NOT TRANSFERABLE

JAMMU AND KASHMIR MEDICAL SUPPLIES CORPORATION LTD.

(Public Sector Undertaking of the Government of Jammu and Kashmir)
Jammu Office: Plot No. 9, Transport Nagar, Narwal (J&K)-180006: **Tele:** 0191-2490001;**Telefax**: 0191-2490902
Srinagar Office: 121-Green Avenue, Hyderpora (J&K)-190014: **Telefax**: 0194-2432008
email: enquiryjkmscl@gmail.com; **website**: www.jkmscl.nic.in

JKMSCL

E BID FOR THE PROCUMENT OF MACHINERY AND EQUIPMENTS

(REFERENCE NO: NIT/JKMSCL/MACHINERY/2015/ 106 DATED :23 /11/2015)

LAST DATE OF SUBMISSION OF ONLINE BIDS: 05.01.2016 (Tuesday) upto 1600 hrs

Bidding Document for Purchase of Machinery & Equipments

(Procurement of Goods: Single Stage-Two Bids)

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(To be submitted on letter head of Firm)

Bid Submission Letter

(*Declaration Form-Cum -Check List)*

Subject: - Regarding Bid submission for **NIT/JKMSCL/MACHINERY/2015/ 106 DATED 23.11.2015**

I/Weé ..... *(Name, Designation and Address of Bidder)*..... having our office até ..... *(Address of Firm)*..... do declare that I/We have read all the terms & conditions of the bid document floated by JKMSCL for the supply of machinery & equipments and agree to abide by all the terms & conditions set forth therein.

I/We declare that we are participating in this bid in the capacity of é ....é é *(Manufacturer /Direct Importer/Distributor/Authorized Dealer of the original manufacturer* ..... I/We enclose valid Manufacturing license/Import license along with authorization by foreign principal manufacturer/ authorization from principal manufacturer in case of Distributors/Authorized Dealers of the original manufacturer/importer.

I/We further declare that the rates offered by us shall remain valid for the period of 12 months and shall reduce the rates, if the rates are reduced by us for any other buyer during this period within Union of India . I/We enclose the following documents as per details given below: -

S. No	Item	Particular (Page No.)
1.	Bid security General Conditions of the Contract (GCC) 3 (through demand draft)	
2.	Technical bid submission sheet (Annexure I)	
3.	Self attested Photocopy of Acknowledgement **of EM-II SSI** unit for each quoted Product and a certificate from NSIC/MSME/Industries department for the production capacity & the quality control measures properly installed at the production unit. GCC 2.6 (ii)	
4.	Self attested photocopy of IEC certificate and permission/ authorisation or sale from the foreign principal manufacturer (authorization letter of principal company) GCC 2.6 (iv) /principal manufacture GCC 2.6 (V)	
5.	Copy Of Central Excise Registration GCC 2.6 (iii), *if applicable.*	
6.	Affidavit on non judicial stamp paper of Rs.10/- (GCC 2.6 (Annexure ï IX)	
7.	BIS License with schedule for ISI marked products quoted GCC 2.6 (v)	
8.	Self attested photocopy of ISO & BIS certificate for quoted Items as mentioned in bid GCC 2.6 (vi & vii)	
9.	Average Annual turnover statement for past 3 years certified by chartered accountant GCC 2.6 (viii & ix) (Annexure V)	
10.	Latest Sales Tax clearance certificate/affidavit (up to dated 31.03.15). GCC 2. 6 (x) supported by balance sheets	
11.	Specify point of supply with full Address. GCC 2.6 (xi)	Full Address ....
12.	Statement of installed manufacturing capacity, certificate regarding quoted model is of latest technology, certificate regarding rate reasonability, undertaking for availability of spare parts &	

	consumables, undertaking of non- debarring GCC 2.6 (xii) (Annexure-XIV) (on Non Judicial stamp paper of 200/-)	
13.	Statement of plant & machinery etc (Annexure ï VII) GCC 2.6 (xiv)	
14	Original bid GCC & SCC (Section VI A & VI B) or A-III uploaded on e- portal	
15.	Statement of past supplies and performance under SCC 11 (Annexure VI)	
16.	Pre ï stamp receipt under GCC 3 (ii) (Annexure-VIII)	
17.	Rate contract completion report GCC (Annexure X)	
18.	CMC on Rs. 100/- Non Judicial stamp (Annexure XI)	
19.	CMC/rates in BOQ : To be electronically uploaded on website	
20.	Declaration regarding acceptance of bid terms and conditions. (Annexure XIV)	
21.	Memorandum of appeal (Annexure XIII)	
22.	Declaration by the bidder regarding qualifications (Annexure XIV) uploaded on e- portal	
23.	Declaration of manufacturer/direct Importer (Annexure XV)	
24.	Authorisation from foreign principal manufacturer (Annexure XVI) (applicable in case of direct importer only)	
25	Authorisation of the bidder by the firm (Annexure XVII)	
26.	Corrigendum/modification/clarification to be submitted with bid document	
26.	Pan card along with Income tax return for the assessment year 2015-16	
27.	Financial bid submission sheet (Annexure II)	
28.	Name, photograph & specimen signature of the bidder or designated officer/ person who is authorized by the firm to bid and make correspondence with the JKMSCL. *Also attach photo ID.*	Name ..... Signature..... Full address..... Mobile No:..... e-mail address :

Dated Name and signature of bidder with seal

Note :

1. The documents submitted at the time of registration of firm need not to be re-submitted. Only the documents, wherever the validity of the submitted documents has expired shall be uploaded in the technical bid.

2. The Annexure No. VIII, X & XI are required to be submitted after the finalization of contract.

JAMMU AND KASHMIR MEDICAL SUPPLIES CORPORATION LTD.

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Srinagar Office: 121-Green Avenue, Hyderpora (J&K)-190014: **Telefax**: 0194-2432008
email: enquiryjkmscl@gmail.com; **website**: www.jkmscl.nic.in

Tender No. **NIT/JKMSCL/MACHINERY/ 2015/106**

Dated 23/11 /2015

NOTICE INVITING TENDER

On Behalf of Jammu & Kashmir Medical Supplies Corporation Limited, e-bid under two cover system (Technical bid in cover 1 and Financial bid in cover-2) is invited for the finalization of Annual Rate Contract for the procurement of Machinery & Equipment from the manufacturers/direct importers/authorized distributors/dealers of the manufacturers/direct importers. Detailed tender document may be downloaded at J&K Govt. Portal www.jktenders.gov.in, www.jkmscl.nin.in, www.jkhealth.org & www.jknhm.com. The cost of the tender alongwith tender processing fee shall be deposited against the Demand Draft of Rs. 10000/- (Rupees Ten thousand only/-) as tender charges i.e Rs. 5000/- only as cost of tender & Rs. 5000/- only as tender processing fee, drawn on any of the Scheduled/Nationalised bank in favour of Jammu & Kashmir Medical Supplies Corporation Limited Payable at Jammu/Srinagar. In case of SSI units, the cost of tender fee shall be Rs. 100/-, tender processing fee shall be Rs. 5000/- and Earnest money deposit Rs. 5000/-

Managing Director
Jammu and Medical Supplies Corporation Ltd.

JKMSCL

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E BID FOR THE PROCUREMENT OF MACHINERY & EQUIPMENT

Bid Reference	: **JKMSCL/Machinery/2015/106 Dated :23.11.2015**
Date of publication of e-bid	: 24.11.2015 (Tuesday) 1300 hrs
Start date and time for download of bid document	: 24.11.2015 (Tuesday) 1700 hrs
Last date and time for download of bid document	: 05.01.2016 (Tuesday) upto 1400 hrs
Clarification start date	: 24.11.2015 (Tuesday) 1700 hrs
Clarification end date	: 07.12.2015 (Monday) 1600 hrs

Pre- bid conference :

Item No. 1-25 ï (10.00 A.M to 1.00 P.M) & item No. 26-45 ï (2.00 P.M to 4 P.M) on 01.12.2015 (Tuesday)

Item No. 45-65 ï (10.00 A.M to 1.00 P.M & item No. 66-85 ï (2.00 P.M to 4 P.M) on 02.12.2015 (Wednesday)

Last date and time for submission of online bids	: 05.01.2016 (Tuesday) upto 1600 hrs
Date and time for online opening of technical bids	: 06.01.2016 (Wednesday) at 1100 hrs
Last date for registration of firm	: 26.12.2015 (Saturday) at 1600 hrs.
Cost of tender document	: Rs. 5000/- (For SSI Unit Rs. 100/-)
Tender Processing Fee	: Rs. 5000/-

NB : The bidder other than SSI unit have to submit Rs. 10,000/- as tender charges in the form of single bank draft. In case of SSI units the amount of demand draft shall be Rs. 5100/-

Earnest money deposit in the shape of FDR/CDR : Rs.100,000 /- (for SSI Units Rs. 5000/-)

NB: Cost of bid document/tender processing fee shall be accepted in the form of demand draft. However EMD shall be accepted in the form of FDR/CDR.

Note: -

1. The bidder shall have to get their self updated with the date & time fixed for Pre-bid as per the item list. After pre-bid meeting necessary changes in bid conditions/ catalogue shall be done after the approval of the competent authority. Bid should be submitted through e-portal **www.jktenders.gov.in**. after pre-bid meeting including all the clarifications/ modifications/ amendments.
2. Corrigendum/addendum shall be the integral part of terms & conditions of bid which shall be duly signed and attached with the bid document by the bidder.
3. The technical bids shall be opened on 06.01.2015 at 1100 hrs or as amended in the presence of the bidders or their representatives, who wish to be present.
4. The JKMSCL is not bound to accept the lowest bid and may reject any/part thereof or all bids without assigning any reason thereof.
5. The bidders shall have to submit a valid óVATô clearance certificate from the concerned commercial taxes Officer and the óPANô issued by income tax department.
6. It is clarified that the information required in bidding document should be submitted only in enclosed format bidding form **(Annexure I to XVIII)** without any change or modification in its formats. Bids submitted with changed or modified annexure/ formats shall be rejected.
7. Information of award of contract shall be communicated to all participating bidders on the website www.jkmscl.nic.in www.jktenders.gov.in**.** www.jkhealth.org & www.jknhm.com
   Note: - *If any amendment/clarification is carried out in the technical specifications and bid terms & conditions following pre-bid meeting or any other information, the same shall also be uploaded on the websites mentioned above.*

TABLE-1

List of Machinery & Equipment(s) (refer Annexure AVIII for technical specifications)

S.No.	Item Code	Name of the item
	EMERGENCY RESPONSE SYSTEM	
1	MC0001	**Suction systems**
2.	MC0002	**Suction pump, Foot operated**
3.	MC0003	**Laryngoscope**
4	MC0004	**Foetal Doppler system**
5.	MC0005	**Nebulizing systems**
6.	MC0006	**Automated external defibrillators**
7.	MC0007	**Patient monitors**
8.	MC0008	**Syringe pump**
	LABORATORY EQUIPMENTS	
9.	MC0009	**Automated 3-part Differential Haematology Analyzer**
10.	MC0010	**Automated 5-part differential Haematology analyzer**
11.	MC0011	**Binocular Microscope**
12.	MC0012	**Centrifuge**
13.	MC0013	**Semi automated biochemistry analyzer**
14.	MC0014	**Semi-automated ELISA reader**
15.	MC0015	**Semi- Automated Urine Strip Analyser**
	RADIOLOGY EQUIPMENTS	
16.	MC0016	**300 Ma HF X-Ray machine**
17.	MC0017	**Color Doppler Machine**
18.	MC0018	**Ultrasound system**
19.	MC0019	**500 Ma X-Ray Machine(HF)**
20.	MC0020	**C-ARM System(HF)**
21.	MC0021	**CR System**
22.	MC0022	**Digital Radiography System(HF)**
23.	MC0023	**Mobile X-ray Machine(HF)**
24.	MC0024	**Mamography**
	OPERATION THEATRE	
25.	MC0025	**Autoclave HP Vertical(single bin)**
26.	MC0026	**Autoclave HP Horizontal**
27.	MC0027	**Autoclave HP Vertical(2 bin)**
28.	MC0028	**Operation table orthopaedic**
29.	MC0029	**Electrosurgical Unit**
30.	MC0030	**Operation Table Hydraulic Major**
31.	MC0031	**Shadowless lamp ceiling type major**
32.	MC0032	**Sterilizer(Big instruments)**

33.	MC0033	**Table for Obstetric labour**
34.	MC0034	**Focus Lamp Ordinary : For Examination**
35.	MC0035	**Electro- hydraulic table**
36.	MC0036	**Operation table hydraulic minor**
37.	MC0037	**Shadowless lamp ceiling type minor (Single Dome)**
38.	MC0038	**Shadowless lamp standing model**
	NEONATAL & PEDIATRIC CARE ICUs	
39	MC0039	**Ophthalmoscope**
40.	MC0040	**Bilirubinometer**
41.	MC0041	**Multichannel Electrocardiographic (ECG)**
42	MC0042	**Blood gas monitors/monitoring systems and associated devices (ABG Machine)**
43	MC0043	**Cold Light Sources**
44	MC0044	**CPAP**
45	MC0045	**Intensive care ventilator (Neonatal & Pediatrics)**
46	MC0046	**Transport pneumatic high-frequency ventilator**
47	MC0047	**Ventilator (all patient category) Adult to neonatal**
48	MC0048	**Nebulizing systems**
49	MC0049	**Emergency suction systems**
50	MC0050	**Oxygen administration enclosures**
51	MC0051	**Oxygenators**
52	MC0052	**Infant warmer**
53	MC0053	**Phototherapy units/systems**
54	MC0054	**Infant Incubator**
55	MC0055	**Pulse oximeter**
56	MC0056	**Blue light radiometer**
57	MC0057	**Breast Pump**
58	MC0058	**EEG – Electroencephalography**
	SKILL LABORATORIES	
59	MC0059	**Abdominal Palpation Maannequin for Leopard Maneuers during pregnancy**
60	MC0060	**Adult CPR Mannequin : - Simulators (Resuscitation training model)**
61	MC0061	**Child Birth Simulator alongwith attachment for cervical Dilatation : Simulators and associated devices**
62	MC0062	**Adult IV Training ARM KIT : Infusion/injection training model**
63	MC0063	**Episiotomy suturing unit, reusable**
64	MC0064	**Female lowertorso mannequin with normal and postpartum uterus and accessories : Gynaecologic trainer**
65	MC0065	**Normal New born baby simulation model : Simulators**
66	MC0066	**Peditaric IV Arm Kit : Infusion/injection training model**
67	MC0067	**Uterine Model : Cavity Simulator**
68	MC0068	**Essential New Born care and resuscitation mannequin : Simulators and associated devices**

69	MC0069	**Female catheterization Mannequin : Cervical Dialatation catheter, Indwelling Catheterization kit.**
70	MC0070	**Intramuscular Injection training mannequin : Infusion/injection training mode (Anatomical Training Models)**
71	MC0071	**OG Tube insertion Simulation Model : Gastric feeding tube**
72	MC0072	**Postpartum Hemorrhage simulation model**
	FAMILY WELFARE	
73	MC0073	**Single Puncture Laparoscope**
	BLOOD BANK PRODUCTS	
74	MC0074	**Blood Collection Monitor**
75	MC0075	**Blood Donor couch**
76	MC0076	**Portable blood storage refrigerator**
77	MC0077	**Table top tube sealer**
78	MC0078	**Tube Stripper**
	CONTROLLER DRUGS & FOOD CONTROL ORGANIZATION EQUIPMENT	
79	MC0079	**Double beam UV –visible spectrophotometer**
80	MC0080	**Water purifier**
81	MC0081	**Dissolution apparatus**
82	MC0082	**Potentiometer**
83	MC0083	**Electronic Balance**
84	MC0084	**UV-VIS Spectrophotometer**
85	MC0085	**FTTR Spectrophotometer**

Note :

1. **The Average Annual Turn Over required for the item(s) pertaining to the Group "Machinery & Equipment" is as per the cost of the equipment (each unit) as mentioned below. Only the bid(s) falling under the category as specified under Annual Turnover is accepted. The bid(s) not falling under the Annual Turnover clause shall be out rightly rejected.**

S. No.	Details of Groups	Average Annual Turnover for the last three years
1.	Group I : Machinery & Equipment (Cost > 5.01 Crore)	**Rs. 50.00 Crore**
2.	Group II : Machinery & Equipments (Cost 1.01 Crore to 5 Crore)	**Rs. 20.00 Crore**
3.	Group III : Machinery & Equipments (Cost 10.01 Lacs to 1 Crore)	**Rs. 5.00 Crore**
4.	Group IV : Machinery & Equipments (Cost upto 10 lacs)	**Rs. 1.00 Crore**

2. **The documents submitted by the firm at the time of registration needs not be re-submitted with the technical bid. However, the latest documents if any, (wherever the submitted documents are expired) at the time of tender shall be uploaded with the technical bid.**
3. **The catalogues/brochures of the equipments shall be submitted alonwith the demand drafts in a separate envelopes, 03 days prior to submission of online bids. The catalogues/brochures pertaining to the equipment information should be signed by the autherised signatory of the manufacturer.**
4. **No minimum quanitity is guaranteed and the bidder shall not claim or compensation from the Jammu & Kashmir Medical Supplies Corporation Ltd.**

D I S C L A I M E R

The information contained in this bid document for proposed procurement or subsequently provided to the Bidder(s), in documentary or any other form by or on behalf of the Jammu and Kashmir Medical Supplies Corporation ltd. (procuring entity) or any of its employees or advisors, is provided to bidder(s) on the terms and conditions set out in this bid and such other terms and conditions subject to which such information is provided to the bidder.

Whilst the information in this bid has been prepared in good faith and contains general information in respect of the proposed procurement, the bid is not and does not purport to contain all the information which the bidder any require.

Jammu and Kashmir Medical Supplies Corporation Ltd., does not accept any liability or responsibility for the accuracy, reasonableness or completeness of, or for any errors, omissions or misstatements , negligent or otherwise, relating to the proposed procurement, or makes any representation or warranty, express or implied, with respect to the information contained in this bid or on which this bid is based or with respect to any written or oral information made or to be made available to any of the recipients or their professional advisers and liability therefore is hereby expressly disclaimed.

This document is neither an agreement and nor an offer or invitation by the Jammu and Kashmir Medical Supplies Corporation Limited, (hereinafter referred to as ñprocuring entityò) to the prospective bidders or any other person. The purpose of the bid document is to provide interested parties with information to assist the formulation of their proposal/offer. The information contained in this bid document is selective and is subject to updating expansion, revision, and amendment. Each recipient must conduct its own analysis of the information contained in this bid document or to connect any inaccuracies therein that may be in this bid document and is advised to carry out its own investigation into the proposed procurement, the legislative and regulatory regime which applies thereto and by and all matters pertinent to the proposed procurement and seek its own professional advice on the legal, financial, regulatory and taxation consequences of the entering into any agreement or arrangement relating to the proposed procurement.

This bid document includes certain statements, estimates and targets with respect to the procurement. Such statements, estimates and targets reflect various assumptions made by the procuring entity, (and the base information on which they are made) which may or may not prove to be correct. No representation or warranty is given as to the reasonableness of forecasts or the assumptions on which they may be based and nothing in this bid document is, or should be relied on as, a promise, representation, or warranty. Bid document and the information contained therein is meant only for those applying for this procurement, it may not be copied or distributed by the recipient to third parties, or used as information source by the bidder or any other in any context, other than applying for this proposed procurement.

The procuring entity is, its employees and advisors make no representation or warranty and shall have no liability to any person, including any bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this bid document or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the bid document and any assessment, assumption, statement or information contained therein or deemed to form part of this bid document or arising in any way for participation in this bidding process.

The procuring entity also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any bidder upon the statements contained in this bid document.

The procuring entity may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this bid document.

The issue of this bid document does not imply that the procuring entity is bound to select a bidder or to appoint the selected bidder or bidder, as the case may be, for the procurement and the procuring entity reserves the right to reject all or any of the bidders or bids at any point to time without assigning any reason whatsoever.

The bidder shall bear all its costs associated with or relating to the preparation and submission of its bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the procuring entity or any other costs incurred in connection with or relating to its bid. All such costs and expenses shall remain with the bidder and the procuring entity shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a bidder in preparation or submission of the bid, regardless of the conduct or outcome of the bidding process.

Any information/documents including information/ documents pertaining to this bid or subsequently provided to bidder and/or selected bidder and information/documents relating to the bidding process; the disclosure of which is prejudicial and/or detrimental to, or endangers, the implementation of the procurement is not subject to disclosure as public information/documents.

Managing Director
Jammu and Kashmir Medical Supplies Corporation Ltd

Section-I Instruction To Bidders (ITB)

Before uploading bid, kindly go through the following instructions carefully so that your bid may not be considered invalid:

Clause No.	Description
	Only Registered firms with JKMSCL are allowed to participate in the tendering process. The registration of the bidders / manufacturers / dealers shall be carried in the Corporate Offices of JKMSCL i.e. 121- Green Avenue, Hyderpora, Srinagar / Plot No 9, Transport Nagar, Jammu (J&K)-180003, as per the details mentioned in Annexure ñAVIII ò. The registration shall close seven days prior to the date of uploading the bids on the website of JKMSCL.
	Do not submit Bid if the turnover of the firm is less. The turnover should be as per bid conditions mentioned in Table 1. The bids with lesser turnover shall be outrightly rejected.
1.	Go through the terms and conditions, annexure and other forms of the document carefully and meticulously & get your digital signatures available for uploading.
2.	Bid form must conform the terms & conditions of the bid documents and **Technical Bid in Cover-'A' & Financial Bid in Cover-'B' to be uploaded on www.jktenders.gov.in. The cost of tender, tender processing fee, EMD and catalogues of the quoted items shall be submitted in the office of JKMSCL three days prior to submission of online bids. No tender document is accepted in physical form**
3.	It is expected from all bidders that DD/CDR/FDR in separate envelope shall be deposited with the authorised person of JKMSCL at reception against proper receipt from thee concerned .
4.	Correspondences/Complaints lodged to JKMSCL should bear signature, name, I.D proof and mobile number of the complainant. Unauthenticated correspondence/complaints may not be acted upon. If any bidder intends to lodge a complaint or make a suggestion with regards to some bid condition, it shall be done in the Pre-bid conference, in the office of JKMSCL in writing. After the stipulated period as decided by the JKMSCL, no such complaint/ suggestion would normally be considered.
5.	Certificates/Licenses/Documents which are required should be complete and updated. The bidder shall submit acceptance of terms and conditions of the tender document as annexure.
6.	The average annual turnover of the bidder shall be as per **Table-1** for last three financial years. The turn over statement **(Annexure-V)** duly certified and signed by chartered accountant duly supported by the balance sheets shall be submitted along with bid, failing which the bid shall be rejected.
7	If there is any query in bid document/uploading process, bidder may contact JKMSCL office at Jammu/Srinagar during working hours i.e 1000 hrs to 1600 hrs on ph. 0191-2490902, 0194-2432008 or e mail on enquiryjkmscl@gmail.com, jkmsclj@gmail.com
8.	In case a bidder is given any assurance what so ever of being provided with any advantage in JKMSCL by anybody or if a bidder is directly or indirectly threatened of being put to some deliberate disadvantage in the bidding process & in the bidderôs subsequent association/ working with JKMSCL, it is requested that the concerned must immediately inform about the same to the Managing Director, JKMSCL/G.M (Adm), JKMSCL in writing or through e-mail on jkmsclj@gmail.com or enquiryjkmscl@gmail.com . It is advised that evidence of such unfair activity of such person, if available, is produced along with the complaint, so that action can be taken against such a person(s) and that their details can be put on the website so that other bidders can be forewarned in this regard.

9	Demand draft received in original after the specified time and date shall not be accepted in any case.
10.	The technical bids shall be opened on 06.01.2016 (Wednesday) at 1100 hrs.
11.	The JKMSCL is not bound to accept the lowest bid and may reject any or all bids without assigning any reason thereof.
12.	The Bidders shall have to submit a valid 'VAT' clearance certificate from the concerned commercial taxes officer or affidavit and the ôPANô issued by income tax department.
13.	It is clarified that the information required in bidding document should be uploaded as per enclosed bidding form without any change or modification in its formats. Bids submitted with changed or modified annexure/ formats shall outrightly be rejected.
14.	The declaration of technical bid in respect of responsive/non responsive bidders shall be uploaded on website **www.jktenders.gov.in** Similarly, information regarding financial bid (L-1) shall also be provided to bidders on above websites. Individual bidders shall not be informed separately.
15	No firm/bidder/manufacture/importer shall provide/supply any of the product item at the rate contract /approved by JKMSCL to any of the department/NGO/other procuring institute within or outside the State. In case any supply is made without the information to JKMSCL, the supplier/firm shall be liable to be penalised to the tune of 7.5% of order placed/blacklisting for a period not less than five years. However, JKMSCL can procure the items for any of the departments within /outside the State of J&K/after charging the administrative expenses.

Section-II: Bid Data Sheet (BDS)

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Section-II: Bid Data Sheet (BDS)

Clause No.	Description
1.	**Introduction**
1.1	**NIT/JKMSCL/MACHINERY/2015/** Date.....
	The Procuring Entity is : Jammu & Kashmir Medical Supplies Corporation Ltd (J&K)
1.2	The expenditure on the subject matter of procurement shall be met by budgetary resources of demanding / indenting officers of the concerned department.
	The goods and related services to be procured are as per table 1 and *as per technical specifications*
1.3	The rate shall be valid for 12 months.
2.	**Bidding document**
2.1	Bids are invited from manufacturers/direct importers/ distributors/ authorised dealers of the of the original manufacturers/direct importers (refer clause 2.6 xv) . Joint venture will not be allowed.
2.2	The price of the bidding document Rs. 5000/- as tender fee (Rs. 100/- in case of SSI unit of J&K State only) and Rs. 5000/- as tender processing fee in the shape of demand draft (both non-refundable)
2.3	Bid Security : Rs. 1.00 lacs in the form of FDR/CDR (Rs. 5000/- in case of SSI unit) .
2.4	The Pre-bid meeting will be held at the office of JKMSCL, Jammu
2.5	Last date for downloading bid document : 05.01.2016 (Tuesday) upto 1400 hrs
2.6	Last date for submission of clarification : 07.12.2015
2.7	Last date & time for submission of bid : 05.01.2016 (Tuesday) upto 1600 hrs
2.8	Date & time of opening of (technical bid) bid : 06.01.2016 (Wednesday) at 1100 hrs.
2.9	Address for correspondence and clarifications:- **Corporate Office (Jammu):** Plot No 9, Transport Nagar, Jammu (J&K); Tele: 0191-2490001, Telefax: 0191-2490902 **Corporate Office (Srinagar) :** 121- Green Avenue, Hyderpora, Srinagar (J&K); Tele: 0194-2432008
3.	**Preparation of Bids**
3.1	The language of the bid shall be in English only
	The Bidder shall uploaded the following documents with the technical bid : 1. Bid security (EMD) in the shape of DD/FDR/CDR. 2. Bid document cost/tender processing fee (**through demand draft**). 2. In case of Indian manufacturer, valid manufacturing license from competent authority / copy of the registration with central excise department. 3. In case of direct Importer/distributor/authorized dealer, Import Export Code (IEC) certificate and permission/authorisation for sale from the foreign principal manufacturer/ principal manufacturer. **(Annexure XVI)** 4. The average annual turnover of the bidder shall be as per **Table-1** for last three financial years. **(Annexure V)** 5. Declaration by the bidder regarding qualification **(Annexure XII)** 6. Declaration of manufacturer/direct importer/distributor/authorized dealer **(Annexure XV).** 7. Authorisation of the bidder by the firm **(Annexure-XVII)** 8. Bidders shall have to submit a valid 'VAT' clearance certificate from the concerned commercial taxes officer or affidavit and the ôPANô issued by income tax department. 9. USFDA Certificate/CE Marking/ ISO/BIS certificate.....etc., *as applicable.* **Note : The above mentioned documents, if already submitted with the registration of**

	firm needs not to be re-submitted.
3.2	The Bidder shall upload with its financial bid submission sheet **(Annexure II)** **N.B : No rate should be quoted/uploaded along with technical bid.** **Rates are to be uploaded on BOQ only.**
3.3	Alternative bids are not permitted.
3.4	Discounts or award of combination of lots shall not be offered.
3.5	For goods offered from outside India/direct importer, the bidder shall quote prices including all kinds of costs like inland transportation, taxes, installation and commissioning charges up to the consignee site, complete in all respect including consumables kit for demonstration (*if any).*
3.6	The terms of quoting price of equipments are inclusive of all taxes/charges with installation and commissioning etc. complete in all respect.
3.7	The prices quoted by the bidder shall be fixed for entire contractual period of equipments. The contract price shall be fixed for a contact period of 12 months of the goods and related services; extendable upto 03 months with mutual consent.
3.8	The currency of the bid shall be Indian rupees only.
3.9	The bid validity period shall be 120 days from the opening of technical bid.
3.10	a. A bid security/ bid securing declaration shall be required.
	b. Bid security shall be required, the amount and currency of the bid security shall be as mentioned in Table-1.
3.11	The scanned copy of complete bid document filled and signed on each page as per Instructions to bid (ITB) and other requirements need not to uploaded on website www.jktenders.gov.in. However, declaration as Annexure AVII regarding acceptance of all the terms & conditions and other clauses as given in the tender document duly notarised shall have to be uploaded along with technical bid. **Please note that physical submission of bid document shall not be accepted.**
3.12	The authorisation to sign on behalf of the bidder shall consist of power of attorney by the bidder/any valid certification or the change in bidder shall be resolved in the board of firm/ company which shall be immediately communicated to the JKMSCL. No authorised agent/dealer/supplier shall be allowed to make any declaration which is mandatory required to be made by the MD/chairman/Directors/authorised person designated by the manufacturing company/importer.
4.	**Submission and Opening of Bids**
4.1	The last date for Bid submission is 05.01.2016 upto 1600 hrs
4.2	The technical Bid opening shall take place on 06.01.2016 at 1100 hrs.
5.	**Evaluation and comparison of bid**
5.1	The price preference shall apply as per GCC and SCC provisions.
6.	**Award of Contract**
6.1	If the procuring entity does not procure any subject matter of procurements, the bidder shall not be entitled for any claim or compensation. No minimum quantity is guaranteed.
6.2	The period within which the contract agreement is to be executed and performance security is to be submitted is 15 days from the date of receipt of letter of intent (LOI) through email, fax/correspondence etc.
6.3	The performance security shall be required as per **GCC-10** @5 % of the value

	of the indicative quantity in favour of JKMSCL payable at Jammu/Srinagar.
7.	**Redressal Grievances during Procurement Process**
7.1	I. In case of any dispute, the decision of Managing Director, JKMSCL shall be final and binding. II. If any dispute arise out of the contract with regard to the interpretation, meaning and breach of the terms of the contact, the matter shall be referred by the parties to the Managing Director JKMSCL, J&K who will appoint his senior most officer as the sole arbitrator of the dispute who will not be related to this contract and whose decision shall be final. III. If any bidder or prospective bidder is aggrieved that any decision, action, omission of the procuring entity is in contradiction to the provisions of the Act/Rules of the guidelines issued there under; he may file an appeal to first & final appellate authority, i.e Secretary to Govt. Health & Medical Education department, J&K with in 10 days from the date of such decision, action, omission as the case may be, clearly giving the specific ground(s) on which he/she feels aggrieved. Fee for such appeal shall be Rs. 10,000/- (ten thousand only), 50% of which shall be refundable, if the decision is announced in his/her favour. IV. Any legal dispute shall be within the jurisdiction of Hon'ble High Court of Jammu / Srinagar (J&K).
7.2	Name & Address of the Bidder: Name and Designation..... M/S .....é ..... Telephone No..... Telegram Code é ..... Fax No..... Mobile No é é é é é é . e-mail address é é é é é é é é (email of responsible person be intimated)

SECTION III – QUALIFICATION AND EVALUATION CRITERIA

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Section III: Evaluation and Qualification Criteria

2. Qualification Criteria

The lowest evaluated bidder shall have the necessary qualifications to successfully fulfil its obligation under the contract. Minimum acceptable levels with regards to bidder's experience in supply of goods and related services with comparable technical parameters, its financial capability and other factors are defined.

Clause No.	Description
1.	**Size of operation:-** The minimum average annual turnover of the Bidder or firm for last three financial year shall be as per Table-1. This includes the total payments received by the Bidder in Indian rupees for contract completed or under execution over the last three financial years.
2.	**Contractual experience:-** The bidder shall be a manufacturer; direct importer; distributor; authorised dealer of the original manufacturer/direct importer, who must have manufactured/ imported and supplied and installed such equipments in India satisfactorily. The list of such installations of the equipments may be asked from the bidder and the bidder should submit self attested copy of purchase order, indent and invoice (inclusive of quantity & rate). (Refer Annexure XVII)
3.	**Technical experience:-** The goods offered/ being procured by JKMSCL have been produced and sold for at least three years and have been in operation satisfactorily.
4.	**Production capacity :** The JKMSCL may fix the minimum supply and/ or production capacity required to assure that the bidder is capable of supplying the type, size and quantity of goods required. It should be dedicated quantity to JKMSCL on monthly and annual basis.
5.	**Financial position:-** The soundness of the bidders financial position showing long term profitability demonstrated through audited annual financial statement (balance sheet, income statement etc.) for last three years.
6.	**Cash Flow capacity :** The bidder should have sufficient availability of/ access to liquid assets, lines of credit and other finances to meet the possible cash flow requirement which may arise during the execution of the rate contract.
7.	**Litigation history:-** The information regarding all pending claims, arbitration, or other litigation is asked by the JKMSCL
8.	**Tax clearance certificates:-** The VAT/Sales Tax and other taxes clearance certificate (latest) or declaration to be submitted by the bidder. Bidders shall have to submit a valid & latest 'VAT' clearance certificate from the concerned commercial taxes officer or affidavit and the óPANô issued by income tax department.
9.	**Declaration regarding qualifications :-** Declaration regarding qualifications of the bidder shall be given in specified format provided in Section IV, bidding forms.

1. Evaluation Criteria

Clause No.	Description
1.	**Scope**
1.1	**Local handling and inland transportation:-**The cost for Inland transportation, insurance, related services, installation, commissioning, demonstration and other incidental costs for delivery of goods, or port of entry, or supply point to consignee site, schedule of supply shall be quoted in price schedule.
1.2	**Minor omission and missing items:-** Pursuant to the relevant clauses, the cost of all quantifiable non-material non-conformities or omissions from the contractual and commercial conditions shall be evaluated. The procuring entity will make its own assessment of the cost of any non-material non-conformities and omissions for the purpose of ensuring fare comparison of bids.
2.	**Technical Criteria:-**The minimum technical level that the goods and related services shall have in order to comply with the Section V, schedule of supply are specified. These criteria are evaluated on a pass-fail system, with a minimum acceptable level for each criteria enumerated in technical specifications of item. However, a minor deficiency in technical compliance may not be cause for rejection of the bid.
3.	**Economic Criteria: -** The economic criteria are most important when evaluating a Bid. The price, however, may not be the only criterion, as there could be technical evaluation that may be expressed in mandatory terms *i.e.* cost per test etc. The following may be examples: - 3.1, 3.2....
3.1	**Adjustment for deviations in the delivery and completion schedule: -** The deviation from the delivery and completion schedule specified in Section V, schedule of supply are permitted. No credit will be given for earlier completion.
3.2	**Operation and maintenance cost :** The operation and maintenance costs of equipments are taken into account for bid evaluation purposes. The methodology is elaborated at BOQ for determining lowest bid (L-1) Generally, the life cycle of equipment and its comprehensive maintenance period is defined in technical specifications. Presently, maintenance costs are evaluated at their present value over the life cycle of the goods and then added to the price of the goods for comparison of bids.
3.2	**Spare parts: -** Only those spare parts and tools which are specified on an item wise basis in the list of goods and related services Section V, schedule of supply shall be taken in account in bid evaluation. Supplier recommended spare parts for specified operating requirement shall not be considered in bid evaluation. The list of spare, consumables, chemicals and reagents likely to be required during operation of equipment shall be indicated in comprehensive maintenance contract (CMC) format. The unit prices of these items may be examined for evaluation of bid by the technical committee.
3.3	**Performance and productivity of goods:-** The performance and productivity of the equipments shall be as per the reference value or norms specified in technical specification of an item and corresponding value guaranteed by the bidder in its bid.
4.	**Price preference:-**
4.1	The price preference (applicable for SSI units of J&K State only) shall be given in evaluation of bids and award of contract as per J&K Industrial Policy 2004 and amendment made thereof from time to time.
4.2	VAT or CST**,** as applicable, should be mentioned clearly and separately.
4.3	If an item quoted in the bid does not attract excise duty at the time of bidding and excise duty is levied by the union government/State Govt. Subsequently, the bidder shall be entitled to such excise duty paid on production of invoices drawn as per central excise rules.
4.4	C- Form shall be issued by JKMSCL for charging CST at concessional rate against supplies made as per order. The invoice should show the concessional rate of CST separately.

Section IV: Bidding Forms

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(To be submitted on Firms' letter head)

Annexure I

Technical Bid Submission Sheet (Cover 'A')

Managing Director
Jammu & Kashmir Medical Supplies Corporation Ltd.
J&K

We, the undersigned, declare that:

1. I/We é é é . é é é é é é é é é é é é é é have examined and have no reservations to the bidding document of NIB No. ..... dated.....including addenda/clarification No.:.....dated .....
   We offer to supply in conformity with the bidding document and in accordance with the delivery schedule specified in Section V, schedule of supply, the following goods and related services..... *Name of the item and guarantee period plus CMC etc.* .....
2. Our bid shall be valid for a period of 120 days from the date of technical bid opening in accordance with the bidding document, and it shall remain bidding upon us and may be accepted at any time before the expiration of that period. However, validity may also be extended with mutual consent;
3. If our bid is accepted, we commit to submit a performance security in the amount of 5% of the contract price or as specified in bid document for the due performance of the contract;
4. Our firm, including authorised agent/dealer/ supplier for any part of the contract, have nationalities from the eligible countries;
5. I/We are not participating, as bidders, in more than one bid in this bidding process, in the bidding document;
6. Our firm, its affiliates or subsidiaries, including authorised agent/dealer/ suppliers has not been debarred by the Union Govt/any State Government or the procuring entity.
7. I/We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
8. I/We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
9. I/We agree to permit the JKMSCL or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the JKMSCL.
10. My/our quoted items..... *(Name of item)*.....fully comply with the technical specifications as per bid document Section V, schedule of supply.
11. **The following mandatory documents attached along with this technical bid Submission Sheet. The following documents/certificates/requirements are fulfilled:**
    i. Cost of bid document and bid security/processing fee (scanned copies to be uploaded in the financial bid and submitted in roginal in the office of JKMSCL.
    ii. In case of Indian manufacturer, valid manufacturing license from competent authority, if applicable, acknowledgement of EM II memorandum/ IEM/ Registration of SSI unit/copy of the registration with central excise department as per provisions of central excise act;

iii. In case of direct Importer, Import export code (IEC) certificate and permission/ authorisation for sale from the foreign principal manufacturer.

iv. In case of distributor/authorized dealer authorization for sale from the principal manufacturer.

v. The average gross annual turnover of the bidder/firm shall be as per **Table-1** for last three years;

vi. Duly signed copy of section VI A and VI B (GCC & SCC) as acceptance of terms and conditions;

vii. USFDA Certificate/CE marking/ISO/ISI/equivalent quality control certificate.

viii. BIS certificate, in case of ISI marked item, if applicable.

ix. Any other documents.....

Note : The documents submitted at the time of registration of firm need not to be re-submitted. Only the documents, wherever the validity of the submitted documents has expired shall be uploaded.

12. I/we understand that our bid shall liable to be declared non responsive in case of any deficiency in fulfilment of above requirements on our part.

13. I/we accept all the terms, conditions and provisions of this bid document.

Name/Address..... in the capacity or.....*(Designation)*..... Signed..... duly authorized to sign the bid for and on behalf of.....*(Name of Firm)*..... Dated..... Tel:.....Fax:.....e-mail:.....

N.B : The original manufacturer/direct importer of the bidding items/their sole authorised representative/agent shall execute tri-partite agreement with the Corporation i.e JKMSCL, iner-alia, stating that :

i. The invoice submitted by the authorised representative/agent/distributors/dealers for such supplies shall be endorsed by the original manufacturer/direct importer of bidding items. Original copy of the delivery challan of the manufacturer towards distributor for such supplies shall be endorsed along with invoice submitted by Authorised representative/agent.

ii. JKMSCL may secure confirmation/or authenticating of such supplies from manufacturer/direct importer before releasing the payment.

iii. No original manufacturer/direct importer shall be allowed to authorize more than one agent/representatives to bid, negotiate/conclude the tripartite agreement with regard to business against this specific tender.

(To be submitted along with required fees) **Annexure II**

Financial/Price Bid Submission Sheet (Cover 'B')

To:

Managing Director
Jammu & Kashmir Medical Supplies Corporation J&K

I/We é é é é é é é é é é é é é é . the undersigned, declare that:

1. I/We have examined and have no reservations to the bidding document, including Addenda No.:..... dated é é é é é é é .., if any
2. I/We offer to supply in conformity with the bidding document and in accordance with the delivery schedule specified in Section V, schedule of supply, the following goods and related services.....(*Name of equipments/items with guarantee and CMC etc.*).....;
3. The prices of said equipment/item(s) are uploaded electronically in BOQ on website www.jktenders.nic.in in as per instructions provided;
4. The uploaded financial bid checked, confirmed and found as per bid instructions;
5. The copy of demand draft as per ITB (instructions to bidder) clause 7 with respect to bid security and cost of bidding document and processing fee are enclosed as detailed below:-
   (i) Bid Security : Rs. 100,000/- (one lac only)
   (ii) Cost of bidding document : Rs. 5000/- (five thousand only ï non refundable)
   (iii) JKMSCL processing fee : Rs. 5000/- (five thousand only ï non refundable).
6. I/We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
7. I/We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
8. I/We agree to permit the JKMSCL to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the JKMSCL.
9. I/We accept all the terms, conditions and provisions of this bid document.

Name/Address..... In the capacity or.....(*Designation*)..... signed.....
duly authorized to sign the Bid for and on behalf of.....(*Name of firm*).....
dated..... Tel:.....Fax:.....e-mail:.....

Annexure III

ITEM WISE FINANCIAL BID (BOQ –1)
For Uploading Rates of Equipment

S. No.	Item descriprtion	Item Code	Unit	Basic Rate	Excise duty	(VAT) or CST	Freight charges	Any other tax/dutie /levies	Total amont with taxes	Total amount without taxes
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1.										

FINANCIAL BID FOR COMPREHENSIVE MAINTENENCE CONTRCAT (BOQ –I1)
(ITEM WISE)

S. No.	Item descriprtion	Item Code	Unit	Basic Rate	Excise duty	(VAT) or CST	Freight charges	Any other tax/dutie /levies	Total amont with taxes	Total amount without taxes
	Ist Year									
	2nd year									
	3rd year									
	4th year									
	5th year									
	Total									

Date

Signature

Name in capital, Company /firm Seal

Note: -

1. The rate quote should be as per BOQ I & II . Filling of both the BOQ is mandatory.
2. Excise component & CST/VAT should be separately shown in column no 6 & 7 for further reference
3. Rate should be quoted only for packing units as mentioned in the bid
4. No quantity or cash discounts should be offered.
5. Read all the terms & conditions before filling the Annexure III.
6. Please quote rates in absolute amount only.
7. Please quote rates per unit only
8. BOQ of the individual item shall have to be uploaded to ensure evaluation/finalization of items. If the bidder upload BOQ of more than one item, the rates are opened for the other items shall be declared as non-eligible/non-responsive for procurement.
9. Finalization of the price bid shall be made on the combination basis of price quoted in BOQ-I & BOQ-II ; which pertains to CMC of five years.

PLEASE DO N'T WRITE 00 AGAINST THE ITEMS FOR WHICH YOU DIDN'T WISH TO QUOUTE ; INSTEAD, DO WRITE "NOT QUOTED" AGAINST THE SAID ITEM; AS THE SYSTEM TAKES RS. 00.00 AS L1.

Annexure IV

Declaration and Undertaking

(On Non Judicial Stamp Paper worth Rs. 100/- Attested by Notary Public and submitted with Cover-'A')

1. I/We..... (Name of firm) ..... certify that the quoted model (of quoted item) is of latest technology and is not outdated.
2. I/We certify that the rates (of quoted item) are reasonable and not sold on lower rates to anyone than charged from JKMSCL.
3. I/We do hereby undertake to ensure the availability of spare parts & consumables for quoted model of equipment for at least 07 years from the date of completion of guarantee of the equipment.
4. I/We do hereby accept condition of guarantee period with spare parts of each quoted equipment as per terms & conditions or technical specifications. (from the date of installation/ demonstration).
5. (a) I/We do hereby undertake that our company/firm has not been black listed/banned/debarred by Union Govt. or any State Govt. or their subordinate departments from participation in bidding.

   (b) I/We do hereby declare that our company/firm has been black listed/banned/debarred by..... (Name, Address of Govt./dept./State) and detailed information is as given below:

   (i) Cause of black listing/banning/debarring.
   (ii) For which item.....:
   (iii) Period of black listing/banning/debarring.
   (iv) Latest Status of black listing/banning/debarring.

5. I/We hereby confirm that we have deposited all the VAT/Sales Tax / CST as on dated é é .. with the concerned authority/department. No VAT/CST is due on the firm as on dated é é é .
6. I/we do hereby agree to the condition that JKMSCL may, if deemed fit go for the third party maintenance under Comprehensive equipment maintenance programme of Govt. of India.

Signature of authorized signatory

Place:

Dated:

Name and signature of bidder

Designation with seal

Annexure V

(On Firm's letter head)

ANNUAL TURN OVER STATEMENT

The average annual turnover of M/S..... *(Name of Firm)*..... and address ..... for the past three years are given below and certified that the statement is true and correct:-

Sl. No.	Financial Years		Turnover in Lakhs (Rs.)
1.	2012-13	-	
2.	2013-14	-	
3.	2014-15	-	
	Total	-	_____Lakhs

Average gross annual turnover _____Lakhs

Note :

1. Turn over for the year 2015-16 may also be considered, if the accounts are audited and certified by Charted Accounted. The turnover should be supported by the balance sheets of the respective years.
2. **The Average Annul Turn Over required for the item(s) pertaining to the Group "Machinery & Equipment" is as per the cost of the equipment (each unit) as mentioned in Table 1. Only the bid(s) falling under the category as specified under Annual Turnover is accepted. The bid(s) not falling under the Annual Turnover clause shall be out rightly rejected.**

Date

Signature of the bidder

Signature of Auditor/Seal
Chartered Accountant
(Name & Address.)
Tel. No.

Annexure VI

(On Firm's letter head)

STATEMENT OF PAST SUPPLIES AND PERFORMANCE

SEPARATE FOR EACH ITEM

I/We..... *(Name of firm.....)* do hereby certify that we have supplied..... *(Name of equipment.....)* as per details given below:-

Financial year	Order placed by [full address of purchaser with telephone & fax no.]	Order No. and date	Description and quantity of ordered goods	Date of completion of delivery		Remarks indicating reasons for late delivery, if any	Has the equipments been supplied & installed satisfactory?
				As per contract	Actual		
2012-13							
2013-14							
2014-15							

1. It shall be submitted with technical bid and the above information should be verifiable from relevant documents of the bidder.
2. Firm should have supplied at least 10% of the indicative quantity specified in the notice inviting bid in last three financial years.
3. The different variants of same equipment may be considered.
4. Performance for the year 2015-16 may also be considered, if the accounts are audited and certified by charted accounted.
5. In case of supply of imported item(s), the suppliers may be asked to furnish a certificate and other information to the effect that the firm has completed all the formalities including bill of entries in custom in connection with import of the item in question.

Place:

Dated :

Signature of bidder with Seal

Annexure VII

(On Firmôs letter head)

STATEMENT OF PLANT & MACHINERY

(It should be submitted with cover-A)

(i) List of Plant & Machinery available for production of equipment

(ii) List of items manufactured by the bidder

(iii) Area of unit with working space & authority letter of allotment

(iv) Stock position of raw material

(v) Registration certificate for manufacturing unit/SSI unit from Industries department.

(vi) Man power status/details

(vii) List of equipments for quality control measures including details of Quality control Laboratory, if any.

(viii) Certificate from Govt. Agency/Charted engineer for production capacity assessment.

(ix) Any other information.

(Name)
Signature of Bidder with Seal

Annexure VIII

(On Firm's letter head)

PRE- STAMP RECEIPT

I/We received an amount of.....nil..... from JKMSCL through Demand draft/Cheque No. ……..... or RTGS etc. as details for payment is given below:

i. Name of supplier.....

ii. Name & address of firm.....

iii. Name of bank & branch.....

iv. Bank a/c type : Saving/Current/Over draft/.....

v. Bank a/c number.....

vi. Bank branch MICR Code.....

vii. RTGS Code.....

viii. IFCS Code.....

ix. PAN No.....

x. Bank contact personôs name & mobile no. : .....

