

Date: 18.02.26

Tender (Ref: IISc-Med-2025-26/L-40)

LOCAL TENDER ENQUIRY

To Whom It May Concern

Request for Quotation (RFQ) – Turnkey Central Sterile Services Department (CSSD)

This Request for Quotation (RFQ) invites proposals on a turnkey (DSITC) basis for the planning, design, supply, installation, testing, commissioning, validation, and user training of a Central Sterile Services Department (CSSD) intended for safe, compliant, and efficient reprocessing of medical devices and sterile goods for hospital operations.

The scope shall include a fully integrated CSSD solution comprising equipment, workflow furniture, accessories, utilities interfaces, consumables, and software solutions, including instrument tracking and data management systems, sourced directly from Original Equipment Manufacturers (OEMs). The CSSD shall cover all functional areas, including decontamination, inspection and assembly, packing, sterilization, cooling, quarantine, sterile storage, and dispatch, designed strictly in accordance with approved workflows, infection control principles, and applicable national and international standards.

The CSSD system shall support end-to-end sterile processing operations, ensuring unidirectional material flow, lean design, traceability, process control, and operational efficiency, suitable for continuous clinical service delivery, institutional training, and large-scale hospital requirements. The facility should be planned and designed to meet the workload demands of an 850-bed hospital, with adequate capacity, redundancy, and scalability for future expansion.

All equipment, furniture, and systems shall be modular, scalable, and upgradable, and shall be supplied completely with required accessories, validation tools, monitoring devices, documentation, software licenses (where applicable), identification and traceability provisions, and statutory certifications. The vendor shall be responsible for site coordination, integration with architectural and MEP services, testing and validation protocols, regulatory compliance, and comprehensive staff training as part of the turnkey scope. The CSSD facility shall be handed over to the hospital team fully functional and compliant with the approved design specifications.

Compliance and Standards

The CSSD shall be designed for optimal workflow efficiency, infection prevention, and regulatory compliance, adhering to NABH 6th Edition Standards, NHM guidelines, and applicable national and international healthcare standards. In case of any conflict between standards, the best and most stringent applicable standard shall prevail.

The CSSD must comply with, but not be limited to, the following standards and guidelines:

- Cleaning and Washer-Disinfectors: ISO 15883-1, ISO 15883-2, ISO 15883-4, HTM 01-01, HTM 01-06
- Sterilizers: EN 285, EN 13060
- Sterilization Processes: ISO 17665-1, ISO 14937, ISO 11135, EN 550, EN 17180, ISO 11138-8
- Packaging and Validation: ISO 11607-2, EN 868-5
- Quality and Risk Management: ISO 13485, ISO 14971
- Environmental and Cleanroom Controls: ISO 14644-1, ISO 14644-3, ASHRAE 170, HTM 03-01
- Electrical and Fire Safety: IEC 60601-1, NFPA 70, NFPA 99
- Utilities and Water Quality: ISO 7396-1, ISO 23500, WHO Drinking Water Guidelines, HTM 02-01

Vendors shall clearly specify and justify all standards and guidelines applied in their technical submissions.

All equipment shall be certified by CDSCO and/or European CE (issued by a notified body) and shall comply with EN 285, Medical Device Regulation (EU) 2017/745 (as amended), or possess US FDA certification, as applicable.

Project Management and Execution

The vendor should define clear project milestones and timelines. A detailed Gantt chart outlining the complete project execution plan shall be submitted and shall be mutually agreed and signed by the Client and the Vendor. The Vendor appoint a full-time on-site Project Manager, supported by a dedicated project team, responsible for coordination, adherence to timelines, quality control, and alignment with the hospital's overall project schedule.

At IISc, the CSSD facility shall support clinical services, academic activities, and research requirements. Vendors should ensure strict compliance with institutional guidelines, statutory regulations, and applicable standards while submitting their proposals.

Further details about IISc can be referred from:

A. Procedure:

1. Vendors are required to submit a technical proposal and a commercial proposal in two separate sealed envelopes. Only vendors who meet the technical requirement will be considered for commercial negotiation.
2. The Bidder should belong to either Class-1 or Class-2 suppliers distinguished by their "local content" as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter.
 - a) Class-1 supplier: Goods and services should have local content of equal to or more than 50%.
 - b) Class-2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.
3. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
4. The quotations should be on FOR-IISc Bangalore basis in INR only.
5. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.
6. Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to the Class-1 supplier.
7. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details. Separate detailed justification needs to be given to substantiate the qualification as Class 1 and Class 2 suppliers, and the intender reserves the right to cross-check the factual validity of the same
8. Separate detailed justification needs to be given to substantiate the qualification as Class 1 and Class 2 suppliers, and the intender reserves the right to cross-check the factual validity of the same
9. The deadline for submission of proposals is **11th March 2025, Wednesday, 5:30 pm Indian Standard Time.**
10. Bids in the sealed envelope should arrive at the office of Dean (A & F), Main building, Indian Institute of Science, Bangalore 560012, India, by the above deadline.
11. The technical proposal should contain a technical compliance table with 6 columns.
 - a. The first column must list the technical requirements in the order that they are given in the technical requirement below in tender specifications.
 - b. The second column should provide specifications of the equipment against the requirement (please provide quantitative responses wherever possible.)
 - c. The third column should describe your compliance with a "Yes" or "No" only. Ensure that the entries in column 2 and column 3 are consistent.
 - d. The fourth column should state the reasons/explanations/context for deviations, if any.
 - e. The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features and qualify the response of previous columns.
 - f. The Sixth column should contain the datasheet & technical offer Page reference number.
 - g. If the required information is not available in the Product Data Sheet and printed technical literature, it must be authenticated by the competent authority of the principal manufacturer, and in case of any discrepancy, the decision of the Technical Committee shall be final and binding on the supplier; additionally, the vendor must provide a legally binding declaration stating that the required information will be demonstrated at the time of handover and commissioning
12. Vendors are encouraged to highlight the advantages of their equipment over comparable equipment from the competitors.
13. In the commercial bid, please provide the itemized cost of the equipment and required accessories, etc.
14. Please provide itemized cost for any suggested/optional accessories/add-on items that may enhance the equipment usability, capability, accuracy or reliability. Vendors are encouraged to quote for as many add-ons as their product portfolio permits.
15. In the quote, you are requested to provide itemized cost for spares, accessories, and consumables expected over 2 years of use.
16. Please indicate the warranty provided with the equipment.
17. Any questions or clarifications can be directed to:

Dean (A & F)
Main building, Indian Institute of Science,
Bangalore 560012
office@iiscmedicalschoolfoundation.org

B. Terms and Conditions

1. The decision of the purchase committee of IISc will be final.
2. The vendor is responsible for the planning, supply, installation, testing and commissioning of the equipment & the training of personnel of the installed equipment at the IISc.
3. The RFQ must include references to previous installations including the list of all customers where similar systems were installed in the past 5 years. Please provide the names and contact addresses of the referees so that the

committee can contact them independently. Details of such systems with model numbers and users should be provided. The reference letters can be used to disqualify vendors with poor track records of service, build quality, system performance, or poor availability of spares.

4. The vendor should have qualified technical service personnel for the equipment based in India and must assure a response time of <2 hours after receiving a service request. The schedule for periodic preventive maintenance for the equipment and all the items related to OEMs should be provided.
5. The indenter reserves the right to withhold placement of the final order and to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason.
6. Wherever requested in this specifications sheet, data must be supplied along with technical compliance documents. Technical bids without supporting data will be deemed as technically non-compliant.
7. Upon request, all guaranteed specifications will have to be demonstrated in an active installation. Failure to demonstrate any promised specifications will be deemed as technical non-compliance.
8. Printed literature and published papers to support compliance with the prescribed specifications may be provided duly authenticated by qualified personnel in the company.
9. Technical evaluation by the IISc may include a demonstration to verify the functionalities and capabilities of the equipment quoted. Any discrepancy between the promised and demonstrated specifications will be deemed technical non-compliance. If the need arises, the vendor must be ready to visit IISc for a techno commercial discussion physically.
10. The validity of commercial quotations should be at least 90 days from the last date for the submission of tender documents.
11. **Payment terms:** LC will be opened with 70% payment on shipment of the item and remaining 20% on installation, testing & commissioning and 10% on user satisfaction. Insurance coverage should be till the commissioning of equipment.
12. The functionalities and capabilities of the equipment to be provided as part of documentation. Any discrepancy in technical specification between what was committed during technical evaluation and demonstrated specification on ground will be deemed technical non-compliance. If the need arises, the vendor must be ready to visit IISc for a techno commercial discussion in person.

C. Other terms

1. Shipment and Delivery Terms

1.1 Partial Shipments

- a. Partial shipments are allowed; however, transshipment is strictly prohibited.

1.2 Delivery Confirmation

- a. Delivery shall only be made after receiving written confirmation from the IISc purchase team.

1.3 Consignee Details

- a. The address of the consignee and the markings on the containers must be clearly stated as per the details provided by IISc.

1.4 Packing Slip and Documentation

- a. A packing slip detailing each item and its quantity shall accompany every shipment.
- b. The packing slip must be securely attached to the exterior of one of the containers in a visible manner.
- c. The purchase order (PO) number must be clearly marked on all packing slips, invoices, and correspondence.

1.5 Missing Items and Substitutions

- a. Any items that are not found upon delivery must be clearly noted on the packing slip, and the anticipated availability of such items shall be indicated.
- b. Substitutions of items shall not be made without prior written authorization from IISc.

1.6 Packing of Fragile Equipment

- a. Fragile equipment shall be packed in wooden boxes to prevent damage during transit.

1.7 Packing of Critical Components

- a. Critical components must be packed using foam/bubble wrap and cartons and securely stuffed within containers to prevent any damage during transit or handling at the site.

1.8 Protection during Transit

- a. The Seller shall ensure that all items are securely protected and packed in accordance with best established practices to avoid damage under conditions such as multiple handling, transportation by ship/road, storage, and exposure to heat, moisture, rain, etc.

1.9 Seller's responsibility for damage

- a. The Seller shall bear full responsibility for any breakage, damage, or pilferage (including during transit or handling within the hospital) resulting from faulty packing.

1.10 Marking and Packing Slip

- a. All packages must be visibly marked with the purchase order (PO) number and name of the Buyer in bold letters.
- b. Copies of the packing slip must also be placed inside each package.

2. Insurance and Freight

- a. The cost of all Freight & Insurance is Included in the purchase order value will be arranged by the supplier. The insurance should be from the vendor warehouse to the site till Installation & commissioning at IISc.

2.2 Seller Notification for Insurance

- a. If IISc needs to arrange insurance, the Seller must notify promptly.

3. Warranty Terms

3.1 The equipment along with all the 3rd party items should carry a warranty of 12 months from the date of successful commissioning.

3.2 The warranty shall commence from the submission of a duly filled "Medical Equipment Acceptance Sheet Checklist," accompanied by all relevant documents, as per the specifications and requirements.

3.3 After-Sale Service

- a. After-sales service will be provided by a service engineer trained by the principal company.
- b. The credentials and certification of the service engineer shall be shared with IISc for approval.

3.4 Preventive Maintenance and Calibration

- a. Preventive maintenance and calibration shall be performed according to the recommendations of the Original Equipment Manufacturer (OEM).
- b. Preventive maintenance and calibration shall include calibration for any major breakdowns and be conducted in accordance with local rules and regulations, as well as OEM recommendations.
- c. Maintenance and calibration shall also be based on the equipment performance history, using calibrated equipment traceable to international or NABL standards, as required.

3.5 Responsibility for Malfunctions

- a. The seller shall take full responsibility for any mishaps or malfunctions related to the ordered equipment caused by delayed periodic maintenance or calibration under warranty & subsequently in a comprehensive annual maintenance contract.

3.6 Maintenance and Calibration Costs

- a. Preventive maintenance and calibration shall be executed free of cost during the warranty and Annual Maintenance Contract (AMC) period.
- b. The seller shall clearly inform IISc about the list of consumables or maintenance kits that may incur additional costs (not covered under the maintenance contract) before the equipment is supplied.
- c. All accessories, including computer systems, printers, laptops, and software versions, shall be covered free of charge under warranty, rental contracts, and subsequent maintenance agreements.

- d. The vendor shall provide a separate quotation for the one-time maintenance call cost. This cost should cover the technician's visit charge, labor, and basic service expenses for each individual maintenance call requested by the customer (On call charges)

3.7 Annual Maintenance Contract (AMC) and Comprehensive AMC (CAMC)

The AMC & CAMC rate shall be quoted absolute value of the equipment cost per year till nine years post warranty period of equipment. Please refer to the template for GENERAL TERMS AND CONDITIONS FOR COMPREHENSIVE/LABOUR MAINTENANCE CONTRACT(CMC/AMC).

3.8 No Additional Terms to be imposed

- a. The seller shall not impose any additional terms on the buyer when an Annual Maintenance Contract is established on a yearly basis.
- b. All the terms mentioned in the tender and subsequent purchase order shall remain applicable without any modifications.

3.9 Warranty Terms during CAMC

- a. The warranty terms, including those for preventive maintenance and calibration, shall remain valid and applicable throughout the duration of the CAMC, as per the terms outlined in the tender and subsequent purchase order.

3.10 Payment for AMC and CAMC

- a. Payment for CAMC will be made on a quarterly or annual basis.
- b. Payments will be disbursed upon the successful completion of preventive maintenance and calibration activities, in line with the terms and conditions of the tender and subsequent purchase order.

3.11 Consumables List

- a. The vendor shall provide a list of consumables required for the equipment, along with their associated costs, before the supply of the equipment to IISc.

3.12 Equipment Recall and Standby Equipment

- a. The vendor shall notify IISc of any recall related to the supplied equipment and ensure proper action is taken as per the buyer's recall terms and policies.
- b. In the event of an equipment recall, the seller shall provide suitable standby equipment, ensuring the clinical functionality of the buyer is not impacted.
- c. Any open recall or Field Safety Corrective Action (FSCA) associated with the quoted model shall be **fully disclosed** by the bidder in the technical bid submission.

3.13 Adverse Event Reporting

- a. Any adverse events associated with the medical devices shall be promptly reported to IISc.
- b. The vendor shall ensure that any adverse event is communicated to the National Collaboration Centre-Materiovigilance Programme of India, in accordance with regulatory requirements.

4. Maintenance and Calibration

4.1 Preventive Maintenance and Calibration

- a. Preventive maintenance and calibration will be conducted free of charge under the warranty period and any subsequent Annual Maintenance Contracts (AMC).
- b. Calibration will be performed in accordance with industry standards and OEM specifications.

4.2 Report of Maintenance and Calibration

- a. The Seller shall provide a report of maintenance and calibration with details of the work performed, including calibration standards and methods.

4.3 Qualification of Engineers

- a. The Seller must ensure the trained engineers are certified and qualified for preventive maintenance and calibration.

5. Spare Parts

5.1 Supply of Spare Parts

- a. The Seller shall supply spare parts for the entire lifetime of the equipment and guarantee availability for a minimum of 10 years from the date of commissioning of equipment.

5.2 Price of Spare Parts

- a. The Seller will provide the prices of major spare parts, which should not exceed 30% of the total equipment value.
- b. A list of critical spare parts and their estimated prices shall be submitted with the tender as part of commercial bid.

5.3 Spare Parts Availability

- a. The Seller must maintain a minimum stock of spare parts to ensure quick availability for repairs.

5.4 Spare Parts Pricing

- a. The prices of spares shall be firm for 5 years, after which adjustments can be negotiated considering inflation and exchange variations.

6. Uptime and Compensation

6.1 Uptime Requirement

- a. The bidder must ensure a minimum uptime of 98% based on a 365-day working year.
- b. In case the uptime falls below the specified 98%, the Warranty/CAMC shall be extended by a ratio of 1:7 days for every additional day of downtime.

6.2 Compensation for Test Failures or Erroneous Results

- a. The seller shall be liable to compensate the buyer for any test failures or erroneous results generated by the ordered equipment.
- b. The compensation amount will be mutually agreed upon by both parties, and this provision will be legally binding.

7. Software and Support Services

7.1 Software Licenses

- a. All software supplied as part of the equipment must come with the necessary licenses for use in India.
- b. The seller shall provide a copy of the software license along with proof of ownership.

The supplied application & operating system software will be kept updated in the form of Free of cost as & when they are released by the factory.

However, for new application software any additional hardware is needed, the cost will be borne by IISc management at negotiated special price.

7.2 Software Support Services

- a. Any software updates or bug-fixing services will be free of charge during the lifetime of equipment.

8. Integration with Clients HIS & PACS-RIS

8.1 Integration Requirement

- a. The Seller must integrate the equipment with clients' Hospital Information System (HIS) & PACS-RIS at no extra cost, as applicable.

9. Confidentiality and Ownership Transfer

9.1 Confidentiality

- a. The service provider must not acquire or retain any confidential data from IISc.

9.2 Ownership Transfer

- a. Any change in the ownership of the principal company must honor all existing agreements with IISc.

10. Recall of Equipment

10.1 Equipment Recall

- a. In the event of any recall of equipment, the Seller shall promptly inform IISc in writing.
- b. During the period when the equipment is under recall, the Seller shall provide suitable standby equipment of similar or higher specifications to IISc, at no cost.

11. Force Majeure

If either Party is unable to carry out his obligations under this Contract due to an Act of God, war, riot, blockade, strike (I.e. national/ state or city), lockout, flood or earthquake or Government orders/ restrictions not within the control of the parties hereto which results in an Inability, In spite of due diligence of either party in performing its obligation In time, this Contract shall remain effective, but the obligation which the affected party is unable to carry out shall be suspended for a period equal to the duration of the relevant circumstances provided that :

The non-performing party shall give the other Party prior written notice describing particulars of the Inability including but not limited to the nature of occurrence with its expected duration and the steps which the non-performing parties is taking to fulfil its obligation.

Upon receipt of such notice the other party shall discuss the matter with the non-performing party with a view to helping the non-performing party to fulfil obligations. This clause does not envisage financial assistance.

If in any event the Force Majeure situation continues for a period of three weeks both the parties shall meet again and discuss whether the Contract can be amended to overcome the Force Majeure situation so the Project can proceed further.

Notwithstanding anything contained to the contrary it is clarified that economic hardship, non-availability of material, labour and transport shall not constitute Force Majeure. The overall responsibilities and obligations of the parties shall not be excused by reasons of Force Majeure situation.

Notwithstanding the above If the Force Majeure continues for a period of three months or more in that event without prejudice to the rights of the parties, the Buyer shall have the right thereafter to terminate this contract.

12. Seller's Personnel at Buyer's Premises

12.1 Adherence to Safety Regulations

- a. Seller's personnel on IISc premises must adhere to all IISc safety regulations and protocols.

12.2 Seller's Responsibility for Personnel's Safety

- a. The Seller is responsible for their personnel's safety and health while on IISc premises and shall indemnify IISc for any accidents or injuries.

13. Site Evaluation

- a. The Seller must conduct a site evaluation including transportation path, power, air conditioning and other requirements before equipment installation, as applicable.
- b. The Seller shall submit detailed drawings, specifications, and colour codes for all ordered items for Buyer review and approval via email or other methods, as applicable. Manufacturing shall commence only after drawing approval and joint inspection of the proposed site.

14. Skilled & trained Engineer for Installation

- a. Installation must be carried out by a skilled engineer and is considered complete only when the equipment is fully operational as per the tender specification.

15. Inspection and Quality Plan

15.1 New Equipment Requirement

- a. Only brand-new equipment will be accepted, and it must be accompanied by quality conformance and manufacturer test certificates.

15.2 Training

- a. Hands-on training for IISc engineers and technicians must be provided at no extra cost.

16. Marketing Support

- a. The Seller shall provide marketing support to IISc as mutually agreed upon.

17. Other terms and conditions

- a. **Software Compatibility** – If the equipment includes software, it must support integration with hospital EMR/HIS via HL7/FHIR standards and required middleware as applicable.
- b. **Standard Accessories** – The system should come with all essential accessories (e.g., power cords, consumables) required for full functionality.
- c. **Regulatory Compliance** – The software should comply with National Health Stack requirements and undergo ABDM sandbox testing, if applicable.
- d. **Data Protection** – Any patient-related data generated by the equipment must adhere to DPDP Act guidelines, if applicable.
- e. **BMS Integration** – The system should include a portal for Building Management System (BMS) integration at no additional cost, if applicable.
- f. **Local Service Support** – Supplier must have a registered office, trained engineers, spare parts, calibration equipment, and installation references in Bangalore.
- g. **Country of Origin Restrictions** – Equipment/materials originating from countries sharing a land border with India will not be accepted.
- h. **Cloud Based facilities**- All cloud-based facilities should be hosted in the IISc by the vendor
- i. Vendor shall provide regulatory certificates (**like CDSCO/CE/FDA/ISO/AERB/BIS**) type approval where applicable) for the quoted model and the same is to be enclosed on the technical bid.

