Government of Maharashtra
Maharashtra Medical Goods Procurement Authority (MMGPA)

"Request for Proposal (RFP) for Supply, Installation and Commissioning Cardiac Cathlab unit on Turnkey basis"

RFP Reference No.: E- 265 /MMGPA/ Cardiac Cathlab unit on turnkey basis (2025-26)

Date:13.02.2026

1st Floor, Arogya Bhawan St. George's Hospital Compound,
Near C.S.M.T. Railway Station, Mumbai - 400 001.
Maharashtra
Website: https://mahatenders.gov.in.
Email: maha.mmgpa2023@gmail.com

Disclaimer

The information contained in this Tender Document or subsequently provided to Bidder(s), whether verbally or in documentary or any other form, by or on behalf of the Maharashtra Medical Goods Procurement Authority (MMGPA) or any of its employees or advisors, is provided to Bidder(s) on the terms and conditions set out in this Tender Document subject to which such information is provided.

This Tender Document is not an agreement and is neither an offer nor invitation by the MMGPA to the prospective Bidders or any other person. The purpose of this Tender Document is to provide interested parties with information that may be useful to them in making their financial offers (Bids) pursuant to this Tender Document. This Tender Document includes statements, which reflect various assumptions and assessments arrived at by the MMGPA in relation to the project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This Tender Document may not be appropriate for all persons, and it is not possible for the MMGPA, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this Tender Document. The assumptions, assessments, statements and information contained in this Tender Document may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this Tender Document and obtain independent advice from appropriate sources.

Information provided in this Tender Document to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The MMGPA accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The MMGPA, 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 Tender Document or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the Tender Document and any assessment, assumption, statement or information contained therein or deemed to form part of this Tender Document or arising in any way for participation in this Tender Document.

The MMGPA 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 Tender Document.

The MMGPA 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 Tender Document.

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 MMGPA or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and the MMGPA 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.

Glossary

Abbreviations and Acronyms	Description
BG	Bank Guarantee
BOM/BOQ	Bill Of Material/Quantity
CA	CHARTERED ACCOUNTANT
CAMC	Comprehensive Annual Maintenance Contract
CBS	Cost Based Selection
CMC	Comprehensive Maintenance Contract
CRC	Consignee Receipt certificate
DPIIT	Department for Promotion of Industry and Internal Trade
EMD	Earnest Money Deposit
EM-II	Entrepreneurs Memorandum
FEMA	Foreign Exchange Management Act
GST	Goods and Services Tax
IA	Implementation Agency
IP	Intellectual Property
IQ	Installation Qualification,
ISO	International Organization of Standardization
KPI	Key Performing Indicators
LLP	Limited Liability Partnership
MMGPA	Maharashtra Medical Goods Procurement Authority
MSME	Ministry of Micro, Small & Medium Enterprises
NEFT	National Electronic Funds Transfer
O&M	Operation and Maintenance
OEM	Original Equipment Manufacturer
OP	Operational Qualification
PAN	Permanent Account Number
PO	Purchase Order
PQ	Performance Qualification
RFP	Request For Proposal
RTGS	Real Time Gross Settlement
SSI	Small-scale industries
TCV	Total Contract Value

MAHARASHTRA MEDICAL GOODS PROCUREMENT AUTHORITY

Bid Notice

Tender reference No: E- 265 /MMGPA/Equipment/Cardiac cathlab on turnkey basis (2025-26)

Maharashtra Medical Goods Procurement Authority (hereinafter referred to as "Authority"), Mumbai invites **ONLINE BID** for the year **2025-26** in **two envelope system** from the Manufacturers/Importers/Authorized Distributor for the purchase of following items.

Schedule of requirements:

Sr. No.	Equipment/Item Name	No. of units	Tender fee (Rs.)	EMD (Rs.)	Consignee and Delivery Address
1	Supply, Installation and Commissioning of Cardiac cathlab unit on turnkey basis	04	**50000+9000(GST @ 18%)**	**98,00,000/-**	Public Health institutions in the state of Maharashtra as detail in **Annexure-XII**

Delivery terms: Delivery at the assigned consignee address as per bid conditions.

Interested eligible bidders may obtain further information of technical specifications, required quantities and other terms and conditions applicable for procurement of above items from the tendering website **https://mahatenders.gov.in**.

"Bidders are required to quote for the supply, installation, testing and commissioning of the complete Cardiac Cath Lab unit on a turnkey basis, in strict accordance with the specifications and schedule of requirements."

BID SCHEDULE

All bid related activities (Process) like Downloading of bid document, submission of bid and submission of EMD and other documents will be governed as per the time schedule given under Key Dates below:

Sr. No.	Activity	Period
1.	Period of sale of Tender document/ Download	**From 13.02.2026 at 6.50 PM**
2.	Date for Submission of Queries	**Before Pre-bid meeting**
3.	Date of pre-bid meeting	**25.02.2026 at 11.30am**
4.	Dates for uploading tender document	**From 13.02.2026 at 06.50 pm to 06.03.2026 up to 02.00 pm**
5.	Last date and time for submission of tender:	**06.03.2026 at 2.00 pm**
6.	Date and time of openingof Envelope No.1	**09.03.2026 at 2.00 pm**

Address for communication	1st Floor, Arogya Bhawan, St. Georges Hospital Compound, Near CSMT Railway Station, Mumbai- 400 001. Telephone No.: 022-22717527

A complete set of tender documents may be purchased by interested eligible bidder by online payment of a non-refundable fee ("Bid/Tender Fee"). Bidder has to pay **online payment of bid fee by RTGS/NEFT to the A/c of** "**Maharashtra Medical Goods Procurement Authority, Mumbai**" as per the table given and within time as per schedule.

As per Govt. Resolution by Industries, Energy & Labour Department, Maharashtra State, dated 1.12.2016 - Entities who are registered under Micro, Small and Medium Enterprises Development Act, 2006 are exempted from paying Tender Form Fees and Earnest Money Deposits.

The bidders shall be rejected summarily upon failure to follow procedure prescribed in the bid document. The conditional bid shall be rejected.

Chief Executive Officer, Maharashtra Medical Goods Procurement Authority, Mumbai reserves all the rights regarding this bid document and procedure.

Sd/-
CHIEF EXECUTIVE OFFICER,
MAHARASHTRA MEDICAL GOODS PROCUREMENT AUTHORITY
MUMBAI

Contents

Fact Sheet

Clause Reference	Topic
Commercial Bid Evaluation	*The method of selection is LCBS (Least Cost Based Selection-L1)*
Downloading RFP Document	RFP can be downloaded from https://mahatenders.gov.in.
Earnest MoneyDeposit (EMD)	Bidders are required to pay the EMD/Bid Security of ₹ 98,00,000 /- throughonline mode on https://mahatenders.gov.in or in the form of Bank Guarantee issued by a Scheduled / Nationalized Bank in the form provided in Annexure XVII
Scope of Work	Procurement is for services linked to Supply, Installation and commissioning of or use of various public health institution in Maharashtra.
Pre-bid meeting and clarifications	A pre-Bid meeting will be held on **25.02.2026 at 11.30 am** Clarifications may be requested on or before the schedule date and time for submission of pre-bid queries as per the bidding schedule.
Language	Proposals should be submitted in the English language only.
Taxes	For all goods/services supplied, the Bidder shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed/incurred until delivery of the contracted products or services.
Bid Validity	180 days from the date of Technical Bid opening
Submission of Responses	Bidders must upload and submit all the documents on the Mahatender portal https://mahatenders.gov.in *Each of the above documents must be uploaded in the format specified for this purpose*
Submission of Proposals	This is online process; interested bidders are required to submit the proposal online only by the date and time specified in the RFP.
Last Date of Submission	Proposals submitted 06.03.2026 , 02:00PM will not be accepted bythe e-Tender portal.
Tender Fee	All bidders shall pay tender fee of ₹ 50000+9000/- (GST @ 18%) In case of revision of the above-mentioned tender fee, bidders shall pay revised tender fee.

TERMS AND CONDITIONS:

1. Introduction

Maharashtra Medical Goods Procurement Authority (MMGPA), Mumbai has been formed as per the Maharashtra Medical Goods Procurement Authority Act 2023 (Mah. Act No. XIII of 2023). The procurement authority has been formed with an objective to simplify and expedite the procurement process of medical Goods and Equipment's for health institution, under the state government and certain other health institution in the state as mentioned in the above act.

1.1. **Chief Executive Officer, Maharashtra Medical Goods Procurement Authority, Mumbai**, hereinafter referred to as the **"Authority "**invites online bid in two Envelope systems for supply of Equipment specified in **Annexure-X** Schedule of Requirements, for use in public health facilities in the State of Maharashtra.

1.2. All bid related activities ("Bid Process") like Bid Document Downloading, Bid submission and submission of Bid Security/Earnest Money Deposit and other documents will be governed by the bid schedule given in bid notice.

1.3. All activities of this bid are carried out online on Website **https://mahatenders.gov.in**. The bid document is uploaded on Government of Maharashtra, (GoM) e-tendering website **https://mahatenders.gov.in** and has to be downloaded as well as filled up and submitted online only. The Bidders are required to submit online bid fees (Non-refundable) as mentioned through **online payment gateway in A/c of "Maharashtra Medical Goods Procurement Authority, Mumbai"**. In no case, the bid fee should be mixed with EMD amount. The bid shall be liable to be rejected summarily upon failure to follow procedure prescribed in the Bid document.

1.4. **The quantities mentioned in the Bid are only approximate estimated quantities. The Chief Executive Officer, Maharashtra Medical Goods Procurement Authority, Mumbai reserves the right to increase or decrease the quantities', maximum up to 50% of the quantities to be purchased without assigning any reason thereof.**

1.5. If any bidder wishes to lodge any complaint against the other bidder regarding submission of false documents, information etc, the bidder has to submit the complaint before price bid opening along with deposit of **Rs.50,000 (Rupees Fifty Thousand only)** online in favor of **"Maharashtra Medical Goods Procurement Authority, Mumbai"** in the form of deposit. This complaint will be submitted to Appeal Committee along with facts. The amount so deposited shall be refunded, if after scrutiny the complaint is found to be true by the Appeal Committee. However, if the complaint is found to be false and malafide the deposit will be forfeited. No interest shall be paid against this deposit. **Any complaint received after price bid opening will not be entertained.**

1.6. e-bidding process related Queries can be sent on email – eproc.support@maharashtra.gov.in /Help: The Toll-Free Telephonic Help Desk Number1800-3070-2232. / Mobile: +91- 7878107985, +91-7878107986 ,+ 91-7878007972 and +9-7878007973 (9:00 am - 10:00 pm) Mon to Sat.

1.7. The Orders/ Circulars issued by Govt. of Maharashtra from time to time will be applicable to this bid.

1.8. The entire bidding process is governed by rules and clauses mentioned in Maharashtra Government Industries Department Stores Purchase Rules GR dated 01.12.2016, General Financial Rules 2017 and CVC Guidelines. Any disputes raised by the bidder, shall be resolved within the framework of these rules and clauses

1.9. **A bidder who has been blacklisted/ debarred for the quoted product(s) in any state / department/ undertaking/ corporation will not be allowed to participate in Bid for the said product(s) and will not be evaluated.**

1.10. **The bidder shall, at its own cost and responsibility, visit the site of the proposed works and submit a Site Visit Report along with detailed Civil Layout, Structural Drawings, MEP (Mechanical, Electrical, and Plumbing) and Machine room Drawings as per AERB norms, as well as**

geo-tagged photographs necessary for the execution of the works. The Site Visit Report and drawings shall be mandatorily uploaded as part of the technical bid. The bidder shall also obtain all necessary information required for preparing the bid and entering into the contract for the works. The cost of the site visit and preparation of the required documents shall be borne entirely by the bidder.

1.11 Tender Submission Requirements

- Detailed technical proposal with compliance statement to above standards.
- Project plan including timelines, safety measures, and resource deployment.
- Documentary proof of similar projects executed and experience in specialty Healthcare construction.
- Notarized affidavit regarding compliance and ethical bidding practices.
- Price bid to be submitted in a separate sealed envelope.

1.12General Terms

- The procuring authority reserves the right to inspect ongoing works for quality checks at any stage
- Final Plan & Approval: All works aligned to an institute/hospital-approved plan and subject to compliance verification at each work stage.

2. Eligibility criteria:

Eligibility criteria for this bid are mentioned:

Sr. No.	Basic Requirement	Specific Requirement	Documents required
1.	**Registered Legal Entity**	The Bidder shall be any person/Company/ Society/Proprietorship/ Partnership firm/Trust registered under applicable Act in India/ Government-owned enterprise or institution The Bidder shall be – **a)** A manufacturer having valid manufacturing and equipment license for the items quoted. **OR** **b)** An Importer* having valid import license and equipment license for the items quoted. **OR** **c)** Authorized Distributor fulfilling all tender conditions. **d)** Separate Manufacturer's Authorization will be required for each equipment. **e)** Registered with the GST Authorities. **f)** Should have a valid PAN number. **Importer refers to a legal Entity such as a Company/ Society/ Trust/Partnership* firm *registered under applicable Act in India/ Government-owned enterprise or institution that engages in the process of bringing equipment or goods from outside India into the country's borders for commercial purposes.* *Importer itself shall be responsible for supply and maintenance of the equipment as per the terms of RFP and shall not engage any third party for the same)*	a. Copy of certificate of incorporation/registration along with charter documents like copy of Memorandum and Articles of Association, and other registration documents according to the nature of entity. b. Attested photocopy of valid manufacturing Equipment/ import license with product list duly approved by the Licensing Authority for each and every product quoted as per specification in the bid. The license must have been duly renewed up to date and the items quoted shall be clearly highlighted in the license. If quoted item is manufactured at different places, Manufacturing License & Performance certificate should be enclosed. c. Manufacturer's Authorization as per Annexure XIV to be provided by Importer, Authorized distributor d. Copy of GST Registration certificate issued by GSTN authorities. e. Copy of PAN Card.
2.	**Certifications/ registration**	The Bidder shall have to provide requisite certifications/registration.	a. Certificates of DPIIT (if applicable) b. Original manufacturer's certificate that the product is being used in country of origin. c. Import Export Certificate (IEC Code) d. Affidavit of Importer regarding equipment being imported in India for last three years.

Sr. No.	Basic Requirement	Specific Requirement	Documents required
3.	**Litigation**	The Bidder should not be involved in any major litigation such as fraud, FEMA violations and any other civil or criminal proceedings that may have an impact of affecting or compromising the delivery of services as required under this contract.	Affidavit as per Annexure VII.
4.	**EMD/Bid Security**	Bidders are required to pay the EMD/Bid Security of ₹98,00,000 /- through online mode on **https://mahatenders.gov.in or in the form of BG as per annexure XVII**	• EMD in the form of NEFT/RTGS/BG
5.	**EMD Exemption**	EMD exemption is not allowed as this is not a supply contract but a turnkey Project involvingworks.	• **Importer/Authorized Distributor shall produce authorization Certificate from manufacturer as authorized seller as per Annexure XIV** • EM-II certificates whenevernecessary (mandatory for Medium Enterprises)
6.	**Conflict of Interest**	On the date of submission of the proposal, the Bidder should not be involved in any conflict-of-interest situation.	Undertaking by the authorized signatory as per Annexure I
7.	**Blacklisting or banned**	On the date of submission of the proposal, the Bidder should not be blacklisted or banned by any ministry/department/attached offices/sub-ordinate offices under Government of India and any State government, Autonomous bodies (established by Central/State govt), any Central/State PSUs for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices.	Affidavit as per **Annexure VII**
8.	**Debarment**	On the date of submission of the proposal, the Bidder should not be debarred	Affidavit as per Annexure VII.

Sr. No.	Basic Requirement	Specific Requirement	Documents required
9.	**Average Annual Turnover**	Average Annual Turnover (in last three financial years (2022-23,2023-24,2024-25) shall be at least **Rs.49 Cr.**	Certificate issued by a statutory auditor/chartered accountant (as attached Annexure-IV) along with Audited Financial Statements confirming the Average Annual Turnover of the Bidder during the stated Financial Years must be submitted.
10.	**Net Worth**	The net worth of the bidder in the financial year (2024-25) should be **positive**.	Certificate issued by a statutory auditor/chartered accountant (as attached **Annexure-IV).**
11.	**Technical Capability**	Bidder must have successfully undertaken supply, installation & commissioning of quoted Equipment or Medical Equipment & Instruments of an amount of **Rs.49 Cr.** during last three financial years The bidder must submit work experience documents related to the supply, installation, and commissioning of Cardiac Cath Lab Units executed in Government Hospitals during the last three financial years (2022–23, 2023–24, and 2024–25). The bidder must have: At least one single order of minimum ₹80 crore, or Two separate orders of minimum ₹50crore each, or Three separate orders of minimum ₹40 crore each.	The Bidder shall provide the documentary evidence in support of its credentials such as agreement copy/ work order / Letter of Award. This should be supported by delivery report/work completion certificate/customer satisfaction certificates with customer details and client certificate. Statutory auditor's certificate or Chartered Accountant's certificate, as the case may be, shall be submitted for demonstrating the past experience. (as per Annexure number III)
12.	**Production Capacity / Import Quantity**	Production Capacity (Cardiac Cathlab-Capital goods) of the Original Equipment Manufacturer must be minimum 1.5 times of the quoted order quantity in last one financial year.	Certificate of Statutory Auditor/Chartered Accountant For importers and Authorized distributors Certificate of Statutory Auditor/Chartered Accountant of OEM has to be submitted in Annexure V

Sr. No.	Basic Requirement	Specific Requirement	Documents required
13.	**Service center**	In case of Bidder being Manufacture**r**, the bidder should have at least 2 service centers in state of Maharashtra. In case of Bidder being Importer/Authorized distributor, the bidder should ensure that OEM have at least 2 service centers in state of Maharashtra.	List of at least 2 service centers in Maharashtra with address and contact details shall be provided by the bidder which shall exist for the period of warranty as mentioned and also, during the additional CAMC/AMC period, if awarded. The Importer/Authorized Distributor shall provide an undertaking from OEM that OEM shall have at least 2 service centers for the period of warranty as mentioned and also, during the additional CAMC/AMC period, if awarded.

2.1 Conflict of Interest

Conflict of Interest among Bidders/ Agents A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

a. they have controlling partner (s) in common; or
b. they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
c. they have the same legal representative/agent for purposes of this bid; or
d. they have 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
e. Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.
f. In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following: 1. The principal manufacturer directly or through one Indian agent on his behalf; and 2. Indian/foreign agent on behalf of only one principal.
g. Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;
h. In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must

proactively declare such sister/ common business/ management units in same/ similar line of business.

3. Cost of bidding:

The bidder shall bear all costs associated with the preparation and submission of their online bids and the Authority will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

4. Corrigendum:

The bidder shall note that any corrigendum issued regarding this bid notice will be published on the https://mahatenders.gov.in.

5. Pre-bid meeting:

The pre-bid meeting will be held at the date, time and venue mentioned in the e-bid Notice.

A prospective bidder requiring any queries/clarification with regard to the bid document shall contact the Authority by letter or email preferably prior to the date of pre bid meeting. Email ID – maha.mmgpa2023@gmail.com

The bidder shall submit the Authorization letter nominating a responsible person of the bidder to attend the meetings like pre bid & negotiation meeting.

The prospective bidder(s) should submit their Queries /Suggestions/ Observations, if any, on or before the schedule date for receipt of queries in writing.
Only Queries/ Suggestions / Observations received in writing within stipulated scheduled time will be discussed and clarified in pre-bid meeting and any modification of the bid documents, which may become necessary as a result of pre-bid meeting, shall be made by Maharashtra Medical Goods Procurement Authority, Mumbai exclusively through the issue of an addendum/ corrigendum and shall form part of the RFP. The RFP uploaded shall be read along with any modification. Authorized representatives of prospective bidder(s) can attend the said meeting and obtain clarification regarding specifications, scope of works & tender conditions. Authorized representatives should have authorization letter to attend the pre-bid meeting, subject to the condition that queries are submitted in time.

Non-attendance at pre-bid meeting shall not be a cause for disqualification of the bidder. The suggestions/ objections/ queries which are not in consonance with the requirement of the bid & received during pre-bid meeting may not be considered, Maharashtra Medical Goods Procurement Authority, Mumbai reserves the right to accept or reject the same.

6. Amendment of bid document:

6.1. At any time prior to the deadline for Sale of bid, the Authority may amend the bid documents by issuing Addendum/Corrigendum.

6.2. The bidder will not be communicated separately regarding the amendment. Any amendment to the bid shall be placed on the e-bidding website (https://mahatenders.gov.in.)

6.3. Any addendum/corrigendum as well as clarification thus issued shall be a part of the bid documents. And it will be assumed that the information contained in the amendment will have been taken into account by the bidder.

6.4. To give prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Authority shall extend, at its discretion, the deadline for submission of bids, in which case, the Authority will notify all bidders by placing it on website of the extended deadline and will be binding on them.

7. Submission of Bids:

The bid should be submitted online through website https://mahatenders.gov.in. in two envelopes i.e. **Technical Bid in envelop no.1** & **Commercial Bid in Envelop no.2** along with EMD & Bid Fee. **All documents should be properly signed, sealed and then uploaded.**

To prepare and submit the bid/offer online all bidders are required to have e-token based DIGITAL SIGNATURE CERTIFICATE. The Digital signature certificate should be obtained from competent authority; However, the e-tender website or helpline numbers may guide you for obtaining the same.

8.1 Technical Bid (Envelope No. 1):

Technical offer must be submitted online at https://mahatenders.gov.in..in as per the instructions on the portal. The bidder must upload the following documents.

FOLLOWING DOCUMENTS ARE MANDATORY & SHOULD BE ENCLOSED IN SEQUENCE & ORDER, in PDF only along with the table of content:

7.1.1. The instruments such as power of attorney, resolution of board etc. authorizing an officer of the bidder for signing the bid document.

7.1.2. Authorization letter nominating a responsible person of the bidder to attend the meetings like pre bid & negotiation meeting.

7.1.3. Attested photocopy of valid manufacturing equipment license with product list duly approved by the Licensing Authority for each and every product quoted as per specification in the bid. The license must have been duly renewed up to date and the items quoted shall be clearly highlighted in the license. However, Loan Licensee/ third party licensee are not allowed.

7.1.4. Proof of Tender Fee/ EMD paid (if exempted appropriate copies for same)/ BG for EMD as per Annexure XVII.

7.1.5. The documents comprising the Bid shall also include:

Annexure I: Letter Comprising the Technical Bid
Annexure II: Compliance Sheet for Pre-qualification Proposal
Annexure III: Proforma for Production And Sale Statement
Annexure IV: Annual Turnover statement for three years
Annexure V: Details of Manufacturing unit
Annexure VI: Contract Form
Annexure VII: Undertaking for rates, specification, blacklisting status on Stamp paper duly notarized
Annexure VIII: Mandate Form
Annexure IX: Power of Attorney for signing of Bid
Annexure X:Technical Specifications
Annexure XI: Compliance sheet for Technical Proposal
Annexure XII: Place of delivery
Annexure XIII: Self Declaration Affidavit (on Rs.100/- Stamp Paper)
Annexure XIV: Manufacturer's Authorization From
Annexure XVIII: Checklist duly signed by authorized representative of bidder.

- The bidder shall, at its own cost and responsibility, visit the site of the proposed works and submit a Site Visit Report along with detailed Civil Layout, Structural Drawings, MEP (Mechanical, Electrical, and Plumbing) and Machine room Drawings as per AERB norms, as well as geo-tagged photographs necessary for the execution of the works. The Site Visit Report and drawings shall be mandatorily uploaded as part of the technical bid. The bidder shall also obtain all necessary information required for preparing the bid and entering into the contract for the works. The cost of the site visit and preparation of the required documents shall be borne entirely by the bidder.
- Copy of Tender Fee RTGS transaction.
- Copies of Balance Sheet and Profit and Loss Accounts for last three years i.e. (2022-23,2023-24,2024-25) certified by the Auditor. If last year's Audit report is not finalized the Tenderer should submit Provisional Audit Report signed by Chartered Accountant.
- PAN and GST Registration certificate.
- Copy of the GST return of last quarter.
- Attested copy of valid registration made by manufacturer for offered product under Micro & Small, Medium Industries Development Act, 2006.
- EM-II certificates whenever necessary
- Electrical safety standards if required in Technical Specifications
- Incorporation / Registration Certificate of bidder
- All documents required as per point no. 2 eligibility criteria.
- All other documents as per the terms of RFP.

8.2 Commercial Bid (Envelope No. 2):

a) All Commercial offers must be submitted online https://mahatenders.gov.in. as per theinstructions given on the portal. No hard copy of commercial bid shall be submitted. In case a bidder submits commercial bid in hard copy, such bid shall be summarily rejected.

b) Rates should be quoted in the Commercial Bid part-1 of **Annexure XVII only**.

c) Part-2 of **Annexure XVII** Should be filled by the Bidder. However, it will be used only for the purpose of comparing the rates offered by the bidder in various other bidders.

d) Price bid in **Annexure XVII** Part-I should not be submitted in technical bid. If the price bid Part-I is submitted in technical bid, the bid will be rejected.

8. Deadline for submission of bid – as per schedule mentioned in bid notice.

9. Opening of Bid:

On the date and time specified in the bid notice following procedure will be adopted for opening of bid.

9.1. Opening of Technical Bid (Envelope No.1):

Technical bid (Envelope No.1) of the bid will be opened by the bid opening authority. Bidder is free to attend himself or depute an authorized officer as his representative.

9.2. Opening of Commercial Bid (Envelope No.2):

The Commercial Bid shall be opened as per e-tendering procedure after the evaluation of the technical bid. The Commercial Bid shall be opened only for those Bidders who are qualified in evaluation of Technical Bid. The date and time of Commercial Bid opening will be communicated electronically through portal.

10. Period of Validity of Bid:

10.1. The bid shall remain valid for a period of 180 days after the date of opening of the technical bid (Envelope No.1)

10.2. Prior to the expiration of the bid validity the Authority may request the bidders to extend the bid validity for the period as required by the Authority.

11. Earnest Money Deposit: (EMD)

11.1. All bids must be accompanied by Earnest Money Deposit (EMD – Online)

11.2. EMD should be in favor of "Maharashtra Medical Goods Procurement Authority, Mumbai".

11.3. EMD will be Exempted as per schedule -8 of G.R.No. SPO- 2014/Pra.Kra.82/Part-III/Industry-4, dated 01.12.2016 issued by Industry, Energy & Labor Department, Mantralaya, Mumbai-1

11.4. Bids that do not include the Earnest Money Deposit (EMD), unless exempted as per the RFP terms, will be promptly rejected.

11.5. Unsuccessful bidder's EMD will be discharged/ returned after award of contract to the Selected bidder.

11.6. The bidder shall not be entitled for any interest on EMD.

11.7. The Selected bidder's EMD will be discharged after signing the Contract and submitting the Performance Security Deposit as stipulated.

11.8. The EMD shall be forfeited or if bidder is exempted from EMD, the bidder may be debarred/ blacklisted under the following conditions.

11.8.1. Bidder fails to accept the purchase order.

11.8.2. If a bidder withdraws its tender at any stage during the bidding process.

11.8.3. In case of a successful bid, if the bidder fails:

i. To sign the Contract in accordance with terms and conditions or.

ii. To furnish Performance Security Deposit &/ or processing fee as per bid clause15

12. Prices:

12.1. The prices quoted and accepted will be binding on bidder and valid for a period of one year from the date of signing of contract and any increase in price during the period of one year will not be entertained.

12.2. Purchases may be made on staggered basis as per the requirement of the Authority within one year from the date of signing of the contract.

12.3. **Rates should be quoted in Indian Rupees only** for each of the required Equipment separately on consignee address delivery basis according to the unit asked for strictly as per the format of price schedule **(Appendix-II).** Bid for the supply of Equipment with conditions like 'AT CURRENT MARKET RATES' shall not be accepted. The Authority shall not be responsible for damages, handling, clearing, transport and insurance charges and will not be paid. The deliveries should be made as stipulated in the place /consignee address in the purchase order placed with successful tenderer. Conditional bids are not accepted and liable for rejection.

12.4. In case of any enhancement in GST/Other taxes due to statutory Act of the Govt. Or any other taxes newly levied by Govt. after the date of submission of bid and during the bid period, the quantum of additional GST/Other taxes so levied will be allowed to be charged extra as separate

item without any change in price structure of the equipment and accessories approved under the bid. For claiming the additional cost on account of the increase in GST/Other taxes, the bidder should produce a letter from the concerned Competent Authorities for having paid additional GST/other taxes on the goods supplied to the Authority and can also claim the same in the invoice.

12.5. **Fall Clause:**

It is a condition of the contract that all through the currency thereof, the price at which bidder will supply the stores should not exceed the lowest price charged by the bidder to any Govt. Organization / Semi Govt. Organization during the currency of the contract and that in the event of the prices going down below the contract prices, the bidder shall promptly furnish such information to the Authority to enable him to amend the contract rates for subsequent supplies.

13. Technical Specifications:

13.1. The bidder shall carefully read and understand the technical specifications, quality requirements, applicable standards, Acts & Rules including the Mandatory requirement for substantiation of their compliance without deviating from bid requirements.

13.2. The bidder shall carefully read & understand the specifications mentioned in **Annexure X.**

14. Evaluation of bids:

14.1. After opening of technical bid, on the scheduled date, time and venue, contents of the tenders received online through e-tendering process along with all prescribed mandatory documents will be examined.

14.2. The Authority shall also analyze that there is no collusive or fraudulent practice involved in the entire tendering process amongst all the tenders received.

14.3. The technical scrutiny shall be on the basis of submitted substantiation documents and applicable laws/guidelines.

14.4. All the equipment's supplied should comply and conform to BIS/CE notified body with 4-digit /USFDA certifications. The equipment must be approved by CDSCO and should have ISO-13485 Certified.

14.5. Any bid that does not meet the bid conditions laid down in the bid document will be declared as not responsive and such bids shall not be considered for further evaluation. However, the bidders can check their bid evaluation status on the website.

14.6. Bids which are in full conformity with bid requirements and conditions shall be declared as responsive bid for opening price bid on the website and price bid of such bidders shall be opened later, on a given date and time.

14.7. Authority can call for original documents for verification and any other supporting documents.

15. Technical Qualification Criteria

i. Bidders who meet the pre-qualifications/eligibility requirements would be considered as qualified to move to the next stage of Technical and Financialevaluations.
ii. The Medical equipment offered should meet all the technical and functional specifications given in the **Annexure-X,** Non-compliance to any ofthe technical and functional specification will attract rejection of the proposal.

iii. Compliance on each parameter with detailed substantiation how the offered product meets the requirement. (Do not write simply Yes or Complied, If written, then bid will be rejected)
iv. Bidders, whose bids are responsive, based on minimum qualification criteria as in Pre- Qualification Criteria would be considered technically qualified.

15.1. Commercial Bid Evaluation

i. The Financial Bids of technically qualified Bidders will be opened on the prescribed date in the presence of Bidder representatives, who wish to attend.
ii. The Bidder, who has submitted the lowest combined Commercial bid for all equipment, shall be **selected as the ("Lowest Bidder") i.e., L1** Bidder and shall be called for further process leading to the award of the contract.
iii. Only fixed price financial bids indicating total prices for all the deliverables and services specified in this bid document will be considered.
iv. The bid price will include all taxes and levies and shall be in Indian Rupees.
v. Any conditional bid would be rejected.
vi. Errors & Rectification: Arithmetical errors will be rectified on the following basis: "If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail"

15.2. Final Selection

i. The Bidder submitting the lowest combined Commercial bid for all equipment shall be the L-1 Bidder based on the Least Cost methodology (the "L-1 Bidder"). The Bidder whose Proposal is adjudged as responsive and meets the requirements in its technical evaluation in accordance with this RFP and who quotes the lowest price in its Commercial bid shall ordinarily be declared as the selected Bidder (the "Selected Bidder"). In the event that the Authority rejects or annuls all the Bids, it may, in its discretion, invite all eligible Bidders to submit fresh Bids hereunder. In the case of two or more Bidders quoting the same value, the Bidder having the higher annual average turnover as per the eligibility criterion would be the first in sequence.

ii. In the event that 2 (two) or more Bidders are qualified in terms hereof as L-1 (the "Tie Bidders"), then such Bidder having the higher annual average turnover as per the eligibility criterion would be the first in sequence. Further, if Tie Bidders are found to be having the same average annual turnover also, then the number of projects undertaken in the last 03 (three) years shall be taken into consideration and the Bidder having the higher number of projects shall be awarded as Lowest Bidder. In case, Tie Bidders are found to be having the same number of projects undertaken also, then such Tie Bidders shall be asked to further submit a best and final offer quote ("Best and Final Offer") which shall be a lower price than their common L-1 quote for being eligible for consideration; and in such event lower price offered with respect to the L-1 quote among them shall be the Selected Bidder.

