
- d) Diopter setting + / - 5D
- e) Magnification range 2X- 12X or higher with 10X eyepiece.
- f) Working distance continuously variable, motorized, range 210 mm to 460 mm or more.
- g) Should have interface compatible with commercially available lasers, with focus lock.
- h) Integrated beam splitter.
- i) Tilt able binocular tube for main surgeon
- j) Stereo Co-observation attachment with tilt able tubes.

3. ILLUMINATION SYSTEM:

- a) Coaxial Xenon illumination 300W.
- b) Provision for emergency backup illumination.

4. OPERATIONS:

- a) Easily maneuverable handgrips with adjustable keys for zoom and focus & magnetic brakes.
- b) Should have magnetic clutches for easy maneuverability.
- c) User programming facility for magnification, working distance, zoom & focus.

5. DISPLAY:

- a) Liquid crystal display (LCD) of system parameters.

6. VIDEO/ IMAGE DATA MANAGEMENT SYSTEM:

- a) Modular 3CCD Video camera with direct recording facility to external devices.
- b) Image data storage and editing system with necessary software, cables and ports.

7. CE & US FDA approved.

Item No.22: Cautery OT

CAUTERY MACHINE

Specification for Electro surgical cautery machine

- Electro surgical generator with a microprocessor based continuous feedback system, which continuously takes feed back of the tissue impedance and delivers constant power to the surgical site.
- Should have monopolar and bipolar cutting and coagulation functions.
- Should have at least 3 modes for monopolar coagulation such as forced, spray and soft.
- Monopolar cutting modes should be adjustable to low cut, pure cut or blend functions with a special mode for underwater applications.
- Should be able to detect changes of patient position in relation to patient plate.
- Should have the facility for dual application with simultaneous operation with 2 separate outlets for monopolar operable by both hand and foot control.
- Should have easily readable digital display of various functions.
- It should have facility for progressively increasing or decreasing HF power output in 1 watt steps.
- The unit should have auto-testing ability for troubleshooting.
- There should be built-in dynamic self-adaptive HF power output control which automatically selects the most suitable operating points.
- Programmable memory settings / preset memory settings for different specially applications with easy manual override.
- Capability to auto store last set values on the front panel, if unit is shut off.
- Active current leakage limitation to ensure patient safety along with safety alarms for current leakage, patient plate disconnection and continuous activation of the unit.
- Should have automatic HF power cut off by auto coagulation stop.
- Should be functional by both hand switch and foot pedal with appropriate color coding for cutting and coagulation modes.
- The foot switch should be explosion protected.
- The reusable patient plate should be made of silicon rubber with durable connection interfaces with the unit.
- Should be operable by two surgeons working simultaneously at surgery.
- Should be CE certified and also conform to IEC directives.
- Should be able to cut and coagulate under water.
- Should be quoted with all essential accessories such as:
 - Monopolar foot switch
 - Patient earth pad (reusable) – 15 per year approximately.

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- Reusable monopolar hand switch with finger control and cord (sterilizable in Cidex, Formalin, ethylene oxide) – 25 per year approximately.
 - Disposable hand switches – 50 per year approximately.
 - Bipolar forceps with cord and facility for a saline irrigation channel at the tip to prevent charring during operation – 4 per year approximately.
 - Standard – 100 per year.
 - Bayonet type – 10 per year.
 - Diathermy tips: Flat blade (2mm), pointed tip and ball point – 110 Nos/year
 - Length of the short electrodes with insulated shaft: 4-5 cm – 90 nos./year.
 - Length of the long electrodes with insulated shaft: 15-18 cm – 20 nos./year.
- The unit should conform to the following technical data:-
- Mains supply : 220-240 V
 - Mains frequency : ~50 Hz
 - Max Power: 350 W
 - LF leakage Current in accordance with IEC 601.1
 - HF current leakage detection and alarm range: 150 mA (blinking indicator) – 300 mA (acoustic signal with auto power shut off).
 - Output frequency : 375-450 KHz
 - Modulation frequency: 1 KHz
- Maximum power of different output types should be as follows:
- Monopolar
 - Cutting 1: 0-350 watt (unmodulated sinusoidal wave form)
 - Cutting 2: 0-350 watt
 - Urology cutting 1 & 2: 0-320 watt
 - Contact coagulation 1a & b: 0-250 watt
 - Contact coagulation 2: 0-150 watt
 - Forced and Spray coagulation: 0-120 watt (pulse modulated waveform)
 - Bipolar
 - Bipolar cutting 1 & 2: 0-120 watt
 - Bipolar coagulation: 0-120 watt