.....

This amount is received against refund of bid security of bid no. é é ...dated é é ..é and sanction No. é é é é é é .. Dated é é é é é ..

Signature of authorized signatory

Place : Name of signatory

Designation with seal

Dated :

Annexure IX

Format of Affidavit for EM-II
(section VIA-GCC Clause No. 2.6 (ii)

(on non- judicial Stamp Paper of Rs. 10/-)

I/weé é é é é é é é .(*Name*) é é é é é é é é é S/oé é é é é é é é .(*Name*)é é é .. agedé é é é yrsé é é é ..residing at.....é é é é é (*Address*) é é é é é ..proprietor/partner /authorized director of M/s é é é é .. do hereby solemnly affirm and declare that:

(a) My/our above noted enterprise M/S _____ (*Name of firm*) _____ has been issued acknowledgement of Entrepreneurial Memorandum Part-II by the District Industries Centre _____ (*Name & Address with District & State*)_____ The acknowledgement No. is_____ dated _____ and has been issued for manufacture of following items.

(i)

(ii)

(iii)

(iv)

(v)

(b) My/our above noted acknowledgement of Entrepreneurial Memorandum Part-II has not been cancelled or withdrawn by the Industries Department and that the enterprise is regularly manufacturing the above items.

(c) My/our enterprise is having all the requisite plant and machinery and is fully equipped to manufacture the above noted items.

Place _____

Date_____

Signature of the Proprietor/Director

Authorized signatory with rubber stamp and date.

(On firms letter head)

Annexure –X

To

Jammu & Kashmir Medical Supplies Corporation Limited
J&K

Subject : Regarding submission of Consolidated Contract completion report
Name of the Firm _____
Rate Contract No. & Date _____
Name of the Item _____

Sno	Supply Order				Stipulated date of completion of supplies (Delivery Period) In days	Actual supply		Quantity remained unsupplied	Payment details (In Rs.)							
	No. & Date	Consignee name/Medical Institution	Qty (in unit)	Amt (Rs.)		Actual date of receipt	Quantity (in unit)	Quantity (in unit)	Reasons	Sanction no. & date	Net Amt	Taxes VAT/ CST	L.D Charges	JKMSCL Charges @ 5%	Amt. Paid to firm	Total sanction amt.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

(Signature of seal of firm)

Note :

1. Column no. 1 to 17 is to filled by firm and shall be submitted to G.M (EPM)
2. The information filled in by firm shall be correct, complete
3. Attach separate sheets as annexure, wherever necessary

Annexure XI A

Non Judicial Stamp Paper of Rs. 100/-

Comprehensive Maintenance Contract (C.M.C)

This comprehensive maintenance contract (CMC) is made on ..... day of ..... at ..... by and between.....(Name of the firm/company with address).....through (hereinafter referred to as the .....(Name of the Firm/Company)..... which expression shall unless repugnant to the context or meaning thereof be deemed to mean and include its successor and assigns).

And

JKMSCL or his designated officerôs (hereinafter referred to as the ñProcuring Officerò (means user of equipments/ consignee/ incharge officer of medical institution) which expression shall unless repugnant to the context or meaning thereof be deemed to mean and include its successor and assigns) :

Whereas:

A. M/S .....(Name of Firm/Company)..... is inter alia, engaged in the business of marketing of equipments and apparatus/instruments manufactured by..... (Name of firm/company..... in India and it also provides maintenance service for equipments in India ;

B. The consignee/Procuring Officer has asked to provide service and maintenance of equipments installed in its premises and..... (Name of Firm/Company)..... has agreed to provide the services(as defined in Clause 3 below), subject to terms as contained in this Agreement.

Now therefore in consideration of mutual promises and covenants and for other good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged and agreed to by the parties, the parties execute this contracts follows :

1. **Commencement:** CMC will only be commencing after the completion of guarantee period and a written request by concerned JKMSCL/Procuring officer or his authorized officer to the firm. The JKMSCL/concerned consignee shall ensure the availability of funds and shall also examine the CMC necessity for a particular equipment/instrument.
2. **Duration, extension and termination of this agreement** :
   i. This CMC is the supplementary part of original agreement (Rate Contract) No. ..... of this equipment or instrument.
   ii. The validity period of this CMC is for as specified in bid document (..... years) which starts from the next day of completion of Guarantee period of Rate contract referred in clause first above. The comprehensive maintenance agreement starts from..... day of ..... and shall end on the date..... however, C.M.C may be extended for further two mutual consent subject to the same terms and conditions.
   iii. The security deposited shall be refunded as per clause 12 of this original agreement R/C No. Subject to that : -
      a) The 25% of total deposited Security deposit amount shall be withheld against the security of this (CMC) agreement.
      b) If there is any default in comprehensive maintenance service the department may forfeit the penalty amount described under clause -8 or any other recovery from security deposit.
      c) The consignee/procuring officer may terminate this contract during the term of this contract, at any time as he considers appropriate in the interest of corporation/department. No compensation shall be paid to said firm for termination.
3. Scope of this Contract and service to be tendered under this contract by .....(Name of Firm/Company).....ò
   a) Onsite & service centre labour for carrying out preventive maintenance and repairs.
   b) All parts require replacement shall be supplied to the consignee by the.....(Name of the firm/company)..... under this agreement at no additional cost, during the CMC period.
   c) Safety and software updates for features that were originally purchased and forming part of the equipment during commencement of this contract.
   d) Routine cleaning, lubrication, replacement of rings, gaskets etc for all mechanical instruments.
   e) Routine cleaning & calibration of electronic equipments.
   f) Spare parts beyond clause no. 6 are included in the CMC offer and will not be charged extra.
   g) Firms offering conditions :
   - Response time < 48 hours after first contact

• Service hours	Mon to Sat
• Part for preventive maintenances	all as per requirement
• UP time	95% (346 days)
• Breakdown	all
• Technical & application support session	as required
• Demonstrations & trainings	as & when required.

Note : PM Includes quality assurance, safety checks and calibration.

h) Contacts details of service providing firm :

Full Address
E mail ID
Hotline
Service portal
Toll Free No.

i) Exclusion of service under this contract:

a) Damages caused by or arising out of aggravated by fire caused by sources external to the equipment covered under this agreement, theft, flood, earthquake, war, invasion, act of foreign enemy, hostilities or war like operations (whether war be declared or not) civil war, revolution, insurrection, mutinity, labour unrest, lockout, confiscation, commandeering by a group of malicious person or persons acting on behalf of or in connection with any political organization, requisition or destruction or damage by order of any govt. de-jure or de-facto or any public, municipal or local authority.

b) Any work external to the equipment covered under this contract.

c) This contract does not cover hardware upgrade of any kind.

d) All consumables as per bid documents as per clause -5

e) Any no. of preventative maintenance visits and any number of breakdown emergency calls will be provided by the firm during guarantee and CAC period.

f) Training for the quoted equipment/machine, if required, will be provided by the firm without any additional charge.

ii) **Limitations of Services under this contract:**

a) Maintenance and updates will be provided based on originally purchased software options. Additional features, hardware or software, that are not part of the equipment on commencement of this contract are not included in this contract but can be included mutually agreed terms and conditions, reduced in writing.

b) Parts will be replaced at the sole discretion of .....(Name of consignee).....

c) Whenever a breakdown call is attended then during such visit, preventive maintenance can also be carried out. Hence, such a visit may be treated as a preventive maintenance visit also.

d) If required and permitted, the transportation of equipment from purchasing officer to service centre of firm and back to purchase officer site, is sole responsibility of the service providing firm company.

4. **Care for the equipment** :

The consignee shall take proper care and diligence in using the equipment so as to ensure that the equipment is protected against damage resulting from accidents, neglect or misuse, pests and insects etc. The consignee shall also maintain the optimum temperature and other environmental conditions to safeguard the equipment against damages as per the specification given in the instruction manual.

5. Price:

i. In consideration of .....(Name of firm/company) ..... providing the services (as set out in clause 2 above) the JKMSCL shall pay to .....(Name of firm/company) ..... maintenance contract charges (hereinafter the ñCMC chargesò) for the equipment annexed to this agreement.

ii. The CMC charges specified above is inclusive of all taxes, levis, impositions, cess etc as may be applicable on the services rendered by.....(name of firm/company)..... to the consignee. If any fresh taxes, levies impositions, cess is levied and changed by the appropriate authority during the term of this contract; the variation shall be borne by the procuring officer.

iii. All the defective parts/items shall become the property of.....(name of firm/company)..... on replacement of parts and have to be returned to .....(name of firm/company).....by the procuring officer/consignee only if same are replaced without charges.

iv. No price escalation will be applicable.

6. **List and rates of consumables:**

The é é é é é é .(Name and brand of equipment) é é é é é é .has the following requirement of reagents, consumables & spares without which this equipment cannot be made operational/functional . All the reagents, chemicals, consumables and spares are covered under comprehensive maintenance contract except given below:-

(a) The list of Reagents & Chemicals:

S. No.	Name of reagents & chemicals	Packaging unit	Price per unit (Rs.)	Remark
1				
2				
3				
4				
So on				

(b) The list of consumables :

S. No.	Name of consumables	Packaging unit	Price per unit (Rs.)	Remark
1				
2				
3				
4				
So on				

(c) The list of spare parts:

S.No.	Name of spare parts	Packaging unit	Price per unit (Rs.)	Remark
1				
2				
3				
4				
So on				

7. Payment Terms:

The JKMSCL/procuring officer/consignee shall make 50% payment of annual maintenance charges after completion of each six months of satisfactory service by way of demand draft/account payee cheque in favour of service providing firm. The remittance charges shall be borne by the firm. The consignee shall ensure that maintenance and repair are satisfactory during last half yearly period before further advancing C.M.C charges to firm.

8. Liquidation damages:

(i) The Supplier/service providing firm shall be liable to pay a penalty of Rupees five hundred per day **(varies from equipment to equipment)** if the firm didnôt response after 48 hours from the time of receiving first complaint. The complaint may be sent to firm by way of telephone /fax/letter or e-mail. The amount of liquidation damage shall be directly deducted from the security deposit of the firm at the time of refund or before by way of any adjustment order.

(ii) During breakdown of equipments/machine firm will depute the engineer for immediate rectification of defect within 48 hours positively otherwise equipment may be got repaired on the risk & cost of the firm.

9. Assistance for providing service:

The Procuring Officer shall give é é é é é é é é é é (Name of firm/company)é é é é é é é ..full access to the equipment to enable é é é é é é é é . (Name of firm/company) é é é é é é é é ..to provide service, make available to the representative of é é é é é é é é é (Name of firm/company) é é é é é é é é .. appropriate procuring officer staff who are familiar with the procuring officer work and provide suitable working space and facilities.

10. Location & location change:

The location & place of installation shall be decided by the appropriate authority of Corporation with consultation with the Head of the end user institute/department . The consignee may transport/shift any equipment or part thereof

without the express consent of é é é é é é é (Name of firm/company) é é é é é é é é é é and asked for maintenance of equipment without any additional cost.

11. I/we do hereby agree to the condition that JKMSCL may, if deemed fit go for the third party maintenance under Comprehensive equipment maintenance programme of Govt. of India.

12. Dispute resolution committee:

If both the parties fail to resolve any issue bilaterally then the specific point may be placed before the dispute resolution committee constituted by JKMSCL. The service providing firm shall participate in proceedings through his authorized signatory of rate contract holding firm only.

13. Jurisdiction:

All actions, proceedings and suits arising from or connected to this contract shall be subject to the exclusive jurisdiction of courts in Jammu & Kashmir.

In witness whereof the parties here to have signed this agreement on the day and year first herein above written:

Signed on behalf of the ……..
Signed_____
(Authorized signatory)
Name _____
(Capitals)
Designation _____
Rubber Stamp

Witness-1

Signed on behalf of the ……..
Signed _____
(Authorized signatory)
Name _____
(Capitals)
Designation_____
Rubber Stamp

Witness-1

Annexure XI B

COMPREHENSIVE MAINTENANCE CONTRACT CHARGES/RATES

(Rates from BOQ)

(Amount in Rs.)

S.No.	Years (after the completion of guarantee period)	Prices including taxes and all kinds of charges	
		In figures	In words
1	1st year	Note : Donôt write rates here	Note : Donôt write rates here
2	2nd year		
3	3rd year		
4	4th year		
5	5th year		

Note :

1. No rates should be quoted in this annexure.
2. Rate quoted in the BOQ II shall be applicable (ANNEXURE III).

Authorised signatory of firm

Signature with seal

Authorised signatory of JKMSCL

Annexure XII

(ON A NON JUDICIAL STAMP PAPER OF 100/-)

DECLARATION

I/We M/s.

é represented by its proprietor/ managing partner/managing director having its registered office at é é é é é é é é é é é and its factory premises at é é é é é é é é é é é ..é do declare that I/we have carefully read all the conditions of bid no. ..... dated.....including all the amendments in ……..... Refernce .....for supply equipments of ..... *(item name)* **……** for Jammu and Kashmir Medical Supplies Corporation Limited and accepts all conditions of bid including amendments, if any.

I/We agree that JKMSCL may forfeit bid security and/or performance security and debar me/us for a period specifying in orders, if any information/document furnished by us is proved to be false/fabricated at the time of inspection and not complying with the terms and conditions of the bid document as presented in bid, and other relevant documents.

Signature & Seal of bidder
Name & Address:

Note: - To be attested by the notary

Annexure XIII

(On Firm's letter head)

Memorandum of Appeal

Appeal no..... of.....

Before the..... (appellate authority)

1. Particulars of appellant:
   (i) Name of the appellant:
   (ii) Official address, if any:
   (iii) Residential address:

2. Name and address of the respondent(s):
   (i)
   (ii)
   (iii)

3. Number and date of the order appealed against and name and designation of the officer/ authority that passed the order (enclose copy), or a statement of a decision, action or omission of the procuring entity in contravention to the provisions of the Act by which the appellant is aggrieved:

4. If the appellant proposes to be represented by a representative, the name and postal address of the representative:

5. Number of affidavits and documents enclosed with the appeal:

6. Ground of appeal:
   .....
   .....
   ..... (supported by an affidavit)

7. Prayer:.....
   ....
   .....
   Place .....
   Dated .....

Appellant's signature

Annexure XIV

(Shall be submitted on letter head of firm)

Declaration by the Bidder regarding Qualifications

In relation to my /our bid submitted to Managing Director, JKMSCL, J&K for procurements of ..... *(name of items)* .....in response to their Notice Inviting Bids No.....,. Dated..... I/We hereby declare that:

1. I/We possess the necessary professional, technical, financial and managerial resources and competence required by the bidding document issued by the procuring entity;
2. I/We have fulfilled my/our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in bidding document;
3. I/We are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my /our business activities suspended and not the subjected of legal proceedings for any of the foregoing reasons;
4. I/We do not have and our directors and officers not have been convicted of any criminal offence related to my /our professional conduct or the making of false statement or misrepresentations as to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
5. I/We do not have a conflict of interest as specified in the Act, rules and the bidding document which materially affects fair competition;

Dated:
Place:

Signature of bidder
Name:
Designation:
Address:

Annexure XV

(Shall be submitted on letter head of firm)

Declaration of Manufacturer/Direct Importer

Date:_____
NIB No.:_____

I/We a legally constituted firm/body.....*(Name of Firm/Company with address)*..... and represented by Mr.....(*Name of Bidder/Sale proprietor/ CMD/ Chairman)* ..... declare that I am/we are manufacturers/direct importer in the goods and related services for which I/we have bid.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/our bid security may be forfeited in full and the bid if any to the extent accepted may be cancelled.

I/we further declare that the item.....*(Name of item)* .....is manufactured/imported at our premises at ..... *(Address of factory & office)* ..... signed..... name..... in the capacity of..... duly authorized to sign the authorization for and on behalf of.....(*Name of sale proprietor/firm/company)*..... Tel: ....

Fax: .....

E-mail: .....

Dated: .....

Annexure XVI

(On the letterhead of manufacturer and notarized)

Authorisation from foreign principal manufacturer

(Applicable in case of direct importer only)

The Managing Director
Jammu and Kashmir Medical Supplies Corporation Limited
J&K

Subject: Regarding authorisation for our products.
Ref.: Your NIB no. .....dated.....

Name of items.....

Dear Sir,

I/we.....(Name).....for M/S.....*(Name of firm)*..... who are proven and reputable manufacturers .....*(Name of item)*.....having factory at ..... *(Address of Factory and Office)*..... hereby authorize M/S..... *(Name of Bidder firm)*.....to submit a bid, process the same further and enter into a contract with you against your requirement as contained in the above referred bid documents/NIB for the above goods manufactured by us.

I/we further confirm that no supplier or firm or individual other than M/S.....*(Name of bidder firm),* is authorised to submit a Bid, process the same further and enter into a contract with you against your requirement as contained in the above referred bid documents for the above goods manufactured by us.

I/we also hereby extend our full guarantee, CMC as applicable as per bid conditions of contract, read with modifications/addendum, if any, in the general/special conditions of contract for the goods and services offered for supply by the above firm against this bid document.

I/we also hereby confirm that we shall also be responsible for the satisfactory execution of contract placed on the authorized Firm.

This authorization shall be valid till the completion of rate contract period and related services i.e. guarantee and comprehensive maintenance obligations, etc., whichever is later.

Yours faithfully,

(Name & Signature)..... *verification and signature by bidder*

For M/s ..... Seal and address of bidder

AUTHORISED SIGNATORY

Accepted by the authorized Bidder Mr.....*(Signature, Name & Address)*.....

Annexure XVII

(On the letterhead of manufacturer and notarized)

Authorisation of Bidder by the Firm

The Managing Director
Jammu and Kashmir Medical Supplies Corporation Limited
J&K

Subject: Regarding authorisation of bidder by the firm Ref.:
Your NIB no. .....dated.....

Name of items.....

Dear Sir,

I/we.....(Name).....for M/s.....*(Name of firm)*..... who are proven and reputable manufacturers .....*(Name of item)*.....having factory at .....*(.Address of Factory and Office)*..... hereby authorize Mr.....*(Name & Designation of Bidder)*.....to submit a bid, process the same further and enter into a contract with you against your requirement as contained in the above referred bid documents/NIB for the above goods manufactured by us.

I/we further confirm that no individual other than Mr.....*(Name & Designation of Bidder),* is authorised to submit a Bid, process the same further and enter into a contract with you against your requirement as contained in the above referred Bid documents for the above goods manufactured by our Firm.

I/we also hereby extend our full guarantee, as applicable as per bid conditions of contract, read with modifications/addendum, if any, in the conditions of contract for the goods and services offered for supply by the authorized bidder/signatory against this bid document.

I/we also hereby confirm that we shall also be responsible for the satisfactory execution of contract placed on the authorized Firm.

This authorization shall be valid till the completion of the rate contract period and related services ie. Guarantee etc., whichever is later.

The attested photocopy of photo ID/voter ID/driving license/any other equal document for authorised person is enclosed here.

Yours faithfully,

(Name & signature of chairman).....
For M/s .....
AUTHORISED SIGNATORY OF FIRM

Accepted by the authorized person Mr.....*(Signature, Name & address)*.....

Annexure XVIII

(Shall be submitted on letter head of firm)

VERIFICATION

I/weé é é é é é é é é é é é é é é é é S/oé é é é é é ...é é é é é é agedé é year residing at .....é é é é é é é é é é é é é é é é authorized bidder/proprietor/ partner/director of firm M/sé é é é é é é é é é é é é .. verify and confirm that the contents of bidding documents , its bidding forms **Annexure I to Annexure XVIII** and other information submitted for bid no. ..... are true and correct to the best of my knowledge and nothing has been concealed therein.

Signature of bidder.....

Name: .....

Address: .....

Mobile no.....

e-mail address.....

Section V: Schedule of Supply

Table of Contents

Section V: Schedule of Supply

Clause No.	Description
1	**List of goods and related services**
1.1	Name of item.....
1.2	Related services are delivery, local transportation, installation, commissioning, demonstration and training etc.
1.3	Guarantee period starts from the date of successful installation for a period of five (05) years.
1.4	Comprehensive maintenance contract shall be executed for a period of five (05) years from the date of completion of guarantee period. However, JKMSCL may, if deemed fit, enter into third party agreement under comprehensive equipment maintenance programme, Govt. of India.
2	**Delivery and completion schedule**
2.1	**SUPPLY ORDERS AND SUPPLY SCHEDULE:**
2.1.1	Supply order shall be placed through registered post/e-mail/any communication medium by the JKMSCL. The date of receipt of e mail/fax/other communication shall be treated as the date of order for calculating the period of execution of order. The successful bidder shall execute the orders within a delivery period of 60 days or as specified in the supply order.
2.1.2	In case of imported items, 30 days will be given in addition to above mentioned period, as mentioned in condition No. 2.1.1 above.
2.1.3	The successful bidder acknowledge receipt of orders within 7 days from the date of dispatch of order, failing which the procuring entity may be at liberty to initiate action to purchase the items on risk & cost purchase provision.
2.1.4	Except for equipment/machinery, which requires installation / commissioning, all other supplies shall be designated drug warehouse. In case of non-viable size of order for supplies, the corporation shall take appropriate decision on representation from the supplier on case to case basis. The consignee for supplies shall be the JKMSCL.
2.1.5	To ensure sustained supply without any interruption, the JKMSCL reserves the right to have more than one approved supplier from amongst the qualified bidders. In such a case, the requirement may be met by dividing be quantity among the R/C holders considering the quantity required and dedicated capacity of the successful bidders.
2.1.6	The ready stock position of the item, if provided by the firm, may be considered by the corporation for the placement of supply orders.
2.1.7	It may be noted that the JKMSCL does not undertake to assist in the procurement of raw material, whether imported or controlled or restricted, and as such the bidders must offer their rates to supply the specific items from own quota of raw material stock by visualizing the prospect of availability and requirement. Any of the above points if taken, as argument for non-supply/delayed supply will not be entertained.
2.1.8	The figures indicated, if any, do not constitute any commitment on the part of JKMSCL to purchase any of the articles and the quantities shown therein against each or in any quantity whatsoever and no objection against the quantity of the indent of approved item being more or less than the indicative quantity will be entertained and shall not be acceptable as a ground for non supply of the quantity indented.
2.2	**PROCURING ENTITY'S RIGHT TO VARY QUANTITY:**
2.2.1	The quantity of equipments originally indicated in the bidding document may vary without any change in the unit prices and other terms and conditions of the bid and the conditions of contract.
2.2.2	If the JKMSCL procures less than the quantity indicated in the bidding documents (if asked) the bidder shall not be entitled for any claim or compensation except otherwise provided in the conditions of contract.
2.2.3	If the bidder fails to supply, the JKMSCL shall be free to arrange / procure the item(s) from other sources and the extra cost incurred shall be recovered from the supplier.

2.3	**SUBMISSION OF CONTRACT COMPLETION REPORT**
2.3.1.	A consolidated statement (Annexure X) shall be submitted to General Manager, EPM by the 10th of each month. Every time the statement should contain details of all orders placed under the contract.
2.3.2	Firms shall have to submit consolidated statement (Annexure X) in duplicate at the end of rate contract as well as after expiry of equipment / instrument guarantee period (as provided in guarantee clause of the contract) to enable the corporation to examine the case for refund of performance security.
2.3.3	The consignee shall intimate the contract /supplier about the defect (s) at once in such a manner, so as to reach the office of the firm immediately and before completion of guarantee period. It shall be the responsibility of the consignee to get the complaint of guarantee period. It shall be the responsibility of the consignee to get the complaint of defective equipment of defective performance registered immediately with the office of JKMSCL.
2.5	**PACKING & INSURANCE:**
2.5.1	The good shall be delivered at the destination in perfect condition. The firm if so desires may insure valuable goods against loss by theft, destruction or damages by fire, flood, under exposure to weather of otherwise in any situation. The insurance charges will have to be borne by the supplier and the corporation shall not be required to pay any such charges, if incurred.
2.5.2	The firm shall be responsible for the proper packing so as to avoid damages under normal conditions of transport by sea, rail, road or air and delivery of material in good condition to the procurement officerôs store. In the event of any loss, damage, breakage or leakage or any shortage the firm shall be liable to make good such loss and shortage found at destination after the checking/inspection of material by the consignee. No extra cost on such account shall be admissible. The firm may keep its agent to verify any damage or loss discovered at the consigneeôs store, if it so likes.
2.5.3	Packing, cases, containers and other allied material if any shall be supplied free, except where otherwise specified by the firm(s) and agreed by the corporation and the same shall not be returned to him.
2.5.4.	**Packing specifications** Schedule for packing ï General specifications 1. All items should be packed only in first hand boxes only. 2. Flute: The boxes should be of narrow flute 3. Joint: Every box should be preferably single joint and not more than two joints. 4. Stitching: Every box should be stitched using pairs of metal pins with an interval of two inches between each pair. The boxes should be stitched and not joined using calico at the corners. 5. Flap: The flaps should uniformly meet but should not overlap each other. The flap when turned by 45-60^0 should be crack. 6. Tape: Every box should be sealed with gum tape running along the top and lower opening. 7. Carry strap: Every box should be strapped with two parallel nylon carry straps (they should intersect). 8. Label: Every box should carry a large outer label at least 15cms, 10cms dimension clearly indicated that the product is for **"JKMSCL Supply" for the year 2015-16, "Not for Sale "** and it should carry the correct technical name, strength or the product, date of manufacturing, date of expiry, quantity packed and net weight of the box in bold letters as Enclosure II to Annexure VI of this document 9. Other: No box should contain mixed products or mixed batches of the same product. Specifications for chemicals: Not more than 25 Kg may be packed in a single bag / carton. **Note: The weight/size of the box for packing the equipment may vary from equipment to equipment for the safe delivery/installation of equipment. Any deviation in the packing, if necessary shall be made after getting permission from JKMSCL.**
2.6	**REJECTION OF GOODS:**

2.6.1	Articles not as per specification/ or not approved shall be rejected by the corporation / consignee and will have to be replaced by the supplier firm at its own cost within 15 days or with time limit fixed by the corporation.
2.6.2	All the stores supplied shall be of the best quality and conforming to the specification, trademark laid down in the schedule attached to agreement and in strict accordance with and equal to the approved, standard/specifications/ samples. In case of any material of which there are no standards or approved samples, the supply shall be of the best quality to be substantiated by documents/specifications. The decision of JKMSCL as to the quality of stores is final and binding upon the bidder. In case any of the articles supplied are not found as per specification or declared sub-standard, that shall be liable to be rejected and any expenses of loss caused to the supplier as a result of rejection of supplies shall be entirely at his account.
2.6.3	The rejected item must be removed by the firm, within 15 days of the date of intimation of rejection. The officials concerned shall take reasonable care of such material upto 15 days from teh date of intimation onlybut in no case shall be responsible for any loss, damage, shortage that may occur while it is in their premises.
2.6.4	No payment shall be made for defective/incorrect items.
2.6.5	In case firm wants to take back item to their service station for rectification then firm has to deposit payment received against such defective supplies. In case supplier has not received any payment then material be returned to supplier firm for rectification. In no case the defective equipment is allowed to be installed after rectification.
2.6.7	The bidder shall be responsible for the proper packing and delivery of the material to the consignee. In the event of any loss, damage, or breakage, leakage or shortage in transit, the bidder shall be responsible. No extra cost on such account shall be admissible.
2.7	**TERMS OF PAYMENT:-**
2.7.1	File for payment shall be processed only after the receipt of minimum 60% of the supply as per purchase order, subject to quantity pass as ñ Standard Qualityò (wherever, sample items) by the technical committee constituted for the purpose by JKMSCL. Payment shall be released on receipt of certificate of supply as per specifications and in good condition from the consignee along with the bill. Installation / commissioning of equipment and rendition of required satisfactory training to the consignee's personnel, if any, shall also be necessary for releasing payment. In case of delayed supplies, deduction of liquidated damages as per provisions shall be made from payments. The firms shall have to seek time for extension from the JKMSCL before executing delayed supplies.
2.7.2	Payment shall be made by RTGS. Expenses on this account, if any, shall be borne by the firm.
2.7.3	Payment to the authorised dealer/supplier/agent shall be made as per the tripartite agreement with the Corporation i.e JKMSCL.
2.7.4	No advance payments towards cost of items shall be made to the bidder.
2.7.5	All bills/invoices should be raised in triplicate and in the case of Excisable items; the bills should be drawn as per Central Excise Rules in the name of the authority concerned.
2.7.6	If at any time during the period of contract, the price of bid items is reduced or brought down by any law or Act of the Central or State Government or by the bidder himself, the bidder shall be bound to inform Managing Director JKMSCL immediately about it. Purchasing authority shall be empowered to unilaterally effect such reduction as is necessary in rates in case the bidder fails to notify or fails to agree for such reduction of rates. In case this reduction of rates comes to the knowledge of JKMSCL in later stage, additional payment made w.e.f of the details of rates shall be charged from the firm with 1.5% monthly interest from the date/till rates have been reduced besides action as desired fit by JKMSCL which may be debarring/any other penalty as per penalty clause.
2.7.7	In case of any enhancement in excise duty due to notification of the Government after the date of submission of bids and during the bid period, the quantum of additional excise duty so levied shall be allowed to be charged extra as a separate item without any change in the basic price structure of the items approved under the bid. For claiming the additional cost on account of

	the increase in excise duty, the bidder should produce a letter from the concerned excise authorities for having paid additional excise duty on the goods supplied to ordering authority and also must claim the same in the invoice separately. Similarly if there is any reduction in the rate of excise duty of items, as notified by the Government, after the date of submission of bid, the quantum of the price to the extent of reduction of excise duty of items will be deducted without any change in the basic price structure of the items approved under the bidder.
2.7.8	In case of successful bidder has been enjoying excise duty exemption on any criteria, such bidder will not be allowed to claim excise duty at later point of time during the tenure of contract, if the excise duty become chargeable on goods manufactured due to any reason.
2.7.9	If there is any hindrance by the consignee to provide the required site for installation the part payment of equipment shall be made / decided by JKMSCL. In that case, the firm has to inform JKMSCL immediately.
2.8	**LIQUIDATED DAMAGES:**
2.8.1	The time specified for delivery in the bid form shall be deemed to be the essence of the contract and the successful bidder shall arrange supplies within the period on receipt of order from the purchasing officers.
2.8.2	In case of extension in the delivery period with liquidated damages, recovery of liquidated damages shall be made at such rates, as given below, of value of stores which the bidder has failed to supply :- (a) Delay up to one- fourth period of the prescribed delivery period - **2.5%** (b) Delay exceeding one fourth but not exceeding half of the prescribed delivery period - **5%** (c) Delay exceeding half but not exceeding three- fourth of the prescribed delivery period - **7.5%** (d) Delay exceeding three- fourth of the prescribed period **-10%** Fraction of a day in reckoning the period of delay in supplies shall be eliminated if it is less than half a day. The maximum amount of agreed liquidated damage shall be 10%.
2.8.3	If the supplier requires an extension of time in completion of contractual supply on account of occurrence of any hindrances, he shall apply in writing to Managing Director JKMSCL, J&K, for the same immediately on occurrence of the hindrances but not after the stipulated date of completion of supply. The firms shall ensure extension of delivery period for delayed supplies. The payment shall only be released by corporation after sanction of extension in delivery period.
2.8.4	Delivery period may be extended with or without liquidated damages. If the delay in the supply of goods is on account of force majeure i.e., which is beyond the control of the bidder, the extension in delivery period may be granted without liquidated damage.
2.8.5	If the bidder is unable to complete the supply within the specified or extended period, the corporation shall be entitled to purchase the goods or any part thereof from elsewhere without notice to the bidder on his (i.e., bidders) account at his cost and risk, with the prior approval of Managing Director JKMSCL, J&K. The bidder shall be liable to pay any loss or damage which the purchasing officer may sustain by reasons of such failure on the part of the bidder. The bidder shall not be entitled to any gain on such purchases made against default. The recovery of such loss or damage shall be made from any sums accruing to the bidder under this or any other contract with the corporation/government. If recovery is not possible from the bill and the bidder fails to pay the loss or damage within one month of the demand, the recovery of such amount or sum due from the bidder shall be made from the bidder. In case supplier fails to deliver ordered goods, the risk purchases may be made at market rate from any other firm. It is mandatory for the approved supplier to acknowledge receipt of orders within seven days from the date of dispatch of order, failing which the procuring entity will be at liberty to initiate action to purchase the items on risk purchase provision at the expiry of the prescribed supply period.
2.9	**RECOVERIES:-**
2.9.1	Recoveries of liquidated damages, short supplies, breakage, rejected articles shall ordinarily be made from bills. Such amount may also be recovered from any other untied dues & security deposits available with the JKMSCL. In case recovery is not possible, action will be taken as per prevailing Acts/rules in J&K State.

2.9.2	Any recovery on account of liquidated damage charges/risk & cost charges in respect of previous rate contracts/supply orders placed on them by the JKMSCL can also be recovered from any sum accrued against this bid after accounting for untied sum or due payment lying with JKMSCL against previous rate contracts/supply orders. Firm shall submit details of pending amount lying with JKMSCL but decision of Managing Director JKMSCL, J&K regarding authenticity of sum payable shall be final.

3. Technical Specifications :

Annexure : AVIII

General features:

i. **Bidders are requested to send printed descriptive literature/catalogue of the quoted items duly sealed by MD/Chairman/authorised signatory of the firm/bidder in the office of Jammu and Kashmir Medical Supplies Corporation Ltd. two days prior to last day of uploading of the bid.**

ii. If bidder supplied to or have rate contract of quoted items with any other Govt. institutions within one year, he may be asked to provide copies of purchase orders, invoices and rate contract.

4) .Drawings if any

5. Inspection and Tests

Clause No.	Description
5.1	**INSPECTION OF EQUIPMENTS AND INSTRUMENTS:-**
5.2	The equipments supplies shall be according to technical specifications and shall be inspected by the committee constituted by JKMSCL as mentioned in the supply order or amended thereafter by competent authority. In case of BIS Items, inspection shall be strictly as per relevant BIS specifications with latest amendments and have been made applicable by B.I.S. at the time of inspection. The inspection and testing of the material may be got done by any inspecting Agency/team of experts at site of installation/commissioning. The supplier shall provide all facilities for inspection/testing free of cost.
5.3	Notwithstanding the fact that the authorized inspecting team had inspected and/or has approved the stores/articles, any officer(s)/team of officer nominated by the corporation may inspect the item/material as soon as it is received in the stores to ensure that the supply is in accordance with the specifications laid down in rate contract/supply order.
5.4	In case of doubts in inspection/ test, same may be got inspected or tested in any laboratory. If the material is not found as per specifications or defective, corporation shall not accept the material and shall inform the corporation within 3 days. Consignee may also simultaneously ask the firm for removal of defect/replacement. The firm shall be bound to replace the defective equipment/item within 15 days of receipt of intimation from the consignee/corporation. However, the date of delivery, in case of defective item shall be taken as the date on which the JKMSCL accepts the item after replacement of defective material/removal of defects as the case may be. Wherever defective item is replaced, the inspection/testing charges, if any, shall be borne by the supplier.
5.5	The corporation/technical expert or team shall match the specification with available reserved sample with the corporation which is submitted by the firm/supplier at the time of technical approval before release to end user. .
5.6	In case of imported item, the supplier shall ensure that the item shall be inspected by the third party inspection agency before dispatched to the consignee. In case any un- inspected item has been found in the item received by consignee, the firm shall be solely responsible for it and the JKMSCL shall be free to take suitable necessary action as per terms and conditions of bid documents/agreement against the firm.

Section VI A: - General Conditions of Contract (GCC)

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SECTION VI A: - GENERAL CONDITIONS OF CONTRACT (GCC)

Bidder should read these terms & conditions carefully and comply strictly while submitting their bids. If a bidder has any doubt regarding the terms & conditions and specifications mentioned in the bid notice/ catalogue, he should refer these to the Jammu and Kashmir Medical Supplies Corporation, J&K, before submitting bids and obtains clarifications. The decision of the Managing Director Jammu and Kashmir Medical Supplies Corporation, J&K shall be final and binding on the bidder. The clauses of terms & conditions are as follows:-

Clause No.	Description
1.	**Definitions**
	The following words and expressions shall have the meanings hereby assigned to them: **'Act/Rules'** means Acts & rules prevailing in J&K State in terms of procurement. **'Completion'** Means the fulfilment of the supplies and Related Services by the supplier in accordance with the terms and conditions set forth in the contract. **"Contract"** Means the Agreement entered into between the procuring entity and supplier, together with the contract documents referred to therein, including all attachments, appendices, specifications and codes and all documents incorporated by reference therein. **"Contract Documents"** Means the documents listed in the agreement, including any amendments thereto. **"Contract Price/Rate"** Means the price payable to the supplier as specified in the agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the contract. **"Day"** Means calendar day. **"Delivery"** Means the transfer of the goods from the supplier to the procuring entity in accordance with the terms and conditions set forth in the contract. **"GCC"** Means the general conditions of rate contract. **"SCC'** Means the special conditions of rate contract". **"Goods"** Means all of the commodities, raw material, machinery and equipment, documents, guarantee/warrantees and /or other materials that the supplier is required to supply to the Procuring Entity under the Contract. **"Procuring Entity"** Means the entity purchasing the goods and related services, Managing Director Jammu and Kashmir Medical Supplies Corporation, J&K, or as specified in the special conditions of the contract (SCC). **"Related Services"** Means the services incidental to the supply of the goods, such insurance, installation, training and initial maintenance, commissioning of equipment or machinery and other similar obligations of the supplier under the contract. **"Subcontractor"** Means any natural person, private or government entity, or a combination of the above, including its legal successors or permitted assigns, to whom any part of the goods to be supplied is subcontracted by the supplier. **"Supplier"** Means the natural person, private or government entity, or a combination of the above, whose bid to perform the contract has been accepted by the procuring entity and is named as such in the agreement, and includes the legal successors or permitted assigns of the supplier. **Authorised agent :** Means the natural person, proprietor or Govt entity, duly authorised by the Managing Director/Prop/Chairman/Board of Director of original manufacturer/direct importer under their seal signatures duly notarized ; to bid, negotiate, raise the invoice, receive the payment against the supplies made, enter into tripartite agreement within the Corporation i.e JKMSCL, inter-alia. **Authorised signatory :** Means the natural person authorised by the proprietor, Managing Director/Chairman/Board of Director of original manufacturer/direct importer under their seal signatures duly notarized to sign on behalf of the company. **"The Site"** where applicable, means the place of delivery, installation, testing/ commissioning of the goods /equipment or machinery or as mentioned in the supply order. **"Consignee"** Means the receiver of the stores as mentioned in supply order.
2.	**General terms**
2.1	Bids are invited from Indian manufacturers /direct importers/distributors/authorized dealers of

	the original manufacturer/direct importer.
2.2	Bid shall have to uploaded as per schedule, to JK e-portal : www.jktenders.gov.in. At any time prior to the date of uploading of bid, bid inviting authority may, for any reason, whether on his own initiative or in response to a clarification requested by a prospective bidder, modify the condition in bid document by an amendment. In order to provide reasonable time to take the amendment into account in preparing their bid, bid inviting authority may at his discretion, extend the date and time for submission of bid. Interested eligible bidders may obtain further information in this regard from the office of the bid inviting authority.
2.3	The bidder should have average annual turnover as per Table-I, for the preceding three financial years to be eligible to participate in the bid.
2.4	Supplies shall be made directly by the bidder to bee called as ñSupplierò after finalization of rate contract, and suppliers. Manufacturer bidder should have permission to manufacture the item quoted as per specification given in the bid from the competent authority.
2.4.1	Direct importer should authenticate import/sale license for the product quoted in the bide issued by the competent authority.
2.4.2	In case, the item/product is supplied through authorised agent/dealer, product manufacturing permission, import/sale license of the principal manufacturer (s) direct importer (s) shall have to be uploaded along with technical bid.
2.5	Bid shall be have to be loaded on e-portal i.e www.jktenders.gov.in submitted to Managing Director, Jammu and Kashmir Medical Supplies Corporation, J&K
2.6	The bidder shall submit following certificates along with the bid, However the documents submitted for the registration of firm, **needs not be re-submitted** :- **(i)** Bid security shall be submitted in the shape of FDR/CDR and cost of bid document & tender processing fee shall be submitted in the form of demand draft drawn at any of the scheduled/nationalised ban kin favour of Jammu and Kashmir Medical Supplies Corporation, J&K, payable at Jammu/Srinagar. **(ii)** (a) **Manufacturer-** bidder shall enclose duly self attested photocopy of acknowledgement of EM-II Memorandum/IEM /Registration of SSI unit of J&K State only for the products duly approved by the licensing authority for every product quoted in the bid. The license, if any, should be renewed up to date. Acknowledgement of EM-II, issued by District Industries Centre with an affidavit as per Annexureï IX, under rules for preference to industries of Jammu and Kashmir, in respect of stores for which they are registered**.** **(**b) Likewise manufacturer/bidder shall submit documents relating to the production capacity and properly installed quality control measures at the production site/ unit at the time of bid, which may be a certificate from NSIC (For micro and small scale industrial units) / MSME (micro, small, medium enterprises) / production capacity certificate issued from Industries Department. **(iii)** Firm shall submit copy of the registration with central excise department/ exemption from registration, if applicable, as per provisions of central excise act. **(iv)** In case of imported equipments and instruments self attested photocopy of IEC (Import export code) certificate and permission / authorization for sale from the foreign principal manufacturer. **(v)** Duly self attested photocopy of BIS certificate, renewed up to date with respective schedule for ISI certification for quoted items, if applicable. **(vi)** Duly attested photocopy of ISO Certificate, if applicable. **(vii)** Duly attested photocopy of BIS/CE/USFDA certificate from Govt. of India lab or from Govt. of India approved lab for the quoted items, as mentioned in Table-1. **(viii)** The average annual turnover statement for preceding three financial years i.e 2012-

	13, 13-14, 14-15 duly signed by the bidder, duly verified by the Chartered Accountant attested by notary public and supported by balance sheets. The annual turnover for the year 2015-16 may also be considered, if it is audited/authenticated by the competent authority. **(ix)** Copies of annual accounts (balance sheet & profit & loss statements) certified by the auditors for the preceding three financial years may also be asked. **(x)** **Notarised** copy of latest Sales Tax/VAT clearance certificate (up to 31.03.2015 (preferably upto last quarter of the year 2015-16) issued by commercial tax officer of the circle concerned, from where supplies will be affected, shall be submitted. **(xi)** Declaration regarding point of supply with full address in bid submission letter. **(xii)** A combined undertaking/declaration regarding that the quoted item : a. Model is of latest technology, the item has not become outdated, that the rate quoted is not more than the rate charged from anyone else, b. that the bidder is not black listed or banned or debarred by central or any state government or its append gages, c. availability of spare parts and consumables for the quoted equipment for at least 10 years/life of the item, from the date of installation must be submitted on Non-Judicial stamp paper of Rs. 200/- in prescribed format (Annexure XIV) duly notarized for each item quoted in bid. Note : Bid should not be submitted for the quoted item(s) for which the bidder has been blacklisted/banned/debarred either by bid inviting authority or Govt. of J&K or by any other State/Central Govt. and its agencies. This also applies to the bidder for its sister/ allied firm(s)/ unit(s). **(xiii)** The declaration from the bidder regarding qualifications (Annexure XIV). **(xiv)** The bidder should submit a declaration giving details of plant and machinery, staff, production capacity achieved, factory area, etc. on non-judicial stamp paper of Rs. 50/- duly notarized in enclosed performa **(Annexure VII)**. **(xv)** **The bidder, in case of dealer of the manufacturer/direct importer shall submit fresh authorization of the manufacturer/direct importer duly authenticated and notarized.** **PLEASE ALSO NOTE THAT: -** (A) All attested documents must be submitted in English language. If the documents are not in English, translated version of the same, in English, duly signed and attested by authorized translator must be submitted along with copy of original document. (B) All the above mentioned documents should be under the name and address of the premises where the quoted items are actually manufactured/ stored for supply. (C) The point of supply should be specified as has been requested in bid conditions above. (D) The bidder may be asked to submit its annual accounts (Profit & Loss account & Balance Sheet etc.).
2.7	Financial Bid duly filled in (Annexure III/BOQ) giving the rates for quoted items should be uploaded through e portal www.jktenders.gov.in. The rate should not be disclosed/uploaded in the technical bid. **Rates uploaded along with technical bid shall means out rightly rejection of bid of the concerned person.**
2.8	The required amounts towards cost of bid document and tender processing fee shall be deposited through demand draft & the EMD in form of FDR/CDR pledged in favour of Chief Accounts Officer, JKMSCL the in the corporate office of Jammu and Kashmir Medical Supplies Corporation, Jammu/Srinagar 02 days before the last date and time of bid submission.

	All bids received will be opened in the presence of bidders, who choose to be present. Financial bid will be opened only for those bidders, who satisfy the criteria laid down by the JKMSCL on the details furnished by the bidder in technical bid in compliance of terms & conditions of the bid.
2.9	(i) In case of the bid being submitted by a proprietary firm, the bid must be signed by the sole proprietor. In case of a partnership firm, bid must be signed on behalf of the firm by a person authorized, holding a power of attorney in his favour to do so; and in the case of a company, the bid must be signed by an authorized signatory, in the manner laid down in the articles of association of the bidder company. (ii) Any change in the constitution of the firm/ company shall be notified forthwith by the bidder/contractor in writing to the Jammu and Kashmir Medical Supplies Corporation, J&K and such change shall not relieve any former member of the firm/ company from the liability under the conditions of the bid/contract. No new partner / partners shall be accepted in the firm by the bidder/contractor in respect of the bid/contract unless he/ they agree to abide by all its terms and conditions and submit a written agreement to this effect. The bidder's/contractor's receipt for acknowledgement or date of any new partner subsequently inducted, as above, shall bind all of them and will be a sufficient discharge for any of the purposes of the contract.
2.10	The hard copy of bid documents shall be filled with ink or typed. The bidder shall sign the bid form at each page and at the end in token of acceptance of all the terms and conditions of the bid and then scanned copy be uploaded on the e.portal https://www.jktenders.org except the final bid **(BOQ).**
3	**BID SECURITY:**
	(i) Bid shall have to be accompanied with a scanned copy of FDR/CDR as bid security i.e Rs. 1.00 lacs. However, the FDR/CDR as bid security shall have to be submitted before the opening of technical bid. Bids submitted without sufficient bid security shall be summarily rejected. (ii) The bid security of bidder shall be refunded after the earliest of the following events, namely:- (a) the expiry of validity of bid security; (b) the execution of agreement for procurement and performance security is furnished by the successful bidder; (c) the cancellation of the procurement process; or (d) the withdrawal of bid prior to the deadline for presenting bids, unless the bidding documents stipulate that no such withdrawal is permitted. Bidder should produce a pre stamp receipt as per Annexure VIII with the bid document for that purpose. (iii) The bid security lying with the JKMSCL in respect of other bids awaiting approval or rejection or on account of contracts being completed, shall not be adjusted towards bid security for the fresh bids. The bid security may, however, be taken into consideration in case bids are re-invited for the same item. (vi) In case any document submitted by the bidder or by his authorized representative is found to be forged, false or fabricated, the bid shall be rejected and bid security may be forfeited. Bidder/his representative may also be banned / debarred. Report with police station may also be filed against such bidder/his representative.
4	**FORFEITURE OF BID SECURITY: -**
	The bid security shall be forfeited if: (i) The bidder withdraws or modifies the offer after opening of financial bid, but before acceptance of bid, (ii) The bidder does not execute the agreement, if any, prescribed within the specified time or extended time by competent authority (on the request of the bidder), (iii) The bidder does not deposit the 'performance security' after the supply order is placed/requested for signing the agreement, (iv) The bidder fails to commence the supply of the items as per supply order within the time prescribed, (v) The bidder fails to submit samples/demonstration of quoted item on demand (vi) The bidder violates any of the terms & conditions of the bid document.