16. Performance Security Deposit & Contract.

16.1. The Selected Bidder shall furnish the Performance Security Deposit to the Authority within 15 days from the date of communication of Selected Bidder for an amount of (3%) of the contract/order value and enter into Contract by paying requisite stamp duty in favor of Govt. of Maharashtra. Cost of stamp duty will be as per The Maharashtra Stamp Act. The cost of Stamp paper should be borne by the bidder.

16.2. The Bidder shall provide Performance Security Deposit in the form of Demand Draft in favor of "Maharashtra Medical Goods Procurement Authority, Mumbai" payable at Mumbai from any Nationalized or Scheduled bank or in the form of Bank Guarantee issued by a Scheduled / Nationalized Bank in the form provided in **Annexure XVIII.**

16.3. The Performance Security Deposit will be discharged by the Authority and returned to the Supplier upon receipt of demand form supplier, not later than 60 days following the date of completion of the Supplier's performance obligations, including the warranty obligation, under the contract.

16.4. The Performance security deposit shall be forfeited as a compensation for any loss resulting from the failure to perform the obligations under the contract or in the event of termination of the contract or in any event as the Authority thinks fit and proper.

16.5. For the capital goods quoted by importer/Authorized Dealer, the bidder will enter into Tri parties' agreement. The agreement will be in between Maharashtra Medical Goods Procurement Authority, Mumbai + Importer/Authorized Distributor + Manufacturing Company on Non-Judicial Stamp Paper of requisite value.

17. Proprietary data and Patent Rights :

17.1. All documents and other information supplied by the Purchaser or submitted by a Bidder to the Purchaser shall remain or become the property of the Purchaser. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their Bid. The Purchaser will not return any Bid, or any information provided along therewith.

17.2. Patent Rights: The supplier indemnify the purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

18. Award of Contract:

18.1. The Authority will award the Contract to the Selected Bidder whose bid has been determined to be responsive and has been determined to be the Lowest Bidder (L1).

18.2. A contract will not be awarded to the Selected Bidder if Performance Security Deposit is not deposited by him to the Authority within stipulated time limit, if any extension for the submission of performance security has not been asked.

18.3. The Selected Bidder who is liable for award of contract should transfer the Performance Security as per Clause 15 of this RFP.

18.4. The Selected Bidder shall sign the Contract within a period of 15 (fifteen) days of issue of award of Contract.

19. Period of Contract:

The contract shall commence from the date of its signing and will be valid for a period of 24months from the date of supply or delivery of all equipment under the Contract.

20. Deliverables and Timelines

The Bidder should deliver the medical equipment as per schedule given below:

Sl. No.	Deliverable	Location for Delivery	Timelines
1.	Supply / Delivery and Installation and Commissioning of cardiac cathlab unit	As per **Annexure XII.**	The work shall be completed within 1 year from the date of site handover

Sl. No.	Deliverable	Location for Delivery	Timelines
2.	Installation of Equipment		within 1 year from the date of site handover. In Exceptional circumstances due to unavoidable circumstances at Consignee level, CEO MMGPA shall review the situation and allow extension in installation period.
3.	Operational Acceptance of the equipment		Within 7 days from the Installation.
4.	Comprehensive warranty period		2 years from the date of successful installation.
5.	Frequency of visits to consignee addresses concerned during Warranty/CMC		One visits every three months (4 visits in a year) for periodic/preventive maintenance and any time for attending repairs/break down calls.

21A. Transfer of Title of Equipment with Accessories -

Unless otherwise stated in the contract, notwithstanding any inspection and approval by the consignee on the Selected Bidder's premises, or any payments made to the Selected Bidder, property in the equipment (and resultant rights and liabilities) shall not pass on to the consignee until the equipment have been received, inspected, and accepted by the consignee or its representative. The equipment and every constituent part thereof, whether in the possession or control of the consignee, his agents or servants or a carrier, or the joint possession of the Selected Bidder, his agents or servants and the consignee, its agents, or servants, shall remain in every respect at the risk of the Selected Bidder, until their actual delivery is accepted by the consignee or its representative. The Selected Bidder shall alone be entitled and responsible for making claims against any carrier in respect of non-delivery, short delivery, mis-delivery, loss, destruction, damage, or deterioration of the equipment entrusted to such carrier by the Selected Bidder for transmission to the consignee or its representative.

21B. Insurance

Goods should be dispatched at carrier's risk, failing which they should be properly covered by transit Insurance with Government insurance Fund, MHADA, Bandra (East), Mumbai-400 051 or New Address

1) The goods are inserted in packages in a safe and in a sound condition,
2) According to the normal trade practice packing used is good. Failure to comply with these instructions may result in non-acceptance of transit risk by the Insurance Officer.

21. Delivery Period:

Sr. No.	Item	Units	Period
1.	Supply, Installation and Commissioning of Cardiac cathlab unit on turnkey basis	04	The work shall be completed within 1 year from the date of site handover

22. Place of delivery:

The goods should be delivered to the consignee’s addresses safely undamaged and tallied. The consignees’ addresses are mentioned in **Annexure-XII**

23. Guarantee/Warranty Terms:

a. The Selected Bidder has to warrant that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.
b. The Selected Bidder further have to warrant that the Goods supplied under this Contract shall have no

defect arising from design, materials or workmanship (except when the design and/or material is required by the Tender Inviting Authority's specifications) or from any act or omission of the Selected Bidder, that may develop under normal use of the supplied goods.

c. All the equipment's including the accessories supplied as per the technical specification as mentioned in the bidding document should carry comprehensive warranty (including all spares) for a period mentioned in this document in the first instance. During this period, the successful Bidder shall replace all defective parts and attend to all repairs/break downs and undertake stipulated number of preventive maintenance visits to every user installation site. The cost of spare parts for all replacements has to be borne by the Selected Bidder during the period of comprehensive warranty. The items which are not covered under warranty should be clearly mentioned along with rate of the items.
d. On expiration of the comprehensive warranty period, the Selected Bidder shall be willing to provide after sales support for an additional period on mutually agreed terms and conditions.
e. The prospective Bidder, who is Importer/ Authorized Distributor, shall submit an undertaking from the Original Equipment Manufacturers (OEM) that they are willing to provide spare parts for the period of warranty as mentioned and also, during the additional CMC/AMC period, if awarded. The OEM shall also assure continuity of service to their product, even in the event of change in Authorized service partner/ dealership or the Bidders – their existing Authorized service partner/ dealers shall ensure and provide service during the warranty / CAMC period. The undertaking from OEM is an essential document forming part of the Technical Bid, without which the tenders will be rejected summarily in the first round itself.
f. After sales service centers in Maharashtra should be available as part of the pre-qualification and the Bidder shall provide proof of their capability to undertake such maintenance/repair within the stipulated time. (Companies without service center/partner in Maharashtra should give an undertaking that they shall establish/appoint their service center/partner within a period of three months of the signing of contract)
g. The Selected Bidder shall provide preventive maintenance as per the frequency mentioned in this document during the warranty period. The Bidder shall attend any number of break down/repair calls as and when informed by the Consignee authority.
h. Upon receipt of such notice for repair/breakdown from the user institution, the Successful Bidder shall, within the period as specified in this document, and with all reasonable speed, repair or replace the defective goods or parts thereof, without cost to the Tender Inviting Authority.
i. If the successful Bidder, having been notified, fails to rectify the defect(s) within the period specified/ mentioned in this document, the Tender Inviting Authority may proceed to take such remedial action a may be deemed necessary, at the Selected Bidder's risk and cost and without prejudice to any other rights which the Tender Inviting Authority may have against the successful Bidder under the contract.
j. Failure to attend the repairs in time or failure to attend the stipulated preventive maintenance visit or failure to replace the defective equipment's or to provide stand by equipment if the fault/down time exceeds the stipulated period or to ensure the stipulated up-time in a year shall lead to forfeiture of the performance security and/or may lead to blacklisting/debarring of the defaulting Bidder.
k. The equipment which requires quality assurance test shall be done at free of cost immediately after installation, during the comprehensive warranty period, during the CMC / AMC period, by the demand of User and also when major spares are replaced.
l. Any mandatory approval required for installation shall be obtained by the successful Bidder in liaison with the respective authorities.
m. The Bidder shall submit the parameters which require calibration, and the frequency of calibration required.
n. The Bidder shall undertake on-site calibration of the equipment every year as part of the after sales service during the period of comprehensive warranty, CMC/AMC or on demand from the user.
o. The Bidder shall also have to submit whether periodic replacements of consumable items are required for proper functioning of their quoted machine/Equipment If yes they should submit the list of such consumables along with price list and frequency of replacement per year, if the same is not replaced free of cost during warranty / guarantee period.
p. The offered warranty includes:
    i. Visits to the user institutions at frequencies prescribed as part of preventive maintenance.
    ii. Testing & calibration as per technical/service/operation manual of the manufacturer or as per the period specified or as per the demand of the user.

iii. Quality Assurance tests (if applicable).

iv. The cost of labour for all repairs/ and all spares required for replacement during repairs all kinds of accessories, Probes, all types of sensors and transducers, Electrodes, Detectors, battery, battery for UPS, other vaccumatic parts etc. wherever applicable and also the accessories and other devices supplied along with the equipment's which forms part of the equipment system, without which it cannot perform satisfactorily.

v. The exclusion of warranty of any vital equipment parts will be compared with offers of other Bidders during evaluation of the bids and this may be taken into consideration in deciding the successful Bidder on the basis of expert advice.

vi. The Bidder shall provide up-time warranty of complete equipment as mentioned in this document,
the uptime being calculated on 24 (hrs) X 7 (days) basis failing Warranty period will be extended for every additional day of down time equal to one week.

vii. The installed software should be the latest one for the particular model and all future software updates should be provided free of cost during the Warranty period.

24. Warranty Period:

a) The "Complete System" shall remain under warranty period of 2 year from the date of satisfactory installation of all equipments with accessories and turnkey work and it will also cover the following wherever applicable any kind of motor, plastic & glass parts & medical equipments against any manufacturing defects only,all kind of sensors,coils,probes and transducers

b) During warranty period, bidder shall provide at least four maintenance visits per year at regular interval for usual maintenance and supervision. If bidder fails to provide these maintenance visits at regular interval, a proportionate deduction in the form of damages on pro-rata basis will be recovered from the bidder from the Performance Security amount in accordance with KPIs. In case the Performance Security is not adequate, Authority shall have right to recover the losses / damages from other sources as well.

c) Bidder shall also attend all breakdown calls within 3-7 days of the receipt of the information from Consignees through fax/e-mail/mobile/SMS etc.

d) During warranty period, bidder shall maintain and keep 95% uptime per year of the "Complete System." as per calculation given below: -.

1 Year = 365 days

95% of 365 days = 347 Days per annum

e) The bidder shall compensate the uptime less than the specified above for every additional day of down time over and above 18 days stipulated above, warranty period will get extended by one week as penalty at no extra cost i.e., the extended penalty period will be equal to one week for every additional day of down time.

f) During warranty period, bidder will make the "Complete System" in satisfactory working condition. In case, any spare parts need replacement due to normal wear and tear, bidder will supply and install the same for which no additional payment is to be made. If any spares / accessories / consumables etc. are not replaced by the bidder during warranty period, bidder should mention it clearly with name of the items with frequency of replacement and its rate with a validity to cover warranty period.

g) In case, the bidder is not able to provide services (and the items / accessories is not functioning as the reason thereof) due to natural calamity (act of God), Political unrest, Riot and fire at the user site, then in such a situation the warranty period will be extended by the period for which the item / accessories could not be operated because of supplier not been able to provide services.

h) During warranty period, in case of any alleged damage due to accident / human error, a committee under the Chairmanship of CEO, MMGPA, Mumbai with one member from the bidder and one member from the Authority will decide the authenticity of the claim. The decision of the committee shall be final and binding on both the parties.

25. After Sales Services: -

a) After expiry of the warrantee/Guarantee period of the equipment, the Selected Bidder will have to undertake the Comprehensive Annual Maintenance contract (with spare parts) of the Complete System for the further life span of equipment. The life span of the equipment shall not be less than ten years. In special circumstances the total life span of the Equipment/ items may be reduced by the Authority.

b) The Complete System should include the basic unit and allied supporting components to be supplied by the bidder along with basic unit.
c) During Comprehensive Annual Maintenance Contract, bidder shall **provide at least four maintenance visits per** year at regular interval for usual maintenance and supervision. If bidder fails to provide these maintenance visits at regular interval per year, a proportionate deduction in the form of damages at the rate of 1/2% of CAMC contract amount per week will be deducted maximum up to 5%.
d) Bidder shall also attend all breakdown calls within 3-7 days of the receipt of the information from Consignees through fax/e-mail/mobile/sms etc.
e) During Comprehensive Annual Maintenance Contract**, bidder** shall maintain and keep **95% uptime** per year of the **"Complete System"** as per calculation given below: -.

1 Year = 365 days

95% of 365 days = 347 Days per annum

f) The bidder shall compensate the uptime less than the specified above for every additional day of down time over and above 18 days stipulated above, warranty period will get extended by one week as penalty at no extra cost i.e., the extended penalty period will be equal to one week for every additional day of down time.
g) During Comprehensive Annual Maintenance Contract, **bidder** will make the "**Complete System"** in satisfactory working condition. In case, any spare parts, PCB etc. needs replacement due to normal wear and tear; bidder will supply and install the same for which no additional payment is to be made. **If any spares / consumables / accessories etc. are not covered under Comprehensive Annual Maintenance Contract charges, it should be clearly mentioned with frequency of replacement and with rate. The validity of rate of such items should also be mentioned clearly. What will be the rate of escalation on the quoted rate after expiry of the validity of rate of such item must be mentioned.**
h) The payment of Comprehensive Annual Maintenance Contract will be made on half yearly basis after submission of satisfactory functioning report of the Complete System by the officials authorized by the Authority.
i) In case, the **bidder** is not able to provide services (and the items / accessories is not functioning as the reason thereof) due to natural calamity (act of God), Political unrest, Riot and fire at the user site, then in such a situation the Comprehensive Annual Maintenance Contract will be extended by the period for which the item / accessories could not be operated because of supplier not been able to provide services.
j) During Comprehensive Annual Maintenance Contract, in case of any alleged damage due to accident / human error, a committee under the Chairmanship of CEO, MMGPA, Mumbai, with one member from the bidder and one member from the Authority will decide the authenticity of the claim. The decision of the committee shall be final and binding on both the parties.

26. Comprehensive Annual Maintenance Contract:

a) The decision to enter into CMC or AMC will be determined on the basis of cost and complexity of the equipment by the Tender Inviting Authority, at its discretion, prior to the expiration of warranty period. In case if it is decided by Authority to enter into CAMC contract, the vendor will have to submit CAMC agreement at the time of supply of items. The Performance Security Deposit for CAMC contract will be 10% of the CAMC cost.
b) The Comprehensive Maintenance Contract (CMC) is otherwise an extended warranty. All the terms and conditions agreed by the successful Bidder for executing the comprehensive warranty of the equipment shall be extended during the period of CMC, only difference being the payment of CMC charges is absent during the period of comprehensive warranty.
c) The cost of CMC, accessories, spares, and consumables as in case may be quoted along with taxes applicable, if any. The taxes to be paid extra, to be specifically indicated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
d) Failure/refusal on the part of the successful tender supplying/installing the equipment's to enter into CMC with the Tender Inviting Authority, at the end of the Comprehensive Warranty Period, if the Authority, as the case may be, desires so, shall lead to forfeiture of performance security and may also result in the blacklisting/debarring of the Bidder.
e) The payment of the agreed CMC charges will be made as per frequency for payment after satisfactory completion of said period, on receipt of service report/ break down report from the user.
f) The Bidder shall also have to submit whether periodic replacements of consumable items are required for proper functioning of their quoted machine/Equipment? If yes, they should submit the list of such

consumables along with price list and frequency of replacement per year if the same is not included in quoted

Comprehensive Annual Maintenance Contract charges per year.

g) The tenderer will have to agree to enter into an Annual Maintenance Contract (AMC)@ 0.5% per year of the Order value of the machinery / equipment (excluding taxes).

h) Where required, tenderer will have to agree for Comprehensive Maintenance Contract (CMC) inclusive of all spares @ 5% of the Order value (excluding taxes) of the equipment per year. The period of such AMC / CMC will be of 5 years after completion of warranty period. In case of non-compliance of AMC/CMC the supplier will be liable to pay a damages. Such damages shall be recovered from the amount of the Performance Security submitted. Payment for AMC /CMC on yearly basis will be made by the user's institution, at the end of year after satisfactory performance report from the end user.

Key Performing Indicators (KPI)

Sr. No.	SLA Description	Resolution Target	Liquidated Damage (LD)
1.	Supply/Delivery of equipment(s)	The work shall be completed within 1 year from the date of site handover	1/2% per week delay and thereof of the Purchase Order value, maximum up to 5% value of the Purchase Order
2.	Installation of Equipment	Within 7 days of supply of equipment(s)	1/2% per week delay and thereof of the Equipment Value, maximum up to 5% value of the Equipment
3.	Operational Acceptance of the equipment(s)	Within 7 days of Installation of equipment(s)	1/2% per week delay and thereof of the Equipment Value, maximum up to 5% value of the Equipment
4.	Any defect in EQUIPMENT or any of its part	Resolution: <= 3 Days from the time the call is logged by end user.	1/2% of cost of the Equipment & accessories will be deducted per week up to maximum 5% of PO Value post which purchaser may proceed to take such remedial action as may be necessary. Damages will be recovered from due payment to bidder or from Performance Security deposit. Once the Performance Security deposit get forfeited, the bidder will be required to recoup the Performance Security deposit. if the bidder fails to recoup the Performance Security deposit or settle the damages amount, the bidder will be blacklisted for three years. (Performance Security deposit will be released after settlement of damages.)

Sr. No.	SLA Description	Resolution Target	Liquidated Damage (LD)
5.	Warranty	Resolution: <=3-7 Days from the time the call is logged by end user.	The **Selected Bidder** must ensure 95% uptime during warranty period. In case of downtime, warranty period will be extended for period of downtime. If the equipment is not attended within 3 days for Mumbai, 7 days for other places the supplier will be liable to pay a damages of 1/2% of purchase cost for every week of delay. Such damages will be recovered from the amount of security deposit. Certificate of such uptime / downtime issued by the end user will be binding for the supplier.
6.	Annual Maintenance Contract (For rendering services)/ The tenderer will have to agree to enter into an Annual Maintenance Contract (AMC)@ 0.5%per year of the Order value of the machinery / equipment (excluding taxes).	Resolution: <=3-7 Days from the time the call is logged by end user.	1/2% per week delay and thereof of the Equipment Value, maximum up to 5% value of the Equipment
7.	**Comprehensive Annual Maintenance Contract: -** Where required, tenderer will have to agree for Comprehensive Maintenance Contract (CMC) inclusive of all spares @5% of the Order value (excluding taxes) of the equipment per year. The period of such AMC / CMC will be of 5 years after completion of warranty period. In case of non-compliance of AMC/CMC the supplier will be liable to pay damages. Such damages shall be recovered from the amount of the Performance Security submitted. Payment for AMC /CMC on yearly basis will be made by the user's institution, at the end of year after satisfactory performance report from the end user.	Resolution: <=3-7 Days from the time the call is logged by end user.	1/2% per week delay and thereof of the Equipment Value, maximum up to 5% value of the Equipment

27. Demonstration:

Demonstration of quoted product is mandatory for technically qualified bidders before the opening of financial bid. Such bidders shall produce the quoted product for demonstration on the date (approximately within 7 days

from the date of declaration of technically qualified bidder) and at the place specified by the MMGPA, Mumbai, India. If the concerned bidder fails to do so, the said bid will be summarily rejected and the EMD will be forfeited. If demonstration / testing of equipment offered by the bidder is found to be non-satisfactory, then the said bid will not be considered, and the bid will be rejected.

In case of Equipment for which it is not possible to arrange demonstration at the MMGPA due to technical reasons like requirement of regulatory certificates and bulky equipment, demonstration shall be arranged at the site where the equipment is stored by the bidder. Demonstration of such equipment shall be done on the date (approximately within 7 days from the date of declaration of technically qualified bidder) and at the place specified by the MMGPA, Mumbai, India. If the concerned bidder fails to arrange the product for the demonstration, or after the demonstration, the said product does not satisfy the test, the bid of the said bidder will be rejected and EMD will be forfeited. The decision to arrange Demonstration onsite shall be at the sole discretion of CEO, MMGPA and will be binding on all the bidders. The cost of arranging the demonstration shall be borne by the bidder.

The demonstration of equipment should be attended by empaneled members as decided by CEO, MMGPA from members empaneled by Government Resolution dated 31.10.2017. The video recording of the demonstration shall be mandatorily done. Soft copy of the Video Recording shall be handed over to the representative of MMGPA who witnessed the demonstration, at the site itself. Arrangement of Video Recording shall be done by the bidder at their own cost. The demonstration report shall be prepared on same day and signed by all present including representatives of bidder and the report of the demonstration should be scanned and mailed to General Manager (Technical), MMGPA on office mail I.D. on the same day.

28. Pre-dispatch Inspection:

The Pre-dispatch inspection will be done by a team appointed by CEO, MMGPA prior to shipment and the team will inspect the equipment physically in accordance to the tender specifications and certify the following things: -

a. The equipment is new and made of virgin material, it is not reconditioned / retrofitted.
b. The name of the equipment manufacturer, model and serial nos. of equipment & country of manufacturer.
c. "Maharashtra Government (MMGPA) Supply" shall be affixed on each equipment item by using aluminum strip of appropriate size.
d. The team shall clearly mention in their report the purchase order no., date and name of consignee.
e. Packing List: - It shall be issued by original manufacturer/importer/ Authorized Distributor.
f. Country of origin Certificate: - It shall be issued by competent authority of that country (Chamber of commerce of concerned Country) mentioning Name of manufacturer, consignee, name of equipment, invoice No., Qty. etc.
g. Original Invoice issued by bidders / manufacturer
h. The name of the equipment manufacturer, model, and serial nos. of the equipment.
i. Name of the consignee -list attached.
j. Allowances of pre-dispatch inspection team shall be borne by the Bidder.

29. Consequences of default by Bidder:

29.1. **Damages on late delivery:** If the supplier fails to deliver the goods or any consignment thereof within the period prescribed for delivery, the purchaser shall be entitled to recover 1/2 % of the value of the delayed supply for each week of delay or part thereof subject to the maximum of 5%, calculated from the next day after the agreed delivery period is over.

29.2. **Consequences of inferior substandard/supply**: - If the equipment supplied is found of inferior quality or not as per specifications, the contractor shall replace the equipment within one month from the date of intimation at the cost & risk of the contractor and also liable to pay the fine imposed by

the consignee, failing which Performance Security Deposit of the contractor shall be forfeited and the tenderer shall be liable for penal action including black-listing etc. In addition to the forfeiture of the Performance Security Deposit, if any fine is imposed by the consignee same shall be recovered from other dues to the contractor from –his bills payable.

29.3. **Replacement of Rejected materials**: - Tenderer / Contractor shall have to replace rejected material with approved one. The supplier shall remove the rejected material within 15 days failing which the same will be disposed of by consignee at the risk and cost of contractor without any further correspondence in this regard.

29.4. **Risk & Cost Purchase:** - In case the Contractor/s, shall at any time during the continuance of these presents fails to supply satisfactorily the equipment within the prescribed time as herein provided and or in case shall fail to replace any part/s that may have been rejected with other of approved quality, the consignee shall be at liberty forthwith to procure the same in the open market at the risk and cost of the contractor/s. Similarly if the work underlying the contract is not executed satisfactorily within the stipulated period or after the same having been disapproved wholly or partly is not rectified or re-done to the satisfaction of the Officer in Charge within the said specific period, the consignee shall get the same executed or rectified or re-done through any other agencies, at the entire risk of the supplier and expenses thereby incurred, shall be payable by the supplier and / or may be deducted from any moneys due or become due to the contractor/s and the consignee may, however fix such other subsequent date as he may think fit by which the delivery of the said article and or execution of the said work shall be completed.

29.5. **Blacklisting:** - The firm shall be black-listed for a period of two years, if it is found that: -

a. Forged documents are submitted.

OR

b. If it becomes responsive on the basis of submission of bogus certificate / information.

29.6. In case of non-supply of equipment / accessories or supply of substandard quality or supply of equipment / accessories found to have been previously used or having re-furbished parts.

29.7. **Warranty Period** :-(including supply of spares). The Selected Bidder will provide a comprehensive warranty for a period of 2 year from the date of commissioning of all equipment supplied as certified by the consignee. The successful tenderer must ensure 95% uptime during warranty period. In case of downtime, warranty period will be extended for period of downtime. If the equipment is not attended within 3 days for Mumbai and 7 days for other places the supplier will be liable to pay damages of 0.07% of purchase cost for every day of delay. Such damages will be recovered from the amount of security deposit. Certificate of such uptime / downtime issued by the end user will be binding for the supplier.

29.8. Replacement of equipment's/ parts and service thereof due to manufacturing defects during warranty period will be entirely at the supplier's cost. The expenditure incurred on account of transport, installation, commissioning, and various duties involved in the replacement of equipment's/ parts shall be borne by the supplier.

30. Third Party Inspection: -

30.1. In the event of challenge raised about the technical specifications or the working of the equipment by the technically disqualified bidder/s or the user department, the CEO, MMGPA, Mumbai will have the authority to appoint third party inspection. The cost of third-party inspection shall be borne by the tenderer, but such "third-party inspection" will be at the discretion of CEO. MMGPA

31. Force Majeure:

If, at any time, during the continuance of this contract the performance in whole or in part by either party of any obligation under this contract shall be prevented of delayed by reason of any war, hostility, acts of the

public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restriction, strikes, lock-outs or acts of God (hereinafter referred to as "events"), provided notice of happening of any such eventuality is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such nonperformance or delay in performance; and deliveries under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of purchasing officer as to whether the deliveries have been so resumed or not, shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, either party may at its option terminate the contract PROVIDED ALSO that it the contract is terminated under this clause, the purchaser shall be at liberty take over from the contract at a price to be fixed by the purchasing Officer which shall be final all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture in the possession of the contractor at the time of such termination or such portion there of as the purchaser may deem fit accepting such material, bought out components and stores as the contractor may with the concurrence of the purchaser elect to retain.

32. Confidentiality:

32.1. Information relating to the examination, clarification, evaluation, and comparison of bids, and recommendations for the award of a Contract shall not be disclosed to bidders or any

32.2. other persons not officially concerned with such process until the notification of Contract award is made.

32.3. Any effort by the bidder to influence the Authority in the Authority 's bid evaluation, bid comparison, or contract award decisions may result in the rejection of the bidder's bid.

33. Payment:

1. (10%) payment of the contract value on the completion on plinth
2. (20%) Payment of the Contract Value on the completion of slab casting
3. (30%) payment of contract Value on delivery of Capital equipment of Cath lab
4. (20%) payment of contract value on completion of work of Modular operation theater and Cardiac ICU
5. Remaining (20%) payment of contract value on will be released after successful installation and satisfactory commissioning of Cardiac Care Unit

Payment against supply order issued under this bid will be made by Maharashtra Medical Goods Procurement Authority, Mumbai.

Submission of following documents:

i. 3 copies of supplier's invoice.
ii. Acceptance certificates issued by the consignees.
iii. Payments towards the supply of Items will be made strictly as per the rules of MMGPA, Mumbai. The payment will be made through RTGS/ NEFT. The bidder shall furnish the relevant details to make the payment through RTGS/NEFT and the change of Bank Account during the validity of the bid will not be entertained normally.
iv. The bidder must furnish CRC (Consignee Receipt certificate) IQ, PQ and OQ certificate approved, signed and stamped by the Authorized Consignee.

The Authority shall have every right to deduct the pending dues on account of loss, compensation, or any remedial action in monetary terms from the said payment. The supplier shall not agitate the said issue in future.

34. Corrupt or Fraudulent Practices:

34.1. The Authority as well as bidders shall observe the highest standard of ethics during the procurement and execution of such contracts.

34.2. "Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.

34.3. Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract to the detriment of Authority and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Authority of the benefits of free and open competition.

34.4. "Collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Authority, designed to establish bid prices at artificial, non-competitive level; and. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or effect the execution of the contract.

34.5. "The Authority will reject a bid for award if it determines that the bidder recommended for award has directly or through an agent engaged in corrupt or fraudulent practices in competing for the contract in question.

34.6. The Authority will declare a firm or individual as ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract.

35. Resolution Of Dispute:

35.1. In the event of any question, dispute, or differences in respect of contract or terms and conditions of the contract or interpretation of the terms and conditions or part of the terms and conditions of the contract arises, the parties may mutually settle the dispute amicably.

36. Arbitration:

36.1. In the event of failure to settle the dispute amicably between the parties, the same shall be referred to the sole arbitrator as mutually agreed upon by the parties. The award passed by the sole Arbitrator shall be final and binding on the parties.

36.2. The arbitration proceedings shall be carried out as per the Indian Arbitration and Conciliation Act, 1996 and the rules made thereunder. For settlement of all disputes & Arbitration the place of jurisdiction shall be Mumbai, Maharashtra. The language of Arbitration shall be English.

37. Governing Language: English language version of the contract shall govern its Interpretation.

38. Applicable laws:

The contract shall be governed in accordance with the law prevailing in India, Act, Rules, Amendments, and orders made there on from time to time.

39. Indemnification:

The supplier shall indemnify the Authority against all actions, suit, claims and demand or in respect of anything done or omitted to be done by supplier in connection with the contract and against any losses or damages to the Authority in consequence of any action or suit being brought against the supplier for anything

done or omitted to be done by the supplier in the execution of the contract. The supplier shall submit an indemnity bond to this effect.

40. Jurisdiction: All the suits arising out of the contract shall be authority in the court of competent jurisdiction situated in Mumbai only and not elsewhere.

41. Saving clause:

No suits, prosecution or any legal proceedings shall lie against the Chief Executive Officer, Maharashtra Medical Goods Procurement Authority, Mumbai, or any person for anything that is done in good faith or intended to be done in pursuance of bid.

Appendix I: Pre-qualification-cum-Technical Bid Templates

I. General

The Bidders are expected to respond to the RFP using the forms given in this section and all documents supporting Pre-Qualification / Technical Evaluation Criteria.

Pre-Qualification Bid & Technical Proposal shall comprise of following forms:

Annexure to be used in Pre-Qualification cum Technical Proposal (Envelope 1)

Annexure I: Letter Comprising the Technical Bid
Annexure II: Compliance Sheet for Pre-qualification Proposal
Annexure III: Proforma for Production And Sale Statement
Annexure IV: Annual Turnover statement for three years
Annexure V: Details of Manufacturing unit
Annexure VI: Contract Form
Annexure VII: Undertaking for rates, specification, blacklisting status on Stamp paper duly notarized
Annexure VIII: Mandate Form
Annexure IX: Power of Attorney for signing of Bid
Annexure XI: Compliance sheet for Technical Proposal
Annexure XII: Place of delivery
Annexure XIII: Self Declaration Affidavit (on Rs.100/- Stamp Paper)
Annexure XIV: Manufacturer's Authorization Form
Annexure XV: Format for EMD Bank Guarantee if not submitted online.
Annexure XVIII: Checklist duly filled and signed by the bidder's Authorized representative.