Item No.23: Fiber operative Bronchoscope-OT

- The set should contain two video bronchoscopes, one for adult use and other for pediatric use.
- Telescopic eyepiece for direct compatibility to CCTV system if required.
- Video bronchoscopes should be based on charge couple device (CCD) to collect image data.
- The CCD should be in the control section.
- For Adult Bronchoscope:
 - Optical System: Field-120 degrees or more
 - Depth of field =3-100 mm
 - Insertion Tube-distal end outer diameter= 6 mm or less
 - Insertion tube outer diameter= 6 mm or less
 - Instrument channel: Inner diameter= at least 2.8 mm
 - Bending range: Up/down= 180/130 degrees
 - Channel diameter=2.8 mm or more
- For Pediatric Bronchoscope
 - The working length should be more than 550mm.
 - The distal end of the scope should have a provision for anterior and posterior angulation of more than 120 degrees.
 - External diameter should be between 3.0- 4.5 mm
- Bending mechanism knob without lock
- Light weight, high resolution with integral (non-detachable) light cable
- Fully immersible in liquid disinfectant solution.
- Leak testing facility with regulated (flow and pressure) air feeding (non-pressure gauge system) through light source.
- Autoclavable suction valve to avoid risk of cross contamination
- Laser and electrocautery compatibility
- Standard set should include reusable and autoclavable biopsy forceps and cleaning/maintenance kit.
- Image grabbing and editing software
- Camera with CCD chip with monitor
- Equipment should include facility for recording images and video on DVD recorder and computer and should be equipped with DVD recorder, computer and compatible software to record and edit videos and high resolution still images for patient report.
- Equipment should have facility for simultaneous recording on DVD and Computer
- Computer requirement: Core 2 duo, at least 2G b RAM, Minimum 250 GB hard disk, DVD-Recorder, at least 17 inch LCD monitor, mouse & Keyboard
- High resolution color laser printer (at lest 1200 dpi)
- Digital video and photo capture card (fire-wire port)
- S-video facility
- Halogen light source (compact, weight less than 5-6 kg; minimum 250 watt; with stand-by lamp option)
- Built in air pump for distension and automatic leakage testing
- Should be compatible with rigid and flexible bronchoscope both
- Pump pressure 0.3-0.6 kg/cm² (at 0 cc/min); 0.18 kg/cm² or below (at 2000 cc/min)
- The set should have 5 biopsy forceps.

Item No.24: OT Table Neurosurgery

Technical Specification for O.T. Table (Neuro Surgery)

Accepted

The table should be mobile, electrically controlled with batter powered hydraulic drive, Table top should be divided into segments, topped with integral foam padding which is both radio translucent and electrically conductive. The table should rest on easy-rolling castors and should be fitted with brakes.

The Table

1. Should have a stable base
2. Should have a powered longitudinal slide for 400 - 600 mm.
3. Should be electro-hydraulic with facility for various positions such as sitting, supine, prone and lateral positions under the microscope.
4. Should have a top that can be adjusted from 50 - 100 cm height.
5. Should have a top with dimensions 50 cm (W) x 190-210cm (L)
6. Should have a head holder for various positions. The head holder should be attached to the main unit.
7. Should have a table top which can rotate towards the right and left by 20° - 30° each.
8. Should have headboard break 15°, up 90° down with manual and electro-hydraulic operation.
9. The table should have a power source AC 100 V - 220 V, 50 - 60 hz.
10. Movement should be possible by simply pressing the appropriate buttons on the Remote Control Unit.
11. Should have current leakage less than 70 U/A AC (0.07m Amp).
12. Should be able to take intraop X-Rays of skull & Spine. Table Top Should be radiolucent
13. Should have all necessary accessories.
14. Electric control to achieve the following positions.
 - ❖ Trendelenburg - 30°
 - ❖ Reverse Trendelenburg - 25°
 - ❖ Side tilt - 20° - 30°
 - ❖ Back plate raise - 80° - 90°
 - ❖ Back plate drop - 50°

Specifications-Surgery

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15. Accessories for Neurosurgery

- ❖ Mayfield skull clamp with necessary adapters
- ❖ Attachment frame for positioning the patient in sitting position.
- ❖ Arm Board
- ❖ Wristlet
- ❖ Body straps
- ❖ Anaesthesia screen
- ❖ Infusion bottle holders
- ❖ Radial setting clamp
- ❖ Horseshoe with connecting fixtures adults
- ❖ Horseshoe with connecting fixtures pediatrics
- ❖ Wrist support
- ❖ Accessories for prone and knee-chest position

Specifications-Surgery

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Item No.25: OT Table Orthopedic

Orthopaedic operation table electro-hydraulic

Specifications:

- Basic cover , column casing , table top frame, traction bars and accessories should be made up of chrome Nickel Steel.
- Radiolucent , Section Table top
 - *Three section back plate with two detachable shoulder segment ,
 - *Seat plate with detachable buttock support
 - *perineal rest
 - *detachable divided leg plates
- Two folder traction bars fixed beneath the seat plate with two adjustable pivot joints
- Guide rails beneath the seat plate for X-ray cassette insertion .
- Detachable pads made of foam core , approximately 50mm thick , Radiotranslucent Electrically conductive.
- T-base and rolls on caster for longitudinal and lateral movement.

BATTERY POWERED /MAINS OPERATION

- Hand control and remote control for various table functions
- Battery capacity for approx 2 weeks or 50-80 operations.
- Can be operated directly on mains.

ELECTRO HYDRAULIC ADJUSTMENTS

- Height adjustments 810-1175mm
- Lateral tilt Left/ Right 10-20 Degree
- Trendelenburg 15-30 degree
- Reverse Trendelenburg 15-25 Degree
- Back plate Up 50-70 degree

Standard Accessories

Orthopaedic traction , arm board, Anaesthesia Screen, Infusion Stand , Body Strap, Accessory stand Mobile.