18. Vendor is to provide compliance with remarks against all terms and conditions

- a. The First column should describe your compliance with a “Yes” or “No” only. Ensure that the entries in column 1 and column 2 are consistent.
- b. The Second column should state the reasons/explanations/context for deviations, if any.
- c. The Third column can contain additional remarks from the OEM

19. A soft copy of the technical compliance sheet (only) in both pdf and worksheet like excel format should be submitted in pen drive along with technical bid

TEMPLATE FOR ACCEPTANCE OF MEDICAL EQUIPMENT FOR CLINICAL USAGE

SN	MEDICAL EQUIPMENT PRE-COMMISSIONING CHECK-LIST	Vendor to fill the details
1	Equipment name	
2	Main Unit Model & Serial No	
3	Date of receipt of equipment at site	
4	Goods opening report (item wise)	

5	Principal Company name	
6	Dealer/ Vendor name	
7	Vendor contact details including email address	
8	Equipment Model name	
9	User Department name	
10	End User (Head of Dept) Signature	
11	Clinical Engineers name	
12	Clinical Engineers Signature	
13	Service Engineers name and Contact number	
14	Application specialist name and contact number	
15	Main Unit - hardware as per Purchase Order (Vendor-signed PO and list of items supplied as per PO with invoice) to be enclosed as part of the commissioning documentation.	
16	Main Unit - software as per Purchase Order (Vendor-signed PO and list of software supplied as per PO with invoice) to be enclosed as part of the commissioning documentation.	
17	OEM items as per Purchase Order (Vendor-signed PO and list of items supplied as per PO with invoice) to be enclosed as part of the commissioning documentation.	
18	Accessories as per Purchase Order (Vendor-signed PO and list of items supplied as per PO with invoice) to be enclosed as part of the commissioning documentation.	
19	Consumables as per Purchase order- (Vendor signed PO and List of items supplied as per PO with invoiced) to be enclosed as part of commissioning documentation	
20	Brochure of equipment to be enclosed as part of the commissioning documentation.	
21	Technical Data Sheet to be enclosed as part of the commissioning documentation.	
22	Set of service manuals (1 hard copy & 1 PDF soft copy) to be handed over to the Clinical Engineering Dept.	
23	Set of instruction manuals - Two copies (1 hard copy and 1 PDF) to be handed over to the Clinical Engineering Dept.	
24	List of spares & additional accessories with re-ordering codes and costs used along with the equipment as a standard package (PDF).	
25	Equipment demo training information materials like PPT/Video to be handed over to the Clinical Engineering department.	
26	Duly signed letter from the vendor organization head (MD/CEO) stating that the supplied unit, accessories & OEM items are brand new from the factory, to be enclosed as part of the commissioning documentation.	
27	Quality test certificate of equipment from the factory, duly signed by the factory production in-charge, to be enclosed as part of the commissioning documentation.	
28	Software license document (PDF); including OS, system and application software, and commitment to support over the lifetime of the equipment, to be enclosed as part of the commissioning documentation.	
29	All cables from the equipment should have proper cable management, i.e., cable labeling.	
30	2S and HIRA (Hazard Identification and Risk Assessment) to be conducted during preventive maintenance wherever applicable to keep the working area clean.	
31	First-level training to Clinical Engineering (training certificate).	
32	Application training to the end-user on all functions demonstrated (training certificate).	
33	Do's and Don'ts for the equipment for the user group to be provided as part of the training module, to be enclosed as part of the commissioning documentation.	
34	Preventive maintenance frequency calculated based on Equipment Risk Classification, Usage and Operational Intensity, Manufacturer's Recommendations, Historical Performance, and Failure Data.	
35	Preventive maintenance (PM) checklist to be predefined & duly filled during preventive maintenance, to be enclosed as part of the commissioning documentation.	
36	Preventive maintenance kit specification & details to be shared in advance, to be enclosed as part of the commissioning documentation.	
37	Preventive maintenance schedule should be done during non-clinical work operational hours based on prior approval from the user.	

38	Calibration schedules should be based on Manufacturer's Recommendations and after every major equipment breakdown servicing.	
39	The calibration process should follow NABL 126 guidelines.	
40	With each maintenance work, the service provider should hand over two physical copies of the service report (one for the user and one for the Clinical Engineering Dept.) along with a duly filled PM checklist. If physical copies are not available, soft copies should be provided to both the user and the Clinical Engineering Dept. Accepted downtime in hours & accepted equipment breakdown frequency as per PO terms should be understood by the service team, including downtime penalty	
41	Accepted Downtime in hours & accepted equipment breakdown frequency as per PO terms are understood by the service team including downtime time penalty.	
42	The service provider should maintain a logbook of maintenance at the user site.	
43	Shelf-life details of critical spares/accessories/consumables to be provided, to be enclosed as part of the commissioning documentation.	
44	Commissioning report should include (IQ/PQ/OQ) as part of equipment commissioning documents, duly signed by the user group, to be enclosed as part of the commissioning documentation.	
45	Cleaning & disinfection methodology, including the material used, to be provided at the time of commissioning of equipment, to be enclosed as part of the commissioning documentation.	
46	User application training schedule to be provided along with the PM schedule.	
47	Training materials soft copy (PPT/Video) to be shared for installation sign-off.	
48	Letter from the principal manufacturer stating their commitment to IISc for support of equipment for the coming years as per Purchase Order terms to be provided.	
49	CE/FDA, CDSCO Certificate to be enclosed as part of the commissioning documentation.	
50	The single-phase power cord supplied along with the equipment should have a 3-pin plug (Neutral, Phase, Earth) for Indian usage.	
51	Warranty card and details of the warranty to be enclosed as part of the commissioning documentation.	
52	Short shipped items (if any) with quantity. The warranty will start only after full supply, installation, testing, and commissioning of hardware, application software, and third-party equipment supplied along with the main equipment.	
53	OEM and Dealer Sales and Service Escalation contact details, including CEO/MD, to be enclosed as part of the commissioning documentation.	
54	Life of the equipment as committed during technical discussions to be provided with maintenance and spare support during the course of the year, irrespective of dealer change, as per PO terms and conditions, to be given on the OEM letterhead. In case the OEM stops service support during the sales-committed life, the vendor is expected to compensate with the depreciated cost of equipment or provide buyback or upgrade options according to the hospital's requirements.	
55	Any adverse events and recalls related to the equipment, if reported, need to be intimated to IMSF in a timely manner to ensure patient & staff safety by the vendor.	
	Signature: User Dept Head Head-Clinical Engineering	
	Date and Time	
	All these details should be given in a spiral bound document by vendor to IISc.	
	EQUIPMENT WARRANTY WILL START ONLY AFTER FULL COMPLIANCE OF ABOVE FORM	

GENERAL TERMS AND CONDITIONS FOR COMPREHENSIVE/LABOUR MAINTENANCE CONTRACT(CMC/AMC)

1) ALL TERMS AND CONDITIONS REMAIN UNCHANGED AS PER SALES PO

2) AMC & CMC VALID FROM TO

3) THIS CONTRACT INCLUDES	
1	All equipment and items supplied by the OEM are covered under service contracts and must be replaced free of cost under CMC.
2	All equipment must be serviced by trained, authorized service engineers. The training certificate of the engineer must be submitted to the IMSF Clinical Engineering Team in advance.
3	Preventive maintenance frequency is calculated based on equipment risk classification, usage, operational intensity, manufacturer's recommendations, historical performance, and failure data.
4	The equipment preventive maintenance must be performed according to the predefined checklist provided in the service manual.
5	Operating system and anti-virus updates are an integral part of preventive maintenance.
6	The vendor will not allow their service engineer to train junior staff on our equipment.
7	Vendor to attend unlimited breakdown calls.
8	Call response time of two hours to be maintained; response time to attend calls within 2 hours is applicable, including holidays and non-working hours.
9	Breakdown frequency should not exceed twice the frequency of preventive maintenance.
10	Vendor must submit soft copies of all reports in two copies.
11	Vendor must maintain a service logbook at the user department.
12	Yearly downtime and breakdown frequency will be calculated based on the call logbook.
13	Any damage to hospital property during maintenance by the company engineer should be compensated to the hospital.
14	Vendor must ensure two preventive maintenance visits per year before the due date. Any malfunction or harm to the patient due to delayed preventive maintenance or calibration will be the sole responsibility of the vendor, including legal compensation. Preventive maintenance and calibration must be mandatory after repair or replacement of any spare parts, and necessary kits are to be provided FOC.
15	A copy of the preventive maintenance report with a checklist and a soft copy of calibration, if applicable, is to be shared within one day of execution. The preventive maintenance and calibration label, with done and due dates, must be affixed to the machine without fail, along with the clinical engineer.
16	Periodic training to clinical engineers and end-users, as and when applicable, is mandatory. Training documents must be provided for all concerned staff prior to the renewal of the contract. It is the vendor's responsibility to ensure training, including application training for all staff, without fail. Training materials (PPT/Video) must be submitted to the clinical engineering team prior to any training.
17	Vendor should provide the cleaning and disinfection protocol for the equipment, carry out necessary training periodically, and ensure that all concerned members are trained on the same.
18	Any recall related to the above equipment must be notified in writing, and required corrective actions must be carried out FOC. Necessary training must be provided to concerned staff.
19	Any adverse event reported must be intimated to the Materiovigilance department, and corrective action must be shared within one working day with the hospital.
20	Complete breakdown details, including downtime and preventive maintenance/calibration history, must be shared before the renewal of the next contract. Any downtime of more than 48 hours must include root cause analysis and corrective & preventive action with due diligence. Service reports must be legible and include call received, call attended, and call closed (including date & time) accurately. Any report missing this information will be deemed incomplete.
21	Unlimited spare support must be provided, except for consumables (filters). All accessories and parts are covered and included in the contract. Spares must be ordered and moved immediately after diagnosis, including during holidays and non-working hours.
22	Uptime must be maintained at 98%, including holidays and non-working hours.
23	Uptime is defined by the machine working for its intended purpose without compromising patient care or revenue. Any deviation will count as downtime, and for any additional downtime, the contract will be extended by 1:7 days.

24	A maximum of two breakdowns per preventive maintenance frequency is permitted. Any deviation will increase the preventive maintenance frequency in the subsequent year with any cost escalation.
25	Standby equipment must be provided within a day if the issue cannot be resolved for movable equipment.
26	The vendor escalation matrix, including sales and service contact details (mobile numbers & email IDs), must be provided without fail.
27	First-level service training must be provided for the concerned equipment, and the training certificate must be provided to the clinical engineering team members.
28	Preventive maintenance must not be executed during peak working hours and must be carried out as per the user's convenience. The preventive maintenance kit is included in the CMC and must be replaced during preventive maintenance.
29	The AMC bill will only be cleared after the submission of the equipment log report, which must include details of downtime and preventive maintenance (PM) or calibration history. This report must be provided prior to the renewal of the contract.
30	For equipment under AMC, the quotation for spare parts must be provided within one day of the service engineer's recommendation in the service report.
31	For equipment under AMC, no cannibalization of spare parts from working equipment by the service engineer is allowed.
32	Any spare part ordered for equipment under CMC must reach the hospital site within 72 hours.
33	All defective spare parts under AMC will be retained by the hospital. For equipment under CAMC, IMSF will mark the spare part as defective, and a non-returnable gate pass will be issued.

Template for purchase order terms
<p>General: Acceptance of this Purchase/ Work Order (hereinafter referred to as "PO/Order") includes the acceptance of the following terms & conditions and is made expressly conditional on Seller's assent to the exact terms contained herein. None of the terms in the Order may be modified, added to, or superseded, except with the written consent of Indian Institute of Science ("Buyer").</p>
<p>1.Price: The prices mentioned in this Order are the prices at which Buyer has agreed to purchase the Goods or Services (as applicable). No escalation in the aforesaid prices shall be binding on Buyer, notwithstanding anything that may be mentioned in Seller's terms of acceptance of Order.</p>
<p>2.Advice of Dispatch: A full and comprehensive dispatch advice notice shall be sent to stores or concerned departments of the Buyer ("Buyer Stores"). Instructions regarding dispatch & Insurance as mentioned in this Order should be complied with and the packing slips giving reference of Buyer order number shall be included securely with the goods in closed envelopes.</p>
<p>3. Delivery Terms:</p> <p>(a) Deliver Date: Time is the essence in any Purchase Contract. Time of delivery/performance as mentioned in this Order shall be the essence of the Agreement and no variations shall be permitted except with prior authorization in writing from the Buyer.</p> <p>(b) Place of Delivery: The goods/services shall be delivered/performed strictly as per the instructions in the Order. All Goods/Services delivered/performed should reach Buyer Stores before 2.00 p.m. on weekdays except that no deliveries/ dispatches shall be made or accepted on Sundays or holidays in the working place of the Buyer.</p> <p>(c) Delayed Delivery: The time and date of delivery/performance as stipulated in the Order shall be deemed to be the essence of the Agreement. In case of delay in performance of its obligations by the Seller, or any extension granted by the Buyer, the Buyer shall at his option either (i) accept delayed deliveries at price reduced by a sum/ percentage (%) mentioned in the Purchase Order for every week of delay or part thereof; and/or (ii) cancel the Order in part or in full and purchase such cancelled quantities from open market at the prevailing market price at the risk & cost of the Seller without prejudice to his rights under 3(c) (i) noted above in respect to the goods delivered; and/or (iii) refuse to accept the Goods delivered beyond the delivery date and claim/set-off the difference between the prevailing market price and contracted price of such quantity delivered belatedly by the Seller.</p> <p>(d) Delay due to force majeure: In the event of cause of force majeure occurring within the agreed delivery terms, the delivery date may be extended by the Buyer at its sole and absolute discretion on receipt of application from the Seller without imposition of liquidated damages. Only those cause which have duration of more than seven (7) consecutive calendar days will be considered the cause of force majeure. The Seller must inform the Buyer, by a Registered Post or courier letter duly Certified by the Chamber of Commerce or Statutory Authorities, the beginning and the end of the cause of delay immediately, but in no case later than ten (10) days from the beginning and end of each cause of force majeure as defined above.</p> <p>(e) The goods shall correspond with the description of the samples of the original specification thereof in full details and must be delivered and dispatched within the stipulated time, as the case may be. Otherwise, the same shall be liable to be rejected</p>

and the Seller shall be deemed to have failed to deliver the goods in breach of the PO. The Buyer shall in that event at its sole and absolute discretion, will be entitled to either purchase such goods from other sources on Seller's account, in which case, the Seller shall be liable to pay to the Buyer any difference between the price at which such goods have been purchased and the price calculated at the rate set out in this Order or to hold the Seller liable to pay the Buyer damages for non-delivery of goods for such breach.

(f) Packing: Goods supplied against this order must be suitably and properly packed (conforming to special conditions stipulated by the Buyer, if any, for safe and/or undamaged transport by road or rail.)

4. Examination of goods: Irrespective of the fact that the goods are delivered to the Buyer by the Seller at the Seller's place or at Buyer's said office or are dispatched as per Buyer's instructions by rail or road, the goods shall always be supplied, subject to detailed inspection, at the Buyer works or such other destinations as specified in the Order for ascertaining whether the goods are in conformity with the Agreement or not and until then in no event the Buyer shall be deemed to have accepted such goods and upon any rejection of goods in question the Seller shall be deemed to have failed to deliver the concerned goods in accordance with the Agreement.

5. Rejection/ Removal of rejected goods and replacement: Buyer shall have the right to reject the goods whether in full or parts which are not delivered in accordance with the terms of the PO. within fifteen days from the receipt of the intimation from the Buyer of his rejection to accept the goods the Seller shall remove, at his own cost, the rejected goods from the Buyer's works or wherever such goods are lying. The Buyer shall not be in any way responsible for or be held liable for any loss or deterioration of the rejected goods as this shall be at the Seller's risk entirely. The Seller shall pay to the Buyer reasonable storage charges for storing such rejected goods for a period exceeding 15 days as aforesaid. Upon rejection, if the Seller fails to replace the goods with the goods acceptable to the Buyer within the contractual period then the Buyer may, solely at his discretion, exercise all or any of the following options in respect of the rejected/undelivered quantity:- a. Dispose-off the rejected goods and claim/set-off the difference between the prevailing market price and contracted price of such undelivered/rejected quantity to the Seller's account; and/or b. purchase such undelivered/rejected quantity from the open market at the prevailing market price at the risk and cost of the Seller.

6. Transit Insurance: In case insurance is not included in Seller's scope he must furnish details such as reference, Lorry Receipt, Note No., nature of packing, number of cases, gross weight net weight, train carrying the goods, value of the goods dispatched etc. immediately on dispatch to Buyer's office to take up insurance in case of goods sent by Regd... Post, the Regd. Post parcel No. should be furnished to the Buyer with a packing slip when action will be taken to insure the goods. This procedure will be adopted unless specially advised by the Buyer to the contrary.

7. Insurance: Seller agrees that during the term of its performance hereunder, it shall, at its sole cost, maintain worker's compensation insurance and other legally required insurance in accordance with and meeting requirements of applicable law.

8. Invoices: All bills/ invoices for supplies/ services made bearing registration number of the Seller should be marked to concerned Office or as mentioned in Order (quadruplicate) duly endorsed with Purchase Order, Reference Number and Date and be accompanied by advice of dispatch detailed packing list and by an appropriate certificate necessary under the GST Registration Rules and Regulations.

9. Billing Instructions: Seller must follow the billing instructions carefully and correctly to enable early settlement of his dues. Disregarding the same may involve delay in such settlement. Seller must mention the following information in his bill: (1) Vendor Code Number (2) Purchase Order Item Number (3) Material Code Number, if any. The abovementioned information will be always available in this Order sent to him. One copy of the above document is to be sent to Buyer at The Assistant Registrar, Stores and Purchase Section, Indian Institute of Science, Sir C V Raman Avenue, Bengaluru-560012 or to the address as advised by the Buyer.

10. Compliance with laws: It is clearly reiterated that the Seller is representing an Entity which is strictly complying with all the Laws of the Land as is expected generally from a Seller of a product. It is also made explicitly clear that (a) the Seller has and shall maintain as valid shall under this order strictly comply with the specifications and the requirements agreed upon. At any given point of time, the seller is obliged to produce all applicable licenses, permits, approvals, authorizations and/or or other statutory approvals required to perform its obligation/s under the PO; (b) shall at all times duly observe, perform and comply with all obligations, requirements and/ or prohibitions contained in any statutes, regulations or ordinance of any authority whether governmental or provincial, relating to or in any way affecting or regulating the respective performance of the PO by it.

11. Standard GST Clause: a. The price quoted in this PO for supply of goods shall be exclusive of any applicable Goods and Services Tax, Customs duties, or any other indirect tax as may be imposed by the Government of India from time to time. The Seller shall provide a proper invoice in the form and manner prescribed under GST Invoice Rules containing all the particulars mentioned therein. In the event that the Seller fails to provide the invoice in the form and manner prescribed under rules, Buyer shall not be liable to make any payment against such invoice. Notwithstanding anything contained anywhere in the Agreement, in the event that the input tax credit of the GST charged by Seller is denied by the tax authorities to Buyer, Buyer shall be entitled to recover such amount from the Seller by way of adjustment from the next invoice. In addition to the amount of GST, Buyer shall also be entitled to recover interest at the applicable rate and penalty, in case any penalty is imposed by the tax authorities on Buyer. b. As required by any applicable legislation, where identifiable cost savings are realised by virtue of the enactment of the GST law, those cost savings will be reflected in the calculations of the consideration under this Agreement and shall be passed on by the Seller to Buyer. c. Event of default clause – In the event that the Seller does not deposit the GST charged on the invoice issued to Buyer or such GST charged on the invoice and paid by Buyer is not reflected in online tax credit ledger on common GSTN portal of the govt. as eligible input tax credit for any reason whatsoever, this Agreement shall be liable to be terminated with immediate effect and Seller shall be liable to pay such damages as may be reasonably estimated by Buyer. In the event that the compliance rating prescribed under the GST Act, 2017 read with GST Rules, 2017 of Seller falls below prescribed level for any reason whatsoever, this Agreement shall be

liable to be terminated with immediate effect and Seller shall be liable to pay such damages as may be reasonably estimated by Buyer. d. Representation and warranties clause – The Seller represents and warrants that it shall have and maintain in effect level of compliance rating as prescribed by the govt.

12. Warranty: The Seller warrants that goods and/or services supplier shall be of the highest grade and quality unless otherwise specified; shall conform to the specifications, drawings, samples or other descriptions contained in the Order or furnished or specified by the Buyer; shall be performed in a workmanlike manner; shall be fit and sufficient for the purpose intended; shall not violate any third party intellectual property rights and shall be merchantable, of good material and workmanship and free from all the defects whether latent or patent. In case the same is found to be defective, inter-alia, in respect of materials, workmanship, design or process of manufacturing within a period 12 months after the same had been put in use or 20 months from the date of acceptance of the goods by the Buyer, whichever is earlier, the Seller shall refund the price paid by the Buyer in respect of the said goods. The Seller shall guarantee that the material Seller further agrees that all materials / goods shall be repaired or replaced as the case may be as noted in Clause 20 below. All spare parts should carry the following: a) Name of the Machine b) OEM/Party's name c) Sr. at his / her own expense. The Seller shall be liable for all costs and damages and replacements at the sole option of the Buyer. These warranties are in addition to those implied by or available at law to Purchaser and shall exist notwithstanding the acceptance and/or inspection by Purchaser of all or part of the goods or services.

13. Right of the Buyer to Set Off: In the event, the Seller fails to deliver the goods in accordance with the terms of this PO, the Buyer shall have the right to cancel the PO forthwith and claim refund of any payment made by the Buyer as advance or otherwise to the Seller under the PO. The Buyer shall also have the absolute right to withhold, adjust, and/ or set-off any payment required to be made by the Buyer to the Seller under this PO or any other PO entered into between the parties against the cost, losses, damages etc. suffered by the Buyer due to the failure of the Seller to deliver the Goods in accordance with the terms of this PO, and the Seller expressly waives any objections it may have in this respect.

14. Cancellation/Termination: The Buyer reserves the right to cancel/terminate this Purchase Order or any part thereof. The Buyer shall be entitled to rescind the Agreement wholly or in part in a written notice to the Seller if (i) The Seller fails to comply with the terms of the Purchase Order; or (ii) The Seller goes bankrupt or goes into liquidation proceedings; or (iii) The Seller fails to deliver the goods on time and / or replace the rejected goods promptly; or (iv) the Seller fails to deliver the Goods/Services of desired quality, weight, specification, drawing, layout, design, etc.; or (v) The Seller makes general assignment for the benefit of the creditors; or (vi) Receiver is appointed in respect of property of the Seller. The Buyer shall also be entitled to cancel this Order without assigning any reasons or becoming any way liable in such cancellation.

15. No Assignment: This Purchase Order shall not be assigned to any other agency by the Seller without obtaining prior written consent of the Buyer.

16. Force Majeure: Failure or omission to carry out or observe any of the stipulation or condition of the Agreement shall not give rise to any claim or be deemed a breach of the Agreement if the same shall arise from any of the following causes. viz. the imposition or restriction on Import, Acts of God. The Seller submits his acceptance of this agreement with the above conditions by acceptance of Buyer's Order even in cases where the confirmation has been made under assumption of different conditions.

17. Special Conditions: Seller will ensure that all statutes, regulations of the Central or State Government are strictly followed. Buyer shall not be liable to pay any damages/compensation due to non-compliance of these rules / regulations by Seller.