Annexure I: Letter Comprising the Technical Bid

To,
Chief Executive Officer,
Maharashtra Medical Goods Procurement Authority,
1st Floor, Aarogya Bhawan,
Near CSMT Railway Station,
Mumbai 400001 (Maharashtra)

Subject: Request for Proposal (RFP) for……..

Dear Sir,
Having examined the bid document and addendum/corrigendum, if any the receipt of which is hereby acknowledged, we, the undersigned, offer to supply and deliver the goods under the above-named Contract in full conformity with the said bid document and our financial offer in the Price schedule submitted in Envelop No. 2 which is made part of this bid.

We undertake that all information provided in our bid and in the Appendices is true and correct and all documents accompanying such bid are true copies of their respective originals.

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

We undertake that as on the date of submission of the proposal, we are not involved in any conflict-of-interest situation.

If our bid is accepted, we undertake to submit the security deposit in the form, in the amounts, and within the times specified in the bid document.

We agree to abide by this bid for the Bid Validity Period specified in the bid document and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

Until the formal final Contract is prepared and executed between us, this bid together with your written acceptance of the bid shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any bid you may receive.

We agree and undertake to abide by all the terms and conditions of the RFP Document. In witness thereof, We submit this Proposal under and in accordance with the terms of the RFP Document.

Signed: _____

Date: _____

In the capacity of _____

Duly authorized to sign this bid for and on behalf of _____

Signature & stamp of bidder

Annexure II: Compliance sheet for Pre-Qualification Proposal

(The pre-qualification proposal should comprise of the following basic requirements. The documents mentioned in this compliance sheet along with this form, needs to be a part of the Pre-Qualification proposal)

Sr. No.	Basic Requirement	Specific Requirement	Documents required
1.	**Registered Legal Entity**	The Bidder shall be any person/Company/ Society/Proprietorship/ Partnership firm/Trust registered under applicable Act in India/ Government-owned enterprise or institution. The Bidder shall be – a) A manufacturer having valid manufacturing and equipment license for the items quoted. **OR** **b)** An Importer* having valid import license and equipment license for the items quoted. **OR** **c)** Authorized Distributor fulfilling all tender conditions. **d)** Separate Manufacturer's Authorization will be required for each equipment. **e)** Registered with the GST Authorities. **f)** Should have a valid PAN number. **Importer refers to a legal Entity such as a Company/ Society/ Trust/Partnership* firm *registered under applicable Act in India/ Government-owned enterprise or institution that engages in the process of bringing equipment or goods from outside India into the country's borders for commercial purposes.* *Importer itself shall be responsible for supply and maintenance of the equipment as per the terms of RFP and shall not engage any third party for the same)*	a. Copy of certificate of incorporation/registration along with charter documents like copy of Memorandum and Articles of Association, and other registration documents according to the nature of entity. b. Attested photocopy of valid manufacturing Equipment/ import license with product list duly approved by the Licensing Authority for each and every product quoted as per specification in the bid. The license must have been duly renewed up to date and the items quoted shall be clearly highlighted in the license. If quoted item is manufactured at different places, Manufacturing License & Performance certificate should be enclosed. c. Manufacturer's Authorization as per Annexure XIV to be provided by Importer, Authorized distributor d. Copy of GST Registration certificate issued by GSTN authorities. e. Copy of PAN Card.
2.	**Certifications/ registration**	The Bidder shall have to provide requisite certifications/registration.	a. Certificates of DPIIT (if applicable) b. Original manufacturer's certificate that the product is being used in country of origin. c. Import Export Certificate (IEC Code) d. Affidavit of Importer regarding equipment being imported in India for last three years.

Sr. No.	Basic Requirement	Specific Requirement	Documents required
3.	**Litigation**	The Bidder should not be involved in any major litigation such as fraud, FEMA violations and any other civil or criminal proceedings that may have an impact of affecting or compromising the delivery of services as required under this contract.	Affidavit as per Annexure VII.
4.	**EMD/Bid Security**	Bidders are required to pay the EMD/Bid Security of **₹98,00,000 /-** through online mode on https://mahatenders.gov.in. **or in the form of BG as per annexure XVII**	• EMD in the form of NEFT/RTGS/BG
5.	**EMD Exemption**	EMD exemption is not allowed as this is not a supply contract but a turnkey Project involvingworks.	• Importer shall produce authorization Certificate from manufacturer as authorized seller as per Annexure XIV • EM-II certificates whenever necessary (mandatory for Medium Enterprises)
6.	**Conflict of Interest**	On the date of submission of the proposal, the Bidder should not be involved in any conflict-of-interest situation.	Undertaking by the authorized signatory as per Annexure I
7.	**Blacklisting or banned**	On the date of submission of the proposal, the Bidder should not be blacklisted or banned by any ministry/department/attached offices/sub-ordinate offices under Government of India and any State government, Autonomous bodies (established by Central/State govt), any Central/State PSUs for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices.	Affidavit as per **Annexure VII**
8.	**Debarment**	On the date of submission of the proposal, the Bidder should not be debarred	Affidavit as per Annexure VII.
9.	**Average Annual Turnover**	Average Annual Turnover (in last three financial years (2022-23,2023-24,2024-25) shall be at least **Rs.49 Cr.**	Certificate issued by a statutory auditor/chartered accountant (as attached Annexure-IV) along with Audited Financial Statements confirming the Average Annual Turnover of the Bidder during the stated Financial Years must be submitted.
10.	**Net Worth**	The net worth of the bidder in the financial year (2024-25) should be **positive**.	Certificate issued by a statutory auditor/chartered accountant (as attached **Annexure-IV).**
11.	**Technical Capability**	Bidder must have successfully undertaken supply, installation & commissioning of quoted Equipment or turnkey work of an amount of **Rs.49 Cr.** during last three	The Bidder shall provide the documentary evidence in support of its credentials

Sr. No.	Basic Requirement	Specific Requirement	Documents required
		financial years (2022-23,2023-24,2024-25) The bidder must submit work experience documents related to the supply, installation, and commissioning of Cardiac Cath Lab Units executed in Government Hospitals during the last three financial years (2022–23, 2023–24, and 2024–25). The bidder must have: At least one single order of minimum ₹80 crore, or Two separate orders of minimum ₹50 crore each, or Three separate orders of minimum ₹40 crore each.	such as agreement copy/ work order / Letter of Award. This should be supported by delivery report/ work completion certificate/customer satisfaction certificates with customer details and client certificate. Statutory auditor's certificate or Chartered Accountant's certificate, as the case may be, shall be submitted for demonstrating the past experience. (as per Annexure number 3)
12.	**Production Capacity / Import Quantity**	Production Capacity of the Original Equipment Manufacturer must be minimum 1.5 times of the quoted order quantity in last one financial year.	Certificate of Statutory Auditor/Chartered Accountant For importers and Authorized distributors Certificate of Statutory Auditor/Chartered Accountant of OEM has to be submitted in Annexure V
13.	**Service center**	In case of Bidder being Manufacture**r**, the bidder should have at least 2 service centers in state of Maharashtra. In case of Bidder being Importer/Authorized distributor, the bidder should ensure that OEM have at least 2 service centers in state of Maharashtra.	List of at least 2 service centers in Maharashtra with address and contact details shall be provided by the bidder which shall exist for the period of warranty as mentioned and also, during the additional CMC/AMC period, if awarded. The Importer/Authorized Distributor shall provide an undertaking from OEM that OEM shall have at least 2 service centers for the period of warranty as mentioned and also, during the additional CMC/AMC period, if awarded.

Annexure III: Proforma for Production/Sale Statement

(For a period of last 3 Years)

(To be submitted on the letterhead of the Statutory Auditor/ Chartered Accountant of the Bidder)

Sr. No.	Year	Name and full Address of the Purchaser	Purchasing Entity (Gov./Semi Gov./Other)	Name of the Product	Purchase Order No. & Date	Purchase Order Quantity	Purchase Order Value (in Rs.)	Quantity		PO Copy enclosed on Pg. No.
								Manufactured Qty	Sold Qty	
1	2022-23									
2	2023-24									
3	2024-25									

Add rows as per requirement.

Note:

1. In support of above statement, enclose the copies of supply orders with client's satisfactory certificates. All purchase orders should be enclosed in the sequence as per the data provided in table above.
2. All the data provided in the above table has been verified by undersigned CA.

Name, Membership number and signature of the Chartered Accountant:
UDIN:
Name and seal of the firm:
Location, Date:

Authorized Signature *(PoA holder)*
[In full and initials with Seal]:
Name and Title of Signatory:
Name of Bidder (*Firm/ Organization's name*):
Address:
Telephone:
Email:
(Name and seal of the Bidder)

[*Location, Date*]
Disclaimer: If, 1. The bidder is OEM , then the details of Annexure III of production in last three years
2. The bidder is Authorized distributor, then the details of Annexure III of sale in last three years

Annexure IV: Average Annual Turnover and Net Worth of the Bidder

(To be submitted on the letterhead of the Statutory Auditor/ Chartered Accountant of the Bidder)

The Average Annual Turnover and Net Worth details of M/s _____ for participation under the RFP are given below and certified that the statement is true and correct.

Sr. No.	Year	Turnover (In Rs.)	Positive Net worth (*Yes/ No*)
1	**2022-23**		
2	**2023-24**		
3	**2024-25**		
4	**Average Annual Turnover of above 3 years**		

This is to certify that the Net worth of (*name of Bidder*) is Positive for last 3 (three) Financial Years i.e., (2022-23, 2023-24, 2024-25) as per the Audited Financial Statements.

For the purposes of this RFP, net worth (the "**Net Worth**"), in case of Company shall mean the aggregate value of the paid-up share capital and all reserves created out of the profits and securities premium account, after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off, as per the audited balance sheet, but does not include reserves created out of revaluation of assets, write-back of depreciation and amalgamation.

For other eligible entities, the Net Worth shall mean the amount derived by subtracting the liabilities from the corpus and reserve amounts as certified by the chartered accountant/statutory auditor having valid registration.

Note:

(a) Certificate issued by a statutory auditor/chartered accountant along with Audited Financial Statements confirming the average annual turnover of the Bidder during the stated financial years must be submitted on the letterhead of the Statutory Auditor.

(b) Provide supporting Audited Financial Statements (Balance Sheets, Profit and Loss Statements, etc.) of the bidding organization/ firm.

Name, Membership number and signature of the Chartered Accountant:
UDIN
Name and seal of the firm:
Location, Date:

Authorized Signature *(PoA holder)*
[In full and initials with Seal]:
Name and Title of Signatory:
Name of Bidder (*Firm/ Organization's name*):
Address:
Telephone:
Email:
(Name and seal of the Bidder)
[*Location, Date*]

Annexure V: Details of Manufacturing Unit

(To be submitted on the letterhead of Original Equipment Manufacturer)

1. **Name of the Manufacturer:**

2. Full address:

3. Phone Nos.:

4. Fax No.:

5. Email ID:

6. Date of inception:

7. License No. & date:

8. Issued by:

9. Valid up to:

10. RTGS (Real Time Gross Settlement) System or Core Banking A/c No.:

11. Details of installed production capacity for 1 year:

Sr. No.	Equipment name	Total Production Capacity	Actual Production	Installed Quantity
1.	Cardiac cathlab unit on turnkey basis (Capital goods)			

Date:

Seal **Signature**

Name (in capital letters)

Note: 1.The details of manufacturing unit shall be for the premises where item quoted are actually manufactured
Disclaimer: Details of manufacturing unit should be given by OEM for capital goods included in technical specifications.

THE DETAILS OF FACTORY PREMISES

Person In-charge of Factory

Name :

Phone No. :

Mobile No. :

Nearest Land mark of Factory:

Layout

Km from Airport :

Name of the Airport and City:

Km from Railway Station :

Name of the Railway Station:

Km from Bus Stand :

Name of the Bus Stand and City :

Name of designation of the authorized signatory

Note: The details of manufacturing unit shall be for the premises where item quoted are actually manufactured.

Annexure VI: Contract Form

(Stamp duty as applicable as per MSA)

THIS AGREEMENT made the .....day of....., 200... Between..... (Name of Authority) of..... (Country of Authority) (Hereinafter "the Authority") of the one part and..... (Name of Supplier) of..... (City and Country of Supplier) (Hereinafter called "the Supplier") of the other part:

WHEREAS the Authority is desirous that certain Goods and ancillary services viz. (Brief Description of Goods and Services) be procured and has accepted a bid by the Supplier for the supply of those goods and services in the sum of .....(Contract Price in Words and Figures) (Hereinafter called "the Contract Price"). Whereas the supplier has deposited a Demand Draft in favor of "Maharashtra Medical Goods Procurement Authority, Mumbai" payable at Mumbai from any Nationalized or Scheduled bank of Rs..... (Rs. in words.....) as performance security towards the fulfillment of this agreement.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The contractor has accepted the contract on the terms and condition set out in notice No.-------- .....as well in the Acceptance Letter No : -.....Dt:..... ----------which will hold good during the period of this agreement.

3. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:

(a) The Price List submitted by the Supplier;
(b) The Schedule of Requirements;
(c) The Technical Specifications;
(d) Terms & conditions of tender document.
(e) The Authority's Notification of Award.

4. In consideration of the payments to be made by the Authority to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Authority to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Authority hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
6. Upon breach by the supplier of any of the condition of the agreement, the Chief Executive Officer may by a notice in writing resolving, determine and put an end to this agreement without prejudice to the right of the Government to claim damages for antecedent breaches thereof on the part of the supplier and also to responsible compensation for the loss occasioned by the failure of the supplier to fulfill the agreement as certified in writing by the Chief Executive Officer which certificate shall to conclusive evidence of the amount of such compensation payable by the supplier to the Government.

7. This Agreement shall remain in force until the expiry of 24 (twenty four) months from the date of supply or delivery of all equipment under the Contract but notwithstanding herein or in the tender and acceptance forms contained, the Government shall not be bound to take the whole or any part of the estimated quantity herein or therein mentioned and may cancel the contract at any time upon giving one month's notice in writing without compensating the Supplier.
8. The Supplier has fully read, understood & shall abide by all the term and conditions as stipulated in Bidder document, failing which the Contract Agreement is liable to be terminated at any time without assigning any reason by the Maharashtra Medical Goods Procurement Authority, Mumbai.
9. Any change/amendments if required to be incorporated in the Agreement at a later stage shall be discussed & mutually agreed by both the parties and supplementary agreements shall be binding on both the parties and shall form the part of this agreement.
10. This Contract Agreement shall be governed by and construed in accordance with the laws of Republic on India.

Brief particulars of the goods and services which shall be supplied/provided by the Supplier are as under:

Sr. No.	BRIEF DESCRIPTION OF GOODS & SERVICES	QUANTITY TO BE SUPPLIED*	UNIT PRICE	TOTAL PRICE	DELIVERY TERMS
					As per the supply order

*1. Actual quantity to be supplied may vary & will be strictly as per actual requirement.
2. Actual supply to take place only after & as per the supply order(s) issued by Maharashtra Medical Goods Procurement Authority, Mumbai from time to time.
Tender Document is a part & parcel of the contract.
4. All terms & conditions will apply as per Maharashtra Government Industries Department, Stores Purchase Rules issued vide Government Resolution no. 82 dated 1.12.2016 and other applicable Government Resolutions.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.
Signed, Sealed and Delivered by the Said. (For the Authority) in the presence of:.....
Signed, Sealed and Delivered by the Said..... (For the Supplier) In the presence of….

Following documents to be submitted in original to this office

1. **Proof of all documents inclusive of all Appendices and Annexures of this RFP**

Address for communication:

Office of the ---
Chief Executive Officer,
Maharashtra Medical Goods Procurement Authority,
1st Floor, Aarogya Bhawan,
Near CSMT Railway Station,
Mumbai 400001 (Maharashtra)

Annexure VII: Non-Blacklisting Affidavit

Undertaking for rates, specification, blacklisting status on Stamp paper duly notarized
AFFIDAVIT on Non-Judicial Stamp Paper of Rs. 100/-
(Original copy To be submitted to this office)
Undertaking for rates, specification, blacklisting status on Stamp paper duly notarized

Reference: Tender No. E- /MMGPA/Equipment (2025-26)

1. I/We undertake to provide the drugs/medicines/equipment's as required by Maharashtra Medical Goods Procurement Authority, Mumbai and there will be no deviation in composition, quality, packing etc.

2. The firm ……..(Name of the Firm) has not been found guilty of malpractices, misconduct or blacklisted/debarred/ deregistered for the quoted product by any department of Govt. of Maharashtra or by any local authority and semi Govt. organization and other State Government/Central Government's organizations/ procurement corporation as on the date of submission tender document for the quoted items."

3. The firm is not involved in any major litigation such as fraud, FEMA violations and any other civil or criminal proceedings that may have an impact of affecting or compromising the delivery of services as required under this contract.

Seal **Signature**

Date

Place

Annexure VIII: Mandate Form

01	Company Name	
02	Postal Address of the company with Telephone No., Fax No. and Mail address	
03	Name of the Managing Director/ Director/Manager Mobile No./Phone No. E-mail address	
04	Name and designation of the authorized company official Mobile No./Phone No. E-mail address	

Bank Details

01	Name of the Bank Branch Name & Address; Branch Code No. Branch Manager Mobile No. Branch Telephone no. Branch E-mail ID	
02	9 digit MICR code number of the bank and branch appearing on the MICR cheque issued by the bank.	
03	IFSC code of the Branch	
04	Type of Account (Current/Savings)	
05	Account Number (as appear in cheque book)	

(Please **attach the original cancelled cheque** issued by your bank for verification of the above particulars)

I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold Maharashtra Medical Goods Procurement Authority, Mumbai responsible for the same. I have read the conditions of tender / agreement entered and agrees to discharge the responsibility expected of me/from the company as a tenderer/ successful bidder.

Date: Company seal Signature

Place: (Name of the person signing & designation)

CERTIFIED THAT THE PARTICULARS FURNISHED ABOVE BY THE COMPANY ARE CORRECT AS PER OUR RECORDS

Bank Seal with address

Signature of the Authorized Official of the bank

Annexure IX: Power of Attorney for signing of Bid

Know all men by these presents, We_____ (Name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms. (name), son/daughter/wife of and presently residing at _____, who is presently employed with us and holding the position of _____ , as our true and lawful attorney (hereinafter referred to as the "***Attorney***") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Bid for qualification and submission of our Bid for [***] (Project) for the [***] (the "***Authority***") including but not limited to signing and submission of all Bids, bids and other documents and writings, participate in Pre-bid and other meetings/conferences and providing information/ responses to the Authority, representing us in all matters before the Authority, signing and execution of all contracts including the Agreement and undertakings consequent to acceptance of our bid, and generally dealing with the Authority in all matters in connection with or relating to or arising out of our bid for the said Project and/ or upon award thereof to us and/or till the entering into of the Agreement with the Authority.

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds, and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, _____, THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____ 2_____

For

_____

(Signature, name, designation, and address)

Witnesses:
1.(Notarized)

2.Accepted

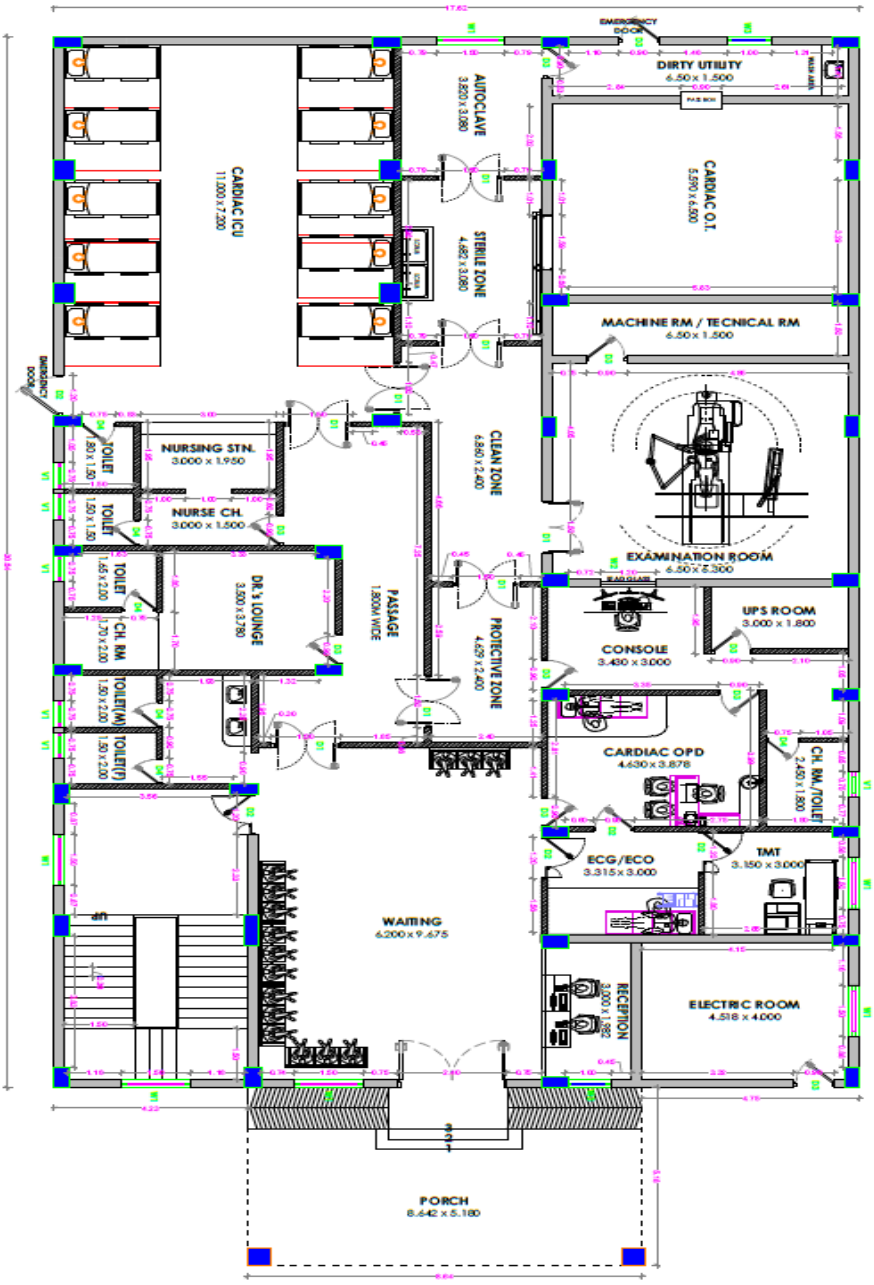
_____

(Signature)

(Name, Title and Address of the Attorney)

Notes:
The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure. Wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/ power of attorney in favor of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder. For a Power of Attorney executed and issued overseas, the document shall also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.

Annexure X: Technical Specification



Approximate Area Statement for Cardiac Care Unit

Sr No	Description	Quantity	Unit
1	Total Built Up Area	553.79	SQM
2	Carpet Area		
	A. Examination Room	40.95	SQM
	B. Dirty Utility	9.75	SQM
	C. AUTOCLAVE/ETO/CSSD	11.7656	SQM
	D. Operation Theatre	35.75	SQM
	E. Sterile Zone	14.4144	SQM
	F. Clean Zone	16.464	SQM
	G. Protective Zone	11.1096	SQM
	H. Pre Op & Post Op ICU	77	SQM
	I. Nursing Station	5.85	SQM
	J. ELECTRICAL ROOM	18.04	SQM
	K. TECHNICAL ROOM	9.75	SQM
	L. Waiting + Reception	59.954	SQM
	M. CONSOLE ROOM	10.29	SQM
	N. Technician change Room	4.5	SQM
	O. Cardiac OPD	17.9181	SQM
	P. Passage	26.4	SQM
	Q. Doctor's Lounge	13.23	SQM
	R. ECG Room	9.9	SQM
	S. TMT Room	9.45	SQM
	T Stair	37.8	SQM
	U Reception	5.94	SQM
	V UPS Room	5.85	SQM
	Total Carpet Area	**452.0757**	**SQM**

TECHNICAL SPECIFICATION FOR CARDIAC CARE UNIT ON TURNKEY BASIS		
SR. NO.	**PARTICULARS**	**QUANTITY**
B1	**TURNKEY (INCIDENTAL / INTERNAL PRE-INSTALLATION) DETAILS REQUIRED FOR CARDIAC CATHLAB OR (ROOM).**	
1	SELF-LEVELLING ANTISTATIC CONDUCTIVE FLOORING IN CATH LAB ROOM	AS PER REQUIREMENT
2	ANTIMICROBIAL WALL COVERING FOR CATHLAB ROOM	AS PER REQUIREMENT
3	CEILLING SYSTEM IN CATHLAB ROOM	AS PER REQUIREMENT
4	FIRE SAFETY COMPLIANCE FOR CARDIAC CATHLAB OR	AS PER REQUIREMENT

5	DOORS OF CATHLAB ROOM	AS PER REQUIREMENT
6	CATLAB CEILLING BEAUTIFUL SCENERY	1 NOS
7	ELECTRICAL INSTALLATIONS FOR CATHLAB ROOM	AS PER REQUIREMENT
B2	**TURNKEY (INCIDENTAL / INTERNAL PRE-INSTALLATION) DETAILS REQUIRED FOR CARDIAC OPERATION THEATRE**	
1	SELF-LEVELLING ANTISTATIC CONDUCTIVE FLOORING IN CARDIAC OPERATION THEATRE	AS PER REQUIREMENT
2	P OF OT WALLS BY ANTIMICROBIAL 3 SECTION WALL PANELS WITH SERVICE PANEL	AS PER REQUIREMENT
3	CARDIAC OPERATION THEATER CEILING WITH ANTIMICROBIAL CEILING PANEL	AS PER REQUIREMENT
4	PRESSURE RELIEF DAMPERS	1 NOS
5	FIRE SAFETY COMPLIANCE FOR CARDIAC OPERATION THEATRE.	AS PER REQUIREMENT
6	ELECTRICAL INSTALLATIONS	AS PER REQUIREMENT
7	DIGITAL TOUCH SCREEN OT CONTROL PANEL	1 NOS
8	LED X-RAY ILLUMINATING SCREEN	1 NOS
9	WRITING BOARD (OPERATING LIST BOARD)	1 NOS
10	PERIPHERAL LIGHTING	6 NOS
11	DOUBLE ARM PENDANT	1 NOS
12	SINGLE ARM PENDANT	1 NOS
13	AUTOMATIC HERMETICALLY SEALED SLIDING OT DOOR	1 NOS
14	AUTOMATIC SENSOR BASED 2 BAY SCRUB STATION STAINLESS STEEL GRADE 304	1 NOS
15	REUSABLE CAPACITIVE COUPLING CURRENT QUALITY MONITORING ELECTRODE	1 NOS
16	LED SURGICAL LIGHT FOR CARDIAC OPERATION THEATER	1 NOS
B3	TURNKEY (INCIDENTAL / INTERNAL PRE-INSTALLATION) DETAILS REQUIRED FOR PRE/POST ICU 10 BEDED	
1	ICU FLOORING	AS PER REQUIREMENT
2	ANTIMICROBIAL PVC SHEET ON ICU WALL	AS PER REQUIREMENT
3	CEILLING SYSTEM INSIDE ICU	AS PER REQUIREMENT
4	ELECTRICAL INSTALLATION	AS PER REQUIREMENT
5	CLEAN ROOM HERMETIC DOUBLE DOOR	AS PER REQUIREMENT
6	CEILING PERIPHERAL LIGHTS/ICU LUMINAIRES	AS PER REQUIREMENT

7	LED ILLUMINATED BEAUTIFUL SCENERY PANELS	1 NOS
8	WALL MOUNTED MODULAR BED HEAD PANELS WITH NURSE CALL SYSTEM	10 NOS
9	U TRACK CURTAIN SYSTEM WITH CURTAIN	10 NOS
10	ANCILLARY AREA OF CARDIAC CARE CENTER	AS PER REQUIREMENT
B4	LIST OF CAPITAL EQUIPMENT'S FOR CARDIAC CATHLAB UNIT ON TURNKEY BASIS	
1	ADVANCED AI-BASED MODULAR CATH LAB	1 SET
2	C-ARM GANTRY	1 NOS
3	PATIENT TABLE	1 NOS
4	X-RAY GENERATOR	1 NOS
5	X-RAY TUBE	1 NOS
6	COLLIMATOR	1 NOS
7	FLAT PANEL DETECTOR	1 NOS
8	IMAGE DISPLAY SYSTEM	1 NOS
9	DIGITAL IMAGE PROCESSING SYSTEM AND CONTROLS	1 NOS
10	WORKSTATION	1 NOS
11	ESSENTIAL ACCESSORIES	1 SET
12	ONLINE UPS REQUIRED FOR ADVANCED CATHLAB SYSTEM	1 NOS
B5	TECHNICAL SPECIFICATIONS OF CARDIAC OPERATION THEATRE EQUIPMENT'S	
1	CARDIAC OPERATION TABLE	1 NOS
2	ANESTHESIA WORKSTATION WITH PATIENT MONITOR	1 NOS
3	ELECTROSURGICAL GENERATOR	1 NOS
4	ELECTRIC STERNUM SAW MACHINE	1 NOS
5	ELECTRIC SUCTION MACHINE	1 NOS
6	SET OF CVTS INSTRUMENTS MAJOR	1 NOS
7	SET OF CVTS INSTRUMENTS MINOR	1 NOS
B6	CARDIAC PRE POST ICU EQUIPMENT & INSTRUMENTS	
1	MOTORISED MODULAR ICU BEDS WITH SIDE BOARD, HEAD BOARD & FOOT BOARD	10 NOS
2	MATTRESS 100 MM	10 NOS

3	BED SIDE INFUSION POLE ASSLY ADJUSTABLE WITH 2 HOOKS	10 NOS
4	BED SIDE LOCKER	10 NOS
5	OVER BED TABLE	10 NOS
6	CRASH CART	1 NOS
7	INSTRUMENT TROLLY WITH BOWEL BUCKET	1 NOS
8	EMERGENCY RECOVERY TROLLY WITH MATTRESS	1 NOS
9	LED X-RAY VIEW SCREEN	1 NOS
10	MAGNETIC WRITING BOARD (WHITE)	1 NOS
11	CENTRAL MONITORING STATION	1 NOS
12	ECG MACHINE	2 NOS
13	SYRINGE INFUSION PUMP	10 NOS
14	DEFIBRILLATOR	1 NOS
15	MULTIPARA PATIENT MONITOR WITH IBP & ETCO2	2 NOS
16	PULSE OXIMETER	1 NOS
17	VIDEO LARYNGOSCOPE	1 NOS
18	TEMPORARY EXTERNAL DUAL CHAMBER PACEMAKER	1 NOS
19	INTRA-AORTIC BALLOON PUMP (IABP) MACHINE	1 NOS
20	SINGLE CHAMBER TEMPORARY EXTERNAL PACEMAKER	1 NOS
21	ECHO MACHINE PREFERABLY PORTABLE ECHO WITH 2 PORTS WITH ADULT AND PAEDIATRIC PROBE	1 NOS
22	ABG MACHINE	1 NOS
23	MULTIPARA PATIENT MONITOR	8 NOS
24	HIGH-END VENTILATORS	2 NOS
25	TMT MACHINE	1 NOS
26	PLASMA STERILIZER WITH ACCESSORIES	1 NOS
27	AUTOCLAVE	1 NOS
28	MEDICAL GAS PIPELINE SYSTEM (MGPS) INCLUDING MEDICAL VACUUM SYSTEM, MEDICAL AIR COMPRESSOR SYSTEM, AND AIR RECEIVER/ RESERVE TANK.	AS PER REQUIREMENT
29	ELECTRIFICATION WORK WITH GENERATOR BACKUP	AS PER REQUIREMENT

30	COMPLETE CCTV SURVEILLANCE AND FIRE SAFETY WORK	AS PER REQUIREMENT
31	HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SYSTEM	AS PER REQUIREMENT
32	OTHER TURNKEY WORK	AT ACTUAL