SPECIAL ACCESSORIES FOR

- Humerus , Tibia , femur nailing
- Interlocking nailing of femur in supine position

- Accessory for hip surgery.
- Genucubital position with a chair accessory with Up/Down movement.
- Hand operating Table
- Knee positioning device for arthrotomy and arthroscopy and control
- Thoracic and pelvic plaster cast
- Skull traction and head rest for cervical spine surgery
- Beach chair position accessories.

Item No.26: OT Table – General

Technical Specification for O.T. Table (General surgery)

The table should be mobile, electrically controlled with batter powered hydraulic drive, Table top should be divided into segments, topped with integral foam padding which is both radio translucent and electrically conductive. The table should rest on easy-rolling castors and should be fitted with brakes.

The Table

1. Should have a stable base
2. Should have a powered longitudinal slide for 400 – 600 mm.
3. Should be electro-hydraulic with facility for various positions such as sitting, supine, prone and lateral positions under the microscope.
4. Should have a top that can be adjusted from 50 – 100 cm height.
5. Should have a top with dimensions 50 cm (W) x 190-210cm (L)
6. Should have a head holder for various positions. The head holder should be attached to the main unit.
7. Should have a table top which can rotate towards the right and left by 20° – 30° each.
8. Should have headboard break 15°, up 90° down with manual and electro-hydraulic operation.
9. The table should have a power source AC 100 V – 220 V, 50 – 60 hz.
10. Movement should be possible by simply pressing the appropriate buttons on the Remote Control Unit.
11. Should have current leakage less than 70 U/A AC (0.07m Amp).
12. Should be able to take intraop X-Rays of skull & Spine. Should be able to take intraop X-Rays of skull & Spine. Table Top Should be radiolucent
13. Should have all necessary accessories.
14. Electric control to achieve the following positions.
 - ❖ Trendelenburg - 30°
 - ❖ Reverse Trendelenburg - 25°
 - ❖ Side tilt - 20° – 30°
 - ❖ Back plate raise - 80° – 90°
 - ❖ Back plate drop - 50°

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15. Accessories for surgery

- ❖ Lithotom with strips & ankle support
- ❖ Table for abdominal surgery a two part section which permits elevation thoracic XII level. It should be possible to carry out lithotomy regardless of the angling of the section.
- ❖ Kidney including hand rest & provision for break in.
- ❖ Thorax including hand rest and air driven mattress.
- ❖ Adjustable boards on both sides


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Item No.27: Ceiling OT Light – Twin LED

OT Light with LED Technology

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Surgical light system based on LED technology

Extremely flat, compact and aerodynamically surgical light based on innovative LED technology.

The light head consists of several, systematically arranged light emitting modules, using multitudinous LEDs to form a multi-lens matrix for a shadow free and homogeneous illumination of the surgical field.

Surgical light consisting of:

Central axis, horizontal extension arm, height adjustable spring arm, vertical and horizontal bow and the one-point suspended light head consisting of 5 or 3 light emitting modules.

Suspension system:

Main light on lowermost axis position:

Extension arm: 850mm (if 1 or 2 extension arms per axis) or 700mm (if 3 extension arms per axis) respectively

Length of spring arm: 930mm (iLED 5), 910mm (iLED 3)

Operating distance: 70-150cm

Operating range: 2272mm (iLED 5), 2050mm (iLED 3)

All arms are freely rotatable (without stops) at all vertical joints.

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Number of stops: 1 (2 at iLED 3)

At which joint: connection between horizontal bow and light head (and connection between vertical and horizontal bow with iLED 3)

Rotation range joints with stop : > 400°C

Light system:

Surgical light with cold and shadow-free light, high lighting intensity and very homogeneous large- area and in-depth illumination of the surgical field through unique multi lens matrix technology.

The colour temperature is adjustable in 4 steps from 3500K to 5000K. Within a light combination, in order to avoid an undesirable mix of light colour from two separate light heads, when adjusting the colour temperature on one light head, it is, as a standard setting, automatically synchronized with the other light heads. This synchronization can be switched off and on as needed at the touch of a button.

Light field adjustment from 22cm to 30cm and focusing via sterilisable handle in the center of the light head. It is operated by turning clock-wise in an ergonomic angle of not bigger than 45°C to reach the respective maximum or minimum setting.

All light heads can be dimmed in a range of 10% to 100%. The colour temperature of the light remains constant in all dimming levels and is not subject to unwanted changes. Activation and deactivation of the endo-light level (10% remaining lighting intensity) via the dimmer control on one light head is, as a standard setting, synchronized for all other light heads within the light combination. It can, if the need arises, be adjusted separately for each light head at the touch of a button.

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Exceptional in-depth illumination and avoiding of cast shadows by means of an adjustable shadow correction for 4 pre-defined

Situation through switching on and off and adjusting the lighting intensity of different parts of the light emitting surface respectively. (Only iLED5!)