18. Arbitration: Any dispute arising out of or in connection with the agreement shall be settled by Arbitration in accordance with the Arbitration Conciliation Act, 1996. The arbitration proceedings shall be conducted in English in Bengaluru by the sole arbitrator appointed by the Buyer. The cost of arbitration shall be shared equally between the parties unless decided otherwise by the arbitrator.

19. Dispute & Jurisdiction of Bengaluru: All disputes shall be subjected to the exclusive jurisdiction of the court in Bengaluru only or as provided in the PO/Order.

20. Limitation of Liability: In no event shall Buyer be liable to Seller, or to Seller's officers, employees or representatives, or to any third party, for any indirect, consequential, incidental, special, punitive or exemplary damages of whatsoever nature (including, but not limited to, lost business, lost profits, damage to goodwill or reputation and/or degradation in value of brands, trademarks or trade names, service names or service marks, or injury to persons) whether arising out of breach of contract, warranty, tort (including negligence, failure to warn or strict liability), contribution, indemnity, subrogation or otherwise.

21. All spare parts should carry the following: a) Name of the equipment b) OEM/Party's name c) Sr. No. as per the catalogue d) Buyer's Order No. and date and e) Quantity all relevant information.

22. Works carried out in Buyer's Institution or premises by the Sellers representatives etc.: Agent representative or employees of the Seller who in pursuance of the Agreement have to work in Buyer/Owner's Institution/Premises will be subject to the rules and regulations existing in the works. The Buyer shall not be liable for any accident which may cause to the Sellers personnel.

23. Intellectual Property Rights: All drawings, specifications and other documents furnished by Buyer and the Buyer's consultants, and copies thereof furnished to the Seller, are for use solely with respect to this Order. Such drawings, specifications and other documents are to be returned to the Buyer at the completion of the Order or earlier termination of this Agreement. All drawings, specifications and other documents prepared by or for Seller in contemplation of, in the course of, or as a result of performing the work shall be deemed works for hire and all right, title and interest therein shall vest in Buyer, whether or not the Order is ultimately completed. To the extent such drawings, specifications or other documents cannot be considered, by operation of law, works for hire, Seller shall assign to Buyer all right, title and interest thereto and

all copies of such drawings, specifications and other documents shall be delivered to Buyer upon completion of the Order or earlier termination of this Agreement. Seller agrees to provide Buyer with reasonable assistance necessary to perfect Seller's interest in intellectual property created under this Agreement. This shall include, but not be limited to, the execution of documents necessary for the Copyright registration. No drawings, specifications or other documents may be used by the Seller or any Sub seller or material or equipment supplier on other projects or for additions to their Project outside the scope of the work without the specific written consent of the Buyer. The Seller, Sub suppliers, Sub-Sub suppliers and material or equipment suppliers are authorized to use and reproduce applicable portions of the drawings, specifications or other documents appropriate to and for use in the execution of their work under the contract documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the drawings, specifications and other documents prepared by or for the Buyer. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Purchaser's copyrights or other reserved rights. Any intellectual property conceived or developed during the course of the Order based upon or arising from Buyer's confidential and proprietary information shall be solely owned by Buyer. Except as expressly provided herein, no license or right is granted hereby to the Seller, by implication or otherwise, with respect to or under any patent application, patent, claims or patent or proprietary rights of Buyer.

24. The terms and conditions of this Order constitute the entire Agreement between the parties here to and changes will be binding only if the amendments are made in writing and signed by the authorized representatives of the Buyer and the Seller.

25. Risk of loss and/or damage to any goods furnished hereunder shall be upon Seller until the goods are physically delivered to Buyer's facility specified on the face of the Order and accepted by the Buyer.

26. Indemnification: Seller agrees to defend, indemnify and hold harmless the Buyer, its affiliated companies or parent companies, and their officers, employees, agents, guests, invitees and customers from and against any and all liability, loss, damage, fine, penalty, cost or expense (including attorneys' fees) by reason of any allegation, claim, action or suit, whether for death, personal injury, property damage or otherwise, arising out of (1) failure of the goods or services supplied to meet specifications or warranties or for the goods or services to be otherwise defective; or (2) any alleged or actual, direct or contributory infringement or misappropriation of any patent, copyright, trade secret or other proprietary right arising from the purchase, use or sale of such goods or services; or (3) any leak or spill of any goods while being transported or delivered to Buyer; or (4) any breach by Seller of any term or condition contained in the Order; or (5) violation of applicable laws; or (6) alleged defect in the Goods and/or packaging material, or packed Product, or due to the Goods or packaging thereof being alleged to not adhere to any standard or quality set out herein or under any applicable laws; and/or (7) the acts, omissions, or wilful misconduct of Seller's employees and subcontractors, including their agents and representatives, and all other persons performing any services under the Order with the Seller, whether or not caused in part by a party indemnified hereunder. In the event that the goods or services, in Purchaser's reasonable opinion, are likely to infringe a patent or copyright, or misappropriate a trade secret (and in any event, if a court of law finds that the goods or services, in fact, do infringe or misappropriate), then Seller shall further provide Buyer one of the following forms of relief to be chosen by Seller: (a) obtain a license on Buyer's behalf to continue to use or sell the goods or services; (b) redesign the goods or services so that they do not infringe or misappropriate; or (c) refund Buyer the price paid for the goods or services in question. In any and all claims against Buyer by any employee of Seller, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under the Paragraph shall not be limited in any way by any indemnity or limitation on the amount or type of damages, compensation or benefits payable by or for Supplier, any subcontractor, or anyone directly or indirectly employed by any of them under workers' compensation acts, disability benefit acts, or other employee benefit acts.

27. Confidentiality: Seller shall keep confidential all specifications and proprietary information furnished by Buyer or prepared by Seller in connection with the performance of the Order (including the existence and terms of the Order) and shall not divulge or use such specifications or information for the benefit of itself or any other party, except as required for the efficient performance of the Order. Upon completion of the Order, Supplier shall make no further use, either directly or indirectly, of any such specifications or information.

28. Disposal: If applicable, Seller shall at all times retain title of ownership to any and all materials, substances or chemicals not incorporated into the work that Seller or any subcontractor brings onto Buyer's premises. Seller shall be solely responsible for the handling, transportation and disposal of any and all materials, substances and chemicals. Seller or any subcontractor brings onto Buyer's premises, and any waste generated or resulting from the use thereof. Seller shall not dispose or permit the release of any materials, substance or chemical, or any waste generated or resulting from the use thereof on Buyer's premises. Seller shall handle, transport, and dispose of any and all substances and chemicals, including but not limited to hazardous wastes and substances as defined by applicable federal, state and local laws, rules, regulations, codes and ordinances.

29. Severability: If any provision of this Agreement is held to be invalid, illegal or un-enforceable, either in whole or in part, that holding will not affect the validity, legality or enforceability of the remaining provisions of this Order

30. Original Excise Gate pass must accompany each delivery for excisable goods, if applicable.

31. The Seller will not claim without our knowledge any refund from the excise authorities for the amount of Central Excise duty on the supplies made to us. The Seller shall also undertake to refund to the Buyer all money recovered by him from Govt. authorities for which he has been paid by the Buyer.

32. Unless a specific objection to each of the terms of this Purchase order is raised within 24 hours from the date of Purchase order/email under which this PO is sent, it shall be deemed to be accepted in full.

33. Supplier (Seller) Code of Integrity: The Seller/ Supplier agrees to follow code of integrity and code of conduct as prescribed by General Financial Rules 2017.

TENDER SPECIFICATION

TECHNICAL SPECIFICATION	
1. CART / LARGE VOLUME WASHER DISINFECTOR	
1	The system shall be a double-door large volume washer disinfectant with fully automated washing, chemical disinfection, rinsing, and drying programs, suitable for transport trolleys, hospital beds, operation tables, and transport containers. The system shall allow floor-level loading with a minimum load capacity of two transport trolleys or one container wash rack per cycle.
1.1	The wash chamber shall be constructed of AISI 316L stainless steel.
1.2	The system shall be provided with automatic sliding glass doors on both loading and unloading sides.
1.3	The washer disinfectant shall be capable of processing large equipment, including up to six DIN containers with lids and carts, and shall be supplied with a minimum of five (5) pre-set programs. All program parameters shall be stored and controlled through a microprocessor-based control system.
1.4	The wash chamber shall be equipped with horizontally moving spray arms on the left and right sides. Separate rinse spray arms shall be provided, independent of wash spray arms, to optimize water consumption. A dedicated spray pipe shall be provided for washing and rinsing the bottom surfaces of the load.
1.5	The built-in wash pump shall have a minimum capacity of 500 L/min and a minimum power rating of 7 kW. The pump shall be constructed of stainless steel, and wash pressure shall be monitored and controlled via a pressure sensor.
1.6	A return pump shall be provided to transfer accumulated water from the wash chamber to the drain, pre-rinse tank, wash tank, or rinse tank, as required by the selected program step. The return pump shall be made of stainless steel.

1.7	All stages of washing, disinfection, rinsing, and drying shall be fully automatic and microprocessor-controlled. A colour touchscreen operator panel shall be provided on the loading side, mounted on the side of the washer chamber, with user login/logout, user levels and authorizations, door controls, program selection, alarm acknowledgment, and language selection.
1.8	LED status displays shall be provided on both loading and unloading sides, indicating remaining cycle time, readiness for loading/unloading, and fault/error status.
1.9	Emergency stop push buttons shall be provided on both the loading and unloading sides.
1.1	The drying system shall be electrically heated and shall include a ventilator and heating element, capable of achieving a drying temperature up to 120°C. The ventilator shall have a minimum capacity of 1600 m ³ /h, and the heater shall have a minimum capacity of 33 kW.
1.11	Washing, rinsing, and drying temperatures shall be monitored using PT100 Class A temperature sensors.
2. STEAM STERILIZER - 12 STU	
1	The unit should be a fully automatic, microprocessor-controlled horizontal steam sterilizer with pre- and post-vacuum treatment. It should include loading equipment and accessories, with a minimum usable volume of more than 870 litres and 12 STU.
2	The design pressure should meet the safety standards of ASME or PED requirements.
3	The sterilizer should have an inbuilt electric steam generator.
4	The sterilizer should have double doors with fully automatic vertical sliding movement (to conserve space as per site conditions), along with door safety features.
5	A pressure monitoring system should be provided in the chamber to monitor chamber pressure before opening the door. The chamber should be completely depressurized before the door seal is retracted by vacuum.
6	The equipment manufacturer should comply with the following door safety features.

7.1	A pneumatic safety pressure switch to prevent the opening of the doors until the chamber pressure reaches room pressure.
7.2	A locking facility to ensure the door cannot be opened when the chamber is pressurized.
7.3	Steam should not be allowed into the chamber when the door is open.
7.4	The equipment run cycle should not start if the door is open or not properly locked.
7.5	A sensor or equivalent component should detect objects in front of the closing door.
8	The sterilizer should have a pneumatically based door seal gasket with a guaranteed life of more than 3,500 sterilization cycles.
9	The chamber, doors, and jacket should be made of solid, high-quality 316L stainless steel. The chamber should be jacketed to ensure temperature uniformity. The chamber floor should be slightly sloped towards an internal drain. A stainless-steel mesh strainer should protect the drain port from blockage. The chamber should be mounted on a stainless-steel framework with height-adjustable feet of ± 25 mm.
10	The sterilizer jacket and doors should be completely insulated with up to 50 mm thick chloride-free mineral wool. The insulation should be encased in a removable rigid aluminium sheet housing.
11	The sterilizer should have an inbuilt steam generator of adequate capacity, mounted under/above the sterilizer chamber, made of SS 316L grade material.
12	The steam generator should be insulated with up to 50 mm thick chloride-free mineral wool and encased in a rigid aluminium sheet housing.
13	It should have a built-in overpressure safety valve. The heating element should be made of stainless steel and include a manual blow-down valve. The heating element capacity should not be less than 60 kW.
14	The sterilizer should be supplied with two three-shelf loading racks with adjustable shelves and two fixed-height loading/unloading trolleys on each side.

15	The piping system should be made of stainless steel (SS 316 or above). All process valves should be stainless steel and pneumatically operated. All non-standard components should be non-proprietary and easily sourced. All hot pipes should be properly insulated. Only safety valves should be made of brass.
16	Electrical components, including terminals and contactors, should be housed in a tight cabinet, while other electrical components should be directly mounted on the sterilizer.
16.1	It should be relay-operated for commanding the vacuum pump and the water pump.
16.2	Circuit breakers should protect all power circuits.
16.3	An overload switch should protect the device from high overload currents.
16.4	Electrical elements, sockets, plugs, fuses, and related components should conform to IPX4 protection level and EN 60529:2001/A2:2014/AC:2019 standards.
17	The sterilizer should have a high-capacity, efficient water ring-type vacuum pump mounted on vibration isolators, connected to condensers, and provided with a low water level alarm.
18	A disposable HEPA air filter should be provided for filtering atmospheric air before entering the chamber, with separation efficiency >99.99% (H14) for particles <0.3 μm.
19	The sterilizer should be equipped with a microprocessor PLC control system with digital I/O, analog inputs, and communication ports for printer and PC.
20	The control system should include a minimum 5.5-inch color touch-panel display on the loading side and a secondary independent monitoring and documentation system in compliance with EN 285 and EN 554.
21	The operator should be able to run only type-tested cycles.
22	Access to parameter setting, calibration, servicing, and maintenance should be controlled through predefined access levels.
23	The sterilizer should have at least two temperature sensors and two pressure sensors.
24	The pressure sensor should have an accuracy of 1% over a range of 0–6 bar.

25	The control system should include a comprehensive alarm/alert system and a separate input power supply for power and control functions. A single-phase UPS should be used for control.
26	The control system should register alarms for deviations from type-tested cycles, including chamber high pressure, low water level, generator high pressure, chamber temperature sensor error, generator high temperature, and water pump timeout.
27	The control system should have an independent PLC to monitor and compare all critical parameters.
28	The control system should continuously cross-check safety systems and limits as per EN 285 standards.
29	The sterilizer should be equipped with an alphanumeric printer to print complete cycle performance data, including pressure, temperature, time, cycle numbers, and alarms.
30	If the printer runs out of paper during a cycle, the last cycle data should be printable after completion.
31	The sterilizer should have RS232 or Ethernet connectivity for networking and/or remote access.
32	The sterilizer/software should have storage capacity for a minimum of 10,000 cycles.
33	The sterilizer should include a water-saving system capable of reducing water usage by up to 90% using a cooling loop with centralized HVAC chilled water at 8°C or a dedicated chiller.
34	The sterilizer should include pre-programmed cycles for wrapped instruments (134°C), heat-sensitive materials (121°C), wrapped textiles (134°C), inbuilt and external Bowie & Dick test, automatic leak rate test, and prion cycle.
35	The vendor shall provide applicable regulatory certificates (CDSCO/CE/FDA/ISO/AERB/BIS) for the quoted model, to be enclosed with the technical bid.
36	The sterilizer should have a provision for front-door service access to minimize dead space between adjacent sterilizers.
3. STEAM STERILIZER - 18 STU	

1	The unit should be a fully automatic, microprocessor-controlled horizontal steam sterilizer with pre- and post-vacuum treatment. It should include loading equipment and accessories, with a minimum usable volume greater than 585 litres and 8 STU.
2	The design pressure should meet ASME or PED requirements.
3	The sterilizer should have an inbuilt electric steam generator.
4	The sterilizer should have double doors with fully automatic vertical sliding movement (to conserve space as per site conditions), along with door safety features.
5	A pressure monitoring system should be provided in the chamber to monitor chamber pressure before opening the door. The chamber should be completely depressurized before the door seal is retracted by vacuum.
6	The equipment manufacturer should comply with the following door safety features.
7.1	A pneumatic safety pressure switch to prevent opening of the doors until the chamber pressure reaches room pressure.
8	The door seal should be made of silicone rubber. Upon commencement of the process, the door gasket should be pneumatically pressed against the rear face of the door to ensure it remains closed during the process. It should have a lifespan of 3,600 cycles or 2–3 years.
9	The chamber, doors, and jacket should be made of solid, high-quality 316L stainless steel. The chamber should be jacketed to ensure temperature uniformity. The chamber floor should be slightly sloped towards an internal drain to facilitate drainage. A stainless-steel mesh strainer should protect the drain port from blockage by debris. The chamber should be mounted on a stainless-steel framework with height-adjustable feet.
10	The sterilizer jacket and doors should be completely insulated with up to 50 mm thick chloride-free mineral wool, keeping the autoclave cool on the outside. The insulation should be encased in a removable rigid aluminium sheet housing.
11	The sterilizer should have an inbuilt steam generator of adequate capacity, mounted under/above the sterilizer chamber, and made of SS 316L grade material.

12	The steam generator should be insulated with up to 50 mm thick chloride-free mineral wool and encased in a rigid aluminium sheet housing.
13	It should have a built-in overpressure safety valve. The heating element should be made of stainless steel and include a manual blow-down valve. To expedite the sterilization process, the heating element capacity should not be less than 60 kW.
14	The sterilizer should be supplied with two three-shelf loading racks with adjustable shelves and two fixed-height loading/unloading trolleys on each side.
15	The piping system should be made of stainless steel (SS 316 or above). All process valves should be stainless steel and pneumatically operated, controlling condensate and steam flow in and out of the chamber, operating the vacuum, and the air inlet valve for longer, trouble-free operation. All non-standard components should be non-proprietary and easily sourced. All hot pipes should be properly insulated. Only safety valves should be made of brass.
16	Electrical components, including terminals and contactors, should be housed in a tight cabinet, while other electrical components should be directly mounted on the sterilizer.
16.1	It should be relay-operated and used for commanding the vacuum pump and the water pump.
16.2	Circuit breakers should protect all power circuits.
16.4	Electrical elements, sockets, plugs, fuses, and other relevant components should conform to IPX4 protection level and EN 60529:2001/A2:2014/AC:2019 standards.
17	The sterilizer should have a high-capacity, efficient water ring-type vacuum pump mounted on vibration isolators for quiet operation. It should be connected to condensers to assist in air removal and include a low water level alarm to protect against dry run.
18	A disposable HEPA air filter should be provided for filtering atmospheric air before entering the chamber. The filter separation efficiency should be greater than 99.99% (H14) for particle sizes less than 0.3 µm.

19	The sterilizer should be equipped with a microprocessor PLC control system dedicated to sterilizer control, including digital input/output, analog measuring inputs, and communication ports for printer and PC.
20	The process should use a microprocessor-based PLC system designed for sterilization applications. The control system should include a minimum 5.5-inch color touch-panel display on the loading side, showing all process parameters graphically. A secondary independent monitoring and documentation system should continuously cross-check safety systems and timing as per EN 285 and EN 554 standards.
21	The operator should be able to run only type-tested cycles.
22	Access to parameter setting, calibration, servicing, and maintenance functions should be controlled through predefined access levels to prevent unauthorized access.
23	The sterilizer should have at least two temperature sensors and two pressure sensors.
24	The pressure sensor should have an accuracy of 1% over a range of 0–6 bar.
25	The control system should include a comprehensive alarm/alert system that automatically triggers pre-programmed information alerts (e.g., preventive maintenance schedules). Separate input power supplies should be provided for power and control functions. A single-phase UPS should be used for control.
26	In the event of any deviation in a type-tested cycle, the control system should register an alarm.
26.1	Chamber high pressure.
26.2	Low water level in the generator.
26.3	Generator high pressure.
26.4	Chamber temperature sensor error.
26.5	Generator high temperature.
26.6	Water pump operation timeout.
27	The control system should have an independent PLC to monitor and compare all critical parameters.
28	The control system should continuously cross-check the sterilizer's safety systems and limits as per EN 285 standards.

29	The sterilizer should be equipped with an alphanumeric printer that prints cycle performance data, including transition points, pressure, temperature, cycle start time, date, sterilizer number, cycle number, and alarms.
30	If the printer runs out of paper during a cycle, it should be possible to print the last cycle data after cycle completion.
31	The sterilizer should have either an RS232 or Ethernet port for network connectivity and/or remote access applications.
32	The sterilizer/software should have storage capacity for a minimum of 10,000 cycles.
33	The sterilizer should have a water-saving system capable of reducing water usage by up to 90% compared to a normal cycle, preferably using a cooling loop circuit with customer chilled water utility.
34	The sterilizer should be equipped with the following pre-programmed cycles.
34.1	Wrapped instruments, porous load – 134°C.
34.2	Heat-sensitive material (rubber, plastic), porous load – 121°C.
34.3	Wrapped goods, textile load – 134°C.
34.4	Bowie & Dick test with an integrated Bowie & Dick device to reduce daily running costs.
34.5	Automatic leak rate test.
34.6	Prion cycle.
35	Standards and Codes.
36	The quoted medical devices/equipment should have valid Indian Standards quality certification. If no Indian Standard is available, the quoted model should have valid US FDA or European CE certification.
37	The unit should preferably have front-door service access to save space and allow side-by-side installation of sterilizers.
4. WASHER DISINFECTOR	
1	Washer Disinfector with approximate gross volume of 350 litres and minimum capacity of 18 DIN trays.
2	The washer disinfector should have double-door, automatic vertical sliding doors for loading and unloading. It should be suitable for cleaning and disinfection of surgical instruments/goods, including a pre-wash stage.

3	The unit should be electrically operated with a complete water circulation pump. The wash pump capacity should be a minimum of 900 L/min. The unit should have a dryer blower pump with adjustable drying capacity and necessary valves and fittings for washing micro-instruments.
4	Washer Disinfectant Management System: Management of cycle processes, menus, and functions should be performed through a minimum 7-inch multi-colour touchscreen display with password protection. The system should include dual PLCs—one to control main parameters and another to verify functionality and safety.
5	Chamber capacity should be approximately 350 L gross volume and capable of processing a minimum of 18 DIN trays in a single process. Eighteen (18) standard DIN trays should be supplied with each washer. The chamber should be made of SS AISI 316L with electro-polished internal surfaces. Chamber edges should be free from pockets and folds to prevent bacterial growth. The chamber should be fitted with internal illumination for visibility of the washing process.
6	The washer should have the following features.
7	Facility to heat washing water to substantially reduce cycle time.
8	Use of peristaltic dosing pumps for durability and long service life.
9	Cleanable spray arms located at the top and bottom of each shelf in the chamber.
10	Wash carts equipped with cleanable spray arms between each shelf to ensure water reaches all surfaces requiring cleaning.
11	Wash carts should automatically connect to water and drying air to clean and dry the inside of tubular instruments.
12	Working temperature range should be 60°C to 93°C. The unit should have pre-programmed cycles for instruments, micro-instruments, anaesthesia instruments, containers, etc., and variable cycle parameters. A minimum of 20 programmable cycles should be available via the touchscreen display. Memory capacity should be at least 1,000 cycles.
13	Total thermal dissipation should not exceed 1,300 watts.
14	The unit should have two temperature probes for monitoring both water and air temperatures.