S. No	GMDN Name	Technical Specification
B1	**TURNKEY (INCIDENTAL / INTERNAL PRE-INSTALLATION) DETAILS REQUIRED FOR CARDIAC CATHLAB OR (ROOM).**	
1	**CATHLAB ROOM SELF LEVELLING AND ANTISTATIC PVC FLOORING**	Floor of CATHLAB should be antistatic conductive flooring. It should be 2mm antistatic seamless PVC flooring. Floor should be smooth, non-slip, impervious material conductive enough to dissipate static electricity but not conductive enough to endanger personnel from electric shock. Electrostatic charge dissipation combat PVC seamless flooring of very high quality should be provided Thickness not less than 2mm. Continuous roll should be used and joints should be welded by special PVC thermal welding units using PVC welding bars of same color. The sheets should be highly durable with resistance to shock and indentation. It should be scratchproof also. The conductive material should be uniformly impregnated as grains It should be inert to body fluids, chemicals and disinfectants. Should not be affected by temperature variation within the OT. The floor should efficiently discharge electric charges up to 2 kV Flooring installation should be done by skilled workers of accredited agencies authorized by the supplier of PVC sheets. The electrical resistance (point to ground) should be within 2.5x104 to 5x106 ohms. The floor should not allow build-up of electrical charge beyond 100 volts due to antistatic effect. The corners should not be terminated sharply and concealed cove-former (aluminium) should be used overlap the wall panel to a height of approx.25mm and sealed perfectly and uniformly. Self-levelling compounds should be used for this purpose. The conductive copper grid laid underneath the PVC sheet should be supported by liquid epoxy compounds allowed to set as a uniform and level surface. The copper strips to be made visible by grinding and no copper strip should project more than 0.5mm above level surface to avoid damage to the PVC sheet. One earthing lead should be brought out from every 150 sq. ft area and attaching it to the main earthing strip/ground. Copper grounding strips (0.05 mm thick, 50 mm width) should be laid flat on the floor in the conductive adhesive and connected to copper strip of grounding. The connection from copper grid should be brought out uniformly at places to form equipotential grid. Flooring should be mechanically shock proof, scratch proof, flame retardant and anti-microbial Corners should be uniformly curved Final surface should be non-corrosive to biological fluids and detergents. Colour should be uniform pleasant and matching with ambience. Bidder has to use self-levelling material (if required) in order to have flooring in uniform level.
2	**ANTIMICROBIAL PVC WALL COVERING FOR CATHLAB ROOM**	Supply & Installation of antimicrobial flexible vinyl sheet wall covering of 1.0mm thick 100% recycled PVC flexible, homogeneous of total weight 1750 g/m2 in sheet of size 2mtrs. X40 metres. in approved pattern & colour combination with PUR surface treatment fully resistant to impact, as it acts a buffer against damage from beds, trolleys and indoor motorized vehicles with Anti-bacterial and Fungicidal properties & should create safe and hygienic environment in ICU. The wall covering shall confirm the fire rating M1 class as per NFP 92 506. The vinyl

		wall covering shall be fixed with water-based adhesive based on acrylic type co polymer with 40000 to 60000 cps viscosity. Wall should be without any undulation if any & if so then it should be repaired with Wall Putti with primer to make the wall smooth with proper edged corners.
3	**CEILLING SYSTEM IN CATHLAB ROOM.**	The snap fit ceiling tiles shall be made up of galvanized Steel sheets, 0.7 mm thick and shall be coated with antibacterial powder coating. The ceiling support element shall be combination of galvanized / powder coated steel suspension brackets along with threaded rod. The installation shall be carried out with main runners spaced at 1200 mm (centre to centre) securely fixed to the slab by the means of roll plug, 1.2mm thick L-clamp & 6.0 mm diameter GI rod fully threaded (with Hex nut for precise level adjustment) at 1200 mm maximum (center to center). The distance between the last runner & adjacent wall shall not exceed beyond 600mm. Ceiling panels shall be placed adjacent and shall form hermetic sealing. if required ceiling panel shall be removable through removable tool for maintenance access. ceiling panel shall be placed back after maintenance work and shall form hermetic sealing. The metal tiles ceiling shall be suspended ceiling, constructed as a modular framework system with a grid of 4 feet x 2 feet to fulfil the requirements of flexibility and easy future refurbishment of the Cath lab Machine Room. Ceiling mounting grid shall not be visible. The grid shall be rigid and remain perfectly stable during all the subsequent site operations. Room lighting, possible air supply inlets, ceiling service units and return outlets shall be integrated into the metal ceiling system. It shall be possible to remove the panels individually, with exceptions of those at the edges. Size of the light fitting shall be in accordance with size of the steel structure grid for both light fittings and ceiling tiles. The design shall permit height variation of ceiling from 250mm to 1100mm with respect to civil RCC Slab. Stability: permanent and non-slip even after adjustment. Material: Galvanized steel. The lighting for the Cath lab Machine Room shall be flush and tightly fitted modular lights suitable for Cath lab Machine Room. It will form seamless construction with ceiling panels at same level. Light cover panel shall be act as similar to ceiling panels for maintenance ease & easily removable and retrofit easily after maintenance & shall form similar hermetic sealing. Hazardous/Flammable Ceiling System Material such as Puff Panels, PUF, Corian/Acrylic Solid Surface (ASS/SAP)/Solid Mineral Surface (SMS), Welded Sheets, Compact laminates, Laminated Panels, Glass-wool/Rock-wool backing, Site-painting etc. shall not be used/Considered for wall paneling. These materials shall be deemed unacceptable. Bidder/OEM to provide an undertaking in this regard. Material Testing/Certification (all certificates/test report/document to be submitted along with the bid): RoHS Certificate (from UL / Intertek) on the ceiling system Valid certificate/test report to be submitted along with the bid. Fire Safety – Cath lab Machine Room's ceiling tiles shall be tested and certified for ASTM E84 (From UL/Intertek) to ensure that the material does not provoke fire and does not generate smoke. The OEM shall have had this certificate/test report for at least two year prior to bid release date of the tender. The Manufacturer of ceiling system should be registered with GRIHA (Green Rating for Integrated Habitat Assessment) for the offered ceiling design under GRIHA V.2015 criterion: 11 and GRIHA V.3 criterion: 29 and a member of Green Building Council (IGBC). The OEM shall have CE compliance certificate on ceiling systems. Valid certificate/test report to be submitted along with the bid. Ceiling system shall be tested & certified for Resonance Test & Seismic Zone – 5

		Test as per IS 1893 Certificates/test report shall be issued from NABL Accredited/ authorized government agency. Lab and Valid Certificate/test report shall be submitted along with bid. Ceiling Panels shall have tested as per ISO 22196:2011 for minimum 9 different bacteria and 2 different fungus Valid certificate/test report to be submitted along with the bid. "Powder coating shall be tested and certified on following parameters. Certificates/test report shall be issued from NABL Accredited/ authorized government agency. Lab. Valid certificate/test report to be submitted along with the bid. Cross Hatch Adhesion test as per ASTM: D3359 Mandrel Bend Test as per ASTM: D522 Humidity Resistance : ISO 6270-1:2017 Impact resistance test: ASTM D 2794 (5/9' ball) on applying minimum 100 kgs of impact load. Salt spray test: 1000 hrs. as per ASTM B117-19"
4	**FIRE SAFETY COMPLIANCE FOR CARDIAC CATHLAB OR**	Supply, Installation of DUCT Thermal Insulation -Should Insulate ducts with fire retardant XLPE Duct Insulation with site-glued, Aluminum foil faced, • Closed cell fire rated (FM approved) Nitrile Rubber Insulation of suitable density (40 - 60 kg / m^3), • Class "O" insulation as per thickness specified, • All joints and corners should be finished with 50 MM wide cross linked oven type Aluminum Self-Adhesive Tape. • Size: 19mm for Supply Air Ducts, 13mm for Return Air & Exhaust Air Ducts
5	**DOORS OF CATHLAB ROOM**	With door spring and locking arrangements and both way handle. Specification: 0.7mm thick Galvanized sheets, cavity filled with Honeycomb / CFC free Polyurethane in Flat of make inside adequate quantity. The surface finish of the leaf shall be of Antibacterial Powder Coating. The overall thickness of the finished door shall be 45-55mm. Door with minimum 1.0 mm thick lead sheet (lead equivalence ≥1.0 mm), suitable for C-arm/X-ray usage. Hinges shall be used enough strong to take the load of at least 120 kg. hinges shall have stainless steel material with anodized finish. The Leaf door shall be manufactured and supplied by the OEM of wall and ceiling system supplies. Door shall have euro profile cylinder with one side key and one side thumb turn. Door shall have externally mounted door closure to ensure the smooth movement of door. Leaf door shall have mortise lock & lever handle to operate. The surface finish of the leaf shall be of Antibacterial Powder Coating. powder coating properties shall be tested as per ISO 22196:2011 for minimum 9 different bacteria and 2 different fungus. Valid Certificate/test report shall be submitted along with bid. Door size shall be as suitable for site conditions.
6	**CATLAB CEILLING BEAUTIFUL SCENERY**	In the ceiling for better ambiance Ceiling mounted scenery of size 4 ft x 2 ft as per the user choice.
7	**ELECTRICAL INSTALLATIONS FOR CATHLAB ROOM**	Electrical installation in CATHLAB should be latest & contempory. Bidder is responsible to provide all required Distribution box, isolation transformer, MCB's, leakage relays, cable tray, etc and all internal wiring, earthling inside the CATHLAB. Power distribution within the CATHLAB should be "provided' from distribution boards located local to each theatre. Sub mains power to these panels should be by the general electrical contractor. From these panels all distribution services within the departments should be run. DISTRIBUTION BOARD a) All high voltage equipment should be installed in a separate enclosure.

		b) The remote cabinet should house the operating lamp transformers, mains failure relays, UPS, electrical distribution equipment & circuit protection equipment for all circuits within the operating theatre. c) All internal wiring should terminate in connectors with screw & clamp spring. d) Connections of the clip- on type mounted, on a CE approved rail & labelled with indelible proprietary labels. Complete schematics should be provided. Earthed equipotent bonding of all exposed metalwork should be provided. Power sockets within the Operating Theatres & ancillary areas should meet required quantity Light fittings within the clinical areas should be recessed LED type with control gear Fittings should be sealed In accordance with the standard IP54.
B2	**TURNKEY (INCIDENTAL / INTERNAL PRE-INSTALLATION) DETAILS REQUIRED FOR CARDIAC OPERATION THEATRE**	
1	**SELF-LEVELLING ANTISTATIC CONDUCTIVE FLOORING IN CARDIAC OPERATION THEATRE**	Floor of operation theatre should be antistatic conductive flooring . It should be 2mm antistatic seamless PVC flooring. Floor should be smooth, non-slip, impervious material conductive enough to dissipate static electricity but not conductive enough to endanger personnel from electric shock. Electrostatic charge dissipation combat PVC seamless flooring of very high quality should be provided Thickness not less than 2mm. Continuous roll should be used and joints should be welded by special PVC thermal welding units using PVC welding bars of same colour. The sheets should be highly durable with resistance to shock and indentaation. It should be scratchproof also. The conductive material should be uniformly impregnated as grains It should be inert to body fluids, chemicals and disinfectants. Should not be affected by temperature variation within the OT. The floor should efficiently discharge electric charges up to 2 kV Flooring installation should be done by skilled workers of accredited agencies authorized by the supplier of PVC sheets. The electrical resistance (point to ground) should be within 2.5x104 to 5x106 ohms. The floor should not allow build-up of electrical charge beyond 100 volts due to antistatic effect. The corners should not be terminated sharply and concealed cove-former (aluminium) should be used overlap the wall panel to a height of approx.25mm and sealed perfectly and uniformly. Self-levelling compounds should be used for this purpose. The conductive copper grid laid underneath the PVC sheet should be supported by liquid epoxy compounds allowed to set as a uniform and level surface. The copper strips to be made visible by grinding and no copper strip should project more than 0.5mm above level surface to avoid damage to the PVC sheet. One earthing lead should be brought out from every 150 sq. ft area and attaching it to the main earthing strip/ground. Copper grounding strips (0.05 mm thick, 50 mm width) should be laid flat on the floor in the conductive adhesive and connected to copper strip of grounding. The connection from copper grid should be brought out uniformly at places to form equipotential grid. Flooring should be mechanically shock proof, scratch proof, flame retardant and anti- microbial Corners should be uniformly curved Final surface should be non-corrosive to biological fluids and detergents. Colour should be uniform pleasant and matching with ambience. Bidder has to use self-levelling material (if required) in order to have flooring in uniform level.
2	**SET UP OF OT WALLS BY ANTIMICROBIAL 3 SECTION WALL PANELS WITH INTEGRATED SERVICE PANEL**	The material of the wall elements shall be at least 0.8mm thick galvanised steel sheet, which shall be electrically conductive and finished with at least 60 micron powder coating. The 0.8mm thick Galvanized Steel sheet panels shall have atleast 15mm or above thick plaster board bonded to the panel using a PUR Glue with an overall panel thickness of 18 mm and flanged on all four edges. Vertical profiles to allow the wall paneling screwing shall be made of a minimum 30x30x1.0 mm thick galvanized steel square tube having a GI coating of at least 90 gsm. The front face of the upright shall have feature to allow the fitment of wall panels on it through screws. The vertical level shall be adjusted with the aid of laser measuring systems. The side of the upright features to allow the connection of the

		cross-member / reinforcement to support the equipped technical modules if required. J-piece shall be used instead of an adjusting screw. The J-piece lies with its surface on the floor and shall be anchored into it. Both the closed steel profiles of the vertical structure and the bearing profile shall be installed to this piece. The gap between the bearing profile and the concrete floor shall be covered by a C-Channel. Spacer profile designed shall be able to absorb level differences of the slab/floor and shall be capable of connecting the finishing panel allowing the subsequent installation of flooring with suitable upward curvature up to a nominal level of 100 mm. these profiles are made up of at least 90 gsm Galvanized Steel sheet & thickness of sheet should be 0.8mm & 1.0mm The supports in the installation points of most wall elements and door drives shall be mounted to the vertical steel structure of the galvanized steel with at least 90 gsm GI Coating transverse stiffener to decrease wall panel load & secure safe anchoring of element the standard thickness of the reinforcement shall be 0.7mm and 1.5mm. Support structure shall have GI Coating finish. The corner profile shall be made of curvilinear and precisely extruded aluminium profile with Color surface treatment to match/complement the Color shade of the wall panels. The wall panels shall be inserted into this profile in the vertical direction and shall be sealed with expansion sealing inserted into the corner profile. The system shall be 100% modular to ensure quick and easy installation, maintenance, retrofitting and upgradation including Free-standing sub frames, perimeter wall panels and removable sealing gaskets. The system shall be installed at site without any welding. "Any kind of cutting, chipping, spraying and painting at site shall be deemed unacceptable. The grid section shall be made of three elements: - Lower wall element (approx. 900mm high). Upper wall element (approx. 1800mm high). A customizable installation module of 200 mm between the lower and upper wall element. " The standard height for operating theatre shall be approx. 3000mm. The upper wall element shall be high enough to reach the lower edge of the premanufactured ceiling. There shall be a possibility of wide variety of Color and Images to be used on the wall elements to give the aesthetic and state of the art look to the Operating room. Vertical gap between the wall panels shall be 10 mm maximum and shall be filled with removable extruded silicon sealant Gasket matching the Color of the wall panels. Silicon Gasket shall be of food grade quality and anti-bacterial properties as per ISO 22196-2011 guidelines. Pressure sealing gaskets: Vertical and horizontal gaskets shall be non-toxic. The gasket shall be installed around all the contact perimeters between the various materials, and hermetic sealing of vertical joints between finishing panels. The silicon gaskets shall provide optimal compartmentalization and ensure that sterile air pressure values are maintained without dispersal in the protected environment, this being a fundamental prerequisite for guaranteed sterility. The joints between the panels shall be 10 mm maximum and filled with removable press fit silicone gasket to close the gap. The silicon gasket shall have property to maintain its original shape, when place in temperature range of -15 to +55 degree Celsius. Electrical element - Cut-outs shall be provided within the wall elements/partitions. The total wall panelling shall be at least 100 mm wide & self standing partition system shall have at least 120mm wide to provide a minimum installation space of 62 mm for sockets, switches, and elbow switches. Any kind of cleaning or disinfection problems shall not arise, also the sealant shall

		be cleaning/disinfected fumigation agent resistance. Valid third party lab certificate to be submitted. System shall offer total ease of cleaning and sanitization of the Panelling / partitions and shall not have vertical, horizontal & cross-sectional corners; adjacent surfaces shall be molded flush. Hazardous/Flammable Wall Paneling Material such as Puff Panels, PUF, Corian/Acrylic Solid Surface (ASS/SAP)/Solid Mineral Surface (SMS), Welded Sheets, Compact laminates, Laminated Panels, Glass-wool/Rock-wool backing, Site-painting etc. shall not be used/Considered for wall paneling. These materials shall be deemed unacceptable. Bidder/OEM to provide an undertaking in this regard. Panel shall be covered with protective sheet prior to shipment to prevent scratch during installation. Material Testing/Certification (all certificates/test report/documents to be submitted along with the bid): The silicon gasket shall have property to maintain its original shape, when place in temperature range of -15 to +55 degree Celsius. Necessary certificate/test report shall be submitted from NABL approved laboratories along with the bid. The OEM shall have CE compliance certificate on paneling systems. Valid certificate to be submitted along with the bid. The wall paneling system shall be RoHS certified (UL/Intertek). Valid certificate/test report to be submitted along with the bid. RoHS Certificate (from UL / Intertek) on the wall paneling system Valid certificate/test report to be submitted along with the bid. The Manufacturer of wall system should be registered with GRIHA (Green Rating for Integrated Habitat Assessment) for the offered wall panel design under GRIHA V.2015 criterion: 11 and GRIHA V.3 criterion: 29 and a member of Green Building Council (IGBC). During maintenance requirements, the finishing panels shall have feature of quick and easy demounting and reinstallation of individual panels without removing the adjacent panels. The system shall have UL/ Intertek certified design feature of changeability to ensure that the tile can be replaced within 10 minutes (using screwdriver). UL/ Intertek certificate/test report to be submitted along with the bid. Silicon Gasket shall be of food grade quality and anti-bacterial properties as per ISO 22196-2011 guidelines. Valid test report alone for this gasket shall be submitted along with the bid. Sealing of vertical gap with conventional silicon filler shall be deemed unacceptable. Wall Panelling / Partition shall have tested as per ISO 22196:2011 for minimum 9 different bacteria and 2 different fungus Valid Certificate/test report shall be submitted along with bid. "Powder coating shall be tested and certified on following parameters. Test report shall be issued from NABL Accredited/ authorized government agency. Lab. Valid Certificate/test report shall be submitted along with bid. Cross Hatch Adhesion test as per ASTM: D3359 Mandrel Bend Test as per ASTM: D522 Humidity Resistance : ISO 6270-1:2017 Impact resistance test: ASTM D 2794 (5/9’ ball) on applying minimum 100 kgs of impact load. Salt spray test: 1000 hrs. as per ASTM B117-19" Modular Operation Theater shall have tested from UL/Intertek as per UL ECVP 2789 to ensure minimum 75% of recyclability of material used in it. Valid Certificate/test report shall be submitted along with bid.
3	**CARDIAC OPERATION THEATER CEILING WITH**	The snap fit ceiling tiles shall be made up of galvanized Steel sheets, 0.7 mm thick and shall be coated with antibacterial powder coating. The ceiling support element shall be combination of galvanized / powder coated steel suspension brackets along with threaded rod. The installation shall be carried

	ANTIMICROBIAL CEILING PANEL	out with main runners spaced at 1200 mm (centre to centre) securely fixed to the slab by the means of roll plug, 1.2mm thick L-clamp & 6.0 mm diameter GI rod fully threaded (with Hex nut for precise level adjustment) at 1200 mm maximum (center to center). The distance between the last runner & adjacent wall shall not exceed beyond 600mm. Ceiling panels shall be placed adjacent and shall form hermetic sealing. if required ceiling panel shall be removable through removable tool for maintenance access. ceiling panel shall be placed back after maintenance work and shall form hermetic sealing. The metal tiles ceiling shall be suspended ceiling, constructed as a modular framework system with a grid of 4 feet x 2 feet to fulfil the requirements of flexibility and easy future refurbishment of the modular operating theater. Sizes of 2x2 feet for smaller rooms, such as preparation rooms, washing and sterilization rooms shall be used. Ceiling mounting grid shall not be visible. The grid shall be rigid and remain perfectly stable during all the subsequent site operations. Room lighting, possible air supply inlets, ceiling service units and return outlets shall be integrated into the metal ceiling system. It shall be possible to remove the panels individually, with exceptions of those at the edges. Size of the light fitting shall be in accordance with size of the steel structure grid for both light fittings and ceiling tiles. The design shall permit height variation of ceiling from 250mm to 1100mm with respect to civil RCC Slab. Stability: permanent and non-slip even after adjustment. Material: Galvanized steel. The lighting for the operation theater shall be flush and tightly fitted modular operation theater lights suitable for Operation theater. It will form seamless constcrution with ceiling panels at same level. Light cover panel shall be act as similar to ceiling panels for maintenance ease & easily removable and retrofit easily after maintenance & shall form similar hermetic sealing. The lighting arrangement within the operating theater shall be designed and prepared to achieve 500-700 lux at the operating table area. Hazardous/Flammable Ceiling System Material such as Puff Panels, PUF, Corian/Acrylic Solid Surface (ASS/SAP)/Solid Mineral Surface (SMS), Welded Sheets, Compact laminates, Laminated Panels, Glass-wool/Rock-wool backing, Site-painting etc. shall not be used/Considered for wall paneling. These materials shall be deemed unacceptable. Bidder/OEM to provide an undertaking in this regard. Material Testing/Certification (all certificates/test report/document to be submitted along with the bid): RoHS Certificate (from UL / Intertek) on the ceiling system Valid certificate/test report to be submitted along with the bid. Fire Safety – Modular Operation Theater's ceiling tiles shall be tested and certified for ASTM E84 (From UL/Intertek) to ensure that the material does not provoke fire and does not generate smoke. The OEM shall have had this certificate/test report for at least two year prior to bid release date of the tender. The Manufacturer of ceiling system should be registered with GRIHA (Green Rating for Integrated Habitat Assessment) for the offered ceiling design under GRIHA V.2015 criterion: 11 and GRIHA V.3 criterion: 29 and a member of Green Building Council (IGBC). The OEM shall have CE compliance certificate on ceiling systems. Valid certificate/test report to be submitted along with the bid. Ceiling system shall be tested & certified for Resonance Test & Seismic Zone – 5 Test as per IS 1893 Certificates/test report shall be issued from NABL Accredited/ authorized government agency. Lab and Valid Certificate/test report shall be submitted along with bid. Ceiling Panels shall have tested as per ISO 22196:2011 for minimum 9 different bacteria and 2 different fungus Valid certificate/test report to be submitted along

		with the bid. "Powder coating shall be tested and certified on following parameters. Certificates/test report shall be issued from NABL Accredited/ authorized government agency. Lab. Valid certificate/test report to be submitted along with the bid. Cross Hatch Adhesion test as per ASTM: D3359 Mandrel Bend Test as per ASTM: D522 Humidity Resistance : ISO 6270-1:2017 Impact resistance test: ASTM D 2794 (5/9' ball) on applying minimum 100 kgs of impact load. Salt spray test: 1000 hrs. as per ASTM B117-19"
4	**PRESSURE RELIEF DAMPERS**	1. Pressure relief dampers or Overflow ports should be provided in each room to prevent contamination of air from clean and dirty areas. 2. Suitably sized air pressure relief damper strategically placed, enabling differential room pressure to be maintained and ensure that when doors are opened between clean and dirty areas. 3. Counter- weight balancing system should be provided in the pressure relief dampers to maintain positive pressure inside the operation room. 4. Air pressure stabilizers have unique capability of controlling differential pressure to close tolerance. The pressure relief dampers should remain closed at pressure below the set pressure and should open fully at a pressure only fractionally above the threshold pressure. 5. The body should be epoxy powder coated as per standard BS colours. High grade electrolyzed steel plate should be used for body and high grade SS304 stainless steel for blades.
5	**FIRE SAFETY COMPLIANCE FOR CARDIAC OPERATION THEATRE.**	Supply, Installation of DUCT Thermal Insulation -Should Insulate ducts with fire retardant XLPE Duct Insulation with site-glued, Aluminum foil faced, • Closed cell fire rated (FM approved) Nitrile Rubber Insulation of suitable density (40 - 60 kg / m^3), • Class "O" insulation as per thickness specified, • All joints and corners should be finished with 50 MM wide cross linked oven type Aluminum Self-Adhesive Tape. • Size: 19mm for Supply Air Ducts, 13mm for Return Air & Exhaust Air Ducts
6	**ELECTRICAL INSTALLATIONS**	Electrical installation in operation theatre should be latest & contempory. Bidder is responsible to provide all required Distribution box, isolation transformer, MCB"s, leakage relays, cable tray, etc and all internal wiring, earthling inside the OT .Power distribution within the OT should be "provided' from distribution boards located local to each theatre. Sub mains power to these panels should be by the general electrical contractor. From these panels all distribution services within the departments should be run. Institute will provide one point supply for three phase and/or single phase outside of OT corridor/area. **DISTRIBUTION BOARD** a) All high voltage equipment should be installed in a separate enclosure. b) The remote cabinet should house the operating lamp transformers, mains failure relays, UPS, electrical distribution equipment & circuit protection equipment for all circuits within the operating theatre. c) All internal wiring should terminate in connectors with screw & clamp spring. Connections of the clip- on type mounted, on a CE approved rail & labelled with indelible proprietary labels. Complete schematics should be provided. Earthed equipotent bonding of all exposed metalwork should be provided. Power sockets within the Operating Theatres & ancillary areas should meet required quantity

		Light fittings within the clinical areas should be recessed LED type with control gear Fittings should be sealed In accordance with the standard IP54.
7	**DIGITAL TOUCH SCREEN OT CONTROL PANEL**	Touch Control Panel shall be an integral part of wall panel, merging seamlessly with a common back structure. Control panel shall flush mounted, and design shall allow for the storage of all cables and internal connection within the wall panel. All the controls for the modular operation theatre shall be provided on a single touch screen-based system. This micro controller based electronic control panel shall be mounted directly in the operation theatre. The Touch control panel shall be manufactured and supplied by the OEM of wall and ceiling system supplies. The following features shall be incorporated in the control panels : Date Time - Real time clock Operation timing - Elapsed time Anaesthesia timer – Count Down time Day and night mode user interface changeable sliding door's hand wave sensors enabling through touch control panel Peripheral Light control with dimmer OT Light On/Off HVAC On/Off Temperature with set point Humidity with set point Medical Gas Alarm for Gases and Vacuum HEPA Filter Status Indicator Hands Free Telephone Differential Pressure Music Player and integrated with bosch speaker Audio Alarm USB Stick Port, Plug and Play Wireless Bluetooth connectivity Data retrieval Interactive Touch
8	**LED X-RAY ILLUMINATING SCREEN**	LED type flat panel X-ray viewing panel shall be supplied. The panel shall be Slim, Durable and Effective. Energy Efficient: Savings range from 82% to 93%. Power efficient. L.E.D Light with long life- up to 100,000 hours. It shall comply with relevant electrical safely codes. It shall be a 2-panel viewing screen. Mounting shall remain flushed with the wall to avoid dust accumulation and growth or organisms between wall and panel. The different user on the front panel shall be a uniformly lit screen. X-ray viewer design shall merge seamlessly with wall panels, creating a flawless and uniform appearance. No external frame shall be installed on the modular wall, and the surface shall be free from protrusions or irregularities that may cause interruptions. Outer peripheral facia of X-ray viewer shall be in similar material of wall panel and also front peripheral facia finish shall have same powder cating color theme as wall panel. mounting arrangement of X-Ray viewer shall be screwing system with backframe similar to the wall panel mounting. X-ray viewer shall be designed in a way that width of the X-ray viewer shall be matching with wall panel width. Dimming electronic control shall be enclosed at the bottom of the cabinet. The X-ray viewer shall be manufactured and supplied by the OEM of wall and ceiling system supplies. Each panel shall be able to illuminate films up to 14”x17” size. The viewer shall be provided with Film activated switch. It shall be automatic shut

		down if no film inside. 10 step digital dimmer to get the perfect brightness. 2 Panel dimmable x-ray viewing screen designed to provide high level of control luminance.
9	**WRITING BOARD (OPERATING LIST BOARD)**	One operating List/Writing board shall be provided in each Modular Operation Theater with having magnetic properties. The magnetic writing board for the Modular Operation Theater shall be used for writing down information by doctors/ technicians. The information might be the list of instruments/ implants or how the operation needs to be performed. The magnetic writing board shall be flushed into the Modular Operation Theater wall, which makes the Modular Operation Theater seamless and does not permit dust or any particles to enter the Modular Operation Theater from the joints. Writing board design shall merge seamlessly with wall panels, creating a flawless and uniform appearance. No external frame shall be installed on the modular wall, and the surface shall be free from protrusions or irregularities that may cause interruptions. Outer peripheral facia of writing board shall be in similar material of wall panel and also front peripheral facia finish shall have same powder cating color theme as wall panel. mounting arrangement of writing board shall be screwing system with backframe similar to the wall panel mounting. Writing board shall be designed in a way that width of the Writing board shall be matching with wall panel width. The board shall be coated with an antimicrobial coating making it suitable for Modular Operation Theater. The Magnetic writing board shall be manufactured and supplied by the OEM of wall and ceiling system supplies. The Approximate dimensions shall be 800mm x 600mm although final dimensions shall be as per approval by the authority.
10	**PERIPHERAL LIGHTING**	Ambient Lighting (4 ft x 2 ft) Peripheral lighting and Modular Operation Theater luminaries shall be provided with minimum intensity of 500-700 Lux at operating table. Luminaries cover shall be made of highly resistant, disinfectant proof laminated acrylic sheet with stylish fine-grained surface, light box shall have laminated transparent acrylic screwed. The dimensions shall be: 4 ft(L) X 2ft(W). Light cover shall have provision to open from bottom side when necessary for maintenance and placed it back after maintenace to form hermetic sealing. The reflectors shall be of high quality, cleanable and non-deteriorating. Recess frames shall be gas tight. The fitting shall remain flushed with the ceiling and shall be removable when required. The light fitting shall be uniformly and aesthetically distributed on the ceiling to provide uniform illumination in the modular operation theater. Light shall not interfere when green mode endoscopy is performed. The Ambient light shall be manufactured and supplied by the OEM of wall and ceiling system supplies. The light box / body shall be antibacterial Color coated. The Color of the light body shall be matching with the ceiling Color or Color theme of the modular operation theater. The antimicrobial silver ion-based powder and these powder properties shall be tested as per ISO 22196:2011 for minimum 9 different bacteria and 2 different fungus. Valid Certificate/test report shall be submitted along with bid Peripheral lighting shall be done according to IP66. IP 66 certificate/test report shall be issued from NABL Accredited/ authorized government agency. Lab and Valid Certificate/test report shall be submitted along with bid.
11	**DOUBLE ARM PENDANT**	1. Pendant should have safety factor of 3 2. The length of the drop tube from the extension arm should be suitable to the OT height Double Arm Pendant should have total length of 1500mm arm 3. Weight carrying capacity of the arm should not be less than 140 Kg