Switching the light head on and off is possible in a sterile manner directly at the light head as well as on the optional wall control panel. From one single control panel either only the respective light head or the complete light combination can be switched on and off simultaneously. Switching on and off is without any restriction in terms of holding time after switching off or with regard to the nominal light values after switching on.

No heat emission through IR radiation.

High fail-safely through optical light system consisting of 184 (iLED5) or respectively 111 (iLED3) single LEDs each with its own lens. In case of failure of one source (LED), the illumination of the light field is not affected. Even in case of failure of a second or more light sources, negative effects on the illumination of the surgical fields remain limited to a minimum.

Gaps and spaces between the single light emitting modules of the light head support the effect of laminar air flow systems.

Sterilizable knob at the lower side of the light head for control of all light function (dimming, endo-light colour temperature adjustment shadow control, switching on/off and if applicable, camera zoom and picture rotation) by the surgical team itself (LED5!)

Lighting intensity at 1 m distance: 160,000 Lux (LED5)

130,000 Lux (LED 3)

Size of light field at 1 m distance: 22-30 CM

Homogeneous light cylinder : 75 cm

Colour temperature : 3500- 5000K

Colour rendering index : RA 95

Residual illumination with one shadower: 156.800 Lux (iLED 5)

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94.120 Lux (iLED 3)
 Residual illumination with two shadower: 102.400 Lux (iLED 5)
 67.600 Lux (ILED 3)
 Residual illumination with tube : 147.200 lux (i LED 5)
 113.100 lux (I LED 3)
 Residual illum with tube and 1 shadower : 132.800 lux (iLED 5)
 76.700 lux (iLED3)
 Residual illum with tube and 1 shadower: 75.000 lux (iLED5)
 55.900 lux (I LED 3)

Luminosity factor : 280 lm/W
 Temperature increase at surgical site : max. 1o degree C
 Life span of main light source : > 20.000h
 Nominal lamp power : 184 x 1W (I LED 5)
 111 X 1w (iLED 3)

Power input (per light head) : 200 W (I LED 5)
 120 W (iLED 3)
 Supply Voltage : 90- 240 V AC
 24 V DC
 24 V AC
 Protection class : I

Light Head:

Made of powder coated aluminum diecast with smooth and clean surfaces that are easy and safely to clean.
 Dust and Splash – proof
 One – point suspended
 Diameter : 823 mm (Iled 5) or 690 mm (iLED3) respectively

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Temperature at working conditions above : approx 45 degree C
Underneath < 1 degree C

The light head can be pre-equipped with preparation and the respective cabling for the camera system.

Camera :

ICCD chip camera for installation either in the central handle of the light head or at a separate carrying arm.

Control of the camera functions via external control unit . In addition , picture rotation and camera zoom can be adjusted via the sterilisable knob at the respective light head (only iLED 5 !)

Signal transmission and power supply via inlaying cabling with slip rings in all vertical joints.

Chip	1/6 " CCD
Standard	PAL / NTSC
Pixels	800,000 PAL, 680,000 NTSC
Zoom	25 * optical , 12 * digital
Lens	f+2.4mm(far) bis 60 mm (tele), F1.6 bis F2.7
Signal/ Noise ratio	49 dB
Shuter	¼ bsi/10000s , 20 steps(NTSC) 1/3 bis 1/10000s, 20 steps (PAL)
Horizontal resolution	470 TV lines (NTSC), 460 TV lines (PAL)
Min illumination	3.0 lux (50 IRE)
White balance	automatic/ manually
Gain	automatic / manually (-3 bis 28 dB , 16 steps)

Yn- / Outputs at the control unit :

1. 2 * Y/C (S- Video)

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Item No.28: Thoracoscopy Set

Thoracoscopy Set - One

Camera, Light Source, Monitor , Insufflators , Telescope and Hand Instruments as per the specification attached

S. No.	Name of the Instrument	Quantity	
1		Thoracoport Reusable	6
2	Kaiser Type	Dedicated Thoracoscopy Instrument	1 set
3		Open Cannuls Thoracoscopy Instruments	1 set
4	Laproscope type		
		Talc Insufflator	1

HIGH DEFINITION 3- CHIP ENDOVISION SYSTEM

It should be a complete digital system from image sensor to LCD monitor.

It should have digital image processing including dynamic aperture and automatic shutter regulation

It should have DVI and full HD- RGB output for optimized picture on LCD monitors

It should have DV for digital recording devices

It should have minimum 5 profiles adapted for special indications.

It should have minimum 5 user oriented profiles.