5	**GUARANTEE CLAUSE:-**
	(i) The bidder would guarantee that the subject matter of procurement would continue to conform to the description and quality as per technical specifications and performs as per descriptions, from the date of delivery/ installation of the said subject matter of procurement. Notwithstanding the fact that the purchaser may have inspected and/or approved the said subject matter of procurement during the guarantee period, if the said subject matter of procurement is discovered not to conform to the description and quality as aforesaid or not performing, as described, the procuring entity will be entitled to reject the said subject matter of procurement or such portion thereof as may be discovered not to conform to the said description and quality or not performing as described. On such rejection, the subject matter of procurement will be at the seller's risk and all the provisions relating to rejection of goods, etc., shall apply. The successful bidder shall, if called upon to do so, replace the goods etc. or such portion thereof, as rejected by the procuring entity. Otherwise, the bidder shall pay such damages, as may arise by reason of such breach of the condition herein contained. Nothing herein contained shall prejudice any other right of the procuring entity in that behalf under this contract or otherwise. (ii) The bidder shall, during the guarantee period appearing in the contract, replace the whole subject matter of procurement or part(s), if any, and remove the manufacturing defects, if found during the above period so as to make the machinery and equipment operative. (iii) In case of the machinery or equipment, the successful bidder shall be responsible for carrying out annual maintenance and repairs on the terms & conditions, as agreed. The bidder shall have to ensure that consumables required for the maintenance of machine/equipment are being supplied free of cost for a period of not less than 06 months. The adequate regular supply of spare parts and consumables for the machinery or equipment, whether under their annual maintenance and repairs contract or otherwise shall be ensured. In case of change of model the bidder shall notify the procuring entity sufficiently in advance, to facilitate procurement of sufficient quantity of consumables/ spare parts from the bidder to maintain the machinery or equipment. (iv) In case, any item supplied by the successful bidder does not conform to the required specifications, the payment thereof, if received by the supplier, shall have to be refunded to the Jammu and Kashmir Medical Supplies Corporation, J&K along with interest to the tune of 1.5% per month from the date of release of payment . The supplier will not have any rightful claim to the payment of cost for substandard supplies, which may have been consumed, either in part or whole, pending receipt of laboratory test / inspection report, wherever required. Supply of goods less in weight and volume than those mentioned on the label of the container, the same will be dealt with in the manner prescribed under rules.
6	**MARKING**
	All instruments/equipments and accessories supplied should bear marking ñJKMSCL SUPPLY 2015-16, NOT FOR SALE, ò or as mentioned in supply order in English, without which the supply will not be entertained. However in case of imported item(s)/foreign manufactured products, the supplies may be arranged without logogram.  JKMSCL SUPPLY (15-16) NOT FOR SALE
7	**APPLICABILITY OF TAXES**
	C-Form shall be issued by JKMSCL for charging CST at concessional rate against supplies made as per order. The invoice should show the concessional rate of CST separately.

8	**COMPARISON OF RATES:**
	(i) Only net rates should be quoted. No separate free goods or cash discounts should be offered. Rates must be valid for the entire period of contract. (ii) In comparing the rates quoted by a firm from outside J&K and another bidder from within the state, the element of Central Sales Tax shall be added in the rates of the from outside J&K and VAT, if any, shall be excluded from the rates quoted. While comparing the rates in respect of firms within J&K, the element of J&K VAT or CST shall be excluded from the rates quote. (iii) Consignee may be located at a district headquarter (except equipment/ machinery requiring installation and commissioning, the place may be any other station) or as directed by Jammu and Kashmir Medical Supplies Corporation Limited, J&K and the rates must be quoted accordingly. No cartage or transportation charges shall be payable. (iv) The net rate must be inclusive of all charges by way of packing, forwarding, incidental or transit charges, including transit insurance, and any other levies or duties etc. on the subject matter of procurement. (v) Excise duty or surcharge prevailing on the date of submission of bid rate must be included in the net rate and should also be shown separately in the Financial Bid. In the event of any subsequent variation (increase or decrease) in the rate of excise duty, VAT **or** CST by the government (state or central), the same will be admissible accordingly. (vi) If the rates of item quoted are found same from two for more bidders, then the bidders shall be asked to submit revised financial bid, containing reduced rates within given time by Managing Director, Jammu and Kashmir Medical Supplies Corporation Limited, J&K. (vii) The rates must be written both in words and figures. In case of discrepancy between the prices quoted in words and in figures, lower of the two shall be considered. There should not be errors or overwriting and corrections, if any, should be made clearly and initialled with dates. Element of the VAT or central sales tax should be mentioned separately. (viii) The bidder will exercise all due diligence at their own level regarding applicability of other taxes, duties and fees etc. for the unit of supplies as specified in the bid document and accordingly include the same in their quotes. Any additional/extra claims over and above the rates agreed pertaining to taxes, duties and fees etc. will not be entertained later on any account. (ix) No part of the bid document should be detached / deleted. (x) Any change or insertion of any other condition or stipulation in the above terms of supplies are not allowed and if so found, this shall render the bid to be rejected without notice. (xi) For comparison of rates, the average comprehensive annual maintenance charges shall be added to the rate quoted for the equipments, if comprehensive annual maintenance is applicable.
9	**SUBMISSION OF SAMPLES AND DEMONSTRATION**
	(i) Samples of the quoted item(s) must be sent free of cost **on demand** by JKMSCL even though the specifications or description etc. are mentioned in the bid form are complied. No sample shall be accepted after prescribed period. In the event of non-submission of samples within the prescribed period on demand, the bid shall not be considered and bid security shall be forfeited. JKMSCL may grant extension in time for submission of samples on the request of bidder. (ii) Samples of equipment(s) should be collected back from the JKMSCL, J&K within 15 days from the date of finalization of list of successful bidder/demonstration of product before the expert panel. The corporation shall not be responsible for any damage, wear and tear or loss during the course of testing / examination, etc. The corporation would retain the sample of

	approved item for one month beyond expiry of contract. The corporation shall not be responsible for any damage, wear and tear or loss in this period. The corporation shall not make any arrangement for return of samples even if the bidder agrees to pay the cost of transportation. (iii) The bidder may be asked to demonstrate the technique, procedure and utility of equipment as per specifications given in the bid document before the technical committee constituted by the Corporation for the purpose. In case of heavy equipment, the demonstration may be carried out at the nearby place where the equipment has been installed by the bidder. In that case, the decision of the technical committee shall be final. The firm shall keep ready the quoted equipment and arrange all logistics within the time frame as and when asked by the JKMSCL. After the due date, no request of the bidder/firm shall be entertained for demonstration. (iv) Sample should be strictly according to the item quoted in the bid form failing which the bid will not be considered. Sample must be submitted duly sealed and marked suitably either by writing on the sample or on a slip or durable paper securely fastened to the sample with the particulars as mentioned below: a. Name and full address of the firm b. Catalogue no. and name of the item c. Name of section d. Name of manufacturer e. Brand (v) No change in marking on sample will be allowed after the submission of the sample.
10	**PERFORMANCE SECURITY (P.S.) AND AGREEMENT:**
	(i) The successful bidder shall submit the original copy of Bid document signed on each page **at the time of agreement**. However, while uploading the technical bid, only the declaration regarding acceptance of terms & conditions (Annexure AVII) shall be uploaded. (ii) The period of rate contract shall be 12 months from the 1st day of next month of agreement signing month. The Managing Director, JKMSCL can extend the original rate contract subject to original terms and conditions for a period deemed fit by them, but not exceeding three months, for which the bidder shall abide. (iii) Successful bidders, whose offers are accepted shall have to deposit performance security @5% of the value of the supply order in favour of Chief Accounts Officer, JKMSCL within 15 days from the date of issuance of letter of intent. The performance security shall be deposited in the form of FDR/CDR/B.G (Bank Guarantee). However, the bank guarantee shall be for a validity period of six months, beyond the guarantee period sought for the item. (iv) The firm may submit bank guarantee issued by any scheduled/nationalised bank. The minimum validity of bank guarantee should be six months after completion of guarantee period for the item. (v) The Performance Security: The Performance Security (P.S.) shall be 5% of the total value of stores ordered for supply. The payment shall not be released against supplies untill the additional Performance Security due is deposited by the supplier or additional. (vi) The performance security shall be refunded after six months after satisfactory completion of contract and after satisfying that there are no dues outstanding against the bidder subject to guarantee provisions. (vii) It is to be noted that earlier yearôs bid security and performance security, even if lying in the JKMSCL shall not be considered towards this contract and therefore fresh bid

	security/performance security shall be deposited. The JKMSCL shall pay no interest on bid security or performance security amount. (viii) Successful bidders shall have to execute an agreement on a Non-Judicial stamp paper of an amount mentioned in the offer letter, in the prescribed form with the JKMSCL and deposit performance security within 15 days from the date of acceptance of the bid is communicated to him. However, Managing Director JKMSCL, J&K may condone the delay in execution of contract by the bidder. The expenses in this regard shall be borne by the successful bidder. The validity of contract under this agreement shall be for a period as mentioned. (ix) The bidder shall furnish the following documents at the time of execution of agreement:- (i) Attested copy of partnership deed in case of partnership firms. (ii) Registration number and year of registration, in case partnership firm is registered with registrar of firms; (x) Address of residence and office, telephone numbers, in case of sole proprietorship with : (i) Registration issued by registrar of companies under Registrar of companies Act 1956, in case of company. (ii) Comprehensive maintenance agreement, if applicable. (xiv) In case of breach of any terms and conditions of the contract or on unsatisfactory performance, the amount of performance security shall be liable to forfeiture by JKMSCL, J&K and decision of Managing Director JKMSCL J&K shall be final. (xv) The 25% of total deposited performance security amount shall be retained as Performance Security against the security of Comprehensive Maintenance Contract (CMC). If there is any default in comprehensive maintenance service, the corporation may forfeit the performance security, as described under different clauses or any other recovery from this Performance Security. (xvi) The rate contract can be repudiate/rejected at any time by the Managing Director JKMSCL, J&K if the supplies are not made to his satisfaction after giving an opportunity to the bidder of being heard and after reasons for repudiation being recorded by him in writing. However, Managing Director JKMSCL, J&K may terminate the agreement of contract at any time without notice/intimation to the successful bidder.
11	**SUPPLY ORDERS:**
	(i) Supply order shall be placed through registered post/e-mail/any communication medium by the JKMSCL. The date of receipt of letter of communication date will be treated as the date of order for calculating the period of execution of order. The successful bidder will execute the orders within a period of 60 days or as specified in the supply order. (ii) The successful bidder acknowledge receipt of orders within 7 days from the date of dispatch of order, failing which the procuring entity may be at liberty to initiate action to purchase the items on risk & cost purchase provision. (iii) In case of imported items, 30 days shall be given in addition to above mentioned period, (iv) Except, for equipments / machinery, which requires installation / commissioning, all other supplies shall have to be to FOR district drug warehouse only. In case of non-viable size of order for supplies, the corporation shall take appropriate decision on representation from the supplier on case to case basis. The consignee for supplies shall be JKMSCL. (v) To ensure sustained supply without any interruption, the Managing Director, JKMSCL reserves the right to have more than one approved supplier from amongst the qualified bidders as matched L1 supplied at matched L1 rates. In such a case, the requirement may be met by dividing be quantity among the rate contract holders considering the quantity required and dedicated capacity of the successful bidders.

	(vi) The ready stock position of the item, if provided by the firm, may be considered by the corporation for the placement of supply orders. (vi) It may be noted that the JKMSCL does not undertake to assist in the procurement of raw material, whether imported or controlled or restricted, and as such the bidders must offer their rates to supply the specific items from own quota of raw material stock by visualizing the prospect of availability and requirement. Any of the above points if taken, as argument for non-supply/delayed supply will not be entertained. **(vii)** The quantities indicated in the Table 1 are mere estimates and are intended to give an idea to the prospective bidder. The figures indicated do not constitute any commitment on the part of corporation to purchase any of the articles and the quantities shown therein against each or in any quantity whatsoever and no objection against the quantity of the indent of approved whatsoever and no objection against the quantity of the indent of approved item being more or less than the indicative quantity shall be entertained and shall not be acceptable as a ground for non supply of the quantity indented.
12	**SUBMISSION OF CONTRACT COMPLETION REPORT**
12.1	A consolidated statement (Annexure X) shall be submitted to General Manager, EPM by the 10th of each month. Every time the statement should contain details of all orders placed under the contract.
12.2	Firms shall have to submit consolidated statement (Annexure X) in duplicate at the end of rate contract well as after expiry of equipment / instrument guarantee period (as provided in guarantee clause of the contract) to enable JKMSCL to examine the case for refund of performance security.
12.3	The end user shall intimate the complaint/defect arise immediately to the manufacturer/importer/dealer with copy to JKMSCL for further follow up..
13.	**TERMS OF PAYMENT:-**
	(i) Only after the receipt of certificate of satisfactory installation/commissioning of the equipment/machinery, as well as training of personnelôs of institution/speciality in handling of the machine, duly signed by the technical panel constituted by the corporation, duly authenticated by the HODs of the end user institute/speciality, the file for payment of the said equipment(s) shall be processed. (ii) Only in case, space for installation of machine is not available/provided by the end user institute, part payment upto 50% as deemed fit by the corporation shall be released subject to the condition that the end-user shall give in writing regarding their responsibility for any fault arise after installation/commissioning in later stage. (iii) In case of delayed supplies, deduction of liquidated damages as per provisions shall be made from payments. The firms shall seek time extension from the JKMSCL before delayed dispatch of supplies. (ii) Payment shall be made by RTGS. Expenses on this account, if any, shall be borne by the firm. (iii) No advance payments towards cost of items will be made to the bidder. (iv) All bills/invoices should be raised in triplicate and in the case of excisable items, the bills should be drawn as per central excise rules in the name of the authority concerned. (v) Payment(s) to authorised dealer/agents shall be made as per tripartite agreement only. (v) If at any time during the period of contract, the price of bid items is reduced or brought down by any law or act of the Central or State Government or by the bidder himself, the bidder shall be bound to inform JKMSCL immediately about it. Purchasing authority shall be empowered to unilaterally effect such reduction as is necessary in rates in case the bidder fails to notify or fails to agree for such reduction of rates. (vi) In case of any enhancement in Excise Duty due to notification of the Government after the date of submission of bids and during the bid period, the quantum of additional excise duty so levied will be allowed to be charged extra as a separate item without any change in the

	basic price structure of the items approved under the bid. For claiming the additional cost on account of the increase in excise duty, the bidder should produce a letter from the concerned excise authorities for having paid additional excise duty on the goods supplied to ordering authority and also must claim the same in the invoice separately. Similarly if there is any reduction in the rate of excise duty of items, as notified by the Government, after the date of submission of bid, the quantum of the price to the extent of reduction of excise duty of items will be deducted without any change in the basic price structure of the items approved under the bidder. (viii) In case of successful bidder has been enjoying excise duty exemption on any criteria, such bidder will not be allowed to claim excise duty at later point of time during the tenure of contract, if the excise duty become chargeable on goods manufactured due to any reason. (ix) If there is any hindrance by the consignee to provide the required site for installation the part payment of equipment will be made/decided by JKMSCL
14	**LIQUIDATED DAMAGES:**
	(i) The time specified for delivery in the bid form shall be deemed to be the essence of the contract and the successful bidder shall arrange supplies within the period on receipt of order from JKMSCL. (ii) In case of extension in the delivery period with liquidated damages, recovery of liquidated damages shall be made at such rates, as given below, of value of stores which the bidder has failed to supply :- (a) Delay up to one- fourth period of the prescribed delivery period - 2.5% (b) Delay exceeding one fourth but not exceeding half of the prescribed delivery period - 5% (c) Delay exceeding half but not exceeding three- fourth of the prescribed delivery period - 7.5% (d) Delay exceeding three- fourth of the prescribed period -10% fraction of a day in reckoning the period of delay in supplies shall be eliminated if it is less than half a day. The maximum amount of agreed liquidated damage shall be 10%. (iii) If the supplier requires an extension of time in completion of contractual supply on account of occurrence of any hindrances, he shall apply in writing to JKMSCL for the same immediately on occurrence of the hindrances but not after the stipulated date of completion of supply. The firms shall ensure extension of delivery period for delayed supplies. The payment shall only be released by JKMSCL after sanction of extension in delivery period. (iv) Delivery period may be extended with or without liquidated damages. If the delay in the supply of goods is on account of force majeure i.e., which is beyond the control of the bidder, the extension in delivery period may be granted without Liquidated Damage that too after thorough consideration by the Managing Director, JKMSCL. (v) If the bidder is unable to complete the supply within the specified or extended period, the purchasing officer shall be entitled to purchase the goods or any part thereof from elsewhere without notice to the bidder on his (i.e., bidders) account at his cost and risk, with the prior approval from JKMSCL. The bidder shall be liable to pay any loss or damage which the purchasing officer may sustain by reasons of such failure on the part of the bidder. The bidder shall not be entitled to any gain on such purchases made against default. The recovery of such loss or damage shall be made from any sums accruing to the bidder under this or any other contract with the corporation/government. If recovery is not possible from the bill and the bidder fails to pay the loss or damage within one month of the demand, the recovery of such amount or sum due from the bidder shall be made or any other law for the time being in force. In case supplier fails to deliver ordered goods, the risk purchases may be made at market rate from any other firm. It is mandatory for the approved supplier to acknowledge receipt of orders within seven days from the date of dispatch of order, failing which the procuring entity will be at liberty to initiate action to purchase the items on risk purchase provision at the expiry of the prescribed supply period.

15	(i) JKMSCL shall procure the machinery & equipment for the Health & Medical Education Institutes of J&K State, inter-alia. (ii) The funds shall be transferred to JKMSCL with indent form and supply orders shall be placed by JKMSCL to suppliers.
16	**RECOVERIES**
	(i) Recoveries of liquidated damages, short supplies, breakage, rejected articles shall ordinarily be made from bills. Such amount may also be recovered from any other untied dues & security deposits available with the JKMSCL. In case recovery is not possible, recourse will be taken under or any other law in force. (ii) Any recovery on account of liquidated damage charges/risk & cost charges in respect of previous rate contracts/supply orders placed on them by JKMSCL can also be recovered from any sum accrued against this bid after accounting for untied sum or due payment lying with JKMSCL against previous rate contracts/supply orders. Firm shall submit details of pending amount lying with JKMSCL but decision of Managing Director JKMSCL, J&K regarding authenticity of sum payable shall be final.
17	**INSPECTION:-**
	(i) The equipments supplied shall be according to specifications provided at Section IV (3) schedule of supply and may be inspected by the technical panel/team constituted for the purpose by JKMSCL deemed fit on the site of manufacturer (in case of Indian manufacturer)/ importer (importer site). The manufacturer/importer shall facilitate the demonstration of the said machine/equipment/on the site only. After the receipt of ñCertificate of satisfactionò from the technical panel, the supply order shall placed. In case of BIS Items, inspection shall be strictly as per relevant BIS specifications with latest amendments and have been made applicable by B.I.S. at the time of inspection. The machine/equipment shall be further inspected at the time of installation/commissioning at site i.e the end user site. The supplier shall provide all facilities for inspection/testing free of cost. (ii) Notwithstanding the fact that the authorized inspecting agency had inspected and/or has approved the stores/articles, the procurement officer or his representative may inspect the item/material as soon as it is received in the stores to ensure that the supply is in accordance with the specifications laid down in rate contract. (iii) In case of doubts in inspection/ test, same may be got inspected or tested in any laboratory. If the material is not found as per specifications or defective, consignee will not accept the material and shall inform the JKMSCL, J&K within 3 days. Consignee may also simultaneously ask the firm for removal of defect/replacement. The firm shall be bound to remove the defect or replace the defective equipment/item within 15 days of receipt of intimation from the consignee. However, the date of delivery, in case of defective item shall be taken as the date on which the JKMSCL accepts the item after replacement of defective material/removal of defects as the case may be. Wherever defective item is replaced, the inspection / testing charges, if any, shall be borne by the supplier. (iv) If required, the consignee may refer inspection committee to match the specification with available reserved sample with the corporation which is submitted by the firm/supplier at the time of technical approval. (v) In case of imported item, the supplier shall ensure that the item shall be inspected by the third party inspection agency before dispatched to the consignee. In case any un-inspected item has been found in the item received by consignee, the firm shall be solely responsible for it and the JKMSCL shall be free to take suitable necessary action as per terms and conditions of bid documents/agreement against the firm.
18	**PACKING AND INSURANCE**
	(i) The goods will be delivered at the destination in perfect condition. The firm if so desires may insure valuable goods against loss by theft, destruction or damages by fire, flood, under

	exposure to weather of otherwise in any situation. The insurance charges will have to be borne by the supplier and the corporation shall not be required to pay any such charges, if incurred. (ii) The firm shall be responsible for the proper packing so as to avoid damages under normal conditions of transport by sea, rail, road or air and delivery of material in good condition to the procurement officerôs store. In the event of any loss, damage, breakage or leakage or any shortage the firm shall be liable to make good such loss and shortage found at destination after the checking/inspection of material by the consignee. No extra cost on such account shall be admissible. The firm may keep its agent to verify any damage or loss discovered at the consigneeôs store, if it so likes. (iii) Packing, cases, containers and other allied material if any shall be supplied free, except where otherwise specified by the firm(s) and agreed by the JKMSCL and the same shall not be returned to him.
19	**REJECTION**
	(i) Articles not as per specifications/or not approved shall be rejected by the JKMSCL and will have to be replaced by the supplier firm at his own cost within 15 days or as time limit fixed by the JKMSCL. (ii) All the stores supplied shall be of the best quality and conforming to the specification, trademark laid down in the schedule attached to agreement and in strict accordance with and equal to the approved, standard, samples. In case of any material of which there are no standards or approved samples, the supply shall be of the best quality to be substantiated by documents. The decision of Managing Director JKMSCL as to the quality of stores be final and binding upon the bidder. In case any of the articles supplied are not found as per specification or declared sub-standard/spurious, that shall be liable to be rejected and any expenses of loss caused to the supplier as a result of rejection of supplies shall be entirely at his account. (iii) The rejected item must be removed by the firm, within 15 days of the date of intimation of rejection. The officials concerned will take reasonable care of such material but in no case shall be responsible for any loss, damage, shortage that may occur while it is in their premises. (iv) No payment shall be made for defective/incorrect items. However, if payment has been made, then defective items shall be allowed to be removed only after the firm replaces material as per specifications, duly inspected. If the payment has not been made, the firm may be allowed to remove the material without prior replacement (provided firm has performance security as per condition No. 18). Joint inspection of defective material may be carried out as required by the JKMSCL. However sample of ISI marked material found defective shall be kept by consignee for reference to BIS. (v) In case firm wants to take back item to their works for rectification then firm has to deposit payment received against such defective supplies. In case supplier has not received any payment then material be returned to supplier firm for rectification. The Bidder shall be responsible for the proper packing and delivery of the material to the consignee. In the event of any loss, damage, or breakage, leakage or shortage in transit, the Bidder shall be responsible. No extra cost on such account shall be admissible.
20.	**CORRECTION OF ARITHMETIC ERRORS**
	Provided that a financial bid is substantially responsive, the procuring entity will correct arithmetical errors during evaluation of financial bids on the following basis: (i) 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 procuring entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;

	(ii) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected. (iii) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to clause (a) and (b) above. If the bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be disqualified and its bid security shall be forfeited or its bid securing declaration shall be executed.
21	**PROCURING ENTITY'S RIGHT TO VARY QUANTITY:**
	(i) The quantity of equipments and instruments originally indicated in the bidding document may vary without any change in the unit prices and other terms and conditions of the bid and the conditions of contract. (ii) If the Managing Director JKMSCL J&K procures less than the quantity indicated in the bidding documents the bidder shall not be entitled for any claim or compensation except otherwise provided in the conditions of contract. (iii) If the Bidder fails to supply the Managing Director JKMSCL J&K shall be free to arrange/procure the items and the extra cost incurred shall be recovered from the Supplier.
22.	**PARALLEL RATE CONTRACT**
	The JKMSCL may also execute parallel rate contract to with more than one firm for each item on the lowest approved rates on the same terms and conditions, if the original lowest one each not in a position to supply material as per JKMSCL requirement. (i) To ensure sustained supply without any interruption, the bid inviting authority reserves the right to approve more than one supplier to supply the requirement among the qualified bidders. (ii) Orders will be placed with Lowest I (L-1) firm. However in case of any exigency at the discretion of the bid inviting authority, the orders may also be placed with the other firms, in the ascending order, L-2, L-3 and so on who have matched with the L-1 rates and executed agreement with corporation on same rates (L1), terms and conditions. (iii) After the conclusion of financial bid opening (Cover B) the lowest offer of the bidder is considered for negotiation and rate arrived after negotiations is declared as L-1 rate and L-1 supplier for an item for which the bid has been invited. (iv) The bid who has been declared as L-1 supplier for certain item shall execute necessary agreement for the supply of the required quantity of such item on depositing the required amount performance security and on execution of the agreement such bidder is eligible for the placement of supply orders. (v) JKMSCL will inform the L-1 rate to the bidders who had qualified for financial bid (Cover B) opening, inviting their consent to match with the L-1 rates for the item/items quoted by them and the bidders who agree to match L-1 rate, will be considered as matched L-1 (vi) The bidder who agrees to match L-1 rate shall furnish the breakup detail (Rate, CST, VAT, etc.) of rates (L-1 rates). (vii) The supplier, on receipt of the supply orders deems that the purchase orders exceeds the production capacity declared in the bid documents and the delay would occur in executing the order, shall inform the JKMSCL immediately without loss of time and in executing the order, shall be returned within 7 days from the date of issuing order, failing which the supplier would be deprived from disputing the imposition of liquidated damages, and penalty for the delayed supplies. (viii) If the L-1 supplier has failed to supply / intimated JKMSCL about his inability / delay in supply as per the supply order, the required items within the stipulated time or as the case may be, JKMSCL may also place purchase orders with the matched L-1 Bidders for

	purchase of the items provided such matched L-1. Bidders shall execute necessary agreement indicating the production capacity as specified in the bid document on depositing the required amount. Such bidder is eligible for the placement of purchase orders for the item quoted by them. (ix) Subject to para (vii) above, while JKMSCL has chosen to place purchase orders with matched L-1 supplier and there are more than one such matched L-1 supplier, then the purchase orders for the requirement of items will be place with L-2 first on matched rates of L-1 and in case L-2 does not have the required capacity than L-3 would be considered on matched L-1 rates and the same order would be flowed in case of L-3, L-4, etc. (x) The matched L-1 supplier, on placement of purchase orders, will be deemed as L-1 rate supplier for the purpose of the bid and all provisions of the bid document applicable to L-1 rate bidder will apply mutatis mutandis to the matched L-1 supplier. (xi) If the supplier fails to supply the item for the purchase orders, at any point of time, either fully or partly, within the stipulated time, JKMSCL is at liberty to place purchase orders with other bidders (in ascending order, viz, L-2, L-3 and so on) at the price offered by then and in such cases the supplier is liable to indemnify JKMSCL, without any protest or demur, for the difference in cost incurred by JKMSCL and the JKMSCL is entitled to recover the difference in cost from the amount due / payable to the supplier. (xii) Parallel rate contract may be concluded as described above during any time / currency of rate contract subject to matching of L-1 rates, price fall clause and on same terms and conditions.
23	**VALIDITY OF BID:**
	Bids shall be valid for a period of 120 days from the date of opening of technical bid. Prior to the expiry of the period of validity of bid, the procuring entity, may request the bidders to extend the bill validity period for an additional specified period of time. A bidder may refuse the request and such refusal shall be treated as withdrawal of the bid but in such circumstances bid security shall not be forfeited.
24	**PRICE ESCALATION:**
	Price escalation or price variation shall not be applicable or considered under any circumstances for the purchases made under this bid or agreement. However, the provisions provided for tax variations are exclusive to this clause.
25	**SUBLETTING OF CONTRACT:**
	Subletting or assigning contract to third party is prohibited. In the event of bidder violating this condition, the Jammu and Kashmir Medical Supplies Corporation Limited shall be at liberty to place the contract elsewhere on the Bidder's account and at his risk. The bidder shall be liable for any loss or damage, which the Government may sustain in consequence or arising out of such replacement of the contract.
26	**FALL CLAUSE:-**
	(i) The prices under contract shall be subject to price fall clause. The prices charged for the store supplies under the contract by successful bidder shall in no event exceed the lowest price at which the successful bidder sells the stores of identical description to any other persons during the period of the contract in the state of J&K. If any time, during the period of the contract, the bidder reduces the sales price chargeable under the contract, he shall forth with notify such reduction to the JKMSCL, J&K and the price payable under the contract for the stores supplied after the date of coming into force of such reduction or sale shall stand reduced correspondingly. It imply that if the contract holder quotes/ reduces its price to render similar goods at a price lower than the contract price to anyone in the State at any time during the currency of contract including extension period, the contract price shall be automatically reduced with effect from the date of reducing or quoting lower price for all delivery of subject matter of procurement under contract and the

	contract shall be amended accordingly. (ii) The firms holding parallel rate contract shall also reduce their price. Firms shall notify their reduced price and intimate their acceptance to the revised price within 15 days to JKMSCL. Similarly, if parallel rate contract holding firm reduced its price during currency of the rate contract, its reduced price shall be conveyed to other parallel rate contract holding firms and the original rate contract holding firms for corresponding reduction in their prices. If any rate contract holding firm does not agree to reduce price, further transaction with it, shall not be conducted.
27.	**COMPREHENSIVE MAINTENANCE CONTRACT (CMC)**
	If required, Bidder shall execute a CMC with the Managing Director JKMSCL, J&K as described in Annexure XI and GCC (general conditions of the contract) clause No. 5. The rates for maintenance shall be applicable as quoted in [BOQ]. CMC will only be commence after the guarantee period and on a written request made by the concerned procurement officer / user medical institutions to the firm. The firm shall abide itself by the terms and conditions of CMC.
28	**GRIEVANCE / APPEAL**
28.1	In case of any dispute, the decision of Managing Director, JKMSCL shall be final and binding. In any dispute arises out of the contract with regard to the interpretation, meaning and breach of the terms of the contract, the matter shall be referred to the Managing Director, JKMSCL, J&K, who will appoint his senior most officer as sole Arbitrator of the dispute, who will not be related to this contract and whose decision shall be final and binding on both the parties. The Arbitrator shall deal with the grievance expeditiously, as possible and shall endeavour to dispose it off, within thirty days from the date of its submission.
28.2	If the officer designated as Arbitrator fails to dispose of the grievance filed within the period or if the Bidder or prospective bidder or the Procuring Entity is aggrieved by the order passed by the Officer, appointed as Arbitrator, the Bidder or prospective bidder or the Procuring Entity, as the case may be, may file a Appeal before Final Appellate Authority specified in the Bidding Document in this behalf within fifteen days from the expiry of the order passed by Arbitrator or of the date of receipt of the order passed by the Arbitrator, as the case may be. The Designation and address of the final Appellate Authority is Secretary, Health and Medical Education Department, J&K.
28.3	**(i) Appeal not to lie in certain cases** No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely:- (a) Determination of need of procurement; (b) Provision limiting participation of Bidders in the Bid process; (c) The decision of whether or not to enter into negotiations; (d) Cancellation of a procurement process; (e) Applicability of the provisions of confidentiality. (ii) **Form of Appeal:** (a) An appeal under Para (28.1) or (28.2) above shall be in the Form (Annexure-) along with as many copies as there are respondents in the appeal. (b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee. (c) Every appeal may be presented to First Appellate Authority or Final Appellate Authority, as the case may be, in person or through registered post or authorized representative. (iii) **Fee for filling appeal:** (a) Fee for filing appeal before final appellate authority shall be Rs. 10,000/- (Rupees Ten thousand only), which shall be 50%

refundable, when the case has been proven true.

(b) The fee shall be paid in the form of bank demand draft only of a Scheduled Bank in India payable in the name of Appellate Authority concerned.

(iv) **Procedure for disposal of appeal:**

(a) Appellate Authority upon filling of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.

(b) On the date fixed for hearing, the Appellate Authority shall,-

(i) Hear all the parties to appeal present before him; and

(ii) Peruse or inspect documents, relevant records or copies thereof relating to the matter.

(c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the parties free of cost.

(d) The order passed under sub-clause (c) above shall be placed on the J&K State tender Portal, www.jktenders.nic.in.

28.4 If the bidder wishes to lodge any complaint against the other bidder regarding submission of false documents, information etc, the bidder has to deposit Rs. 10,000/- (Rupees Ten thousand only) in the form of Demand Draft drawn in favour of JKMSCL in terms of deposit. The amount so deposited shall be refunded if after scrutiny the complaint is found to be true. However, if the complaint found to be false and malafide, the deposit will be forfeited. No interest shall be paid against this deposit. The complaint must be on letter head bears the signature of the bidder or the authority higher than the bid signatory of the firm.

29 COMPLIANCE WITH THE CODE OF INTEGRITY AND NO CONFLICT OF INTEREST :

Any person participating in a procurement process shall-

a) Not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process;

b) Not misrepresent or omit misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;

c) Not indulge in any collusion, bid rigging or any-competitive behaviour to impair the transparency, fairness and progress of the procurement process;

d) Not misuse any information shared between the procuring entity and the bidders with an intent to gain unfair advantage in the procurement process;

e) Not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any part or to its property to influence the procurement process;

f) Not obstruct any investigation or audit of a procurement process;

g) Disclose conflict of interest, if any; and

h) Disclose any previous transgressions with any entity in India or any other country during the last three years or any debarment by any other procuring entity.

Conflict of Interest :

The bidder participating in a bidding process must not have a conflict of interest. A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or

	compliance with applicable laws and regulations. A bidder may be considered to be in conflict of interest with one or more parties in bidding process if, including but not limited to : a. Have controlling partners/shareholders in common; or b. Receive or have received any direct or indirect subsidy from any of them; or c. Have the same legal representative for purposes of the bid; or d. Have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another bidder, or influence the decisions of the procuring entity regarding the bidding process; or e. The bidder participates in more than one bid in a bidding process. Participation by a bidder in more than one bid will result in the disqualification of all bids in which the bidder is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a bidder, in more than one bid; or f. The bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specification of the goods, works or services that are the subject of the bid; or bidder or any of its affiliates has been hired (or is proposed to be hired) by the procuring entity as engineer-in charge/consultant for the contract. Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as engineer-in-charge / consultant for the contract.
30	**DISPUTE SETTLEMENT MECHANISM (ARBITRATION)**
	If any dispute arise out of the contract with regard to the interpretation, meaning and breach of the terms of the contact, the matter shall be referred by the parties to the Managing Director JKMSCL, J&K who will appoint his senior most official as the sole arbitrator of the dispute who will not be related to this contract and whose decision shall be final. All legal proceedings, if necessary arise to institute may by any of the parties (JKMSCL or contractor) shall have to be lodged in courts situated at Jammu / Srinagar in J&K and not elsewhere.
31	All correspondence in this connection should be addressed to the Managing Director JKMSCL, J&K. Technical questions should be referred to the Managing Director JKMSCL, J&K direct by correspondence or by personal contact.
32	(i) Direct or indirect canvassing on the part of bidders or their representative shall disqualify their bids. (ii) Supplier may be disqualified, banned or suspended from business during the rate contract if : (a) fails to execute a contract or fails to execute it satisfactorily ; (b) no longer has the technical staff or equipment considered necessary ; (c) is declared bankrupt or insolvent or its financial position has become unsound, and in the case of a limited company, it is wound-up or taken into liquidation ; (d) The firm is suspected to be doubtful loyalty to state. (e) The State Bureau of Investigation (SBI) or any other Investigating agency recommends such a course in respect of a case under investigation. (f) Managing Director JKMSCL, J&K is prima- facie of the view that the firm is guilty of an offence involving moral turpitude in relation to business dealings, which if established would result in business dealing with it banned.
33	No action on the letter head of the bidder /firm regarding any complaints against the JKMSCL will be considered unless the letter head bears the signature of the bidder or the authority higher than the bid signatory of the firm.

34	(i) If any certificate/documents/information submitted by the bidder found to be false/ forged/ fabricated/vexatious or frivolous or malicious appeals or complaints etc. than bidder shall be liable for the appropriate legal action along with disqualification, banning, suspension etc. for limited or unlimited period. (ii) Bidders are required to submit wanted information (if any) based on the facts. If the furnished information by the firm found to misleading or not based on facts disciplinary action against the firm may be taken as to banning concerned item/items for certain or uncertain period.
35	The JKMSCL reserves the right to accept any bid not necessarily the lowest. The JKMSCL may reject any bid without assigning any reasons and accept bid for all or anyone or more of the articles for which bidder has been given or distribute items of stores to more than one firm/supplier.
36	The JKMSCL will have the right of rejection of all or any of the bids without assigning any reason for the same. The right to conclude parallel rate contracts with another firm for the stores detailed in Table I is also reserved by the Managing Director JKMSCL, J&K
37	Extra stipulation or any other condition contrary to the above bid conditions are not acceptable and may render the bid liable to rejection.
38	The bidder must sign all the pages of bid document at the below of terms & conditions agreeing to abide by all conditions of the bid and accept them in toto. The Signing of **Annexure XII** shall be treated as acceptance of all the terms and conditions of the bid document.
39	The Managing Director JKMSCL, J&K may relax or change/ modification in terms and conditions in the exigency excluding fundamental changes. In case of such urgency the terms & conditions shall be got approved from Purchase committee of Managing Director JKMSCL, J&K as the case may be.
40	**JURISDICTION:-** All actions, legal proceedings and suits arising from or connected to this bid shall be subject to the exclusive jurisdiction of courts in J&K only.

Section VI B: - Special Conditions of Contract (SCC)

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC. The clauses of special conditions of contract are as follows:-

Clause No.	Particulars
1.	Technical details, bid security, tender cost, tender processing fee and all other required documents should be uploaded under **Cover "A" Technical Bid** and financial details (BOQ) should be uploaded under **Cover "B". The documents submitted/uploaded at the time of registration needs not to be uploaded in technical bid.** No document except financial instrument (DD/FDR) & catalogues of the bid items shall be entertained physically by the Corporation.
2.	Pre-requisite, if any, for installation, including UPS, computer, printer, and other items should be provided by the firm in technical bid and financial bid respectively.
3.	Firm shall provide comprehensive guarantee with spare parts for item(s), as mentioned in Technical specification (from the date of installation / demonstration). Acceptance of comprehensive maintenance contract after expiry of guarantee period should be submitted with the cover ñAò and rates in cover ñBò respectively.
4.	Conditional bids shall not be considered.
5.	List of consumable items is to be provided in technical bid which is not covered under the guarantee; otherwise all the consumables will be treated as spare parts covered under the guarantee and CMC.
6.	Transhipment shall be permitted and partial shipment not allowed.
7.	Normally, payment shall be released after installation, demonstration and successful commissioning of equipment/machine and satisfactory operational training.
8.	The bidder should quote rates in Indian rupees and payment will be made in Indian rupees (INR) only.
9.	**All certificates should be valid on the date of submission of bids and issue of supply order.**
10.	The bidder should have well equipped local service centre in India preferably in J&K.
11.	i. The bidder shall be a manufacturer/direct importer/authorised dealer of the original manufacturer/importer who must have manufactured/ imported and supplied and installed this equipment(s) in India satisfactorily. The list of such installation of the equipments may be asked from the bidder in verification of Annexure XVIII information and he should submit self attested copy of purchase order, indent and invoice (inclusive of quantity & rate). ii. The merger / amalgamation / transfer of business / transfer of assets etc. of a firm affects the bid condition relating to ópast performanceô and óturn overô in preceding years. In cases where bidder acquired an ongoing business or assets of another entity, eligibility in respect of the past performance and condition relating to minimum turn over in preceding years shall be decided based on specific mention in purchase and transfer of ownership agreement / agreement of sale of business and / or its assets / board of directors (B.O.D) resolution chartered accountant certification or any other document (s) in this regard, which the bidder shall have to submit preferably with the bid. The eligibility of a bidder in this regard shall be ascertained by the purchase committee on the basis of the above stated agreement or any other document(s) and the decision of purchase committee shall be final.

12.	In case of imported item, the bidder will have to produce third party inspection report from NABL approved/accredited laboratory or DGS&D or Central/State Govt. laboratory or Central/State Govt. approved laboratory pertaining to specification and performance of each supplied machine/equipment with the consignment. All expenses regarding third party inspection will be borne by the bidder.
13.	The name, make, model and brand of equipments, which are offered, should be mentioned in against each item. Mere indication of English/USA/Indian will not serve the purpose.
14.	In the case of supply of imported item the suppliers may be asked to furnish a certificate to the effect that the firm has completed all the formalities in connection with import of the item in question.
15.	In case the item approved by the JKMSCL is procured by any other department on the rate contract of JKMSCL, the administrative charges to the extent of 5% of the invoice value shall be deposited by the approved firm or else, the firm/supplier shall be liable to be penalised which may lead to blacklisting/debarring from entering into the tender process for not less than 05 years by JKMSCL besides forfeiture of earnest money or any other action as deemed fit by the Managing Director, JKMSCL..

APPLICABILITY OF CLAUSES: - All the clauses from 1 to 40 of general terms and conditions and from 1 to 15 of special terms and conditions and their annexure, formats & enclosures are applicable for the bid items.

Managing Director
Jammu and Kashmir Medical Supplies Corporation Limited

I/We have read the above terms and conditions and I/We agree to abide myself/ourselves by the above terms & conditions of the bid document

Signature of bid with seal

Section VI C: Contract Forms (CF)

Table of contents

Annexure AI

LETTER OF ACCEPTANCE

M/s é é é é é é é é é é é é
é é é é é é é é é é é é é
é é é é é é é é é é é é é
é é é é é é é é é é é é é

Sub :- Acceptance of the bid rates for the item .....
Ref :- Your bid no. ..... dated é é é é é ..

1. Item (s) as per schedule enclosed/ noted/is/are approved in your favour against the rate (s) quoted by you in the above mentioned bid. According to the terms & conditions of the bid it is necessary to execute an agreement in the prescribed form enclosed, on a non judicial stamp paper of Rs. **……** and furnish the requisite amount of performance security. The amount of performance security calculated on the basis of the approved items and indicative quantity mentioned in the bid from works out to é é é é é é .. (é é é é é é only)
2. The performance security shall be furnished to Jammu and Kashmir Medical Supplies Corporation Limited through bank draft payable at Jammu.
3. All terms and conditions of the bid document shall be an integral part of the contract. You are informed to return the agreement form along with schedule of rates for approved item (s) in duplicate duly filled in and signed by you with signature and addresses of two witnesses below signature at the appropriate place mentioned in the agreement form. The copies of the agreement form must be send duly completed in all respect along with the amount as mentioned above falling which it will be treated as a breach of the terms and conditions of the bid and it will also be presumed that you are not interested in entering into the contract and approval of the rates shall be cancelled without notice or any reference.
4. The list of approved items may be checked and in case there is any difference between your offer and the approved rates, the same may be intimated immediately, failing which it will be presumed that it is correct as per your offer and technical specification.
5. The firm shall furnish consolidated statement of supplies made to JKMSCL by the 10th of the next month as per terms of conditions.
6. Please note that self attested/notarized copies of documents shall be considered valid. If photo copies are submitted, than at the time of signing the agreement, the firm shall bring original documents for confirmation.
7. Also please arrange to furnish the following documents required under the terms and conditions of the bid failing which the agreement will not be executed and the failure would lie at your part
   (i) **The original copy of bid document signed on each page, which has been uploaded on e-procurement portal.**
8. You are therefore; requested to please complete the above formalities within 15 days from the date of issue of this letter. The duly signed duplicate copy of the agreement will be returned to you for reference.

Encl.:1. Agreement form
2. Schedule of Rates
3. CMC format, if applicable
Any other

Managing Director
Jammu and Kashmir Medical Supplies Corporation Limited

Annexure AII

(On Non – Judicial Stamp Paper of .....)

AGREEMENT

1. This deed of agreement is made on this ..... day of .....2015 for the contract period from é é é é é . ending é é é . of equipment (s) ---------- between M/s ---------- ---------- represented by Shri ..... Proprietor/Managing Director/Managing Partners having its registered office at é é é é é é é é é é é é é é é . and its factory premises at é é é é é é é é é é . (hereinafter called ñ**the approved supplier",** which expression shall where the context so admits, be deemed to include his heirs successors, executors and administrators unless excluded by the contract) on the one part and Jammu and Kashmir Medical Supplies Corporation Limited represented by its Managing Director having its Corporate office at Jammu and Srinagar (hereinafter referred to as **"The Procuring Entity"** which term shall include its successors, representatives, executors, assigns and administrator unless excluded by the contract) on the other part.

2. Whereas the supplier has agreed with the procuring entity, the equipments and other supplies with specifications mentioned in the schedule attached here to at the prices noted here in and in the manner and under the terms and conditions here in after mentioned to the JKMSCL of the State of J&K at its head office as well as at offices/consignees throughout jurisdiction of the JKMSCL, all those articles/items set forth in the schedule appended hereto in the manner set forth in the conditions of the bid and contract appended herewith and at the rates set forth in **column No**. --- (approved rate ---------- ----------) of the said attached schedule.

3. And whereas the approved supplier has deposited with the procuring entity a sum of **--------(in words ----------only)** as s e c u r i t y deposit for the due and faithful performance of this agreement**,** to be forfeited in the event of the supplier failing duly and faithfully to perform it. Now these present witness that for carrying out the said agreement in this behalf into execution the supplier and the procuring entity do hereby mutually covenant, declare, contract and agree with each other of them in the manner following, that is to say,

   (i) The term **"Agreement",** wherever used in this connection, shall mean and include the terms and conditions contained in the invitation to bid floated for the supply of equipments and for JKMSCL, the instruction to bidders, particulars hereinafter defined and those general and special conditions that may be added from time to time.

   (ii) (a) The agreement if for the supply by the supplier to the procuring entity of equipments and instruments specified in the Schedule attached here to at process noted against each therein on the terms and conditions set forth in the agreement.

   (b) The a greement shall be deemed to have come into force with effect from the date é é é é and it shall remain in force for a period of twelve months or as for extended period.

   (c) The indicative quantity noted against each item in the table-1 attached hereto indicates only the probable total requirements of the procuring entity in respect of each item for the placement of supply orders. This quantity may increase or decrease at the discretion of the procuring entity. The supplier shall supplies for the equipments and on the basis of the supply orders placed by the procuring authorities specifying the quantities required to be supplied at the specific location in the state of J&K as mentioned in bid document.

4. **Now these Presents witness**:

   (i) In consideration of the payment to be made by the JKMSCL or consignee offices at the rates set forth in the schedule hereto a appended the approved supplier will duly supply the said articles set forth in s chedule of rates and supply order thereof in the manner set forth in the conditions of the bid and also appended to this agreement will be deemed to be taken as part of this agreement and are binding on the parties executing this agreement.

   (ii) The conditions of the bid and contract for open bid enclosed to the bid notice Noé é .

é é é dated é é é é & corrigendum noé é é é é dated : é é é é é . and also appended to this agreement will be deemed to be taken as part of this agreement and are binding on the parties executing this agreement.

(iii) Letters received from bidder and letters issued by JKMSCL in the regard of this bid and also as appended to this agreement shall also form part of this agreement.

(iv) (a) JKMSCL do hereby agree that if the approved supplier shall duly supply the said articles in the manner aforesaid observe and keep the said terms and conditions, JKMSCL will through demand draft/RTGS transfer or cause to be paid to the approved supplier at the time and the manner set forth in the said conditions, the amount payable for each and every consignment.

(b) The mode of payment will be as specified in terms & conditions of the bid i.e. through RTGS /demand draft etc.

5. The delivery shall be completed within the period noted below from the date of supply order:-

Sno	Items/Quantity	Delivery Period
1	As per supply order	As per terms & conditions of bid

6. (i) The time specified for delivery in the bid form shall be deemed to be the Essence of the contract and the successful bidder shall arrange supplies Within the period on receipt of order from the procuring entity.

(ii) In case extension in the delivery period is granted by the procuring entity with liquidated damages (L.D), the recovery shall be made on the basis of following percentages of value of stores, which the supplier fail to supply :-

(a) Delay up to one fourth period of the prescribed delivery period 2.5 %

(b) Delay exceeding one fourth but not exceeding half of the Prescribed delivery period 5%

(c) Delay exceeding half but not exceeding three fourth of the prescribed delivery period 7.5% (d) Delay exceeding three fourth of the prescribed delivery period. 10% Fraction of a day in reckoning period of delay in supplies shall be eliminated if it is less than half a day. The maximum amount of agreed liquidated damages shall be 10%.

(iii) If the supplier requires an extension of time in completion of contractual supply on account of occurrence of any hindrances, he shall apply in writing to the authority which had placed the supply order, for the same immediately on occurrence of the hindrance but not after the stipulated date of completion of supply.

(iv) Delivery period may be extended with or without liquidated damages if the delay in the supply of goods is on account of hindrances beyond the control of the supplier.

7. Termination of Contract on Breach Of Condition

(i) (a) In case the supplier fails or neglects or refuses to faithfully perform any of the covenants on his part herein contained, it shall be lawful for the procuring entity to forfeit the amount deposited by the supplier as performance security and cancel the contract.