15	The unit should have a built-in drain cooling device.
16	Maintenance access should be from the front and rear only, avoiding lateral access. The unit should preferably have front-door service access to save space and allow side-by-side installation.
17	The washer should be equipped with independent temperature monitoring and a validation test port.
18	Provision should be available for barcode tracking, remote maintenance, networking management, and remote connection via RS232 serial port and/or Ethernet.
19	The noise level should be less than 65 dB.
20	The washer should have a built-in self-cleaning debris filter.
21	The washer should be equipped with an audible alarm to alert in case of error codes.
22	Double doors should be made of special tempered, heat-resistant glass mounted in an AISI 316L stainless steel frame. Door closure should be automatic via pneumatically driven vertical sliding movement, with interlocked doors to prevent simultaneous opening.
23	The washer should have dosing pumps for detergent, neutralizer, disinfectant, and lubrication/enzymatic cleaners. It should be capable of measuring and displaying dosing volumes (in ml) for each chemical. A dedicated compartment with a door should be provided for chemical canisters.
24	The washer should perform the following processes.
25	Pre-rinse with cold water.
26	Main wash with hot water (60°C) and detergent.
27	Final rinse with water (55°C).
28	Disinfection with hot water (93°C) and thermal disinfection with hot air drying (120°C), adjustable between 110°C and 136°C.
29	The unit should support thermal and chemo-thermal washing, with cycle validity verified through A0 calculation.
30	The unit should have an inbuilt thermal real-time printer with provision for interfacing with an external printer.

31	The washer disinfectant should be supplied with adaptable removable shelf racks, racks for anaesthesia instruments, racks for minimally invasive surgery (MIC) instruments, and full-size instrument trays. The machine should be compatible with robotic instruments currently in use.
32	The following accessories should be supplied along with the equipment.
33	Loading trolleys – 2 numbers, with integrated tub, docking device, rack locking device, and lower depositing for one rack.
34	Five-level adaptable rack for instruments, suitable for loading a minimum of 15–18 standard instrument trays, complete with required accessories – 1 number.
35	Three-level wash rack for bulk items – 1 number.
36	Wash rack for anaesthesia material with required accessories – 1 number.
37	Wash rack for minimally invasive surgery material (MIC) with required accessories – 1 number.
38	Standards and Norms.
39	The device should qualify as a medical device in accordance with MDR (EU) 2017/745.
40	The quoted medical device/equipment should have valid US FDA and/or European CE certification.
41	Safety Features: The washer disinfectant should be provided with the following safety devices.
42	Device to block door opening during cycle execution.
43	Device to block door opening while electrical resistors are operating.
44	Device for detecting overheating during washing and disinfection phases.
45	Device for detecting temperature abnormalities during washing and disinfection phases.
46	Device to prevent water emission into the chamber if the door is open or not properly closed.
47	Device to inhibit simultaneous opening of both doors.
48	Circuit breakers for motor protection.
49	Fuse and electrical protection for auxiliary electrical systems.
50	Emergency stop button for all machine functions, with reset in standby mode and restart via a new start command.

51	Sensor system for anti-flood level detection.
52	Differential protection for the electrical system related to hot water production (resistance).
53	Safety thermostat for wash chamber resistance.
54	Safety thermostat for air heating system resistance.
55	Safety thermostat for pre-heater resistors.
56	Safety thermostat for washer chamber resistors.
57	Safety thermostat for air heating system resistors.
58	Device for detecting the internal rack and automatically selecting the appropriate cycle.
59	All electrical components and panels should be IP55 protected, and the control panel should be IP22 protected. Separate input power supplies should be provided for power and control functions. A single-phase UPS should be used for control supply.
60	The unit should have a digital display of temperature, time, pressure, cycle time, elapsed time, and calculated A0 values for ease of operation.
61	Alarms: The system should have audio-visual alarms in case of errors. All alarms should display full explanatory text messages, perform self-diagnosis, and be displayed and printed. Preferably, an LED display should show remaining cycle time and illuminate red in case of errors.
62	The unit should perform self-diagnosis and check for the following alarms.
63	No supply voltage alarm.
64	Minimum/maximum washing temperature alarm.
65	No water supply alarm (hot, cold, or treated water).
66	Motor/pump overload relay alarm.
67	Temperature probe fault alarm.
68	Maximum phase time alarm (for all phases).
69	Tank temperature probe differential reading alarm.
5. FO / STEAM STERILIZER	
1	The system shall be a double door steam/formaldehyde sterilizer of at least 8 STU capacity, capable of performing steam sterilization and low-temperature formaldehyde sterilization cycles at 60°C.
2	The system shall support a low temperature sterilization method (LTSF – formaldehyde based). Details shall be specified by the vendor.

3	The system shall include a low temperature formaldehyde sterilization cycle. Cycle details shall be specified by the vendor.
4	The system shall provide defined cycle times for both steam sterilization and low temperature sterilization (LTSF).
5	The system shall be provided with a formaldehyde (FO) vaporizer. Details shall be specified.
6	The system shall include additional door heating to prevent condensate formation.
7	The system shall be equipped with a vacuum pump with gas injector to achieve lower vacuum levels.
8	The system shall include auto-start and standby functions.
9	The system shall be equipped with safety interlocks to prevent access during sterilization.
10	The system shall include overheat protection.
11	The system shall be equipped with gas sensors for monitoring formaldehyde levels.
12	The system shall include a built-in ventilation system for gas removal with efficient air exchange.
13	The system shall support an integrated gas generator or external gas source connection.
14	The system shall be environmentally friendly and shall not generate toxic by-products.
15	The system shall fully monitor operations and shall be provided with a clear LCD display and alarms.
16	The system shall be fully automatic and microprocessor-controlled, supporting horizontal steam sterilization and low-temperature formaldehyde sterilization, including pre- and post-vacuum treatment.
17	The system shall be provided with an inbuilt electric steam generator.
18	The system shall have a double door configuration with fully automatic vertical sliding doors, including door safety features.
19	The system shall be capable of processing all load types as per EN 285, including wrapped, non-wrapped, solid, hollow, and porous loads.
20	The system shall have a chamber volume of at least 550–600 litres (8 STU or more).
21	The system shall comply with EN 285 requirements applicable to large steam and low-temperature formaldehyde sterilizers.

22.1	The system shall include a chamber pressure monitoring system to ensure complete depressurization before door opening.
22.2	The chamber doors shall not open while the chamber is pressurized.
22.3	The system shall include a mechanical safety edge to stop door movement if obstructed.
22.4	A cycle shall not start if the door is open or not properly locked.
22.5	Double door interlocks shall prevent simultaneous opening of both doors.
22.6	The door seal shall be made of silicone rubber gasket, pneumatically or steam-activated to maintain sealing.
22.7	The system shall include two independent safety systems (software and hardware) to ensure doors unlock only at atmospheric pressure ± 100 mbar.
23.1	The chamber and doors shall be constructed from SS 316L, jacketed for temperature uniformity, mounted on a stainless-steel framework with height-adjustable feet, and provided with a sloped floor and internal drain with mesh strainer.
23.2	Internal corners shall be rounded to facilitate cleaning.
23.3	The sterilizer jacket shall be fully insulated with insulation enclosed in rigid removable housing. Gasket life shall be minimum two years.
23.4	The jacket shall be made of SS 316L and shall include a pressure gauge.
23.5	The inbuilt steam generator shall be of adequate capacity, made of SS 316L, mounted beneath the chamber, and provided with automatic blow-down and degassing systems.
23.6	The jacket and doors shall be insulated with up to 80 mm chloride-free mineral wool, enclosed in rigid aluminium housing.
23.7	The steam generator shall be insulated with up to 50 mm chloride-free mineral wool, enclosed in aluminium housing.
23.8	The system shall include an overpressure safety valve, stainless steel heating elements, a manual blow-down valve, and minimum 40 kW heater capacity.
23.9	The frame, piping, and process valves shall be stainless steel. Valves shall be pneumatically operated piston valves. Non-standard components shall be non-proprietary and easily sourced.

23.11	Electrical terminals and contactors shall be housed in a sealed cabinet.
23.12	The system shall include a liquid ring vacuum pump, vibration-isolated, with condensers and low-water level alarm. Pressure sensor accuracy shall be $\pm 1\%$ over 0–6 bar.
23.13	The system shall include minimum two temperature sensors and two pressure sensors, PT100/PT1000 Class A or better, with $\pm 0.1^\circ\text{C}$ accuracy.
23.14	The control system shall include comprehensive alarms and preventive maintenance alerts.
23.15	Any deviation from a type-tested cycle shall automatically generate an alarm.
24	The system shall be provided with a HEPA air filter with $\geq 99.998\%$ efficiency for particles $\geq 0.3 \mu\text{m}$.
25.1	The control system shall be microprocessor-based, with a multitouch operator interface compliant with EN 285, EN 554, FDA, and European regulations.
25.2	Password-protected access levels shall be provided. CPU execution time shall be $< 5 \text{ ms}$.
25.3	The touchscreen shall be minimum 7-inch, resolution $\geq 800 \times 480$, with non-volatile memory for at least 100 cycles, retrievable via USB/Ethernet.
25.4	The system shall display real-time cycle parameters, temperature graphs, and status bars.
25.5	The system shall include data logging and comprehensive alarm systems.
25.6	Cycle data shall be stored in compliance with EN 285, EN 554, and EN ISO 17665.
25.7	The system shall support Steam/Formaldehyde sterilization modes.
6. ENDOSCOPE WASHER DISINFECTOR	
1	Capacity: The system shall have the capacity to process at least 3 endoscopes with 7 channels simultaneously.
2	Volume: The system shall have a minimum chamber volume of 200 litres.
3	Certification & Compliance: The system shall be certified to ISO standards and shall comply with EN ISO 15883-1, EN ISO 15883-2, and EN ISO 15883-4, and shall be CE marked.

4	Application: The system shall be used for endoscopy reprocessing, suitable for both flexible and rigid endoscopes, and shall also be suitable for reprocessing of medical goods with up to 8 DIN trays (optional).
5	The system shall be provided with an ECU-based control system with status display and an inbuilt printer.
6	Chamber Quality: The washing chamber shall be constructed from AISI 316L stainless steel with a minimum thickness of 1.5 mm.
6.1	Outer Body: The external body shall be constructed from SS 304 stainless steel with a minimum thickness of 1.25 mm.
7	Dosing Pumps: The system shall be equipped with minimum two (2) dosing pumps.
8	The system shall be provided with a blower equipped with HEPA H13 filter.
9	Door: The system shall be provided with a hinged door with viewing glass.
9.1	Door Seal: The system shall be equipped with a silicone door seal.
10	Drying System: The system shall include a drying system consisting of a minimum 3.5 kW electric heater and a ventilator with minimum airflow of 150 m ³ /h.
11	The system shall support AER with high-speed drying functionality.
12	Programmes: The system shall include minimum six (6) pre-programmed cycles, with provision to create additional user-defined programmes.
12.1	Reprocessing Stages: The system shall include the following reprocessing stages.
12.1	Pressure test (Leak Test).
12.2	Pre-rinsing stage.
12.3	Cleaning stage.
12.4	Rinsing stage.
12.5	Chemo-thermal disinfection stage.
12.6	Final rinse stage.
12.7	Drying stage.
13	Operational Benefit: The system shall be capable of reprocessing different types of endoscopes from multiple manufacturers.
14	Pressure Range: The system shall operate within a minimum pressure range of 2 to 6 bar.

15	Disinfection Performance: The system shall perform thermal disinfection in accordance with A ₀ = 3000 profile.
16	Automatic Leakage Test: The system shall perform an automatic leakage test at the start of each cycle, with all channels tested.
17	Display: The system shall be provided with an LCD display with status indicators.
18	Accessories & Consumables: The system shall be supplied with a 3-level endoscopy rack with base and initial start-up detergents.
19	Adapter set- itemized list to be provided
7. ULTRASONIC CLEANER-ROBOTIC	
1	Make & Material: The ultrasonic cleaner shall be constructed from Stainless Steel 316.
1.1	Chamber Capacity: The chamber shall have a minimum capacity of more than 40 litres, suitable for cleaning surgical robotic instruments.
1.1.1	The interior of the chamber shall have a smooth corner finish to facilitate effective cleaning and ease of maintenance.
1.2	Transducer Type: The ultrasonic cleaner shall be equipped with piezoelectric ceramic transducers.
1.3	Operating Frequency: The unit shall operate at a frequency of 39 kHz ± 1 kHz and shall be provided with sweep system technology for uniform cavitation.
1.4	Heating Function: The ultrasonic cleaner shall be provided with a built-in heating element with adjustable temperature control.
1.5	Timer & Temperature Control: The unit shall be equipped with a digital control panel with adjustable timer and temperature settings.
1.6	Cycle Time: The ultrasonic cleaning cycle time shall be adjustable between 5 and 15 minutes.
1.7	Door: The cleaner shall be provided with a manually operated door constructed from Stainless Steel 304.
1.8	Safety Features: The unit shall include overheating and overloading protection mechanisms to ensure safe operation.
8. TABLE TOP STERILIZER	

1	<p>Loading & Processing: The unit shall be capable of processing all load types as specified in EN 13060, including wrapped and non-wrapped solid instruments, narrow lumens, simple lumens, and porous materials. The sterilizer shall be suitable for dental handpieces, laparoscopes, and wrapped surgical sets.</p>
1.1	<p>Capacity: The sterilizer shall have a minimum chamber capacity of 20 to 25 litres, with a rectangular or cylindrical chamber capable of accommodating minimum 3–5 stainless steel trays.</p>
1.2	<p>Chamber Construction: The chamber shall be manufactured from Stainless Steel 316 (SS 316) and shall comply with the Pressure Equipment Directive (PED) and EN 13445 standards.</p>
1.2.1	<p>The chamber shall be provided with an electrically heated jacket for pre-heating during standby mode.</p>
1.2.2	<p>The chamber shall have a working pressure of minimum 2.2 bar or better and a design pressure up to 3.8 bar.</p>
1.3	<p>Door: The sterilizer shall be provided with a hinged door.</p>
1.4	<p>Cycle Programmes: The unit shall include the following sterilization and test cycles:</p>
	<ul style="list-style-type: none"> • 134°C Wrapped
	<ul style="list-style-type: none"> • 121°C Wrapped
	<ul style="list-style-type: none"> • 134°C Flash / Rapid open instrument cycle
	<ul style="list-style-type: none"> • 134°C Textile
	<ul style="list-style-type: none"> • 134°C Prions
	<ul style="list-style-type: none"> • Test Programs: Bowie & Dick Test, Leak Test
1.5	<p>Control System: The control system shall be microprocessor-based and shall allow automatic process monitoring, fault detection, and corrective actions. The system shall provide alarms for temperature sensor failure, pressure sensor failure, and phase time-out.</p>
1.5.1	<p>The control system shall include a PLC specifically designed for sterilization applications, with CPU processor and battery backup.</p>
1.5.2	<p>The PLC shall support digital inputs/outputs, analog measurement inputs, and communication ports (COM) for printer and PC connectivity.</p>
1.5.3	<p>The unit shall operate on a 230 V, 50 Hz AC power supply.</p>

1.6	Cycle Time: The sterilization cycle time shall be 30–54 minutes for Type B wrapped instruments and 30–37 minutes for Type S unwrapped instruments.
1.7	Control Panel: The sterilizer shall be equipped with a minimum 3.5-inch LCD touchscreen control panel, located on the front right side of the unit.
9. SEALING MACHINE	
1	Description: The machine shall be a microprocessor-controlled rotary sealing unit designed for packaging of sealable pouches and reels (SBS) for hospital use.
1.1	Display & Interface: The machine shall be provided with a two-line LCD display along with a membrane keypad for user interaction.
1.2	Casing: The outer casing of the machine shall be constructed from Stainless Steel AISI 304.
1.3	Sealing Temperature: The machine shall support a maximum sealing temperature of up to 220°C.
1.4	Contact Pressure: The sealing contact pressure shall be adjustable within the range of 70 N to 130 N.
1.5	Sealing Process & Control: The sealing process shall be automatic, controlled, and reproducible. The machine shall be equipped with a microprocessor-based PLC system specifically designed for sterilization applications.
1.5.1	The control system shall include a CPU processor with battery backup, digital input/output controls, analog measuring inputs, and communication ports (COM) for printer and PC connectivity.
1.6	Power Supply: The machine shall operate on a 230 V, 50 Hz AC power supply.
1.7	Cycle Time: The cycle time shall be 30–54 minutes for Type B wrapped instruments and 30–37 minutes for Type S unwrapped instruments.
1.8	Control Panel: The machine shall be provided with a minimum 3.5-inch LCD touchscreen control panel, located on the front right side of the unit.
10. LOW TEMPERATURE HIGH SPEED STERILIZER	
1	A Low temperature hydrogen peroxide plasma/gas technology based high-speed sterilization system.
2	The sterilizer should use low temperature H ₂ O ₂ (Hydrogen Peroxide) plasma/gas sterilizer technology.
3	Should have a cycle temperature of less than 50 degrees Celsius.

4	Should be environmentally friendly and have no toxic by-products.
5	Should have a sterilization chamber with more than 150 Litres usable volume and removable shelves.
6	Should have a Microprocessor controlled system with a clear user interface for control and display of cycle phases & parameters.
7	Should have an inbuilt printer and a touch screen LCD control panel.
8	Should not require an additional Dryer Machine.
9	Should have the facility to store/upload data on Ethernet/USB port for sterilization cycle recall and printing.
10	Should be easy to install without any civil/plumbing work and should be mobile on wheels for easy movement.
11	Should be ISO, USFDA/European CE approved. The sterilizer's process has to be certified with EN ISO 14937 (certificate should be attached).
12	Should completely monitor its operations with a clear LCD display and alarms.
13	Total cycle time should not exceed 40-50 minutes. (3 cycle options)
14	The concentration of hydrogen peroxide should not exceed 50% to 60%.
15	Must be able to sterilize flexible lumened instruments with an inside diameter of 1 mm and length of 1000 mm or more without any additional accessories like a booster/adaptor. Proof of lumen claim should be attached with the bid.
16	Should be able to sterilize rigid stainless steel lumened instruments with an inside diameter of 1 mm and length of 500 mm.
17	The system should operate on single/three-phase supply with no additional requirement for civil work like plumbing, water, and drainage, etc.
18	There should be a minimum of 10 installations with performance certificates for the quoted model in India, preferably in government institutes.
19	Should be supplied with all accessories like an Incubator, Sealing machine. The machine should be provided with all the consumables needed to make the machine fully functional. The machine should be supplied with all the consumables required to run for a minimum of 200 cycles.
20	Should be supplied with printer paper and Printer Ink cartridge – 10 each.

21	Should be supplied with a minimum of six instrument trays and matching instrument tray mats (silicon) of three different sizes and lids.
22	The Sterilizer Shall Comply with CDC Guidelines for Prion Destruction, Ensuring Effective Sterilization of High-Risk Instruments
11. DATA MANAGEMENT AND INSTRUMENT TRACKING SOFTWARE FOR VARIOUS MODALITIES WITH LASER ETCHING MACHINES.	
1	Overview: The data management system software should be designed for use with CSSD (Central Sterile Services Department) machines, providing cycle and material files to the Instrument Tracking System.
2	Dashboard Features: The system should include a local dashboard displaying wash program details such as connected machines, program stages, and remaining time. The dashboard should provide a PDF report containing the most relevant cycle data and should come with a lifetime license.
3	Real-Time Data Capture: The system should capture all machine data in real time from any connected machine and transform it into well-visualized, useful information for the entire CSSD team. The system should include continuously evolving features and updates, such as e-learning modules and troubleshooting support.
4	Data Transmission: All relevant machine data should be transmitted in real time to the user's device of choice, providing CSSD management with an overview of the following:
4.1	Program progress
4.2	Sensor data
4.3	Alarms and fault messages
5	Loading data
6	ADDITIONAL REQUIREMENT FOR INSTRUMENT TRACKING SYSTEM
6.1	The vendor shall provide a comprehensive Data Management & Instrument Tracking Application Software along with all necessary hardware (except client-supplied computer systems) for seamless integration with all CSSD equipment to enable real-time status monitoring and usage tracking.

6.2	The system shall include instrument tracking, sterilization cycle management, secure real-time data transmission, dashboard monitoring, automated alerts, audit logs, and compatibility with existing hospital IT infrastructure.
6.3	The system shall be license-free, with no recurring annual license or user-based fees.
6.4	Instrument Tracking & Traceability
6.5	The system shall provide unique identification for each instrument, tray, and set using Barcode / RFID / QR code technology.
6.6	The system shall enable real-time tracking of instrument movement across all CSSD workflow stages.
6.7	The system shall support batch-wise tracking of instruments, trays, and sterile packs.
6.8	The system shall integrate seamlessly with barcode scanners, RFID readers, and QR code scanners.
6.9	Sterilization Cycle Monitoring
6.10	The system shall automatically record sterilization cycles including but not limited to Steam, Plasma/H ₂ O ₂ processes.
6.11	The system shall validate and log critical parameters such as temperature, pressure, and exposure time.
6.12	The system shall integrate with sterilizers and washer-disinfectors for automatic data capture.
6.13	The system shall record and maintain logs for Bowie-Dick tests, Vacuum Leak tests, and Biological Indicator results.
6.14	Expiry & Sterilization Efficacy Management
6.15	The system shall automatically calculate sterilization expiry dates based on defined protocols.
6.16	The system shall generate alerts for expired and soon-to-expire sterile packs.
6.17	The system shall allow configurable expiry rules for different packaging and sterilization methods.
6.18	Inventory & Stock Management
6.19	The system shall provide real-time inventory visibility of surgical instruments and consumables.
6.20	The system shall support automated stock monitoring with low-stock alerts.
6.21	The system shall enable batch-wise tracking of consumables such as wraps, chemicals, and indicators.