It should have digital electronic 2 x zoom

It should have manual color adjustment

It should have freeze function

It should have flexible system by interfaces in the rear of control unit

It should have OSD (on-screen-display):

It should have bf isolation of applied part on control unit

It should have automatic request for white balancing after each start-up sequence

It should have 3CCD HD camera head to be connected to HD controller

It should have digitalisation inside the camera head for excellent image processing

It should have two freely programmable camera head buttons for remote functions

It should have sensitivity 3 LUX

It should have cable length minimum 3 meter

It should be immersible and gas sterilisable

a. Technical Specifications of Camera System

Imaging System	:	Progressive Scan CCDs Full High Definition
Video Outputs (Digital/Analog)	:	Two Digital Video Interface (DVI)/RGBHV 1280 × 1024 (HD), 720p, 1080p (HDTV) format
Y/C	:	One S-VHS
Digital Fiber	:	full HD, HDTV (R, G, B, Clk)
Digital	:	One Display port 1280 × 1024 (full HD), 720p, 1080p (HDTV) format
Mounting	:	Endoscope eyepiece used with universal coupler
Auto Shutter Range	:	Approx. 1/60– 1/50,000 second
Operating Conditions		
Temp.	:	5 – 40°C
Relative Humidity	:	30 – 95%
Transport and Storage Conditions		
Temperature	:	-10 – 60°C
Relative Humidity	:	10 – 75%
Atmospheric Pressure	:	700 – 1060 hPa
Input Electrical Ratings	:	100 – 240VAC
Cable		
Camera Head to Console	:	minimum 10 feet sealed cable
System should confirm the relevant European/ US standards.		

1 Technical Specifications of Light Source:

Electrical	Primary: 100 - 240 VAC, 50/60 Hz, 400 W Fuses (2): 5.0A 250V
Fiberoptic Cable Range	4 mm to 7 mm diameter
Working Life	minimum 500 hours
Operating Conditions	10 to 40°C 30 to 75% Relative Humidity
Transportation & Storage	5 to 40°C 30% to 95% Relative Humidity
Should confirm European/US standards.	

Technical Specifications of Fiber Optic Light Cable:

Dimensions 4 - 7 mm diameter X 8- 10 feet length Fiber Optic Light Cable

2 Flat Panel Monitor

Should be 26" High Definition Progressive Scan Flat-panel Monitors with ceiling mounted spring arm suspension to support high-definition/HDTV progressive Scan images and should be able to support and display DVI/HDTV, RGBHV, S-Video, Composite video signals.

The flat Panel suspension should be ready with the cables for integration of High Definition Digital (DVI/HDTV), RGBHV(High Resolution), SVHS(S-Video), Composite video signals to travel from the various sources of video like endoscopic camera, room camera, in light camera, high definition flat panel monitors, while assuring native resolution / signal.

Such Monitor should at least meet the following technical criteria:

Resolution	: 1600 dots x 1200 dots, Progressive Scan
Display Colors	: 16 Million Colors
Inputs	: DVI, RGBHV, S-Video, Composite Video
Synchronization	: 2.5 – 5.0 Vpp separated sync
Response time	: < 25ms
Travel	: 330° - 340°
Forward Tilt	: 30° - 40°
Backward Tilt	: 45°- 50°
Cable Kit for Integration	: DVI, Fiber Optic, RGBHV, S-Video, Composite

4 INSUFFLATOR

40 Liter of high flow
Microprocessor controlled unit
Soft approach pressure control
for safe recovery of abdominal pressure
Gas heating
LCD based central display monitor with multilingual text and graphics
Audio visual warning signals

5 LAPAROSCOPES, Fully autoclavable with working length 300mm

Wide angled distortion free view
Universal adaptor for other light sources
Yellow glass index for optimum evenness of focus and contrast
0 degree, 10 mm,
30 degree, 10 mm
0 degree, 5mm

6 Specifications for laparoscopic hand instrument

LAPROSCOPES 10mm, 5mm

Fully autoclavable
0 and 30 degree
wide angled distortion free view
universal addaptor for other light sources
Yellow glass index for optimum evenness of focus & contrast

LAPAROSCOPIC INSTRUMENTS

Veress needle 15 cm

12 cm

Trocar Sleeve with automatic valve 5.5mm

Trocar 5mm

Trocar Sleeve with automatic valve 11mm

Trocar 10mm

Reducer Sleeve 10 to 5mm

Washers for 10 mm trocar sleeve

Washers for 5 mm trocar sleeve

5MM INSTRUMENTS ROTATABLE DISMANTELABLE

Dissecting & grasping forceps 33 CM

Needle holder with needle driver

Alligator Grasping forceps 33 CM

Laparoscopic vascular clamps (Satinsky, bull dog, Debakey)

Fundus Grasping forceps 33CM

Kelly Forceps dissecting forceps 33 CM

Maryland dissecting forceps 33 CM

Metzenbaum Scissors 33CM

Hook Scissors 33CM

ANGLED SPATULA TIP 33CM

J TIP UNIPOLAR ELECTRODE 33CM

L TIP UNIPOLAR ELECTRODE 33CM

Needle holder with Y Handle 5mm straight, left and right 33CM

Aspiration needle

Suction cannula 5 mm

Scoop forceps

BIPOLAR FORCEPS 33CM WITH FOLLOWING TIPS:

FENESTRATED/ PADDLE/ MICRO TIP

Cholangio clamp (for intra-op cholangiogram) 5 mm

MIXTER DISSECTOR 33 CM

RIGHT ANGLED DISSECTOR 33CM

COBRA TOOTH GRASPER 33CM

SERRATED FENESTRATED GRASPER 33CM

DORSEY GRASPER 33CM

SINGLE ACTION ATRAUMATIC GRASPER 33CM

PADDLE BABCOCK GRASPER 33CM

ALLIS SINGLE ROW GRASPER 33CM

DEBAKEY GRASPER 33CM

Knot pusher 5 mm

10MM INSTRUMENTS 33CM

ALLIS GRASPING FORCEPS

BABCOCK GRASPING FORCEPS

PENINGTON FORCEPS

DOUBLE ACTION CLAW GRASPIN FORCEPS

MARYLAND DISSECTOR

MIXTER FORCEPS

PADDLE BABCOCK

Nathanson Liver Retraction System One Set with accessories

Suction cannula

STERILIZATION INSTRUMENTS TRAYS FOR 33CM INSTRUMENTS

7. Movable and Lockable Trolley for the Endovision system

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Item No.29: Thoracotomy Set

General Specification

Instrument made of rust proof stainless steel with light weight excellent working qualities. All instruments must have inscription indicating the name of the catalogue number. Original Catalogue should be submitted Page no. They must provide the complete details of the user (reputed Government Hospitals) including phone numbers, fax number etc. along with performance report from some of the user. All instruments should have international quality and CE/FDA approved. Price of all the instrument to be quoted separately.

Description	Quantity required
Chest wall retractor large	1
Chest wall retractor medium	1
Chest wall retractor small	1
Kelley forceps 20cm & 26 CM	6 each
Curved artery forceps-16cm	20
Mosquito artery forceps	12
Right angled forceps-14cm	2
Right angled forceps-18cm	2
Right angled forceps-23cm	2
SEMB dissecting forceps	1
Lung retractors-26cm	4
Lung retractors-36cm	2
Duals lung forceps	4
Metzenbaum scissor 7" curved	1
Metzenbaum scissor 8" curved	2
Mayo scissors curved 6 ¾ curved	3
Periosteal elevator	2
Perisosteal elevator	2
Rib shears-17cm	1
Rib shears-23cm	1
Rib raspatory LT	2
Rib raspatory RT	2
Stapling gun	1
Linear stapler & cutter	1
Mayo hoggard needle holder 20cm with tungsten carbide inserts 20cm	2
Mayo hoggard needle holder 20cm with tungsten carbide inserts 24cm	2
Needle driver for sternal wire	1
Wire cutter and twister	1
Sternal retractor	1
Dissecting forceps set w T.C inserts size 8"	2
Dissecting forceps set w T.C inserts size 10"	2
Sternal and rib punch	1
Vascular clamp with atraugrip jaws 8"	2
Bronchus clamp with atraugrip jaws 10"	2

Sternum Saw

One

Electric oscillating Sternum Saw with battery back up should contain-

1. Sternum saw hand piece
2. Saw guard
3. Saw wrench
4. Saw blade compatible with the saw
5. Sterile container with standard accessories
6. Battery with it's accessories for charging

The instrument should be of international quality. Catalogue no. and manufacturer name should be inscribed on the instrument. Original catalogue must be submitted. Satisfactory performance certificate from the users of reputed government/ corporate hospitals (at least three) must be provided. Company should provide guarantee as per the bid document.

Item No.30: Anesthesia Work Station

Anesthesia Workstation

The anaesthesia workstation consists of the anaesthesia machine, ventilator and monitor preferably of the same make and should be a new generation state of art equipment capable of delivery of low flow anaesthesia.

Anaesthesia machine

- Should be compact, ergonomic and easy to use and maintain
- Machine should have at least one hour battery backup
- Shall have work surface illumination.
- Handle on side for easy positioning and castor locking
- Should have cylinder bank at the back of the machine with independent pipeline inlet for oxygen, air and nitrous oxide
- The gas regulators should be modular in design
- Electronic gas mixing with less than 1 second mixer response time
- Graphic and numerical display of the respiratory parameters like flow, pressure, Inspired and expired oxygen, nitrous oxide and end tidal vapour with a 12" TFT screen
- Safety features should include
 - Hypoxic guard to ensure minimum delivery of 25% oxygen with a oxygen failure alarm
 - Automatic nitrous oxide cut off in case of oxygen failure
 - Backup oxygen control with independent flow meter in case of electronic failure

Vaporisor

- New generation (Tec7) maintenance free temperature, flow and pressure compensated vaporisors for halothane, isoflurane and sevoflurane mounted to a selectatec back bar manifold for two vaporisors
- Locking system to isolate the vaporisor in off position from the gas flow and prevent simultaneous use of both vaporisors

Breathing system

- latex free fully autoclavable breathing system
- flow sensing capability at inhalation and exhalation ports, sensor connections shall be internal to help prevent disconnection
- Adjustable pressure limiting valve shall be flow and pressure compensated
- The sensors should not require daily maintenance



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- Adult and Paediatric autoclavable breathing circuits two set with each machine to be provided
- In addition each unit to be provided with 50 nos. of Disposable Adult & Paediatric circuits and 50 nos. of HMEF filters.