(b) In case the supplier fails, neglects, or refuses to observe, perform, fulfil and keep, all or any one or more or any part of any one of the covenants, stipulations and provisions herein contained, it shall be lawful for the procuring entity or any such failure, neglect or refusal, to put an end to this agreement and thereupon every article, cause and thing herein contained on the part of the procuring entity shall cease and be void, and in case of any damage, loss, expense, difference in cost or other moneys from out of any moneys for the time being payable to the supplier under this and/or any other contract and in case such last mentioned moneys are insufficient to cover all such damages, losses, expenses,

difference in cost and other moneys as aforesaid, it shall be lawful for the procuring entity to appropriate the performance security made by the supplier as herein before mentioned to reimburse all such damages, losses, expenses, difference in cost and other money as the procuring entity shall have sustained, incurred or been put to by reason of the supplier having been guilty of any such failure, negligence or refusal as aforesaid or other breach in performance of this contract.

(c) If at any time during the course of the contract, it is found that any information furnished by the supplier to the procuring entity, either in his bid or otherwise, is false, the procuring entity may put an end to the contract/agreement wholly or in part and there upon the provision of clause (a) above shall apply.

(ii) The procuring entity reserves the right to terminate without assigning any reasons therefore the contract/agreement either wholly or in part without any notice to the supplier. The supplier will not be entitled for any compensation whatsoever in respect of such termination of the contract/agreement by the procuring entity.

(iii) **Notice etc. in writing**

All certificates or notice or orders for time or for extra, varied or altered supplies, which are to be the subject of extra or varied charges whether so described in the agreement or not, shall be in writing, and unless in writing, shall not be valid, binding or be of any effect whatsoever.

(iv) The supplier shall not in any way be interested in or concerned directly or indirectly with, any of the officers or subordinate or servants of the procuring entity, in any trade, business or transactions not shall the supplier give or pay or promise to give or pay such officer or subordinate or servant directly or indirectly any money or fee or other consideration under designation of ñcustomò or otherwise; nor shall the supplier permit any person or persons whomsoever to interfere in the management or performance hereof under power of attorney or otherwise without the consent in writing the consent in writing of the procuring entity obtained in first hand.

(v) **Bankruptcy of the supplier** : In case the Supplier at any time during the continuance of the contract becomes bankrupt or insolvent or commits any act of bankruptcy or insolvency under the provisions of any law in that behalf for the time being in force, or should compound with his creditors, it shall be lawful for the procuring entity to put an end to the agreement, and thereupon every article, clause and thing herein contained to be operative on the part of the procuring entity, shall cease and be void and the procuring entity shall have all the rights and remedies given to him under the preceding clauses.

(iv) **Serving of notice on supplier:** - All notice or communication relating to or arising out of this agreement or any of the terms thereof shall be considered duly served on or given to the supplier, if delivered/e-mailed to him or left at his premises/e-mail address, place of business or abode.

8. **Dispute settlement:-**

All disputes arising out of this agreement and all questions relating to the interpretation of this agreement shall be decided by the Managing Director JKMSCL and the decision of the Managing Director JKMSCL, J&K shall be final as per bid terms and conditions.

And it is hereby agreed and declared between the parties hereto that in case any question of dispute arises touching the construction or wording of any of clause herein contained on the rights, duties, liabilities of the parties hereto or any other way, touching or arising out of the present, the decision of the Managing Director JKMSCL, J&K in the matter shall be final and binding.

If any dispute arise out of the contract with regard to the interpretation, meaning and breach of the terms of the contact, the matter shall be referred to by the parties to the Managing Director JKMSCL who will appoint his senior most officials as the sole arbitrator of the dispute who will not be related to this contract and whose decision shall be final. All legal proceedings, if necessary arise to institute may by any of the parties (JKMSCL or contractor) shall have to be lodged in courts situated at Jammu and Kashmir and not elsewhere.

9. If the rates of the approved items are reduced in any manner by the Govt. Of India/other state governments, the approved supplier will have to notify JKMSCL and reduce the rates in the same proportion.

10. The firm shall furnish consolidated statement of supplies made to JKMSCL by the 10th of next month as per terms and conditions of the bid.

11. All terms and conditions of the bid shall be an integral part of the contract.

12. **JURISDICTION:**

All actions, proceedings and suits arising from or connected to this agreement shall be subject to the exclusive jurisdiction of courts in J&K.

In witness where of the parties here to have set their hands on the day ..... of .....é 2015.

Signature of the approved Supplier with Seal

Managing Director
Jammu and Kashmir Medical Supplies Corporation Limited
Jammu / Srinagar

Witness-1

Witness-1

Annexure AIII

SCHEDULE OF RATES

M/s é é é é é é .....
é é é é é é é é é é é é

é é é é é é é é é é é é ..

Name & Detail of item-……

S. No	Name of approved item(s) with full specification	Brand/ Make	Packing Unit	Approved Rate Per Unit ( )
1	2	3	4	5

Managing Director
Jammu and Kashmir Medical Supplies
Corporation Limited

Signature of Approved Supplier
with Seal

Annexure AIV

TO BE SUBMITTED ON 100/-NON-JUDICIAL STAMP

Affidavit under price fall clause of Contract

I.....S/o Sh.....Aged.....year

Manager/Partner/Prop.....M/s ..... do hereby take oath and state as under:-

1. That I am.....of the said Firm/Company/supplier and well conversant with the matter related to the Contract No. .....with JKMSC for the item (s)..... which was awarded to our company/firm.

2. That the price of said item (s) has neither been quoted or reduced in any other tender nor had supplied the same item to any one at a price lower than the Contract price anywhere in the state of J & K at any time during the currency of the Contract.

(Deponent)

Annexure AV

(On bankôs letter head)

FORM OF BANK GURANTEE

To

Managing Director,
Jammu and Kashmir Medical Supplies Corporation ltd.
Jammu.

Whereas the Managing Director, Jammu and Kashmir Medical Supplies Corporation ltd. (hereinafter called the ñprocuring entity/JKMSCLò) having entered into an agreement No. ..... dated..... with M/s ..... (hereinafter called theò approved supplierò) for..... (Name of item) here-in-after called ñthe said agreementò under which the Supplier(s) M/s ..... have applied to furnish Bank guarantee (B.G) to make up the full performance security.

1. In consideration of the JKMSCL having made such a stipulation in agreement. We.....) Indicate the name of the bank) here-in-after referred to as ñthe Bankò at the request of M/s.....supplier(s) do hereby undertake to pay to the JKMSCL amount not exceeding Rs. ..... (Rupees..... only) on demand of JKMSCL.

2. We..... (indicate the name of bank), do hereby undertake to pay Rsé é é é é é . Any demur or delay, merely on a demand from the JKMSCL any such demand made on the bank by the JKMSCL shall be conclusive and payable by the bank under this guarantee. The bank guarantee shall be completely at the disposal of the JKMSCL and we..... (indicate the name of bank), bound ourselves with all directions given by JKMSCL regarding this bank guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. ..... (Rupees..... only).

3. We..... (Indicate the name of Bank), undertake to pay to the JKMSCL any money. So demanded notwithstanding any dispute or disputes raised by the Supplier(s) in any suit or proceeding pending before any Court of Tribunal or Arbitrator etc. relating thereto, our liability under these presents being absolute, unequivocal and unconditional.

4. We..... (indicate the name of Bank), further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of said agreement and that it shall continue to be enforceable till all the dues of the JKMSCL under or by virtue of the said agreement and that it shall continue to be enforceable till all the dues of the JKMSCL under or by virtue of the said agreement have fully paid and its claims satisfied or discharged or till the Government certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said supplier and accordingly discharges this guarantee.

5. We..... (indicate the name of bank), further agree with the JKMSCL that the JKMSCL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time to performance by the said Supplier(s) from time to time or to postpone for any time or from to time any of the powers exercisable by the JKMSCL against the said supplier forbear or enforce any of the terms and conditions relating to the said Agreement and forbear or enforce any of the terms and condition relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said supplier(s) or for any forbearance act or omission on the part of the JKMSCL or any indulgence by the JKMSCL to the said Supplied(s) or by any such matter or thing whatsoever which would but for this provision, have effect of so relieving us.

6. The liability of us..... (indicate the name of Bank), under this guarantee will not be discharged due to the change in the constitution of the bank or the supplier.

7. We..... (indicate the name of bank), lastly undertake not to revoke this guarantee except with the previous consent of the JKMSCL in writing.

8. This performance guarantee shall remain valid and in full effect, until it is decided to be discharged by the JKMSCL. Notwithstanding anything mentioned above. Our liability against this guarantee is restricted to Rs..... (Rupees..... only).
9. It shall not be necessary for the JKMSCL to proceed against the supplier before proceeding against the bank and the guarantee herein contained shall be enforceable against the bank notwithstanding any security which the JKMSCL may have obtained or obtain from the Supplier.
10. The bank guarantee shall be payable at the Jammu. If the last date of expiry of the bank guarantee happens to be a holiday of the bank, the bank guarantee shall expiry on the close of the next working day.

    Notwithstanding anything contained hereinabove, our liability under this guarantee is restricted Rs. ...../- (Rupees .....) and our guarantee shall remain in force up to date ..... unless a demand or claim under the guarantee is made on us in writing or by e-mailing on or before date ..... therefore, after date ..... all your rights under the guarantee shall be forfeited and we shall be relived and discharged from all liabilities hereunder irrespective of whether or not the original guarantee is returned to us.

Dated..... day of ..... for and on behalf of the bank (indicate the bank).

Signature & Designation

E-mail address.....

The above bank guarantee is accepted by the Managing Director, Jammu and Kashmir Medical Supplies Corporation Ltd.

Signature

For & on behalf of M.D JKMSCL

Annexure AVI

Guidelines for Registration/ Empanelment are as under:

1. The registration fees of Rs. 1,00,000/- (Rs One lakh only) per group by the Original Manufacturer, Direct Importers, Authorised Representative(s), Agent(s) and Dealer(s) of various Original Manufacturers/ Direct Importers and Rs 50,000/- (Rs fifty thousand only) per group by SSI Units of J&K state only, associated with the production/ business of equipments and machineries falling under various groups, shall have to be paid in the form of Demand Draft only drawn on any scheduled/ nationalised bank in favour of Jammu and Kashmir Medical Supplies Corporation Limited payable at Jammu/ Srinagar.

2. Manufacturers/ firm placed abroad shall have to pay in INR equivalent to 5,000/- dollars (five thousand dollars only) per group for direct participation in any of the bidding process for the supply of machineries and equipments to JKMSCL in the form of Demand Draft only as given in condition no. 1 above.

3. The registration with regard to machinery and equipment shall be valid for a period of five years from the date of issuance of registration no./ certificate which shall further be renewed thereafter keeping in view the genuineness / performance of firms/ bidders with regard to timely and quality supply / AMC or CMC of the items ordered for, by JKMSCL during the preceding years.

4. The registration fees shall be **NON-REFUNDABLE..**

5. The registration/ empanelment shall in no case be renewed for the original manufacturer(s), Importer(s), Authorised Representative(s), Dealer(s), Agents and Suppliers, which are/were declared as defaulters on one or more grounds including non compliance / delay in the execution of AMC/CMC; by JKMSCL or any of the Central/ State Government procuring agency(ies) or any other Corporation with Union of India.

6. The authorised representative(s), dealer(s), supplier(s), agent(s) blacklisted/ debarred for any default(s) with regard to its authorisation/ representation or otherwise, by/ for any of the original manufacturer(s)/ Importer(s) shall not be allowed to register / for renewal of registration.

7. Firms / bidders i.e. Original Manufacturers (including SSI units of J&K State), Direct Importers and their Authorized representatives, agents and dealers shall have to submit documents as per the details mentioned below, along with an application for registration on the letter head of the company / duly signed and sealed by the proprietor / Managing Director / Chairman / Authorized Signatory.

Note: In case of Authorized Signatory, latest original letter of Authorization (issued not before one month) authenticating the signatures and photo of the authorized signatory shall also have to be enclosed along with the application.

FORMAT FOR REGISTRATION OF MANUFACTURERS / SSI Unit.

1. **Name of the Firm**_____

   (In case of authorized representative/agent/dealers; Please mention the name of the authorizing firm also with details indicating the authority to authorize the representatives/ agent/ dealers etc.)

2. **Address**_____

3. a) **Contact No. L. Line**____**Mob**_____b) **email ID**_____

4. **Group Registration**_____

5. **Registration No:-**

   a) With Department of Industries & Commerce

   (SSI Units of J&K Only) _____

   b) With Sales Tax Department _____

   c) With Excise Department (GOI) _____

   d) Any other _____

6. **Registration fee (in the form of Demand Draft drawn on any scheduled/ Nationalized Bank in favour of J&K Medical Supplies Corporation Limited payable at Jammu/Srinagar.**

   D.D. No_____**Bank Drawn From**_____

   IFSC Code_____**Date of Drawal**_____**Valid upto**_____

Check List For Manufacturers/ SSI Units:

a. Non Conviction certificate.
b. Sales tax registration VAT/CST, copy of Tin No.
c. Sales tax clearance certificate of last 03 financial years
d. Average Annual Turnover Certificate for last three financial years (Duly Certified).
e. Copy of Product permission certificate/ license issued by licensing authority.
f. Copy of PAN card supported by income tax clearance certificate of last 03 financial years
g. Quality certification(s) of the manufacturer like ISO / ISI /OEM/ CE/ USFDA, etc.
h. EM-II Certificate for each quoted product from NSIC/MSME/Industries department.
i. BIS License with schedule for ISI marked products.
j. State of manufacturing capacity.
k. Statement of plant & machinery.
l. Statement of past supplies and performance.
m. Excise registration, if applicable
n. Company memorandum
o. Constitution of company

p. Board member resolution.
q. Product permission manufacturing certificate/license.
r. Market standing certificate issued by Licensing authority.
s. Details of technical personnel employed.
t. Non-blacklisting declaration.
u. Registration format (duly filled)

NOTE: Format shall have to be annexed along with written request on Letter Head duly signed and sealed by the Proprietor/Managing Director/Chairman/Authorized signatory of the firm/bidder. In case of authorized signatory, letter of authorization shall have to be enclosed, indicating Name, Address, Mobile No. Photograph and Signatures duly attested by Proprietor/Managing Director/Chairman of the firm/bidder.

FORMAT FOR REGISTRATION OF DEALERS / IMPORTER.

1. **Name of the Firm**_____

(In case of authorized representative/agent/dealers; Please mention the name of the authorizing firm also with details indicating the authority to authorize the representatives/ agent/ dealers etc.)

2. **Address**_____

3. a) **Contact No. L. Line**_____**Mob**_____b) **email ID**_____

4. **Group Registration**_____

5. **Registration No:-**

a) With Department of Industries & Commerce

(SSI Units of J&K Only) _____

b) With Sales Tax Department _____

c) With Excise Department (GOI) _____

d) Any other _____

6. **Registration fee (in the form of Demand Draft drawn on any scheduled/ Nationalized Bank in favour of J&K Medical Supplies Corporation Limited payable at Jammu/Srinagar.**

D.D. No_____**Bank Drawn From**_____

IFSC Code_____**Date of Drawal**_____**Valid upto**_____

NOTE: Format shall have to be annexed along with written request on Letter Head duly signed and sealed by the Proprietor/Managing Director/Chairman/Authorized signatory of the firm/bidder. In case of authorized signatory, letter of authorization shall have to be enclosed, indicating Name, Address, Mobile No. Photograph and Signatures duly attested by Proprietor/Managing Director/Chairman of the firm/bidder.

Checklist for Dealers / Importer:

a. Copy of PAN Card.
b. Copy of TIN No.
c. Non Conviction certificate of dealer / importer.
d. Authorization letter from manufacturers/direct importer.
e. Non-Conviction certificate of manufacturer.
f. Copy of Average Annual Turnover certificate for last three financial years of manufacturers / Direct Importer.
g. Quality certification of the manufacturer like ISO / ISI / IEC, etc.
h. Permission / authorization for sale from the foreign principal / manufacturer (if applicable).
i. IEC Certificate and permission/authorization or sale from the foreign manufacturer.
j. Registration format (duly filled).

Sig. of Authorized Signatory of firm/ Bidder along with Seal.

Certified that the information(s) furnished above is/are correct and noting has been concealed to best of my knowledge. I/we shall be held personally responsible for any wrong information(s).

Important Note:

1. **All the copies should be notarized.**
2. **The dealer/importer shall have to submit the documents/details of manufacturer as mentioned above in addition to his own particulars/documents.**
3. **The firm shall have to upload online registration form as well submit the documents in physical form in the office of Jammu & Kashmir Medical Supplies corporation, Jammu/Srinagar.**
4. **The documents submitted at the time of registration need not to be uploaded in the technical bid. The documents submitted at the time of registration shall be considered for technical evaluation. However, where the validity of the documents is expired at the time of uploading of tender, the firm shall upload the latest documents in the technical bid. The information of such documents shall immediately be informed to the registration section of JKMSCL for updation of records.**

Annexure AVII

UNDERTAKING ON THE LETTER HEAD OF THE BIDDER

UNDERTAKING ï IN ACCEPTANCE TO THE TENDER DOCUMENT

Managing Director,
Jammu & Medical Supplies Corporation Ltd.

Subject : Acceptance of terms & conditions of Tender Document for Machinery & Equipment.

Sir,

1. 1/We hereby agree to abide all terms and conditions laid down in tender document.
2. We will be responsible for warranty of equipment for five years from the date of successful installation.
3. This is to certify that/we have read and fully understood all the terms and conditions and instructions contained therin and undertake myself/over selves abide by the said terms and conditions and sign this undertaking as letter of acceptance of all the tender document.

(Signature of the bidder)
Name and address of the bidder
With photograph

Note : The documents submitted at the time of registration of firm need not to be re-submitted. Only the documents, wherever the validity of the submitted documents has expired shall be uploaded with the technical bid.

Technical Specifications

S.No.	Item Code	Name of Item	Specifications
1	MC0001	Suction systems	1. **USE** 1.1. Clinical purpose to aspirate fluids, secretions, or other foreign materials from a patientôs airway by means of suction. 1.2. Used by clinical department/ward : All 2. **TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) 0-760 mm Hg ± 10 regulable, 1/2 HP; single phase 1440 RPM motor; flutter free vacuum control knob; Wide mouthed 2 x 2 LITRE (Polycarbonate) with self sealing bungs and mechanical over flow safety device. 2.2. Settings : Manual 2.3. Userôs interface : Manual 3. **PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) Max: 43 x 30 x 68 cms. 3.2. Weight (lbs, kg) Max: 27Kg. 3.3. Noise (in dBA) : 50 dB A ± 3. 3.4. Heat dissipation : Should maintain upto 36.5 deg temp and the heat disbursed through a exhaust fan. 3.5. Mobility, portability : Yes 4. **ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1. Power Requirements 220 V, 50 Hz, 2 ± 0.5 Amps, 370 watts. 4.2. Battery operated : NA. 4.3. Tolerance (to variations, shutdowns) Voltage corrector / stabilizer to allow operation at ± 30% of local rated voltage. Use of SMPS to correct voltage. 4.4. Protection Electrical protection by resettable over current breakers or replaceable fuses, fitted in both live and neutral lines. 4.5. Power consumption : 200W. 4.6. Other energy supplies : NA 5. **ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1. Accessories & Spares Collection container & its cap, suctions tube tips, a vacuum gauge and control knob. 5.2. Consumables / reagents (open, closed system) Tubing:8 mm ID x 2 mtr (PVC), 2x2 lt polycarbonate jar. 6. **ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1. Atmosphere / Ambiance (air conditioning, humidity, dust ...) Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2. Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable and sterilizable using both alcohol and chlorine agents. 7. **STANDARDS AND SAFETY** 7.1. Certifications FDA /CE 1023, ISO 13485:2003; ISO 10079-1-1999; IEC 60601-1-8-2006; IEC 60601-1-SER-Ed 1.0-2011; IEC/TRF 60601-1-8-Ed 4.0-2010. 8. **TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance: Availability of 15 amp socket, safety and operation checks before handover. 8.2. Requirements for sign-off Certificate of Calibration and inspection from the factory.

			8.3. Training of staff (medical, paramedical, technicians).
2	MC0002	Suction Pump, Foot Operated	1. **USE** 1.1. Clinical purpose To aspirate fluids, secretions, or other foreign materials from a patientôs airway by means of suction. HNICAL 2. **TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) : 0-600 mm Hg ± 10 mm regulable, flutter free vacuum control knob. 2.2. Settings : Manual 2.3. Userôs interface : Manual 3. **PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) Max spec : 32 x 17 x 30 cms. 3.2. Weight (lbs, kg) : 2.5kg max. 3.3. Noise (in dBA) 50 dB A ± 3. 3.4. Mobility, portability : Yes 4. **ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1. Tolerance (to variations, shutdowns) : NA. 4.2. Protection : NA 4.3. Power consumption : NA 4.4. Other energy supplies : NA 5. **ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1. Accessories & spare parts Collection bottles, a vacuum gauge. 5.2. Consumables / reagents (open, closed system) : microbial filter, tubing. 6. **ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1. Atmosphere / Ambiance (air conditioning, humidity, dust ...) : capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2. Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable and sterilizable using both alcohol and chlorine agents. 7. **STANDARDS AND SAFETY** 7.1. Certifications FDA/CE 1023, ISO 13485:2003; ISO 10079-2-1999. 8. **TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance : NA 8.2. Requirements for sign-off : NA 8.3. Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) 8.4. Training of users in operation and basic maintenance shall be provided.
3	MC0003	Laryngoscopes	**1. USE** 1.1. Clinical purpose For viewing vocal folds and glottis. Surgical and mechanical ventilation/intubation. 1.2. Used by clinical department/ward : O.T / ICU / NICU/ Causality. 1.3. Overview of functional requirements : A light source on or via the blade illuminates the larynx to allow viewing and tube passage. The unit is handheld with internal batteries and has interchangeable, rigid blades of different sizes. **2. TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) : Fibber optic Laryngoscope- preferably should be reusable using the latest LED technology. The main body of the handle should incorporate an excellent grip & should feel even wearing a glove. There should be a freely moving light intensifier of light from the light source through to the tip of the fiber optic blade to prevent any possibility of cross contamination. The unit should allow the blade to be inserted

			easily & should provide a positive locking mechanism when moved in to the closed position. 2.2. Userôs interface : Manual 2.3. Software and/or standard of communication(where ever required) : NA **3. PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) : NA 3.2. Weight (lbs, kg) : Light weight (upto 500 gms) 3.3. Configuration : Handheld unit, single piece when in use; On/off switch to be robust and easy to use; External material to be non-ferrous; Blades to be surgical grade stainless steel; Supplied in protective, reclosable container. 3.4. Noise (in dBA), heat dissipation : NA. 3.5. Mobility, portability : Yes 3.6. Others : storage box should be provided **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1. Power Requirements Independent of external source. 4.2. Battery operated : Internal batteries, rechargeable preferred. Battery charger (if rechargeables), Battery compartment (if reusables) to be sealed against liquid ingress, yet easily opened. 4.3. Tolerance (to variations, shutdowns) : NA 4.4. Protection : NA 4.5. Power consumption : 3V lithium battery; 2 Nos. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1. Accessories (mandatory, standard, optional) : Batteries, blades of various neonatal sizes. 5.2. Spare parts (main ones) : Handle. 5.3. Consumables / reagents (open, closed system) : 3 bulbs/3LED should be given as spare. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1. Atmosphere / Ambiance (air conditioning, humidity, dust ...) Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. Liquid splash resistant. Blades should be autoclavable. 6.2. Userôs care, Cleaning, Disinfection & Sterility issues : Should be autoclavable. **7. STANDARDS AND SAFETY** 7.1. Certificates FDA/CE; ISO 7376:2009 gives general requirements for laryngoscopes used for intubation, and specifies critical dimensions for the handle and lamp of hookon type laryngoscopes. It also addresses the inter-changeability of blades and handles. 7.2. Local and/or international Manufacturer/supplier should have ISO certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance : NA. 8.2. Requirements for sign-off : NA 8.3. Training of staff (medical, paramedical, technicians) : NA
4	MC0004	Foetal Doppler system	**1. USE** 1.1. Clinical purpose: To non invasively detect foetal heart beats from the surface of the pregnant women's abdomen. 1.2. Used by clinical department/ward : Emergency/gynae deptt.C **2. TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) : Water proof probes of 2MHz, 3MHz and 5 MHz frequency, Ultra sound Intensity û10mw/cm2, Auto Shut Off Facility to save Battery Power, Built-in Speaker, Volume Control Facility and Audio Output for Ear Phone, Heart Rate Range should be from 50 to 120 bpm with accuracy of + /-2%, Should be Water Proof Body, Should have Facility for FHR Data transfer to PC. 2.2. Settings : Setting of ultraound intensity.

			2.3. User's interface : LCD display. 2.4. Software and/or standard of communication(where ever required) : Inbuilt. **3. PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) Handheld. 3.2. Weight (lbs, kg) : 500 gm. 3.3 Noise (in dBA), Noise: <60dBA. 3.5 Mobility, portability : Yes **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1. Power Requirements : AA batteries 4.2. Battery operated : AA battery type; Minimum Battery Time of 300 minutes. 4.3. Tolerance (to variations, shutdowns) : ± 10% of input AC. 4.4. Protection Electrical protection by resettable over current breakers or replaceable fuses, fitted in both live and neutral lines. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1. Accessories (mandatory, standard, optional) : Doppler probe, battery charger. 5.2. Consumables / reagents (open, closed system) : AA battery. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1. Atmosphere / Ambiance (air conditioning, humidity, dust ...) : Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2. User's care, Cleaning, Disinfection & Sterility issues : Complete unit to be easily washable and sterilizable using both alcohol and chlorine agents. **7. STANDARDS AND SAFETY** 7.1. Certificates (pre-market, sanitary) FDA or CE or UL approved product. Type B or BF. 7.2. Performance and safety standards (specific to the device type) : Shall meet IEC-60601-1-2:2007 Medical electrical equipment -- Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests (Or Equivalent BIS). 7.3. Local and/or international : Manufacturer should be ISO 13485 certified. **8. TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance : Supplier to perform installation, safety and operation checks before handover. 8.2. Requirements for sign-off Certificate of Calibration and inspection from the factory. 8.3 Training of staff (medical, paramedical, technicians) Training of users in operation and basic maintenance shall be provided.
5	MC0005	Nebulising systems	1. **USE** 1.1. Clinical purpose Designed to generate warmed aerosolized medication/fluids (finely dispersed airborne droplets in a liquid phase) intended to be inhaled by a patient with a respiratory disorder. 1.2. Used by clinical department/ward : AllAL 2. **TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) : Medicine cup capacity of minimum 5 ml. 2.2. Settings : Manual 2.3. User's interface : Manual 2.4. Software and/or standard of communication (where ever required) : NA 3. **PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) Should be compact. 3.2. Weight (lbs, kg) <2kg. 3.3. Noise (in dBA), heat dissipation : <60dBA 3.4. Mobility, portability : Yes

			4. **ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1. Power Requirements 220 V AC + 10%, 50Hz power supply. 4.2. Battery operated Rechargable battery (4.8 V nominal output). 4.3. Tolerance (to variations, shutdowns): ± 10% of input AC. 4.4. Protection Electrical protection by resettable overcurrent breakers or replaceable fuses, fitted in both live and neutral lines 4.5. Power consumption 2Watt (nebulizing); 6.5 Watt (charging). 4.6. Other energy supplies NA 5. **ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1. Accessories & Spares : With necessary accessories- nebulization mask, tubing for nebulizer; cable cord 5.2. Consumables / reagents (open, closed system) : Aerosol/medicinal solutions 6. **ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1. Atmosphere / Ambiance (air conditioning, humidity, dust ...) : Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2. User's care, Cleaning, Disinfection & Sterility issues : Complete unit to be easily washable and sterilizable using both alcohol and chlorine agents. 7. **STANDARDS AND SAFETY** 7.1. Certificates (pre-market, sanitary,) : FDA/ CE ; ISO 27427-2010; IEC-60601-1-SER--Ed 1.0 ï 2011. 8. **TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance Supplier to perform installation, safety and operation checks before handover. 8.2. Requirements for sign-off Certificate of Calibration and inspection from the factory. 8.3. Training of staff (medical, paramedical, technicians) : Training of users in operation and basic maintenance shall be provided.
6	MC0006	**Automated external defibrillators**	**1. USE** 1.1. Clinical purpose : To detect cardiac arrhythmias in a sudden cardiac arrest patient, and then audibly/visually instructs an operator to enable it to activate defibrillation of the heart through application of electrical shocks to the chest surface. 1.2. Used by clinical department/ward Emergency/ICU/Cardiac care **2. TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) ➢ Unit should be lightweight compact and portable. ➢ Unit should have facility for Automatic External Defibrillation and manual defibrillation. ➢ Should be able to deliver shock from 50-200 joules in biphasic mode via metal chest pads. ➢ Should having design protection to avoid passage of current to the user. ➢ The whole system should have an inbuilt recorder; TELEMETRY NOT RECOMMENDED. 2.2. Settings : Manual AND Automatic. 2.3. User's interface :The monitor should have a TFT color display with a three channel display. 2.4. Software and/or standard of communication(where ever required) : Inbuilt **3. PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) Compact. 3.2. Weight (lbs, kg) <10kg 3.3. Noise (in dBA), heat dissipation : <60dBA; adjustable heart rate alarm as well as paddles & ECG cable disconnection alarms. 3.4. Mobility, portability : Yes **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1. Power Requirements : 220 to 240V, 50 Hz. 4.2. Battery operated : Rechargeable battery backup of approximately 5 hours. 4.3. Tolerance (to variations, shutdowns) ± 10% of input AC.

			4.4. Protection : Electrical protection by resettable overcurrent breakers or replaceable fuses, fitted in both live and neutral lines. 4.5. Power consumption : Should not be more than 160 W. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1. Accessories & Spares : Chest paddles, 5.2. Consumables / reagents (open, closed system) : ECG cable; Recording paper rolls; Disposable pads; **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1. Atmosphere / Ambiance (air conditioning, humidity, dust ...) : Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2. User's care, Cleaning, Disinfection & Sterility issues : NA **7. STANDARDS AND SAFETY** 7.1. Certifications FDA, CE ; IEC-60601-1-2:2007; IEC 60601-1-8-2006; IEC 60601-1-SER-Ed 1.0-2011; IEC/TRF 60601-1-8 Ed4.0-2010; ISO 13485. **8. TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance Supplier to perform installation, safety and operation checks before handover. 8.2. Requirements for sign-off Certificate of Calibration and inspection from the factory. 8.3. Training of staff (medical, paramedical, technicians).
7	MC0007	Patient monitors	**1. USE** 1.1. Clinical purpose Designed to continuously measure and display multiple vital physiological parameters of newborn and premature infants, especially those under critical care. 1.2. Used by clinical department/ward : All 1.3. Overview of functional requirements : Operates from mains voltage or from internal rechargeable battery. Operator can set audio visual alarm levels for low or high levels of each parameter independently. Allows display of single, 3 lead ECG or simultaneous display of at least 5 waves ECG selected from up to 12 points. Display to be digital of all active parameters and trace display for at least three selectable parameters. Continuous display on screen of neonatal or infant ECG, respiration and heart rates, invasive /non-invasive blood pressure, body temperature and SpO2.ICAL **2. TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) 2. Should have facility for printing ECG at 25mm/sec and 50mm/sec speed. Should have facility for charging from both 12V DC & 220V AC. 3a. Should be supplied with. ➢ Pulse oximeter probe. ➢ ECG cable -12 lead. ➢ Temperature probe. ➢ NIBP (non-invasive blood pressure) probe. All probes should be supplied in 2 pairs, should be re-usable and should include adult, pediatric & neonatal size cuff/leads. ➢ Capable of saving data for min 24 hrs. ➢ Rates for consumables should be offered in price bid. ➢ Optional item to be quoted : invasive blood pressure-monitoring module complete with reusable transducer. ➢ The monitor should have facility for transmission of data from ambulance to a receiving station (desirable NOT Mandatory) to be quoted separately. 2.2. Settings : User operated 1mV ECG test marker function required. 2.3. User's interface : Manual (touch screen or remote operated not mandatory). 2.4. Software and/or standard of communication : Audio Visual alarms required: high and low levels for each parameter (operator variable settings), sensor / wire / probe disconnected, low battery. **3. PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) : Screen size minimum: 8.4" 3.2. Weight (lbs, kg) : <6kg. 3.3. Configuration : Case is to be hard and splash proof. Display must allow easy viewing in all ambient light levels. Cable connectors to be designed so as fit correct socket only.

			3.4. Noise (in dBA) : <50 dB; Lead disconnection Alarm > 65 dB. 3.5. heat dissipation : Should maintain nominal Temp and the heat should be disbursed through a exhaust cooling fan. 3.6. Mobility, portability Supplied in protective case for clean storage and safe transport. **4. ENERGY SOURCE** (Electricity, UPS, Solar, Gas, Water, CO2 ....) 4.1. Voltage (value, AC or DC, monophase or triphase) : 220 to 240V, 50 Hz. 4.2. Battery operated : Battery charger to be integral to mains power supply, and to charge battery during mains power operation of unit. Battery powered, silenceable alarm for power failure. Internal, replaceable, rechargeable battery allows operation for at least one hour in the event of power failure. 4.3. Tolerance (to variations, shutdowns) : Voltage corrector / stabilizer to allow operation at ± 30% of local rated voltage. 4.4. Protection : Electrical protection provided by fuses in both live and neutral supply lines. 4.5. Power consumption : <120Watt. 4.6. Other energy supplies : Mains cable. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1. Accessories & Spares : 2 pairs, 12 lead ECG cable. 5 packs of 100 disposable ECG connection electrodes. Two sets of reusable SpO2 probes including adult, paediatric & neonatal probes. Two sets of NIBP cuffs of each size. Two external skin temperature probes. 5.2. Consumables / reagents (open, closed system). **6. ENVIRONMENTAL** AND DEPARTMENTAL CONSIDERATONS 6.1. Atmosphere / Ambiance (air conditioning, humidity, dust ...). Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2. User's care, Cleaning, Disinfection & Sterility issues : The case is to be cleanable with alcohol. **7. STANDARDS AND SAFETY** 7.1. Certifications FDA / CE ; IEC-60601-1-2:2007; IEC 60601-1-8-2006; IEC 60601-1-SER-Ed 1.0-2011; IEC/TRF 60601-1-8 Ed4.0-2010; ISO 13485; ISO 80601-2-56-2009 (Thermometer); ISO 80601-2-61-2011 (SpO2). **8. TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance : Supplier to perform installation, safety and operation checks before handover. 8.2. Requirements for sign-off : Supplier to perform installation, safety and operation checks before handover. Local clinical staff to affirm completion of installation. 8.3. Training of staff (medical, paramedical, technicians) Training of users in operation and basic maintenance shall be provided.rt Different
8	MC0008	Syringe pump	**1. USE** 1.1. Clinical purpose Designed to precisely drive the plunger of a syringe down its barrel to infuse a solution when it must be administered with a high degree of volume accuracy and rate consistency. 1.2. Used by clinical department/ward : Intensive care unit (ICU), radiology department, orthopaedics, emergencies). 1.3. Overview of functional requirements : A syringe containing medication is securely mounted on the drive arm. Alarms indicate if any error situations occur. The drive arm infuses the medication at a steady, programmed rate.CAL **2. TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) ➢ Flow rate programmable range at least from 0.1 to 200 ml/hr, in steps of 0.1 ml/hr; and at least from 100 to 1200 ml/hr in steps of 1 ml/hr. ➢ Saves last infusion rate even when the AC power is switched off. ➢ Bolus rate should be programmable, with infused volume display. ➢ Selectable occlusion pressure trigger levels selectable from 300, 500 and 900 mmHg. ➢ Must work on commonly available 20, 50 and 60 ml syringes. ➢ Accuracy of ±2% or better. ➢ Maximum pressure generated Ò20 psi. ➢ Automatic detection of syringe size and proper fixing. Must provide alarm for

			wrong loading of syringe. ➢ Anti-bolus system to reduce pressure on sudden release of occlusion. ➢ Pause infusion facility required. ➢ Self-check carried out on powering on. ➢ Comprehensive alarm package required including: occlusion alarm, near end of infusion pre-alarm and alarm, volume limit pre-alarm and alarm, low battery pre-alarm and alarm, AC power failure, drive disengaged, syringe loading error, maintenance required. 2.2. Settings : Double loadable with one syringe of minimum 20ml. 2.3. User's interface : Automatic. 2.4. Software and/or standard of communication : Inbuilt. **3. PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) : Max spec: 120 x 100 x 40mm. 3.2. Weight (lbs, kg) : <500gm 3.3. Configuration : Tamper-resistant case made of impact resistant material. Securely mountable on tabletop, IV stand or bed fitting. 3.4. Noise (in dBA) : <50 dB. 3.5. heat dissipation : NA 3.6. Mobility, portability : Yes **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1. Voltage (value, AC or DC, monophase or triphase) : 220 to 240V, 50 Hz. 4.2. Battery operated Internal rechargeable battery having at least 5 hours backup for 10ml/hr flow rate with 50ml syringe. 4.3. Tolerance (to variations, shutdowns) : Voltage corrector/stabilizer to allow operation at ± 30% of local rated voltage. 4.4. Protection : Battery powered alarm for power failure or disconnection; Electrical protection provided by fuses in both live and neutral supply lines; 4.5. Power consumption : 25W **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1. Accessories & Spares : Clamp for mounting pump on IV stand. 5.2. Consumables / reagents (open, closed system) : Battery, syringe holder. **6. ENVIRONMENTAL** AND **DEPARTMENTAL CONSIDERATONS** 6.1. Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. ➢ Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. ➢ Enclosure to protect against water ingress; Possible to perform cleaning with alcohol or chlorine wipes. 6.2. User's care, Cleaning, Disinfection & Sterility issues : NA **7. STANDARDS AND SAFETY** 7.1. Certifications FDA / CE ; IEC-60601-1-2:2007; IEC 60601-1-8-2006; IEC 60601-1-SER-Ed 1.0-2011; IEC/TRF 60601-1-8 Ed4.0-2010; IEC-60601-2-24: Particular requirements for the safety of infusion pumps and controllers; ISO 13485 **8. TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance : Supplier to perform installation, safety and operation checks before handover. 8.2. Requirements for sign-off : As per requirement. 8.3. Training of staff (medical, paramedical, technicians) : Training of users in operation and basic maintenance shall be provided. 3-
9	MC0009	Automated 3-part Differential Heamotology Analyzer	**1. USE** 1.1. Clinical purpose Automated differential blood count: Automated hematology instruments using multiple parameters and methods (such as impedance) are used to count and identify the 3 major white blood cell types in blood (so-called 3-part differential count):, lymphocytes, monocytes/mixed population and ranulocytes/neutrophiles. 1.2. Used by clinical department/ward : Clinical and Analytical LaboratoriesNICAL **2. TECHNI** CAL **CHARACTERISTICS**

			2.1. Technical characteristics (specific to this type of device) ➢ 18 parameters (WBC, TC, RBC, Hb, hematocrit, MCV, MCH, MCHc, RDWSD/RDW-CV, PLT, MPV, Pt Crit, PDW, PLCR optional), with 3-part WBC differential. ➢ Maximum sample volume required 50 εl. ➢ Screen Colour touch screen. ➢ Printer Built-in printer and external printer option. ➢ Memory for 1000 results incl. histograms. ➢ Program Built-in QC program for. ➢ 3 levels/control ➢ Barcode reader and external option. ➢ External keyboard. ➢ Automatic sample dilution. ➢ Automated start up and shutdown. ➢ Auto probe wipe and external option. ➢ System must have throughput of atleast 60 samples per hour. ➢ Linearity of 18 parameters (Hematocrit, platelet, WBC, RBC, Hb) min. 2.2. User's interface Touch screen. 2.3. Software and/or standard of communication(wherever required) : USB printer interface, HL7. **3. PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) : N/A 3.2. Weight (lbs, kg) : N/A 3.3. Noise (in dBA) : N/A 3.4. Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism. 3.5. Mobility, portability Stationary laboratory Installation. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1. Power Requirements 230/110 VAC, 50/60 HZ, 60 VA, +-10% 4.2. Battery operated : No 4.3. Protection : N/A 4.4. Power consumption Less than 100 VA. **5. ACCESSORIE S, SPARE PARTS, CONSUMABLES** 5.1. Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) ➢ 2D-Barcode Scanner. ➢ Reagents: All the reagents required for 1000 tests should be supplied with the equipment along with one set of tri level control. ➢ Closed System rate to be declared for cost/test. ➢ Online UPS for 30 minutes back up. ➢ Calibrator - 1.NG/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENT AL AND DEP ARTMENTAL CONSIDERATIONS** 6.1. Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2. User's care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1. Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485/US(FDA)/EU(CE) certification for quality standards. ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electro-medical equipment: 61326-1.

			➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2-101 for safety. 7.2. Local and/or international Manufacturer/supplier should have ISO certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket. ➢ Safety and operation check before handover; 8.2. Requirements for sign-off Certificate of calibration and inspection from the manufacturer. 8.3. Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented;
10	MC0010	Automated 5-part differential haematology analyzer ENERAL	**1. USE** 1.1. Clinical purpose Automated differential blood count: Automated haematology instruments using multiple parameters and methods (such as fluorescence, flow cytometry and impedance) are used to count and identify the 5 major white blood cell types in blood (so-called 5-part differential count): neutrophils, lymphocytes, monocytes, eosinophils and basophils. 1.2. Used by clinical department/ward Analytical laboratories.CAL **2. TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) ➢ Five-part differential. ➢ 24 parameters, all different WBC's should be measured directly. ➢ Advanced, integrated self-cleaning system. ➢ On-screen patient results trending. ➢ Stores 5, 000 test results with histograms and scattergrams. ➢ Integrates with common practice management systems. ➢ maximum sample required 100 ε L sample size permits whole blood analysis from venous collections. ➢ Parameters Total Leukocytes (White Blood Cells) and Differential (in absolute numbers and %) for: Neutrophils, Lymphocytes, Monocytes, Eosinophils, Basophils. ➢ Sample Material Capillary or venous (EDTA) whole blood. ➢ Linearity of all parameters. ➢ Measuring Time Within 60 Sec. ➢ System must have throughput of atleast 60 samples per hour in all discrete modes. ➢ Manual mode. ➢ Stat mode. ➢ Pre-diluted mode and whole blood mode. 2.2. User's interface Printer, keyboard, barcode reader, PC, optional. 2.3. Software and/or standard of communication(where ever required) : NA **3. PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) : NA 3.2. Weight (lbs, kg) : NA 3.3. Noise (in dBA) : NA 3.4. Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism. 3.5. Mobility, portability Stationary lab Installation. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1. Power Requirements Recharging unit: Input voltage- single/3-phase. 4.2. Battery operated No 4.3. Tolerance (to variations, shutdowns) : ±10% 4.4. Pressure gauge : NA 4.5. Operating temperature Analyzer: 4-50 °C (39-122 °F). Capillary samples from finger stick:18-25 °C (67-77 °F). 4.6. Protection : N/A 4.7. Power consumption : upto 500VA.

			5. ACCESSORIES, SPARE PARTS, CONSUM ABLES 5.1. Accessories (mandatory, standard, optional); Spare parts (main ones);Consumables/reagents (open, closed system) ➢ 2D-Barcode Scanner. ➢ Reagents: All the reagents required for 1000 tests should be supplied with the equipment along with one set of tri level control. ➢ Closed System rates to be closed for all test. ➢ Online UPS System for 30 minutes back up.G/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1. Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2. User's care, Cleaning, Disinfection & Sterility issues : ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1. Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international : ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485/US(FDA)/EU(CE) certification for quality standards. ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2-101 for safety. 7.2. Local and/or international Manufacturer/supplier should have ISO certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1. Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2. Requirements for sign-off Certificate of calibration and inspection from the manufacturer. 8.3. Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented;
11	MC0011	**Binocular Microscope**	**1. USE** 1.1. Clinical purpose Binocular microscope is simply a microscope that lets the viewer use both eyes. The microscope has 2 eye lenses. The development of the double eye piece microscope was adapted to reduce the eyestrain and muscular strain that typically results from traditional microscopes. 1.2. Used by clinical department/ ward Clinical labs.NICAL **2. TECHNICAL CHARACTERI STI CS** 2.1. Technical characteristics (specific to this type of device) ➢ Body-Single mould sturdy stand, inclined Binocular body 30 °, 360º rotatable head. ➢ Eyepieces-Highest quality 10 X/20mm wide angle anti fungus field eyepiece. one with pointer. Diopter adjustment must be present on both eye pieces. ➢ Objectives-Parfocal, antifungus coated 4x, 10x, 40x and 100x (oil immersion) with semi planner achromatic correction. Objective should be well centred even if their position on turret is changed. ➢ Optical system-Infinity corrected. ➢ Stage - Double plate rackless horizontal mechanical stage preferably 100 x 140 mm with fine vernier graduations designed with convenient coaxial adjustment

			for slide manipulation preferably through 30 x 70 mm double slide holder. ➢ Sub stage-Abbe condenser focusable, continuously variable iris diaphragm. ➢ Illuminator-Built-in LED light source with white light with intensity control and LED life of more than 10, 000 Hrs. ➢ Finish-A durable textured acid resistant finish. ➢ Battery backup : minimum 1 Hour. ➢ Nose piece: Backward tilted revolving nose piece suitable to accommodate four objectives with click stop and rubber grip. ➢ Focussing: Coaxial coarse and fine focussing knob, capable of smooth, fine focussing movement sensitivity; minimum: 300 micron; focussing stop for slide safety. 2.2. User's interface Manual. 2.3. Software and/or standard of communication(where ever required) : NA **3. PHYSICAL CHARACTERI STICS** 3.1. Dimensions (metric) : NA 3.2. Weight (lbs, kg) : NA 3.3. Capacity : NA 3.4. Noise (in dBA) : NA 3.5. Heat dissipation : NA 3.6. Mobility, portability Portabl. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1. Power Requirements Input voltage- single/3-phase. 4.2. Battery operated No 4.3. Tolerance (to variations, shutdowns) : NA 4.4 Pressure gauge : NA 4.5 Operating pressure : NA 4.6 Sterilizing pressure : NA 4.7 Protection : Should have over-charging cut-off with visual symbol. 4.8 Power consumption : Less than 2 W. **5. ACCESSORIES, SPARE PART S, CONSUMABLES** 5.1. Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/ reagents (open, closed system) : Should provide with wooden storage box, dust cover, immersion oil.NG/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENT AL CONSIDERATIONS** 6.1. Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2. User's care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1. Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS Standard) ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety. 7.2. Local and/or international Manufacturer/supplier should have ISO certificate for quality standard. **8.** TRAINING AND INSTALL ATION 8.1. Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket;

			➢ Safety and operation check before handover; 8.2. Requirements for sign-off Certificate of calibration and inspection from the manufacturer 8.3. Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented.
12	MC0012	Centrifuge	**1. USE** 1.1. Clinical purpose Used in Biochemical and Analytical labs for Hematocrit, blood Corpuscle percentage, Serum Analysis, Precipitate Separation and Blood Group matching. 1.2. Used by clinical department/ward : Analytical Laboratories. CAL **2. TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) ➢ Speed: Maximum Range 4000 to 6000 RPM. ➢ Reciprocating Centrifugal force (RCF): 3000 to 3500. ➢ Minimum Capacity: 240 ml. ➢ Digital Timer range: 0 to 59 minutes. ➢ Auto Lid interlock to prevent opening while running centrifuge with emergency lidlock release. ➢ Motor imbalance detector feature - desirable. ➢ Microprocessor with digital display. ➢ Dynamic break for quick declaration. ➢ Stainless steel Chamber easy to clean. ➢ Hinges to prevent door falling. ➢ Rotor Sizes: 16 x 15ml. ➢ Rotors should be autoclavable. 2.2. Userôs interface : Manual 2.3. Software and/or standard of communication (where ever required) : NA **3. P HYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Capacity 120 ml or above 3.4 Noise (in dBA) : NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism. 3.6 Mobility, portability Portable **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements 220-240 V/50Hz. 4.2 Battery operated : No 4.3 Protection : NA 4.4 Power consumption 400 to 500 Watts. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) Rubber adapter should be provider for the use of vacutainer for 3ml and 5ml. BIDDING/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENT AL AND DEP ARTMENT AL CON SIDERATONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover.

			➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS Standard). ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety. ➢ Should have ISO certificate for quality standard. **8. TRAINING AND IN STALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket;Safety and operation check before handover; 8.2 Requirements for sign-off Certificate of calibration and inspection from the manufacturer. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented.
13	MC0013	Semi automated biochemistry analyzer	**1. USE** 1.1. Clinical purpose The Semi -automated Biochemistry Analyzer measures biochemical indexes by analyzing blood and other body fluid, then combines with other clinical information, to help diagnose disease, evaluate organs function. 1.2. Used by clinical department/ward : Pathology and diagnostic laboratory TECHNICAL **2. TECHNICAL CHARACTERI STICS** 2.1 Technical characteristics (specific to this type of device) ➢ Analyzer should use wet chemistry reagent. ➢ Analyzer should have ability to use external cuvettes and integrated flow cell. ➢ Analyzer should have more than 200 programmable channels. ➢ Key board should be touch/mechanical. ➢ Analyzer should have 5 assay types: End point, Fixed time, Kinetic, absorbance and 1-point calibration with option for extended keyboard. ➢ Analyzer must have calibration types: Linear factor, multi point, pint to point and Log-Logit. ➢ In kinetic essay measurement interval should be 1 second. ➢ levels control with day to day levey jennings chart stored and displayed. ➢ Flow cell must be quartz. ➢ Flow cell must have optical path of 10mm. ➢ Flow cell volume should be less than 20 ε L. ➢ Measurement range should be 25, 30, 37 degree Celsius with 1 degree increment. ➢ Standard wavelengths in the range of 340-700. ➢ Analyzer must store 1000 results. ➢ Analyzer resolution must be 0.0001 absorbance unit and absorption range from 0.00-3.00 unit. 2.2 Userôs interface Manual 2.3 Software and/or standard of communication(where ever required) : NA **3. P HYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) : NA

			3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism. 3.6 Mobility, portability Stationary lab Installation. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz 4.2 Battery operated : No 4.3 Tolerance (to variations, shutdowns) : ±10% 4.4 Protection : NA 4.5 Power consumption. **5. ACCESSORIES, SPARE PART S, CONSUMABLE S** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) ➢ UPS for back up of system for half hour. ➢ Light source/Lamp-1 no. ➢ Open System. ➢ Micro pipettes(5 No.) - 2 variable(5-50), (100-1000) ➢ Tips 500 - small and 500- big. BIDDING/PROCUREMENT TERMS/DONATION REQUIREMENTS **6.** ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and supplier should have ISO 13485/US (FDA)/EU(CE) certification for quality standards. ➢ Shall meet internationally recognised for Electromagnetic Compatibility (EMC) for electromedical equipment: 61326-1 ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-281 7.2 Local and/or international Manufacturer/supplier should have ISO 13485 certificate for quality standard. **8.** TRAINING AND INSTALLATION 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for sign-off Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
14	MC0014	Semi-automated ELISA reader	**1. GENERAL USE** 1.1 Clinical purpose The enzyme-linked immunosorbent assay (ELISA) is a test that uses antibodies and color change to identify a substance. ELISA is a popular format of ñwet-labò type analytic biochemistry assay that uses a solid phase enzyme immunoassay (EIA) to detect the presence of a substance, usually an

			antigen, in a liquid sample or wet sample. ELISA evaluates either the presence of antigen or the presence of antibody in a sample, it is a useful tool for determining serum antibody concentrations. 1.2 Used by clinical department/ward : Analytical Laboratories TECHNICAL 2. **TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) **Washer:** ➢ The device should be fully automated and easy to operate with 8 and 12 channel manifold. ➢ It should be capable to wash flat, round and V bottom plates and strips. ➢ It should have large display along with more than 40- 50 program storage facility. ➢ System should have calibration facility. ➢ System should have warning/alarm for waste container full; wash bottle empty. ➢ Residual volume after washing should be < 2ul. ➢ It should have specially designed peristaltic pump to dispense 50 - 400 ul. ➢ It should be supplied with waste bottle, wash bottle and rinse bottle of capacity 2 liters with tubings. ➢ It should have option of washing cycles. ➢ Cross wise aspiration, over flow washing, bottom washing. Automatic manifold detection. ➢ Equipment should be un-pressurized, capable of using any bottle or container for washing. It should be suitable for UV & flat bottom microplate. **Microplate Reader:** ➢ Bichromatic/Optics with six wave lengths. ➢ Trichromatic Light source. ➢ Internal Printer with port for external printer. ➢ Should read ELISA Plate Horizontally A to Hand and vertically 1 to 12. ➢ Photometric Accuracy should be ±3%. ➢ Print Out of whole plate in Matrix Format. ➢ Linear measurement range 0 to 4 Absorbance unit. ➢ Interference, filters. ➢ Filters of 405, 450, 492, 630 nm with two extra positions. 2.3 Software and/or standard of communication(where ever required) Compatibility with external Printer. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism. 3.6 Mobility, portability Stationary lab Installation. 4. **ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Operable at- Input voltage- 220V-240V AC, 50Hz. 4.2 Battery operated : No 4.3 Tolerance (to variations, shutdowns) : ±10% 4.4 Protection 4.5 Power consumption. 5. **ACCESSORIES, SPARE PARTS, CONSUM ABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) ➢ External dot matrix printer. ➢ Light/Lamp source.

			➢ Multichannel pipette with variable dispensing volume 50-200 ul. ➢ Paper rolls for internal printer- 10 nos. BIDDING/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ...); Performance and safety standards (specific to the device type); Local and/or international. ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485/US(FDA)/EU(CE) certification for quality standards. ➢ Shall meet internationally recognised for Electromagnetic. Compatibility(EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-281, IEC 61010-101, IEC 61010-2-40 for safety. 7.2 Local and/or international Manufacturer/supplier should have ISO certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Should be operable at 220 -240 volts (50 - 60 Hz). ➢ Safety and operation check before handover. 8.2 Requirements for sign-off Certificate of calibration and inspection from the manufacturer. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance. ➢ Advanced maintenance tasks required shall be document.
15	MC0015	Semi-Automated Urine Strip Analyser	**1. USE** 1.1 Clinical purpose Used in biochemical labs for identification of specific bio-chemical marker in urine like Glucose, Ketones proteins pH etc. in clinical conditions like Diabetes, Renal failure Acidosis etc. 1.2 Used by clinical department/ward : Biochemistry Laboratories TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) Type: reflectance photometer Throughput of min 50 strips/hour at two. levels - normal and abnormal. Memory: patient test results: 1000 and QC test results: 50. Display: touch-screen LCD Should have flagging facility Should be Able to analyse 10 Parameters: Leucocytes, Nitrite, Urobilinogen, Protein, pH, Blood Specific: gravity, Ketones, Bilirubin, Glucose. 2.2 Userôs interface Manual: with USB interface/Rs 232. 2.3 Software and/or standard of communication(where ever required) : Inbuilt **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA

			3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism. 3.6 Mobility, portability Portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz. 4.2 Battery operated : Yes 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection : Should have over-charging cut-off with visual symbol. 4.5 Power consumption Less than 50 W. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) ➢ Thermal Paper 10 rolls. ➢ Test Strips price to be declared and 1000 test strips to be provided. ➢ Calibration strip 2. BIDDING/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CON SIDERATON S** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485/US(FDA)/EU(CE) certification for quality standards. ➢ Shall meet internationally recognised for Electromagnetic, Compatibility(EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2-101 for safety. 7.2 Local and/or international Manufacturer/supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for sign-off Certificate of calibration and inspection from the manufacturer. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented;
16	MC0016	300 mA HF X-Ray machine	**1. USE** 1.1 Clinical purpose Radiography of the bones and fractures and other arthropathies.

X-Ray Chest for the supportive diagnosis of the Pulmonary Tuberculosis X-Ray Pelvis (KUB) for renal disorders and stones. Sinusitis, Fractures of the Skull Cardiac diseases and cardiac enlargement Silicosis and other respiratory conditions, like Pleual effusion, hydrothorax, Pneumothorax Peritonitis by X-Ray abdomen.

TECHNICAL

2. TECHNICAL CHARACTERI STICS

2.1 Technical characteristics (specific to this type of device) High Frequency X- Ray machine suitable for general Radiography. X-Ray Generator

- High Frequency X-Ray generator having Frequency of 40 KHz more suitable for Radiography should be provided.
- Power output of generator should be 25 KW or more.
- Radiography KV range should be 40 to 110 KV or more.
- mA range (Rad.) : 300mA or more ÅExposure time (Rad.): 1 ms to 2 sec. with maximum numbers of steps. Control:
- A very compact, Soft Touch Control Panel having following functions & indications should be provided. The panel can be supplied in floor or wall mount with Spill Proof design Following features should be available on the control panel.
- Machine ON/OFF switch ÅDigital Display of KV& mAs.
- K V & mAs increase and decrease switches.
- Tube focal spot selection switch.ÅReady and x-ray on switch with indicators.
- Bucky Selection switch.
- Self diagnostic Programme with Indicators for Earth fault error, KV error, filament error & Tubeôs Thermal Overload.

X-Ray Tube

- One No Dual focus Rotating Anode BEL/Toshiba/Imported X-ray tube thermally protected having focal spot:
- 1mm or less small Focus, 2mm or less large Focus.
- Anode heat storage capacity of tube should be more than 140 KHU.
- One no manual collimator with aluminium filter & for adjustment of exposure area.

Column Stand:

- It should have floor to ceiling stand with vertical counter balanced travel.
- It should have 360 deg. Rotation.
- It should be provided one vertical bucky stand with machine.
- Table.
- Five position manual tilt table having buky grid ration of 8:1 with 85 lines per inches should be provided.
- The bucky tray should accept cassette of 8òx10ò, 10òx12ò and 14òx17ò size.

2.2 Userôs interface : Manual

2.3 Software and/or standard of communication (where ever required).

3. PHYSICAL CHARACTERISTICS

3.1 Dimensions (metric) : NA

3.2 Weight (lbs, kg) : NA

3.3 Configuration : NA

3.4 Noise (in dBA) Noise-free system

3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism

3.6 Mobility, portability Certified Room Installation.

4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)

4.1 Power Requirements Power unit: Input voltage- 400V-440V AC, 50Hz ;3 - phase

4.2 Battery operated No

4.3 Tolerance (to variations, shutdowns) : NA

4.4 Protection Stabliser of appropriate capacity to be installed.

4.5 Power consumption 25 to 30 KW.

5. ACCESSORIES, SPARE PARTS, CONSUM ABLE S

5.1 Accessories (mandatory, standard, optional); Spare parts (main ones);

			Consumables/reagents (open, closed system) Machine should be supplied with following transducers: ➢ 2 No. BARC Approved whole body lead apporns with all attachements. ➢ One Pair of 8 meter H. V. Cable. BIDDING/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 800% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ Should be FDA/European CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised for Electromagnetic Compatibility (EMI/EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety. ➢ AERB type approved. 7.2 Local and/or international Manufacturer/supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of three phase uniform power supply. ➢ Safety and operation check before handover. ➢ To be installed in a separate room. ➢ Facility for dark room should be available. 8.2 Requirements for sign-off Certificate of calibration and inspection of parts from the manufacturer. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented;
17	MC0017	Color Doppler Machine	**1. USE** 1.1 Clinical purpose Doppler ultra-sonography is a non-invasive diagnostic procedure that changes sound waves into an image that can be viewed on a monitor. an ultrasonic technique for detecting anatomic details by color coding of velocity shifts. In cardiography blood flowing in one direction appears red, and blood flowing in the opposite direction appears blue. The technique can also indicate the velocity of red blood corpuscles moving through the circulatory system, which makes it possible to quantify the flow, measure the pressures within the heart chambers, and calculate the stroke volume. In laparoscopy, Doppler color flow allows for rapid identification and differentiation of ducts and valves in the viscera, particularly in detection and diagnosis of pancreatic and liver tumours and colorectal liver metastases. 1.2 Used by clinical department/ward : Radiology diagnostic laboratories.NICAL **2. TECHNICAL CHARACTERI STI CS** 2.1 Technical characteristics (specific to this type of device)

			The system should be state art with full Digital Technology & should be capable of whole body sonography & other application for adult & paediatrics (Infants & Neonates) which includes abdominal, Obs/Gyn, Endovascular, Peripheral vascular, transcranial, transvaginal, transrectal & small parts. ➢ The system should incorporate facility for high resolution 2D, 3D, M mode, PW color imaging, Power Doppler Angio Imaging Modes. ➢ The system should have more than 20000 Digital Channels & on the site to higher number of channels (preferable). ➢ The system should have 256 Grey shade or more. ➢ The system should have capability of triplex display in real time with all probes. ➢ The system should have a very high frame rate of 700 frames per second or more.Please specify frame rate in triplex mode. ➢ The system should have Harmonic imaging for hard to image patients. The system shall support Tissue Harmonic Imaging capability on phased, linear, 3D and curved array transducers. ➢ The system should have advance image processing algorithms to analyze between targets & artifacts so as to sharpen target anatomy, reduce the sparkle & artifacts to improve image quality. ➢ The system shall offer Harmonic Imaging in Power Doppler Imaging mode for improved sensitivity and specificity in differentiating blood/agent from tissue. ➢ The system should have facility for Zoom(Real-time and Frozen-image) & manipulation of image through pre-processing and post-processing with cine loop viewing image of all modes. ➢ System should have disc of atleast 500 GB or more. ➢ The system should have facility of digital storage & retrieval of B/W & color image data(Both frozen & cine loops) on built in as well as ramble media(CD, DVD)USB port. ➢ The system should have automatic real time quantification of Doppler parameter like velocity, frequency, time heart rate stop, flow volume, plasticity index, resistivity index, peak velocity, average value, point value, area & diameter flow volume etc. ➢ The system should have high dynamic range of 170 dB with scanning depth of 30 cm or more. ➢ All transducers(minimum 3) should be broadband width, Frequency range 2 to 12 MHz or more with universal ports for transducer interchange. Two active ports and one parking probe is required. ➢ System should have 19ò HD display with tilt and swivel Facility along with alphanumeric keyboard with illuminating keys and status function. ➢ Dicom 3.0 compatible. ➢ Review of stored images is desirable. 2.2 Userôs interface Software, Automatic (stages to be displayed or recordable for printing). 2.3 Software and/or standard of communication (where ever required) **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) Noise-free system. 3.5 Heat dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism. 3.6 Mobility, portability Certified Room Installation. **4. ENERGY SOUR CE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Power unit: Input voltage- 220V-240V AC, 50Hz Single-phase. 4.2 Battery operated No 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection : NA **5. ACCESSORIES, SPARE PARTS, CONSUMABLES**

			5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) Machine should be supplied with following transducers: ➢ Broad band convex array transducer with multi-frequency range of 2 to 5 MHz or wider range-1 No. ➢ Broad band transvaginal/transrectal probe with multi-frequency range between 5 to 8 MHz or wider range-1 No. ➢ Linear probe Transducer 5 to 12 MHz or more. The system should have following documentation devices i. Laser color printer for color image printing. ii. B/W Thermal printer of latest model. iii. Glazed thermal paper rolls 50 no. & 5 rim of Glossy paper sheet. iv. Online Ups for power back up of minimum 30 minutes v. 50 nos. of CDs to be supplied BIDDING/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARD S AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international. ➢ Should be FDA/European CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised for Electromagnetic Compatibility (EMI/EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety. 7.2 Local and/or international Manufacturer/supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; ➢ To be installed in a separate room. 8.2 Requirements for sign-off Certificate of calibration and inspection of parts from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance for 2 weeks; ➢ Advanced maintenance tasks required shall be documented.
18	MC0018	Ultrasound system	**1. USE** 1.1 Clinical purpose Diagnostic sonography (ultrasonography) is an ultrasound-based diagnostic imaging technique used for visualizing internal body structures including tendons, muscles, joints, vessels and internal organs for possible pathology orlesions. The practice of examining pregnant women using ultrasound is called obstetric sonography, and is widely used. 1.2 Used by clinical department/ward : Radiology laboratories TECHNICAL

			2. TECHNI CAL CHARACTERISTICS 2.1 Ultrasound scanner with integrated trolley with probe, soft touch alphanumeric key board with track ball: ➢ With panel switches & controlôs easily operable. ➢ Integrated high resolution Monitor(17ò). ➢ Probes & Gel holder-conveniently placed (2 each). Following transducers are to be supplied: ➢ A-2.0-5.0 MHz Multi frequency Convex Transducer-One. ➢ B-5.0-12.0 MHz Multi frequency Linear transducer-One. ➢ C-5.0-8.0 MHz or more Endo Cavitory probe-One. (+/- 1 MHz to be allowed for each): i. All probes should be electronic transducers and multi-frequency preferably three frequencies and should give aperture & depths of scanning. ii. Controls for Depth, gain compensation, body markers with transducers position. iii. Real-time continuous dynamic focus. iv. Auto annotation facility anywhere on image. v. Image display in B, B/M&M Model(2B&2D). vi. Zoom facility minimum five times or more. vii. Shades of grey 256 h. Inbuilt cine memory. viii. Unite should be capable of measuring BPD, CRL, FL & AC and other GA parameters. ix. Facility for image magnification, inversion, changing, scan, direction, freeze facility. x. 8 step STC/GTC should be available. xi. Frame rate minimum 50 FPS, hard disk capacity of 200GB or more. xii. Caliper with trackball for the measurement of distances circumferences, area volume etc. should be possible to make different measurement on single image. xiii. Alphanumeric key board, xiv. Panel Switches & Foot Controls. xv. Patient reports for Obs/Gynae including fetal growth trend, including Histogram facility for Tissue texture & Trend graph for IUGR cases, Urology and orthopedics. xvi. Give the gain adjustable/Range & its steps. xvii. Calculations needed, Velocity, Heart rate, Volume addl. modes. xviii. Dicom 3.0 compatible. xix. Review of stored images is desirable. xx. Channels: 1000 or more. xxi. Depth: 25 to 30 cm. xxii. Dynamic range: 170dB & above. xxiii. Cine loop preview for minimum 60 sec or more. xxiv. Minimum 2 active ports should be there. 2.2 Userôs interface Manual 2.3 Software and/or standard of communication(where ever required) : NA **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Max: 400mm (L) x 300mm (W) 160mm (H) 3.2 Weight (lbs, kg) Max:17 lbs 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism. 3.6 Mobility, portability Portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz. 4.2 Battery operated : No 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection Should have over-charging cut-off with visual symbol. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES**

			5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system). The system should be supplied with the following accessories: ➢ B & W thermal printer with 50 rolls. ➢ Two KVA online suitable UPS. DING/PROCUREMENT TERMS/DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATION S** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements (or equivalent BIS Standard). ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMI/EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety. 7.2 Local and/or international Manufacturer/supplier should have ISO 13485 certificate for quality standard. **8. TR AINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket. ➢ Safety and operation check before hand over. ➢ Machine to be installed only when PNDT registration is obtained by health care facility. 8.2 Requirements for sign-off Certificate of calibration and inspection from the manufacturer. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance atleast for two weeks. ➢ Advanced maintenance tasks required shall be documented.
19	MC0019	**500 mA X-Ray Machine(HF)**	**1. USE** 1.1 Clinical purpose Radiography of the bones and fractures and other arthropathies. X- Ray Chest for the supportive diagnosis of the Pulmonary Tuberculosis. X - Ray Pelvis (KUB) for renal disorders and stones. Sinusitis, Fractures of the Skull. Cardiac diseases and cardiac enlargement. Silicosis and other respiratory conditions, like Pleual effusion,, hydrothorax, Pneumothorax. Peritonitis by X-Ray abdomen. 1.2 Used by clinical department/ward : Radiology DepartmentNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) High frequency X-Ray machine suitable for general radiography. **X-RAY GENERATOR :** ➢ High Frequency X-Ray Generator having frequency of 50KHz or more should

			be provided. ➢ Power output of generator should be 50KW. ➢ Radiographic KV Range should be 40 to 125KV. ➢ mA Range (Rad.): 500mA or more. ➢ Exposure time (Rad.): 1ms to 3Sec. ➢ mAs Range (Rad.): 1 to 200mAs. **CONTROL:** A very compact, Soft Touch Control Panel having following functions & indications should be provided. The panel can be supplied in Floor or Wall mount with Spill Proof design. Following features should be available on the control panel. ➢ Machine ON/OFF Switch. ➢ Digital Display of KV & mAs. ➢ KV & mAs increase and decrease switches. ➢ Tube focal spot selection Switch. ➢ Ready and X-Ray on switch with Indicators ➢ Bucky Selection Switch. ➢ Self diagnostic Programme with Indicators for Earth fault error, KV error, filament error & Tubeôs Thermal Overload. ➢ Anatomical Programming Radiography (i.e. APR) should have Preprogrammed parameters of human Anatomy Up to 216 programs which helps the user to select exposure parameters based on bodypart, examination view and size of the patient. 2.1 Technical characteristics (specific to this type of device) A dual action hand switch with retractable cord should be provided for Radiation Protection of Operator. There should be provision for a cordless Exposure switch also. There should be provision of auto shut off of Control if no key is pressed for 10Min. **X-RAY TUBE:** ➢ Two Nos. Dual focus Rotating Anode X-Ray tube thermally protected ➢ Anode heat storage capacity of tube should be more than 140KHU. ➢ Two Pair of 8 meter H.V. Cable. ➢ Two Nos. Collimator with auto shut off facility should be provided. **HV TANK:** ➢ A very compact H.V. Tank filled with high dielectric transformer oil should be provided. The H.V. Tank should contain H.V. transformer, Filament Transformers, H.V. Rectifiers & H.V. Cable receptacles. **TUBE STAND:** ➢ Floor to Ceiling Stand with Counter Balanced Tube Head (Rotatable ± 180 Degree), 360 Degree Rotatable; mounted on Floor Ceiling Rails for convenient movements should be provided. 2.1 Technical characteristics (specific to this type of device) **TABLE:** ➢ Motorized table should have motorized bucky consisting of bucky grid of size 17 ¼ò x 18 7/8ò ratio 8:1, 85 lines/inch. Spot Film Device (semi automatic) capable of doing all routine spot filming (4 on 1, 2 on 1, 1 on 1) for use with 8ò x 10ò, 10ò x 12ò, 14ò x 14ò cassettes. Grid size 15ò x 15ò, 6:1 ratio, 103 lines per inch. Compression movement of spot film device is motorized. The fluoroscopic parameters (fluoro KV, fluoro mA and fluoro time) should be digitally displayed on the SFD. Control of fluoro KV should be available on SFD. **VERTICAL BUCKY STAND:** ➢ Vertical Bucky Stand with oscillating Grid of Ratio 8:1, 85 lines/inch is provided.T ➢ The Bucky moves up & down & is equipped with a stainless steel cassette tray. ➢ The stand is floor-mounted type & can accommodate cassettes up to 14ò X 17ò.

			The Bucky is tilted in 6 steps of 15 degree Angle each for various Radiographs. 2.2 User's interface : manual 2.3 Software and/or standard of communication(where ever required) : In built **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) Noise-free system 3.5 Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism 3.6 Mobility, portability Stationary Installation. **4. ENERGY SOUR CE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Power supply: 230V, AC, 50Hz. 15 Amps ,three phase, Line resistance < 0.4 ohms 4.2 Battery operated : No 4.3 Tolerance (to variations, shutdowns) line regulation of ±10%. 4.4 Protection : NA **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables /reagents (open, closed system). Machine should be supplied with following transducers:- ➢ 2 No. BARC Approved whole body lead aprons with all attachments. IDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international. ➢ Should be FDA/ European CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601- 1- General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised standard for Electromagnetic Compatibility(EMI/EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1-3,IEC 61010-1-2,IEC 61010-2-54,IEC 61010-1-6 and IEC 62304 ➢ AERB type approved 7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND IN STALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance. Three phase stable power supply 8.2 Requirements for sign-off Certificate of calibration and inspection of parts from the manufacturer

			8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
20	MC0020	C-ARM System(HF)	**1. USE** 1.1 Clinical purpose C-arm machine is a device used by a physician/surgeon to guide surgical instruments while watching the instrument being driven on a live x-ray machine 1.2 Used by clinical department/ward : OT and Screening labsICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) : High End C-Arm with large LCD display. 1K X 1K High resolution imaging chain with progressive scan CCD camera, 9ò Image Intensifier and dedicated computer based acquisition system. The movements should be smooth having very simple positioning mechanism. **X-RAY GENERATOR:** High Frequency 50 KHz X-Ray Generator with power output 5KW or more should be provided. Following modes should be provided: ➢ Radiography. ➢ Fluoroscopy selection of continuous, single pulse, multi pulse should be there. ➢ KV Range (Rad./Fluoro): 40 to 120KVP in 1KV/Step. ➢ Radiographic mA Range: more than 100Ma ➢ Fluoroscopy mA output: Up to 5mA (Normal Fluoroscopy) ➢ Up to 20mA (Boosted fluoroscopy) ➢ mAs output: 0.1 - 200mAs or more **X-RAY TUBE:** ➢ Dual focus Rotating Anode X-Ray Tube of focal spot 0.3mm (small) & 0.6mm (large) to be provided. ➢ Anode heat storage capacity should be more than 250KHU. ➢ Iris Collimator should be provided. 2.1 Technical characteristics (specific to this type of device) **CONTROL PANEL:** A very compact, soft touch control panel(A.P.R) with 20 X 3 (column x rows) L.C.D display on which KV, mAs, fluoro time, FmA, I.I ZOOM, Error inter lock for KV, filament, thermal are displayed on wide angle LCD. Console panel has following functions & indications. ➢ Anatomical programming for radiography of 4 body parts (up to 8 programmes). ➢ Selection of Continuous/multi pulse/single pulse fluoroscopy. ➢ Machine ON/OFF switch. ➢ Collimatorós position adjustment. ➢ I.I magnification(I.I field) selection switch ➢ ñEmergency Flouroò. ➢ Flouro and Radio mode selection. ➢ In built radio timer that enables to select mAS from 0.1 to 300 in 25steps for radiography. ➢ Fluoroscopy timer (Five minute cumulative timer with buzzer that activates after the completion of 300seconds of exposure and to reinitiate the exposure reset switch is provided.) ➢ ABS (Automatic brightness Stabilization) selection for hands free operation. ➢ KV and mAs increase and decrease switches. ➢ X-Ray on switch with indicators. ➢ Switches for up/down movement of ñCò. ➢ Emergency OFF Switch on the control panel. 2.1 Technical characteristics (specific to this type of device) **STAND:** ➢ Up/Down movement (Noise free Actuator movement): At least 430mm

			➢ Horizontal Movement: At least 210 mm. ➢ Arc Orbital: 90º + 30º (120º) ➢ Wig wag: ± 12.5º (25º) ➢ Rotation: ± 360º (with I.I. Safety lock) ➢ Focus Screen Distance: 950mm or more ➢ C Depth: 600mm or more ➢ Locks: Locks for all the movements. ➢ Foot lock: Control Stand foot lock. ➢ Steering wheel for easy steering & movement should be available. **High resolution Imaging Chain:** ➢ 9 Inches, Triple Field Image Intensifier should be provided. ➢ CCD Camera with a progressive scan sensor of 2/3ò of 1K x1K Medical Grade ➢ The acquisition should be made at 14 bits. **MEMORY SYSTEM:** PC based memory system with the following features should be provided:- ➢ Image processing software with Real time image capturing, storage, and display in 1kX1k format ➢ Boosted Fluoroscopy (CINE) up to 30 FPS with real time recording on Hard Disk Drive. ➢ More than 1000 image storage capacity in 1kX1K format ➢ Dicom 3.0 Ready ➢ Dicom CD/DVD 2.1 Technical characteristics (specific to this type of device) ➢ Connectivity with PACS and HIS. ➢ Length and angle Measurements with Annotation. ➢ Pre Programming for Image setting for different operating Modes. ➢ Image Flipping and Image rotation ➢ WW/WL adjustments. ➢ Recursive Filters for image smoothening. ➢ Programmable Motion Detection facility. ➢ Gamma Curve adjustments for optimum image quality. ➢ Image Zoom with Pan ➢ Image Inversion **MONITORS:** 02Nos. Medical Grade Monochrome high brightness, High contrast 19ò LCD Monitors should be provided. High-end monitor trolley with foldable monitors, actuator assisted height adjustable movement of monitors to facilitate viewing of images at most convenient eye level position, specially designed integrated keyboard having feather touch keys and touch pad should be provided instead of double unit keyboard and mouse, 5ò wheels for better mobility 2.2 User's interface : manual 2.3 Software and/or standard of communication(where ever required) : In built. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) Noise-free system 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism 3.6 Mobility, portability Mobile. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Power supply:230V, AC, 50Hz. 15 Amps ,single phase, Line resistance < 0.4 ohms. 4.2 Battery operated : no 4.3 Tolerance (to variations, shutdowns) line regulation of ±10%. 4.4 Protection : NA **5. ACCESSORIES, SPARE PARTS, CONSUMABLES**

			5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables /reagents (open, closed system) Machine should be supplied with following transducers:- ➢ 5 No. BARC Approved whole body lead aprons with all attachments.DING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/ European CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-1-General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised standard for Electromagnetic Compatibility(EMI/EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1-3,IEC 61010-1-2,IEC 61010-2-54,IEC 61010-1-6 and IEC 62304. ➢ AERB type approved 7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance :NA 8.2 Requirements for sign-off Certificate of calibration and inspection of parts from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented.
21	MC0021	**CR System**	**1. USE** 1.1 Clinical purpose Used for Digitization of the already existing Analog X-ray Systems giving advantage of image processing and increased speed Ideal for Medium workload facilities and Secondary care facilities. 1.2 Used by clinical department/ward : Radiology Department TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Digitizer (CR) system should have capacity to process more than 70 or more cassette/films per hour of 14 X 17ò size. ➢ 2. Standard work station (Console) coupled with CR image storage capacity ï at least 2000 images specify the numbers. It should have a resolution of 5 pixels/mm (Minimum) for standard resolution cassette & up to 20 pixels/mm or more. ➢ Separate DICOM workstation in ultra modality with all processing facilities in a centralized reporting. ➢ Other feature of CR system. ÅImage post processing.

			ÅWindow levelling ÅAnnotation ÅArea of interest Zoom ÅMagnification ÅFlipping & panning ÅAutomatic exposure correction ÅPre view software ÅEdge enhancement stepwise ÅContrast/Brightness adjustment ÅShuttering / ROI Finder ÅApplication related software like Pediatric should be available ï The system should have software & hardware to perform full leg/Full spine/Long Body imaging/imaging stitching. ÅDICOM Print ÅDICOM image output to network workstation. ÅGrid Pattern removal software & noise compression processing. ÅGray Scale reversal ÅRotation ÅImage preview time 25 to 60 Sec. (For large image) 2.1 Technical characteristics (specific to this type of device) System should be fully compliant with DICOM 3. ➢ Automatic cassette identification through bar code reader. ➢ Laser camera with at-least three film size on line 14òX 17ò, 11òX 14ò/ 10ò X14ò, 10ò X 12ò, & 8ò X 10ò. ➢ Contrast spatial / Reading resolution 10 pixel/ mm or more constant high resolution in all sizes. True size printing should be possible from reader console. Automatic exposure correction & facility for manoeuvring reading sensitivity manually. Gamma curves for multiple object intensity processing. Registration & cassette identification should b e possible to be done before & after the exposure (Pre/Post registration) 7. Specification for Laser Camera ➢ Mention Spatial resolution higher level preferable minimum 500 DPI/PPI. ➢ Mention Gray Scale resolution : more than 12 bits preferable ➢ Mention Processing capacity/hour for (14ò X 17ò) films, It should be more than 70 films /Hour ➢ Acceptable film size: 14òX 17ò, 11òX 14ò/ 10ò X 14ò, 10ò X 12ò, & 8ò X 10ò. ➢ Online film size : at least three film size ➢ DICOM compatible ➢ CR workstation should have following feature ➢ Multiple image printing with multiple format. ➢ Measurement of image, insert scale. ➢ Preloaded annotation. ➢ DICOM CD writing & reading. ➢ Image inverse, image flipping, image magnification, zooming. ➢ Reporting format. ➢ Image preview. ➢ Image cropping. ➢ Printing multiple patient on one film. ➢ CD writing for multiple patient on one CD ➢ Should have a hard disk of 80 GB or more for storing image. 2.2 Userôs interface manual 2.3 Software and/or standard of communication(where ever required) In built **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA

3.3 Configuration : NA
3.4 Noise (in dBA) Noise-free system
3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism
3.6 Mobility, portability Stationary installation.

4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)
4.1 Power Requirements Power supply: 230V, AC, 50Hz.
4.2 Battery operated no
4.3 Tolerance (to variations, shutdowns) : NA
4.4 Protection NA.

5. ACCESSORIES, SPARE PARTS, CON SUMABLES

5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables /reagents (open, closed system)

Machine should be supplied with following transducers:-

- 2 No. BARC Approved whole body lead aprons with all attachments.
- Please provide cassette for CR with PSP Plate (IP)
  14ò X 17ò -2 No.
  11ò X 14ò /10òX14ò-2 No.
  10òX12ò-2 No.
- Suitable online pure sine wave UPs for 30 minute backup
- Compatible computer System with 2 medical grade monitors

IDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS

6. ENVIRONMENTAL AND DEPARTMENTAL CON SIDERATIONS

6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...)

- Operating condition: Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances.
- Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%.

6.2 Userôs care, Cleaning, Disinfection & Sterility issues

- Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover.
- Sterilization not required.

7. STANDARDS AND SAFETY

7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international

- Should be FDA/ European CE/BIS approved product.
- Manufacturer and Supplier should have ISO 13485 certification for quality standards.
- Electrical safety conforms to the standards for electrical safety IEC 60601-1-General requirements(or equivalent BIS Standard)
- Shall meet internationally recognised standard for Electromagnetic Compatibility(EMI/EMC) for electromedical equipment: 61326-1.
- Certified to be compliant with IEC 61010-1-3,IEC 61010-1-2,IEC 61010-2-54,IEC 61010-1-6 and IEC 62304

7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard.

8. TRAINING AND INSTALLATION

8.1 Pre-installation requirements: nature, values, quality, tolerance
Three phase stable power supply

8.2 Requirements for sign-off Certificate of calibration and inspection of parts from the manufacturer

8.3 Training of staff (medical, paramedical, technicians)

- Training of users on operation and basic maintenance;
- Advanced maintenance tasks required shall be documented.

22	MC0022	**Digital Radiography System(HF)**	**1. USE** 1.1 Clinical purpose Used for Radiographic Images in a digital format (DICOM) greatly reducing the time for image capture and processing. Ideal for heavy workload facilities and tertiary care facilities. 1.2 Used by clinical department/ward : Radiology Department.AL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) Unit should be High frequency Digital Radiography system with rotating anode X-Ray tube. 3D ceiling suspended stand with Autotracking. 2 separate detectors be provided. One in table and one in the vertical bucky each. System should have following features. **HIGH FREQUENCY GENERATOR:** Generator should be of latest technology with high frequency 40KHz or more **X-Ray Generator** Constant Power output of 65KW. KV range should be 40 to 150KV in 1KV/step. mA output: 800 mA mAs range should be 1 to 600mAs or more. It should have solid state automatic exposure control device. **TUBE:** A Dual focus Rotating anode X-ray tube. Large Anode Heat storage capacity for high patient throughput (250KHU or more). Multi leaf collimator having halogen lamp / bright light source and auto shut provision of the light. **HV Cable:** 1 Pair of 12 meter HV cable. ➢ Fully Integrated x-ray generator console control : ➢ System should be fully integrated. All the exposure factors should be controlled from the image acquisition computer and exposure parameters information should be attached to acquired image in DICOM format. ➢ System should have unlimited Anatomical Programs (APR). ➢ Anatomical Programs should be flexible and should be editable by user according to his/her convenience. ➢ Exposure interlocks and self diagnostic messages should be available on Image acquisitions computer for easy troubleshooting of the system. **Stand:** ➢ 3D- Ceiling Suspended tube stand should be a new generation stand providing the user three-dimensional movements of the tube head covering a huge area. Noiseless and swift up/down movement of the tube head should be provided. ➢ Stand should have Auto tracking facility with table & vertical bucky stand. ➢ Stand should have motorized Longitudinal, Transverse and vertical movement with automatic stop. It should have Tube Head Rotation along its axis. ➢ Movements of stand should be: ▪ Longitudinal movement motorized: 2500mm or more. ▪ Transverse movement motorized: 1500mm or more. ▪ Vertical up/down movement motorized: 1000mm or more. ▪ Tube head Rotation (along with Vertical Column axis): ±90°. ▪ Tube head rotation along Horizontal axis - ±90°. ▪ Smart collision avoidance system should be provided. ▪ Manual override facility for x and y axis. ▪ Electromagnetic locks should be available for comfortable operations. Digital touch based display should be available on the X-ray tube/Collimator Assembly at least with following features: ➢ Display and control of Exposure parameters like KV and MAS ➢ Display and control of Mechanical parameters like SID and tube Inclination. ➢ Display of APR and patient position guide image. ➢ Display of Acquired x-ray image.

			➢ The auto tracking system should also be capable of doing motorized oblique tracking with Vertical Bucky Stand during special cases. **Table:** ➢ Horizontal table with floating tabletop and adjustable height should be provided. Tabletop should have three-dimensional movement, for ease of operation and use by patients. ➢ Table should be provided with Inbuilt FPD (FLAT PANEL DETECTOR) beneath the tabletop having manual movement. It should have electromagnetic locking facility and should be unlocked by the foot switch for its movement. ➢ Transverse and longitudinal movements of the tabletop should be locked by electromagnetic locks. ➢ Table should have up/ down motorized movement and it should be controlled by two up & down foot switches. ➢ Movements of table top should be: Transverse movement: 18cm or more, Longitudinal movement: 45cm or more. Height adjustment facility should be available. ➢ Maximum weight carrying capacity for the table during up/down movement should be 150Kg or more. **Vertical Bucky (VB) Stand:** ➢ Floor mounted Motorized Vertical bucky stand should have inbuilt FPD (FLAT PANEL DETECTOR) for lung and skeleton x-ray examinations. It should have user friendly design and handling. ➢ VB stand should have provision to do chest radiography with and without grid. ➢ Motorized Tilting should be -30 degree to + 90 degree. ➢ Vertical Up Down Movement Speed should be 60mm/sec or more. **Flat panel Detector (Each for Table bucky and vertical bucky) :** ➢ A complete imaging solution with cutting edge of performance integrated with X-ray systems. ➢ Specifications: The detector should be flat panel type with A-Si (amorphous silicon) and CsI for scintillation. ➢ Size of detector must be 43cm x 43cm. ➢ Active Image matrix 3K x 3K. ➢ Image depth should be 14bit. ➢ Pixel size should be less than 150um (Smaller pixel size is proffered) ➢ Detector resolution should be more than 3.3 lp/mm. ➢ DQE (Detector Quantum Efficiency) should be more than 65%. **IMAGE ACQUISITION SOFTWARE:** ➢ SOFTWARE provides complete control of all image capture functions within the examination room, enhancing the entire workflow by delivering diagnostic images instantly, and allowing users to move X-ray images electronically to remote workstations, image archives, and printers, also has the super excellent performance on image quality control such as: **IMAGE ACQUISITION AND PROCESSING:** ➢ Digital image processing technology ➢ Preview image should be available in less than 5 seconds. ➢ Processed image should appear in less than 8 seconds. ➢ Exam Specific Algorithms image processing for consistent image quality of all body parts. ➢ Automatic image optimization. ➢ Image harmonization algorithms for uniform images. ➢ Preset image processing tools for different anatomy ➢ Preset GAMMA correction table with manual override. ➢ Image cropping. ➢ Image mirror, rotate. ➢ Image annotation with circle, square, rectangle, Arrow markers. ➢ Add image accept/reject comments. ➢ Rejected images archival with provision of converting them to

			Accepted images ➢ Separate log for Rejected, Accepted and Printed images. ➢ True size for printing. ➢ User defined printing formats. ➢ Should have high image storage capacity with 1TB HDD. **Dose Reduction:** ➢ Advanced noise reduction and image enhancement technology for best image quality at minimum dose. **Excellent Maintainability** ➢ Remote online system diagnosis. ➢ Remote online software upgrade. ➢ Image quality control tools. ➢ Easy and quick Offset and gain calibration with bad pixel removal algorithm. ➢ Automatic programmed offset calibration for best image quality. **Full DICOM 3.0 Compatibility** ➢ Get DICOM work list from HIS/RIS. ➢ Store Images through PACS network system. ➢ Support user defined format DICOM image print. ➢ Support DICOM MPPS **Image Management:** ➢ Resend/ Reprint image. ➢ Send/print queue management. ➢ Re-preview image. ➢ Protect patient record. ➢ Rejected image management **Image Stitching:** ➢ Image stitching software should be provided for long limb imaging. ➢ At least 4 images should be stitched together. **MONITORS:** 1 No. 19ò High Brightness Monochrome LCD Medical grade monitor should be provided. **Additional Work Station:** Additional workstation should be provided. It should have following features: ➢ DICOM connectivity. ➢ Image review. ➢ Image processing. ➢ Patient Reporting. ➢ Image SEND, RECEIVE, PRINT facility. ➢ Should have DIOCM connectivity for existing PACS, RIS system. ➢ Should have large image archival capacity (at least 1TB HDD). 2.2 Userôs interface manual 2.3 Software and/or standard of communication(where ever required) : In built. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) Noise-free system. 3.5 Heat dissipation : Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism. 3.6 Mobility, portability Stationary Installation. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Power supply: 230V, AC, 50Hz. 15 Amps ,three phase, Line resistance < 0.4 ohms. 4.2 Battery operated no 4.3 Tolerance (to variations, shutdowns) line regulation of ±10%. 4.4 Protection NA. **5. ACCESSORIES, SPARE PARTS, CON SUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones);

			Consumables/reagents (open, closed system) Machine should be supplied with following transducers:- ➢ 2 No. BARC Approved whole body lead apporns with all attachments. BIDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/ European CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601- 1- General requirements(or equivalent BIS Standard). ➢ Shall meet internationally recognized standard for Electromagnetic Compatibility(EMI/EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1-3,IEC 61010-1-2,IEC 61010-2-54,IEC 61010-1-6 and IEC 62304. ➢ AERB type approved 7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance Three phase stable power supply 8.2 Requirements for sign-off Certificate of calibration and inspection of parts from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
23	**MC0023.**	**Mobile X-ray Machine(HF)**	**1. USE** 1.1 Clinical purpose Used to get the radiographic images where patient mobility to stationary installation is compromised such as use of other life support equipment. Finds great utility in intensive care units. 1.2 Used by clinical department/ward : Intensive care units and radiology department. TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) **Mobile X-Ray Machine:** ➢ High Frequency generator of 40KHz or more. ➢ ï Radiographic KV: 40 to 110KV. ➢ Rad mA: 150mA or more. ➢ Output power: 6.0 KW. ➢ mAs range: 1 to 200mAs **X-Ray tube head:** ➢ Mono block version X-Ray Tube Head with Stationary Anode Single focus X-Ray Tube. The monoblock consists of Tube, H.V. transformer, filament transformer, H.V. Rectifiers & Capacitors, all immersed in High Grade, High dielectric oil.

			➢ One No. Manual Collimator should be provided, with auto off facility. **Tube Stand:** ➢ Mobile Stand with 4-wheel design, which ensures easy mobility and steering. The Spring Balance Stand should be very light in weight with tube arm. It should be very easy to maneuver & allows smooth movements of Tube Head in vertical Plane. Lead lined cassette storage box. Large wheels for easy mobility should be provided. The stand is designed for maximum maneuverability of the unit and is able to achieve tube focus to floor distance of minimum 75 inch and tube focus to tabletop distance of minimum 46 inches (Standard Radiography Table). The equipment should occupy minimum floor area & is capable to be taken through elevators with ease. **Control Panel:** ➢ KV Increase & Decrease Switches. ➢ mAs Increase & Decrease Switches. ➢ Machine ON/OFF Switch. ➢ Collimator Lamp ónôSwitch. ➢ Stand by & Exposure Switch. ➢ Self diagnostic Programme with indicators for:- ▪ Earth fault Error. ▪ KV Error. ▪ Filament Error. ▪ Tube head Thermal Error ➢ Stand by (Ready) & X-Ray On Indicator.. ➢ Incoming Voltage Indicator. There should be provision for the machine to work from 190Volts Input supply to 250V input supply. ➢ Anatomical Programming Radiography (i.e. APR) should be provided in which KV and mAs are automatically selected depending upon the physique of the patient and part of the body to be X-Rayed. ➢ Anatomical Programming up to 200 programmers or more ➢ There should be a provision that the control should get off, if no key is pressed for 10Min. ➢ A Hand Switch with Dual action for exposure Release with Retractable Cord is provided for Radiation Protection to the Operator. There should be cordless remote for exposure along with corded exposure switch. 2.2 Userôs interface : Manual 2.3 Software and/or standard of communication(where ever required) **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) Noise-free system 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism. 3.6 Mobility, portability mobile. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements Power supply: 230V, AC, 50Hz. 15 Amps, single phase, Line resistance < 0.4 ohms 4.2 Battery operated no 4.3 Tolerance (to variations, shutdowns) line regulation of ±10%. 4.4 Protection NA **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) Machine should be supplied with following transducers:- ➢ 2 No. BARC Approved whole body lead aprons with all attachments. BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENT AL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient

			temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STAND ARD S AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/ European CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-1-General requirements(or equivalent BIS Standard). ➢ Shall meet internationally recognised standard for Electromagnetic Compatibility(EMI/EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1-3,IEC 61010-1-2,IEC 61010-2-54,IEC 61010-1-6 ➢ AERB type approved 7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Certificate of calibration and inspection of parts from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
24	MC0024	Mamography	**1. USE** 1.1 Clinical purpose : A mammography is a screening tool used to detect and diagnose breast cancer 1.2 Used by clinical department/ward : Radiology/Oncology Department TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) X-RAY GENERATOR ➢ High Frequency 40KHz or more X-Ray Generator should be provided. ➢ Power of generator should be more than 5KW. ➢ Maximum mA output should be more than 190mA ➢ KV Range should be 22 to 35KV in steps of increment of 0.5 KV each. ➢ mAs Range for large filament should be from 1 mAs to 700 mAs or more. ➢ 1 No. High Voltage Cable should be provided. **X-RAY TUBE** ➢ Rotating Anode X-Ray Tube having dual focus, dual angle should be provided. ➢ Focal Spots: Small Focus = 0.1 mm^2 Large Focus = 0.3 mm^2 ➢ Anode Heat Storage Capacity 300KHU ➢ Tube Assembly Heat capacity should be at least 1.5MHU **CONTROL PANEL** ➢ Micro Processor controlled Feather Touch Control Panel with LCD display should be provided.

			➢ KV Range should be 22 to 35 KV in steps of increment of 0.5 KV each. ➢ mAs Range should be from 1 mAs to 700 mAs or more. ➢ Technique selection: Manual Two Point Technique (i.e. KV, mAs) should be possible. ➢ Anatomic Program (APR) for small, medium & Large breasts should be provided. ➢ more than 2 Film Screen Combinations should be provided. ➢ More than 2 Step Film Density Control should be provided. ➢ Multi chamber solid state Automatic Exposure Control (AEC) device should be provided. ➢ Automatic selection of filter as per the KV selected (Molybdenum Filter and Aluminum Filter) should be provided. ➢ Following Digital display should be provided: ▪ LCD Display on Control Panel. ▪ KV. ▪ mAs. ▪ Focus. ▪ AEC/APR mode. ▪ Diagnostic Interlocks of the equipment. ▪ Filter Selected. ▪ Large format LCD display on the stand. ▪ Compression force in Kg. ▪ Compressed breast thickness. ▪ Gantry angle ➢ Following Switches and indicators should be provided: ▪ Focal Spot Selection Switch. ▪ Machine ON/OFF Switch. ▪ Ready and X-Ray Switch.. ▪ AEC/APR selection switch. ▪ Film density and Film screen selection switch. ▪ Ready and x-ray exposure indicator. ➢ Breast Release mechanism in case of power failure: ▪ Push to OFF type emergency switches should be available on both sides of gantry to release breast in case of power failure. This mechanism should operate from a battery inside the equipment. ➢ Below Safety features should be provided: ▪ Microcontroller based embedded platform to ensure accurate delivery of exposure parameters. ▪ Automatic compression locking after maximum compression of compression paddle. ▪ Earthing interlock is provided in the machine for safety of user and machine. (Without proper earthing machine would show error). ▪ Fast Compression release mechanism in case if patient is uncomfortable with compression. ▪ Automatic breast release after x-ray exposure is completed. **STAND ASSEMBLY** ➢ A compact Stand having Iso-Centric movement on which C-Arm containing X-Ray Tube & Bucky Assembly is mounted should be provided. ➢ Vertical Movement (Motor operated) should be 650mm or more. ➢ Motorized rotation: +180degree ï 165 degree. ➢ Source to image distance (SID) should be 600mm or more. ➢ Breast Compression: Automatic compression with digital display of compression force should be provided. (Provision should be given for the release of compression paddle on power failure) the Switch for activation & release. Adjustable compression force should be available. Automatic Compression release after Exposure completion should be available. ➢ Compression Paddles for Normal & Magnification Mode (Spot Compression) should be provided. ➢ Magnification Device: 1.5X and 1.8 X should be provided. ➢ 18 x 24 cm Bucky, Motor operated Oscillating Grid of Size 18 X 26 cm, 5:1, 30 lines/cm focal distance 60 to 70 cm should be provided.