6. 22	The system shall integrate with the Hospital Inventory Management System (HIMS) where available.
6. 23	User & Role Management
6. 24	The system shall support multi-user login with role-based access control.
6. 25	The system shall maintain audit trails and activity logs for complete traceability and accountability.
6. 26	OT & Department Integration
6. 27	The system shall integrate seamlessly with Operating Theaters and other hospital departments.
6. 28	The system shall support automatic request generation and processing for sterilized instruments.
6. 29	The system shall provide real-time status updates to OT staff, surgeons, and nursing personnel.
6. 30	Alerts & Notifications
6. 31	The system shall generate instant alerts for failed or aborted sterilization cycles.
6. 32	The system shall provide expiry alerts for sterile instruments and packs.
6. 33	Dashboard & Analytics
6. 34	The system shall provide a real-time dashboard indicating sterilization load and process status.
6. 35	The system shall support KPI monitoring for CSSD operational efficiency.
6. 36	The system shall generate reports on instrument usage, turnaround time, and maintenance history.
6. 37	Data Security & Backup
6. 38	The system shall use encrypted databases to protect against unauthorized access and data breaches.
6. 39	The system shall support automated data backup on cloud and/or on-premise infrastructure.
6. 40	The system shall enforce role-based access control with complete activity tracking.
6. 41	Server Infrastructure
6. 42	The system shall support deployment on a dedicated server, either on-premise or virtualized.
6. 43	The server shall be quoted by the vendor as an optional item, including recommended configuration for optimal system performance.
6. 44	Workstations / Client Systems

6. 45	All desktop computers, laptops, and client workstations shall be provided by the client as required.
6. 46	The software shall be compatible with workstation specifications recommended by the vendor.
6. 47	Laser Etching Device
6. 48	A laser etching device shall be supplied by the vendor for permanent marking of instruments and trays.
6. 49	The laser etching system shall be compatible with barcode / QR code / data matrix marking requirements.
6. 50	Barcode / QR Code / RFID Devices
6. 51	The system shall support 1D and 2D barcode scanners, QR code scanners, and RFID readers.
6. 52	Handheld and wireless scanning devices shall be supplied by the vendor.
6. 53	Label Printers
6. 54	Thermal label printers shall be supplied by the vendor for printing sterilization and traceability labels.
6. 55	The printers shall support durable labels suitable for sterilization and storage environments.
6. 56	Networking Infrastructure
6. 57	Gigabit Ethernet (minimum 1 Gbps) connectivity shall be provided by the client.
6. 58	Wi-Fi connectivity for wireless access shall be provided by the client.
6. 59	Secure VPN connectivity for remote access shall be provided by the client, subject to hospital IT policies.
6. 60	Storage & Backup
6. 61	The system shall support cloud storage integration in compliance with IMSF / hospital IT policies.
6. 62	Cloud storage configuration and integration shall be provided by the vendor.
6. 63	Display & Dashboards
6. 64	Wall-mounted touchscreen displays shall be supplied by the vendor for CSSD workflow tracking.
6. 65	Large-screen dashboard displays of 43 inches or larger shall be supplied by the vendor for real-time monitoring and analytics.
12. DRYING CABINET	

1	The drying cabinet shall be a single-door, electrically operated unit suitable for drying medical instruments and accessories after washing/disinfection.
2	The internal usable chamber volume shall be approximately 600 litres or more.
3	The cabinet shall have a modular and customizable internal configuration to accommodate different types of loads.
4	The cabinet construction shall include adequate sound and thermal insulation to ensure safe and efficient operation.
5	The unit shall be controlled by a PLC-based control system for reliable and repeatable operation.
6	The cabinet shall be provided with a minimum 3.5-inch touch screen control panel for operation and information display.
7	The control system shall support multiple drying programs, with a minimum of six (6) programmable drying cycles.
8	The operating drying temperature range shall be adjustable from +30°C to +80°C.
9	The drying time shall be adjustable in the range of 20 to 180 minutes.
10	The cooling time shall be adjustable in the range of 1 to 30 minutes.
11	The display shall provide real-time indication of chamber temperature and remaining cycle time.
12	The cabinet shall be equipped with a HEPA filtration system of minimum EU13 efficiency for air circulation.
13	The system shall provide a HEPA filter condition or status indication for maintenance monitoring.
14	The cabinet shall incorporate double overheating protection to ensure operational safety.
15	The unit shall be provided with adjustable feet for proper levelling on site.
16	The cabinet shall operate on 230 V AC, single phase, 50/60 Hz power supply, suitable for standard hospital electrical infrastructure.
13. RO PLANT FOR CSSD	
1	Supply, installation, testing & commissioning of complete RO plant suitable for CSSD/medical water applications, including permeate storage tank(s).

2	System shall include pre-filtration (Sediment Filter, Activated Carbon Filter), RO membranes, post-carbon filter, UV filter, feed & high-pressure pumps, automatic dosing & antiscalant system.
3	Electrical control panel with automation (PLC/SCADA if applicable), including power cabling, terminations, earthing & lightning protection.
4	Interconnecting piping in SS 316L / SS water grade, including valves, gauges, fittings, and all necessary supports/frames for pipes, tanks, and pumps.
5	Supply, fabrication, installation, testing & commissioning of SS 316L grade feed and product water storage tanks with manholes, nozzles, level indicators, supports, and accessories.
6	RCC / concrete foundation for RO plant, including mounting supports/frames, base grouting, anchor bolts, and related civil works as per site requirement.
7	System shall supply treated water suitable for CSSD processes such as cleaning, washing, disinfection, and sterilization of medical devices.
8	Treated water quality shall comply with applicable healthcare guidelines and CSSD equipment manufacturer requirements.
9	System shall maintain required limits for dissolved solids, hardness, chlorides, silica, microbial load, and conductivity.
10	Operating pressure and flow rates shall meet simultaneous demand of connected CSSD equipment without compromising performance or water quality.
11	RO system capacity and staging shall be based on raw water quality at site and final treated water requirements of CSSD equipment.
12	Design, layout, and configuration shall be based on actual site conditions and coordinated with approved architectural and engineering drawings.
13	System shall be engineered for continuous, reliable operation with provisions to prevent contamination, scaling, and corrosion in downstream equipment.
14. HVAC – AIR CONDITIONING & VENTILATION SYSTEM	

1	Air Handling Unit (AHU-1): Supply, installation, testing & commissioning of Smart AHU. Double-skin construction with 50 mm thick PUF/PIR insulation, GI pre-coated/powder-coated casing, leakage class as per standards. Draw-through type, suitable for continuous HVAC operation. Fan: backward-curved centrifugal/plug, statically and dynamically balanced. Motor: TEFC, IE2/IE3 efficiency, VFD-compatible, 415 V \pm 10%, 50 Hz, 3-phase. Designed for 24/7 operation.
2	AHU Filtration: Multi-stage filtration including pre-filter, fine filter (~5 micron), HEPA filter for clean areas.
3	Cooling Coil: Chilled-water type, copper tubes, aluminium fins, 6–8 rows (multi-row construction), max face velocity ~2.5 m/s; final selection supported by performance calculations.
4	Hot Water Reheat Coil: Provided for precise temperature & humidity control, especially during dehumidification.
5	Condensate Drain Pan: SS-304, corrosion-resistant, thermally insulated to prevent sweating and microbial growth.
6	AHU Supports: vibration isolators, base frame, flexible connections, RA & SA volume control dampers (VCDs).
7	AHU Fans: DIDW type or centrifugal/plug, backward-curved impellers, statically & dynamically balanced, suitable for required airflow & static pressure.
8	AHU Motors: TEFC type, IE2/IE3 efficiency, VFD-compatible, 415 V \pm 10%, 50 Hz, 3-phase supply.
9	Vibration Isolation: AHUs mounted on vibration isolation supports to limit transmission of vibration and noise.
10	Air Configuration: Configured for fresh air and recirculation ratios; capable of 100% fresh air where required.
11	Chilled Water Piping: Pressure-rated, welded or flanged joints, including motorized control valve, automatic air release vent, emergency bypass, manual/isolating valves, balancing valves, strainers, pressure & temperature gauges, and cooling coil drain connection.
12	Isolation / Control Valves: Butterfly, manual or motorized, PN16 or equivalent for chilled water service.

13	Balancing Valves: Provided in chilled water circuits for hydraulic balancing & flow measurement.
14	Pressure & Temperature Monitoring: Gauges at appropriate locations for air and chilled water sides.
15	Air Distribution / Ducting: Factory-fabricated aluminium / GI ducting, IS-compliant, with flanged joints, neoprene gaskets, low-leakage sealed joints, MS supports/hangers, turning vanes, splitters, collars, access doors, and flexible connections.
16	Duct Insulation: Reflective foil insulation (8–10 mm, Reflectix-type) for internal/external ducts; closed-cell thermal insulation for chilled water lines with vapour barrier & aluminium cladding. Acoustic lining where required.
17	Volume Control Dampers: Provided within ductwork for air balancing and regulation; RA & SA VCD included.
18	Air Terminals: Supply air diffusers: powder-coated aluminium, 600×600 mm (or as specified), 4-way/perforated/laminar, with opposed blade damper, removable core. Return/exhaust grilles: powder-coated aluminium, egg-crate/fixed bar type, with optional OBD, corrosion-resistant finish.
19	Flexible Duct Connections: Provided where required, thermally insulated.
20	Electrical Panel & Controls: Microprocessor-based AHU/TFAU controller, VFDs, suitable for BMS integration, protective wiring in conduits/trays.
21	Digital Monitoring: Temperature, airflow, and system diagnostics for control and maintenance.

22	<p>Treated Fresh Air Unit (TFAU): Supply, installation, testing & commissioning. Double-skin construction, 50 mm PUF/PIR insulation, GI pre-coated/powder-coated casing, leakage class as per standards. Fan: backward-curved centrifugal/plug, statically & dynamically balanced. Motor: TEFC, IE2/IE3 efficiency, VFD-compatible, 415 V \pm10%, 50 Hz, 3-phase. Microprocessor/PID-based controller, BMS compatible. Hot water reheat coil for temperature/humidity control. Cooling coil: copper tubes, aluminium fins, 6–8 rows. Multi-stage filtration: pre-filter, fine filter, HEPA filter. Drain tray SS-304, access doors, vibration isolators, base frame, flexible connections, RA & SA VCDs. Chilled water line with motorized valve, automatic air release, pressure & temperature gauges, balancing valve, strainer, cooling coil drain, emergency bypass, isolation valves.</p>
23	<p>Exhaust Fans: Centrifugal/axial (per design), continuous duty, capacity & static per air change/negative pressure requirements. Heavy-duty 25/50 mm GI/MS powder-coated casing. Aluminium/MS impeller, statically & dynamically balanced. TEFC motor, IP55, IE2/IE3, low noise & vibration, suitable for hospital application. Electrical: power/control cabling, starter/control panel with protections, local isolator, earthing, FRLS copper cables.</p>
24	<p>System Installation & Configuration: Designed, installed, and commissioned as per approved drawings and site conditions. Complete HVAC system shall meet required airflow, temperature, humidity, and ventilation criteria appropriate for intended occupancy.</p>
20	<p>Volume control dampers shall be provided within ductwork for air balancing and regulation.</p>
21	<p>Supply, return, and exhaust air terminals shall be aluminium grilles/diffusers with surface finish suitable for occupied areas.</p>
22	<p>Flexible duct connections shall be provided where required, with thermal insulation suitable for HVAC applications.</p>
23	<p>Acoustic lining or thermal insulation shall be provided inside ducts where indicated to control noise and heat gain/loss.</p>
24	<p>External duct insulation shall be closed-cell thermal insulation of suitable thickness, with vapour barrier and protective cladding.</p>

25	Chilled water piping insulation shall be pre-moulded insulation sections of adequate thickness, with vapour barrier and external aluminium cladding.
26	AHUs shall be provided with electrical panels incorporating variable frequency drives (VFDs) and appropriate control logic.
27	Control and power cabling for AHUs shall be provided, routed in suitable conduits or trays.
28	Motorised actuators shall be provided for control valves and dampers as required.
29	Digital temperature indication and monitoring shall be provided for system control and diagnostics.
30	Variable Air Volume (VAV) boxes shall be of leak-resistant construction, suitable for precise airflow modulation.
31	VAV boxes shall incorporate integrated controllers with pressure sensing and airflow measurement capability.
32	VAV systems shall be capable of interfacing with temperature sensors and occupancy sensors where required.
33	Space temperature control shall be through wall-mounted or ceiling-mounted thermostats, with set-point adjustment capability.
34	Communication and control cabling between VAV boxes, thermostats, and supervisory controllers shall be provided in protective conduits.
35	A microprocessor-based controller shall be provided for AHU operation, monitoring, and safety interlocks.
36	Equipment supports shall be fabricated from mild steel sections, properly primed and epoxy painted for corrosion protection.
37	The complete HVAC system shall be designed, installed, and configured in accordance with approved drawings and site conditions.
38	System performance shall meet required airflow, temperature, humidity, and ventilation criteria appropriate for the intended occupancy and usage.
WORKFLOW ITEMS	(Vendor may optimize design and quantity without compromising functionality or durability, subject to approval for all workflow items as per CSSD design.)
15. WORKTABLE WITH ACCESSORIES	

	1. The work table shall be suitable for inspection, sorting, and handling of wet and dry goods in heavy-duty CSSD areas and shall be ergonomically usable in sitting and standing positions.
	2. The table shall be of rigid SS 304 construction with minimum 1.2 mm thick matt-finish worktop, seamless edges, reinforced structure, and hygienic design free from sharp corners.
	3. The worktop shall be supported on a stable floor-mounted stainless-steel frame with horizontal bracing and adjustable levelling feet; provision for future castor mounting shall be available.
	4. The design shall provide unobstructed operator access and facilitate effective floor cleaning.
	5. Provision for removable shelf mounting, integrated inspection opening, and permanent identification marking shall be provided.
	6. The offered design shall ensure strength, hygiene, load-bearing capacity, and suitability for the intended application.
16. SLOPE HOPPER WITH ACCESSORIES	
	1. Wall-mounted stainless-steel slope hopper suitable for hygienic disposal of soiled fluids with continuous flushing arrangement and hand spray.
	2. Heavy-gauge SS 304 construction with seamless curved bowl, raised edges, and minimum 300 mm backsplash for infection control.
	3. Minimum 1.2 mm thick matt-finish work surface with reinforced edges and corrosion-resistant fabrication.
	4. Concealed plumbing, trap connection, and wall-mounting arrangement allowing unobstructed floor cleaning.
	5. Integrated inspection opening and permanent identification marking shall be provided.
	6. The unit shall ensure flushing efficiency, hygiene, and durability.
17. INSTRUMENT WASHING SINK – 3 SINK UNIT	
	1. Triple-bowl stainless-steel sink suitable for surgical instrument washing workflow with adequate capacity for modular trays.
	2. Heavy-gauge SS 304 construction with seamless bowls, minimum 150 mm backsplash, reinforced edges, and hygienic design.

	3. First sink with drain valve, overflow, water trap, and volume scale; remaining sinks for rinsing and secondary washing.
	4. Sink mixers with extended swivel spouts, multi-flow spray, perforated trays, flexible tool-free plumbing, and provision for air/water guns.
	5. Stable floor-mounted frame with levelling feet, integrated inspection opening, and permanent identification marking.
	6. The unit shall ensure washing efficiency, ergonomics, and structural stability.
18. ULTRASONIC CLEANER TABLE	
	1. Stainless-steel table suitable for placement and operation of ultrasonic cleaning equipment in CSSD.
	2. Minimum 1.2 mm thick matt-finish worktop with vibration-dampening provision and reinforced seamless edges.
	3. Rigid structural support with floor-mounted SS frame and adjustable levelling feet; provision for future castors.
	4. Open design for operator ergonomics and effective floor cleaning.
	5. Integrated inspection opening and permanent identification marking.
	6. The unit shall ensure vibration stability, hygiene, and adequate load capacity.
19. AIR GUN WITH ONE-TOUCH CONNECTOR	
	1. Air gun suitable for instrument cleaning with user-controlled airflow and working pressure up to approximately 10 bar.
	2. Supplied with minimum 5 m coiled polyurethane hose and quick-connect fittings.
	3. Lightweight, ergonomic, and impact-resistant construction suitable for healthcare use.
	4. Tool-free detachable connections for frequent cleaning and maintenance.
	5. Provision for mounting on instrument washing sink support arm.
	6. The unit shall ensure safety, airflow control, and durability.
20. RINSING GUN WITH ACCESSORIES (WATER MEDIA)	

	1. Water-operated rinsing gun with flexible hose and interchangeable cleaning attachments suitable up to approximately 10 bar.
	2. Automated dosing system with adjustable concentration, sink capacity selection, temperature monitoring, and soaking time control.
	3. Control interface for operation and parameter adjustment.
	4. Integrated eyewash attachment with dual low-pressure spray and filtration, mountable on instrument washing sink.
	5. Quick-connect, tool-free plumbing suitable for healthcare use.
	6. The unit shall ensure dosing accuracy, rinsing performance, and operator safety.
21. DIN TRAY FOR INSTRUMENTS	
	1. SS 304 modular DIN tray for all CSSD processing stages.
	2. Brushed finish with rigid and stackable construction.
	3. Wire mesh configuration for effective cleaning and rapid drainage without instrument protrusion.
	4. Foldable handles with provision for optional lockable lid.
	5. Dimensional stability under repeated washing, disinfection, sterilization, and transport.
	6. The tray shall ensure compatibility and long-term durability.
22. SS 304 HAND WASH SINK	
	1. Deep stainless-steel sink suitable for utility areas with wall-mounted installation.
	2. Heavy-gauge SS construction with approximately 350 mm backsplash and satin finish.
	3. Elbow-operated tap for hands-free operation.
	4. Flexible tool-free plumbing, waste outlet, and provision for soap/disinfectant holder.
	5. The unit shall ensure hygiene and structural integrity.
23. JANITOR SINK	
	1. Floor-mounted stainless-steel janitor sink suitable for housekeeping operations.
	2. Heavy-gauge SS construction with sink mixer and standard waste connection.
	3. Stable SS frame with adjustable levelling feet and provision for future castors.

	4. Flexible quick-connect plumbing for maintenance.
	6. The unit shall ensure durability and functionality.
25. PASS BOX	
	1. Wall-mounted SS pass box with electrical door interlocking for controlled material transfer.
	2. Seamless hygienic internal construction with viewing panel and internal illumination.
	3. UV disinfection light interlocked with door operation.
	4. SS architraves, support brackets, and installation accessories.
	5. The unit shall ensure safety interlock and hygiene.
26. SS MESH RACKS	
	1. Modular SS 304 shelving system for sterile storage with interchangeable mesh shelves and one solid shelf.
	2. Satin-finish hygienic TIG-welded construction with minimum 20 kg load capacity per shelf.
	3. Adjustable shelf positioning with defined pitch and polymer levelling bases.
	4. Reusable shelf identification labels.
	5. Integrated material test take-outs and permanent identification marking.
	6. The unit shall ensure load capacity and modularity.
27. SS INSTRUMENT TROLLEY	
	1. The trolley shall be constructed from SS 304 with two shelves and guard rails on the top shelf.
	2. The unit shall be mounted on four hospital-grade swivel castors, two with brakes.
	3. The trolley shall have adequate load-bearing capacity for CSSD material handling.
	4. The construction shall be rigid, corrosion-resistant, and hygienic with satin finish.
	5. The design shall permit smooth mobility and easy cleaning.
	6. Permanent identification marking shall be provided.
28. CONTROL & PACKING TABLE	
	1. The table shall be made of SS 304 with minimum 1.2 mm thick matt-finish worktop.

	2. The unit shall be provided with upper and lower shelves and basket hanging provision.
	3. Integrated LED inspection light shall be provided.
	4. Provision for electrical and data sockets shall be included.
	5. The table shall be mounted on castors for mobility and ergonomic access.
	6. The unit shall ensure adequate illumination, load capacity, and hygienic design.
29. INSPECTION LAMP WITH MAGNIFIER	
	1. The inspection lamp shall have an articulated arm with integrated magnifier.
	2. The optical lens shall provide magnification in the range of approximately 3x–15x.
	3. The unit shall be suitable for clamp mounting on stainless-steel worktables.
	4. Minimum 1.5 m power cord shall be provided.
	5. The lamp shall ensure clear illumination and flexible positioning.
30. TAPE DISPENSER	
	1. The tape dispenser shall be constructed from SS 304 suitable for twin-roll operation.
	2. The base shall be heavy-duty and anti-slip.
	3. Replaceable stainless-steel cutting teeth shall be provided with spare sets.
	4. The construction shall be hygienic and corrosion-resistant.
	5. The unit shall ensure stable operation and clean cutting.
	31. PAPER TROLLEY FOR WRAP STORAGE
	1. The trolley shall be made of SS 304 for storage of sterilization wrap rolls.
	2. Individual roll holder clips shall be provided.
	3. Mesh bottom platform shall be included for additional storage.
	4. The trolley shall be mounted on four swivel castors, two with brakes.
	5. Push handle for manoeuvrability shall be provided.
32. PACKING TABLE FOR TYVEK POUCH	
	1. The table shall be constructed from SS 304 with minimum 1.2 mm thick matt-finish worktop.
	2. Upper and lower shelves with basket hanging provision shall be provided.

	3. Height-adjustable reel holder arms shall be included.
	4. Integrated LED task light, electrical sockets, and one data socket shall be provided.
	5. The unit shall be mounted on four hospital-grade castors, two with brakes.
	6. Integrated inspection opening and permanent identification marking shall be provided.
33. HAND-HELD LABELLER WITH ACCESSORIES	
	1. The labeller shall support three-line printing with alphanumeric characters and date coding.
	2. Label size shall be approximately 25 mm × 31 mm.
	3. The operation shall be manual squeeze-and-release type.
	4. Disposable ink roller shall be provided.
	5. Labels compatible with steam and EO sterilization shall be supplied.
	6. The unit shall ensure clear print quality and ease of use.
34. REEL DISPENSER WITH BUILT-IN CUTTER – FOR TYVEK POUCH	
	1. The reel dispenser shall be constructed from SS 304 with integrated cutter.
	2. The unit shall support single or dual reel configuration.
	3. Replaceable high-quality cutting blade shall be provided.
	4. Bidirectional cutting facility with integrated measuring scale shall be available.
	5. The design shall be compact, stable, and hygienic.
35. SS 304 HEIGHT-ADJUSTABLE REVOLVING CHAIR	
	1. The revolving chair shall be constructed from SS 304 without armrests.
	2. Ergonomically designed seat with smooth height-adjustment and auto-locking mechanism shall be provided.
	3. The base shall have five hospital-grade castors.
	4. The design shall be hygienic and suitable for frequent cleaning and disinfection.
	5. The chair shall ensure stability and durability.