Ventilator

- The workstation should have integrated Anesthesia Ventilator system.
- Ventilator bellows shall be integrally mounted to the breathing system and ascending type
- Ventilator should work on both Volume Control and Pressure Controlled modes.
- Ventilator shall have a tidal volume compensation capability to adjust for losses due to compression, compliance and leaks; and compensation for fresh gas flow.
- Ventilator shall be capable of at least 120 L/min peak flow to facilitate rapid movement through physiologic "dead space" in the Pressure Control mode
- Single switch operation from manual to ventilation mode

Monitor

- Multi Color TFT Display of at least 14 inch size
- Six /eight channel simultaneous graphic display and separate window for numerical display
- Modular in design
- Facility for 24hrs of graphical and numerical trending
- Facility to store snapshots of waveforms
- Audio visual and graded alarming system specially for oxygen saturation
- Should have the capacity to monitor the following parameters
 - ECG 3/5 lead with ability to simultaneously display two ECG leads with electrocautery filter
 - facility for ST segment analysis and arrhythmia detection and alarm
 - SpO2 with adult, paediatric and infant sensors
 - NIBP with adult, child and infant cuffs
 - Invasive BP two channel simultaneous use with two reusable and ten disposable transducer
 - Two temperature
 - Respiration



- Provision for automatic identification and measurement of anesthetic agents, CO₂, O₂ and N₂O. Facility to measure MAC value.
- Oxygen measurement by paramagnetic technology.
- Neuromuscular transmission monitoring complete with sensor

OK

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Item No.31: Rapid Sterilizer (High Speed)

- Total capacity of 1 sterilizers having minimum of 1100 Lts.

Required Specifications

Fully automatic Micro processor controlled Horizontal Autoclave (Steam Sterilizer), With Pre And post-Vacuum treatment and with Loading Equipment.

(a) **Door:** The sterilizer supplied should be double door along with door safety features.
Door Safety Systems:

1. Pressure monitoring system should be available in the chamber to monitor the chamber pressure before opening of the door. Chamber should be completely depressurized before the door seal is retracted by vacuum.
2. Door chamber cannot be opened when chamber is pressurized.
3. A mechanical safety edge stops the door if it is obstructed while closing, thus Protecting operator & loading equipment.
4. A cycle should not start if the door is open or not properly locked.
5. The door seal should be made of silicon rubber gasket & on commencement of the Process the door gasket is pressed against the rear force of the door by steam to Ensure the door remains closed during the process.

(b) Construction:

1. Chamber & Doors: The chamber and doors should be made of solid, high quality 316L Stainless steel. The chamber should be jacketed to ensure the temperature Uniformity in chamber. The chamber floor is slightly sloped towards an internal drain to facilitate drainage. A stainless steel mesh strainer protects the drain port from blockage by debris. The chamber is mounted on a stainless steel framework with height adjustable feet.
2. Surface Treatment: The internal surface is electro-chemically treated for high quality smooth finish to facilitate cleaning. The internal corners are rounded to aid cleaning.
3. Insulation: The sterilizer jacket and door are completely insulated thereby keeping the autoclave cool on the outside. The insulation is completely encased in a rigid removable sheet housing.
4. Jacket: The jacket should be made of 316L quality stainless steel with pressure gauge.
5. Steam Generator: The sterilizer should have steam generator of adequate capacity. It should have built in over pressure safety valve & water level glass inspection visible from service area. It should also have the automatic blow down valve & degassing system for feed water to steam generator. The heating element should be of sufficient capacity to make the sterilization process faster with maximum cycle time of 45-50mins in prevacuum.

(c) AIR FILTERS:

A disposable air filter should be provided for filtering the atmospheric air Before entering in the chamber for particle size less than 0.3µm.

(d) CONTROL SYSTEM:

1. The control system should be microprocessor based system specially design for sterilization applications. Control system should have touch sensitive, 7-9" coloured display interface at operator loading side as well as at unloading side. It should show all the process parameters as well as display the cycle parmeters and alarm indications.

2. Password access levels are provided to control access/operation of the machine preventing unauthorized access. These access levels should be customizable. The control system should have CPU processor with battery back-up, Digital input/output controls, analog measuring inputs & COM ports for printer & PC Connectivity.
3. With the standard factory configuration, calibration of the temperature circuits and calibration of the pressure circuits require a access code.

(f) TEMPERATURE AND PRESSURE SENSORS:

1. The sterilizer should have at least 2 temperature sensors one at chamber drain & in Jacket while it should also have 1 pressure sensor in chamber.
- 2 Each sensor circuit is calibrated with individual constants to correct the deviation in manufacturing and aging.

(g) ALARMS:

Automatic process checking & failure correction should be possible by the control system. The range of alarm should include Temperature & pressure sensor failure, phase time-out, doors not properly closed, power failure ,continuous self, checking of all the safety devices, low water level , water in chamber, etc. All the alarms should be audio-visual.

(h) Loading/Unloading system:

Sterilizer should have the two rails for easy loading, shelf rack with shelf's (carriage), two set of fixed height loading/unloading trolleys.

(i) CYCLE DOCUMENTATION – PRINTER:

The autoclave is equipped with a alpha-numeric printer which prints the each cycle parameter performed by the sterilizer. The measured values of temperature and pressure are printed at fixed time intervals, according to Various phases of the sterilization and the start and end time of the drying phase. All these time intervals can be user defined.

(j) WATER SAVING SYSTEM

Sterilizer should have system for water saving to limit the water usage to save up to 50% compare to the normal cycle.