			➢ Molybdenum Filter & Aluminum Filter Changer. ➢ Light Beam collimator with Halogen Lamp with Auto shut off facility after 1 minute should be provided. ➢ 18 X 24cm collimation plate should be provided. ➢ Cone for Localization & Radiation protection should be provided. ➢ Switches for up/down movement of gantry, placed conveniently on both sides of gantry should be provided.Separate foot control for gantry movements should also be available for hands free operation. ➢ Hand Switch with Retractable cord for initiation of exposure should be provided. 2.2 Userôs interface : Manual 2.3 Software and/or standard of communication(where ever required) : In built. **3. P HYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) Noise-free system 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism 3.6 Mobility, portability Stationary Installation. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ...)** 4.1 Power Requirements Power supply: 230V, AC, 50Hz. 15 Amps, single phase, Line resistance < 0.4 ohms 4.2 Battery operated : No 4.3 Tolerance (to variations, shutdowns) line regulation of ±10%. 4.4 Protection : NA. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) Machine should be supplied with following transducers:- ➢ 2 No. BARC Approved whole body lead aprons with all attachments. ➢ Free standing fully Transparent Lead Glass Screen for operator protection should be provided. ➢ Film marking device & Alpha Numeric identification system should be provided. IDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international. ➢ Should be FDA/ European CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards.

			➢ Electrical safety conforms to the standards for electrical safety IEC 60601-1-General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised standard for Electromagnetic Compatibility(EMI/EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1-3,IEC 61010-1-2,IEC 61010-2-54,IEC 61010-1-6 and IEC 62304 ➢ AERB type approved 7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : Earthing 8.2 Requirements for sign-off Certificate of calibration and inspection of parts from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented.
25	**MC0025**	Autoclave HP Vertical (single bin)	**1 USE** 1.1 Clinical purpose An airtight vessel for heating and sometimes agitating its contents under high steam pressure; used for industrial processing, sterilizing, and cooking with moist or dry heat at high temperatures. 1.2 Used by clinical department/ward : Operation theatre TECHNICAL **2 TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ High Grade strong stainless steel, Triple walled construction. ➢ Positive radial self-locking safety doors. ➢ Hydrostatically tested to withstand 2.5 times the working pressure. ➢ Sealed with Neoprene/Silicon long-lasting and durable gasket. ➢ Digital display for Jacket and Chamber pressure and temperature. ➢ Outer jacket insulated to prevent heat loss; with a high grade insulation material. ➢ Mounted on 304 stainless steel frame with ground leveling flanges. ➢ Temperature and pressure cut-off device. ➢ Auto cut-off at low water level. ➢ Rust-proof 304 grade stainless steel. ➢ Cylindrical construction. ➢ Equipment should have separate steam release valve and drainage system. ➢ Minimum of two safety valves with auto-release at 16 and 20. 2.2 Userôs interface Manual 2.3 Software and/or standard of communication(where ever required) : NA **3 PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Capacity 40 L,70 L,100 L 3.4 Noise (in dBA) : NA 3.5 Heat dissipation : Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability : Portable. **4. ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- single/3-phase 4.2 Battery operated No 4.3 Tolerance (to variations, shutdowns) ±10% 4.4 Pressure gauge 0-2.1Kgf/cm² 4.5 Operating pressure from 15-20 psi 4.6 Sterilizing pressure 1.2Kgf/cm(15 psi) at 121ęC

			4.7 Protection Should have over-charging cut-off with visual symbol. 4.8 Power consumption upto 9kW. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) ➢ Automatic Pressure Control Switch -2 no. ➢ Automatic Water Cut-off Device -2 no. ➢ Micro Processor PID Controller with Timer & Auto Stop Facility ➢ Digital Pressure Indicator-2 no. ➢ Perforate basket(rust-free stainless steel) ➢ Cord-plug-4 no. ➢ Biological and chemical indicators-1 set BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6 ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues. ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7 STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or International ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS Standard). ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1,IEC 61010-2-40 for safety. 7.2 Local and/or international Manufacturer / supplier should have ISO certificate for quality standard. **8 TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
26	MC0026	Autoclave HP Horizontal GENERAL	**1 USE** 1.1 Clinical purpose : An airtight vessel for heating and sometimes agitating its contents under high steam pressure; used for sterilizing, with moist or dry heat at high temperatures. 1.2 Used by clinical department/ward : CSSD TECHNICAL

			2 TECHNICAL CHARACTERISTICS 2.1. High Grade strong stainless steel, Triple walled construction. ➢ Positive radial self-locking safety doors. ➢ Hydrostatically tested to withstand 2.5 times the working pressure. ➢ Sealed with Neoprene/Silicon long-lasting and durable gasket. ➢ Digital display for Jacket and Chamber pressure and temperature. ➢ Outer jacket insulated to prevent heat loss;with a high grade insulation material. ➢ Mounted on 304 stainless steel frame with ground leveling flanges. ➢ Temperature and pressure cut-off device. ➢ Auto cut-off at low water level. ➢ Rust-proof 304 grade stainless steel. ➢ Cylindrical construction. ➢ Equipment should have separate steam release valve and drainage system. ➢ Minimum of two safety valves with auto-release at 16 and 20. 2.2 Userôs interface Manual 2.3 Software and/or standard of communication(where ever required) : NA. **3 PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) NA 3.3 Capacity 100 lts;150 lts;250 lts 3.4 Noise (in dBA) NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism 3.6 Mobility, portability Portable. **4 ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 440V AC, 50Hz ,3-phase 4.2 Battery operated No 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection Should have over-charging cut-off with visual symbol. 4.5 Operating Temperature 121 deg c to 134 deg c 4.6 Operating Pressure Should have operating pressure between 1.2 to 2.1 kg/cm2; 10-20 psi 4.7 Power consumption upto 18kW. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables /reagents (open, closed system) ➢ Automatic Pressure Control Switch -2 no. ➢ Automatic Water Cut-off Device -2 no. ➢ Micro Processor PID Controller with Timer & Auto Stop Facility ➢ Digital Pressure Indicator-2 no. ➢ Perforate basket(rust-free stainless steel). ➢ Cord-plug-4 no. ➢ Biological and chemical indicators-1 setDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6 ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required.

			7 STANDARDS AND SAFETY 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS Standard). ➢ Shall meet internationally recognised for Electromagnetic Compatibility (EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1,IEC 61010-2-40 for safety. ➢ Vessel pressure testing. 7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8 TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 15 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff ➢ Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented.
27	MC0027	Autoclave HP Vertical(2 bin)	**1 USE** 1.1 Clinical purpose An airtight vessel for heating and sometimes agitating its contents under high steam pressure; used for sterilizing, with moist or dry heat at high temperatures. 1.2 Used by clinical department/ward Operation theatreHNICAL **2 TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ High Grade strong stainless steel SS 304, Triple walled construction. ➢ Positive radial self-locking safety doors. ➢ Hydrostatically tested to withstand 2.5 times the working pressure. ➢ Sealed with Neoprene/Silicon long-lasting and durable gasket. ➢ Analog display for Jacket and Chamber pressure and temperature. ➢ Outer jacket of mild steel insulated to prevent heat loss. ➢ Mounted on tubular Mild steel frame with ground leveling flanges. ➢ Internal joints should be argon arc welded. ➢ Should have 2 bins for loading. 2.2 Userôs interface Manual 2.3 Software and/or standard of communication(where ever required) : NA. **3. P HYSICAL CHARACTERI STICS** 3.1 Dimensions (metric) 400 mm x 600 mm to 400 mm x 1100 mm 3.2 Weight (lbs, kg) NA 3.3 Capacity 75 lt to 138 lt 3.4 Noise (in dBA) NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism 3.6 Mobility, portability Portable. **4. ENER GY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Input voltage- 220V-240V AC, 50Hz,3-phase 4.2 Battery operated No 4.3 Tolerance (to variations, shutdowns) ±10% 4.4 Pressure gauge 0-2.1Kgf/cm² 4.5 Operating pressure from 15-20 psi

			4.6 Sterilizing pressure 1.2Kgf/cm(15 psi) at 121ęC 4.7 Protection Should have over-charging cut-off with visual symbol. 4.8 Power consumption 16kW. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables /reagents (open, closed system) ➢ Pressure control switch-2 no. ➢ Low water level cut-off device-2 no. ➢ Digital timer-2 no. ➢ Vacuum breaker-2 no. ➢ Gaskets-2 no. DDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1,IEC 61010-2-40 for safety. 7.2 Local and/or international Manufacturer / supplier should have ISO certificate for quality standard. **8 TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff : Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians). ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
28	MC0028	Operation table orthopaedic GENERAL	**1 USE** 1.1 Clinical purpose An operating table, sometimes called operating room table, is the table on which the patient lies during a surgical operation. This surgical equipment is usually found inside the surgery room of a hospital. 1.2 Used by clinical department/ward Operation theatre. TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should have OT Table type base made of high quality 304 stainless steel with double table, split leg type and can take x ray photography.

			➢ Should have imported Y type sealing ring with good sealing performance and durability. ➢ Should have a Rotary brake device hich is easy for moving opreating table. ➢ Base is stainless steel. ➢ Leg board is separated & dischargeable. ➢ Double-decked can do X- Ray. ➢ Inclining forward Ó30° ➢ Inclining backward Ó25° ➢ Inclining leftward Ó20° ➢ Inclining rightward Ó20° ➢ Back board folding upward Ó45ę Fold downward Ó90° ➢ Head Board folding upward Ó80° Folding downward Ó10° ➢ Leg board Folding downward Ó90°. ➢ Fold outward Ó90°. ➢ Waist board elevation Ó120°. ➢ The table top must be made of durable radiolucent bakelite material capable of withstanding exposure to frequent C-Arm imaging, without diminishing the image clarity 2.2 Userôs interface : Manual 2.3 Software and/or standard of communication(where ever required) : NA 3.1 Dimensions (metric) Max: Length:2050 ±50 mm Width:480 ±20 mm, Height:750-950 ±50 mm 3.2 Weight (lbs, kg) Max: 150 Kg (excluding battery) 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability : NA. **4. ENER GY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz,24 VDC 4.2 Battery operated : Yes 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection : Should have over-charging cut-off with visual symbol. 4.5 Power consumption : NA. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) ➢ Shoulder support (1 pair) ➢ Waist Support (1 pair) ➢ Arm rest (1 pair) ➢ Leg holder (1 pair) ➢ Screen Frame (1 Piece) ➢ Foot Plate (1 Pair) BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required.

			7. STANDAR DS AN D SAFETY 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international. ➢ Should have FDA/CE/BIS approved product. ➢ The generator must be CF isolated applied device and defibilltor production must be available. ➢ Safety IEC 60601-1:- Medical electrical equipment-Part 1: General requirement for basic safety and essential. ➢ Performation -Edition 3.1; IEC 60601-2-46:- Medical electrical equipment-Part 2-46: Particular requirements for the basic safety and Essential Performance-Collateral Standard: Usability-Edition 2.0 IEC 60601-1-6: Medical Electrical Equipment-Part 1-6: General Requirements for Basic Safety and Essential Performance-Collateral Standard Usability-Edition 2.0 ➢ EMI/EMC IEC 60601-1-2: Medical Electrical Equipment Part 1-2: General Requirements for Basic Safety and Essential Performance-Collateral Standard: Electromagnetic Compatibility -Requirements and Test-Edition 3.0 ➢ QMS:- ISO 13485 7.2. Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for sign-off Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ T raining of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented.
29	**MC0029**	**Electrosurgical Unit**	1 USE 1.1 Clinical purpose Diathermy uses an electric current to produce heat deep inside a targeted tissue. It can reach areas as deep as two inches from the skinôs surface. The diathermy machine does not apply heat directly to the body. Instead, the current from the machine allows the body to generate heat from within the targeted tissue. 1.2 Used by clinical department/ward : Operation theatre TEHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1. Technical characteristics (specific to this type of device) ➢ Facility for Monopolar, Bipolar and underwater cutting. ➢ Monopolar cutting and coagulation. ➢ Micro-processor based technology. ➢ Monopolar cut in minimum 3 modes. ➢ Bipolar-coagulation in 3 or more modes (forced coagulation, spray coagulation and soft coagulation). ➢ Blending of cutting and coagulation -in minimum 2 levels. ➢ Automatic cut-off technology with self check on every start. ➢ Foot and hand switch. ➢ Automonitoring and display of set parameters. ➢ Touch-controlled interface to set parameters. ➢ 4 or more programmable memory. ➢ Simultaneous use of Monopolar and Bipolar Coagulation. ➢ Output Power of 300 Watt(Minimum). ➢ Monopolar Cutting and Coagulation power adjustable from 0-300 Watt. ➢ Bipolar Coagulation power adjustable from 0-50 W, Micro Power Range- 0.1 to 9.9 Watt increment of 0.1 Watt, Macro Power range from 1-50 Watt increment of 1 Watt. ➢ Audio-Visual Alarm for disconnection of Neutral Plate 2.2.Userôs interface Manual 2.3 Software and/or standard of communication(where

			ever required) : In-built. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) Max: 10kg 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability : Portable. **4. ENER GY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz 4.2 Battery operated : No 4.3 Tolerance (to variations, shutdowns) ±10% 4.4 Protection Should have over-charging cut-off with visual symbol. 4.5 Power consumption 60W. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) ➢ Power cord :1pc ➢ Electrode lever:1pc ➢ Electrode:2sets. ➢ Collective electric bulb: 2pcs switch. ➢ Trolley; Foot switch. ➢ Reusable electrode handle with cutting/coagulation switch. ➢ Disposable REM plate. ➢ Cable for electrode handle. ➢ Neutral plate for adults and pediatric. / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international. ➢ Shall meet internationally recognized IEC 60601-1-1 standard (General Requirements) ➢ Shall meet internationally recognized IEC 60601-2-2 standard(Medical electrical equipment - Part 2-2: Particular requirements for the basic safety and essential performance of high frequency surgical equipment and high frequency surgical accessories) ➢ Shall meet internationally recognized IEC 60601-1-6 standard(MEDICAL ELECTRICAL EQUIPMENT - PART 1-6: GENERAL REQUIREMENTS FOR SAFETY - COLLATERAL STANDARD:USABILITY) ➢ Shall meet internationally recognized IEC 60601-1-8 standard(MEDICAL ELECTRICAL EQUIPMENT - PART 1-: GENERAL REQUIREMENTS FOR SAFETY - COLLATERAL STANDARD:GENERAL REQUIREMENTS, TESTS AND GUIDANCE FOR ALARM SYSTEMS IN

			MEDICAL ELECTRICAL EQUIPMENT AND MEDICAL ELECTRICAL SYSTEMS) ➢ Shall meet internationally recognised IEC 60601-1-2 standard(MEDICAL ELECTRICAL EQUIPMENT - PART 1: GENERAL REQUIREMENTS FOR SAFETY 2. COLLATERAL STANDARD: ELECTROMAGNETIC COMPATIBILITY - REQUIREMENTS AND TESTS) ➢ Shall meet internationally recognised IEC 62304 standard(Medical device software ï Software life cycle processes) 7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
30	MC0030	Operation Table Hydraulic Major	**1. USE** 1.1 Clinical purpose An operating table, sometimes called operating room table, is the table on which the patient lies during a surgical operation. This surgical equipment is usually found inside the surgery room of a hospital. 1.2 Used by clinical department/ward : Operation theatre **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should be a manually controlled operating table, working range from floor level: 800-1040mm. ➢ Should be adjustable to all essential positions. ➢ Should be equipped with movement controls at side of the table. ➢ Should have Frame and bottom made of Stainless Steel 304 material. ➢ Should have reinforced three section stainless steel top. ➢ Height should be adjustable by oil pump, foot step control. ➢ Should have detachable head rest which can be easily adjustable to any desired position, above or below table top. ➢ Table top can be rotated 360° through base. ➢ Trendelenburg: Ó25°-30° ➢ Reversed Trendelenburg: Ó30° ➢ Head Section Raised from the Horizontal: Ó20°-30° ➢ Head Section Lowered from the Horizontal: Ó28°-30° ➢ Back Section Raised from the Horizontal: Ó60°-70 ° ➢ Leg Section Lowered from the Horizontal: Ó40°-50° ➢ Kidney Position should be achievable by breaking the table. ➢ Table-top should be radio-lucent. 2.2 Userôs interface : Manual 2.3 Software and/or standard of communication(where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Table top dimension (1900 mm x 525 mm) ± 15% Table elevation: (700mm -1000 mm) ± 10% 3.2 Weight (lbs, kg) Should be able to bear patient having weight upto 160 kg 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism. **4. ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage - 220V-240V AC,50 Hz 4.2 Battery operated Yes 4.3 Tolerance (to variations, shutdowns) : NA

			4.4 Protection Should have over-charging cut-off with visual symbol. 4.5 Power consumption : NA. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) ➢ S. S. Arm Rest 1 No. ➢ Anaesthetic Screen 1 No. ➢ Lithotomy Leg Holders with Stirr-Ups 1 Set ➢ Leather Wristlets 1 Set. ➢ Padded Leg Rest (Gutter Type)-2 nos. ➢ Anti static mattress-2 nos. ➢ Side rails-2 nos DDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS standard) and IEC 60601-2-46 for usability. ➢ Shall meet internationally recognised IEC 60601-1-2 for Electromagnetic Compatibility(EMC) and Electromagnetic Interference(EMI) 7.2 Local and/or international Manufacturer / supplier should have ISO certificate for quality standard. **8. TRAININ G AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance. ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff ➢ Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
31	MC0031	Shadowless lamp ceiling type major GENERAL	**1. USE** 1.1 Clinical purpose Luminescence shadow less lamp adopts light sources different positions for focus to eliminate shadows of different parts of medical workers. 1.2 Used by clinical department/ward : Operation theatreCHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Double dome. ➢ Intensity Control in 9 steps for individual domes. ➢ Height Adjustment :600mm. ➢ Action Radius :1850mm. ➢ Possible Movements :Radial, Angular & Axial. ➢ Colour Temperature :4500K and above.

			➢ LED technology: minimum 40,000 hours lamp life. ➢ Intensity, brightness, contrast and power switch to be made available on handle/wall-check. ➢ Focal distance(d1+d2)=0.8 to 1.2 m. ➢ Temperature rise on the keep of surgeries to be less than 10°. ➢ CR± approx. 95 or more. ➢ 360° rotation for both arms 2.2 Userôs interface Manual 2.3 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability : Hand held device. **4. ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz 4.2 Battery operated : Yes 4.3 Tolerance (to variations, shutdowns) Voltage:±10%,Frequency:±2% 4.4 Protection Should have over-charging cut-off with visual symbol. 4.5 Power consumption : NA. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) : NA DDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS and ISO 13485 approved product. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-1General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC)and Electromagnetic Interference(EMI) for electromedical equipment: IEC 60601-1-2. ➢ Certified to be compliant with IEC 60601-2-4 for usability. 7.2 Local and/or international :Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff ➢ Certificate of calibration and inspection from the manufacturer

			8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
32	MC0032	Sterilizer(Big instruments)	**1. USE** 1.1 Clinical purpose A sterilizer is a pressure chamber used to sterilize equipment and supplies by subjecting them to high pressure saturated steam at 121 °C for around 15ï 20 minutes depending on the size of the load and the contents. 1.2 Used by clinical department/ward : Operation theatreICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should have seamless shell & lever operated Lid fitted with full proof mechanism control excessive steam escape and restricts condensate within the shell. ➢ Synchronized maneuverability of lid, due to statistically perforated tray for flushing & entry of water. ➢ SS 304/316 deep drawn seamless construction ➢ Thermostatically controlled ➢ Drainage plug at the bottom 2.2 Userôs interface Manual 2.3 Software and/or standard of communication (where ever required) : NA. **3. P HYSICAL CHARACTERISTICS** 3.1 Dimensions (metric): NA 3.2 Weight (lbs, kg) : NA 3.3 Capacity 4.5-7.5 L 3.4 Noise (in dBA) : NA 3.5 Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability : Portable. **4. ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz 4.2 Battery operated Yes 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection Should have over-charging cut-off with visual symbol. 4.5 Power consumption : NA **5. ACCESSORIES, SPARE PARTS, CON SUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables /reagents (open, closed system) : NA BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ Should be FDA/CE/BIS approved product.

			➢ Manufacturer and Supplier should have ISO 13485 certification for quality standards. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1. ➢ Certified to be compliant with IEC 61010-1,IEC 61010-2-40 for safety. 7.2 Local and/or international : Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff ➢ Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
33	MC0033	Table for Obstetric labour	**1. USE** 1.1 Clinical purpose Delivery Bed finds extensive usage in hospitals and nursing homes. These are specifically designed to support the mother during all stages of giving birth that include labour, delivery and recovery. Manufactured using quality raw material, these beds are widely known for their sturdy construction. 1.2 Used by clinical department/ward : Operation theatre/Labour Room TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Tubular frame mounted on PVC shoes. ➢ Three sections, with top made of SS 304 grade. ➢ Trendelburg and CPR position instantly available with the help of penumatic gas spring mechanism along with manual over-ride. ➢ Back rest manually adjustable on ratchets mechanism. ➢ Leg end section should slide completely under the main section. ➢ Lithotomy Rods should be height adjustable covered with soft Rubber and Rexine. ➢ U-Cut in the middle section ➢ Head and side safety railing along with hand grips made of SS 2.2 Userôs interface Manual 2.3 Software and/or standard of communication (where ever required) : NA **3. PHYSICAL CHARACTERI STICS** 3.1 Dimensions (metric) 74òL×35ò W×26òH adjustable to 36ò 3.2 Weight (lbs, kg) should be able to support patient weight upto 160kg 3.3 Configuration : NA 3.4 Noise (in dBA): NA 3.5 Heat dissipation : NA 3.6 Mobility, portability : NA **4. ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements : NA 4.2 Battery operated :NA 4.3 Tolerance (to variations, shutdowns) : NA 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) ➢ Mattress 50 mm with U Cut thick should be tear proof covered with non pinching Rexine,seamless joint,washable and water-proof / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) : NA

			6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be US FDA/EU CE approved product. 7.2 Local and/or international : Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for signoff :NA 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
34	MC0034	Focus Lamp Ordinary : For Examination	**1. USE** 1.1 Clinical purpose Widely used in examination and operation lighting in surgical dept, ENT dept, dept of stomatology, orthopaedic dept, dept of ophthalmology, dept of dermatology and OPD, Facial features section, operation illumination, flow examination, gynaecology examination etc. Perfect for specialties that require very focused light in specific areas like OB/GYN etc. 1.2 Used by clinical department/ward : Operation theatre TECHNICAL **2 TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ LED light ➢ Illumination(lx) should be LED ➢ Minimum 40,000 Lux ➢ Height Adjustment(mm): <=440 ➢ Radial and axial movement of the lamp 2.2 Userôs interface Manual 2.3 Software and/or standard of communication(where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : NA 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability Portable **4. ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz 4.2 Battery operated : Yes 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection Should have over-charging cut-off with visual symbol. 4.5 Power consumption : NA. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) : NA BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6 ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS**

			6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE/BIS and ISO 13485 approved product. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-1General requirements(or equivalent BIS Standard) ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC)and Electromagnetic Interference(EMI) for electromedical equipment: IEC 60601-1-2 ➢ Certified to be compliant with IEC 60601-2-4 for usability. 7.2 Local and/or international : Manufacturer / supplier should have ISO certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff ➢ Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
35	MC0035	Electro-hydraulic table	**1. USE** 1.1 Clinical purpose An operating table, sometimes called operating room table, is the table on which the patient lies during a surgical operation. This surgical equipment is usually found inside the surgery room of a hospital. 1.2 Used by clinical department/ward : Operation theatre TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should be manually controlled operating table, working range from floor level:700 -1000 or more ±10% ➢ Should be adjustable to all essential positions. ➢ Should be equipped with movement controls at side of the table. ➢ 4) Should have frame and bottom made of 304 grade Stainless Steel material. ➢ Should have reinforced five section stainless steel top. ➢ Height should be adjustable by oil pump, foot step control. ➢ Should have detachable head rest which can be easily adjustable to any desired position, above or below the table top. ➢ Table top can be rotated 360° through base. ➢ Head section raised from the Horizontal:20°-30° ➢ Durable and leak-proof hydraulic pump. ➢ Head section lowered from horizontal:28°-30° ➢ Back section raised from the horizontal:60°-70° ➢ Trendelenburg:25-30ę ➢ Reverse Trendelenburg:Ó30°

			➢ Leg section lowered from the Horizontal:40°-50° ➢ Kidney-position should be achievable by breaking the table. ➢ Table-top should be radio-lucent. ➢ Should have handset for position selection by in-built stand-by control. 2.2 Userôs interface : Manual 2.3 Software and/or standard of communication(where ever required) : NA **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) 1910 x 530 mm 3.2 Weight (lbs, kg) : Should be able to bear patient weight 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability Not portable. **4. ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz 4.2 Battery operated : Yes 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection Should have over-charging cut-off with visual symbol. 4.5 Power consumption : NA **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) ➢ S.S Arm Rest: 2 no. ➢ Anaesthetic Screen: 1 no. ➢ Lithotomy Leg Holders with Stirr-Ups:1 set ➢ Leather Wristlets:1 set ➢ Padded Leg Rest(Gutter type) ➢ Anti static mattress ➢ Side rails BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should have FDA/CE/BIS approved product. ➢ All mechanical tests. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements(or equivalent BIS standard) and IEC 60601-2-46 for usability. ➢ Certified to be compliant with IEC 60601-2-2 Medical Electrical Equipment Part 2-2 :Particular requirements for the safety of High frequency Surgical Equipment if applicable or equivalent

			7.2 Local and/or international Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff ➢ Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
36	MC0036	Operation table hydraulic minor	**1. USE** 1.1 Clinical purpose An operating table, sometimes called operating room table, is the table on which the patient lies during a surgical operation. This surgical equipment is usually found inside the surgery room of a hospital. 1.2 Used by clinical department/ward : Operation theatre TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should have Stainless steel top 304 grade ➢ Should have Castor wheel for easy mobility ➢ Head & Leg section should be detachable and interchangeable ➢ Four section table ➢ Durable and leak proof hydraulic pump with heavy pillar fitted in center of the table ➢ Archived by gear mechanism ➢ Trendelenburg: 25°-30° ➢ Lateral tilt (Left & Right):15°-20° ➢ Leg Section 90° 2.2 Userôs interface Manual 2.3 Software and/ or standard of communication(where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Table Top dimension 1900 mm x 525 mm ± 15% Table elevation 700 mm ï 1000 mm± 10% 3.2 Weight (lbs, kg) Should be able to support the weight of the patient upto 160 kg. 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability : Not portable. **4. ENERGY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz 4.2 Battery operated Yes 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection : Should have over-charging cut-off with visual symbol. 4.5 Power consumption : NA. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** ➢ Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) ➢ side rail clamp, ➢ shoulder support, ➢ Arm support(2 nos).

			➢ IV pole. ➢ Body restraining belt. ➢ Leg supports:2 nos. ➢ Lateral supports. ➢ Anti-static mattress BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. ➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary,) Performance and safety standards (specific to the device type); Local and/or international ➢ Should be FDA/CE/BIS approved product. ➢ All mechanical tests. ➢ Shall meet internationally recognised standard IEC 60601-2-46 for usability. 7.2 Local and/or international : Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff ➢ Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
37	MC0037	Shadowless lamp ceiling type minor (Single Dome)	**1. USE** 1.1 Clinical purpose Luminescence shadow less lamp adopts light sources different positions for focus to eliminate shadows of different parts of medical workers. 1.2 Used by clinical department/ward : Operation theatre TECHNICAL 2 TECHNICAL CHARACTERISTICS 2.1 Technical characteristics (specific to this type of device) ➢ Single dome. ➢ minor dome. ➢ Intensity Control :continuous (1,00,000 Lux). ➢ Height Adjustment :600mm. ➢ Action Radius :1850mm. ➢ Possible Movements :Radial, Angular & Axial. ➢ Colour Temperature :4500 and above. ➢ LED technology: minimum 40,000 hours lamp life. ➢ Intensity,brightness,contrast and power switch to be made available on handle/wall-check. ➢ Focal distance(d1+d2)=0.8 to 1.2 m. ➢ Temperature rise on the keep of surgeries to be less than 10°. ➢ CR± approx. 95 or more. ➢ 360° rotation for both arms

2.2 Userôs interface Manual
2.3 Software and/or standard of communication (where ever required) : NA.

3. PHYSICAL CHARACTERISTICS
3.1 Dimensions (metric) : NA
3.2 Weight (lbs, kg) :NA
3.3 Configuration :NA
3.4 Noise (in dBA) : NA
3.5 Heat dissipation: Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism
3.6 Mobility, portability : Portable.

4. ENER GY SOURCE (electricity, UP S, solar, gas, water, CO 2 ....)
4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz
4.2 Battery operated : NA
4.3 Tolerance (to variations, shutdowns) : NA
4.4 Protection Should have over-charging cut-off with visual symbol.
4.5 Power consumption : NA.

5. ACCESSORIES, SPARE PARTS, CONSUMABLES
5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) : NA
BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS
6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS
6.1 Atmosphere /Ambiance (air conditioning, humidity, dust ...)
- Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances.
- Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%.

6.2 Userôs care, Cleaning, Disinfection & Sterility issues
- Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover.
- Sterilization not required.

7. STANDARDS AND SAFETY
7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international
- Should be FDA/CE and BIS/ ISO 13485 approved product.
- Electrical safety conforms to the standards for electrical safety IEC 60601-1General requirements(or equivalent BIS Standard)
- Shall meet internationally recognised for Electromagnetic Compatibility(EMC)and Electromagnetic Interference(EMI) for electromedical equipment :IEC 60601-1-2
- Certified to be compliant with IEC 60601-2-4 for usability.

7.2 Local and/or international :Manufacturer / supplier should have ISO certificate for quality standard.

8. TRAINING AND INSTALLATION
8.1 Pre-installation requirements: nature, values, quality, tolerance
- Availability of 5 amp socket;
- Safety and operation check before handover;

8.2 Requirements for signoff
- Certificate of calibration and inspection from the manufacturer

8.3 Training of staff (medical, paramedical, technicians)
- Training of users on operation and basic maintenance;

			➢ Advanced maintenance tasks required shall be documented
38	MC0038	Shadowless lamp standing model	**1. USE** 1.1 Clinical purpose Luminescence shadow less lamp adopts light sources different positions for focus to eliminate shadows of different parts of medical workers. 1.2 Used by clinical department/ward : Operation theatre TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Dome Head :515mm Di ➢ LED lights-2 nos. ➢ Lockable castor stand with minor dome ➢ Light intensity at 1 mt. :1,00,000 Lux. ➢ Intensity Control :Continuous. ➢ Height Adjustment :600 mm approx. ➢ Action Radius :1250mm. ➢ Possible Movements :Radial, Angular & Axial. ➢ Colour Temperature :4500K or above. ➢ Temp. rise in field :3°-6° c from Amb. Temp. ➢ Control Panel at the dome. ➢ CR± 95000. ➢ Lamp life:40,000 hour. ➢ Battery back-up:1 hour. ➢ Auto-power off and over-charging cut-off. 2.2 Userôs interface Manual 2.3 Software and/or standard of communication(where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 Heat dissipation : Should maintain nominal Temp and the heat should be disbursed through an cooling mechanism 3.6 Mobility, portability : Portable. **4. ENERGY SOURCE (Electricity, Ups, Solar, Gas, Water, Co2 ....)** 4.1 Power Requirements Recharging unit: Input voltage- 220V-240V AC, 50Hz 4.2 Battery operated Yes; Rechargeable battery at the base with the frame. 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection : Should have over-charging cut-off with visual symbol. 4.5 Power consumption : NA. **5. ACCESSORIES, SPARE PARTS, CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) : NA BIDDING / PROCUREMENT TERMS / DONATION REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover.

			➢ Sterilization not required. **7. STANDARDS AND SAFETY** 7.1 Certificates (premarket, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE and BIS/ISO 13485 approved product. ➢ Electrical safety conforms to the standards for electrical safety IEC 60601-1General requirements(or equivalent BIS Standard). ➢ Shall meet internationally recognised for Electromagnetic Compatibility(EMC)and Electromagnetic Interference(EMI) for electromedical equipment :IEC 60601-1-2. ➢ Certified to be compliant with IEC 60601-2-4 for usability. 7.2 Local and/or international : Manufacturer / supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp socket; ➢ Safety and operation check before handover; 8.2 Requirements for signoff ➢ Certificate of calibration and inspection from the manufacturer 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented
39	**MC0039**	**Ophthalmo scope**	**1. USE** 1.1 Clinical purpose Direct ophthalmoscope is a hand-held and battery powered device containing illumination and viewing optics to examine the cornea, aqueous, lens, vitreous, and the retina of the eye. 1.2 Used by clinical department/ ward : NICU & PICUHNICAL **2. TECH NICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should have on/off button for illumination and battery operated; ➢ Should have rotating knob to control the intensity of the ophthalmoscope and should be used with filters that eliminate UV radiation (<400nm) and, whenever possible, filters that eliminate shortwave length blue light (<420nm); ➢ Should have the range of +20 to -20 in single dioptre steps to ensure easy examination of all ocular structures; ➢ Should have apertures shape: Large spot, small spot, slit, central net, and red free; 2.2 User's interface Manual 2.3 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Max: 50mm x 50mm x 250mm. 3.2 Weight (lbs, kg) : NA 3.3 Configuration :NA 3.4 Noise (in dBA) : NA 3.5 Heat dissipation : NA 3.6 Mobility, portability Handheld device. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements : NA 4.2 Battery operated : Yes 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection :NA 4.5 Power consumption : NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES**

			5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables/reagents (open, closed system) ➢ Replacement bulb/illumination source -2 Nos. ➢ Storage case (rigid and steady). BIDDING/PROCUREMENT TERMS/DONATI ON REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ Should have IEC 60601-1/IEC 60601-1-2/CE (EU) certificate; ➢ Optical radiation hazards with ophthalmoscopes: ISO 10942 or ISO 15004; ➢ Manufacturer/supplier should have ISO 13485 certificate for quality standard; **8. TRAI NING AND INSTALLATI ON** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Certificate of calibration and inspection from the manufacturer. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented.
40	**MC0040**	**Bilirubinometer**	**1. USE** 1.1. Clinical purpose Determining the concentration of bilirubin in the blood or other clinical specimen, most commonly to rapidly assess hyperbilirubinemia in neonates. 1.2 Used by clinical department/ward : NICU/PICU TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Sample volume of < 100 ε L required, automatic calibration facility. ➢ Total bilirubin concentration measurable (at least) in range of 0 to 30 mg/dl. ➢ Time for total concentration measurement: Ò5 seconds. ➢ Should have filters: 455 and 575 nm (} 2%). ➢ Should have error rate less than 5%. ➢ Should have resolution- 0.1 mg/dl. ➢ Automatic correction for Haemoglobin. ➢ Measuring cell: Direct Hematocrit capillary readings. ➢ heparinized hematocrit glass capillary. 2.2 Settings Method to recalibrate / save current calibration, set sample size. 2.3 User's interface Manual interface. Backlit display with easy viewing in all ambient light levels. 2.4 Software and/or standard of communication(where ever required) : Inbuilt software. Convenient and quick USB interface. **3. PHYSICAL CHARACTERISTICS** 3.1. Dimensions (metric) Approx. 110 x 150 x 200 mm. 3.2 Weight (lbs, kg) 5 kg - 15 kgs

			3.3 Configuration (Ex : Compact, modular, to be fixed to walls, ceiling, etc). 3.4 Noise (in dBA) <60dB 3.5 Heat dissipation Heat Dissipation: Should maintain nominal temp and the heat should be disbursed through an cooling mechanism. 3.6 Mobility, portability Easy and safe transport to be possible by hand, stable when tabletop mounted; **4. ENERGY SOURCE (Electricity, Ups, Solar, Gas, Water, Co2 ....)** 4.1 Power Requirements 220VAC ± 10%, 50 Hz; 4.2 Battery operated Yes (optional) 4.3 Tolerance (to variations, shutdowns) Voltage corrector / stabilizer to allow operation at ±10% of local rated voltage. 4.4 Protection : NA 4.5 Power consumption : NA 4.6 Other energy supplies Length of mains power cable should be at least 3 meters. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) Hard and splash-proof case to be supplied. 5.2 Spare parts (main ones) 1) Spare/replaceable fuses - 2 sets. ➢ Reagents and capillary tubes sufficient for minimum 100 tests. ➢ Reagents and consumables per test should be declared. 5.3 Consumables / reagents (open, closed system) ➢ Capillary tubes, haemo fluorometric reagents (e.g., aqueous cyanide salt with stabilizers, if applicable). ➢ Price of all Consumables to be mentioned. BIDDING / PROCUREMENT TERMS / DONATI ON REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: ➢ Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be CE (EU)/FDA (US) approved product. ➢ Manufacturer / supplier should have ISO 13485 certificate for quality standard. ➢ Should have IEC 61010 certificate. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5Amps electrical socket. 8.2 Requirements for sign-off 1) Supplier to perform installation, safety and operation checks before handover. ➢ Local clinical staff to affirm completion of installation. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance. ➢ Advanced maintenance tasks required shall be documented.

41	MC0041	Multichannel Electro-Cardiographic (ECG)	**1. USE** 1.1 Clinical purpose Continuously detect, measure, and display a patient's electrocardiogram (ECG) through leads and sensors attached to the patient. 1.2 Used by clinical department/ward : All 1.3 Overview of functional requirements ➢ Continuous display of patient ECG and heart rate on screen. ➢ Allows display of single, 5 lead ECG or simultaneous display of at least 5 waves selected from up to 12 points. ➢ Operator can set audiovisual alarm levels for low or high heart rate. ➢ Operates from mains voltage or from internal rechargeable battery. ➢ Patient connectors that are sterilizable and reusable are preferred, though reusable cables that attach to disposable connection patches are also acceptable. ➢ Hard copy printout of traces will be required. TECHNICAL **2. TECH NICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Heart rate measurement range to be at least 30 to 250 bpm, with accuracy better than ± 5 bpm. ➢ Heart rate trend display of at least previous 24 hours. ➢ Arrhythmia detection facility required; minimum gradation of 1 bpm. ➢ Heart rate measurement range to be at least 30 to 250 bpm, with accuracy better than ± 5 bpm. 2.2 Settings Audiovisual alarms required: high and low heart rate (operator variable settings), cardiac arrhythmia, sensor/wire disconnected, low battery. 2.3 User's interface Manual 2.4 Software and/or standard of communication : In built. **3. PH YSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) less than 5 kgs 3.3 Configuration Case is to be hard and splash proof. ➢ Display must allow easy viewing in all ambient light levels. ➢ Supplied in protective case for clean storage and safe transport. 3.4 Noise (in dBA) <50 dB 3.5 heat dissipation Heat Dissipation: Should maintain nominal Temp and the heat should be disbursed through a exhaust cooling fan. 3.6 Mobility, portability: Supplied in protective case for clean storage and safe transport. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Voltage (value, AC or DC, monophase or triphase) 220 to 240V, 50 Hz 4.2 Battery operated Battery powered, silenceable alarm for power failure. Battery charger to be integral to mains power supply, and to charge battery during mains power operation of unit. Internal, replaceable, rechargeable battery allows operation for at least one hour in the event of power failure. 4.3 Tolerance (to variations, shutdowns) : Voltage corrector/stabilizer to allow operation at ±30% of local rated voltage. 4.4 Protection Electrical protection provided by fuses in both live and neutral supply lines. 4.5 Power consumption 4.6 Other energy supplies Mains cable to be at least 3m length. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) 12 lead ECG cable. ➢ 5 lead ECG cable (if option offered). ➢ 100 sets of ECG connection electrodes (if disposable type).

			➢ 5 sets of ECG connection electrodes (if reusable type). 5.2 Spare parts (main ones) Two sets of spare fuses (if non-resettable fuses used). 5.3 Consumables/reagents (open, closed system) 5 tubes electrode gel (if required). **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: ï Capable of operating continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. 6.2 User's care, Cleaning, Disinfection & Sterility issues. ➢ The case is to be cleanable with alcohol or chlorine wipes. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international. ➢ Should be FDA/CE approved product; Manufacturer/supplier should have ISO 13485 certificate for quality standard. Electrical safety conforms to standards for electrical safety IEC-60601-1. ➢ Shall meet IEC-60601-1-2 (General requirements for safety ï electromagnetic compatibility) and IEC 60601-2-25 (essential performance of electrocardiographs). **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp/15 amp. Electrical socket. 8.2 Requirements for sign-off Supplier to perform installation, safety and operation checks before handover. ➢ Local clinical staff to affirm completion of installation. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users in operation and basic maintenance shall be provided. ➢ Advanced maintenance tasks required shall be documented.
42	MC0042	**Blood gas/ /monitoring systems and associated devices (ABG Machine).**	**1. USE** 1.1 Clinical purpose Determining the concentration of bilirubin in the blood or other clinical specimen, most commonly to rapidly assess hyperbilirubinemia in neonates. 1.2 Clinical department/ward : NICU/PICU TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics 1) Should measure analyte pH and minimum measuring range 6.8 -7.8 pH ➢ Units with resolutiuon of 0.01; ➢ Should measure analyte PO2 and minimum measuring range 0-760mmHg; ➢ Should measure analyte pCO2 and minimum measuring range 5-100 mm Hg. ➢ Should measure analyte Na+ and minimum measuring range 100-180mmol/L; ➢ Should measure analyte K+ and minimum measuring range 1-10mmol/l; ➢ Should measure analyte Ca++ and minimum measuring range 0.25-5.00mmol/l; ➢ Should measure analyte Hct and minimum measuring range 15-70%; ➢ Should calculate analyte tHb and minimum measuring range 3.0 -23g/dL; ➢ Should have feature of data storage for minimum 50 samples results ➢ Software includes printouts of Levey-Jenning charts for quality control requirements; ➢ Should have disposable cartridges for 300 a miminum of 300 samples; no membrane maintenance or replacement is required; ➢ External source of gas not required (not mandatory), ➢ Analyzing time should have <120 seconds; ➢ Should provide automatic error detection;

			2.3 Settings Method to recalibrate/save current calibration, set sample size. 2.4 User's interface Backlit display with easy viewing in all ambient light levels. 2.5 Software and/or standard of communication : Electronic. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) Max. 10 kgs excluding the cartridges 3.3 Configuration Should have compact size; 3.4 Noise (in dBA) <60dB 3.5 heat dissipation heat disbursed through a exhaust fan (if applicable). 3.6 Mobility, portability Easy and safe transport to be possible by hand, stable when tabletop mounted. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Voltage (value, AC or DC, monophase or triphase) 220VAC ± 10%, 50 Hz 4.2 Battery operated : Yes 4.3 Tolerance (to variations, shutdowns) Voltage corrector/SMPS, stabilizer to allow operation at ± 10% of rated voltage, Electrical protection by resettable over-current breakers or replaceable fuses fitted in both live and neutral lines. 4.4 Protection Resettable over-current mains fuse to be incorporated; 4.5 Power consumption : NA 4.6 Other energy supplies Power cable to be at least 3mtr in length; **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) Hard and splash-proof case to be supplied; 5.2 Spare parts (main ones) Two sets of spare/replaceable fuses, reagents and capillary tubes sufficient for 100 tests; 5.3 Consumables/reagents (open, closed system) ➢ Cartridges-combination of various tests; ➢ External source of gas (if applicable); 5.4 Others. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances; ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%; 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ The case is to be cleanable with alcohol or chlorine wipes **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ FDA (US)/CE (EU) from autorized third party and BIS/ISO 13485 ➢ Should be IEC 61010 certificate from a notified agency. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 Amps/15Amps. electrical socket; 8.2 Requirements for sign-off ➢ Supplier to perform installation, safety and operation checks before handover; ➢ Local clinical staff to affirm completion of installation; 8.3 Training of staff (medical, paramedical, technicians)

			➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented;
43	MC0043	**Cold Light Sources**	1. USE 1.1 Clinical purpose Clod light source is used for accessing tiny arteries and veins of the babies. 1.2 Used by clinical department/ward : NICU and PICU TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should have light intensity controlled with smooth rotary potentiometer/pressing button. ➢ Should have output power 250 Watts (24 Volts)/ 150Watts (12 Volts). ➢ Should have minimum dual control having 2 halogen/xenon/led lamps. ➢ Should have SMPS based design ensures smooth working of light source within the voltage variation. ➢ Should have fibre optic light cable 4.5mm - 10mm in diameter, 250cm-300cm in length. 2.2 User's interface : NA 2.3 Software and/or standard of communication(where ever required) : NA **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) 30cm H x 30cm W x 50cm ± 20 % 3.2 Weight (lbs, kg) Upto 5kg 3.3 Configuration : NA 3.4 Noise (in dBA) <60db 3.5 Heat dissipation Heat disbursed through a exhaust fan (if applicable). 3.6 Mobility, portability Hand held device 4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....) 4.1 Power Requirements 220VAC ± 10%, 50Hz 4.2 Battery operated : NA 4.3 Tolerance (to variations, shutdowns) Voltage corrector / stabilizer to allow operation at ± 10% of local rated voltage, Electrical protection by resettable over-current breakers or replaceable fuses fitted in both live and neutral lines. 4.4 Protection Resettable over-current mains fuse to be incorporated. 4.5 Power consumption Max. 250W 5. ACCESSORIES , SPARE PARTS , CONSUMABLES 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables /reagents (open, closed system) ➢ Mains 3m power cord 1 No. ➢ Illumination spare lamp 2nos. ➢ Consumables if any (proprietary/open) should be mentioned along with rates BIDING / PROCUREMENT TERMS / DONATI ON REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of -10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues The case is to be cleanable with alcohol or chlorine wipes. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be CE approved product. ➢ Manufacturer/supplier should have ISO 13485 certificate for quality standard.