		4. The pendant should have a friction braking used should be of high strength aluminium alloy 5. Arm should be capable of 330 degrees of rotation, which can be easily adjusted to suit the desired mode of operation 6. The distribution column should be at least 1200 mm in height & it should be capable of accepting a range of shelves, infusion poles, electrical sockets, gas outlets other accessories as asked in tender 7. Electrical & Gas are separated in different chambers in the distribution column 8. The Pendant should support the range of Physiological Monitor/ Patient Monitor Mounting Solutions 9. Pendant should be supplied of gas outlets with DIN Standard as mentioned below •Oxygen Outlets – 1 nos. • Vacuum Outlets – 2 nos. • Air(4 bar) Outlets - 1 nos. • Co2 outlet - 1 no • Electrical sockets - 10 nos. • All Gas Outlets should come fitted from the factory • Shelf 50 cms x 50cms with two rails one on each side – 3 no. , Each shelf should have weight capacity of 80 Kg • Shelf 50 cms x 50cms with drawer – 1 no. • Data socket RJ-45 -2 nos **Certificates** ISO 13485
12	**SINGLE ARM PENDANT**	1. Pendant should have safety factor of 3 2. The length of the drop tube from the extension arm should be suitable to the OT height 3. Single Arm Pendant should have length of 900mm arm 4. Weight carrying capacity of the arm should not be less than 200 Kg 5. The pendant should have a friction braking used should be of high strength aluminum alloy 6. Arm should be capable of 330 degrees of rotation, which can be easily adjusted to suit the desired mode of operation 7. The distribution column should be at least 800 mm in height & it should be capable of accepting a range of shelves, infusion poles, electrical sockets, gas outlets other accessories as asked in tender 8. Electrical & Gas are separated in different chambers in the distribution column 9. Pendant should be supplied of gas outlets with DIN Standard as mentioned below □ Oxygen Outlets – 1 nos. □ Vacuum Outlets – 2 nos. □ Nitrous oxide – 1 nos. □ Air(4 bar) Outlets - 1 nos. □ Electrical sockets - 8 nos. □ All Gas Outlets should come fitted from the factory □ Shelf 50 cms x 50cms with two rails one on each side – 3 no. , Each shelf should have weight capacity of 80 Kg □ Shelf 50 cms x 50cms with drawer – 1 no. □ IV Fluid Pole with 4 hooks – 1No. □ Data socket RJ-45 -2 nos **Certificates** ISO 13485
13	**AUTOMATIC HERMETICALLY SEALED SLIDING OT DOOR**	The door shall be 45-50mm thick & shall remain completely flushed with the wall paneling/partition. It shall consist of 50mm free polystyrene/Honeycomb. Doors Size shall be 2.1meter (H) X 1.5 meter (W). The controller Doors construction shall properly fit with wall panels and shall create a uniform system of the operating theater. Finished floor on either side of the

		door shall be perfectly leveled (maximum permissible difference +1mm). The inner part of the door shall be filled with CFC free Polystyrene of thickness of 50 mm or nearby (shield airtight to prevent further ingress of any microbial organism). The Sliding door shall be manufactured and supplied by the OEM of wall and ceiling system supplies. Door frame fitted on opening shall have 0.8mm Stainless steel sheet. Finish of the outer frame shall be galvanized steel with antibcaterial powder coating in similar color as wall panel. Door opening frame shall be in 3 different parts and fixed at site through tongue and groove method. sliding door leaf shall have 1.2-1.5mm thick welded frame and finish in antibacterial powder coating in similar color theme as of wall panel to match the aesthetic of wall. The door leaf shall be hung by means of hard plastic rollers of high quality with double bearing at the top. Rollers shall be provided under the aluminum track to enable smooth and noiseless movement. Door track shall be of aluminum and the running surface for the top rollers shall be suitably angled to reduce resistance to movement. Door shall be operated through microprocessor controller. Six logic switch selector. Doors shall have feature of effortless manual operation in case of failure of automatic mechanism. The door shall have design feature of opening & closing by waving hand at a distance of 10 cm from sensor. Door leaf shall have high quality synthetic rubber gasket with long life to ensure sealing(to maintain air pressure differential) to ensure air tightness @ 99.99% at a pressure of 100KPa. Sealing gasket (bulb seal) shall be placed in pre-manufactured raceway created in peripheri of door leaf with right angled bulb seal joint at corners. All motors used shall be AC /DC brush less motors with essential isolation from mains. The starting time after receiving the signal shall be adjustable between 0.5 to 20 seconds. On all 4 sides of the door blade or door periphery or door leaves a special rubber gasket shall be fitted to ensure a hermetic seal. Stainless steel D handle external, recess handle internal. The door shall have safety feature of safety beam photocells. Antibacterial powder coating's properties shall be tested as per ISO 22196 : 2011 for minimum 9 different bacteria and 2 different fungus. Valid Certificate/test report shall be submitted along with bid. "Powder coating shall be tested and certified on following parameters. Certificates/test report shall be issued from NABL Accredited/ authorized government agency. Lab and Valid Certificate/test report shall be submitted along with bid. Cross Hatch Adhesion test as per ASTM: D3359 Mandrel Bend Test as per ASTM: D522 Humidity Resistance : ISO 6270-1:2017 Salt spray test: 1000 hrs. as per ASTM B117-19"
14	**AUTOMATIC SENSOR BASED 2 BAY SCRUB STATION STAINLESS STEEL GRADE 304**	The Surgical Scrub System shall contain 2 Scrub that shall be placed directly against the finished wall with simple connection of the piping. The washbasins shall be made of high-quality Stainless Steel 304 sheets. The brackets shall be made of stainless steel. The scrub shall have following attributes: Easy to clean and maintain. The material shall be non-porous with a soft and seamless surface. Extremely durable, long life. Can be easily renewed and repaired. High resistance to stains. 01 No. Automatic Tap with Hot & Cold Lever, Wall Mount

		01 No. Manual Elbow Tab, Wall Mount
15	**REUSABLE CAPACITIVE COUPLING CURRENT QUALITY MONITORING ELECTRODE**	• Reusable Capacitive coupling current quality monitoring electrode made of viscoelastic polymer. • Should have Current limiting nature & hence eliminate Patient pad site burns • Should be based on Capacitive coupling principle • Should made of akton polymer Can be used for all patient‟s weight >350 grams • Should be Radiolucent & latex free, no adhesive related irritation to patient skin. • Should be US FDA/ CE Notified body approved • Should be compatible to any Electrosurgical generator Size: 36” L x 20”W x 1/8”thickness with duel cord
16	**LED SURGICAL LIGHT FOR CARDIAC OPERATION THEATER**	• OT light system should comprise of two domes- One principal dome and one satellite dome • Each dome should have Only white multi-coloured (Warm white / cool white) LED chips blended together to create natural light so as to prevent casting of colour shadows • Each dome should be connected to swivel arm that can be freely rotated by 360 degree lock free • Maximum Light Intensity at 1-meter distance should be 1,60,000 for principal dome and 1,40,000 for satellite dome • OT Lights should be supplied with latest generation high performance White LEDs with at least 50,000 hours of lifetime • Light Intensity for each dome should be adjustable from 0 to 100 in each colour temperature mode with exact intensity level and CCT mode shown on display setting clearly to the user • Both principal and satellite dome should have adjustable colour temperature in 3 steps – Warm (3700K), Natural (4300K) and Cool (5500K) • Each Light head should have gap in between for allowing clean air flow to operating sight and have laminar air flow compatibility • Light field diameter should be mechanically adjustable using centre sterile handle from 200 mm to 250 mm or better • Light head should also have electronic focus mode for enhanced Deep cavity illumination • Light head should have 3 endoscopic modes (5% illumination) – Warm , natural and cool – allowing surgeon to comfortably operate under endoscopic light • Light head controller should have a button to boost illumination from any level to maximum illumination, allowing surgeon to boost the lux level from any point • The illumination depth (20%) for Light should be more than 1200 mm allowing maximum flexibility for operating surgeon • The light head control panel should have a OLED display for displaying settings • Colour rendering Index (CRI) should be at least 95 • Net power consumption per dome must not exceed 50 Watts at maximum illumination • Temperature rise at surgeons head should less than 2 degree Centigrade • Each light head should be supplied with an additional sterilizable handle as a standard accessory • Both the domes should be operated using a single CE approved SMPS power supply with standard AC input (207-253V/50Hz) Compliance and Regulatory approvals • Should have certified approval of following internationally recognised IEC standards

		for electromedical equipment: 1. IEC 60601-1-1 - Electrical Safety General requirements 2. IEC 60601-1-2 - Electro Magnetic Compatibility (EMC) 3. IEC 60601-2-41- Basic safety and essential performance of Surgical Luminaires 4. IEC 60601-1-6 - Collateral standard- Usability (*60601-2-41) • Equipment should have CE certification verified by authorized their European representative • Supplier must also bear following ISO certifications: 1. ISO 13485-Quality management system of Medical device 2. ISO 9001- Quality management system of Company
B3	**TURNKEY (INCIDENTAL / INTERNAL PRE-INSTALLATION) DETAILS REQUIRED FOR PRE/POST 10 BEDDED ICU**	
1	**ICU FLOORING**	PVC Flooring with Colour differentiated pathways and areas –supply & installation of of 2mm thick imported vinyl flooring, 100% recycled flexible homogeneous and monolayer in construction of weight 2800 g/m2 and should be manufactured by calendering and pressing process of size 2mtrs. X 20mtrs. In approved pattern, to ensure a dense, smooth surface and non-directional design, colour dyed as a raw mixture to ensure even color throughout the thickness and its surface should be densely compacted for improving wear and ease of maintenance with Anti-bacterial and Fungicidal properties. The flooring shall incorporate a specially formulated PUR + Iodine strain free Surface Treatment having wear resistance of ≤2.0mm3 as per EN 660.2 and Wear Group „ T „ as per EN-649 and should have a residual indentation of − 0.03mm confirming to EN-433. The laid flooring shall confirm the fire rating B1 class as per EN 13501-1. It should have low VOC contain as TVOC after 28 days <10 µg/m3 as per ISO 16000-6. The floor finish should terminate at the room perimeter passing over a concealed cove former and continuing up the wall for 100mm. The joints in the flooring should be sealed by using a PVC welding bar of matching colour, using a hot air gun for fusion of welding bar with flooring. The vinyl sheet shall be laid & fixed with water based adhesive preferably on acrylic type co polymer with 40000 to 60000 cps viscosity.
2	**ANTIMICROBIAL PVC SHEET ON ICU WALL**	Supply & Installation of antimicrobial flexible vinyl sheet wall covering of 1.0mm thick 100% recycled PVC flexible, homogeneous of total weight 1750 g/m2 in sheet of size 2mtrs. X40 metres. in approved pattern & colour combination with PUR surface treatment fully resistant to impact, as it acts a buffer against damage from beds, trolleys and indoor motorized vehicles with Anti-bacterial and Fungicidal properties & should create safe and hygienic environment in ICU. The wall covering shall confirm the fire rating M1 class as per NFP 92 506. The vinyl wall covering shall be fixed with water-based adhesive based on acrylic type co polymer with 40000 to 60000 cps viscosity. Wall should be without any undulation if any & if so then it should be repaired with Wall Putti with primer to make the wall smooth with proper edged corners.
3	**CEILLING SYSTEM INSIDE ICU**	The prefabricated clean Room Ceiling should be free hanging structure from composite free hanging insulated antimicrobial PPGI Double skin clean room rock wool panels. The ceiling will be constructed using 50 mm thick double skin PPGI rock wool panel. It should have high pressure injected puf (40kg/cum density). The individual wall panels shall use the tongue and groove technology for joining two panels, no welding should be allowed. The gaps between panels shall be suitably filled with metal filler/epoxy and sanded flush. Ceiling elements should be resistant to all standard cleaning agents, disinfectants and fumigation agents. Ceiling element should be able to be disassembled and reinstalled. Panel should be covered with protective sheath to prevent scratch during installation. Colour of Ceiling panel should be as per the choice of User.

4	**ELECTRICAL INSTALLATION**	Bidder is responsible to provide all required Distribution box, isolation transformer, RCCB, MCB‟s, leakage relays, cable tray, etc and all internal wiring, earthling inside the ICU. Power distribution within the ICU should be "provided' from distribution boards located in ICU. From these panels all distribution services within the departments should be run. Institute will provide one point supply for three phase and/or single phase outside of ICU with Voltage Stabilizer. Each ICU bed should be with UPS supply. Electrical board and oxygen gas point should be away from each other by 1 feet. Stand by supply arrangement to each bed by DG set of proper KVA. For lighting load digital inverter may be used in absence of DG set. Switch gear panel should be earthed by copper plate earthing‟s
5	**CLEAN ROOM HERMETIC DOUBLE DOOR**	With door spring and locking arrangements and both way handle. Specification: 0.7mm thick Galvanized sheets, cavity filled with Honeycomb / CFC free Polyurethane in Flat of make inside adequate quantity. The surface finish of the leaf shall be of Antibacterial Powder Coating. The overall thickness of the finished door shall be 45-55mm. Hinges shall be used enough strong to take the load of at least 120 kg. hinges shall have stainless steel material with anodized finish. The Leaf door shall be manufactured and supplied by the OEM of wall and ceiling system supplies. Door shall have euro profile cylinder with one side key and one side thumb turn. Door shall have externally mounted door closure to ensure the smooth movement of door. Leaf door shall have mortise lock & lever handle to operate. The surface finish of the leaf shall be of Antibacterial Powder Coating. powder coating properties shall be tested as per ISO 22196:2011 for minimum 9 different bacteria and 2 different fungus. Valid Certificate/test report shall be submitted along with bid. Door size shall be as suitable for site conditions.
6	**CEILING PERIPHERAL LIGHTS / ICU LUMINAIRES**	Clean Room Luminaires, IP 65, recessed type to be provided for general illumination The light fixture will be hermetically sealed from top side (ceiling side) with bottom opening for repair & maintenance. Magnetic locking with the frame with no screws visible from the bottom. Size : 2ft. x 2ft. in Corridor , and size 1ft x 1 ft in on every patient bed
7	**LED ILLUMINATED BEAUTIFUL SCENERY PANELS**	in the ceiling for better ambiance Ceiling mounted LED illuminated scenery panel of size 4 ft x 2 ft as per the user choice.
8	**WALL MOUNTED MODULAR BED HEAD PANELS WITH NURSE CALL SYSTEM**	Bed Head Panel with license/CE: Conforms to: IS / ISO 11197 : 2019, IS / ISO IEC 60601-1:2015 + A1 : 2020 IS / ISO 7396-1 : 2016 + A1 : 2017, IS / ISO 9170-1 : 2017 IS / ISO 19054 : 2005 + A 1 : 2016 (Medical Rail) It should be manufactured in ISO 13485:2003 quality management system duly certified constructed in accordance with the requirement of international standard. It will be made up of precoated aluminum extrusion, bed head panel will be integrated with electrical sockets, with potential free contact, and terminal outlets shall be mounted on it, the section for gases and low voltage and high voltage should have separate compartments, the gas section should have opening in case of leakage, rail is mounted on the lower part of the bed head panel to mount various accessories. Should have: IV Pole/Syringe pump pole with holder RJ 45 data point Electrical switch socket as approved by department SS Basket

		Monitor stand
9	**U TRACK CURTAIN SYSTEM WITH CURTAIN**	curtain tracks with curtain and hardware should be ideal for use in Hospital as a cubicle curtains. 1. curtain tracks should be designed for ceiling as well as wall mount and include rigid metal tracks as well as curved and flexible curtain tracks. 2. curtain tracks should be perfect for Hospital use, especially when hanging large heavy draperies and for high ceiling applications. 3. Cubicle curtain tracks should offer offered buttery smooth traversing drapery track. 4. Should be supplied with hardware and curtain cloth and color of curtain should be as per choice of Hospital administration.
10	**ANCILLARY AREA OF CARDIAC CARE CENTER**	a. Receptions & Waiting area – one Reception table of 6 ft x 4ft x 3 ft with two executive revolving chair b. Doctor Consultation Room -Executive Table 4 ft x 3 ft, Executive revolving chair and two non revolving executive chair c. Doctor Changing room - Locker with minimum 8 lockers d. Console Room – PVC Flooring, False Ceilling ,Lead protected Glass for viewing inside cathlab of size as per requirement, executive table 4 x 2 and 2 executive revolving chair e. Nurses Rooms - Locker with minimum 8 lockers , Executive Table 4 ft x 3 ft ,Executive revolving chair and Two non revolving executive chair , Two storage cup boards with Locks of size 6ft x 2 ft x 4 ft g. Doctors Lounge - Standard sofa cum bed of size 6 ft x 3 ft x 2 ft and storage cup boards with Locks of size 6ft x 2 ft x 4 ft
B4	**LIST OF CAPITAL EQUIPMENT'S FOR CARDIAC CATHLAB UNIT ON TURNKEY BASIS**	
1	**ADVANCED AI-BASED MODULAR CATH LAB**	• High-end Flat Panel Cath Lab system with DSA (Digital Subtraction Angiography) • Capable of performing Coronary Angiography, Angioplasty, Pacemaker, and Electrophysiology procedures • Specification of Multipurpose System Cardiac and Vascular Angiography system (Single Plane) - On Turnkey Basis Equipment should be approved from US-FDA/CE European/BIS certified. AERB Approval or NOC is also mandatory RoHS (Reduction of Hazardous Substances) Certified system is preferred.
2	**C-ARM GANTRY**	• Ceiling suspended /floor mounted C-arm with motorized movements. • The C-arm should have head to toe coverage without patient repositioning. The coverage should be at least 1900mm or more on both sides of the table. • The C-arm should travel both side (right and left) of the patient & it should be possible to park the c-arm away from table for patient shifting. Lateral coverage (left and right side of patient) should be at least 1600mm or more ensuring Radial approach without table rotation or lateral movement • C-arm RAO/LAO angulations of minimum +/- 120 degree at Head position and +/- 90 degree or more Left or right-side position of the patient and cranial /caudal 50/45 degrees or more. • The C-arm rotation minimum 25 degrees/second in RAO/LAO & and 25 degrees/seconds cranial/caudal. • Imaging should be possible at any position of the C-arm. • The system should have user defined programmed positions of the C-arm. At least a 1000+ patterns should be possible. Touch screen-based positioning should be available with expected angle displayed in the screen and C arm to patient orientation

		• Iso Centre should be at least 1000mm from floor and C arm depth more than 920 mm • The system should have in-built collision protection.
3	**PATIENT TABLE**	• Cardiac table - patient table must have radiolucent carbon fibre table-top • Maximum table load 200 kg or more (200kg patient weight) Plus CPR of 100 KG or more • The table should have longitudinal, horizontal free floating with magnetic locks and vertical motorized travel • Longitudinal (Head-Foot) movement of 1350mm or more • Transverse (Patient left and right) of 300mm (+/-150mm) • Up down movement (motorized) of 350mm or more • Lowest height should be 800mm or lower from floor • Table should rotate manually on its cantilever pivot +/-90 degree or more. With locking • Table edge should have provisions for arm rest. • The table should be equipped with C-arm control, table movement controls, collimation controls and touch panel-based control. • Following Table accessories should be provided Radiolucent Carbon Fibre Arm rest, Drip stand, Arm supports and Low Rebound mattress.
4	**X-RAY GENERATOR**	• The generator must be optimized for the latest cardiac and Vascular application for interventional procedures with Pulse Fluoroscopy and Radiography with Grid control • The minimum power ratings should be 100kw or more. • Generator should be high frequency for constant output with automatic dose rate control for radiography and fluoroscopy • SID (source to image distance) tracking (automatic tube current adjustment to focus-to-detector distance) • The available Pulse fluoroscopy rates 30, 15, 10, 7.5, 6, 5, 3.75, 3, 2, 1 or More. • The Available Cine (Digital Acquisition) Rates 30, 15, 10, 7.5, 6, 5, 3.75, 3, 2, 1 or more • The Available as frame rates during DSA should be 15, 7.5, 5, 3.75, 3, 1 or more
5	**X-RAY TUBE**	• X- ray tube should be dual focus and capable of pulsed fluoroscopy. Small focus should be 0.6 mm or lower and Large 1 mm or Lower • Anode heat storage capacity should be 2.6 MHU or above with latest cooling technology • Anode heat dissipation should be 4500 W or more • The X Ray Tube should be Liquid Metal bearing and should have External cooling system. • X-ray tube should have secondary grid switching to reduce the soft X-rays
6	**COLLIMATOR**	• With Rectangular fields H and V with single acting central aperture. • Virtual collimation should be possible without Radiation on the Last image hold and ability to do Off Centre collimation should be possible for objects not in the centre of the imaging field • Automatic compensation filters should be available • More than 10 types of Multi Beam Hardening filters should be possible for High Image quality and the selection of the combination should be

		automatic
7	**FLAT PANEL DETECTOR**	• A flat panel detector of 12 x 12 inches or above. Pixel size 200 microns or less • DQE should be 75% or more at 01p/mm • It should be capable of acquisition and processing in 1536 x 1536 matrix with at least 16-bit digitization • 5 zooms must be possible for the detector system
8	**IMAGE DISPLAY SYSTEM**	• Exam room 4 NO.'s of 19" LCD monitor or bigger to display live, reference, Patient vital signs, Additional workstation display, IVUS/OCT display, other reference images if any. The Monitor suspension should be capable of coverage on both sides of the table, along the table length and should have counterbalanced Height adjustment. • Console room should have same 2 LCD monitors 19 inch or more display live, reference
9	**DIGITAL IMAGE PROCESSING SYSTEM AND CONTROLS**	• All system movement of C -arm, table, images display, review, images post processing, Enhanced Stent display and quantification shall be controlled both by operator at the table in the Examination room from the Table side control. • In console room images display, review, images post processing, Enhanced Stent display and quantification should be possible. • The system should have facility for edge enhancement, positive/ negative image display, windowing, contrast /bright ness, electronic, shuttering, Automatic image/3Dpixel shifting/Flexible pixel shifting, vertical and horizontal image reversal, zoom function., along with latest real time stent enhancement software. • The Equipment should come with all standard MAP functions Fluoroscopy Map, DSA Map etc. • Table side control modules should include, All Table movement control, All Collimator controls, Touch panel system which controls all digital system functions, X ray conditions and memory patterns including C arm positions, Joystick and Or mouse for play, pause, ROI, Map function contrast, Quantitative Analysis etc.. • Fluoroscopy pulse rate capacity of 30, 15, 10, 7.5, 6, 5, 3.75, 3, 2, 1 at 1024x1024 @ 12 bit or more and fluoroscopy recording of at least 1000 frames or more both back recording and forward recording should be possible and recording by foot switch selection should be possible • Cine/Digital Acquisition of 30, 15, 10, 7.5, 6, 5, 3.75, 3, 2, 1 fps or more • DSA Frame rate of 15, 7.5, 5, 3.75, 3, 1fps or more • By using the AI filter and Deep Learning technology, it should be possible to separate device components even from images with high noise levels at low doses. It provides highly visible images for devices with reduced noise levels. • Noise reduction, automatic brightness adjustment, edge enhancement, negative/positive inversion, gamma correction, zoom (max. 2.5x or more) and panning, Flexible Auto Pixel Shift, pixel shift, re-mask, Peak hold, Auto cropping, Guidance, comment and annotation input, • System should have angle/distance measurement, images labelling and patient positioning facilities. QCA(QVA), LVA, and distance measurement both table side and console side.

		• System should have a DAP meter with display of radiation dose on the console; it should be possible to record radiation dose and transmit it to RIS/PAC patient data. • System should have latest radiation safety SW/H W package • Digital archiving on CD/DVD. • Image transfer from digital systems should be possible in background mode without affecting the system operation. The system should be compatible and ready for seamless. Integration with capital RIS/PACS.
10	**WORKSTATION**	• Additional workstation should be provided in console room. This should be of latest Intel technology workstation with 32GB RAM and Latest Windows Operating system with Worklist capability • This should be able to do CD/DVD writing ,10TB image storage, other company Cath lab DVD/CD reading and display and Cardiac reporting system
11	**ESSENTIAL ACCESSORIES.**	• Pressure injector with programmed flow rate volume with variable pressure limits vendor should supply 100 disposable syringes. • Multiport laser camera with resolution of 500 DPI or more. Three active ports should be available. • Lead glass at least 120cm x 100 cm for console room. • Ceiling suspended lead glass for table side radiation protection. • One Ceiling suspended examination lamp. • 5 Number of zero lead radio-protective aprons with hangers and floor stand, 5 numbers of thyroid shields and 5 numbers of universal lead eye glasses. Aprons should light and double sided. • Mattress and arms support for patient table. • UPS of at least 120kva or more with 30min. Backup for complete backup of the entire system including generator, digital system, all essential Accessories. • De Humidifier of 20 Liters capacity or more with drain facility should be provided as standard in Cabinet room, UPS room, Examination room and Console room for the safety of the Equipment's • 6 Lead ECG, Dual-IBP, NIBP,SPO2, Adult and Paediatric attachments, Extension cables required , External slave display capability one in console and one in Monitor suspension.
12	**ONLINE UPS REQUIRED FOR ADVANCED CATHLAB SYSTEM**	Supply, Installation, Testing & Commissioning of ONLINE UPS-120 KVA with Isolation Transformer with 30 min back up for CATHLAB "Microprocessor Controlled 120 KVA On-Line Double conversion UPS System (Transformer less design) with Maintenance bypass switch (MBS), IGBT based Rectifier & Inversion Circuit having I/P Power Factor > 0.99, Overall Efficiency > 94% in Double Conversion Mode & 98 % in High Efficiency Mode, Total Harmonic Distortion (THDi) < 5%, Advanced Battery Management Feature (ABM), 3 Ø in put & 3 Ø output. With Battery Breaker and enclosure. Voltage → 384-480V, DC. - O/P Wave Form → Pure- Sinusoidal wave - O/P Power Factor → 0.9pf - UPS Warranty → 24 Months Fabricated Racks in black shade to house Batteries, with Battery inter connecting Link & UPS to, Battery cable up to 10 Meter. - "Sealed Maintenance Free Batteries suitable for approx. 30 minutes back-up on Full load of 120 KVA.

		- Battery Warranty → 24 Months"
B6	**TECHNICAL SPECIFICATIONS OF CARDIAC OPERATION THEATRE EQUIPMENT'S**	
1	**CARDIAC OPERATION TABLE**	1. The Operation Table designed to provide facilities for movements and positioning proper to all surgical procedures. 2. The Operation Table consist of Head, Back, Kidney, Pelvic with uro cut and leg sections with manually controlled drives for head, kidney, leg section and floor lock. 3. Table top made of a special scratch resistant, hardwearing and easy to clean material. Base column covers to be made of good quality stainless steel alloy and stainless steel. 4. Table base cover made of rust proof, acid-resistant impact- resistant material. 5. Full-length radio-translucent top with provision complete coverage of patient‟s anatomy. 6. C-Arm compatible tabletop radio translucent for X-Ray photographic and provided with anti-static, antibacterial, soft slow recovery mattresses at least 5cm in thickness. 7. The operating table provide an elevated surface that supports the patient‟s body during operation procedures, stabilizing patient‟s position and providing optimal exposure of the field. 8. Mattress pad 2" thick (latex free) for correct and comfortable positioning of patients at the joint areas between different segments, with cut-out on seat position of the table top. 9. Mattress to be fully radiolucent, antistatic, detachable, impermeable to fluids, easily cleanable. 10 Powered 100% radiolucent Kidney Bridge position should be obtained without moving the patient, through Hand Crank by using lift min, 150mm /break function. 11. The Table have return to level function with one press of the button on remote. 12. The table have backlit corded hand control to operate following functions. Height adjustment Trendelenburg/Reverse Trendelenburg Lateral Tilt Back Section/Chair Position Flex-Reflex Zero Position 13. Safety key attached with remote to block electrical system in case of critical operations. 14. In case of failure of the handset, the table have the possibility of working all functions through standby controller. 15. The microprocessor based control system is fully programmable and can store upto two user- programmable preset positions in its memory that can be recalled anytime by simply pressing M1 or M2 button. 16. Individual Locking Function. 17. Manual override operation for critical table movements in case of electronic failure. The override system should have following back up movements up/down, Trend/Rev Trend, Rt/Lt Tilt, chair position, flex-reflex. 18. Detachable-Interchangeable head and leg sections provide further versatility. 19. Integrated weight compensation by manual adjustment of the head and leg sections. 20. The Operation Table mounted on strong castors to facilitate relocation of the table. 21. Stable base construction with 4 double swivel castors with central brake for easy motion and maneuvering. 22. Hydraulic Brakes, on all 4 no.‟s corners having PU castors for mobility and 360º rotation applied through foot pedal 23. Locking of the double swivel castor via foot pedal.

		24. In built rechargeable battery backup with a capacity to operate the table for 1 weeks in case of mains AC power failure. The battery status should be indicated on override panel through LED. 25. Charging the batteries via line power supply 220-240VAC, 50Hz. 26. The Operation Table designed to support heavy patient loads of 200 KG. 27. Length of the table top including head rest and leg rest 1980mm. 28. Width of table top without side rail 533mm. 29. Height adjustment 750- 1050 mm state, lifting stroke 300mm. 30. Trendelenburg/Reverse Trendelenburg +30°/-25° state. 31. Back plate adjustment +80°/-25° state. 32. Leg rest +15°/-90° state. 33. Flex-Reflex – 220 deg/120deg 34. Lateral tilt left and right 20° state. 35. Head rest +90°/-90° state. 36. Kidney elevator (Up) 15cm 37. General Accessories O Anesthesia screen, height adjustable – 1 pc O Lateral support, width and height adjustable – 1 pair O Shoulder support, width and height adjustable – 1 pair O Arm posturing device, swivelling and height adjustable – 1 pair O Geopel knee crutches, swivelling and height adjustable – 1 pair O Radial setting clamp – 1 pair O Flat bar clamp – 7 pc O Mattress – 1 set 38. The unit is ISO 9001:2015, EN ISO 13485:2016, OHSAS 18001:2007 & CE
2	**ANESTHESIA WORKSTATION WITH PATIENT MONITOR**	Technical Specification of Anaesthesia Workstation: • Anaesthesia Machine: - Anaesthesia Workstation should be made of ABS noncorrosive material - Unit should come with Air, Oxygen and Nitrous Oxide flow meter assembly. - Unit should have built in hypoxic guard to ensure 25% O2 more than total gas. - Unit should have dual cascade flow meter for Air, O2 and N2O - 6 tube flow meter with low flow facility. - Unit should have Regulators and content gauges for 2 numbers O2 pin index yokes, 2 numbers N2O pin index yokes. - Unit should have Central Pipeline connection for O2, N2O and AIR with High Pressure tubings for the same. - Unit should have inbuilt O2 failure alarm which should give visual and audio indication-OFWD. - Unit should have facility for built in gauge meters for the pipeline pressure to ensure about the leakages inside the machine. - Unit should have the facility to mount 2 units of selecta tec vaporizers from same manufacturer with interlocking facility to allow use of only one vaporizer at a time. – Unit Should have conveniently placed O2 Flush system. - The anaesthesia machine should have a master control ON/OFF switch. - Should have a single auxiliary O2 flowmeter. - Should have only one common gas outlet (ACGO) and auxiliary O2 Outlet. - Should have a facility to connect active scavenging system. - Should have a provision for mounting monitors on top of the machine and with drawers. - Unit should have a minimum 3 drawers with ample storage. - Unit should have sufficient desk (tray) & workspace. - Unit should have antistatic wheels and foot brakes on front two wheels. - Unit should have integrated LED light to illuminate the writing surface and Tec. Vaporiser slot - Unit should have integrated AGM (Anaesthesia Gas Monitoring) with MAC values to be displayed on the same 12.1” display screen along with other ventilator parameters. • Breathing Circuit – Advance Circle Absorber

		- Unit should have an integrated circle absorber system with a visible Inspiratory and expiratory valve, transparent chamber, soda-lime canister. - Advance breathing circle absorber with integrated Dual Flow Sensors - one each qt expiratory and inspiratory ports. - It should be autoclavable. - Bellows Volume: 0 – 1500 mL (Paediatric and Adult applications) - APL Valve: 2 – 70 cmH20 - CO2 Canister Volume: 1.5 L (1.35 Kg) - Bag / Vent Switch: Switch for manual ventilation and mechanical ventilation - Online CO2 Bypass No change in bellows for adult and paediatric applications - Should have integrated heating system • Temperature Compensated Vaporizer: - Anaesthesia Workstation should be supplied with 2 units, one each of Isoflurane and Sevoflurane Temperature compensated, flow compensated, and back pressure compensated Vaporizers with easy fitting on Anaesthesia Machine with agent capacity of 250+25ml. - Safety locking system against accident overdose. • Inbuilt Anaesthetic Ventilator: General Features: - Anaesthesia Workstation should come with built-in integrated Anaesthesia Ventilator - Ventilator should be useful for Adult and Paediatric patients - Should have Volume Monitoring & Pressure Monitoring. - Operating power source:85-264, Vac,50/60Hz, 30 watts - Back up battery capacity: Capacity for 2 hours - Charging time: 4 hours Controls: - Microprocessor controlled ventilator - Electronically controlled and Pneumatically driven ventilator - Unit should have VCV, PCV, SIMV-V, SIMV-P, PCV-VG, SIMV-VG Modes of Ventilation - Power switch: On / Off (Stand-by) - Ventilator rate: 5-80bpm - Tidal volume (digital setting): Minimum 10 ml to 1500 ml - Electronic Peep & Fio2 Monitoring -Pressure alarm limit: High and low, 0-80cm H2O - Alarm setting for high and low pressure alarm limit - Mute: 60sec. alarm silence Display: - Colour Touch Screen Display Screen of Minimum 12.1" or more. Display should be integrated within the machine (should not be on an external side arm) - Offering Volume Monitoring, FIO2 Monitoring, Pressure & flow waveforms - I: E ratio - Low pressure alarm limit - Peak pressure - Can view 3 waveforms and 2 loops simultaneously on a single screen High pressure alarm limit Alarms with visual and audio indications: - Apnea - High and low pressure alarm - Low battery - Internal battery for normal working under electric power failure • Standards: - Anaesthesia Workstation should have BIS, ISO 13485, CDSCO certification. The unit should also have IEC 60601 certification with test report. - The unit should be Made in India. Multi-Parameter Patient Monitor: Suitable for Usage in Operation Room and capable of monitoring, ECG, SPO2, Non-Invasive, Blood Pressure (NIBP), Respiration Rate Temperature, EtCO2 Capnography, Invasive Blood Pressure Monitoring (IBP) - Should be suitable for all age groups. - Should have large color display of 15 inches touch screen display. - All the data should be access through touch screen and rotary knob.