36. BASKET RACK WITH ACCESSORIES	
	1. The basket rack shall be modular and constructed from SS 304.
	2. Sliding basket support frames shall be provided.
	3. Adjustable polymer levelling bases shall be included.
	4. Provision for future wheel mounting shall be available.
	5. Swivel castors with and without brakes shall be provided where mobility is required.
	6. The unit shall ensure adequate load capacity and structural strength.
37. STERILIZATION WIRE BASKET	
	1. The wire basket shall be constructed from SS 304 suitable for all sterilization processes.
	2. The surface shall be satin finish compatible with repeated washing and disinfection.
	3. The basket shall be stackable.
	4. The construction shall maintain dimensional stability under load.
	5. All edges shall be smooth for instrument and user safety.
	6. The basket shall ensure long-term durability.
38. BASKET TROLLEY	
	1. The trolley shall be heavy-duty SS 304 construction.
	2. The platform shall have adequate load-bearing capacity.
	3. Swivel castors for movement and castors with brakes for parking shall be provided.
	4. The design shall be hygienic and suitable for cleaning and disinfection.
	5. The trolley shall ensure stability and smooth mobility.
39. BUS TRANSPORT TROLLEY	
	1. The trolley shall be constructed from SS 304 for transport of stackable baskets in single-file configuration.
	2. Removable full-coverage washable and sterilizable cover shall be provided.
	3. Swivel castors and braked castors shall be included.

	4. The design shall be compact and suitable for CSSD transport routes.
	5. The trolley shall ensure safe transport and adequate capacity.
40. SS STORAGE CABINET WITH GLASS DOORS	
	1. The cabinet shall be constructed from SS 304 with glass doors for visual inspection.
	2. Adjustable load-bearing shelves shall be provided.
	3. Multi-point locking system shall be included.
	4. Removable sloping top canopy shall be provided for hygiene.
	5. Floor-mounted structure with adjustable levelling bases shall be supplied.
	6. The cabinet shall ensure secure and hygienic storage.
41. CLOSED TRANSPORT TROLLEY	
	1. The trolley shall be constructed from SS 304 with double-walled doors.
	2. Doors shall have wide opening and secure locking arrangement.
	3. Adjustable internal shelving with slotted rails shall be provided.
	4. Swivel castors with braking facility shall be included.
	5. The design shall ensure hygienic and safe transport to fit the transport lift
42. LINEN INSPECTION TABLE	
	1. The table shall be made of SS 304 with illuminated inspection area and diffuser.
	2. The worktop shall be ergonomically suitable for sitting and standing operation.
	3. Reinforced seamless edges shall be provided.
	4. Floor-mounted frame with levelling bases and provision for castors shall be included.
	5. The unit shall ensure uniform illumination and structural rigidity.
43. CHANGE LOCKER	
	1. The locker shall be multi-compartment type for personnel storage.
	2. The construction shall be pre-treated and powder-coated steel.

	3. Individual lockable compartments shall be provided.
	4. Ventilated design suitable for healthcare environment shall be ensured.
	5. Permanent identification marking shall be provided.
44. SS 304 SHOE RACK	
	1. The shoe rack shall be constructed from SS 304 with multiple tiers.
	2. The design shall be corrosion-resistant and hygienic.
	3. Dimensions shall be suitable for standard footwear storage.
	4. The rack shall ensure adequate load capacity and easy cleaning.
45. WASTE BIN	
	1. The waste bin shall be constructed from stainless steel with adequate capacity.
	2. Foot-operated lid for hands-free operation shall be provided.
	3. The construction shall be hygienic and easy to clean.
	4. The base shall be stable for frequent use.
	5. Corrosion-resistant finish shall be provided.
46. SS REMOVABLE WALL CLADDING FOR CSSD	
	1. The wall cladding shall be constructed from SS 304 with matt finish.
	2. Panels shall be custom-designed with minimum joints and seamless appearance.
	3. Concealed fixing system with suitable sub-structure shall be provided.
	4. The design shall permit removal for maintenance.
	5. Integrated inspection opening for material testing shall be included.
	6. The cladding shall ensure rigidity, cleanability, and proper alignment.

Note: Where datasheet references are not available for any quoted parameter, the bidder shall submit appropriate supporting documents, including product brochures, user manuals, service manuals, technical offers, or a formal declaration confirming that all stated features and functionalities will be demonstrable during Installation, Testing, and Handover (ITC) of the system. All submitted documents shall be clearly identified, cross-referenced, and traceable, with explicit mention of document name, page number, and clause/reference for verification.

The supplier shall demonstrate full compliance with all technical specifications, performance parameters, features, and capabilities stated, quoted, claimed, or implied in the bid—whether in compliance statements, technical documents, brochures, datasheets, or any other submitted material—during ITC. Any failure or partial inability to demonstrate any quoted specification shall be treated as technical non-compliance, and the equipment may be rejected and removed from the site.

ANNEXURE 1 – ADDITIONAL REQUIREMENTS FOR ALL EQUIPMENT

Sl. No.	Additional Requirement
1	The procurement and supply of equipment shall be executed in a phased manner, subject to the requirements and priorities determined by the Client. The sequence, timelines, and quantity for each phase will be communicated in writing at the time of order placement. The Vendor shall comply with these directives and ensure timely readiness for supply, installation, and commissioning as per the approved phased plan.
2	The vendor shall supply middleware for integration of medical equipment with the Hospital EMR to ensure interoperability.
3	The vendor shall indicate the availability of AI-based features, wherever applicable, to enhance workflow efficiency for the quoted medical equipment.
4	The bidder shall provide a Rate Contract for a period of three (3) years from the date of supply / installation / commissioning, covering system-specific consumables and accessories.
5	A complete itemized list of all consumables and accessories, including model / reference numbers and unit of measurement, shall be submitted as part of the Technical Offer (without prices) .
6	The corresponding unit prices for the consumables and accessories shall be submitted only in the Commercial Offer .
7	The vendor shall specify the country of origin for all quoted models.
8	The bidder shall submit detailed architectural layout drawings in PDF format for the purpose of vendor selection. The layouts shall be complete in all respects and suitable for technical evaluation.
9	The successful bidder shall submit detailed architectural layouts along with complete MEP (Mechanical, Electrical and Plumbing) drawings , fully aligned with the Client's site conditions and approved drawings. All drawings shall be submitted in editable AutoCAD and PDF formats for review and approval.
10	CSSD validation and testing after commissioning shall be within the scope of the vendor.
11	The bidder shall visit the site and familiarize themselves with the existing site conditions, available utilities, access, and working constraints prior to submission of the bid. The bid shall be deemed to have been submitted after such assessment, and no claims arising due to lack of understanding of site conditions will be considered at a later stage. The successful bidder shall provide an undertaking that no demolition/alteration in the civil work within the area handed over to them.
12	The bidder shall comply with all applicable rules, regulations, and statutory requirements governing the project, including those followed by the Client, the Project Management / Project Consultant, and the relevant local regulatory authorities. The Vendor shall adhere to all applicable labour laws, safety norms, and site-specific protocols. The Vendor shall regularly attend review and coordination meetings as required by the Client / Project Consultant and shall deploy a dedicated, qualified Project Engineer for effective planning, coordination, execution, supervision, and timely completion of the works. All activities shall be carried out in alignment with the approved project procedures, reporting systems, and site guidelines.

ANNEXURE:2 SCOPE OF WORK

GROUP	SCOPE OF WORK	RESPONSIBILITY (VENDOR/CLIENT)	REMARKS
CIVIL & INTERIOR	ALL WORKS WITHIN THE TURNKEY PERIMETER	VENDOR SCOPE	NOTE: UNLESS SPECIFICALLY EXCLUDED IN THE SCOPE, SUCH AS MGPS, FIRE FIGHTING AND DETECTION, & ELV ETC
	FLOOR & WALL	VENDOR SCOPE	FLOOR LEVELING AND FINISHING IS UNDER THE SCOPE OF TURNKEY VENDOR.
	GLASS PARTITION	VENDOR SCOPE	AS APPLICABLE
	WALL PANELLING	VENDOR SCOPE	AS APPLICABLE
	FALSE CELING	VENDOR SCOPE	AS APPLICABLE
	OUTER WALLS GLAZING WORK	CLIENT SCOPE	AS APPLICABLE
	OUTER WALLS WITH PLASTERING AND PAINTING	CLIENT SCOPE	AS APPLICABLE
	INNER WALLS WITH PLASTERING AND PAINTING	VENDOR SCOPE	AS APPLICABLE
	PAINTING	VENDOR SCOPE	AS APPLICABLE
	WINDOWS	VENDOR SCOPE	AS APPLICABLE
	DOORS	VENDOR SCOPE	REFER RDS
ELECTRICAL	POWER, LIGHTING & EARTHING	VENDOR SCOPE	<p>CLIENT WILL PROVIDE THE MAIN CABLE LINE TO THE TURNKEY VENDOR DISTRIBUTION PANEL. VENDOR TO DEFINE LOAD REQUIREMENTS AND CABLE SIZES.</p> <p>ELECTRICAL WORK: ALL ELECTRICAL WORK REQUIRED FOR COMMISSIONING AND INSTALLATION, INCLUDING CABLES, OUTLETS, SWITCHES, MCBS, AND ANY OTHER NECESSARY EQUIPMENT, TO BE FIREPROOF AND CERTIFIED FOR ELECTRICAL SAFETY.</p> <p>ISOLATOR WITH CABLE FROM THE MAIN PANEL IN ELECTRICAL ROOM TO TURNKEY AREA WILL BE PROVIDED BY THE CLIENT.</p>
PLUMBING	PLUMBING WORK (SUPPLY, DISTRIBUTION & DRAIN)	VENDOR SCOPE	<p>PLUMBING WORK MUST CONNECT TO THE CLIENT'S MAIN DRAIN. VENDOR TO DETAIL TRENCH REQUIREMENTS AS APPLICABLE. CLIENT IS RESPONSIBLE FOR SLAB EXECUTION. TREATED WATER AT SHAFT LOCATION PROVIDED BY CLIENT, FURTHER CONNECTIONS UNDER VENDOR SCOPE.</p> <p>RO PLANT AND DE IONISED WATER TREATMENT PLANT FOR THE ANALYZER WILL BE UNDER THE SCOPE OF TURNKEY VENDOR AS REQUIRED</p> <p>WATER & DRAINAGE: INSTITUTE WILL PROVIDE ONE-POINT DRAINAGE, AND WATER SUPPLY AT THE LAB; FURTHER DISTRIBUTION IS THE BIDDER'S RESPONSIBILITY.</p> <p>R.O. WATER SYSTEM: THE DESIGN OF THE SYSTEM SHOULD ACCOMMODATE FUTURE SCALABILITY FOR ADDITIONAL RO EQUIPMENT IF REQUIRED.</p>

HVAC	AIR CONDITIONING, AHU	VENDOR SCOPE	<p>VENDORS SCOPE (DESIGN, SUPPLY, EXECUTION AND COMMISSIONING)</p> <p>INCLUDING PLACEMENT OF AHU WITH CONSIDERATION OF ACOUSTIC NOISE REDUCTION</p> <p>AIR FILTRATION SHOULD BE IN LINE WITH ASHRAE STANDARDS OR BETTER</p> <p>HVAC SYSTEM: DESIGN OF HVAC, INCLUDING DUCTING AND EXHAUST SYSTEMS</p> <p>CHILLED WATER TERMINATION WILL BE GIVEN AS THE DEFINED LOCATION GIVEN BY TURNKEY VENDOR TO CLIENT, CONNECTION OF AHU WILL BE UNDER THE TURNKEY VENDORS SCOPE.</p> <p>VENDOR IS TO CONNECT EXHAUST DUCT TO COMMON DUCT OF CLIENT.</p>
MGPS	MEDICAL GAS WORK	CLIENT SCOPE	<p>CLIENT TO PROVIDE MGPS TERMINATION WITH ISOLATION VALVES. CONNECTING TO THE CSSD EQUIPMENT WILL BE UNDER THE SCOPE OF THE VENDOR.</p> <p>NIST (NON-INTERCHANGEABLE SCREW THREADED) CONNECTORS TO BE PROVIDED BY VENDOR FOR CONNECTING TO CLIENTS MGPS PIPELINE</p> <p>INTEGRATION AND CONNECT TO EQUIPMENT FROM ISOLATION VALVE/OUTLET WILL BE UNDER VENDOR SCOPE</p>
ELV	NETWORKING AND DATA BOARDS	CLIENT SCOPE	TURNKEY VENDOR TO SPECIFY REQUIRED NETWORK PORT LOCATIONS. THE VENDOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY TECHNICAL INPUT AND OVERSEEING THE EXECUTION BY THE CLIENT'S ONBOARD CONTRACTOR.
	CCTV FOR CENTRAL MONITORING	CLIENT SCOPE	TURNKEY VENDOR TO SPECIFY REQUIRED PORT LOCATIONS. THE VENDOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY TECHNICAL INPUT AND OVERSEEING THE EXECUTION BY THE CLIENT'S ONBOARD CONTRACTOR.
	CCTV FOR WORKFLOW	VENDOR SCOPE	CCTV CAMERAS SHALL BE INSTALLED AT KEY LOCATIONS, INCLUDING IN FRONT OF THE DIRTY LIFT (TO MONITOR ANY DAMAGED ITEMS), THE SORTING AREA IN THE DIRTY ZONE, THE PACKING AREA IN THE CLEAN ROOM, AND THE DISPATCH AREA IN THE STERILE ROOM. THE CSSD MANAGER SHALL HAVE A DEDICATED CCTV MONITOR TO OVERSEE OPERATIONS AND ENSURE FUNCTIONALITY WITHIN EACH AREA.
	INTERNET CONNECTION	CLIENT SCOPE	<p>VENDOR TO RECOMMEND LAYOUT; CLIENT TO EXECUTE BASED ON APPROVED DESIGNS. NECESSARY OPENINGS IN FALSE CEILING TO BE PROVIDED BY THE VENDOR.</p> <p>THE VENDOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY TECHNICAL INPUT AND OVERSEEING THE EXECUTION BY THE CLIENT'S ONBOARD CONTRACTOR.</p>

FIRE	FIRE DETECTION SYSTEM	CLIENT SCOPE	<p>INCLUDES PIPE ROUTING AND PLACEMENT OF SPRINKLERS/DETECTORS. CLIENT TO EXECUTE AS PER APPROVED VENDOR DESIGN.</p> <p>THE VENDOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY TECHNICAL INPUT AND OVERSEEING THE EXECUTION BY THE CLIENT'S ONBOARD CONTRACTOR.</p>
	FIRE SUPPRESSION SYSTEM (WATER BASED)	CLIENT SCOPE	<p>INCLUDES PIPE ROUTING AND PLACEMENT OF SPRINKLERS/DETECTORS. CLIENT TO EXECUTE AS PER APPROVED VENDOR DESIGN AS APPLICABLE.</p> <p>THE VENDOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY TECHNICAL INPUT AND OVERSEEING THE EXECUTION BY THE CLIENT'S ONBOARD CONTRACTOR.</p>
INTERIOR	MEDICAL FURNITURE	VENDOR SCOPE	AS APPLICABLE
	FIXED FURNITURE (CUPBOARDS, ETC.)	VENDOR SCOPE	AS APPLICABLE
	LOOSE FURNITURE (CHAIRS)	VENDOR SCOPE	SHOULD ALIGN WITH IMSF (ON BEHALF OF IISC) BRANDING REQUIREMENT BRANDING
	SIGNAGE	VENDOR SCOPE	AS APPLICABLE
	WORKFLOW ITEMS	VENDOR SCOPE	LOCATION OF TERMINATION POINT TO BE PROVIDED BY VENDOR
OTHERS	PNEUMATIC CHUTE SYSTEM	CLIENT SCOPE	

ANNEXURE 3: SCOPE OF SUPPLY (FOR TECHNICAL BID)

SN	ITEM NAME (WITH ALL STANDARD ACCESSORIES AND CONSUMABLE)	REMARKS	QTY (NOS/UOM)	VENDOR CATALOGUE NUMBER	STANDARD/OPTIONAL	REMARKS (VENDOR ARE REQUESTED TO MAP THEIR ITEMS IN THEIR PROFORMA INVOICE WITH ENCLOSED LINE ITEMS)	QUOTE REFERENCE:SN)	QUOTE PAGE REFERENCE IF APPLICABLE)
1	CART / LARGE VOLUME WASHER DISINFECTOR		1		STANDARD			
2	STEAM STERILIZER -12 STU	SCALABILITY TO 5TH MACHINE TO BE QUOTED AS OPTIONAL-INSTALLATION TO BE DONE IN PHASED MANNER	2		STANDARD			
3	STEAM STERILIZER 2NOS-8 STU		2		STANDARD			
4	WASHER DISINFECTOR-18 DIN TRAY	SCALABILITY TO 4TH MACHINE TO BE QUOTED AS OPTIONAL-INSTALLATION TO BE DONE IN PHASED MANNER	3		STANDARD			
5	FO / STEAM STERILIZER		1		STANDARD			
6	ENDOSCOPE WASHER DISINFECTOR		1		STANDARD			
7	ULTRASONIC CLEANER-ROBOTIC		2		STANDARD			
8	TABLETOP STERILIZER		5		STANDARD			

9	SEALING MACHINE		3		STANDARD			
10	LOW TEMPERATURE HIGH SPEED STERILIZER	AT LEAST 2 MACHINE, SCALABILITY TO 2ND MACHINE TO BE QUOTED AS OPTIONAL	2		STANDARD			
11	DATA MANAGEMENT AND INSTRUMENT TRACKING SOFTWARE FOR VARIOUS MODALITIES WITH LASER ETCHING MACHINES.		1		STANDARD			
12	DRYING CABINET		1		STANDARD			
13	RO PLANT FOR CSSD WITH SUPPORTING ITEMS		LOT- AS PER DESIGN AND SITE VISIT BY VENDOR		STANDARD			
14	HVAC – AIR CONDITIONING & VENTILATION SYSTEM-DUCTING AND INTEGRATION		LOT- AS PER DESIGN AND SITE VISIT BY VENDOR		STANDARD			
15	WORKTABLE WITH ACCESSORIES		5		STANDARD			
16	SLOPE HOPPER WITH ACCESSORIES (FOR EMPTYING ANY BODY FLUIDS FROM CONTAINER)		2		STANDARD			
17	INSTRUMENT WASHING SINK – 3 SINK UNIT		2		STANDARD			
18	ULTRASONIC CLEANER TABLE WITH ACCESSORIES FOR 2 US CLEANER		1		STANDARD			
19	AIR GUN WITH 1/2" ONE TOUCH CONNECTOR		2		STANDARD			
20	RINSING GUN WITH ACCESSORIES - SPECIFICALLY FOR WATER MEDIA		2		STANDARD			
20.1	AUTOMATED SINK DOSING SYSTEM		2		STANDARD			

20.2	EYE WASH STATION		2		STANDARD			
21	DIN TRAY FOR INSTRUMENTS		60		STANDARD			
22	SS 304 SINK - HAND WASHING		1		STANDARD			
23	JANITOR SINK WITH ACCESSORIES		1		STANDARD			
24	PASS BOX		6		STANDARD			
25	STAINLESS STEEL MESH RACK WITH ACCESSORIES-TYPE		55		STANDARD			
26	SS304 INSTRUMENT TROLLEY		2		STANDARD			
27	CONTROL & PACKING TABLE		4		STANDARD			
28	INSPECTION LAMP WITH MAGNIFIER		4		STANDARD			
29	TAPE DISPENSOR		4		STANDARD			
30	PAPER TROLLEY FOR STERILIZATION WRAP PAPER HOLDER		4		STANDARD			
31	PACKING TABLE FOR TYVEK POUCH PACKING		2		STANDARD			
32	HAND HELD LABELER WITH ACCESSORIES		4		STANDARD			
33	REEL DISPENSOR WITH BUILTIN CUTTER - FOR TYVEK POUCH PACKING		2		STANDARD			
34	CHAIR - SS304 WITH HEIGHT ADJUSTMENT		8		STANDARD			
35	BASKET RACK WITH ACCESSORIES		10		STANDARD			
36	SPRI - STERILIZATION WIRE BASKET SS304		120		STANDARD			
37	BASKET TROLLEY FOR SPRI - STERILIZATION WIRE BASKET SS304		3		STANDARD			
38	BUS TRANSPORT TROLLEY FOR SPRI -STERILIZATION WIRE BASKET WITH PROTECTIVE COVER - MOC		2		STANDARD			
39	STAINLESS STEEL STORAGE WITH GLASS DOOR		2		STANDARD			

40	CLOSED TRANSPORT TROLLEY - STERILE / DIRTY TRANSPORTATION		6		STANDARD			
41	LINEN INSPECTION TABLE - LINEN INSPECTION		1		STANDARD			
42	CHANGE LOCKER		4		STANDARD			
43	SHOE RACK - SS304		4		STANDARD			
44	WASTE BIN - STAINLESS TEEL		8		STANDARD			
45	STAINLESS STEEL REMOVABLE CLADDING FOR CSSD	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS PER DESIGN AND SITE VISIT BY VENDOR:2100 SQF APPROX)		STANDARD			
46	MAIN DOOR	EQUAL LEAF-DIMENSION AS PER SITE CONDITION	AS PER DESIGN AND SITE VISIT BY VENDOR (-4 NOS APPROX)		STANDARD			
47	SINGLE LEAF DOOR - SS304: JANITOR ROOM, CSSD SUPERVISOR CORRIDOR, LOANED GOODS RECEPTION, MALE CHANGE, MALE - TOILET, FEMALE CHANGE, FEMALE - TOILET, CLEAN SUPPLY, LINEN SUPPLY, DISPATCH AREA, CHANGE TO CLEAN ENTRY, AIR LOCK, PLASMA ROOM.	SINGLE LEAF-DIMENSIONS AND QUANTITY AS PER DESIGN	AS PER DESIGN AND SITE VISIT BY VENDOR (17 NOS APPROX)		STANDARD			
48	ELECTRICAL WORK	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING- AS PER SCOPE OF WORK	AS PER DESIGN AND SITE VISIT BY VENDOR -1 LOT		STANDARD			
49	WALL VINYL 1.0MM	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS PER DESIGN AND SITE VISIT BY VENDOR		STANDARD			