			➢ Electrical safety conforms to standards for electrical safety IEC-60601-1, IEC 60601-1-2 and IEC 60601-2-18. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 15 Amps. electrical socket. 8.2 Requirements for sign-off 1) Supplier to perform installation, safety and operation checks before handover. ➢ Local clinical staff to affirm completion of installation. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance. ➢ Advanced maintenance tasks required shall be documented.
44	MC0044	CPAP	1. USE 1.1 Clinical purpose Non invasive resp. support (CPAP) for Newborn infant 1.2 Used by clinical department/ward : NICU and PICU TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Device should able to deliver CPAP of 1 to 10 cmH2O increments of 1cm, using a under water bubble system. ➢ The device should have a in-built air oxygen blender to deliver FiO2 21% to 100% (+/- 2 %) with an adjustable flow in the range of 0 -15 L/min (+/-0.5 L/min); ➢ Should have a heated wire servo controlled humidifier with display temp. near patient end of the circuit; to be supplied with 2 reusable infant water chamber; ➢ Should be supplied with 2 reusable heated wire silicone tubing circuit for infant/Newborn; ➢ Should be able to deliver CPAP using available patient interfaces nasal prongs/nasopharyngeal prongs; ➢ For devices based on underwater bubble systems the water chamber should be reusable; to be supplied with 2 reusable water chamber; ➢ Should be provided pressure release valve at 15cmH2O to 17cmH2O; 2.2 User's interface For a flow driving system a pressure display is required Audio visual alarm for low pressure, high pressure, power failure, low O2, 2.3 Software and/or standard of communication(where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) <8kgs 3.3 Configuration : NA 3.4 Noise (in dBA) <60dB; Alarm > 65dB 3.5 Heat dissipation : Yes 3.6 Mobility, portability : Portable. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements 220VAC, 50 Hz 4.2 Battery operated with at-least 6 hours battery backup 4.3 Tolerance (to variations, shutdowns) ±10% of input 4.4 Protection OVP, earth leakage protection 4.5 Power consumption <140Watt 4.6 Other energy supplies electric/battery driven. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables /reagents (open, closed system). ➢ Each device should be provided with 30 nasal prongs (Atleast three sizes suitable for neonates weighing <1000grms, 1000-1500grms & >1500grms) ➢ Air and O2 hose of 3m length each along with the appropriate socket;

			BIDDING / PROCUREMENT TERMS / DONATI ON REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ CE(EU) and BIS/ISO 13485:2003; ➢ IEC-60601-1-2:2007; IEC 60601-1-8-2006; IEC 60601-1-SER-Ed 1.0-2011; IEC/TRF 60601-1-8 Ed4.0-2010; ISO 15001-2010 (Aesthetic & respiratory equipment- compatibility with oxygen). 8. TRAINING AND INSTALLATION 8.1 Pre-installation requirements: nature, values, quality, tolerance, electrical sockets; Oxygen supply. 8.2 Requirements for sign-off Supplier to perform installation, safety and operation checks before handover ➢ Local clinical staff to affirm completion of installation 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users in operation and basic maintenance shall be provided ➢ Advanced maintenance tasks required shall be documented
45	MC0045	Intensive care ventilator (Neonatal & Paediatrics)	**1. USE** 1.1 Clinical purpose To provide automated, alveolar ventilatory support for patients in emergency situations. 1.2 Used by clinical department/ward : Emergency /Critical Care (NICU/PICU) TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should have facility for Invasive and Non-Invasive ventilation; ➢ Microprocessor Control suitable for Neonatal and Paediatric ventilation; ➢ Should have modes of ventilation equipped with newer modes of ventilation: ▪Assist/ Control. ▪Volume control. ▪Pressure control. ▪Pressure support. ▪SIMV with pressure support (Pressure and volume control). ▪PEEP. ▪Inverse ratio Ventilation. ▪Non invasive ventilation-BIPAP, CPAP. ▪Apnea ventilation, user selectable, volume & pressure control; ➢ Should have built in color screen TFT/LCD display of minimum 8ò for display of waveforms and monitored value; ➢ Should have inbuilt facility to upgrade with EtcO2; ➢ Should have facility to measure and display of the following parameters: ▪Airway Pressure (Peak & Mean) ▪Tidal volume (Inspired & Expired) ▪Minute volume (Inspired & Expired) ▪Respiratory mechanics ▪Spontaneous Minute Volume

			▪Total Frequency ▪FiO2 dynamic ▪Intrinsic PEEP ▪Plateau Pressure. ▪Resistance & Compliance. ▪Use selector Alarms for all measured & monitored parameters. ▪Occlusion Pressure. ▪Pressure Flow & Volume curves. ▪Automatic compliance and leakage compensation for circuit and ET tube; ▪Should have facility of log book, for events and alarms with date & time; ➢ Should have following setting; ▪Tidal volume (Minimum 2ml, Maximum up to 2000ml); pre-set range for both neo-natal & pediatic modes to be provided ▪Inspiratory pressure (upto 60cm of H2O); ▪Respiratory rate 1 to 80 bpm; ▪Apnea back up rate; ▪CPAP/PEEP; ▪Pressure support; ▪FiO2 setting range between 21% and 100%; ▪Pause time; ▪Pressure/flow Trigger; ▪Inspiratory flow up to 120 Lpm; ➢ Oxygen cylinder/central pipeline connector/(to be supplied along with the machines) should be compatible with ventilator; ➢ Disposable Heat Moisture Exchanger, qty 100 to be supplied with unit 2.3 User's interface Manual and Automatic 2.4 Software and/or standard of communication(where ever required) ➢ Inbuilt software; ➢ Convenient and quick USB interface; **3. PH YSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) <50kg including trolley 3.3 Configuration ➢ Compatible hunged arm for holding the circuit; ➢ Should have caster with braking system; 3.4 Noise (in dBA), heat dissipation ➢ Noise of device operation max- 50dbA; ➢ Should have audio visual alarm for battery low, source gas low and high/low pressure in the breathing circuit or source gas inlet;3) Should maintain nominal Temp of the control unit and the heat should be disbursed through an cooling mechanism, ➢ Alarm volume - min. 65dB 3.5 Mobility, portability : Yes. **4. E NER GY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements Input voltage 220 VAC, 50Hz; 4.2 Battery operated ➢ Battery powered, silenceable alarm for power failure. ➢ Battery charger to be integral to mains power supply, and to charge battery during mains power operation of unit. ➢ Internal, replaceable, rechargeable battery allows operation for at least four hour in the event of power failure 4.3 Tolerance (to variations, shutdowns) ➢ Voltage corrector / stabilizer to allow operation at ± 10% of 220V AC. Use of SMPS to correct voltage 4.4 Protection ➢ Electrical protection, resettable over current breakers or replaceable fuses (fitted in both live and neutral lines); ➢ Leakage.

			4.5 Power consumption to be declared by the supplier. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & Spares ➢ Full face mask- 5 Nos each of 0,1 and 3 ➢ Nasal cannula for neonates- 5 nos ➢ Reusable breathing circuit of silicone material (5Nos). ➢ Air & oxygen hose- 1 each 5.3 Consumables / reagents (open, closed system) : NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues : Complete unit to be easily washable and sterilizable using alcohol and other chemical agents. **7. STANDARDS AND SAFETY** 7.1 Certifications ➢ FDA (US) /CE (EU) from autorized third party and BIS/ISO 13485 ➢ Relevant IEC-60601-Part 1 & 2, certificates by a notified agency 7.2 Local and/or international Manufacturer / supplier should have ISO certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 amp/15 Amp. electrical sockets; ➢ Oxygen supply; ➢ Medical air supply; ➢ Requirements for sign-off 1) Supplier to perform installation, safety and operation checks before handover; ➢ Local clinical staff to affirm completion of installation 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users in operation and basic maintenance shall be provided; ➢ Advanced maintenance tasks required shall be documented
46	MC0046	Transport pneumatic high-frequency ventilator	**1. USE** 1.1 Clinical purpose : To provide automated, alveolar ventilatory support for patients during inter hospital or intra hospital transport, and in emergency situations. 1.2 Used by clinical department/ward : Emergency /Critical Care TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Mountable transport ventilator (Neonate/Paediatric). ➢ Invasive Modes (CMV and SIMV) and Non-invasive Mode (CPAP). ➢ Pressure controlled - Pressure upto 15mmHg. ➢ Respiration Rate upto 40. ➢ There should be two FiO2 setting range between 21% and 100%. Setting 100% FiO2 should be mandatory. ➢ PEEP 0-20 cm of water. ➢ Trigger sensitivity - Pressure. ➢ The associated cylinder(to be supplied along with the machines) should be such that it could be locally filled. ➢ Oxygen Cylinder connector(to be supplied along with the machines) should be compatible with ventilator. ➢ Audio and visual alarm for disconnection and high pressure. ➢ The device should be capable of operation in various environments such as

			Emergency, Ambulance, Aircraft, Hospital and MRI. ➢ The device should be MRI conditioned up to 3 Tesla, 430 G/cm. 2.3 User's interface Automatic 2.4 Software and/or standard of communication(where ever required) inbuilt. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) <8kgs 3.3 Configuration : NA 3.4 Noise (in dBA), heat dissipation Should have audio visual alarm for disconnection and high pressure. 3.5 Mobility, portability : Yes. **4. E NER GY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements 220 to 240V, 50 Hz; electricity and battery driven; should be compatible with ambulance power supply system with other life saving equipments running parallel in the ambulance. 4.2 Battery operated with atleast 6 hours battery backup 4.3 Tolerance (to variations, shutdowns) ± 10% of input 4.4 Protection OVP, earth leakage protection. 4.5 Power consumption <140Watt. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & Spares full face mask, 4 reusable breathing circuit of silicone material(2 for pediatiric and 2 for neonates), carry bag, ventilator connecting tubes. 5.3 Consumables / reagents (open, closed system) battery, leakage adapter. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. ➢ Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ The unit should be cleanable with alcohol and/or other chemical agents. **7. STANDARDS AND SAFETY** 7.1 Certifications FDA (US) /CE (EU) and BIS/ISO 13485:2003; IEC-60601-1-2; ISO 15001-2010 (Anestheric & respiratory equipment- compatibility with oxygen). Certificate of approval for transport ventilator. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance electrical sockets; Oxygen supply. 8.2 Requirements for sign-off Supplier to perform installation, safety and operation checks before handover. ➢ Local clinical staff to affirm completion of installation. 8.3 Training of staff (medical, paramedical, technicians) Training of users in operation and basic maintenance shall be provided. Advanced maintenance tasks required shall be documented.
47	MC0047	**Ventilator (all patient category)**	**1. OPERATIONAL REQUIREMENTS** i. It should be microprocessor controlled ventilator with integrated facility for ventilation monitoring suitable for Neontal to adult ventilation.

		Adult to neonatal	ii. The unit should be external compressor based for precise gas delivery (not a turbine/piston/blower based). It should have proximal flow sensor for neonatal patient category. iii. Demonstration of the equipment is must. **2. TECHNICAL SPECIFICATION** i. Hinged arm holding the circuit. ii. Should have coloured touch screen 12 inch or more. iii. It should have inbuilt facility to measure and display for al patient category (Adult to neonatal). iv. Should have mainstream end tidal CO2 detection capnography. v. 3 waves ï pressure and time, volume and time and flow and time. vi. 3 loops ï P-V, F-V, P-F with facility of saving of loops for reference. vii. Display of volumetric capnography loops should be there. viii. Status indicator for ventilator mode, battery life, patient data, alarm settings, clock etc. Simultaneously display of set and exhaled parameter, 3 wave form and 2 loops and alarm. ix. Should have tending facility for 24 hrs. x. Should have automatic compliance & leakage compensation for circuit and ET tube with ET tube size and % of compensation. ➢ Should have following settings for all age groups a) Tidal volume 5 ml to 1500 ml b) Pressure (insp) 2-80 cm H2O c) Pressure ramp/Flow patterns d) Respiratory rate 1 to 150 bpm, Insp. Time 0.1 to 3 sec, I:E Ration 5: 1 to 1:5 e) CPAP/PEEP 0-40 cm H2O f) Pressure support 2-80 cmh2O g) FIO2 21 to 100% h) Pause time 0 to 2 sec. i) Flow Trigger 0.2 to 15 lpm ➢ Should have monitoring of the following parameters a) Airway Pressure (Peak & mean) b) Tidal volume (Inspired & Expired) c) Minute volume (expired) d) Spontaneous minute volume e) Total frequency f) FI02 g) Intrinsic PEEP h) Plateau Pressure i) Resistance (Rinsp & Rexp) & Compliance (Cdyn& Cstat) j) Use selector Alarms for all measured and monitored parameters. ➢ Should have following modes or equivalent modes of ventilation a) Volume controlled b) Pressure Controlled c) SIMV (Pressure control and volume control) with pressure support. d) CPAP/PEEP, PSV + assured tidal volume/guarantee e) Advanced mode like pressure controlled volume guaranteed/PRVC/Autoflow f) Non Invasive ventilation. g) MMV+PSV h) APRV ➢ Should have Apnea/backup ventilation. a) Expiratory block should be autoclavable and no routine calibration required. ➢ Should have monitoring of the following parameters a. Occlusion Pressure (P0.1), Max Inspiratory pressure (Pi max) b. RSBI, imposed work of breathing (WOBi) ➢ Should have integrated (inbuilt) nebulizer or synchronised ultrasonic nebuliser with capability to deliver fine particle Online. ➢ Should integrated battery backup for minimum 2 hour for main unit. a. System configuration Accessories, spares and consumables. b. ICU ventilator mounted on trolley.

			c. Adult, Paeditric, Neonatal autoclavable silicon patient breathing circuits 02 each . d. Reusable and autoclavable flow sensor and exhalation valve/expiratory cassette ï 04 nos each. The expiratory flow sensor and valve should have 05 years complete replacement (free of cost). e. Proximal flow sensor for neonatal use ï 10 nos. f. Hinged support arm ï 01. g. Air oxygen hose ï each 01 no. h. Medical Air compressor, with CE mark i. Reusable masks (small, medium, large) with each machine ï one set each. j. Humidifier ï Servo controlled fisher and paykel MR 850 with digital monitoring of inspired gas temperature ï 01. k. All accessories required like temp, probe, heating wire, draw, chamber etc ï each 02 nos. l. Mean stream EtC02 sensor ï 01 no. Reusable Adult/Paed, Neonatal adaptor ï each 1 m. Standards safety and training . n. Should be USFDA/European CE approved product. The supplier must be ISO certify company. o. Demonstration of quoted equipment model is must. p. Should have local service facility. The service provider should have necessary equipments recommended by the manufacturer to carry out the preventive maintenance test as per guidelines provided in the service/maintenance manual.
48	MC0048	Nebulizing systems	**1. USE** 1.1 Clinical purpose designed to generate aerosolized medication/fluids (finely dispersed airborne droplets in a liquid phase) intended to be inhaled by a patient with a respiratory disorder. 1.2 Used by clinical department/ward : All TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) Medicine cup capacity of minimum 5ml. 2.2 Settings : Manual 2.3 User's interface : Manual 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Should be compact 3.2 Weight (lbs, kg) <2kg. 3.3 Configuration 3.4 Noise (in dBA), heat dissipation <60dBA 3.5 Mobility, portability : Yes. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements 220 V AC + 10%, 50Hz power supply; 5A plug; 4.2 Battery operated : NA 4.3 Tolerance (to variations, shutdowns) ± 10% of input AC 4.4 Protection Electrical protection by resettable over current breakers or replaceable fuses, fitted in both live and neutral lines 4.5 Power consumption Should be compatible with other life saving equipments running parallel 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & Spares With necessary accessories- nebulization mask(both adult

			and pediatric size), PVC tubing for nebulizer (two pair extra); cable cord 5.2 Consumables/reagents (open, closed system) aerosol/medicinal solutions. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ The unit should be cleanable with alcohol and/or other chemical agents. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..) FDA (US)/CE (EU) and BIS/ISO 13485:2003; ISO 27427-2013; IEC-60601-1. **8. TRAI NING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Supplier to perform installation, safety and operation checks before handover. 8.2 Requirements for sign-off Certificate of calibration and inspection from the factory. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users in operation and basic maintenance shall be provided.
49	MC0049	Emergency suction systems	**1. USE** 1.1 Clinical purpose To aspirate fluids, secretions, or other foreign materials from a patient's airway by means of suction. TECHNICAL **2. TECH NICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) Giving vacuum more than 550 mm Hg, with 200 ml/stroke; oil free diaphragm pump. 2.2 Settings : Manual 2.3 User's interface : Manual 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Max spec: 32 x 17 x 30 cms 3.2 Weight (lbs, kg) : 2.5kg max 3.3 Configuration : NA 3.4 Noise (in dBA) : NA 3.5 heat dissipation :NA 3.6 Mobility, portability : Yes. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements : NA 4.2 Battery operated : NA 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection : NA 4.5 Power consumption : NA 4.6 Other energy supplies : NA **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts Collection bottles, clear unbreakable jar (one set extra) 5.2 Consumables/reagents (open, closed system) Microbial filter, silicon tubing (one set extra). **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS**

			6.1 Atmosphere/Ambiance (air conditioning, humidity, dust...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. ➢ Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable and sterilizable using both alcohol and chemical agents. **7. STANDARDS AND SAFETY** 7.1 Certifications FDA/CE and BIS/ISO 13485:2003; ISO 10079-2-1999. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off : NA 8.3 Training of staff (medical, paramedical, technicians). OPTIONAL (Depending upon scope of work order). Training of users in operation and basic maintenance shall be provided.
50	**MC0050**	**Oxygen administration enclosures**	**1. USE** 1.1 Clinical purpose To provide an enriched environment of oxygen (O2) to increase the patient's O2 uptake. 1.2 Used by clinical department/ward : SNCU/NICU TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Transparent Polycarbonate unbreakable single molded. ➢ Silicon rubber Neck Port adjustment enabled to minimize the wastage of oxygen. ➢ Silicon rubber Neck port adjustment to ensures use in Neonate/Infant/Pediatric patients. ➢ Oxygen inlet Port. 2.3 Settings : N.A. 2.4 User's interface : N.A. 2.5 Software and/or standard of communication(where ever required) : N.A. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Appropriate to comfortably fit all size babies up to 5 years of age. 3.2 Weight (lbs, kg) extremely light weight 3.3 Configuration :NA 3.4 Noise (in dBA) : N.A. 3.5 heat dissipation : NA 3.6 Mobility, portability portable. **4. ENERGY SOURCE (Electricity, Ups, Solar, Gas, Water, Co2 ....)** 4.1 Power Requirements : N.A. 4.2 Battery operated : N.A. 4.3 Tolerance (to variations, shutdowns) : N.A. 4.4 Protection : N.A. 4.5 Power consumption : N.A. 4.6 Other energy supplies : N.A. 5. ACCESSORIES , SPARE PARTS , CONSUMABLES 5.1 Accessories (mandatory, standard, optional) : NA 5.2 Spare parts (main ones) : NA 5.3 Consumables / reagents (open, closed system) tubing

			5.4 Others. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) **Operating condition:** ➢ Capable of operating continuously in ambient temperature of 0 to 50 deg. C and relative humidity of 15 to 90% in ideal circumstances. 6.2 User's care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable and sterilizable using both alcohol and chlorine agents. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ...) ➢ ISO 15001-2010 ➢ Should be CE or FDA approved ➢ The company should be ISO 13485 certified 7.2 Performance and safety standards (specific to the device type) : NA **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Confirmation in no crack, no leak in hood structure 8.3 Training of staff (medical, paramedical, technicians) : NA
51	**MC0051**	**Oxygenators**	**1. USE** 1.1 Clinical purpose to concentrate oxygen (O2) from ambient air and deliver the concentrated O2, typically through an attached nasal cannula, to a patient requiring oxygen therapy. 1.2 Used by clinical department/ward : SNCU/NICU TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Flow rate: 0~5 LPM, purity > 93%. ➢ O2 delivery pressure: 0.03 to 0.07 Mpa (4.35 - 10.15 PSI). ➢ Atomising pellet (ml/min.) > 0.5, uninterrupted flow of oxygen. ➢ Oxygen monitoring system (optional). ➢ Low pressure alarm, high pressure alarm and power failure alarm. ➢ Unit capable for supplying oxygen to two outlets simultaneously using two independent flow meters. 2.2 Settings Should be capable of providing minimum 12 hours of continuous operation. 2.3 User's interface Front panel access to reset switch. 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Max spec: 640 mm (H) x 410 mm (W) x 410 mm (D). 3.2 Weight (lbs, kg) Max 30 kg. 3.3 Configuration NA 3.4 Noise (in dBA) <50 db 3.5 heat dissipation Heat desipated using an internal exhaust, so that a maximum of 36.5 degree C is maintained. 3.6 Mobility, portability : Yes **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements 230 +/- 10% VAC, 50 Hz, 2 amps. 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) fuse controlled variation, automatic switch over from AC to DC and vice versa. 4.4 Protection OVP, earth leakage protection

			4.5 Power consumption <500 Watts 4.6 Other energy supplies. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) Humidifier Bottles-4nos, power cord-1no. 5.2 Spare parts (main ones) 5.3 Consumables/reagents (open, closed system) Nasal Cannula with extension tubing-2 nos; Gross particle cabinet filter, compressor intake filter and bacterial filter of 0.8-1.0 micron; geolite crystal. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust...) Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%.Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable and sterilizable using both alcohol and chlorine agents. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..);Performance and safety standards (specific to the device type) CE or FDA approved and company should be ISO 13485 certified; and shall meet IEC 60601-1, IEC 60601-1-2 standard requirements; and compile with ISO 15001-2010. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance Availability of 5 amp/15 Amp. Electrical socket (2 nos) for each warmer. 8.2 Requirements for sign-off Certificate of Calibration and inspection from the factory. 8.3 Training of staff (medical, paramedical, technicians) user training manual required. 8.4 Others List of important spare parts and accessories with their part number and costing.
52	MC0052	**Infant warmer**	**1. USE** 1.1 Clinical purpose Infant Radiant warmer is an electrically powered device with a radiant heating source intended to maintain the thermal balance of an infant by direct radiant of energy in the infrared region of the electromagnetic spectrum. 1.2 Used by clinical department/ward : Neonatal ICU/ SNCUNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ It should be microcontroller based radiant warmer with manual and servo options. ➢ It should have facility to display skin set, skin observed temperature in degree C and heat power separately. ➢ Should have user friendly touch panel control. ➢ It should have ceramic or quartz infrared or calrod heater ➢ It should have audiovisual alarm facility for overheating beyond set temperature range. ➢ It should have alarm facility for patient temperature less than or greater than the required temperature i.e. above or below the set range. Machine should sense the skin probe failure and cut off the heater. ➢ Warmer head should be rotatable in different direction, so as to allow taking X-ray. ➢ It should have alarm for probe failure, power failure, system failure and heater failure. ➢ Observation light of 90 to 100 foot candles or 1000 Lux (color temperature range 3700K to 5100K) should be provided for inspection. ➢ Battery back up for Power failure indication during power fail. ➢ The desired temperature range from 25 to 40 degree C and settable temperature can be from 32 to 38 degC. ➢ The resolution should be 0.1 degree C and accuracy should be 0.2 °C.

			➢ Should have a facility to lock the keyboard to avoid unwanted user modification of the set parameters. ➢ The height of the warmer should be adjustable for different types of bed. ➢ It should have separate bassinet trolley, bed should be tiltable and have provision for x-ray cassette holder, Mattress foam density should be minimum 25 kg/cm3, transparent collapsible side walls easily detachable for cleaning. Mattress size should be minimum 20"X30". ➢ Should have a Feather Touch operation with large digital display and comprehensive alarms. Control Panel should be liquid proof and allow easy and hygienic disinfection. ➢ Manual Mode can adjust Heater Output 10 -100 %, with 10% increment, an auditory and visual alarm shall be given at least every 15 min. ➢ In manual mode, heater cut off / switch off , if the maximum irradiance at any point of the mattress area exceeds a total irradiance level of 10 mW/cm2 (between 10 to 30 minutes). ➢ Bed should be about 80 - 100 cms from the Floor and 80-90cms from the heat source. ➢ Should have lockable castor wheels. ➢ Green indicator light shall be provided to indicate that warmer is ready for normal use. ➢ Markings on the bassinet and X-Ray cassette holder is mandatory to enable proper positioning of the baby while doing the X-Ray. ➢ The size of the drop down sides should be such that it is 5" above the mattress surface and should be atleast 6mm thick; clear and transparent. ➢ If there is more than 60% heater output for 10 minutes it should cutoff with alarm. ➢ For the purpose of cable management there should be at least two number of tubing ports (edges covered by silicon rings) on the side walls. The height of the side walls should be minimum 110mm over the mattress. ➢ X-Ray cassette tray should be at least 750X350mm and should adopt up to 20mm thick X-Ray cassette. ➢ The bay bed should be crevice free for ease of cleaning, infection control. ➢ The mattress used should be of biocompatible material. ➢ Thermistor based skin temperature probe should be small in size not more than 10mm diameter and 3-4mm thick to fix the probe firmly on the infant. Baby contact material should be biocompatible as per ISO 10993 standard requirement. It should be insulated on one side and have well conducting non-rusting, non reacting metallic surface on the other side. Probe wire should be pliable, thin and soft. The attachment site of the probe with the wire should also be pliable and non stiff. o Settings : 1. ➢ Should have Manual mode and Baby (Servo) mode settings. ➢ Mode of operation should be clearly displayed. ➢ In servo mode baby set temperature should be 32 to 38 deg C. 2.3 User's interface Manual and Servo controlled temperature regulation. ➢ 2.4 Software and/or standard of communication(where ever required) : LED Display and inbuilt software; Interruption and restoration of the power supply does not change the preset values. 2.5 Others ➢ Device shall not overbalance when placed in any transport position of normal use on a 10° inclined plane from the horizontal plane. ➢ Transformers of device shall be protected against overheating in the event of short circuit or overload of any output winding. ➢ Patient leakage current should be less than 100 ε A in normal condition. ➢ Temperature on the baby mattress should not exceed 43 deg C when the warmer is operating under steady temperature condition. ➢ Temperature of HEATER GUARDS should not exceed 85 °C in normal use. ➢ The Temperature differences on the mattress shall not exceed 2 °C. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) specifications upto: 2000 mm (Height) X 900mm (Width) X 1100 mm (Length). 3.2 Weight (lbs, kg) maximum spec: 150kg.

			3.3 Configuration Atleast 60 degree angle adjustment must be possible in the heat source and it should provide shielding to the infant in case of breakage of tubes/bulbs, All surfaces to be made of corrosion resistant material. 3.4 Noise (in dBA) Auditory alarm shall have a sound level of at least 65 dBA at a distance of 3 m from the front of the infant radiant warmer, and the sound level of the alarm shall not exceed 80 dBA on the mattress. 3.5 heat dissipation Should maintain upto 36.5 deg temp and the heat disbursed through a exhaust fan , so that effect of UV light is not disturbed. 3.6 Mobility, portability Yes, on castors (2 of the castors should have breaks; casotor size can be atleast 4inch). **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements 220 to 240V, 50 Hz 4.2 Battery operated Power failure indication during power fail. 4.3 Tolerance (to variations, shutdowns) $\pm$ 10% of input 4.4 Protection OVP, earth leakage protection. 4.5 Power consumption : maximum 800 Watt 4.6 Other energy supplies Solar Heating - desirable ; not essential. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) ➢ Should have standard IV pole(sturdy;non rusting; medical grade stainless steel; adjustable to a max height of 6 feet from the ground level), monitor tray(12X10 inches;270 deg swivel; fixed at level of warmer display) and storage trays. 5.2 Spare parts (main ones) Skin temperature probes, 5.3 Consumables / reagents (open, closed system) Thermal reflector to fix the skin probe on baby. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) **Operating condition:** ➢ Capable of operating continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ an ambient air velocity is less than 0.3 m/s. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ Complete unit to be easily washable and sterilizable using both alcohol and chlorine agents. **7. STANDARDS AND SAFETY** 7.1 Performance and safety standards (specific to the device type); Certificates (pre-market, sanitary, ...); ➢ Local and/or international : Should be FDA / (CE of class IIb) approved product. Shall meet IEC-60601-1-2:2007 Medical electrical equipment -- Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests (Or Equivalent BIS). Shall neet IEC 60601-2-21: 2009 Medical Electrical Equipment ï Part 2-21: Particular Requirement for the basic safety and essential performance of infant radiant warmers . should meet IEC 60601-1:2005 standard requirements. ➢ Baby contact material should be biocompatible as per ISO 10993 standard requirement. ➢ Manufacturer should be ISO 13485 certified. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance Availability of 5 amp/15 Amp. Electrical socket (2 nos) for each warmer. 8.2 Requirements for sign-off Certificate of Calibration and inspection from the factory. 8.3 Training of staff (medical, paramedical, technicians) user training manual required 8.4 Others List of important spare parts and accessories with their part number and costing.

53	MC0053	Phototherapy units/systems	**1. USE** 1.1 Clinical purpose Emits in the main radiation spectrum in the range between 400 nm and 550 nm for reducing the concentration of Bilirubin 1.2 Used by clinical department/ward : New born stabilisation unit, SNCU 1.3 Overview of functional requirements ➢ Provides filtered light using radiant electric lights, not fibre optics. ➢ Infant supported securely in bassinette below bulbs. ➢ Monitors hours of radiant light exposure. **2. TECH NICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Phototherapy should be based on LED technology, which after filtering should provide, a light of wavelength approximately 450 to 470 nm with peak wavelength of 450-460nm range. ➢ Irradiance to be minimum 35 εW/cm2/nm at 40 cm height and UV should not exceed 10-4 W/m2 in 180nm to 400nm. ➢ Digital Hour meter showing total exposure time for current patient to be clearly visible by operator. ➢ Effective light field >700 cm2. ➢ Lamp life should be minimum 20000 hours for LED and should have timer to indicate its usage. ➢ Over temperature safety cut out to be included. ➢ Up, down and tilting of head should be possible. ➢ The unit should be mounted with castor wheels with brakes. ➢ Variation in intensity over 5-6 hours < 10%. ➢ The irradiance ratio (min to max) shall be greater than 40 % on mattress. ➢ Green indicator light shall be provided to indicate that equipment is ready for normal use. ➢ Interruption and a restoration of the power supply do not change preset values. LED heat can be reduced by natural cooling. ➢ LED should be protectred from free fall. ➢ It should not topple on 10 deg inclined angle. ➢ The temperature of baby bed and metal surfaces should not exceed 40deg C and 43 deg C for other accesible surfaces. ➢ There should be intutive method to indicate the light surface is at the appropriate treatment distance. ➢ Mobile stand with movable castors and height adjustment facility along with easy swivelling of source box. Unit can be used along with Infant care trolley, Radiant Warmer and Incubator. 2.2 Settings UP/DOWN adjustment of Over Head Unit; The phototherapy unit should be able to provide effective treatment for beds and incubators of varying heights (generally 1.0 to 1.6m). Adjustment of light intensity may be provided. 2.3 User's interface Manual 2.4 Software and/or standard of communication(where ever required) : LED Display and inbuilt software 2.5 Others **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) minimum spec: 1650mm Height X 750mm Width X 500mm Length 3.2 Weight (lbs, kg) <20 kg 3.3 Configuration Clear cabinet for observation of infant. Infant bassinette to be an integral unit which should be detachable. Unit to provide shielding of infant in the event of bulb breakage. Bulb mount to have angle adjustment of at least 30 degrees. All surfaces to be made of corrosion resistant materials. Light unit tilting facility and height adjustment facility. 3.4 Noise (in dBA) <60dBA 3.5 Heat dissipation : The temperature of baby bed and metal surfaces should not exceed 40deg C and 43 deg C for other accessible surfaces.

			3.6 Mobility, portability : Minimum 3 castors and atleast 2 with brakes. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements 220 to 240V, 50 Hz 4.2 Battery operated : NA 4.3 Tolerance (to variations, shutdowns) ± 10% of input AC 4.4 Protection Electrical protection by resettable overcurrent breakers or replaceable fuses, fitted in both live and neutral lines. 4.5 Power consumption Should not be more than 160 W 4.6 Other energy supplies Mains cable to be at least 2.5m length. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) ➢ Complete set of replacement tubes to allow 3 monthsô continuous operation ➢ Two replacement sets of fuses, if replaceable type used. 5.2 Spare parts (main ones) : No spares required 5.3 Consumables / reagents (open, closed system) ➢ Total 500 nos. Infant eye masks of both available sizes (term and pre term babies). **6. ENVIRONMENTAL AND DEPARTMENTAL CONSI DERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ Complete unit to be easily washable and sterilizable using both alcohol and chlorine agents. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ Should be FDA / CE approved product ➢ Shall meet IEC-60601-1-2:2007 Medical electrical equipment -- Part 1-2: ➢ General requirements for basic safety and essential performance ï Collateral standard: Electromagnetic compatibility - Requirements and tests (Or Equivalent BIS) ➢ Should meet IEC 60601-1:2005 standard requirements ➢ Shall meet IEC 60601-2-50: 2009 Medical Electrical Equipment ï Part 2-50: Particular Requirement for the basic safety and essential performance of infant phototherapy equipment; Manufacturer should be ISO 13485 certified. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Supplier to perform installation, safety and operation checks before handover. 8.2 Requirements for sign-off Certificate of Calibration and inspection from the factory. 8.3 Training of staff (medical, paramedical, technicians) Training of users in operation and basic maintenance shall be provided
54	MC0054	**Infant Incubator**	**1. USE** 1.1 Clinical purpose designed to provide an enclosed controlled environment to maintain appropriate temperature and humidity levels mainly for premature infants and other newborns who cannot effectively regulate their body temperature. 1.2 Used by clinical department/ward : NICU and PICU 1.3 Overview of functional requirements : ➢ Control of air temperature and infant skin temperature. ➢ Clear, hard cabinet for infant viewing. ➢ Easy access control panel, with light touch operation switches. ➢ Facility to elevate base, adjustable range. ➢ Self-test functions are performed. ➢ Built for transport of infants between wards or health facilities, including by vehicle. ➢ Must have skin temperature display.NICAL **2. TECHNICAL CHARACTERISTICS**

			2.1 Technical characteristics (specific to this type of device) ➢ Visual and audible alarms for: ➢ Patient and air high/low temperature alarm. ➢ Air circulation / probe / system / power failure alarm. ➢ Heater power indicator ➢ Air velocity: minimum 0.30m/sec ➢ Oxygen input flow rate 5 to15 liters/min or oxygen concentration range 25 to 70%. ➢ Maximum CO2 concentration inside incubator 0.2%. ➢ Internal noise level < 60 dB. ➢ Mode of operation should be properly displayed. ➢ Green indicator light should be provided for its ready to be in normal use. ➢ Infants straps should be provided to restrict the baby movement. ➢ skin temperature probe should be small in size not more than 10mm diameter and 4mm in height to fix the probe firmly on the infant. Baby contact material should be biocompatible as per ISO 10993 standard requirement. ➢ Infant bed should be drawable. Mattress foam density should be minimum 25kg./cm3 and infant bed mattress cover should be biocompatible material. ➢ Examination light should be provided for inspection. ➢ Should have heater power indicator. ➢ Warm up time 30-40 minutes and shall not differ by more than 20%. ➢ Shall be equipped with a thermal cut-out. It shall be so arranged that the heater is disconnected and an auditory and visual warning is given at an incubator temperature which does not exceed 40 deg C. ➢ Should have elbow operate-able ports and head access door. ➢ It should not topple over at 10 deg inclined plane. ➢ Patient skin temperature range: 35 deg C to 37.5 deg C. over ride up-to 38 deg C. ➢ Air temperature range: 30 deg C to 39 deg C; Temperature resolution $\pm$ 0.1 deg C; Temperature accuracy $\pm$0.2 deg C. 2.2 Settings Patient skin temperature range: 35 deg C to 37.5 deg C. over ride upto 38 deg C. ➢ Air temperature range: 30 deg C to 39 deg C. 2.3 User's interface Display allows easy viewing in all ambient light levels 2.4 Software and/or standard of communication : in built 2.5 Others 1. Temperature on the baby mattress should not exceed 40 deg C and 43 deg for other materials ➢ Uniformity of temperature on the horizontal mattress shall not exceed 1.5 deg C and in tilted mattress not exceed 2 deg C. ➢ The overshoot temperature shall not exceed 2 deg C. ➢ The stability of temperature during steady temperature shall not differ from the average temperature by more than 1 deg C. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Baby bed should be at-least 60X30cm and the canopy should be at-least 80X40 cm. 3.2 Weight (lbs, kg) not exceeding 40kg. (without cylinders). 3.3 Configuration Oxygen port with tubing, also mount for oxygen cylinder of 5 liters size. ➢ Accommodates shelves, suction unit and I/V poles. ➢ Double-walled cabinet with at least two hand ports. ➢ Should have collapsible trolley with lockable castors. ➢ Mounted on mobile base, lowest height setting of which is at least 80 cm high. ➢ Minimum castor diameter 12cm. ➢ At least two castors must be fitted with brake facility. ➢ Castors must be made of conductive material such as Static dissipative Polyurethane and rotate (swivel) freely around the vertical axis. ➢ The canopy and infant bed should be crevice free for ease of cleaning. 3.4 Noise (in dBA) <60dBA; Alarm Audible sound level should be at-least 65dBA at 3meter distance from the device. 3.5 heat dissipation Should maintain up-to 37 deg temp.

			3.6 Mobility, portability : Yes, on castors. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Voltage (value, AC or DC, monophase or triphase) 220VAC ± 10% , 50 Hz 4.2 Battery operated Battery charger to be integral to mains power supply, and to charge battery during mains power operation of unit.Electrical protection by resettable over-current breakers or replaceable fuses, fitted in both live and neutral lines. Battery backup of 2 hours for equipment operation. The battery should be protected from overcharging. 4.3 Tolerance (to variations, shutdowns) Voltage corrector / stabilizer to allow operation at ± 10% of rated voltage. 4.4 Protection Internal, replaceable, rechargeable battery allows operation for at least two hours in the event of power failure. 4.5 Power consumption 4.6 Other energy supplies : Mains cable to be at least 3m length 5. ACCESSORIES , SPARE PARTS , CONSUMABLES 5.1 Accessories (mandatory, standard, optional) ➢ With washable and removable straps and binders 5.2 Spare parts (main ones) : Two extra sets of all sensors 5.3 Consumables / reagents (open, closed system) ➢ Two extra sets of filters, two extra set of fuses (if replaceable fuses used). **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) **Operating condition:** ➢ Capable of operating continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ an ambient air velocity is less than 0.3 m/s. 6.2 User's care, Cleaning, Disinfection & Sterility issues Unit layout to enable easy cleaning and sterilization of all surfaces, with no unreachable fluid traps. The case is to be cleanable with alcohol or chlorine wipes. 6.3 Others. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ FDA (US) /CE (EU) from authorized third party and BIS/ISO 13485 ➢ Relevant IEC-60601-Part 1 & 2, certificates by a notified agency. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance Supplier to perform installation, safety and operation checks before handover. 8.2 Requirements for sign-off Certificate of Calibration and inspection from the factory. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users in operation and basic maintenance shall be provided
55	MC0055	Pulse oximeter	**1. USE** 1.1 Clinical purpose Measurement and display of haemoglobin oxygen saturation (SpO2). 1.2 Used by clinical department/ward : All 1.3 Overview of functional requirements ➢ Continuously displays patient oxygen saturation in real time using an external probe on the skin. ➢ Contains adjustable alarms to alert when either saturation or heart rate is low. ➢ Reusable, sterilisable probes are robust and easily connected and disconnected. ➢ Operates from mains voltage or from internal rechargeable battery. TECHNICAL **2. TECHNICAL CHARACTERISTICS**

			2.1 Technical characteristics (specific to this type of device) ➢ SpO2 measurement range at least 40-70 and 70 to 99 %, minimum gradation 1%. ➢ Accuracy of SpO2 better than } 1% for range 40-70 and better than ± 3% for range 70-99. ➢ Pulse rate range at least 30 to 240 bpm, minimum gradation 1 bpm. ➢ Accuracy of pulse rate better than } 5 bpm. ➢ Signal strength or quality to be visually displayed. ➢ Audiovisual alarms required: high and low SpO2 and pulse rate (operator variable settings), sensor disconnected, sensor failure, low battery. ➢ TFT Screen. ➢ Plethysmograph (may be in form of bar) display is mandatory. 2.2 Settings Should have minimum 24 hrs trend memory for SpO2 & PR. 2.3 Userôs interface Easily accessible touch button to operate the machine. 2.4 Software and/or standard of communication in built. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : NA 3.2 Weight (lbs, kg) : should be less than 5kg 3.3 Configuration Case is to be hard and splash proof. ➢ Display must allow easy viewing in all ambient light levels. ➢ Supplied in protective case for clean storage and safe transport. 3.4 Noise (in dBA) <50dBA 3.5 heat dissipation Dispersed through exhaust. 3.6 Mobility, portability Mobile. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Voltage (value, AC or DC, monophase or triphase) 220 to 240V, 50 Hz 4.2 Battery operated Internal, replaceable, rechargeable battery allows operation for at least four hours in the event of power failure. Battery charger to be integral to mains power supply, and to charge battery during mains power operation of unit. 4.3 Tolerance (to variations, shutdowns) : Voltage corrector/stabilizer/UPS to allow operation at } 30% of local rated voltage. 4.4 Protection Electrical protection by resettable circuit breakers in both live and neutral supply lines, Alarms should include Power failure. 4.5 Power consumption 50-100 W. 4.6 Other energy supplies Mains supply cable to be at least 3m in length. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) ➢ Two reusable probes each for adult, paediatric and infant use, Y Probes with clips for infant use and Forehead SpO2 sensors for detection of low saturation levels (less than 70%)/flex probe with provision of fixation. 5.2 Spare parts (main ones) Two sets of spare fuses (if non-resettable fuses used). 5.3 Consumables/reagents (open, closed system) : NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) **Operating condition:** ➢ Capable of operating continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90% in ideal circumstances. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Cleanable with alcohol or chlorine wipes. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..), Performance and safety standards (specific to the device type);Local and/or international ➢ Should be FDA/CE approved product ISO 80601-2-61-2011: Medical Electrical equipment- part 2-61: Particular requirements for the basic safety and essential performance of pulse oxymeter. ➢ Electrical safety conforms to standards for electrical safety IEC-60601-1,

			EMC safety confirms to IEC 60601-1-2 standard requirement. ➢ Manufacturer/supplier should have ISO 13485 certificate for quality standard. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance Electrical sockets 8.2 Requirements for sign-off Supplier to perform installation, safety and operation checks before handover. ➢ Local clinical staff to affirm completion of installation. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users in operation and basic maintenance shall be provided Advanced maintenance tasks required shall be documented.
56	MC0056	Blue light radiometer	**1. USE** 1.1 Clinical purpose Used for checking radiance of phototherapy units. 1.2 Used by clinical department/ward : New born stabilisation unit, SNCU. TEC**2. TECH NICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Hand held, Band pass filter with max transmission 425-475 nm. ➢ light detector sensitivity range: 0-2000 εW/cm2/nm. ➢ Measurement range: 0-100 εW/cm2/nm. ➢ Minimal graduation: 1εW/cm2/nm. ➢ Accuracy: ± 10%. ➢ LED or LCD display. ➢ Should be able to zero between measurements. ➢ Fast measurement response- <5 sec. ➢ Memory storage: required. ➢ UV and IR should be blocked. ➢ Hold function. 2.2 Settings : NA 2.4 Userôs interface Digital display 2.5 Software and/or standard of communication(where ever required) : Built in software 2.6 Others. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Mobile. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements 220VAC/50 Hz 4.2 Battery operated in built 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection Should be provided with fuse while using mains for charging. 4.5 Power consumption 30W max 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) Charger 5.2 Spare parts (main ones) No spares 5.3 Consumables/reagents (open, closed system) : NA 5.4 Others. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues : NA.

			7. STANDARDS AND SAFETY 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type); Local and/or international ➢ Shall meet IEC-61010(Or Equivalent BIS) Standard Retirements. Should be FDA/CE approved product; ISO certified company. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Hand-over report with end user sign. 8.3 Training of staff (medical, paramedical, technicians) ➢ User training on complete operation should be provided.
57	MC0057	Breast Pump	**1. USE** 1.1 Clinical purpose A breast pump is a mechanical device that extracts milk from the breasts of a lactating individual. Breast pumps is an electrical devices powered by electricity or batteries. 1.2 Used by clinical department/ward : NICU and PICUHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Pumping frequency 30 to 80 Cpm and user adjustable. ➢ Cushion inserted inside the breast cup so that it does not hurt the mother. ➢ Suction Pressure 100 to 250 mm hb; user adjustable ➢ Able to express milk from both breasts simultaneously. ➢ Collection bottles can be used for storage of milk should be autoclavable and biocompatible ➢ Double alternating pumps/double cycling pumps. ➢ Should be motorized breast pump units ➢ Should be hospital grade and heavy duty. 2.2 User's interface Manual 2.3 Software and/or standard of communication(where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) : Portable 3.2 Weight (lbs, kg) Compact unit (weight less than 4 kg) 3.3 Configuration LCD/LED display suction timing 3.4 Noise (in dBA) <60db 3.5 Heat dissipation : NA 3.6 Mobility, portability : Yes. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements 220 V AC + 10%, 50Hz power supply; 5A plug. 4.2 Battery operated : NA 4.3 Tolerance (to variations, shutdowns) ± 10% of input AC 4.4 Protection Electrical protection by resettable over current breakers or replaceable fuses. 4.5 Power consumption Should be compatible with other life saving equipments running parallel. 5. ACCESSORIES , SPARE PARTS , CONSUMABLES 5.1 Accessories (mandatory, standard, optional); Spare parts (main ones); Consumables / reagents (open, closed system) ➢ Resuable collection bottles along-with breast cups - 10 sets. ➢ All kinds of tubes - 12 sets (If applicable). ➢ Diaphragm - 100Nos. ➢ Other accessories required for optimum functioning of the equioment. BNG / PROCUREMENT TERMS / DONATI ON REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere / Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal

			circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 User's care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be CE (EU)/FDA (US) approved product. ➢ Manufacturer / supplier should have ISO 13485 certificate for quality standard. ➢ Electrical safety conforms to standards for electrical safety IEC-60601-1. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Supplier to perform installation, safety and operation checks before handover. 8.2 Requirements for sign-off Certificate of calibration and inspection from the factory. 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users in operation and basic maintenance shall be provided.
58	MC0058	EEG - Electroence phalography	**1. USE** 1.1 Clinical purpose : To record the variations of the electrical potential caused by the electrical activity of the brain 1.2 Used by clinical department/ward : NICU/PICU TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ Should be a 32 Channel digital EEG Machine, where 24 Channels for acquisition and storage, 5 Polygraph Channels and 3 DC Channels. ➢ Frequency response should be 0.05Hz to 70Hz. ➢ Should have facility to view all channels in different montages during acquisition and review. ➢ Should have split screen facility to study and even carefully during acquisition, where data storage should be on going in hard disk. ➢ Should have split screen facility in analysis to compare the data of same time or different times with individual selection of filters, sensitivity, montages etc. ➢ Should have the facility for simultaneous acquisition and review of same record. ➢ Should have the facility to mark pages/important events for printing in review. ➢ Should have user definable photic stimulator protocol execution with display of photic marks on screen using LED or Xenon flash lights ➢ Should have unlimited Montage Reformatting. ➢ Should have HLF (15, 35, 70 Hz) and LLF (0.1, 0.3, 1.5, 3, 5 Hz) filters for each channel as well as for all channels for display. ➢ Should have the facility for sweep speed selection. ➢ Should have the facility to display traces with limit trace ➢ Should mark and annotate standards events such as Eyes open, Eyes closed, Hyperventilation on, Hyperventilation off, Artifact, and other user defined events of max. 50. ➢ Should have separate sensitivity control for each channels as well as for all channels. ➢ Should have the facility to enter patient details such as ID, Name, Referred By, Sex, Age, Patient History, Address, Doctor Name etc. ➢ Should have the facility to review of selected patient form list, to sort data according to patient name, sex, age, test date etc, review another patient while acquisition and to edit the patient details. ➢ Should have the facility to browse page by page, Scroll in forward and reverse

			direction and the speed of scrolling can be different speed levels such as same acquisition speed, 2 times, 3 times , 4 times the acquisition speed. ➢ Should have user definable protocols for acquisition. ➢ EEG pages should displayed in BRAIN MAP montage and it should have the facility to view Amplitude brain map, Progressive amplitude brain map, frequency brain map, progressive frequency brain map, 4 bands frequency brain map with frequency spectrum, 5 bands frequency brain map with frequency spectrum, 4 bands frequency brain map with EEG & 5 bands frequency brain map with EEG in review mode. ➢ Should have the facility to edit current page events, browse all the marked events. Display the page having the selected event, to store any number of marked EEG pages on another HDD. ➢ Should have the facility for spike detection with amplitude greater than or equal to the specified amplitude and within specified duration. ➢ Should have the facility to print all marked EEG pages/Brain map pages in queue. ➢ Should have Acquisition Hot keys for Sensitivity for all traces, Eyes open, Eyes close, Hyperventilation ON, Hyperventilation OFF, Mark page, Artifact, Annotated event, Toggle pause/Release pause, Snap shot mode photic stimulation etc. ➢ Should have Review Hot Keys for page mode, scroll mode, flip mode, next page, increase speed, mark page for printing, forward direction, reverse direction, previous page, decrease speed etc. ➢ Photic frequency should be 1-30 Hz, Stimulating time 1-16 sec and pause time 1-16 sec. ➢ CMRR should be greater than 100 db and input impedance should be greater than 10 M Ohms. ➢ Should have a high resolution low light video camera. ➢ Should have infra red camera for night VEEG recording facilities. ➢ Should have facility to upgrade EEG to sleep system in future. ➢ Should be supplied all necessary accessories including EEG Disc Electrode. 2.2 Userôs interface Manual 2.3 Software and/or standard of communication(where ever required) ➢ Convenient and quick USB interface. ➢ Should have an efficient data base management including Hospital details, Reference doctors list, standard comments for summary report etc. ➢ Should have the facility to edit and print summary report, EEG page and Brain map page. ➢ Inbuilt software. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) Portable 3.2 Weight (lbs, kg) Portable 3.3 Configuration 3.4 Noise (in dBA) NA 3.5 Heat dissipation NA 3.6 Mobility, portability Supplied in protective case for clean storage and safe transport. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO2 ....)** 4.1 Power Requirements Input voltage 220 VAC $\pm$ 10%, 50Hz; 4.2 Battery operated Battery powered, silenceable alarm for power failure. ➢ Battery charger to be integral to mains power supply, and to charge battery during mains power operation of unit. ➢ Internal, replaceable, rechargeable battery allows operation for at least one hour in the event of power failure. 4.3 Tolerance (to variations, shutdowns) ➢ Voltage corrector/stabilizer to allow operation at $\pm$ 10% of local rated voltage. Use of SMPS to correct voltage. 4.4 Protection Electrical protection, resettable over current breakers or replaceable fuses (fitted in both live and neutral lines).