		- Monitor should have minimum 72 hours or more trends and stores 100 alarm events. - Device should be compact, portable and light-weight. - Should display 10 waveforms or more. - Waveforms channels should be user selectable. - Should be capable of displaying waveforms and numeric values simultaneously - Should be able to monitor ECG, SpO2, NiBP, Respiration and Temperature, EtCO2, Dual IBP Monitor should have mainstream / sidestream EtCO2. - Monitor should have Masimo SpO2. - Monitor should have an audio visual and graded alarming system. - Monitor should have basic and advanced arrhythmia detection and electrocautery protection should be provided for ECG monitoring. - Should have apnea detection facility - Should have upto 120 seconds for apnea detection - Should have separate volume control and QRS Beep Volume - Should have short-cut keys for freeze, NIBP, Alarm Mute - Should have Heart Rate Variability interface for providing with beat-beat analysis of patient heart rate - Should have lead acid battery with atleast 2 hours of battery backup. - Should work on 220V, 50 Hz supply - The device should be provided with all the accessories for the parameters provided • ECG: - Should be able to monitor ECG through 5-Lead Patient Cable - Should be able to display Lead I, II, III, aVR, aVL, aVF and one of the chest leads - Should be able to monitor Heart Rate from 15-350 bpm - Should have an interface for displaying all the ECG Leads Monitored - Should have pacemaker detection facility - Should have arrhythmia detection • SPO2: - Should use Masimo technology for monitoring SpO2 values - Should display the numeric value and plethysmograph as well - Should display the value from 1-100% - Should use low perfusion technology to measure oxygen saturation for accuracy during motion artefacts low perfusion states like shock, bradycardia and hypothermia. TEMPERATURE: - Should be able to monitor dual temperature values - Should display the rectal as well as skin temperature - Should also display the difference between these values • NIBP: - Should follow the automatic oscillometric method for measurement of NIBP - Should have cuffs for adult, pediatric and neonatal patients - Should have a measuring range of 0-300 mmHg - Should have auto, manual and stat modes of operation • RESPIRATION: - Should display numeric values and respiration waveform as well - Should have the option for selection of lead for monitoring Respiration • ACCESSORIES: Should Provide following Accessories as Standard: - Standard Bain Circuit - 02 Nos. - Jackson Rees Circuit Paediatric – 02 Nos. - Autoclavable silicon Adult and Paediatric circuit – 02 Nos. each - Disposable Adult and Paediatric circuits – 10 Nos Each - Silicon Face Mask - 0, 1, 2, 3, 4, & 5 – 01 No. each. Breathing Bag 2 litres and 500 ml – 02 Nos. each.

		- 3/5 Lead ECG Lead – 02 Nos. - Re-usable SPO2 probes each for adult and paediatric – 02 Nos. each. - 02 units of IBP Connecting Cables with 50 disposables pressure transducers. - EtCO2 Sensor – 01 No. - Nasopharyngeal and skin temperature probes should be provided – 02 Nos each. - 10 sampling lines for AGM. - Re-usable adult cuffs (large), re-usable adult cuffs (medium), re-usable paediatric Cuffs – 02 Nos. each. - Disposable cuffs for neonatal use – 05 nos. each - Power cord – Battery Manufacturer should have BIS, ISO 13485, CDSCO certification.
3	**ELECTROSURGICAL GENERATOR**	1. Unit should have microprocessor-controlled tissue feedback technology. 2. Unit should have Combo Generator Technology having conventional ESU, and Saline Plasma Bipolar system. 3. It should feature a touchscreen display of 7 inches or larger, clearly indicating the true power on the screen. 4. Self-illuminated accessory socket with auto selection during setting of the generator & blinking of light to indicate activation in selected accessories. 5. It should have separate and isolated sockets for the Monopolar, Bipolar and Saline resection. 6. It should complete self-Diagnosis during power on and should show an error code with its solution if any fault is detected. 7. It should accept dual-area (Disposable) and single-area (Reusable) patient return electrodes. Should give Green Indication if dual area patient plate applied to patient & Red indication with alarm tone if the patient plate is not applied. 8. It should have at least 100 user programs for different surgical procedures. 9. Unit should have a remote power setting facility from the sterile field with a conventional Hand switching Pencil. 10. Unit should have pure sinusoidal output waveform in HF power output in cut and bipolar modes. 11. Operating Frequency of the unit should be between the 300kHz to 500kHz, it should not be more or less than this range 12. Unit should be useful for underwater procedures in monopolar as well as saline resection. 13. It should have RANDOMIZED spray coagulation for larger area coverage. 14. Unit should have Seven different modes for Cutting with a max output of 400 Watt 15. Unit should have Seven different modes for Coagulation with max output 200Watt. 16. Unit should have Five Bipolar modes with a max output of 120 watts. 17. Unit should have Auto Bipolar with delay time adjustment. 18. It should have an Alarm facility after the completion of bipolar coagulation. 19. Bipolar Micro mode, power range from 0.1 to 10 watts is adjustable in 0.1watt step. 20. Power Should change from 1 to 40 by step of 1W, 40 to 100 by step of 5W & 100 to max power by step of 10 W for fast setting of the generator. 21. Unit should have Three Saline Plasma Bipolar Cut mode with 300Watt and Three Saline plasma Bipolar Coag with max output 200Watt. 22. Unit should suitable to do TURP in Saline with Monopolar TURP Set with Isolated Bipolar Sheath. 23. Unit should give an alarm in case of Saline Plasma Bipolar cable is broken or activated in non-saline medium activation. 24. Unit should have tissue feedback, and pulsed interval-controlled ENDO CUT function.

		25. Unit should have Time out function to avoid the prolonged activation of HF output in monopolar. 26. Unit should be supplied with Double Paddle footswitch with toggle function to change the usability between the monopolar, bipolar, without going back to the generator. 27. Unit must have European CE with 4 digits notified body certified and ISO 9001:2015 and ISO 13485:2016 these certificates have to submit with a technical sheet. 28. General Safety Standards: IEC 60601-1-1, IEC 60601-2-2 and EMI/EMC Compatibility Standard: IEC 60601-1-2 for Electrosurgical Generator. 29. It should be supplied with the following accessories: - • Dual Area Silicon Patient return electrode Reusable……. 1No. • Cable for return electrode……1No. • Disposable patient return electrode ……1No. • Hand switching pencil Reusable ……..1No. • Foot switching pencil…….1No. • Bipolar forceps……1No. • Cable for bipolar forceps……1No. • Monopolar Foot Switch Toggle paddle) ……1No. • Universal adaptor ……..1No. • Set of electrodes ……1No. • Luer Lock Adaptor with RF connection……1No. • Cord for Endoscopy……1No. • Bipolar Loop, Cutting, Single Stem…….2Nos.
4	**ELECTRIC STERNUM SAW MACHINE**	DRIVING UNIT • 220Volts / 5 Amp A.C. supply. • Completely enclosed. • Foot Control for on/off and speed. • Castors for mobility • Can be dismantled & packed into a suitcase. FLEXIBLE SHAFT • Length 1.5 meters. • Weight approx. 1000 Gms. • Autoclavable • Push-Pull type ends. STERNUM SAW HANDPIECE • Reciprocating Blade Type • Weight 850gms. Approx. • Ideal for Sternotomy. • Pediatric type blades available against request. • Smaller anchors provided against request. • Reciprocations 13,000 / CPM • Autoclavable REDO SAW HANDPIECE • Oscillating Blade Type • Weight 750gms. Approx. • Ideal for Resternotomy • Sector type blades provided

		• Oscillations 13,000 / CPM • Autoclavable
5	**ELECTRIC SUCTION MACHINE**	Housing: ABS Body Jars: Polycarbonate 2 X 2.5 Overflow Protection: Mechanical Type Tubing: Non – collapsible Suction Tubing Vacuum Gauge: 3.0 inch , 0-760 mmHg Filter: Bacterial filter autoclavable / Reusable Pump type : Oil Immersed Rotary Vane Capacity: -710mmHg +- 10 at 32~35 LPM Noise Level : <50 dB A +- 3 Motor: 1/4 HP, FHP Power: 220/230V AC, 50 Hz, 180W RPM: 1440 Should be ISI & CE Marked, ISO: 13485:2003, WHO-GMP
6	**SET OF CVTS INSTRUMENTS MAJOR**	1 MIC.SCISSORS RD HDL. 25° S/S 165MM 1 2 MIC.SCISSORS RD HDL. 45° S/S 165MM 3 3 MICRO NEEDLE HOLDER RD.HDL.200MM 3 4 MICRO NDLHLDR DIAM.COATED 180MM STR 4 5 MICRO RING FORCEPS 1MM STR.210MM 4 6 MICRO RING FORCEPS 1MM STR.185MM 4 7 GERALD FORCEPS DEL CVD 175MM. 2 8 POTTS-SMITH SUPERCUT SCISSORS 45°185MM 2 9 CASTROV. NDL HLDR SERR 0.2/215MM 4 10 NDL HDL RD HDL HEAVY 230MM 4 11 MINI-BULLDOG CLAMP CVD. 14/35MM 4 12 MAYO-HEGAR NDL HOLDER HVY SERR 185MM 5 13 MAYO-HEGAR NDL HOLDER HVY SERR 205MM 5 14 CRILE-WOOD NDL HLDR STD SERR 200MM 5 15 CRILE-WOOD NDL HLDR STD SERR 185MM 5 16 METZENBAUM WVCT SCISS CVD B/B 200MM 5 17 METZENBAUM SCISSORS DEL CVD 180MM 5 18 THUMB FORCEPS 200MM 3 19 MAYO DISS SCISBD BLDS CVD 230MM 2 20 NELSON-METZ SCISSORS CVD 230MM 2 21 DBAKY TNGENTAL CLMP 2.48MM-WIDE 265MM 2 22 DE BAKEY TANGENTIAL CLMP 1.38MM-WD220MM 2 23 DEBAKEY ATR.FCPS 3.5MM STR 200MM 8 24 DE BAKEY ATR.FCPS 2.8MM STR 200MM 4 25 COOLEY PEDIATRIC CLAMP 60DG 30/160MM 2 26 DEBAKEY ATR BULLDOG CLAMP CVD. 45/105MM 2 27 DEBAKEY ATR. BULLDOG CLAMP STR 45/105MM 2 28 TC THUMB FORCEPS 180MM 1 29 TC THUMB FORCEPS 145MM 1 30 DERRA-COOLEY CLAMP 16MM 170MM 2 31 DERRA-COOLEY CLAMP 27MM 175MM 2 32 DEBAKEY ATR FCPS 3.5MM STR 240MM 2 33 LISTER BANDAGE SCISSORS 180MM 2 34 MIC NEEDLE HOLDER RD.HDL.210MM 2 35 DIETHRICH ATR AORTA CLAMP 210MM 1 36 OCHSNER-DE BAKEY ATR. AORTA CLMP 230MM 1 37 MORRIS ATR. AORTA CROSS-CLAMP 175MM 2 38 JOHNS-HOPKINS APPLY/REMOVE FCPS 240MM 1 39 FAT RETRACTOR 4 40 BOX FOR INSTRUMENTS WITH ONE PERFORATED INNER TRAY AS PER GIVEN PICTURE 1
7	**SET OF CVTS INSTRUMENTS MINOR**	1 JOHNS-HOPKINS BULLDOG CLAMP CVD.80MM 1 2 JOHNS-HOPKINS BULLDOG CLAMP CVD.91MM 1 3 CRILE-WOOD NEEDLE HOLDS TR 270MM 3 4 GERALD FORCEPS DEL STR 175MM 3

		5 BAUMGARTNER NEEDLE HOLDER 200MM 3 6 MICRO FORCEPS PLATEAU STR.250MM 1 7 ROSS HOOK SIZE 13X22MM FIG.2 245MM 1 8 WILLIGER ELEVATOR 5/165MM 1 9 HARD AGE THUMB FORCEPS 145MM 1 10 THUMB FORCEPS 1MM STR. 180MM 1 11 VASCULAR SPATULA 3MM BLUNT 185MM 1 12 ROSS HOOK SIZE 15X15MM FIG.1 245MM 1
B6	**CARDIAC PRE POST ICU EQUIPMENT & INSTRUMENTS**	
1	**MOTORISED MODULAR ICU BEDS WITH SIDE BOARD, HEAD BOARD & FOOT BOARD**	1. Overall Size: Approx Buffer to Buffer 2170 mm L x 1030 mm W x390mm to 740 mmH 2. Mattress platform size 1965mm L x 880mm W 3. Backrest, knee rest, height adjustment and Trendelenburg/ reverse Trendelenburg, positions operated by European make electro-mechanical actuators through handset & ACP. The handset should have green color backlight. 4. Lower leg section should be adjusted by ratchet mechanism 5. One touch key provision on ACP for emergency head down 6. One touch key provision on ACP for CPR 7. Provision for function locking and unlocking on ACP 8. Provision for adjustable chair position on ACP 9. Manual pull lever on both sides of bed to quickly bring backrest to a flat position 10. Battery backup with inbuilt battery charger shall be provided 11. The ACP shall have indications for power on and the battery charge 12. Backrest and knee rest shall retract as they are individually and simultaneously raised. 13. Backrest adjustment upto 70° 14. Knee rest adjustment upto 40° 15. Trendelenburg tilt upto 12° 16. Reverse Trendelenburg tilt upto 12° 17. Degree indicator required on both the side for backrest, Trendelenburg/ Reverse Trendelenburg positions. 18. All electro mechanical actuators, control box, handset and ACO need to compatible with class of IP X6. 19. Bed frame is made from 60mm x 30mmx 1.6mm (16G) thick ERW tube with proper support. This frame is fitted on the base frame mainly made of 60mm x 30mm x1.6mm (16G) ERW tubes with various supporting links. 20. The base frame is mounted on 125mm dia non-rusting twin wheel castors with central locking mechanism. Wheel center having precision ball bearing to run smoothly 21. The bed has polymer moulded head & foot panels detachable by hand without need of any tool. Four corner rubber buffers of 125mm dia. 22. Bed has polymer moulded safety side railings on both sides. These shall be fitted to the mattress support sections and should be able to raise and lock through spring lock mechanism. when put down, they should go below the mattress platform for zero transfer gap. The height of the railing from the mattress base should be 390mm or more for enhanced patient safety. 23. There are four locations on the bed to hold one stainless steel saline rod 12mm dia with 31.7mm dia x 1.2mm (18G) stainless steel SS 304 Grade outer covering tube with a knob mount syringe pump. 24. The bed has pullout linen-holder made of SS rod 10min 25. The control box should be covered with MS CRCA sheet. 26. Under the bed clearance is min 150mm 27. Mattress with high quality PU foam covered with covered with rexine. 28. Safe working load 220kg Electrical Specification:

		29. Normal 230 V Ac 30. Switch mode power supply: Operating range from100 to 240Vac50/60 Hz. 31. Electrical shock protection: Class 1 32. Power consumption ideal mode: 0.8W 33. Power consumption at maximum load: 270W max 34. Liquid ingress protection : IPX6 35. Rechargeable Batteries: 2 x 12 volt Sealed Lead /acid gel 36. Duty Cycle: 10% (Two minutes for every eighteen minutes) 37. Finishing & workmanship in the medical furniture is of prime importance and must be of high standard. All corners shall be rounded off so that there shall be no sharp corners and holes, should be burr free 38. All process parameters to be as per documented IMS procedures for quality assurance (ISO 9001:2015, ISO 14001:2015 2004, OHSAS 18001: 2007& ISO 13485:2016 Quality management systems) 39. The bed shall be in compliance with IEC60601-1-2 and IEC 60601-2-52:2015 safety standards. 40. M.S. Tubular parts, linkages, flats are to be In house, pre-treated and epoxy powder coated 50 to 100 microns 41. Accessories: a. Heavy duty IV pole (2 hooks) b. Urine bag holder
2	**MATTRESS 100 MM**	The mattress is provided with 40 density 100 mm thick PU foam mattress with ridges for easy bending. It is covered by heavy helium material which is water proof, flame retardant, vapour & X- Ray permeable with Bacteriostatic properties. The zip & stitches for the mattress cover is concealed.
3	**BED SIDE INFUSION POLE ASSLY ADJUSTABLE WITH 2 HOOKS**	Height adjustable from 1325mm min. to 2390mm max. Stainless steel Saline Rod. Strong base support. Pretreated and epoxy powder coated with 8 tank process. The product should be Pretreated and epoxy powder coated with 8 tank process. He manufacturer should have in house 8 tank pretreatment and powder coating process. The manufacturer should submit the Pollution Control Board certificate for the same Company should have following certificates for quality standard ISO 9001-2015, ISO13485 from notified certifying body and OHSAS, 18001 & 14001, CE/USFDA
4	**BED SIDE LOCKER**	Overall approx. size : 400mm W x 400mm D x 800mm H. CRCA sheet cabinet & drawer. Mounted on 50mm -dia roller wheels Membrane top with four side edge and drawer front. Two drawers one on the top and other on the bottom of the locker should be provided. The product should be Pretreated and epoxy powder coated with 8 tank process. manufacturer should have in house 8 tank pretreatment and powder coating process. The manufacturer should submit the Pollution Control Board certificate for the same Company should have following certificates for quality standard ISO 9001-2015, ISO13485 from notified certifying body and OHSAS, 18001 & 14001, CE/USFDA
5	**OVER BED TABLE**	Over all Approx Size: 810mmL x 470mmW x 810mm H Top Size: 810mm L x355mm W Height adjustment by gas spring mechanism. Height adjustment of the trolley should be on a aluminum extruded telescopic section with ball bearings for smooth up and down movement. Rectangular tube frame. Trolley mounted on 50mm-dia wheels. Pretreated and epoxy powder coated with 8 tank process. The product should be Pretreated and epoxy powder coated with 8 tank process. manufacturer should have in house 8 tank pretreatment and powder coating process. The manufacturer should submit the Pollution Control Board certificate for the same

		Company should have following certificates for quality standard ISO 9001-2015, ISO13485 from notified certifying body and OHSAS, 18001 & 14001, CE/USFDA
6	**CRASH CART**	Overall approx. size: 990mm L X 490mm D X 1600mm H. CRCA tubular framework. Should have 12 no's-colored bins. Should have SS I.V. Rod and Cardiac massage board. Should have Five no's CRCA sheet drawers of different sizes. Two drawers should have height of 100mm, two of 125mm and one of 177mm height. All the drawers should be locked with central lock mechanism. All drawers should have heavy duty telescopic sliding channels. Should have Two I.V. bottle storage tray. Should have SS Handle. Should have Oxygen cage attachment. Trolley mounted on Four non-rusting 125 mm dia. Polyurethane Wheels 2 with brakes and 2 without brakes. Pretreated and epoxy powder coated with 8 tank process. Company should have following certificates for quality standard ISO 9001-2015, ISO13485, OHSAS, 18001 & 14001, CE/USFDA
7	**INSTRUMENT TROLLY WITH BOWEL BUCKET**	SS 304 sheet is used at top for the placement of the instruments being used & also for easy portability"s 304 sheet is at the top as well as bottom shelf for keeping the instrument being used. Horizontal bars is welded with legs to Provide protection at sides with supporting legs for sturdy structure. Castors of 125mm Dia. is used for easy in movement. Spin section should be Provided to the bowl giving a aesthetic look & also bucket is Provided with removable lid & a handle to lift the bucket. Overall Dimension is 1156 mm X 531mm X 915mm H. The Top and bottom shelf is 1 mm thick SS 304 sheet, the shelf size is 755 mm x 467 mm. The supporting legs is 31.08 mm Dia. 1.2 thick SS 304 tube. The horizontal bar is 12.7 mm dia 1.2 mm thick SS 304 tube. to support top & bottom shelf. Maximum safe working load is 40kg. the shelf have 10 kg load and bowl & bucket have capacity of 5 kg load. The manufacturer should compliant with ISO 9001:2015,ISO 14001:2015,ISO 13485:2016, OHSAS 18001:2007 and CE certification
8	**EMERGENCY RECOVERY TROLLY WITH MATTRESS**	Emergency Casualty Trolley – Hydraulic: • Overall approximate dimension 2065mm Lx 730mm W • Height adjustment – Min 670mm to Max 980mm • Removable stretcher size 1975mm Lx 595mm W • X-Ray permeable two section top with pushing handle covered with PVC grip • X-Ray permeable top should be made up of 8mm HPL. • Sliding X-Ray cassette holder tray which can slide along the full length of trolley. • Backrest adjustment on ratchet • Height adjustment by imported hydraulically operated type linear actuator pump foot operated actuation • Trendelenburg and reverse Trendelenburg by gas spring mechanism. • Two gas springs of 30kg each should be used in the trendelenburg and reverse trendelenburg mechanism. • Four 125mm-dia, non-rusting body castor wheel, two with brake • Two IV rod location • S.S. Swing away side safety railings • Oxygen cylinder cage • Corner Buffers • Suitable Rexene covered mattress • ISO 13485:2003 ,CE certified
9	**LED X-RAY VIEW SCREEN**	Operating room wall panel should be installed with One LED Two Plate X-Ray Illuminating Screen which should have electrical safety codes for high & low voltage system. ICU should be equipped with a 2-plate X-ray viewing screen; It

		should be designed to provide flicker free luminance for the film viewing purpose. It should be installed flushed with theatre wall for hygienic and ease of cleaning purpose. The X-ray viewing screen should be designed for the purpose of front access. The X-ray viewing screen should be illuminated by LED and the dimming is controlled by the usage of dimming control with the PCB that is mounted inside the box. The diffuser should be able to diffuse the light evenly and to provide enough luminance for film viewing. The body should be built by using electrolyzed steel with powder coating. It should work on PCB button control system.
10	**MAGNETIC WRITING BOARD (WHITE)**	It should be made of ceramic having Magnetic properties and should be flushed to the wall of the ICU wall.
11	**CENTRAL MONITORING STATION**	It should have central nurse station for the monitoring of patients. Dimension of central nurse station should be approx. (4 ft x 8 ft x 4 ft) Central Nurse station should be provided with latest generation computer with 4 GB RAM, 1 TB hardisk and latest windows operating system and should be provided with laser printer with copier.
12	**ECG MACHINE**	Technical Specifications for 12 Channel ECG Machine Electrocardiograph should have capability of recording 12-lead ECG and should have the following features: □ Should have simultaneous acquisition of 12 Leads □ Should have 9-inch colour TFT screen offering enhanced viewing and clear visualization □ Should be compact, portable and easy to operate □ Should have QWERT alphanumeric keypad for manual entry of patient data □ Should have provision for providing Hospital Name on the printed record □ Should have operating modes such as Manual/ Auto/ Rhythm/ Page Save modes □ Should have a frequency response of 0.05-150 Hz □ Should have sampling frequency of minimum 1000 samples per second per channel □ The device should weigh less than 4.5kgs with battery □ Should have a special arrhythmia triggered mode of printing □ Should have Pacemaker detection facility □ Should be able to record on different modes of sensitivity: 2.5, 5, 10, 10/5, 20 mm/mV & AGC □ Should have different recording speeds: 5, 10, 12.5, 25 and 50 mm/sec □ Should have different filters available for smoothing of waveform □ Should have AC Filter, EMG Filter, Linear phase digital 50Hz Notch filter, anti-Drift Filter □ Should have different print formats: Manual: 3x1, 6x1, 12x1 Auto: 12x1, 6x2, 3x4, 6x2 +1 Rhythm, 3x4 +1 Rhythm, 3x4 +3 Rhythm Long Lead: 1 lead for 60 second duration, 3 leads for 20 second durations □ Should have a large storage of 400 ECGS or more □ In case of error in lead connections, the machine should display the change in colour of particular lead. □ Should have ECG Data Export in multiple format (PDF, RAW and HL7) to external USB □ Should have a display to preview the ECG waveform before printing □ Should be able to printout records on thermal Z-Fold as well as thermal paper roll Z-fold with pre-printed grid: Width 210mm x 295 mm, 100 sheets Roll with pre-printed grid: • Width 216mm, Length 15m • Width 210mm, Length 15m □ Should have facility of printing in automatic/ manual/ rhythm/ R-R mode of

		printing Should have facility for interpretations and measurements preferably Glasgow Interpretation Should provide detailed printout of patient data Should have connectivity for ECG transfer to PC SOFTWARE (Optional) Should have HL7 3.0 Integration export on USB, Ethernet interfaces. Should have Paper Save Feature where Simultaneous ECG acquisition and saving can be done for paperless workflow. Should work on Li-ion battery and record 250 ECGs or more with fully-charged battery Should have direct external printer connectivity Should have FTP Server ECG Data upload onto selectable ftp servers in PDF, RAW & HL7 formats The product should be BIS certified. The manufacturer should be ISO certified CDSCO Certificate should be submitted mentioning manufacturing site address. The device should be provided with standard accessories: • ECG Cable (Adult)-1 No • Gel Bottle- 1 No • Chest Electrodes (Set of 6)- 1 No • Limb Electrodes (Set of 4)- 1 No • Z-fold Paper - 1 pack • Thermal Paper roll- 1 Roll • User Manual-1 No
13	**SYRINGE INFUSION PUMP**	• Should be Fully Microprocessor Controlled. • Should have Auto Mode for automatic calculation of accurate flow rate. • Should have Body Weight mode. • Should have Drug Library. • Should have a touch screen LCD display. • Should accept the following Syringes 5, 10, 20, 30, & 50/60 ml syringes. • Should have a wide range of flow rates from 0.1 ml/hr to 1500 ml/hr. • Should have delivery of fluid at quick rate using BOLUS facility. • Should have the following fixed Bolus Rate: 50/60 mL Syringe: 1500 mL 30 mL Syringe: 900 mL 20 mL Syringe: 600 mL 10 mL Syringe: 400 mL 5 mL Syringe: 100 mL • Should have inbuilt KVO – Keep Vein Open. • Should have a minimum of 4 hours Battery backup for emergencies & Transport. • Should have the following audio and visual alarms: Nearly empty, Empty, Bolus volume finish syringe dislocated, syringe disengaged, pressure sensor error, malfunction, remind start alarm, Occlusion, VTBI finish, internal battery near empty, AC power failure. • Should have rubber anti-slip mat at the bottom of the machine so that it can be securely placed on any surface. • Should have RS 232 interface for connectivity. • Should have a multi-direction clamp for easy fixation on to vertical or horizontal poles. • Should be light weight, compact and should have a good grip for easy portability. • Should have 3 levels of occlusion pressure monitoring as follows: Occlusion Pressure : L: 300+- 100mmHg (40.7 + 13.3KPa) M: 500+-100mmHg (66.7 + 13.3KPa) H: 800 + -200mmHg (106.7 + 26.7KPa)
14	**DEFIBRILLATOR**	• Energy: 200 Joules • Capability parameter of defibrillator: ECG monitoring, external

		defibrillation, external pacing (transcutaneous), internal defibrillation and recording • Modes in defibrillator: Automated external defibrillation and manual Number of wave-forms: 2, 3, 4 • Patient compatibility to defibrillate: Adult and Pediatric paitents Type of display: Colored LCD Screen – 7 inches • Facility to have synchronized cardio version: Yes Provision of in-built recorder: Yes • Provision of printing ECG: Yes • Facility of External non-invasive pacing: Yes • Type of external transcutaneous pacing mode: Both Demand mode and fixed mode Pulse width of External non-invasive pacing in milli seconds: 40 ms • Facility to monitor NIBP: Yes Facility to monitor SPO2: Yes Upgradability to monitor NIBP: Yes Upgradability to monitor SPO2: Yes ECG monitoring: Using 5/6 lead • Suitability of defibrillator for transport on ground (ambulance): Yes Defibrillator should display selected energy: Yes • Defibrillator should display delivered energy: Yes Standards: • Conformity to Manufactures Certification: ISO 13485 and IEC 60601 Test Report Unit Should be Make in India • Accessories: • Li-ion Battery: 1 • ECG cable: 1 • NIBP pediatric cuff with hose: 1 • NIBP adult cuff with hose 1, 2, Not provided SpO2 Finger Probe: 1 • External defibrillator paddles (pediatric in built in adult): 1 Recorder paper roll: 10
15	**MULTIPARA PATIENT MONITOR WITH IBP & ETCO2**	Two multi para monitors should be with IBP and ETCO2 and eight multi para monitors should be basic with facility to upgrade to IBP and ETCO2 • Monitor should have high resolution 12.1" colour, LED display. Should be able to display at least 6 waveforms. • Should be able to monitor following vital sign monitoring for Adult, Paediatric and neonatal patients such as ECG, NIBP, Spo2, Respiration, Temperature & Dual IBP and Etco2. • Should be able to monitor ECG: 3/5 lead, Cascade ECG waveform with HR measurement, arrhythmia detection, ST segment analysis. • Non-Invasive Blood Pressure (NIBP): Measurement and display of systolic, Diastolic, and mean pressure values on NIBP measurement through Oscillometric method for adult, child, and neonate. Modes: Manual, STAT (Continuous 5 min. operation) and automatic selectable interval 2- 480 minutes. • Respiration: Display of respiration waveform with respiration rate using impedance principle. • Temperature: Should be able to monitor two temperatures simultaneously. The unit selection should be possible. • SpO2 sensors should be suitable for Adult, Paediatric & Neonate. • Should be able to monitoring Etco2. • The Graphical and tabular trends of up to 168 hours should be available. • The monitor should have battery backup of up to 5 hours. • Should have automatic pacemaker detection facility. • Should be Compatible with central monitoring system both wired and wireless.