			(10000SQ.FT-APPROX)					
50	FLOOR VINYL 2.0MM WITH SELF LEVELING & THERMAL WELDING AS PER SPEC	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS PER DESIGN AND SITE VISIT BY VENDOR (7000SQ.FT-APPROX)		STANDARD			
51	AL POWDERCOATED GRID FC	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS PER DESIGN AND SITE VISIT BY VENDOR (6500SQ.FT-APPROX)		STANDARD			
52	MGPS WORK	CLIENT TO PROVIDE MGPS TERMINATION WITH ISOLATION VALVES. CONNECTING TO THE CSSD EQUIPMENT WILL BE UNDER THE SCOPE OF THE VENDOR.	AS REQUIRED AS PER DEFINED SCOPE OF WORK		STANDARD			
53	CIVIL WORK	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS REQUIRED AAS PER DEFINED SCOPE OF WORK		STANDARD			
54	PLUMBING WORK	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING- AS PER SCOPE OF WORK	AS REQUIRED AS PER DEFINED SCOPE OF WORK		STANDARD			
55	CCTV CAMERA FOR WORKFLOW		2		STANDARD			
56	OTHER LOOSE AND FIXED FURNITURES		AS REQUIRED AS PER DEFINED SCOPE OF WORK		STANDARD			

57	ALL EQUIPMENT OFFERED UNDER THIS TENDER SHALL COMPLY WITH APPLICABLE REGULATORY REQUIREMENTS AND MUST POSSESS VALID CDSCO APPROVAL ALONG WITH CE AND/OR US FDA CERTIFICATION, WHEREVER APPLICABLE. ANY DEVIATION OR EXCEPTION SHALL BE CLEARLY SPECIFIED BY THE BIDDER WITH PROPER TECHNICAL AND REGULATORY JUSTIFICATION.				STANDARD			
58	VENDORS SHALL EXPLICITLY DECLARE ANY ITEM(S) NOT COVERED UNDER CDSCO / CE / FDA APPROVALS, IF APPLICABLE, ALONG WITH SUPPORTING DOCUMENTS AND JUSTIFICATION, FAILING WHICH THE OFFER MAY BE TREATED AS NON-RESPONSIVE.				STANDARD			
59	THE BIDDER SHALL PROVIDE A COMPREHENSIVE LIST OF ALL CONSUMABLES, INCLUDING BUT NOT LIMITED TO CHEMICALS USED FOR CLEANING AND DISINFECTION, REQUIRED FOR ROUTINE OPERATION OF THE EQUIPMENT.				STANDARD			

60	A DETAILED LIST OF ALL ACCESSORIES AND CONSUMABLES, ALONG WITH UNIT RATES, SHALL BE SUBMITTED AS A SEPARATE ANNEXURE AS PART OF THE COMMERCIAL BID. THE BIDDER SHALL AGREE TO ENTER INTO A RATE CONTRACT FOR THESE ITEMS FOR THE DURATION SPECIFIED IN THE TENDER.				STANDARD			
61	CALIBRATION AND VALIDATION ACTIVITIES, INCLUDING DOCUMENTATION AND COMPLIANCE TESTING, SHALL BE COVERED UNDER WARRANTY AND COMPREHENSIVE MAINTENANCE CONTRACT (CMC). THIS SHALL ALSO INCLUDE THIRD-PARTY ITEMS, IF ANY.				STANDARD			
62	ALL ITEMS SUPPLIED SHALL CARRY A MINIMUM WARRANTY AND DEFECT LIABILITY PERIOD OF AT LEAST TWO (2) YEARS, OR AS SPECIFIED IN THE TENDER, WHICHEVER IS MORE STRINGENT. THE WARRANTY SHALL COVER DEFECTS IN MATERIALS, WORKMANSHIP, AND PERFORMANCE.				STANDARD			
63	ANY OTHER PART TO MAKE SYSTEM COMPLETE & WORKING AS PER THE DEFINED SCOPE OF WORK AND RDS GIVEN	AS REQUIRED			STANDARD			

64	ANY ITEM, ACCESSORY, CONSUMABLE, CABLE, CONNECTOR, SOFTWARE, OR COMPONENT THAT IS PART OF THE SYSTEM AS PER TENDER REQUIREMENTS BUT NOT EXPLICITLY MENTIONED OR ITEMIZED IN THE BOQ SHALL BE DEEMED INCLUDED IN THE SCOPE OF SUPPLY AND MUST BE PROVIDED BY THE VENDOR WITHOUT ADDITIONAL COST. THE VENDOR MAY LIST SUCH ITEMS UNDER "STANDARD INCLUSIONS (NOT SEPARATELY CHARGED)" FOR DOCUMENTATION PURPOSES.	AS REQUIRED				STANDARD		
OPTIONAL GROUP	OPTIONAL ITEM NAME	REMARKS	QUANTITY	VENDOR CATALOGUE NUMBER	STANDARD/OPTIONAL	REMARKS (VENDOR ARE REQUESTED TO MAP THEIR ITEMS IN THEIR PROFORMA INVOICE WITH ENCLOSED LINE ITEMS)	QUOTE REFERENCE:SN)	QUOTE PAGE REFERENCE IF APPLICABLE)
1	ANY OPTIONAL RECOMMENDATIONS APART FROM THE LISTED BOQ OR APART FROM THE DEFINED SCOPE OF WORK TO BE GIVEN BELOW							

ANNEXURE 5: SCOPE OF SUPPLY (FOR COMMERCIAL BID)

SN	ITEM NAME (WITH ALL STANDARD ACCESSORIES AND CONSUMABLE)	REMARKS	QTY (NOS/ UOM)	VENDOR CATALOGUE NUMBER	STANDARD /OPTIONAL	REMARKS (VENDOR ARE REQUESTED TO MAP THEIR ITEMS IN THEIR PROFORMA INVOICE WITH ENCLOSED LINE ITEMS)	QUOTE REFERENCE(S N)	QUOTE PAGE REFERENCE IF APPLICABLE)	UNIT PRICE	TOTAL COST FOR THE QUANTITY MENTIONED	GST %	TOTAL COST WITH GST
1	CART / LARGE VOLUME WASHER DISINFECTOR		1		STANDARD							
2	STEAM STERILIZER -12 STU	SCALABILITY TO 5TH MACHINE TO BE QUOTED AS OPTIONAL- INSTALLATION TO BE DONE IN PHASED MANNER	2		STANDARD							
3	STEAM STERILIZER 2NOS-8 STU		2		STANDARD							
4	WASHER DISINFECTOR- 18 DIN TRAY	SCALABILITY TO 4TH MACHINE TO BE QUOTED AS OPTIONAL- INSTALLATION TO BE DONE IN PHASED MANNER	3		STANDARD							
5	FO / STEAM STERILIZER		1		STANDARD							
6	ENDOSCOPE WASHER DISINFECTOR		1		STANDARD							
7	ULTRASONIC CLEANER-ROBOTIC		2		STANDARD							
8	TABLETOP STERILIZER		5		STANDARD							
9	SEALING MACHINE		3		STANDARD							

10	LOW TEMPERATURE HIGH SPEED STERILIZER	ATLEAST 2 MACHINE, SCALABILITY TO 2ND MACHINE TO BE QUOTED AS OPTIONAL	2		STANDARD							
11	DATA MANAGEMENT AND INSTRUMENT TRACKING SOFTWARE FOR VARIOUS MODALITIES WITH LASER ETCHING MACHINES.		1		STANDARD							
12	DRYING CABINET		1		STANDARD							
13	RO PLANT FOR CSSD WITH SUPPORTING ITEMS		LOT- AS PER DESIG N AND SITE VISIT BY VEND OR		STANDARD							
14	HVAC – AIR CONDITIONING & VENTILATION SYSTEM- DUCTING AND INTEGRATION		LOT- AS PER DESIG N AND SITE VISIT BY VEND OR		STANDARD							
15	WORKTABLE WITH ACCESSORIES		5		STANDARD							

16	SLOPE HOPPER WITH ACCESSORIES (FOR EMPTYING ANY BODY FLUIDS FROM CONTAINER)		2		STANDARD							
17	INSTRUMENT WASHING SINK – 3 SINK UNIT		2		STANDARD							
18	ULTRASONIC CLEANER TABLE WITH ACCESSORIES FOR 2 US CLEANER		1		STANDARD							
19	AIR GUN WITH 1/2" ONE TOUCH CONNECTOR		2		STANDARD							
20	RINSING GUN WITH ACCESSORIES - SPECIFICALLY FOR WATER MEDIA		2		STANDARD							
20.1	AUTOMATED SINK DOSING SYSTEM		2		STANDARD							
20.2	EYE WASH STATION		2		STANDARD							
21	DIN TRAY FOR INSTRUMENTS		60		STANDARD							
22	SS 304 SINK - HAND WASHING		1		STANDARD							
23	JANITOR SINK WITH ACCESSORIES		1		STANDARD							
24	PASS BOX		6		STANDARD							
25	STAINLESS STEEL MESH RACK WITH ACCESSORIES-TYPE		55		STANDARD							
26	SS304 INSTRUMENT TROLLEY		2		STANDARD							
27	CONTROL & PACKING TABLE		4		STANDARD							
28	INSPECTION LAMP WITH MAGNIFIER		4		STANDARD							
29	TAPE DISPENSOR		4		STANDARD							
30	PAPER TROLLEY FOR STERILIZATION WRAP PAPER HOLDER		4		STANDARD							

31	PACKING TABLE FOR TYVEK POUCH PACKING		2		STANDARD							
32	HAND HELD LABELER WITH ACCESSORIES		4		STANDARD							
33	REEL DISPENSOR WITH BUILTIN CUTTER - FOR TYVEK POUCH PACKING		2		STANDARD							
34	CHAIR - SS304 WITH HEIGHT ADJUSTMENT		8		STANDARD							
35	BASKET RACK WITH ACCESSORIES		10		STANDARD							
36	SPRI - STERILIZATION WIRE BASKET SS304		120		STANDARD							
37	BASKET TROLLEY FOR SPRI - STERILIZATION WIRE BASKET SS304		3		STANDARD							
38	BUS TRANSPORT TROLLEY FOR SPRI -STERILIZATION WIRE BASKET WITH PROTECTIVE COVER - MOC		2		STANDARD							
39	STAINLESS STEEL STORAGE WITH GLASS DOOR		2		STANDARD							
40	CLOSED TRANSPORT TROLLEY - STERILE / DIRTY TRANSPORTATION		6		STANDARD							
41	LINEN INSPECTION TABLE - LINEN INSPECTION		1		STANDARD							
42	CHANGE LOCKER		4		STANDARD							
43	SHOE RACK - SS304		4		STANDARD							
44	WASTE BIN - STAINLESS TEEL		8		STANDARD							
45	STAINLESS STEEL REMOVABLE CLADDING FOR CSSD	FINAL MEASUREMENT AS PER SITE CONDITION	AS PER DESIGN AND		STANDARD							

		AND DESIGN DRAWING	SITE VISIT BY VENDOR:2100 SQF APPROX)									
46	MAIN DOOR	EQUAL LEAF-DIMENSION AS PER SITE CONDITION	AS PER DESIGN AND SITE VISIT BY VENDOR (-4 NOS APPROX)		STANDARD							
47	SINGLE LEAF DOOR - SS304: JANITOR ROOM, CSSD SUPERVISOR CORRIDOR, LOANED GOODS RECEPTION, MALE CHANGE, MALE - TOILET, FEMALE CHANGE, FEMALE - TOILET, CLEAN SUPPLY, LINEN SUPPLY, DISPATCH AREA, CHANGE TO CLEAN ENTRY, AIR LOCK, PLASMA ROOM.	SINGLE LEAF-DIMENSIONS AND QUANTITY AS PER DESIGN	AS PER DESIGN AND SITE VISIT BY VENDOR (17 NOS APPROX)		STANDARD							

48	ELECTRICAL WORK	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING- AS PER SCOPE OF WORK	AS PER DESIGN AND SITE VISIT BY VENDOR -1 LOT		STANDARD								
49	WALL VINYL 1.0MM	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS PER DESIGN AND SITE VISIT BY VENDOR (10000 SQ.FT- APPROX)		STANDARD								
50	FLOOR VINYL 2.0MM WITH SELF LEVELING & THERMAL WELDING AS PER SPEC	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS PER DESIGN AND SITE VISIT BY VENDOR (7000SQ.FT- APPROX)		STANDARD								
51	AL POWDERCOATED GRID FC	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS PER DESIGN AND SITE VISIT		STANDARD								

			BY VENDOR (6500S Q.FT-APPROX)									
52	MGPS WORK	CLIENT TO PROVIDE MGPS TERMINATION WITH ISOLATION VALVES. CONNECTING TO THE CSSD EQUIPMENT WILL BE UNDER THE SCOPE OF THE VENDOR.	AS REQUIRED AS PER DEFINED SCOPE OF WORK		STANDARD							
53	CIVIL WORK	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING	AS REQUIRED AS PER DEFINED SCOPE OF WORK		STANDARD							
54	PLUMBING WORK	FINAL MEASUREMENT AS PER SITE CONDITION AND DESIGN DRAWING- AS PER SCOPE OF WORK	AS REQUIRED AS PER DEFINED SCOPE OF WORK		STANDARD							
55	CCTV CAMERA FOR WORKFLOW		2		STANDARD							
56	OTHER LOOSE AND FIXED FURNITURES		AS REQUIRED AS PER DEFINED		STANDARD							

			SCOPE OF WORK									
57	ALL EQUIPMENT OFFERED UNDER THIS TENDER SHALL COMPLY WITH APPLICABLE REGULATORY REQUIREMENTS AND MUST POSSESS VALID CDSCO APPROVAL ALONG WITH CE AND/OR US FDA CERTIFICATION, WHEREVER APPLICABLE. ANY DEVIATION OR EXCEPTION SHALL BE CLEARLY SPECIFIED BY THE BIDDER WITH PROPER TECHNICAL AND REGULATORY JUSTIFICATION.				STANDARD							
58	VENDORS SHALL EXPLICITLY DECLARE ANY ITEM(S) NOT COVERED UNDER CDSCO / CE / FDA APPROVALS, IF APPLICABLE, ALONG WITH SUPPORTING DOCUMENTS AND JUSTIFICATION, FAILING WHICH THE OFFER MAY BE TREATED AS NON-RESPONSIVE.				STANDARD							
59	THE BIDDER SHALL PROVIDE A COMPREHENSIVE LIST OF ALL CONSUMABLES, INCLUDING BUT NOT LIMITED TO CHEMICALS USED FOR CLEANING AND DISINFECTION, REQUIRED FOR ROUTINE OPERATION OF THE EQUIPMENT.				STANDARD							

60	<p>A DETAILED LIST OF ALL ACCESSORIES AND CONSUMABLES, ALONG WITH UNIT RATES, SHALL BE SUBMITTED AS A SEPARATE ANNEXURE AS PART OF THE COMMERCIAL BID. THE BIDDER SHALL AGREE TO ENTER INTO A RATE CONTRACT FOR THESE ITEMS FOR THE DURATION SPECIFIED IN THE TENDER.</p>				STANDARD							
61	<p>CALIBRATION AND VALIDATION ACTIVITIES, INCLUDING DOCUMENTATION AND COMPLIANCE TESTING, SHALL BE COVERED UNDER WARRANTY AND COMPREHENSIVE MAINTENANCE CONTRACT (CMC). THIS SHALL ALSO INCLUDE THIRD-PARTY ITEMS, IF ANY.</p>				STANDARD							

62	ALL ITEMS SUPPLIED SHALL CARRY A MINIMUM WARRANTY AND DEFECT LIABILITY PERIOD OF AT LEAST TWO (2) YEARS, OR AS SPECIFIED IN THE TENDER, WHICHEVER IS MORE STRINGENT. THE WARRANTY SHALL COVER DEFECTS IN MATERIALS, WORKMANSHIP, AND PERFORMANCE.				STANDARD							
63	ANY OTHER PART TO MAKE SYSTEM COMPLETE & WORKING AS PER THE DEFINED SCOPE OF WORK AND RDS GIVEN	AS REQUIRED			STANDARD							

64	ANY ITEM, ACCESSORY, CONSUMABLE, CABLE, CONNECTOR, SOFTWARE, OR COMPONENT THAT IS PART OF THE SYSTEM AS PER TENDER REQUIREMENTS BUT NOT EXPLICITLY MENTIONED OR ITEMIZED IN THE BOQ SHALL BE DEEMED INCLUDED IN THE SCOPE OF SUPPLY AND MUST BE PROVIDED BY THE VENDOR WITHOUT ADDITIONAL COST. THE VENDOR MAY LIST SUCH ITEMS UNDER "STANDARD INCLUSIONS (NOT SEPARATELY CHARGED)" FOR DOCUMENTATION PURPOSES.	AS REQUIRED			STANDARD							
GRAND TOTAL												
OPTIONAL GROUP	OPTIONAL ITEM NAME	REMARKS	QUANTITY	VENDOR CATALOGUE NUMBER	STANDARD /OPTIONAL	REMARKS (VENDOR ARE REQUESTED TO MAP THEIR ITEMS IN THEIR PROFORMA INVOICE WITH ENCLOSED LINE ITEMS)	QUOTE REFERENCE(S)	QUOTE PAGE REFERENCE IF APPLICABLE)	UNIT PRICE	TOTAL COST FOR THE QUANTITY MENTIONED	GST %	TOTAL COST WITH GST
	ANY OPTIONAL RECOMMENDATIONS APART FROM THE RDS AND DEFINED SCOPE OF WORK											

Annexure 6: Checklist for Technical Bid to be completed and attached along with the tender submission

CHECKLIST FOR VENDOR BEFORE SENDING THE TECHNICAL BID			
Sl. No.	Checklist parameter	Yes/ No	Tender reference
1	A covering letter, compliance statement, and all pages of the tender document duly signed and sealed by the authorized signatory, as part of the tender compliance, must be enclosed with the technical bid.		
2	Availability of technical proposal need to be provided with separate sealed envelope, mentioning on its envelope IISc tender reference number (PLEASE DO NOT INCLUDE COMMERCIAL BID IN TECHNICAL ENVELOPE)		Section A - point 1
3	Availability of technical offer (without cost) with model number and make for the quoted model enclosed in technical bid.		Section A - point 1
4	Availability of the Declaration of warranty period (as required in tender) for the quoted model to be enclosed on the technical bid.		Section A - point 16
5	Availability of the technical compliance table with six columns for the quoted model to be enclosed on the technical bid. Please provide both pdf and worksheet like excel format		Section A - point 11
6	Availability of the technical compliance with datasheet and technical offer page number reference for the quoted model to be enclosed on the technical bid.		Section A - point 11. c
7	Availability of the quoted model technical advantage over comparable equipment from the competitor to enclosed on the technical bid.		Section A - point 12
8	Availability of the scope of supply (BOQ) as per tender to be enclosed along with technical bid. Please provide both pdf and worksheet like excel format (Excluding cost)		
9	Availability of brochure and any supporting document to validate technical compliance for the quoted model enclosed in technical bid.		Section A - point 11. g
10	Availability of the technical datasheet for the quoted model, with the relevant specifications highlighted in reference to the Tender technical requirements, must be enclosed with the technical bid.		
11	Availability of the regulatory certificate (like CDSCO/CE/FDA/ISO/AERB type approval where applicable) for the quoted model to be enclosed on the technical bid.		Section C - point 17. I

12	Availability of the manufacturer authorization letter for the quoted model to be enclosed on the technical bid where applicable.		
13	Availability of the list of installation sites with contact details for the quoted model to be enclosed on the technical bid.		Section B- point 3
14	Availability of the confirmation letter on 10 Years of spares support for the quoted model to be enclosed on the technical bid.		Section C - point 5.1
15	Availability of the Details of local service center with technical manpower for the quoted model to be enclosed on the technical bid.		Section C - point 17. f
16	Availability of the Power supply & environmental requirement details for the quoted model to be enclosed on the technical bid.		Section C - point 13. a
17	Availability of the deviation statement from tender specs (with justification) for the quoted model to be enclosed on the technical bid.		Section C - point 18. b
18	The soft copy of technical bid only in both excel and pdf format to be made available in pen drive for the quoted model and enclosed on the technical bid envelope. The pen drive to be labelled with tender reference number and vendor name		Section C - point 19
19	Any open recall or Field Safety Corrective Action (FSCA) associated with the quoted model shall be fully disclosed by the bidder in the technical bid submission.		Section C-Point 3.12
20	Note: Kindly index your technical bid considering the above-mentioned check sheet (not limited) preferably in spiral bound mentioning page number.		
21	The Declaration of Local Content by Local supplier should be provided		

Annexure 7: Checklist for Commercial Bid to be completed and attached along with the tender submission

	Checklist for Commercial Bid	Yes/No	Remarks
Sl. No.	General Requirements		
1	Commercial offer should be in complete alignment with technical offer as mentioned in point no 3 of technical offer checklist		
2	Availability of commercial quote need to be provided with separate sealed envelope, mentioning on its envelope IISc tender reference number		
3	The scope of supply (BOQ) with commercial details should be in align with technical offer mentioned in point 8 of technical offer checklist		
4	The country of origin is clearly mentioned.		
5	Word "quote" should be mentioned in the first page instead of Proposal		
6	The quote should be signed and sealed. If a digital signature is used, it is clearly indicated		
7	The validity period of the quote is clearly mentioned		
8	Commercial Quote to be prepared on letter head of the company and it should include		
8.1	· Registered office address and billing address		
8.2	· Company GST number should be mentioned on the first page		
8.3	· Validity		
8.4	· Payment Terms – 70% payment on shipment, 20% payment after Installation & commissioning, and remaining 10 % on user satisfaction.		
8.5	· Warranty details		
8.6	HSN code of items: Each item shall be listed with its HSN code along with supporting document/literature justifying the HSN classification.		
9	The total amount to be mentioned as unit price, GST percentage, Total price inclusive of tax, total price for total quantity mentioned in the tender)		
10	Breakup of cost to be given as annexure and it should include:		

10.1	· Equipment cost- with GST		
10.2	· Accessories- with GST		
10.3	· Consumables- with GST		
10.4	· Other Items- with GST		
	(Tax should be clearly mentioned as IGST 18% or With CGST 9% and SGST 9% or as applicable)		
11	OEM certificate or Authorized distribution letter to be attached		
12	Additional documents required:		
12.1	List of critical spare parts and their estimated unit price. (Item cost should not exceed 30% of the total equipment value)		
12.2	Vendor shall provide a supporting document clearly specifying the AMC and CAMC rates as fixed absolute values per year for each of the nine (9) years after the warranty period.		
12.3	Rate Contract for 3 years from the date of supply / installation / commissioning, covering all system-specific consumables and accessories.		
12.4	Quotation for the one-time maintenance call cost (On call charges)		

*(To be submitted in the company letter head by supplier)

Declaration of Local Content by Local supplier

Subject: Public Procurement (Preference to Make in India)

References:

Preference to Make in India including counter offering will be as per the Public Procurement (Preference to Make in India), Order 2017 available in the following links
<https://dipp.gov.in/public-procurements>

http://dipp.nic.in/sites/default/files/publicProcurement_MakeinIndia_15June2017.pdf http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017_28052018.pdf
https://dipp.gov.in/sites/default/files/PPP-MII%20Order%20dt%2029th%20May%2019_0.pdf
<https://dipp.gov.in/sites/default/files/PPP%20MII%20Order%20dated%204th%20June%202020.pdf>

We hereby declare with reference to above subject and references that

M/s _____ (Tick whichever is applicable as below)

"Class-I local supplier" meeting the requirement of minimum local content equal to 50% (fifty percent) or more defined in the above government notification for the goods and services

(or)

"Class-II local Supplier" meeting the requirement of local content 20% to less than 50% (fifty percent) defined in the above government notification for the goods and services

(or)

Non Local supplier (If not belonging to Class-I & Class-II)

Please mention the details against the following:

Enquiry no: _____ dated _____.