			4.5 Power consumption Should run with other life saving equipments running parallelly in the NICU/PICU. 4.6 Other energy supplies Mains power cable to be at least 3m length. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories (mandatory, standard, optional) 2 Two sets of electrodes; 5.2 Spare parts (main ones) Two sets of spare fuses (if non-resettable fuses used). 5.3 Consumables/reagents (open, closed system) 5 tubes/box of elefix EEG paste. BIDDING/PROCUREMENT TERMS/DONATI ON REQUIREMENTS **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Operating condition: Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90% in ideal circumstances. ➢ Storage condition: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover. **7. STANDARDS AND SAFETY** 7.1 Certificates (pre-market, sanitary, ..); Performance and safety standards (specific to the device type);Local and/or international ➢ Should be CE (EU)/FDA (US) approved product; ➢ Manufacturer/supplier should have ISO 13485 certificate for quality standard; ➢ Electrical safety conforms to standards for electrical safety IEC-60601-1; ➢ Shall meet IEC-60601-1-2 (General requirements for safety -electromagnetic compatibility); ➢ IEC 60601-2-26:2002 and IEC 60601-2-37 applicable; **8. TRAI NING AND INSTALLATI ON** 8.1 Pre-installation requirements: nature, values, quality, tolerance ➢ Availability of 5 Amps. electrical socket; 8.2 Requirements for sign-off 1) Supplier to perform installation, safety and operation checks before handover; ➢ Local clinical staff to affirm completion of installation; 8.3 Training of staff (medical, paramedical, technicians) ➢ Training of users on operation and basic maintenance; ➢ Advanced maintenance tasks required shall be documented.
59	MC0059	Abdominal Maannequin for Leopard Maneuers during pregnancy	**1. USE** 1.1 Clinical purpose To demonstrate Leopold manoeuvres during pregnancy 1.2 Used by Clinical Department Skill labs TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous materials. ➢ The texture of the mannequin should be as close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevent and suitable for simulation. ➢ The abdominal palpation model should have full size adult female torso (abdomen and pelvis) ➢ The abdominal palpation mannequin should have one-piece full term fetus

			with palpable frontanelles, spine, shoulders, elbows and knees. ➢ The abdominal palpation mannequin should have a mechanism to adjust the firmness of the abdomen in respect to the weeks of pregnancy i.e. 12, 24, 36, 42 gestational age models. ➢ The abdominal mannequin should be able to accomodate the fetus in vertex, breech, or transverse positions. 2.2 Settings : NA 2.3 Userôs interface : NA 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability : Yes, Portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts Fetus size-5th, 7th and term flexible enough to fit inside abdominal palpation mannequin. 5.2 Consumables/reagents (open, closed system) : NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** ➢ 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to the user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
60	MC0060	Adult CPR Mannequin: - Simulators (Resuscitation	**1. USE** 1.1 Clinical purpose It is used to demonstrate nose pinch required for ventilation techniques. Head tilt/chin lift and jaw thrust allowing students to currently practice all manoeuvers necessary when resuscitating a real victim.

		training model)	1.2 Used by clinical department : Skill lab TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous materials. ➢ The texture of the mannequin should be as close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevent and suitable for simulation. ➢ It should have features to demonstrate opening of airway, head tilt/chin tilt and jaw thrust techniques. ➢ Adult CPR Mannequin should have disposable airways. 6.Adult CPR Mannequins should have removable, reusable faces. ➢ Adult CPR mannequin should have an indicator which confirms correct chest compression technique. ➢ It should have compression spring for consistent resistance. 2.2 Settings : NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) adult torso 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability : Yes, portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts 10 nos. reusable mannequin faces. ➢ 10 nos. reusable airways. ➢ 50 nos mannequin wipes. 5.2 Consumables/reagents (open, closed system) : NA. **6. ENVIRONMENT AL AND DE PARTMENT AL CONSIDER ATONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC.

			8. TRAINING AND INSTALLATION 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to the users while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
61	MC0061	Child Birth Simulator alongwith attachment for cervical Dilatation : Simulators and associated devices	**1. USE** 1.1 Clinical purpose Should be able to demonstrate Leopold maneuver 1.2 Used by Clinical Department/Ward : skill labs TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous material. ➢ The texture of the mannequin should be close to the feel of the baby/ adult skin. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevant and suitable for simulation. ➢ Should have pelvis structure of adult female with anatomical landmarks like pelvic cavity, spine etc. Should have manual birthing system to enable the user to control the rotation and speed of fetus delivery etc. ➢ Should have fetal baby with movable joints. ➢ Should be versatile to change the position of the fetus during the process of birth including descent, flexion, extension, internal and external rotation, restitution. ➢ Should have features for training normal and breech deliveries. ➢ Should have features to demonstrate cord prolapse. ➢ Shall allow demonstration and practice of placenta previa. ➢ Should have cervical dilatation attachment for closed os, 4cm, 6cm, 8cm and fully dilated cervix. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) standard female pelvic structure 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability : Yes, Portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts 1. fetal baby with moving joints. 2. 2 detachable abdominal pads. 3. 2 nos placentas.

			4. 6 nos umbilical cords. 5. 2 sets cervical dilatation attachment for closed Os, 4cm, 6cm, 8cm and fully dilated cervix. 5.2 Consumables/reagents (open, closed system) NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC . **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance :NA 8.2 Requirements for sign-off Demonstration to user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
62	MC0062	Adult IV Training ARM KIT : Infusion/injection training model	**1. USE** 1.1 Clinical purpose It is ideal for practicing: intravenous injections, correct puncture of peripheral veins for blood sampling. Puncturing of arm veins. Positioning of a butterfly cannula. 1.2 Used by Clinical Department Skill lab TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous materials. ➢ The texture of the mannequin should be close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevant and suitable for simulation. ➢ Adult IV training Arm should have full adult arm with clenched/open fist. ➢ Adult IV arm should be suitable for practicing IV injections ➢ Adult IV training arm should have prominent venous network. ➢ Adult IV training arm should have anatomically located venous grooves, fitted with soft tubes, closely simulating consistency of human veins. ➢ Adult IV training arm must have a pliable translucent skin stretched over venous network. ➢ Adult IV training arm should have veins in dorsum of hand. ➢ Adult IV training arm should feature órealistic feelô as needle enters vein. ➢ Adult IV training arm veins and skin must be replaceable. IV training arm should have cephalic, basic, antecubital, radial and ulnar veins. ➢ IV training arm must have base and metal stand to hold the mannequin and accessories as required. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) : NA.

			3. PHYSICAL CHARACTERISTICS 3.1 Dimensions (metric) Adult arm 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes, Portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts 1. 2 packs of red colour concentrate/powder, with tubing and connector. 2. 25 sets of replacement skin. 5.2 Consumables/reagents (open, closed system) NA. **6. ENVIRONMENTAL AND DE PARTMENTAL CONSIDERATONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Complete unit to be easily washable with mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to the user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
63	**MC0063**	**Episiotomy suturing unit, reusable.**	**1. USE** 1.1 Clinical purpose The models demonstrate the different types of episiotomies and permits episiotomy suturing. TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous materials. ➢ The texture of the mannequin should be as close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevent and

			suitable for simulation. ➢ Should enable use of chromic sutures. ➢ Should have one model featuring standard episiotomy with tears in labia minora (medio-lateral) on left and right side. ➢ It may have features to attach with child birth simulator and episiotomy with tears. (desirable). 2.2 Settings : NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes, portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts If episiotomy part is replaceable, quote for 100 sets may be given. 5.2 Consumables/reagents (open, closed system) NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
64	**MC0064**	**Female lowertorso mannequin with normal and postpartum uterus**	**1. USE** 1.1 Clinical purpose used for teaching/practicing bi-manual pelvic examination, vaginal examination, PPIUCD (postpartum intrauterine contraceptive device). 1.2 Used by Clinical Department/Ward : Skill labsHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free

		and accessories : Gynaecologic trainer	from any hazardous materials. ➢ The texture of the mannequin should be as close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevant and suitable for simulation. ➢ Should have full size adult female lower torso with relevant internal landmarks and post-partum uterus. ➢ Should have palpable normal and pregnant uteri with realistically sculpted and anatomically accurate ovaries and fimbriae. ➢ Should have normal and abnormal crevices. ➢ Should be suitable for teaching/practicing bi-manual pelvic examination. ➢ Should be suitable for vaginal examination, including insertion of speculum, uterine sounding and IUD insertion and removal and PPIUCD (postpartum intrauterine contraceptive device). ➢ Should have distal end of vagina to facilitate introduction of a female condom. ➢ Should have detachable and attachable cervix. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) :NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes, Portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts 1. One normal and abnormal uterus. 2. One set of normal and abnormal cervices. 3. One anteverted and retroverted uterus. 4. One set of postpartum uterus with duckbill cervix and fallopian tubes. 5. 3 sets of 6 different types of cervices. 5.2 Consumables/reagents (open, closed system) : NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA

			8.2 Requirements for sign-off Demonstration to the user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
65	MC0065	Normal New born baby simulation model : Simulators	**1. USE** 1.1 Clinical purpose It is used to demonstrate the characteristics and examination of new born baby and Kangaroo mother care (KMC). 1.2 Used by Clinical Department Skill labs.N **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous materials. ➢ The texture of the mannequin should be as close to the feel of the baby/adult skin as relevant. ➢ New born baby mannequin should weigh close to the normal newborn. ➢ Should have actual size showing external development and growth. ➢ Should be close to normal skin colour, texture and bony feel. ➢ Should have moving head, flexible upper and lower limbs. ➢ Should have KMC clothes compatible with the size of the mannequins. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes, Portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts NA 5.2 Consumables/reagents (open, closed system) NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deterioration to the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010. ➢ Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION**

			8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
66	MC0066	Peditaric IV Arm Kit : Infusion /injection Training model.	**1. USE** 1.1 Clinical purpose It is ideal for practicing: intravenous injections, correct puncture of peripheral veins for blood sampling, puncturing the veins of upper limb including positioning of butterfly cannula. 1.2 Used by Clinical Department : Skill labs AL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous material. ➢ The texture of the mannequin should be close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevant and suitable for simulation ➢ Should have paediatric arm. ➢ Should have simulated blood pack. ➢ Should have blood bag with tubing and connector. ➢ Should have clamp and hook. ➢ Should have mannequin lubricant, if required. ➢ Should have replacement skin and multi-vein system. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts Replaceable skin sets-25 Lubricant to be provided, if the type of mannequin requires it for effective functioning. 5.2 Consumables/reagents (open, closed system) NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deteriorities in the mannequin. **7. STANDARDS AND SAFETY**

			7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements : nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided
67	MC0067	Uterine Model : Cavity Simulator	**1. USE** 1.1 Clinical purpose Based on real anatomy of female genitalia, this model is designed and used for demonstration of insertion or removal of IUD. TEHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous materials. ➢ The texture of the mannequin should be as close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevant and suitable for simulation. ➢ Anatomically accurate sagittal or coronal section of uterus and vagina suitable for demonstration of insertion and removal of IUCDs. ➢ Should have uterus, ovaries and fimbria. ➢ Model should have a transparent window for easy view of cavity. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts NA 5.2 Consumables/reagents (open, closed system) NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily

			washable with mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to the user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
68	MC0068	Essential New Born care and resuscitation mannequin : Simulators and associated devices	**1. USE** 1.1 Clinical purpose : To demonstrate and practice neonatal resuscitation TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl and silicone rubber, free from any hazardous material. ➢ The texture of the mannequin should be close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevent and suitable for simulation. ➢ Newborn mannequin should have features for training essential newborn care (ENBC) and newborn resuscitation ➢ Newborn Mannequin should facilitate effective bag and mask ventilation, chest must rise only with correct technique. ➢ The newborn mannequin should include the following: Squeeze bulbs for simulation of cord pulsation, spontaneous breathing, auscultation of heart sound and cry. ➢ The new born mannequin should demonstrate clearing of airways, perform suction; monitoring of ventilation and pulsation. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes, Portable. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES**

			5.1 Accessories & spare parts 1. 10 units-device for suction of nose and mouth. 5.2 external umbilical cords and 6 umbilical ties. 3. 2 neonatal mucus sucker (easy to open, clean, autoclave and reusable). 4. 2 training stethoscopes. 5.2 Consumables/reagents (open, closed system) : NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to the user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
69	**Item No 69.**	**Female catheterization Mannequin : Cervical Dilatation catheter, Indwelling Catheterizatio n kit.**	**1. USE** 1.1 Clinical purpose This simulator allows the students to feel the pressure and resistance when a catheter is passed through the urethra and sphincter into the bladder. When the catheter enters the bladder, artificial urine (water) will flow through the catheter. 1.2 Used by clinical departments/ wards : Skill labs TECHNICAL **2. TEC HNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous mateials. ➢ The texture of the mannequin should be close to the feel of the baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevant and suitable for simulation. ➢ Should have adult female lower torso with realistic vulval area and urethral opening. ➢ Female catheterization mannequin should have reservoir bladder. ➢ Should have replaceable urethral valve to prevent fluid leakage. ➢ Should have removable urinary assembly. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA

			3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes. **4 ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts 2 bladder tanks, 6 urethra valves 5.2 Consumables/reagents (open, closed system) NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues ➢ Complete unit to be easily washable with mild soap and water without bringing deterioration to the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off NA 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided
70	**Item No 70.**	**Intramuscular Injection training mannequin : (Anatomical Training Models).**	**1. USE** 1.1 Clinical purpose It is designed to simulate the actual sensation of the human skeletal structure required to determine the correct injection site. It helps users to practice a range of injection procedures, including needle puncture and infusion of simulated injection fluid (water). 1.2 Used by clinical department Skill labs TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous materials. ➢ The texture of the mannequin should be as close to the feel of the baby/ adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevent and suitable for simulation. ➢ Intramuscular injection training model should have lifelike human torso with intramuscular injection site in upper outer quadrant of palpable gluteal region on both side (left and right). ➢ Should have intramuscular injection in ventrogluteal site below iliac crest on

			both side (left and right). 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability Yes, Portable. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts NA 5.2 Consumables/reagents (open, closed system) : NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deterioration to the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010. ➢ Conformity assessment. Supplierôs declaration of conformity. ➢ EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) ➢ OPTIONAL (Depending upon scope of work order) ➢ Training of users in handling and basic maintenance shall be provided.
71	**Item No 71.**	**OG Tube insertion Simulation Model : Gastric feeding tube**	**1. USE** 1.1 Clinical purpose This model can be used to practice the insertion of suction catheters into oral cavity as well suction procedures, oral tube feeding, and gastrostomy care procedures, routinely applied in the nursing and caregiving fields. 1.2 Used by Clinical Department : Skill labs TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of the mannequin should be of Polyvinyl and silicone rubber,

			free from any hazardous material. ➢ The texture of the mannequin should be close to the feel of baby/adult skin as relevant. ➢ The Internal parts of the mannequin must be realistically sculpted, anatomically accurate and feel must be smooth/resilient/bony as relevant and suitable for simulation. ➢ Should look like 0-8 weeks old ➢ should have soft and flexible and replaceable face skin and upper body skin. ➢ placing NP/OP tubes must be possible, 8.should have markings for ear canal, should have removable internal parts. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability : Yes, Portable. **4. ENERGY SOURCE (Electricity, UPS, Solar, Gas, Water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) : NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUMABLES** 5.1 Accessories & spare parts NA 5.2 Consumables/reagents (open, closed system) : NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable with mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010. Conformity assessment. Supplierôs declaration of conformity. EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance :NA 8.2 Requirements for sign-off Demonstration to the user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon scope of work order) Training of users in handling and basic maintenance shall be provided.
72	**MC0072**	**Postpartum Hemorrhage**	**1. USE** 1.1 Clinical purpose It is used for teaching simulation of postpartum bleeding and

		simulation model	allows students to practice fundal massage techniques. 1.2 Used by clinical department : Skill labs TECHNICAL **2. TECHNICAL CHARACTERISTICS** 2.1 Technical characteristics (specific to this type of device) ➢ The material of mannequin should be of polyvinyl or silicone rubber, free from any hazardous materials. ➢ The model should be highly realistic for simulating postpartum hemorrhage. ➢ The model should have features to manually control the amount of bleeding. 2.2 Settings NA 2.3 Userôs interface NA 2.4 Software and/or standard of communication (where ever required) : NA. **3. PHYSICAL CHARACTERISTICS** 3.1 Dimensions (metric) NA 3.2 Weight (lbs, kg) NA 3.3 Configuration NA 3.4 Noise (in dBA) NA 3.5 heat dissipation NA 3.6 Mobility, portability : Yes, Portable. **4. ENERGY SOURCE (electricity, UPS, solar, gas, water, CO 2 ....)** 4.1 Power Requirements NA 4.2 Battery operated NA 4.3 Tolerance (to variations, shutdowns) NA 4.4 Protection NA 4.5 Power consumption NA 4.6 Other energy supplies NA. **5. ACCESSORIES , SPARE PARTS , CONSUM ABLES** 5.1 Accessories & spare parts The mannequin should have the following : ➢ Full term fetus with placenta and umbilical cord. ➢ Red fluid Concentrate ➢ Fluid Collection tray. ➢ Fluid drain. ➢ Urine catheter. ➢ 20 ml syringe. ➢ carrying bag 5.2 Consumables/reagents (open, closed system) : NA. **6. ENVIRONMENTAL AND DEPARTMENTAL CONSIDERATIONS** 6.1 Atmosphere/Ambiance (air conditioning, humidity, dust ...) ➢ Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 deg C and relative humidity of 15 to 90%. 6.2 Userôs care, Cleaning, Disinfection & Sterility issues Complete unit to be easily washable using mild soap and water without bringing deterioration in the mannequin. **7. STANDARDS AND SAFETY** 7.1 Certifications BS EN ISO/IEC 17050-1:2010 Conformity assessment. Supplierôs declaration of conformity. EMC Directive:2004/108/EC. **8. TRAINING AND INSTALLATION** 8.1 Pre-installation requirements: nature, values, quality, tolerance : NA 8.2 Requirements for sign-off Demonstration to user while delivering the product. 8.3 Training of staff (medical, paramedical, technicians) OPTIONAL (Depending upon

			scope of work order) Training of users in handling and basic maintenance shall be provided. Training features to include complete and incomplete placenta delivery, oxytocin injection, and controlled cord traction.
73	**MC0073**	**Single Puncture Laproscope**	

		Qty
	Telescope : Telescope 0 degree with parallel/straight eye piece, diameter 10-12 mm. Fibre optic light transmission incorporated; should be compatible with the commonly available light cables (necessary adapters should be provided) can be sterilised by autoclaving, gluteraldehyde solutions and in formaline chamber. Should have inbuilt 6 mm instrument channel for ring applicator as well as CO2 gas insufflation channel with stopcock, working length of 270-275mm	01
	Trocar and Cannula : Cannula size +1mm more than the Telescope diameter; should have multifunctional valve and automatic valve and stopcock for insufflations (compatible with supplied telescope). Trocar should have pyramidal tip. Tip should not be so sharp that may injure the viscera. The length of the trocar should be 160-170 mm $\pm$ 10 mm and the working length of cannula should be 100-110mm.	02
	Ring Applicator Ring applicator for use with parallel/straight eyepiece telescope compatible with the above telescope, capable of loading two silastic rings. The ring applicator has to be fully dismantable into different parts like, Prone, Inner tube, outer tube, thumb, knurled ring etc to make it sterilization and service friendly	02
	Cones : Suitable cones for loading rings to the above applicator	05
	Slide/Guide : Suitable guide /slide for loading rings to the above applicator	10
	Veress Needle : Veress Needle with spring loaded blunt stylet with leur lock. Size 100, 120 & 150 mm	02 each
	Carbon Dioxide insufflators : Electronic CO2 insufflators with pin index connection. Should have an adjustable flow rate of 0-20 litres per minute and a pressure range adjustable between 0-30mm Hg. Pressure and flow rate should be displayed on the front panel provided with silicon autoclavable tubing with luer attachment. Instrument should work on power supply range 100-240V with a frequency of 50Hz single phase. The unit should be complied with IEC safety standards. The unit should be ISI/CE marked. Secuvent safety system for constant monitoring of intra abdominal pressure and checking over pressure with automatic back release of CO2 gas within 05 seconds should include 1 pack/10 filter for CO2 gas. 1. The machine should give an audible alarm signal in case of wrongly placed veress pneumoperitonium needle and sudden block in the CO2 flow from machine. 2. The insufflators should also give audible alarm in case of overpressure and release of it automatically.	01

	Both the preset value and actual value for pressure and flow should be displayed at the same time on the front panel of the machine.	
	CO2 Gas Micro filter should be provided with each unit.	10 nos.
	High Pressure Hose: High pressure Hose suitable to connect the insufflators with pin indexed CO2 cylinder.	01
	Cold Light Source: Cold light sources with dual control having 02 halogen lamps of minimum 175 watts. Facility to automatically switching on spare lamp in case of failure of one lamp without any delay 24 V rating each operatable on 220-240 V and 50 Hz supply with suitable transformer. Rechargeable battery backup light source compatible with SP laproscope is also to be provided. Handy LED battery light source which can be mounted directly on to the laproscope or rechargeable battery backup light source more than 5 working hours. The unit should comply with relevant IEC safety standards. Should have white light with digital display of intensity and time. Minimum 30,000 Hrs life of LED guarantee.	01
	Fiber optic light cable : Minimum 2300 mm length, minimum 4.8 mm diameter compatible with cold light source & the commonly available telescopes(necessary adaptors may be provided)	02
	System Configuration Accessories, spares and consumables	
	Spare washer for trocar and cannula i. Sealing Cap 10mm. ii. Tappet for multifunctional valve. iii. Seal for Automatic Valve	10 nos each
	Spare Part for Ring Applicator & Veress Needle: i. Spring for Ring Applicator ii. Finger ring(thumb) for ring applicator iii. Knurled screw for ring applicator iv. Inner sheath of ring applicator. v. Tension Rod with grasper (Prone insert) for ring applicator. vi. Adapter for fiber optic light cable for Telescope of same make . vii. Stopcock for cannula gas inlet. viii. Spring cap for stopcock.	 02 nos. 02 nos. 02 nos. 02 nos. 02 no. 02 nos. 02 nos. 02 nos.
	Cleaning Kit: i. Telescope cleansing brush set for scopes. (5mm dia and 10mm dia). ii. Cannula Brush : iii. Cleaning Oil(Silicon Oil) 50ml bottle. iv. Trocar Brush v. Special Lubricant for stopcock.	 05 nos. 02 nos. 02 nos. 02 nos. 05 nos.
	Case for Storage of Laparoscope & instruments: i. Plastic storage brief case with foaming inside for Laparoscope Telescope and all hand instruments and accessories for storage and transportation.	01
	Carbon dioxide Cylinder : 5Kg Carbondioxide bottle with pin index connection	02
	Main Cord Compatible with insufflators and LED cold light sources of 220-240V	02
	Formalin Chamber for sterilization of Laparoscope	01

	• Dimensions of formalin chambers 65 cms ± 10 cm x20 cms (± 2 cm) with three tray made of white Opaque Acrylic.	
	Tray for sterilization of Laparoscope • ±10 cm x 20 cm ± 5 cm x 15 cm ± 2 cm (Volumetric capacity 10 litr ± 2 litre) and the inner tray with holes to keep the instrument in the solution (which is to be kept in outer box). The material should be of S.S material.	02
	All other standard accessories desired for proper functioning of the machine	
	Environmental factors	
	• The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90% • The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%	
	Power supply	
	• Power supply 100-240 V AC, 50/60Hz fitted with Indian Plug	
	Suitable UPS-1.0 KVA • UPS 1.0 KVA offline with one hour backup time. ISE/CE approved good quality.	01
	Voltage Corrector / Stabiliser of appropriate rating • Voltage Stabiliser 1.0 KVA. Should be able to maintain constant output voltage of 220 V AC plus minus 5% should have line RFI filter. ISI/CE approved good quality Indian make	01
	Standards, Safety and Training	
	• Should be US-FDA/CE approved product. • Manufacturer should have ISO 9001:2008 or ISO 13485:2003 certification for quality standards • Comprehensive training for lab staff and support service till familiarity with the system on site.	
	Documentation	
	• Service and User manual in English • 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. • List of spare parts with part nos.	

74	MC0074	Blood Collection Monitor	**1. Clinical Purpose:** ➢ Blood Collection Monitor is used for collecting blood, mixing it with the anticoagulant and stopping the blood inflow at the pre-programmed volume. **2. Technical Characteristics:** ➢ The basic functions of a Blood Collection Monitor includes weighing of blood collected during blood donation, should provide stable agitation to maintain uniform mixing of anticoagulant with blood and stopping the blood inflow at the pre-programmed volume. Monitor shall be programmed to collect any volumes of Blood upto 800 ml with automatic storage and recall of set volumes. Monitor has to have motor driven oscillation of minimum 12+2 rpm. Equipment to have alarm/indication system for LCD, Led indication and audible alarm when blood flow rate goes below 20 ml/min. Classification Protection against electrical shock. Motor activated clamping. LED indication (blinking) with audible alarm when battery is Low. Monitor to support automatic lamping when blood flow rate less than 20 ml/min for more than two minutes. Display of 16x2 line character with Backlit LCD display for set and collected volume and weight, collection time, flow rate and battery status. Monitor to have time measurement time of collection is indicated at the end of

			every collection. Monitor should display real time clock and collection time display. Monitor to have battery 12 VDC, sealed maintenance free lead acid rechargeable battery. Monitor to be Class I, Type B Internally Powered Power 12 W (Max) Ingress of water IM X 1, and protected against dripping water for durability. Auto stop after threshold limit of blood level is achieved, automatic & manual clamp, taring range upto 600. Ability to transfer data to PC for data collection and analysis (Optional). ➢ Setting: Manual. ➢ Userôs Interface: Manual. ➢ Software: Built in. ➢ Physical Characteristics ➢ Dimensions (metric): Not Available. ➢ Weight (lbs, kg): Should be portable and easy to carry by a single Phlebotomist. ➢ Configuration: Not Available. ➢ Noise (in DBA): Not Available. ➢ Heat Dissipation: Not Available. ➢ Mobility, Portability: Portable. 3.Energy Source (Electricity) 1.1. Power Requirements: Maximum upto 220-240 V AC (± 10%), 50/60 Hz. 1.2. Battery Operated: Should have battery backup of min. 8 hrs (12 VDC). 1.3. Tolerance (to variations, shutdowns): As per Standards. 1.4. Protection: Not available. 1.5. Power Consumption: As per standards. 1.6. Other energy supplies: As per standards. 2. Accessories, spare parts, consumables: 2.1. Accessories & spare parts: Removable Tray which is washable, light weight. Complete with comprehensive set of spare parts. Dust cover (optional). 3. Environmental & Departmental Considerations: 3.1. Atmosphere/Ambiance (Air conditioning, humidity: The unit shall be capable of operating continuously in ambient temperate of $+5^0$ to $+45^0$ C and relative humidity (RH) of 5 to 95%. 3.2. Additional Requirements: All equipments should specify design qualifications, operational qualifications and performance qualifications, validation and calibration reports should have traceability towards applicable national/international standards. Performance, efficiency, other factors such as distortion etc. As applicable be also furnished. Complete construction, details in respect of material specification, thickness, finish etc. Are to be furnished. 3.3. Userôs Care, Disinfection & Sterility issues: Complete unit to be easily washable and sterilizable using both alcohol and chemical disinfectant. 4. Standard and Safety 4.1. Product and quality: USFDA or EU (CE) certified or BIS/ISO 13485 or IEC 60601-1 complaint. 4.2. Certification: USFDA or EU (CE) certified or BIS/ISO 13485 or IEC 60601-1 complaint. 4.3. Electrical Safety: Equipment meets electrical safety specifications of IEC 60601-1-2 (as relevant) 5. Training and Installation: 5.1. Pre-installation requirement: Not available. 5.2. Requirement for sign-off: Not available. 5.3. Training of staff: Training of users for operation, basic maintenance & care to be provided.
75	MC0075	Blood Donor Couch	1. Use 1.1. Clinical Purpose: Blood Donor chair is completely variable tilt medical chair and specially designed as per health regulatory guidelines to make blood donations easier, safe and functional. 2. Technical Characteristics: 2.1. Technical Characteristics (specific to this type of device): Construction: Blood Donor Couch (BDC) are custom made for Mobile

			Vehicle use and made from durable material/hardwood. BDC have side entry to allow chair to be installed long ways, parallel to the wall of the vehicle. BDC are fully manual for smooth shifting and setting for more than three positioning system with convenient material handle to adjust for reclining and upright body positions i.e., from head-high/foot-high combinations for blood donors safety, in case of any reaction. BDC need to have manually adjustable, rotating and variable positioning swivel style arm rests with comfortably wide arm-pad which could swing outwards fro comfortable position during regular blood donation sessions. It needs to have back rest and leg rest size medically designed for donor comfort and also comfortable working level for assisting Technician. BDC is ergonomically designed comfortable chair, having sinuous spring system and polypropylene covered wire insulator, followed by 1.75-2.0 density premium foam, upholstered with Contract Grade Vinyl upholstery with antimicrobial/bacterial finish for durability to withstand extreme weather condition and Donor safety. 2.2. Lifting Capacity: Minimum 350 Lbs/150Kgs (Donor Weight). 2.3. Settings: Manual. 2.4. Userôs Interface: Manual Settings. 2.5. Software: Not available. 3. Physical characteristics: 3.1. Dimensions (LxWxH) in cms: 150-160 cms (L) x 50-60 cms (W) x 80-85 cms (H), chair width with both arm rest 90-92 cms. 3.2. Chair Empty Weight (in kgs): Maximum 155 Lbs/70 Kgs. 3.3. Configuration: Manual. 3.4. Noise (in DBA): Not available. 3.5. Heat Dissipation: Not available. 3.6. Mobility, portability: Model to be suitable for mobile blood vehicle (Blood Donor Chair model without wheels only). 4. Energy Source (Electricity, UPS, Solar, Gas, Water, CO_2....) 4.1. Power requirements: NIL 4.2. Battery operated: Not available. 4.3. Tolerance: Not available. 4.4. Protection: Not available 4.5. Power consumption: Not available. 4.6. Other Energy Supplies: NIL. 5. Accessories spare parts, consumables. 5.1. Accessories & Spare Parts: Complete with comprehensive set of available spare parts. The make, rating, model, description, specifications, quantity of each item shall be furnished. To have separate Vinyl Head & Foot cover for extra donor safety and hygiene. 6. Environmental and Departmental Considerations: 6.1. Atmosphere/Ambiance (Air conditioning, humidity): Suitability to be securely installed in Mobile Blood Van. 6.2. Additional Requirements: All equipments should specify design qualifications, installation qualifications, operational qualifications and performance qualifications, validation and calibration reports should have traceability towards applicable national/international standards. Performance, efficiency etc., as applicable be also furnished. Complete construction, details in respect of material specification, thickness, finish etc., are to be furnished. 6.3. Userôs Care, cleaning, disinfection & sterility issues: Contract Grade Vinyl upholstery/fabric with antimicrobial/ bacterial finish to enable required medical hygiene for blood donorôs safety & durability being scratch resistance and stain resistant (Capable of removing permanent marker/pen ink from the fabric without damage to the Vinyl surface or vinyl coating). 7. Standards and Safety 7.1. Product certifications: BIS or MDD; European CE & US FDA. 7.2. Quality Certifications: Not available. 7.3. Electrical Safety: Not available. 8. Training & Installation 8.1. Pre-installation requirements: Quality construction and the ability of custom made blood chair to install securely to the vehicle, withstanding any road

			conditions. 8.2. Requirements for sign-off: Not available. 8.3. Training of staff (Medical Technicians) OPTIONAL: Related training material for staff to be followed.
76	MC0076	Portable Blood Storage Refrigerator	1. Use 1.1. Purpose: Blood Storage Refrigeration unit is portable and specifically designed unit to keep blood bags safe by ensuring consistent temperature of $+2^0$ to $+8^0$ C even during in-transit vehicle movement, extreme temperature fluctuations and weather conditions. 2. Technical Characteristics 2.1. Technical characteristics (specific to this type of device) Mobile Blood refrigeration unit are custom made for Mobile Blood Vehicle use to peculiarities of road conditions, terrains and diverse weather conditions. They support specific temperature ranges and suitable for safe transport of biomedical (Blood) products in hot and cold climates. Internal gross volume of unit need to support storing for approx. 80-100 Blood Bags (350ml) and capable to operate on external operating temperature range from $+55^0$ C to -20^0 C and flexibility on maintaining desired internal temperature range from $+2^0$ to 8^0 C consistently, considering Indian diverse seasonal temperature variations/fluctuations. Temperature holdover time of minimum 12 Hrs. Construction: Mobile Blood refrigeration unitôs cabinet need to be made of single piece by rotational molding for durability and grade and UV resistant polyethylene as per regulatory standards. Blood storage unit need to have thick polyurethane foam insulation of minimum 80-100 mm for maintaining longer Cold lifre with less power consumption during use (for more working time). Mobile Blood Refrigeration unit are specially designed to protect them from damages during vehicle in-transit movement in diverse road conditions and easily stackable. Refrigerator to only have hermetic compressor. 2.2. Lifting Capacity: Not available. 2.3. Settings: Manual. 2.4. Userôs interface: To have large surface roll-bond evaporates, ventilated high efficiency spiral tube condensers, electronic thermostat with digital display, integrated AC/DC power supply as well as battery protection systems. Refrigeration unit should be CFC Free. 2.5. Software: Not available. 3. Physical Characteristics 3.1. Dimensions (LxWxH) in mm: 1000-1100 mm (L) X 600-650 mm (W) 650-750 mm (Ht.) 3.2. Weight (in lbs, kgs): Approx. 35-45 Kgs. 3.3. Configuration: Not available. 3.4. Noise (in dBA): Not available. 3.5. Heat Dissipation: Not available. 3.6. Mobility, Portability: Regulatory certification (ECE R10.4) on suitability of unit on Vehicles. 4. Energy Source (Electricity, UPS, Solar, Gas, Water, CO_2.....) 4.1. Power Requirements: 12-24 V DC & between 100-240 V AC (to have integrated AC & DC power supply with battery protection system). 4.2. Battery operated 4.3. Tolerance: Not available. 4.4. Protection: Not available. 4.5. Power Consumption: Upto 10 Amp. 4.6. Other energy supplies: Not available. 5. Accessories, Spare Parts, Consumables 5.1. Accessories & spare parts: Each unit to be delivered with free mandatory accessories tow removable wire shelves partition including fitted strip curtains, each unit to be deliver5ed with AC & DC cord. 6. Environmental and departmental considerations: 6.1. Atmosphere/ambiance (Air conditioning, dust): Suitability of blood storage refrigerator model to be installed in Mobile Van.

			6.2. Additional Requirements: Not available. 6.3. Userôs Cleaning, Disinfection & Sterility issues: Cleaning related manual for Technicians to be included along with operational guidelines. 7. Standards & Safety 7.1. Product certifications: BIS or US-FDA, European CE & ECE R 10.4 certified. 7.2. Quality certifications: Directive 2002/72/EC. 7.3. Electrical Safety: Not available. 8. Training and installation 8.1. Pre-installation requirements: Blood storage unit to be integrated in the design, well protected from possible damages during vehicle movement in road conditions and easy stackable in Blood Vehicle to optimize space. 8.2. Requirements for sign-off: Not available. 8.3. Training of staff-optional: Operational guidelines in English to be included with unit for Technicians/mobile staff.
77	MC0077	Tabletop Tube Sealer	1. Use 1.1. Clinical purpose: Blood Bag Tube Sealer is a compact equipment to seal the Blood Bag pilot tubing after each Blood Donation. 2. Technical Characteristics: 2.1. Technical characteristics (specific to this type of device): The system should be able to seal the blood bag quickly and effectively. Should be simple to handle. System should gently seal the tubing with no haemolysis using radio frequency (RF). Capable to seal tube diameter atleast to 6 mm. To have Hermetic sealing Minimum 300 seals in snap free mode. To have Alarm indication, if tube sealing fails. Construction: Tabletop Tube sealer need to have indication lamps for ñSealing Processò on handle without requirement of any warm up time. To Sealer need to ensure easy separation of tube segments after sealing. Electrodes should be well protected by a cover. Sealing time need to not more than 05 seconds. Battery charging time need to be upto 06 Hrs with capability of 1000-1500 seals with fully charged battery. Sealer need to have Class I classified protection against electrical shocks and internally powered. 2.2. Settings: Manual. 2.3. Userôs interface: Manual. 2.4. Software (where ever required): Built in. 3. Physical characteristics: 3.1. Dimensions (in mm): Max. 200 x 275 x 150 (W x D x H) mm for base unit. 3.2. Weight (lbs, kg): Not available. 3.3. Configuration: Not available. 3.4. Noise (in dBA): Not available. 3.5. Heat dissipation: Not available. 3.6. Mobility, portability: Portable. 4. Energy source (electricity, UPS, solar, gas water, CO_2....) 4.1. Power Requirements: 100-240 V AC, 50/60 Hz. 4.2. Battery operated: Option of battery backup or alternate power as contingency to cope up power failure in Vehicle. 4.3. Tolerance (to variations, shutdowns): Not available. 4.4. Protection: Not available. 4.5. Power consumption: Approx. 170 W, standby-20 Watt. 4.6. Other energy supplies: Not available. 5. Accessories, spare parts, consumables: 5.1. Accessories & spare parts: Complete with comprehensive set of spare parts. The make, rating, model, description, specifications, price, quantity of each item shall be furnished separately. 6. Environmental and departmental considerations: 6.1. Atmosphere/Ambiance (Air conditioning, humidity, dust): The unit shall be capable fo operating continuously in ambient temperature of $+5^0$ to $+45^0$ C and relative humidity (RH) of 5 to 95 %. 6.2. Additional Requirements: All equipments should specify Design qualifications, installation qualifications, operational qualifications and performance qualifications, validation and calibration reports should have traceability towards applicable national/international standards. Performance,

			efficiency, other factors such as distortion etc. as applicable be also furnished. Complete construction, details in respect of material specification, thickness, finish etc. are to be furnished. 6.3. Userôs care, cleaning & sterility issues: Easy to clean and disinfect parts, if any part comes in contact with body fluid. 7. Standards and safety 7.1. Product certifications: BIS or CE certified or USFDA. 7.2. Quality certifications: ISO 9001, EN ISO 13485 certified. 7.3. Electrical safety: Equipment meets electrical specifications of IEC 60601-1-2 (as relevant). 8. Training and installation 8.1. Pre-installation requirements: Not available. 8.2. Requirements for sign-off: Not available. 8.3. Training of staff (Medical, Paramedical, Technicians): Training of related users in operation and basic maintenance to be provided.
78	MC0078	Tube Stripper	1. Use 1.1. Clinical purpose: Multi function tube stripper is a hand held medical instrument used for stripping, crimping and cutting of blood bag tubes and used in blood donations. 2. Technical characteristics 2.1. Technical characteristics (specific to this type of device): Multi function hand stripper is a metallic hand held medical instrument used for stripping, crimping and cutting of blood bag tube after each blood donation. User should be able to adjust roller to match tubes with various diameter, if needed. Construction: Instrumentôs body material is metallic (stainless steel), Grip material to be of Plastisol. Instruments roller needs to be of Delrin AF. 2.2. Settings: Manual. 2.3. Userôs interface: Manual. 2.4. Software and/or standard of communication (where ever required): Not available. 3. Physical Characteristics: 3.1. Dimensions (metric): Not available. 3.2. Weight (lbs, kg): Not available. 3.3. Configuration: Not available. 3.4. Noise (in dBA): Not available. 3.5. Heat Dissipation: Not available. 3.6. Mobility, portability: Portable. 4. Energy Source (electricity, UPS, solar, gas, water, CO_2....) 4.1. Power Requirements: Not available. 4.2. Battery operated: Not available. 4.3. Tolerance (to variations, shutdowns): Not available. 4.4. Protection: Not available. 4.5. Power consumption: Not available. 4.6. Other energy supplies: Not available. 5. Accessories, spare parts, consumables 5.1. Accessories & spare parts: complete with comprehensive set of spare parts. The make, rating, model, description, specifications, price, quantity of each item shall be furnished separately. 6. Environmental and departmental considerations: 6.1. Atmosphere/ambiance (air conditioning, humidity, dust): the unit shall be capable of operating continuously in ambient temperature of $+5^0$ to $+45^0$ C and relative humidity (RH) of 5 to 95%. 6.2. Additional requirements: Complete construction, details in respect of material specification, thickness, finish etc. are to be furnished. 6.3. Userôs care, cleaning, disinfection & sterility issues: Complete unit to be easily washable and sterilizable using both alcohol and chemical disinfectant. 7. Standards and safety 7.1. Product certifications: BIS or USFDA or CE certified. 7.2. Quality certifications: ISO 13485 certified.

			7.3. Electrical Safety: Not available. 8. Training and installation. 8.1. Pre-installation requirements: nature, values, quality, tolerance: Not available. 8.2. Requirements for sign-off: Not available. 8.3. Training of staff (Medical, Paramedical, Technicians): Training of related users in operation and basic maintenance to be provided.
79	MC0079	Double Beam UV-Visible Spectrophotometer	Microprocessor based UV-Vis Spectrometer with the following specifications: i. Photometric system: Double Beam optics. ii. Photometric range: Absorbance: -4 to +4.0 Abs, Transmittance 0.0 to 400%. iii. Photometric Accuracy: +/- 0.004 Abs. At 1.0 Abs, and +/- 0.002 Abs. At 0.5 Abs. iv. Wavelength Range: 190 to 1000 nm or better. v. Wavelength Setting: 0.1 nm increment. vi. Wavelength Accuracy: +/- 0.1nm or better. vii. Wavelength Repeatability: +/- 0.1nm or better. viii. Scanning speed: Selectable up to 3000 nm/min. or better. ix. Spectral Bandwidth: Variable/1nm or better. x. Stray Light: Less than 0.02% at 220nm & 340 nm. xi. Baseline stability: Less than 0.0003 Abs/H. xii. Baseline Flatness: less than 0.0006 Abs/H. xiii. Noise level : less than 0.00005 Abs. xiv. Monocharomator: Czerny Tuner blazed holographic grating Silicone photodiode (02 Nos.). xv. USB Port: 3-4 USB ports for data transfer, PC, Printer connectivity. xvi. Light source: Tungsten and Deuterium Lamp. xvii. Quartz Cuvetee: 3ml capacity with path length of 10mm (02 Pairs). Quoted system should have built-in D2 lamp consumption counter to check the lamp life. Spectrophotometer should have built in hardware validation for Wavelength accuracy, wavelength repeatability, resolution, stray light, photometric accuracy, photometric repeatability, baseline flatness, baseline stability, noise level and validation software alongwith optical filter for wavelength calibration. Windows based operating software should have built in features like real time concentration display, Photometric mode single/mult-wavelength, Enzyme Kinetic calculation, event recording such as addition of reagents during measurement, DNA/protein quantification etc. Spectrophotometer should have built-in display so that user can use the Spectrophotometer without PC/Laptop also. Branded PC Core 13 Process, 2 GB RAM, 500 GB HDD and compatible online UPZS with 30 minutes back up to be quoted for UV Spectrophotometer.
80	MC0080	Water Purifier	i. Ultrapure (Type I) Product Water Quality: Directï Q systems. ii. Resistivity: 18.2 MQ cm @ 25^0C. iii. Production flow rate Direct-Q3^0: 3 l/h @ 25^0C +/- 15%. iv. Production flow rate Direct-Q 5^0: 5 l/h @ 25^0C +/- 15%. v. Production flow rate Direct-Q 8^0 : 8 l/h @ 25^0C +/- 15%. vi. Instant flow rate (with application Pak final filter : >0.5 l/min. vii. TOC (w/o 185/254 nm UV lamp) : <10 ppb. viii. TOC (with 185/254 nm UV lamp) : <5ppb. ix. Particulates (size>0.22 um)** : <1 particulate/ml. x. Bacteria** : < 0.1 cfu/ml. xi. Endotoxin*** (pyrogens) : < 0.0001 EU/ml. xii. R Nases*** : < 0.01 ng/ml. xiii. D Nases*** : 4 pg/ul. Pure (Type III) Product Water Quality i. Ionic rejection >96% ii. Organic rejection for MW >99% iii. Bacteria and particulates >99%

			In regular operating conditions. System Information: i. Dimensions (H x W x D) : 54 x 29 x 38 cm (21.3 x 11.4 x 15 in ii. Net weight (Direct-Q* 3 system w/o 185/254 nm UV lam) : 8.1 kg (17.9 lb) iii.Net weight (Direct-Q* 3 system with 185/254 nm UV lamp) : 8.6 kg (19.0 lb) iv.Net weight (Direct-Q* 5, 8 systems with 185/254 nm UV lamp) : 7.6 kg (19.0 lb) v.Operating weight (Direct-Q* 3 systems w/o 185/254 nm UV lamp) : 17.6 kg (38.8 lb) vi.Operating Weight (Directï Q* 3 system with 185/254 nm UV lamp) : 18.2 kg (40.1 lb) vii.Operating weight (Direct-Q* 5, 8 system with 185/254 nm UV lamp) : 12.2 kg (4.8 lb) viii.Net weight (Remote dispenser) : 2.15 kg (4.8 lb) ix.Operating weight (remote dispenser) : 2.68 kg (5.91 lb) x.Built-in reservoir volume : 6 l xi.Electrical feed volume : 100-250 V +/- 10 % xii.Electrical Feed Frequency : 50-60 Hz. +/- 10% xiii.Tap (feed) water connection : ½ò Gaz. M xiv.Tap (feed) water pressure : 0.5 to 6 bar Available System Configurations Water Purification Systems i. Available configurations: Direct-Q*C With/without; Direct-Q*5 With; Direct-Q* 8. With ii. UV 185/256 nm : With; With; With iii. Remote Dispenser: With; With/without; With/without iv. Built-in 6l Reservoir : With; Without; Without
81	MC0081	Dissolution Appartus	i. Water circulating pump to maintain water temperature of acrylic bath. ii. Digital temperature controller: 37^0C. iii. Digital RMP: 25-150 rpm. iv. Auto cut lifting : up and down. v. Heater : 1/1.5 KW (Approx.) vi. Glass Beaker: 6. vii. Blade & Basket : 6 viii. Accuracy : ±1digit.
82	MC0082	Potentiometer	Display : 04 digit LED with automatic polarity indicator Range : 0-1.999V Accuracy : 0.002mv± 2 digits
83	MC0083	Electronic balance	Electronic single pan digital balance with minimum sensitivity of 0.01 g(10 mg)
84	MC0084	UV-VIS Spectrophotometers	Powerful Performance & Functionality in a compact design i. High resolution UV-VIS Spectrophotometer with 1nm spectral bandwidth over the entire wavelength range of 1100 nm ï 190 nm.

			ii. Enhanced accuracy and sensitivity in spectroscopic measurements with high performance Czemy-turner optics for high energy throughput. iii. Wide dynamic photometric range with ultra low stray light. iv. Measurement reliability with low baseline drift and photometric noise. v. High Signal-to-Noise ratio due to improved baseline flatness over entire range. vi. Complies with all Pharmacopoelal requirements-EP/USP/BP. vii. Flexible and user friendly operation in stand-alone mode or through windows based UV-Probe^{TM} software as standard. viii. Access control through password protection, even in stand-alone mode. ix. Built in validation programme, diagnostic and security functions. Standard operating modes includes Spectrum. x. Quantitation, Kinetics, Multi-component, Photometric, Multi-wavelength photometric and Bio-mode (DNA & Protein Quantitation). xi. Five USB parts for data storage and transfer through pen drives. xii. Saves valuable laboratory space with compact design, small foot print and only 15kgs in weight. xiii. Complete IQ/OQ and validation support.
85	MC0085	FTIR Spectrophotometer.	Advance high end FTIR Spectrophotometer for critical R&D and challenging QC applications i. Highest sensitivity in its class with Signal-to-Noise ratio of 40,000 : 1 or higher made possible by; • High energy long life Ceramic light source. • High throughput optics with gold coated mirrors. • New high sensitivity DLATGS detector. ii. Maximum resolution of 0.5 cm^{-1}. iii. Completely sealed and dessicated interferometer with 3-way protection against humidity including built-in Peltier dehumidifier and moisture resistant coating on beam splitter surfaces. iv. IRPrestige-21 fully complies to all the requirements of FDA 21 CFR Part 11 including electronic signatures. v. Built in Advance Dynamic Alignment (ADA) for optimum interferometer alignment, immune to tilt, shear and external vibrations. vi. Shlmadzuôs patented Flexible Joint Support (FJS) moving mirror mechanism for smooth distortion free motion and high quality IR spectra. vii. Optionally upgradable to Near-IR (12,500 cm^{-1} to 3,800 cm^{-1}) and Far-IR (5,000 cm^{-1} to 240 cm^{-1}) with user replaceable and automatically aligned beam splitters. viii. Automatic recognition of optional ñQuick Startò accessories like DRS, ATR, HAIR, etc. ix. New advanced 32-bit ñIR Solutionò software working in Windows 2000 environment for complete instrument control and advance data processing including quantitation, multi-component analysis, purity measurement, film thickness measurement, spectral search, etc. x. Standard validation program that complies to European/Japanese Pharmacopoeia and ASIM-1421. xi. Built-in atmospheric correction function compensates for the influences of water vapour and carbon dioxide. xii. Compatiability to a wide range of optional accessories like Diffused Reflectance, Horizontal Attenuated Total Reflectance etc. xiii. Upgradable to FTIR Miscroscope.