		• Should be Compatible with HL7 and Nurse Call. • The Weight of monitor should not be more than 3 kgs. • Should have three priorities of alarm of all the parameters. • Should have option of recording up to 2 waveforms on paper roll. Should be accompanied with following accessories. a. 3/5 ECG lead - 1 no. b. Reusable Spo2 probe for adult - 1 no. c. Nasopharyngeal / rectal /skin temperature probe- 1 no. d. Reusable NIBP Cuffs- Adult– 1 no. e. Etco2 sampling lines-1 no. f. IBP cable-2 nos. g. Disposable IBP transducer- 2 nos. Quality Standards • Monitor should be European CE with four digit notified body number certificate and certificate to be submitted. • Supplier should be ISO9001 and ISO13485 certified. • Electrical Safety conforms to standards for electrical safety EN 60601-1-2:2015, EN80601-2-30:2019 General Requirement
16	**PULSE OXIMETER**	Pulse Oximeter • Should be Portable, light weight and sturdy design and user friendly . • Should be able to monitor SpO2 for Adult, Paediatric Should be CE /USFDA Approved.
17	**VIDEO LARYNGOSCOPE**	Appearance Compact and Portable video laryngoscope with integrated LED light source and camera Function Real-time view of the airway and tube placement Display 4" Full View LCD with 800x480 (RGB) resolution View Angle Wide View Angle Camera type 2.0 Megapixel high resolution CMOS Camera Data Transfer Transfer images and videos through USB to PC Battery Type Rechargeable Lithium Battery Battery Rating 3.7V 3200mAh Battery Charging Time 4-6 hours Backup 130 minutes (Approx.) Life Span ≥300 charging/discharging cycles Charger Input: AC 100-250V, 50Hz Output: DC 5V, 2000mA Unique Anti-fog Function Inbuilt anti-fog function upon powering without preheating Great Distance between Vocal Cords & Eye of Laryngoscopy 30-40 cm Angle of Vision About 15 Degree Handle Comfortable ergonomic design Anti-microbial Disposable plastic blades in sterilized package Size: Mac 1/2/3/4/5 for infant, paediatric, adult, obese and difficult airway (Mac 1 and 5 are optional) Operating conditions Temperature: -10°C to 45°C Humidity: 30% to 85% Atmospheric Pressure: 700hPa to 1060hPa Storage Conditions Temperature: -10°C to 45°C Humidity: ≤93% Atmospheric Pressure: 500hPa to 1060hPa Carry case Compact Carry case for Monitor, blades and adaptor.
18	**TEMPORARY EXTERNAL DUAL CHAMBER PACEMAKER**	Features : Compact, Easy to operate, Automatic lead and battery check, Continuous monitoring of the battery voltage, Shock and water-resistant housing, Free of Cost Warranty, Backup pacing during battery change Packaging Type : Transparent Cover for parameter protection Application: To be used to regulate the contractility of myocardiocytes to maintain

		adequate heart rate. Type: Dual Chamber Pacemaker (Temporary) Stimulation Type: Permanent Stimulation, Burst Stimulation Modes: AOO, AAI, VOO, VII, DDD, DDI, DVI Medical Usage : For bradycardia treatment before, during or after surgery and during cardiac catheterization lab procedures Usage: Hospital Performance Parameters. Battery Backup (min): 150 hour Fast Pacing Burst Rate (ppm): 200 Pacing Rate (ppm): 200 AV Delay (ms) 140 Sensitivity (V) : 20 milliVolt Sensitivity (A): 10 milliVolt Pulse Amplitude (A/V) (nos): 5 Marking: USFDA / European CE (4 digit) approved Warranty: 2 year
19	**INTRA-AORTIC BALLOON PUMP (IABP) MACHINE**	1. It should be Autopilot, Touch screen IABP System, with Wave form touch access control. 2. Should be Transportable, Compact IABP System with minimum 90 Min of battery Backup. 3. Fast Pneumatics to provide accurate & reliable ventricular support enhancing augmentation& improved After-load reduction. Preferably a stepper motor Driven Bellows system for faster drive –gas shuttle speed. 4. System should provide start-up checklist, when the pump is ready to start. 5. System should be capable of using fibre optic Balloon and conventional balloons. 6. Should have 1).Automatic. 2.) Operator Modes of operation. 7. System should be able to Trigger on Pulse Pressure as low as 3mm Hg. 8. System should be free from scheduled Maintenance and replacing the Spares on basis of usage. 9. System should stop shuttling of gas in case of balloon rupture and avoid chances of blood leak to machine (with Alarm). 10. Should be capable of removing Condensation automatically without interrupting the therapy. 11. System should be capable of automatically selecting appropriate trigger that is A).ECG, or B).Pressure and also accurately select the inflation and deflation point in automatic mode. C). Trigger on pacer (V pace, Apace), D). Automatic internal trigger rate. F). A fib Mode. 12. In automatic and operator mode single ecg trigger should be able to track various ventricular and atrial arrhythmia including VE„s bigeminy ,Trigeminy, Couplets etc and atrial fibrillation, without any user intervention and still give optimal performance. 13. Machine should provide print of Therapy report &100 Alarm History report. 14.3600 Visible priority colour intensified Alarm status required. 15. In automatic mode, advanced software should automatically adapt the Timings for various rhythms and rate variations, without any user intervention. 16. In automatic mode it should automatically identify atrial fibrillation and adopt r- wave deflation mode for better patient support without any user intervention. 17. Single key start up to make it fast, user friendly and easy to use. 18. Should be able to display at least 3 wave form as ECG, Invasive Pressure and balloon pressure Wave form. 19. Large detachable display for brighter and very good visibility from a distance in any lighting conditions. 20. on screen indication for helium level in the cylinder and battery level for timely intervention and correction.

		21. ECG Inflation marker to indicate inflation period on ECG which can be usefully when atrial pressure wave form is not available. 22. on screen indication of stand by time and should give alarm after 20 mts to draw user‟s attention on the system being on standby. 23. Should give extensive help message to correct the alarm conditions that are specific to the alarm conditions, this should help the user to overcome the alarm problem immediately and with ease. 24. In built comprehensive service diagnostics to help the technician to locate the faults immediately.- 25. System should be supplied with the followings. • ECG cable with lead wires 01 Nos. • compatable Pressure transducer cable -01 Nos. • Refillable helium cylinder compatible with the iabp system helium (or other) gas cylinders 1 Nos. certificate from explosives dept. 27. Entire unit should be mounted on wider wheel Should be approved by CE Notified Body / USFDA
20	**SINGLE CHAMBER TEMPORARY EXTERNAL PACEMAKER**	Temporary external pacemaker is intended to be used in conjunction with a cardiac Pacing lead system for temporary atrial or ventricular pacing in a clinical environment by trained, Personnel. Specifications Modes:- AAT, A00, VVT, VOO Basic pacing Rates. 30-200 ppm. Rapid Atrial pacing Rates - 80-800 ppm. Output Amplitude 0.1-25 mA. pulse width 1.5 ms. sensitivity 0-4-20mV Electrode Type:- Unipolar or Bipolar. Blanking :- 200 ms + 5-30 ms - Aster pause 120ms + 2 /- 30ms – Aster Sense Battery Type:- Two IEC type LRG - size. CAA size- 1.5 V alkaline batteries. Battery life:- 15 days
21	**ECHO MACHINE PREFERABLY PORTABLE ECHO WITH 2 PORTS WITH ADULT AND PAEDIATRIC PROBE**	1. High end color Doppler ultrasound with Wide band width technology, capable of producing high resolution images in Abdomen, OB-GYN, Fetal Heart, Small Parts, MSK, Urology etc. applications. 2. 15.6” HD LCD monitor with 0 – 180 degrees open angle. It should support full screen imaging to utilize entire screen area. 3. Backlight control panel which enables user to operate in dark. Design should be easy enough to understand / user friendly. 4. 10.1” brightness adjustable touch screen for smooth workflow. Should support QWERTY keyboard, Gesture controlled virtual TGC sliders. 5. System should have two active and universal ports. All the transducers must be pin less and compatible with both the ports. 6. Machine should have compact and light weight design. 7. System should be compatible with multiple transducer choices, covering linear, convex, micro-convex, Endo cavity, phased array etc. Should have an option of high frequency linear probe for superficial, MSK studies. 8. System should have facility for real time and frozen zoom. 9. Total operating depth range should be wide enough to cover vast range of applications. Depth should be accessible from 1 to 45 cm. 10. Monitor should have thumbnail view of saved images and cine clips and easy reviewing of images on monitor quickly. 11. System should support at least 4 no. of focus and intra focus adjustment should be possible. 12. System should have latest state of the art wideband transducers capable of processing signals from 1 to 17 MHz. 13. System should provide wide SV gate adjustment to cover all types of Doppler. It should have range from 0.5 to 40mm. 14. The operating modes system should have – 2D, M-mode, Color mode, PW, CW, Power and Bi-directional flow, TDI.

		15. System should have full spectrum imaging – Tissue harmonic imaging, Spatial compound imaging, speckle reduction technology, trapezoidal image, Quad and dual imaging. 16. Spatial compounding and speckle reduction technology should be given as standard configuration. Both features should be available with all transducers and with all applications. 17. Auto resolution adjustment in B-mode with a single button. 18. System should support Dual B, Quad B, Duplex, Triplex, Dual live imaging. 19. Linear probe should support trapezoid view without losing the resolution at sides. 20. System should support AMM. 21. System should be able to support biopsy mode in all probes for needle guided procedures. Guide line should be visible properly. 22. The system should offer multiple application dedicated presets inbuilt. Further provision to create user defined presets. 23. System should have dynamic range of 20 to 320 dB. 24. Should have facility to store cine retrospectively as well as prospectively. 25. Should have cine saving capacity of 200000 frames for B-mode. Cine saving capacity of 180s for M mode and 240s for PW/CW mode. 26. System should have image management software and easy access to old saved images. System should have inbuilt SSD of 120 GB. Provision to upgrade to 1 TB SSD. 27. System should have faster booting up time up to 30 seconds and boot up form sleep mode should be 5 seconds. 28. Light weight system – weighing 4.3 Kg. 29. Should have optional inbuilt battery back-up for two hours. 30. Machine should have fast operating system, ideal for emergency scans. 31. Provision to connect printer directly to the machine or transferring images/reports to PC. 32. System should be DICOM enabled. All the necessary software shall be provided by manufacturer. 33. All the measurement packages should be supported for various applications such as Abdominal, OB/Gyn, Cardiology, Urology, Small Parts, Vascular, Orthopedic etc. 34. System should support Auto IMT measurement. Measurement should update simultaneously as the cursor is being moved. 35. System should display Fetal growth in a graph chart according to measurement items and their OB tables. 36. Dedicated comments/ annotation charts should be available in the system for various applications such as Abdominal, OB/Gyn, Cardiology, Urology, Small Parts, Vascular, Orthopedic etc. And user should be able to edit and rearrange list of comments as required.
22	**ABG MACHINE**	Universal portable wireless blood analyzer for ABG Electrolyte / Chemistry/ Cardiac /Coagulation / Pregnancy using disposable cartridges. Analyzer must be handheld light weight battery powered and portable suitable for use at patient's bedside and remote healthcare settings. System must be capable of measuring PH PCO2, PO2,TCO2 Na k+ CL lionized calclum Lactate Hematocrit glucose urea creatinine troponin-1 CK MB BNP PT INR ACT and Beta HCG on a single device Analyzer must display calculated parameters including HC03 Base Excess SO2 Anion Gap and Hemoglobin. System must be capable of electro chemical measurement using different modes such as amperometric potentiometric and Conducto metric Test results must be quantitative. The Calibration procedure must be built in and automatic with every patiedns sample.

		Test combinations must be available from different cartridge types based and clinical requirement. Sample type must be whole blood from arterial venous capillary and cord blood samples. System must be capable of using small whole blood samples typically less than 100 ul depending on cartridge type Analysis time must be less than 3 minutes for blood gas electrolytes chemistries and less than 12 minutes for immunoassays like cardiac enzymes and pregnancy test. The system must be capable of automatic measurement of Barometric pressure System must be battery operated using 9V NIMH rechargeable batteries. System must be capable of using electronic quality assurance testing and programmable interval. System must be inbuilt with barcode reader for easy identification of patient ID operator ID cartridge and control lot numbers System must be cable of Liquid QC scheduling and lockout. System must be capable of monitoring operator competency and lockout. System must be capable of capturing patients respiratory parameters electronically. System must have option to adjust hematocrit results for patients on cardiopulmonary bypass pump. System must be provided with portable printer with IR Link for wireless printing. System must have capability to transmit the patients results to hospital LIS or HIS using wireless wifi mode The analyzer must be USFDA and CE certified.
23	**HIGH END VENTILATOR**	1. A Dedicated Neonatal, High frequency Oscillatory (HFO) Ventilator should have Conventional Modes to support critical patients of up to 30 Kgs body weight 2. Should be microprocessor Controlled ventilator with with altitude compensation and BTPS correction 3. The unit should be external compressor based for precise gas delivery & it should have proximal flow sensor for neonatal patient category. 4. Should support Invasive, Non-Invasive, and High flow oxygen Nasal cannula Ventilation in Neonate and Paediatric patient 5. High Frequency oscillator should be of membrane Technology with Active Expiration mechanism 6. The Ventilator should have 12” or more LCD screen with touch facility for real time display of all parameters/waveforms 7. Should have 3 waveforms- Pressure and Time, Volume and Time and Flow and Time 8. Should have 3 loops- P-V, F-V, P-F with facility of saving for reference 9. Graphic display to have Manual scaling facility for waves 10. Status indicator for Ventilator mode, Battery life, patient data, alarm settings, clock etc 11. Should have trending facility for 72 hours 12. Should have Automatic compliance & Leakage compensation 13. Should have following Ventilation settings parameters a) Pressure (insp) 2- 60 cmH2O b) Tidal volume guarantee (VTG) 0.1 ml to 200 ml c) Frequency up to 200 BPM d) Insp. Time 0.1 to 2 sec e) I : E Ratio 9:1 to 1:99 f) Insp. Flow 2 to 32 LPM, g) PEEP 0-30 cm H2O h) Pressure support up to 60 cm H2O i) Fi02 21 to 100% j) Trigger 0.1 to 1 Lpm

		k) High flow Oxygen Therapy up to 30 LPM 14. Should have following HFO Ventilation settings parameters a) MAP 0 to 40 cmH2O b) HF frequency 5 to 20 Hz c) HF Amplitude 5 to 100 cmH2O d) HF I: E Ratio 1:1 to 1:3 e) HF Tidal Volume guarantee 0.1 ml to 30 ml f) Recruitment in HFO mode with pressure of 1-40cmH2O 15. Should have Monitoring of the following parameters. a) Airway Pressure (Peak & Mean) b) Tidal volume (Inspired & Expired) c) Minute volume d) Spontaneous Minute Volume e) Total Frequency f) Fi02 dynamic g) C20/C index h) Resistance i)Compliance (Cdyn) j) Alarms for all measured & monitored parameters & Alarm log should display up to 4500 Alarms k) DCO2 measurement 16. Should have following Modes of ventilation a) Pressure Control b) SIMV with Pressure support c) SIPPV with Pressure support d) CPAP e) HFO f) NIV Modes includes Non-Invasive HFO g) High Flow oxygen Therapy/HFNC h) Volume Limit i) Volume Guarantee in HFO Mode j) Apnea /backup ventilation k) Should have O2 flush 17. Should have following Alarms with audio and visual text message a) Pressure changes (High/low) b) Tidal volume changes c) Minute volume changes d) High PEEP e) High/Low O2 concentration f) Power failure and Low Battery g) Patient disconnection h) Apnea 18. Expiratory block should be autoclavable and no routine calibration required 19. Should have integrated Battery backup for minimum 3 hour 20. Should have interface for communications with networked devices 21. Power input to be 220-240VAC, 50Hz 22. Gas input (air and oxygen) - 50-100 psi 23. Ventilator should be US FDA or European CE approved product and should submit the respective certificate of US FDA or European CE. Configuration: a) NICU Ventilator with trolley – 01 b) Should be supplied Hinged arm holder for holding the circuit c) Neonatal autoclavable silicone patient breathing circuits -01

		d) Reusable and autoclavable exhalation valve - 01 extra e) Proximal Flow sensor for neonatal -01 f) Air and Oxygen Hose - each 01 nos g) NIV kit (Masks, Prongs, Bonnets of various size)- 01 kit
24	**MULTIPARA PATIENT MONITOR**	• The monitor have 12.1" inch display. Should measure these parameters for all type of patients (Adult, Pediatric &Neonatal) a) 3/5 Lead ECG b) Respiration rate c) SPO2 d) NIBP The monitor should have following features: • Highly visible, Night mode, bright , high resolution 12.1" TFT LCD Screen or above colour Medical grade screen resolution have 800 *600 with Big Fonts. • Monitors have ST analysis. • Audio and Visual ,Alarm should glow in different color indicating from a distance the seriousness/ priority of the alarms. • Able to operate through Single knob. • Monitor should be ESU and defibrillator protected. • Display at least 8 waveforms on a single screen along with related numerical parameters on a single screen. • Easy to recognize alarm priority system with color coded visual indication, variable pitch and It is capable for Central Monitoring System. • Central Monitoring System with lan cable and computer setup. • Real time Online remote services for Tele ICU Monitoring. • Real Time View on Android and IOS App facility. • Function has calculation packages for drugs. • It have the capability to provide event review based on the events defined by the user of the monitor as per the specific condition of the patient. • Display setting have various configurable user defined setups • Color Coding visual Alarm • Indicators for Mains, Battery and charging. • 3 hours battery back. • Facility to display all Leads in ECG on the screen at a time. • Dual Temperature facility. • Facility to Configure ECG 5Lead and 3 Lead . • Wall Mounting Stand • Monitor have 4 digit Euorpean CE Certificate with ERTL test reports standard 60601-2-49. Standard Accessories have Standard Scope of supply should include: • NiBP Cuff 1 No. • SPO2 reusable sensor probe 1 No • 3 or 5 Lead ECG Patient Cable 1 No • Disposable electrodes 20 No • Operating Manual/CD 1 No • Power Code 1 No. Power supply: Power input to be 220 – 240V AC, 50Hz fitted with Indian plug of appropriate rating
25	**TMT MACHINE**	1. Environmental Operating Temp : -5 ºC to +50 ºC Operating & Storage : 0 to 95 % non-condensing

		Humidity 2. Power supply Input : 230V AC+/- 10% @ 50Hz Power consumption : < 350 Watt 3. Performance Display : 1024 x 768 pixels OR More (Touch screen optional) Language : English Alarm : Audio alarms for HR and ST level at pre-configured Values QRS Beep : On each QRS 4. Acquisition Frequency response : 0.05 Hz to 100 Hz with notch at 50Hz Filter : DSP Input impedance : 10 M ohm Time constant : > 3.2 sec A/D conversion : 12 bit Noise : < 20µVp-p Leakage current : < 10 µA Patient isolation : Optical isolation. Gain : 5, 10 & 20 mm/mV selectable. CMRR : > 120 dB Sweep speed : 25.0 mm/S. Accuracy of HR : +/- 2 BPM. Sampling Frequency : 250 samples per second simultaneous Operation : User friendly keyboard, Touch screen Storage : 12 lead unaveraged ECG, 10 second Rhythm strips of 12 leads, Medians after every 8 sec along with HR, BP and fiducial points, full disclosure of entire test Protocols : Pre-programmed protocol including BRUCE, MODIFIED BRUCE, NAUGHTON, MODIFIED BALKE and user editable protocols and Manual Protocol Printouts : Automatic and manual online printing with grid On/off facility. Print colour reports. Treadmill Power : 200-240VAC,50Hz 6A,1 Ø Power consumption : 1.5KVA Incline Range : 0-22% Dimension : L X W - 2080 X 785 mm Walking Area : 1350 X 500m Weight : 100Kg Patient Weight : Up to 250kg Belt Speed : Smooth, 0-15Kmph In-House manufacturing : Yes Treadmill features 1. Wide and long belt for stable and comfortable stride. 2. 20 mm thick wooden floating deck for longer life. 3. Anti-skid side steps. 4. Roller fitted with sealed dust proof ball bearings. 5. Strong steel platform design for shock absorption and enhanced cushioning. 6. Drive System: 2.0 HP continuous-duty Permanent Magnet DCmotor which ensures trouble-free running even under heavy loads. 7. Motor with 4 Kg dynamically balanced flywheel for smooth operation. 8. AC motor driven integrated front incline system with built in feedback for

		correct incline positioning. 9. Smooth, noise free operations. 1. Acquisition display modes a. 12 lead display i. Display 12 lead, 4 second ECG on First screen. Enlarged Medians next to each lead are displayed. ii. Configurable zoom factor for enlarged median: 2, 3, 4 times. iii. In exercise stage Basal Enlarged medians and current Medians are superimposed. iv. Facility to move superimposed medians. b. 3 lead display i. 8 seconds display of 2 leads of ECG + 1 QRS detection Lead. ii. Facility to configure 3 leads to any of the 12 ECG leads iii. Display lead sets (I, II, III) OR (aVR, aVL, aVF) OR (V1, V2, V3) OR (V4, V5, V6) iv. An enlarged Exercise median of the minimum ST level lead with fiducial points marked is displayed. (The enlarged median can be any of the 12 leads in Manual Mode. In Automatic mode, the lead having maximum ST Depression is displayed by the system.) v. Along with enlarged median, basal median is displayed in exercise stage and peak exercise median is displayed in recovery for comparison vi. Facility to compare medians side by side and superimposing on each other by moving median vii. Printer status check message 4 lead display i. 8 seconds display of 3 leads of ECG + 1 QRS detection Lead. ii. Facility to configure 4 leads to any of the 12 ECG leads iii. ST Integral display iv. Enlarged median of the lead having minimum ST depression with fiducial points marked displayed along with basal or peak exercise median Online display of following parameter in all display modes i. Sweep speed ii. METS iii. Heart rate is updated every 4 seconds with symbol and Target heart rate with percentage of completion target heart rate. iv. BP in mmHg v. ST measurement Mode (Manual / Auto) vi. Current ST Level and ST Slope of enlarged median vii. ECG gain with standardization pulse viii. Test and Phase duration in hh:mm format ix. Exercise protocol stage name x. Detection of Premature Ventricular Ectopic Online printouts Facility to print selected online reports i. Linked Median report (12 linked medians with ST Levels of selected long lead) ii. 12 lead Raw ECG report Automatic Reports

		Facility to print selected stage reports automatically i. Linked Median report (12 linked medians with ST Levels 1 long lead) ii. 12 lead Unaveraged ECG report iii. 12 lead Raw ECG report iv. Rhythm report – 12 leads of 5 seconds or 6 leads of 10 seconds v. Mixed Median report with one Median complex + 2.5 seconds ECG of each lead vi. Advanced mixed median report. vii. Extended Mixed Median Report - One Median complex + One Basal Median complex + 2.5 seconds ECG of each lead viii. Selected median report Stage reports configuration includes i. Reports at stage end ii. At set interval in 'EXERCISE' and 'RECOVERY' stage iii. Automatic 'PEAK EXERCISE' Linked Median printout iv. 6 leads of 10 seconds OR 12 leads of 5 seconds selection for Rhythm Report v. Automatic 'PEAK EXERCISE' Linked Median printout (10 seconds after Exercise is stopped). vi. Grid On/Off Acquisition settings i. Facility to enter BP 50 seconds before end of each exercise stage ii. ECG sweep speed: 12.5, 25, 50 mm/sec iii. Relearn the median template iv. Facility to enter a stage comment in each phase v. Change the QRS detection lead vi. Automatic/Manual detection of fiducial points (E, J, Post J) vii. Hold/Release treadmill stage viii. QRS beep On/Off Recovery a. Facility to compare basal median is displayed in exercise stage and peak exercise median is displayed in recovery stage Review a. Review data of selected patient b. Grid/Graph/No grid option on all review screens c. Facility to edit HR and BP of any stage d. Facility to edit Patient Details e. 12 medians screen f. 12 medians are displayed with ST-level and ST-Integral g. Mixed Median report with one Median complex + 2.5 seconds ECG of each lead h. Facility to zoom median of selected lead and edit fiducial points i. Trends j. Trends of HR, BP, ST Level, ST Slope, J Amplitude, R-Wave amplitude, METs, PVC per minute & RPP k. 8, 16, 32, 48, 56 seconds resolution. l. View and print rhythm strips marked during acquisition. Facility to select 12 leads of 5 sec. OR 6 leads of 10 seconds for each printout m. View unaveraged ECG n. Superimpose medians of any 2 stages in different colours. o. Full wave disclosure of 1 minute of any lead p. Edit and print Summary Report using standard edit options

		2. Reports a. 12 lead linked median (single / all stages) b. Mixed Median Report c. 6 lead Rhythm report of 10 seconds (single / all stages) d. 12 lead Unaveraged ECG report e. Extra Comments report f. Stage Report g. Brief Summary Report h. Trends Report (HR, BP, ST Levels / ST Slopes, J Amplitude of 3 configured leads, R-Wave amplitude, METs, PVC per minute & RPP i. Full wave disclosure of 1 minute of any lead j. Facility to print superimposed medians of any 2 stages in different colours k. Summary Report (Hospital Address and referring doctor designation to be printed in Summary reports) l. Advance Mixed Median Report m. ST-Levels & Slopes Table n. Extended Mixed Median Report o. Selected median report Configuration mode i. Hospital details ii. Referring Doctor list iii. Standard Summary report option iv. ST-Win system configuration v. Treadmill protocol vi. Available standard protocols 1. BRUCE 2. MODIFIED BRUCE 3. NAUGHTON 4. MODIFIED BALKE vii. Printing details configuration viii. System configuration 1. Speed in km/hr or m/s 2. TM speed at exercise stop (slow-0 km/hr,Fast-0 km/hr, 1.2 km/hr) 3. ST Level lead in Summary 4. Long lead in reports 5. Screen Display leads (3) 6. 3 Leads in Trend Report 7. Stage Report Leads 8. Treadmill Support: Compact, Treadstar, TreadstarXP, Trackmaster 9. COM Port Selection for amplifier and for treadmill. 10. Median update time is configurable to 1 to 8 sec. Utilities a. Test Treadmill b. Test acquisition unit c. Calibrate TM Speed d. Calibrate TM Grade e. Delete printout from printer queue
26	**PLASMA STERILIZER WITH ACCESSOREIS**	Low Temperature Hydrogen Peroxide Gas Plasma Sterilizer 1) The Sterilizer should use Low Temperature H2O2 Gas Plasma for sterilization with plasma energy generated inside the sterilization chamber. 2) Sterilizer should have chamber temperature of less than or equal to 560 C at all the time during the cycle. 3) The sterilizer should have inbuilt memory to store at least data of 50 cycles

		and built-in printer. 4) Sterilizer should have facility of moisture detection, instrument warming, moisture removal & perform system check within 5 - 6 minutes of starting the cycle. 5) Sterilizer should have preprogrammed cycles without any room for human error due to manual programming; total cycle time to sterilize general medical instruments with lumen and non-lumen together should be less than 35 minutes. There should be a separate cycle for flexible endoscope. 6) The quoted model should be indicated for sterilization of metal and non-metal medical devices at low temperature by USFDA/510k or European CE (4 digit notified body). 7) The quoted model should be endorsed by European CE (4 digit notified body) for implementing a quality assurance system for design, manufacture, and final inspection of the sterilizer. 8) The sterilizer should be recommended by minimum three leading IFUs of reputed device manufacturers (e.g. Karl Storz, Olympus, Stryker, Smith & Nephew, Aesculap, Maxer etc.) for sterilization of telescopes and camera heads. 9) Lumen sterilization claims should be validated and endorsed by USFDA/510K or European CE (4 digit notified body). 10) The By-products of the sterilizer should be non-toxic and eco-friendly 11) Sterilant cassette/bottle/cup should be able to store at room temperature 12) Sterilant should be in cassette/bottle/cup form with leak proof indicator to avoid exposure to concentrated H2O2. 13) Manufacturer/bidder shall ensure uninterrupted supply of consumables like cassettes/bottle prefilled with H202(Hydrogen Peroxide), Chemical Indicator strips and tape, Biological Indicator, Trays, Endoscope Holders and Tyvek rolls for wrapping instrument trays and medical devices. 14) The quoted model should have ability to continuously monitor concentration of H2O2 within the sterilization chamber. 15) The quoted model should be tested to assess residual hydrogen peroxide on worst case device materials (known to absorb hydrogen peroxide) following load conditioning in conjunction with a sterilization cycle. The results should demonstrate that mean residual hydrogen peroxide level should be lower than threshold level which should be endorsed by USFDA/510K or European CE (4 digit notified body). 16) Should provide satisfactory performance certificate from at least 5 users of quoted model for installations in India. 17) Supplier should have service center in India with ready availability of spares within 48 hours. Details of nearest service center to be provided with the tender. 18) The quoted model should be endorsed by USFDA or European CE (4 digit notified body)
27	**AUTOCLAVE 2 DRUM**	Operational Parameters:- Working Pressure 15psi Working Temperature : 121ºC Hydraulic test Pressure: Jacket & Steam Generator –2.5 kgf/cm² Chamber-1.9kgf /cm² Material Of Construction: Chamber S.S.304, quality End-ring S.S.304, quality Jacket S.S.304, quality Door plate With ribs S.S.304, 12 mm plate Insulation Fiber glass wool. (50 mm. thick) Outer cover S.S.304, 20 G. sheet – mirror polished Pipe lines S.S.304, quality seamless Fittings / Connections S.S.316, quality, B.S.P. threading