(K) VACUUM PUMP:

High capacity water ring type 2 stage vacuum pump for removal of air within the chamber should be provided & mounted on vibration isolator for quite operations. . It should also have low water level alarm to protect it from dry run.

(l) Available Cycles:

The sterilizer should be design to operate various programs. The Special cycle can be programmed by an authorized supervisor code.

(M) RO system: the supplier should ensure an RO system is incorporated in the sterilizer to ensure proper functioning of the sterilizer.

Directives & Standards:

It should meet following Directive and standard EN ISO /US FDA/ IEC/ BIS

Item No.32: Automatic Steam Sterilizer

One smaller sterilizers should have minimum capacity of 400lts.

Required Specifications

Fully automatic Micro processor controlled Horizontal Autoclave (Steam Sterilizer), With Pre And post-Vacuum treatment and with Loading Equipment.

(a) **Door:** The sterilizer supplied should be double door along with door safety features.
Door Safety Systems:

1. Pressure monitoring system should be available in the chamber to monitor the chamber pressure before opening of the door. Chamber should be completely depressurized before the door seal is retracted by vacuum.
2. Door chamber cannot be opened when chamber is pressurized.
3. A mechanical safety edge stops the door if it is obstructed while closing, thus Protecting operator & loading equipment.
4. A cycle should not start if the door is open or not properly locked.
5. The door seal should be made of silicon rubber gasket & on commencement of the Process the door gasket is pressed against the rear force of the door by steam to Ensure the door remains closed during the process.

(b) Construction:

1. Chamber & Doors: The chamber and doors should be made of solid, high quality 316L Stainless steel. The chamber should be jacketed to ensure the temperature Uniformity in chamber. The chamber floor is slightly sloped towards an internal drain to facilitate drainage. A stainless steel mesh strainer protects the drain port from blockage by debris. The chamber is mounted on a stainless steel framework with height adjustable feet.
2. Surface Treatment: The internal surface is electro-chemically treated for high quality smooth finish to facilitate cleaning. The internal corners are rounded to aid cleaning.
3. Insulation: The sterilizer jacket and door are completely insulated thereby keeping the autoclave cool on the outside. The insulation is completely encased in a rigid removable sheet housing.
4. Jacket: The jacket should be made of 316L quality stainless steel with pressure gauge.
5. Steam Generator: The sterilizer should have steam generator of adequate capacity. It should have built in over pressure safety valve & water level glass inspection visible from service area. It should also have the automatic blow down valve & degassing system for feed water to steam generator. The heating element should be of sufficient capacity to make the sterilization process faster with maximum cycle time of 45-50mins in prevacuum.

(c) AIR FILTERS:

A disposable air filter should be provided for filtering the atmospheric air Before entering in the chamber for particle size less than 0.3µm.

(d) CONTROL SYSTEM:

1. The control system should be microprocessor based system specially design for sterilization applications. Control system should have touch sensitive, 7-9" coloured display interface at operator loading side as well as at unloading side. It should show all the process parameters as well as display the cycle parmeters and alarm indications.

2. Password access levels are provided to control access/operation of the machine preventing unauthorized access. These access levels should be customizable. The control system should have CPU processor with battery back-up, Digital input/output controls, analog measuring inputs & COM ports for printer & PC Connectivity.
3. With the standard factory configuration, calibration of the temperature circuits and calibration of the pressure circuits require a access code.

(f) TEMPERATURE AND PRESSURE SENSORS:

1. The sterilizer should have at least 2 temperature sensors one at chamber drain & in Jacket while it should also have 1 pressure sensor in chamber.
- 2 Each sensor circuit is calibrated with individual constants to correct the deviation in manufacturing and aging.

(g) ALARMS:

Automatic process checking & failure correction should be possible by the control system. The range of alarm should include Temperature & pressure sensor failure, phase time-out, doors not properly closed, power failure ,continuous self, checking of all the safety devices, low water level , water in chamber, etc. All the alarms should be audio-visual.

(h) Loading/Unloading system:

Sterilizer should have the two rails for easy loading, shelf rack with shelf's (carriage), two set of fixed height loading/unloading trolleys.

(i) CYCLE DOCUMENTATION – PRINTER:

The autoclave is equipped with a alpha-numeric printer which prints the each cycle parameter performed by the sterilizer. The measured values of temperature and pressure are printed at fixed time intervals, according to Various phases of the sterilization and the start and end time of the drying phase. All these time intervals can be user defined.

(j) WATER SAVING SYSTEM

Sterilizer should have system for water saving to limit the water usage to save up to 50% compare to the normal cycle.

(K) VACUUM PUMP:

High capacity water ring type 2 stage vacuum pump for removal of air within the chamber should be provided & mounted on vibration isolator for quite operations. . It should also have low water level alarm to protect it from dry run.

(l) Available Cycles:

The sterilizer should be design to operate various programs. The Special cycle can be programmed by an authorized supervisor code.

(M) RO system: the supplier should ensure an RO system is incorporated in the sterilizer to ensure proper functioning of the sterilizer.

Directives & Standards:

It should meet following Directive and standard EN ISO /US FDA/ IEC/ BIS