		Lock / radial arm / hinge Lock C.I. chrome plated, others S.S. Gasket Silicone rubber, jointless square type Stand M.S. Stand– 42 mm Dia. Steam Generator (Boiler) S.S.304 quality, 14 G thick fitted with S.S.304 quality 12mm thick heater plate with S.S. perforated cover. Control & Fittings: Multi control operating valve : To carry out all functions of sterilization cycle at one point i.e. Steam to jacket Steam to chamber from Jacket, slow / fast Exhaust and vacuum dryer. Door: Single door shall be fitted with radial arms & automatic Pressure licking device so that door cannot be opened till the steam is fully exhausted from the chamber. Quick vacuum drying- apparatus: This allows the filtered and sterile air to break the Chamber vacuum which helps in quick drying also. Accidental vacuum – breaker / jacket air valve: A safety device for jacket against accidental vacuum And for automatic residual air displacement. Safety valve :A safety device against excess pressure-in jacket / Steam generator. Chamber Temperature gauge: Fitted with a dial type thermometer at front in discharge line to indicate sterilization temperature Pressure gauge: Indicates Steam pressure in jacket & steam generator Compound Gauge: Indicates Steam Pressure & Vacuum in Chamber. Drain line Connected with 2" N.B haider S.S. funnel junction and water trap arrangement to avoid air contamination. Pocket for thermometer: A Provision to interest sensor of time Temperature Recorder (Thermograph) Plug screen: A device to prevent large particles from entering chamber drain line. Chamber condensate-pipe line. Incorporated with Spirex FT 14 float type thermostatic steam trap and check valve (N.R.V) for through evacuation of air and condensate from the chamber to achieve optimum temperature. 1. Water immersion type industrial heating elements -3k.w. x 3nos. (I.S.I. MARKED) 2. A magnetic automatic water level switch to protect heaters from water level 3. Water level indicating gauge tube with S.S. Guard 4. Water inlet & outlet S.S. ball valve
28	**MEDICAL GAS PIPELINE SYSTEM (MGPS) INCLUDING MEDICAL VACUUM SYSTEM, MEDICAL AIR COMPRESSOR SYSTEM, AND AIR RECEIVER / RESERVE TANK.**	**FULLY AUTOMATIC CONTROL PANEL FOR OXYGEN** SITC of Fully Automatic Oxygen Control Panel-1350LPM @ 50 to 55 PSI. The fully automatic control panel should comply with IS/ISO 7396-1 standard. It shall be fully automatic, including shifting to secondary bank when the service bank is exhausted, with automatic reset of replaced bank to primary status. Semi-automatic manifolds are not acceptable. The manifold control(s) shall incorporate: a) Pressure transducer to actuate designated signals when service bank is exhausted. b) Visible display on control unit to determine when primary bank is exhausted, and the secondary bank is in operation. A continuously lit green indicator to indicate header in use. c) An amber indicator of header ready for the secondary header. A red indicator of header empty for each header. d) Digital Display for line pressure/Gas Flow Manifold design shall ensure that the failure of any one component does not prevent continued supply of gas to patients. Manifolds design shall incorporate ed

		regulators for header switching. Alarm Manifold power supply shall be separate unit for ease of installation. Wiring between manifold and power supply shall be manufacturer supplied. Manifolds requiring electrical work inside the manifold cabinet during installation are not acceptable. Wiring shall terminate in power supply box not in manifold. Manifolds which can perform switching operations with electrical power are acceptable. Manifold Control Panel should have CDSCO License. OXYGEN SUPPLY MANIFOLD SITC of Oxygen Supply Manifold (3+3 or as per approved load calculation). The oxygen manifold shall comply with IS/ISO 7396-1 and HTM 02-01 standards and shall be compatible with Class-D type bulk oxygen cylinders. The manifold shall consist of two independent high-pressure header bar assemblies to facilitate primary and secondary cylinder banks. Each header bar shall be provided with cylinder pigtails suitable for IS 3224 / BS standard cylinder valves and shall incorporate non-return valves at each connection. Each header bar shall be provided with a high-pressure isolation shut-off valve. The header bars shall be extendable to accommodate future cylinder expansion. The manifold shall be hydraulically tested to 3000 psig, suitable for continuous operation, and designed for safe and easy cylinder replacement. Cylinders shall be supported using galvanized brackets and safety chains. OXYGEN SUPPLY EMERGENCY RESERVE MANIFOLD SITC of O2 Emergency Manifold 1+1 with double gauge regulator. The emergency manifold(s) should comply with IS/ ISO-7396-1 standards. Emergency system shall have arrangement for jumbo cylinders and it shall be compatible with Class-D type bulk cylinders. Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with respective numbers of cylinder pigtail connections to suit cylinder valves as per IS 3224/ BS/ ASME incorporating a check valve at the header connection. The high-pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve. The manifold should be hydraulically tested to 3000 psig. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The system should have non – return valves for easy changing of cylinders without closing the bank. The cylinder should be placed with the help of cylinder brackets and fixing chains which should be galvanized. NITROUS OXIDE SUPPLY MANIFOLD SITC of Nitrous Oxide Manifold (2+2 – size as per OT requirement). The nitrous oxide manifold shall comply with IS/ISO 7396-1 / HTM 02-01 standards and shall be compatible with standard nitrous oxide cylinders. The manifold shall consist of two high-pressure header bar assemblies with non-return valves, cylinder pigtails and isolation valves. The system shall allow automatic changeover through the control panel without interruption of gas supply. The header bar design shall permit extension for future capacity enhancement. The manifold shall be pressure tested to the applicable working pressure and designed for safe handling and cylinder replacement. NITROUS OXIDE SUPPLY EMERGENCY RESERVE MANIFOLD SITC of Nitrous Oxide Emergency Reserve Manifold (1x2 or as per approved design). The emergency reserve manifold shall comply with IS/ISO 7396-1 standards and shall provide uninterrupted nitrous oxide supply during failure of the primary system. It shall consist of header bars with pigtail connections, non-return valves,

		isolation valves, Regulator and pressure gauges. The emergency manifold shall be hydraulically tested, expandable, and suitable for rapid cylinder changeover. Cylinders shall be mounted using galvanized brackets and safety chains. COMPRESSED AIR PLANT The medical air plant shall fully comply with the requirements of the HTM 02-01/ EN ISO 7396-1. Compressors shall be Belt Driven Reciprocating, the plant capacity 450 lpm running and 450 lpm reserve with duplex drier and filtration system having capacity of each Drier and filter should be 450 lpm. The system shall be Duplex such that the supply is maintained in single fault condition. Standby compressors system capacity shall be accordingly as per the relevant standards. Air Compressor, Dryers, & Filtration should be from reputed make & manufacturer. A test certificate shall be provided from the manufacturer for the compressors showing the results of the tests, including the free-air flow rate obtained at normal working pressure. Compressor must be complied as per ISO 7396-1. This declaration should be on manufacturer's letter head which shows model no. that proposed compressor is comply to ISO 7396-1. Each compressor should be at pressure rating of 8,5 bar or more. The duplexed air purification module shall incorporate high efficiency water separators, oil coalescing filters, heatless regenerative desiccant dryers, activated carbon filters with optional hoplite catalyst and pressure regulators. The performance of the filters shall be according to below specifications: Oil coalescing two-in-one high efficiency filter: mass efficiency of 99,991%, tested according to ISO 8573-2 & ISO 12500-1 Activated carbon filter: max remaining total oil content of 0,003 mg/m³, tested according to ISO 8573-5 & ISO 12500-2 Bacterial filter: particle count efficiency of 99,98% at MPPS=0.06µm,tested according to ISO 12500-3. Air Receivers- 500 L x 1 The air receiver of 500 liters each shall be as per MS IS 2825 standards and the same should be stamped /engraved with code no./lot no along with the test certification. Air Receiver shall be supplied with Auto drain Valve, Gaues, Safety Valve. Duplex Pressure Reducing station Electrical Wiring And Accessories VACUUM PLANT Medical Vacuum System The duplex medical vacuum system should comply with HTM 02-01/ EN ISO-7396-1 standards. It should be Lubricated Belt Driven Reciprocating Type to produces minimum of 50 CFM each(+/- 5% tolerance) as primary and one 50 CFM(+/- 5% tolerance) as standby. The vacuum plant shall comprise air-cooled, oil lubricated rotary vane vacuum pumps with control panel suitable for both continuous and frequent start/stop operation at inlet vacuum levels between 500mmHg and 660 mmHg. The control system should normally employ automatic rotation of the lead pump to maximize pump life and ensure even wear. Vacuum pump inlets shall include a wire mesh filter and integral non- return valve to prevent oil suck back and pressure increases in the vacuum system. Each vacuum pump shall be fitted with anti- vibration pads between the pump foot and mounting frame. The plant shall be fitted with duplex bacteria filter system. Vacuum Pumps and bacteria filters from the reputed make & manufacturer. The vacuum receiver (Indigenous or equivalent) size mentioned in BOQ, shall be made of rust-free corrosion resistant steel for a vacuum pressure of 723mmHg. It should include bypass valves, manual drain valves, vacuum gauge. The control includes individual self-protected combination motor controls with

		short circuit, single phase and thermal overload protection, individual control circuit transformers with fuse less primary and secondary protection, pressure sensors, temperature switches with reset buttons, and an electronic controller to automatically change the operating sequence of the compressors. The system should have a status display to show the system pressure, fault conditions, and silence button, lighted Hand-Off-Automatic selector switches and safety disconnect operating handles. The vacuum receiver shall be as per MS IS 2825 standards and the same should be stamped /engraved with code no./lot no along with the test certification. Air Receiver capacity of 500 liter x1 shall be supplied with Auto drain Valve, Gaues, Safety Valve. Electrical Wiring and Accessories MEDICAL GRADE COPPER PIPE Copper Pipes (BS EN 13348:2008): Seamless, degreased half-hard (R250); carbon test per EN 723; factory markings include manufacturer, standard, OD x WT, temper, date, lot/batch; end-capped. Manufacturer Capability: Induction furnace, extrusion press, pilger mill, draw bench, bright annealing furnace, degreasing station; in-house tests—spectrometer, eddy current, carbon determinator, UTM; third-party inspection (e.g., Lloyd's); ISO 9001 compliance. Documentation: MTCs for physical and chemical properties; degreasing certificates; third-party certificates; delivered in protected, labeled bundles: 'DEGREASED FOR MEDICAL GAS LINES'. Copper Fittings: To BS EN 13348; factory degreased and individually packed; Kitemarked (<=54 mm); manufacturer to BS EN ISO 9001; supply BSI Kitemark, ISO 9001, CoC, oil analysis <100 mg/m2. Brazing Rods: CP104 (5% silver Cu-P) for Cu–Cu; AG 203 (43% silver Cu-Ag-Zn) for Cu–brass/gunmetal; to BS EN 1044:1999. Valves & Terminal Units: Oil-free, degreased ball valves; male threads, flat solder unions, O-ring grooves; safety handle; DIN EN 19 marking; individually sealed with certificates for pressure test & degreasing. Installation: OFN purging during brazing; supports—<=42 mm with plastic saddles/brass rings; >54 mm metallic powder-coated clamps; sleeves at penetrations; protect against damage; only Cu–Cu joints on site (no flux); five random joints to be cut & inspected (clean, oxide-free, min penetration = 3x wall); failed joints trigger adjacent inspections; Cu–brass/gunmetal joints off-site under controlled conditions, degreased and packed. Supports: As per BS 3974; spacing—up to 15 mm: 1.5 m; 22–28 mm: 2.0 m; 35–54 mm: 2.5 m; >54 mm: 3.0 m; coordinate with structural/architectural works; allow for building movement; concealed work not sealed until inspections/tests complete and routes marked to prevent damage by other trades. Sizes: 12MM x0.7 MM 15MM x 0.9 MM 22MM x 0.9 MM 28MM x 0.9 MM 42MM x 1.2 MM 54MM x 1.2 MM MEDICAL GAS TERMINALS The medical gas terminal units shall conform to BS EN ISO 91701:2008,IS/ISO 7396. Terminal units shall be capable of single-handed insertion and removal of the medical gas probe. The anaesthetic gas scavenging

		(AGS) terminal unit shall conform to IS/ISO 7396 as venturi outlet. The wall mounted first fix assembly shall consist of brass pipeline termination block with copper stub pipe secured between a back plate and a gas specific plate to allow limited radial movement of the copper stub to align with the pipeline. Terminal units installed in walls, bedhead Trucking, headwalls or fixed pendants shall be connected to the pipeline with a copper stub pipe. Terminal units for an aesthetic gas scavenging shall incorporate a 15mm O/D copper stub pipe. The terminal outlets must be certified as per Medical Device Directives (93/42/EEC) having the CE mark / UL TECHNICAL SPECIFICATION Listing along from the certifying agency. The terminal outlets must be manufactured in an ISO 13485 certified facility. MEDICAL GAS TERMINALS PROBES Medical gas terminal probes shall be gas-specific, non-interchangeable and fully compatible with the corresponding medical gas terminal units. Probes shall comply with BS EN ISO 9170-1 / ISO 7396-1 standards and shall incorporate sealing O-rings and locking mechanisms to ensure leak-proof operation. Probes shall be colour coded as per gas service and designed for repeated clinical use. All probes shall be supplied with test certification and included in testing and commissioning. MEDICAL GAS AREA LINE PRESSURE ALARM It should have each gas service to show 'Normal' (green), 'Low' and 'High' pressure (red) conditions. Medical vacuum systems shall be displayed in the 'Normal' (green) and 'Low' vacuum (red) conditions. Failure indicators shall be displayed by flashing lights and normal indications shall be steady. An audible warning shall sound simultaneously with any failure indication and a mute facility shall be provided. Following a mute selection the audible will resound after approximately 3 minutes, or shall operate simultaneously should a further alarm condition occur. A "Mute" button shall be provided inside the panel for use during any maintenance resulting in prolonged pipeline or plant shutdown. This facility shall automatically reset when the gas service returns to normal. The alarm panel shall have a 'Test' facility to prove the integrity of the internal circuits, The area alarm panel shall be wall mounted, continuously powered and shall be included in the scope of testing, commissioning, integration with the medical gas master alarm and hospital BMS system. Alarm cabling, sensors, calibration, documentation and training shall form part of the turnkey MGPS scope. Integrated medical gas monitoring and alarm system (for the entire bridge) (4–20 mA) of power sources. The system allows for current continuous reading of medical gas installation parameters using sensors with a value of (4–20 mA). The digital display shows the current pressure level in the medical gas network supplying the unit - shown by manometers. Possibility of setting minimum and maximum limit values. The system allows the transmission of all information to an external recipient via a communication interface and the activation of an alarm. Alarm - audio-optical (bell, LED light) Service Configuration: 2 Gas 3 Gas 4 Gas 5 Gas 6 Gas

		ZONAL VALVE BOX The Area Valve Service Unit (AVSU) should incorporate a ball value with NIST connectors either side, mounted in a lockable box with emergency access. The valve should be complete with copper stub pipes will be top entry and exit that extend to the outside of the box to enable easy connections to the Medical Gas Pipeline System (MGPS). The valve should operate from fully closed to fully open with a quarter turn of the handle. Should be full bore values for minimum pressure loss. comprise of full-bore ball valve complete with copper stub pipes for ease of installation. The valves shall be connected to the copper stub pipes by means of union nut and nipple, allowing removal of the valve without the need to distort the pipe work. The valve box should have a universal back plate for first fix mounting and a metal body, cover which fits over the installed valve. The design with tempered glass front panel. Front panel with vertical opening for minimizing space requirements and not block walkway. A color-coded service identity label will be fitted. The door should incorporate a quick release mechanism for emergency access to the valve. Should be reliable and easy to operate and must have NIST connectors facilitate easy purge, sample and pressure testing, and emergency, supply system. Should be easy site installation with pre-fitted stub pipes. They should have break emergency access fitted as standard. Should have optional quick release emergency access system. It should fully comply and meets with the requirements IS/ISO 7396. Service Configuration: 2 Gas 3 Gas 4 Gas 5 Gas 6 Gas ISOLATION BALL VALVES Isolation ball valves for the Medical Gas Pipeline System shall be full bore, medical-grade ball valves suitable for use with oxygen, medical air, vacuum, nitrous oxide, carbon dioxide and AGSS pipelines. The valves shall comply with ISO 7396-1, HTM 02-01 and NABH standards, and shall be specifically approved for medical gas service. Valve bodies shall be manufactured from forged medical-grade brass compatible with EN 13348 copper piping, with hard chrome plated brass or stainless-steel balls, PTFE seats, and blow-out proof stems. All valves intended for oxygen service shall be factory cleaned, degreased and certified for oxygen use, free from oil, grease, hydrocarbons and particulate contamination, and supplied with protective end caps until installation. The isolation ball valves shall be of quarter-turn (90-degree) operation, full port design, providing minimal pressure drop and leak-tight shut-off under maximum working pressure. Each valve shall be clearly identified with gas service type, flow direction arrow, manufacturer identification and pressure rating, and shall be color coded as per HTM 02-01 / ISO requirements. Valves shall be provided with a locking arrangement to prevent unauthorized operation and shall be installed in accessible locations such as plant rooms, zone entry points, vertical risers and critical branch connections, either within lockable valve boxes or exposed but clearly labeled. The valves shall be pressure tested as part of the complete MGPS testing and commissioning process, and shall form an integral part of the turnkey medical gas pipeline system, including warranty, documentation and as-built drawings. Sizes: 12MM 15MM 22MM

		28MM 42MM 54MM BPC FLOW METERS WITH HUMIDIFIER BOTTLES It should be manufactured in an ISO 13485:2003 quality management system duly certified constructed in accordance with the requirement of international standard. Back Pressure Compensated flow meter for accurate gas flow measurement with following features: A) Control within a range of 0-15 LPM, B) It should meet strict precision and durability standard. C) The flow meter body should be made of brass chrome plated materials. D) The flow tube and shroud components should be made of clear, impact resistant polycarbonate. E) Flow tube should have large and expanded 0-15 LPM range for improved readability at low flows. F) The humidifier bottle is made of unbreakable & reusable polycarbonate /polysulfone/polypropylene material autoclavable at 121 degree centigrade. Should have CDSCO License. SUCTION REGULATOR WITH WARD VACUUM It should be manufactured in an ISO 13485:2003 quality management system duly certified constructed in accordance with the requirement of international standard. It must consist of the following: - 1. 1 no of Suction Regulator and 1no of 700 ml polysulfone /polycarbonate /polypropylene collection jar. 2 Suction regulator should be supplied with a safety jar, including and antibacterial filter and an anti-overflow safety device. Should have wide membrane continuous suction controller 3. Should have vacuum levels: 0-760 mm of Hg 4. Should have vacuum gauge fitted with a protective bumper device. 5.Should have on/off knob allowing for the quick restoration of a readjusted vacuum level. 6.Must have central adjustment knob with a color coded for 0 to 760 mm of Hg. Should have Polysulfone/polycarbonate 7. Suction should be increased or decreased live without taking ofline. 8. Suction controller should be precise with 5mmHg controllable range. 100cc safety jar, autoclavable at 121º C, unbreakable, fitted with an anti-overflow safety device and equipped with a plastic antibacterial filter. It should be totally transparent, to ensure perfect sucked liquid visibility. Should have CDSCO License BED HEAD PANELS Bed Head Panel with license/CE: Conforms to: IS / ISO 11197 : 2019, IS / ISO IEC 60601-1:2015 + A1 : 2020 IS / ISO 7396-1 : 2016 + A1 : 2017, IS / ISO 9170-1 : 2017 IS / ISO 19054 : 2005 + A 1 : 2016 (Medical Rail) It should be manufactured in ISO 13485:2003 quality management system duly certified constructed in accordance with the requirement of international standard. It will be made up of precoated aluminum extrusion, bed head panel will be integrated with electrical sockets, with potential free contact, and terminal outlets shall be mounted on it, the section for gases and low voltage and high voltage should have separate compartments, the gas section should have opening in case of

		leakage, rail is mounted on the lower part of the bed head panel to mount various accessories. Should have: IV Pole/Syringe pump pole with holder RJ 45 data point Electrical switch socket as approved by department SS Basket Monitor stand
29	**ELECTRIFICATION WORK WITH GENERATOR BACKUP**	Complete electrification work inside the Cardiac Cath Lab Unit including design, supply, installation, testing and commissioning of internal electrical systems comprising LT electrical panels in the electrical room, bus bars, MCBs/MCCBs, distribution boards, earthing, cable trays, trenches, conduits, wiring and all associated cabling up to final points, as per approved drawings and applicable standards. The End User shall provide the required sanctioned electrical load up to the Cath Lab electrical room as recommended by the Engineer-in-Charge. The bidder shall provide and integrate sufficient capacity generator (DG) power backup for Operation Theatre (OT) and ICU areas for emergency operation; however, DG backup for the Cath Lab machine room shall be excluded from the bidder's scope."
30	**COMPLETE CCTV SURVEILLANCE AND FIRE SAFETY WORK**	"The bidder shall provide complete CCTV surveillance and fire safety systems for the Cardiac Cath Lab Unit. CCTV scope shall include supply, installation, testing and commissioning of indoor IP cameras, monitoring display/monitor, network switches (if required), structured cabling, conduits, accessories, recording arrangement, and integration with the hospital security system. Fire safety scope shall include supply, installation, testing and commissioning of smoke detectors, fire alarm system with hooters/manual call points (as applicable), fire extinguishers, cabling, control panels, and all associated accessories, fully compliant with applicable NBC, local fire authority, and hospital safety norms. All works shall be executed on a turnkey basis as per approved drawings and Engineer-in-Charge instructions."
31	**HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SYSTEM**	The scope of the Bidder shall include complete Design, Engineering, Supply, Installation, Testing and Commissioning (SITC) of the Heating, Ventilation and Air Conditioning (HVAC) system for ICU, Cardiac Cath Lab and Operation Theatre areas, strictly in compliance with prevailing NABH, MoHFW, ASHRAE, HTM/FGI and local statutory norms. The HVAC system shall be designed to maintain specified temperature, relative humidity, air changes per hour (ACH), differential pressure (positive/negative as applicable), filtration levels (including pre-filters, fine filters and HEPA filters for OT and Cath Lab), and air quality suitable for critical care and sterile environments. The scope shall include Air Handling Units (AHUs), ducting, insulation, terminal HEPA filter boxes, return air systems, exhaust systems, control panels, VFDs, BMS interface (if applicable), pressure monitoring devices, noise and vibration control, electrical integration for HVAC equipment, testing, validation and performance qualification. The Bidder shall ensure complete integration of HVAC with civil works, ceiling systems and MEP services to achieve contamination-controlled, infection-safe clinical environments, ready for NABH/clinical accreditation and end-user operations.
32	**OTHER TURNKEY WORK**	• All construction works for the Cardiac Cath Lab Unit shall be within the scope of the bidder on a turnkey basis. • The scope shall include complete planning, architectural and engineering design, preparation of all drawings (architectural, structural, MEP and shop drawings), civil construction, interior works, and all MEP-related works including electrical, HVAC, medical gas pipeline systems, plumbing, drainage within the building, fire fighting and fire detection systems, CCTV,

		IT/networking, earthing, and allied services, as required for a fully functional Cardiac Cath Lab Unit. • Final layout and drawings shall be prepared by the Bidder as per site conditions and executed only after approval of the End User. • The scope shall also include external development works such as site grading, paving, pathways, and landscaping surrounding the Cath Lab building. All works shall be executed in compliance with applicable codes, standards, hospital norms, and as per directions of the Engineer-in-Charge, up to final completion, testing, commissioning, and handover. The End User shall provide the required space/land for construction, obtain and provide all local authority and municipal permissions/approvals, and shall make available water supply and external drainage connections up to the Cath Lab building."

Sign
Stamp
Date

Annexure XI:Technical Compliance sheet

Compliance Sheet for Cardiac cathlab unit on turnkey basis

Sr. No.	Technical specifications/ composition of tender enquiry	Compliance on each parameter with detailed substantiation how the offered product meets the requirement. (Do not write simply Yes or Complied or As per licenses mentioned in the Bid.	Brand Name (only for Importer)	Medical devices/ Import License	MSME/ SSI	Remarks, if any
A	B	C	D	E	F	G

Signature

Date

Place

Annexure XII:Delivery places
(District wise place and address of Consignee)

Sr. No.	Name of consignee	Total Quantity
1.	District Hospital Aundh Pune	**1**
2	District Hospital Jalna	**1**
3	District Hospital Ghadinglaj	**1**
4	District Hospital Kolhapur	**1**

Signature

Date

Place

Annexure-XIII:Self Declaration Affidavit (on Rs.100/- Stamp Paper)

I ..... age ..... address ..... (Authorized signatory to sign the contract), hereby submit, vide this affidavit in truth, that I am the owner of the contracting firm ..... / authorized signatory and I am submitting the documents in envelope no.1 for the purpose of scrutiny of the contract. I hereby agree to the conditions mentioned below: -

a. I am liable for action under Indian Penal Code for submission of any false / fraudulent paper / information submitted in envelope no.1.

b. I am liable for action under Indian Penal Code if during contract period and defect liability period, any false information, false bill of purchases supporting proof of purchase, proof of testing submitted by my staff, subletting company or by myself, I will be liable for action under Indian Penal Code.

c. I am liable for action under Indian Penal Code if any paper is found false / fraudulent during contract period and even after the completion of contract (finalisation of final bill).

(Signature of Bidder)

(Seal of company)

Annexure-XIV: Manufacturer's Authorization Form

(Manufacturer's or Producer's Letter head)

To,
The Chief Executive Officer,
Maharashtra Medical Goods Procurement Authority,
1st Floor, Arogya Bhawan,
P.D' Mello Road, Mumbai- 400001.

WHEREAS (*Name of Manufacturer or producer*) (hereinafter, "we" "us") who is established and reputable manufacturer's or producers of (*name and/or description of Goods requiring this authorization*) having production facilities at *(Insert address of the factory)* do hereby authorize (name and address of Bidder) (herein after, the" bidder") to submit a bid, and sign the Contract with you against Request For Proposal ref no. *(Title and reference of RFP)* including the above goods produced by us.

We hereby extend our full guarantee and warranty for the above specified Goods described above in accordance with the terms and conditions of this Request for Proposal and Contract to be executed between the Bidder and Authority.

For and on behalf of the Manufacturer or Producer

Signed: _____

Date: _____

In the capacity of *(Title, position, or other appropriate designation)* and duly authorized to issue Authorization Form on behalf of *(Name of Manufacturer or producer)*

Note:

This Letter /form should be signed by a person competent and having the power of attorney/authority to legally bind the manufacturer. This should be included by the bidder in it's bid.

This Letter /form is required to be provided by Importer and Authorized Distributor.

Annexure-XV: Format for EMD Bank Guarantee

To be submitted in original at MMGPA office

B.G. No. Dated:

1. In consideration of you, Maharashtra Medical Goods Procurement Authority, having its office at 1st Floor, Arogya Bhawan St. George's Hospital Compound, Near C.S.M.T. Railway Station, Mumbai - 400 001 Maharashtra (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns)having agreed to receive the bid of ……(mention nature of entity and acts under which it is registered) and having its registered office at …… (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the **Supply, Installation and Commissioning of Supply, Installation and Commissioning of Cardiac Cathlab unit on turnkey basis** (hereinafter referred to as "the Project") pursuant to the RFP Document dated …… issued in respect of the Project and other related documents (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Bank) having our registered office at …… and one of its branches at …….. (Hereinafter referred to as the "Bank"), at the request of the Bidder, do hereby irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of Rs. ……. (Rupees …….. only) as bid security (hereinafter referred to as the "Guarantee") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Bank.

3. We, the Bank, do hereby unconditionally undertake to pay the amounts due and payable under this Guarantee without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from the Authority stating that the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as regards amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs. …… (Rupees ……. only).

4. This Guarantee shall be irrevocable and remain in full force for a period of 240 (two hundred and forty) days from the Bid Due Date inclusive of a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Bank, and shall continue to be enforceable till all amounts under this Guarantee have been paid.

5. We, the Bank, further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, *inter alia*, the

failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other authority.

6. The Guarantee shall not be affected by any change in the constitution or winding up of the Bidder or the Bank or any absorption, merger or amalgamation of the Bidder or the Bank with any other person.

7. In order to give full effect to this Guarantee, the Authority shall be entitled to treat the Bank as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfilment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and the Bank shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Bank from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Bank and sent by courier or by registered mail to the Bank at the address set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to [name of Bank along with branch address] and delivered at our above branch which shall be deemed to have been duly authorised to receive the said notice of claim.

10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Bank hereunder, be outstanding or unrealised.

11. We, the Bank, further undertake not to revoke this Guarantee during its currency except with the previous express consent of the Authority in writing.

12. The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Guarantee for and on behalf of the Bank.

13. For the avoidance of doubt, the Bank's liability under this Guarantee shall be restricted to Rs. …… (Rupees ……..... only). The Bank shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Bank in accordance with paragraph 9 hereof, on or before [……. (Indicate date falling 240 days after the Bid Due Date)].

Signed and delivered by ……. Bank

By the hand of Mr./Ms ……..., its …….. and authorised official.

(Signature of the Authorised Signatory)
(Official Seal)

Annexure-XVI: Format for Performance Security Bank Guarantee

To,
The Chief Executive Officer
Maharashtra Medical Goods Procurement Authority
1st Floor, Arogya Bhawan
P. D'Mello Road, Mumbai- 400001

Dear Sirs.

Whereas you intent to enter into a contract, as per your Letter of Intent, Reference No. _____ dated _____(Hereinafter referred to as "the contract") with M/s _____ as vendor for the supply of_____ defined in contracts schedule, (hereinafter referred to as "the goods / services") and whereas the vendor has undertaken to produce a performance cum warranty bond for amount of Rs _____ being equal to 3% of the total contract value of the goods / services to be delivered as specified contract No _____dated _____ referred to as "contract to secure its obligations to the beneficiary with respect to the goods specified in the invoice.

1. We _____ (Name of the Bank), hereby expressly, irrevocably, and unreservedly undertake and guarantee as principal obligators on behalf of the Seller that in the event that the beneficiary submits a written demand to us stating that the Seller has not performed according to the terms and conditions of the contract, we will pay you on demand and without demur any sum up to a maximum amount of (3% of the contract value). Any claims must bear the confirmation of your bankers that the signatures thereon are authentic. Your written demand shall be conclusive evidence to us that such written demand. For the avoidance of doubt any documents received by way of facsimile or similar electronic means is/are not acceptable for any purpose(s) under this guarantee.
2. We shall not be discharged or released from this undertaking and guarantee by any arrangements, variations made between beneficiary and the seller or any forbearance whether as to payment, time performance or otherwise.
3. In no case shall the amount of the guarantee be increased.
4. Unless a demand under this guarantee is received by us in writing on or before the expiry dates (unless this guarantee is extended by the seller), all your rights under this guarantee shall be forfeited and we shall be discharged from the liabilities hereunder.
5. This guarantee shall be a continuing guarantee (which means guarantee will also be valid if the bank is in under liquidation or bankruptcy) and shall not be discharged by any change in the constitution of the bank or in the constitution of the Seller.
6. Please return this letter of guarantee immediately after our liability thereafter has ceased to be valid.
7. Our liability under this guarantee will cease to be valid even if the guarantee deed is not returned to us.
8. This guarantee is personal to the beneficiary and not assignable to a third party without our prior written consent.
9. This guarantee shall be governed by Indian Law. This guarantee is valid until (Insert date in dd/mm/yyyy)

Signature and Seal of Guarantors _____

Date _____

Address: _____ _____

(Signature of Bidder)

(Seal of company)

Appendix II: Commercial Proposal Templates

I. General

The Bidders are expected to respond to the RFP using the forms given in this section for Commercial Proposal (Envelop - 2).

Annexure XVII: Letter comprising the Commercial Bid

Annexure XVII: PART I

Letter comprising the Commercial Bid

PRICE BID FOR THE CURRENT TENDER) ***(To be kept in Envelope No. 2)***

Item Description	**Unit**	**Qty**	**Ex-factory cost per unit (In Rs.)**	**GST applicable for Govt. Supply (In Rs.)**	**Other incidental charges (Please specify) (In Rs.)**	**Total landed cost per unit (4+5+6) (In Rs.)**	**Total Cost Rs. (3x7)**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Cardiac Cathlab unit on turnkey basis District Hospital Aundh Pune , Jalna, Nanded, Kolhapur	Nos	04					
Total							

Total tender price (in words .....)

The price should be quoted only in Indian currency Note:

In case of discrepancy between unit price and total price, the unit price shall prevail. Only total landed cost per unit considered for rate comparison **(column No.7)**

L1 will be decided based on price entered in https://mahatenders.gov.in. **site.**

Signature of the Tenderer

Name

Designation

Business address

To be uploaded in the form of Excel

Annexure XVII: PART II

(Statement showing comparative prices offered by the tenderer in other tenders of the same product)
ONLY FOR ADDITIONAL INFORMATION AS TO RATES OFFERD BY THE TENDERER IN VARIOUS OTHER TENDERS.

Please mention quoted rates of above item of different years

Sr. No.	Financial Year	Unit	Unit Price offered in other Bids/ Tenders/Rate contracts (in Rs.)
1.	**2022-23**		
2.	**2023-24**		
3.	**2024-25**		

Signature

Seal

Annexure-XVIII Checklist:

S No	Equipment Name	Make	Model	Country of Origin
1.	Cardiac Cathlab unit with turnkey			

Sr. No.	Documents	Submitted	Not Submitted
1	Tender Fees		
2	EMD		
3	Legal Entity Document		
4	Manufacturer/Importer/Authorized Distributor		
5	Manufacturer's Authorization (Annexure XIV)		
6	Manufacturing License		
11	DPIIT (Foreign Border)		
12	Product used in country of origin		
13	IEC code		
14	Affidavit of import for last three years		
15	Letter comprising Technical Bid (Annexure 1)		
16	Pre-qualification compliance (Annexure II)		
17	Proforma for Production and sale Statement (Annexure III)		
18	Annual Turnover and positive net worth Certificate (Annexure IV)		
19	Supply orders in past 3 years (Govt/State/Pvt)		
20	Details of Manufacturing Unit (Annexure V)		
21	Production capacity		
22	Non-Blacklisting affidavit (Annexure VII)		
23	Mandate Form (Annexure VIII)		
24	Power of Attorney (Annexure IX)		
25	Technical Specifications (Annexure X)		
26	Technical Compliance (Annexure XI)		
27	Brochure / Product Literature		
28	Delivery Place Acknowledgement (Annexure XII)		
29	Self-Declaration Affidavit (Annexure XIII)		
30	Two Service Centres in Maharashtra		
31	GST Registration		
32	PAN		
33	MSME Certificate		
34	EM II for medium Enterprises		
35	BIS/CE/USFDA certificate		
36	CDSCO		
37	ISO 13485		
38	Installation Prerequisites		
39	Site Visit Report along with detailed Civil Layout, Structural Drawings, MEP (Mechanical, Electrical, and Plumbing) and		

	Machine room Drawings as per AERB norms, as well as geo-tagged photographs necessary for the execution of the works.		