Type of Supplier (Class-I/Class-II)

Product: _____

Project:.....

Details of location at which local value addition will be made is as follows:

We also understand that the false declarations will be in breach of the code of Integrity under rule 175(1)(i)(h) of the General financial rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Authorized Signature M/s

(Signature and seal)

Place:.....

Date:.....

ROOM datasheet to be updated by vendor as per their design					ELV CCTV - STATIC AND DYNAMIC	ELV Access control - STATIC AND DYNAMIC	SPRINKLAR	LIGHTS	LIGHTS CONTROL	CHILLED WATER
SN	Room Typology	Area Classification	Room No.	Room Name						
1	Reception for Loaned Goods	Soiled	B2-CSSD-1	Reception for Loaned Goods						
2	Toilet (Female)	Soiled	B2-CSSD-2	Toilet (Female)						
3	Change Room (Female)	Soiled	B2-CSSD-3	Change Room (Female)						
4	Common Corridor	Soiled	B2-CSSD-4	Common Corridor						
5	Change Room (Male)	Soiled	B2-CSSD-5	Change Room (Male)						
6	Toilet (Male)	Soiled	B2-CSSD-6	Toilet (Male)						
7	Clean Supplies Instrument Inventory Locker	Clean	B2-CSSD-7	Clean Supplies Instrument Inventory Locker						
8	Linen Supply / Textile Room	Clean	B2-CSSD-8	Linen Supply / Textile Room						
9	Air Lock	Clean	B2-CSSD-9	Air Lock						
10	AHU – 1	Service	B2-CSSD-10	AHU – 1						
11	AHU – 2	Service	B2-CSSD-11	AHU – 2						
12	Dispatch Area for Sterile Material	Service	B2-CSSD-12	Dispatch Area for Sterile Material						
13	RO Water Plant	Service	B2-CSSD-13	RO Water Plant						
14	AHU – 3	Service	B2-CSSD-14	AHU – 3						
15	Sterile Storage	Sterile	B2-CSSD-15	Sterile Storage						
16	Plasma / ETO Room	Clean	B2-CSSD-16	Plasma / ETO Room						
17	Gowning Room	Clean	B2-CSSD-17	Gowning Room						
18	Prep & Packing	Clean	B2-CSSD-18	Prep & Packing						
19	Clean Lift Lobby	Clean	B2-CSSD-19	Clean Lift Lobby						
20	Janitor Room – Clean	Clean	B2-CSSD-20	Janitor Room – Clean						
21	Janitor Room – Soiled	Soiled	B2-CSSD-21	Janitor Room – Soiled						
22	Soiled Entry Corridor	Soiled	B2-CSSD-22	Soiled Entry Corridor						
23	Elec ELV Room	Service	B2-CSSD-23	Electrical Room for CSSD						
24	Decontaminati on Area	Soiled	B2-CSSD-24	Decontamination Area						
25	CSSD Supervisor	Clean	B2-CSSD-25	CSSD Supervisor						

VENDOR TO SELECT APPROVED MAKE AS APPROPRIATE

SECTION-14 : LIST OF APPROVED MAKES		
FIRE HYDRANT AND SPRINKLER SYSTEM		
SL. NO	DETAILS OF MATERIALS / EQUIPMENTS	MANUFACTURER'S NAME
1	PUMPS	ARMSTRONG / GRUNDFOS /KSB/WILO/ XYLEM
2	MOTORS	SIEMENS / ABB / CGL/HAVELS
3	DIESEL ENGINE	CUMMINS / GREAVES / CLARKE / KIRLOSKAR
4	GI / MS PIPE	TATA / JINDAL (HISAR)/SURYA ROSHINI
5	GI/ MS FITTINGS	JK TUBE PRODUCTS/ RAJDHAN/ ATC (ALLIED TRADE CENTRE)
6	SUPPORTS (Pipe supports – Tie rod)	HITECH / SARATHI / KAPSON INDIA/OBO/HIRA
7	PRESSURE GAUGE	H. GURU / WAREE/ HD FIRE
8	PRESSURE SWITCH	INDFOSS / DANFOSS/ SWITZER
9	WATER FLOW SWITCH	SYSTEM SENSOR / POTTER / LEVCON / ROSSMOUNT
10	BATTERY CHARGER	CHHAM ELECTRICAL / SERVODYNE / SATNIFE / AE
11	WRAPPING & COATING	IWL / RUST TECH / ULTRASEAL TECHNOLOGY
12	BATTERY	AMCO / EXIDE / PRESOLITE
13	BUTTERFLY VALVES	LEHRY INSTRUMENTATION & VALVES/ AUDCO ZOLOTO/UTTAM/SANT/L&T.
14	NON RETURN VALVE	LEHRY INSTRUMENTATION & VALVES/ AUDCO ZOLOTO/UTTAM/ SANT.
15	Y STRAINER	LEHRY INSTRUMENTATION & VALVES/ AUDCO ZOLOTO/UTTAM/ SANT.
16	HYDRANT VALVES / BRANCH PIPE / NOZZLE	NEWAGE / SHABOGILAL/ MINIMAX/HD/TYCO
17	FOAM WATER MONITOR	NEWAGE / SHABOGILAL / MINIMAX/ ROSENBAUER / MATRE SKYBIZ
18	BALL VALVE, FLOAT VALVE	LEHRY INSTRUMENTATION & VALVES/ AUDCO ZOLOTO/UTTAM/ SANT
19	PRESSURE REDUCING VALVE	LEHRY INSTRUMENTATION & VALVES/ AUDCO ZOLOTO/UTTAM/SENT.
20	PRESSURE RELIEF VALVE (FIRE PUMP DISCHARGE)	LEHRY INSTRUMENTATION & VALVES/ AUDCO ZOLOTO/UTTAM/SENT.
21	SLUICE / GATE VALVES	LEHRY INSTRUMENTATION & VALVES/ AUDCO ZOLOTO/UTTAM/SENT/L&T.
22	TAMPER SWITCH	INDFOSS / DANFOSS/ SWITZER/ HONEYWELL
23	CONDUIT PIPES & ACCESSORIES	AS PER ELECTRICAL MAKE LIST
24	SPRINKLER HEADS	TYCO JOHNSON CONTROL VIKING /RELIABLE/ NEWAGE/HD
25	SPRINKLERS & ALARM VALVE	TYCO (JOHNSON CONTROL) / VIKING / RELIABLE/ NEWAGE/HD
26	WATER CURTAIN NOZZLES	TYCO (JOHNSON CONTROL) / VIKING / RELIABLE , NEWAGE/HD
27	SPRINKLER FLEXIBLE DROPS	GILPRO / VIKING/ MONSHER / TYCO/HD/ NEWAGE
29	PAINTS	ASIAN PAINTS / BERGER / SHALIMAR
30	RCC HUME PIPE	KK, INDIAN HUME PIPE, PRANAL I
31	FIRE SEALANT	3M/ HILTI/ PROMAT/FISCHER/OBO/CHARCOAT
32	FIRE EXTINGUISHERS	MINIMAX / CEASEFIRE / KANEX /ANSUL (TYCO) / CAFF PRO

		/ SAFE PRO
33	CLEAN AGENT FIRE EXTINGUISHERS	MINIMAX / CEASEFIRE/ KANEX /ANSUL (TYCO) / SAFE PRO
34	IN PANEL (FIRE SPOT) UL APPROVED GAS FLOODING SYSTEM FOR MAIN ELECTRICAL PANELS / FUME HOOD SUPPRESSION	MINIMAX / FIRETRACE / ROTAREX (FIRE DETEC)/ KANEX /HONEYWELL.
35	GAS RELEASE PANEL	ANSUL / HONEYWELL/RAVEL/SIMENCE/KANEX
36	CLEAN AGENT GAS SUPPRSSION SYSTEM	ANSUL - SAPPHIRE/ HONEYWELL/ SINOREX 1230/NOVAC
37	SIGNAGES	PROLITE/ AUTOLITE/ SANNIDHI
38	DELUGE VALVE	TYCO (JOHNSON CONTROL) / VIKING / RELIABLE/ NEWAGE
39	SPRAY NOZZLE	TYCO (JOHNSON CONTROL)/VIKING / RELIABLE/HD
40	LEVELCONTROLLER UNIT WITH INDICATORS	MIDAS MARKETING / SRIDHARAN INTERNATIONAL / INTERLINK/ TECHNIKA
41	SWITCH FUSE UNIT AND LOAD BREAK SWITCH	REFER TO ELECTRICAL MAKE LIST
42	HRC FUSES AND BASE	REFER TO ELECTRICAL MAKE LIST
43	CONTACTORS / RELAYS	REFER TO ELECTRICAL MAKE LIST
44	MULTI-FUNCTION METERS	REFER TO ELECTRICAL MAKE LIST
45	INDICATING LAMPS (LED BASED)	REFER TO ELECTRICAL MAKE LIST
46	CURRENT TRANSFORMERS	REFER TO ELECTRICAL MAKE LIST
47	SELECTOR SWITCHES	REFER TO ELECTRICAL MAKE LIST
48	POWER CABLES/CONTROL CABLES	REFER TO ELECTRICAL MAKE LIST
49	PUSH BUTTON STATION	REFER TO ELECTRICAL MAKE LIST
50	TERMINAL BLOCK	REFER TO ELECTRICAL MAKE LIST
51	CABLE LUG	REFER TO ELECTRICAL MAKE LIST
52	CABLE GLANDS	REFER TO ELECTRICAL MAKE LIST
53	MOTOR STARTERS	SIEMENS / L & T / ABB / SCHNEIDER
54	FIRE SENSOR FOR HELIPAD WITH CONTROL PANEL	HONEYWELL/ SIEMENS / L & T / ABB / SCHNEIDER
55	FOAM SKID UNIT	MATRE/ SKYBIZ/ NEWAGE
56	OIL WATER SEPARATOR (OWS)	SKYBIZ/ HELIPOR SYSTEM.INS/ AVIATION 365DESIGN PRIVATE LIMITED
57	PORTABLE MONITOR NOZZLE	ROSENBAUER/LEADER/HD FIRE
58	FLOW METER	JOHNSON CONTROL / HONEYWELL / SIEMENS / NEXTECH
59	AIR RELEASE VALVE	LEHRY / L & T / SANT / ZOLOTO / AUDCO / RB / ADVANCE / HONEYWELL / LEADER
60	CABLE TRAY	REFER TO ELECTRICAL MAKE LIST
61	FRP TANK	AS APPROVED
62	SINGLE / DOUBLE HEADED HYDRANT VALVE	HD FIRE / TYCO / VIKING / NEWAGE
63	RRL HOSE	HD FIRE / TYCO / VIKING / NEWAGE
64	GUN METAL SHORT BRANCH PIPE	HD FIRE / TYCO / VIKING / NEWAGE
65	FIRE HOSE CABINET & FRAME	HD FIRE / TYCO / VIKING / NEWAGE
66	FIRE BRIGADE INLET CONNECTION – 4 WAY	HD FIRE / TYCO / VIKING / NEWAGE
67	FIRE BRIGADE DRAW OFF	HD FIRE / TYCO / VIKING / NEWAGE
68	OSCILLATOR MONITOR	ROSENBAUER / SKYBIZ / NEWAGE
69	TRIPLE IR SENSOR	HONEYWELL / SIEMENS / FIREPRO / TYCO
70	MANUAL PULL STATION	HD FIRE / TYCO / VIKING / NEWAGE

71	ROSSET PLATE	AS APPROVED
72	INSPECTOR TEST ASSEMBLY	HD FIRE / TYCO / VIKING / NEWAGE
73	INSTALLATION CONTROL VALVE	LEHRY / L & T / SANT / ZOLOTO / AUDCO / RB / ADVANCE / HONEYWELL / LEADER
74	OPEN NOZZLES FOR WATER CURTAIN SYSTEM	HD FIRE / TYCO / VIKING / NEWAGE
75	ACTUATORS – ELECTRIC AND MANUAL, PNEUMATIC	HONEYWELL / SIEMENS / FIREPRO / TYCO
76	ABORT CUM RELEASE SWITCH	HD FIRE / TYCO / VIKING / NEWAGE
77	SMOKE AND HEAT DETECTOR	HD FIRE / TYCO / VIKING / NEWAGE

MATERIAL - APPROVED MAKE LIST

Approved makes of materials are listed below. The contractor should get the sample of material in respect of quality and source of supply or manufacturer approved by PMC / IMSF in all cases. All such approved samples should be kept at site in the custody of PMC / IMSF. The tests for the make in external laboratory in presence of PMC / IMSF to be carried out by Contractor at his own cost as per relevant latest codes. Every items purchase bills shall be produced to PMC / IMSF as and when asked for. Contractor shall produce the certificates/documents related for Green Building Product from manufacturer as and when asked for.

Sl. No.	BOQ ITEMS	DESCRIPTIONS/ITEMS	MAKES/BRANDS/MANUFACTURES
1	1.1	AAC work	Meghalite / Maxlite / Fusion / Renacon/Birla Aerocon. AAC Blocks shall be manufactured as per IS, GRIHA approved.
2	1.1	AAC Block Adhesive	MYK Laticrete / Kerakoll / Mapei / Roff / Saintgobain-Weber
3	1.2 to 1.5	Brick Work	As approved
4	1.1 to 1.5	Cement	Ultra tech / Ambuja Cement /Dalmia Bharat Cement / ACC cement
5	1.6	Reinforcement	Tata Steel Ltd. / Sail / Jindal steel & Power Ltd. / JSW steel Ltd. / RINL
6	1.7	Terrakota Jaali	Mitti King / Tapcotiles/ Catadel infraas / Infinia
		Adhesive	Kerakoll / MYK Laticrete / Mapei / Saintgobain-Weber / Pidilite - Roff
7	2.1 to 2.3	Ready Mix Concrete (RMC)	As approved
8		Fly Ash	As approved
9		GGBS	As approved
10		Admixture/plasticizers	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
11		Coarse Aggregate	As approved
12		Fine Aggregate	As approved
13	2.4	Form work	As approved
14	2.5 to 2.7	Steel Reinforcement	Tata Steel Ltd. / Sail / Jindal steel & Power Ltd. / JSW steel Ltd. / RINL
15	2.8 & 2.10	Anchor Fastener	Hilti / Fischer / Wurth.
16	3.1 to 3.4, 3.10	Cement	Ultra tech / Ambuja Cement /Dalmia, Bharat Cement / ACC cement
17		M-Sand	As approved
18	3.5	Waterproofing	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
19	3.6	Gypsum Plaster	Saint Gobain Gyproc / Ferrous crete / Birla / JK Cement
20	3.7	Chicken GI wire mesh	As per IS Code

21	3.8	Fiber wire mesh	Saintgobain USG Knauf / As approved
22	4.1 to 4.2, 4.31	Ready Mix Concrete (RMC)	As approved

23	4.3, 4.3.1, 4.4, 4.4.1, 4.27, 4.43	Vitrified Tiles (GVT / Full Body)	HR Johnson / Somany / RAK / Nitco / Kajaria/Simpole/Varmora
24	4.43	Tile Adhesives	Kerakoll / MYK Laticrete / Mapei / Saintgobain-Weber / Pidilite – Roff
25	4.5 & 4.5.1	Tile Grouts	MYK Laticrete / Pidilite – Roff / Mapei / Saintgobain-Weber/Henkel/Varmora
26	4.6 to 4.7, 4.32, 4.38, 4.40	Granite	R K Marble/Madhav/Aravali/Maruti or As approved
27	4.8 & 4.44	Italian marble/ Indian Marble	Madhav/R K Marble/Indian Marble Company or As approved
		adhesive	Kerakoll / MYK Laticrete / Mapei / Saintgobain-Weber / Pidilite - Roff
28	4.9	Heat Resistant Terrace Tiles	HR Johnson / Johnson / Somany / RAK / Nitco / Kajaria
29	4.10 & 4.11	Kota Stone	As approved
30	4.12, 4.32 & (any items	Cement	Ultra tech / Ambuja Cement / Dalmia, Bharat Cement / ACC cement
31	where the same material to be used)	M-Sand	As approved
32	4.13	Epoxy Terrazzo Flooring	MYK Arment / Ardex Edura / Pidilite / Master builders Solutions (MBCC) / Flow crete
33	4.14 to 4.18	Vinyl Flooring / Wall covering	CCIL- Armstong / Gerflor / Tarkett / Forbo / Polyflor
34	4.19	Self - leveling Compound	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
35	4.20	Carpet	Milliken / Shaw / Interface
36	4.21&4.2a	Wooden Flooring and skirting	Square foot / Mikasa - Greenlam / CCIL – kahr/Century Ply/Pergo Flooring
37	4.22	Raised / False Access Flooring	Unifloor (UBP India) / Antares / Unitile
38	4.23	Polyurethane flooring	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
39	4.24 & 4.25	Cobble Stones	As approved
40	4.26	Rubbed Sand Stone	As approved
41	4.28	Wood Plastic Composite (WPC)	Lamiwood / Square Foot / Xylos/NewTechWood
42	4.29	Artificial Grass	Mycloudforest (Cloudforest E Commerce Pvt Ltd) / Maverickcorp / Green Divine
43	4.30	Engineered / Composite Marble flooring	CMC (Classic marble Company) / AGL / HR Johnson/ Indian Marble Company/Madhav Marble
44	4.30	Stone Adhesives	Kerakoll / MYK Laticrete / Mapei / Saintgobain-Weber / Pidilite – Roff
45	4.31	Polysulphide Sealant	MYK Arment / Fosroc / Pidilite / Master builders Solutions (MBCC)
46	4.34	Epoxy Resin Based	MYK Arment / Fosroc / Pidilite / Master builders

		adhesives	Solutions (MBCC)
47	4.36	Gunmental Cramps	As approved
48	4.37	Expansion hold fastener	Hilti / Fischer / Wurth / as approved
49	4.38	Urinal Partition	Greenlam / Merino / Super Creation / T-Line
50	4.39 & 4.39.1	Ceramic Tile	HR Johnson / Somany / RAK / Nitco / Kajaria
		adhesive	Kerakoll / MYK Laticrete / Mapei / Saintgobain-Weber / Pidilite - Roff
51	4.41	Granite Stone Tile	As approved
		adhesive	Kerakoll / MYK Laticrete / Mapei / Saintgobain-Weber / Pidilite - Roff
52	4.42	Glass Mosaic Tile	Piccolo / Italia / Paladio / SISA
		adhesive	Kerakoll / MYK Laticrete / Mapei / Saintgobain-Weber / Pidilite - Roff
	4.45	Brick Stone Cladding	Flex Stone Adhesive – Flex Stone
54	4.46	Slim Tile	Stonelam (Laminam) / Techlam / Kale
55	4.47	Composite Marble Wall Cladding	CMC (Classic marble Company) / AGL / HR Johnson
56	4.46, 4.47	Adhesives	Kerakoll / MYK Laticrete / Mapei / Saintgobain-Weber / Pidilite - Roff
	4.48	POP Tile	As approved
57	5.1a	Sal Wood	Sal Wood as approved
58	5.1.1	First Class Wood	First Class Teak Wood as approved
59	5.2	Second Class Wood	Second Class Teak Wood as approved
60	5.3	Dash Fastener	Hilti / Fischer / Wurth
61	5.4	Factory Prepped Flush Door with Laminate	(i)Archidply / Tufwud / Navair/Kutty (ii)Make of Flush Door-Century/GreenPly/ Archidply/Kutty (iii)Laminate shall be as per 5.5
62	5.5	High Pressure Laminate	Greenlam / Merino / Royal Touché / Century/ Archidlam
63	5.6, 5.7 & 5.7.1	Wooden Moulded Beading	Second Class Teak Wood
64	5.8	Metal Fire Rated Doors	Shakti Hormann / MPP – Bangalore Protech / Navair / Signum
65		Powder coating	Akzonobel/Asian Paints- PPG /Jotun
66	The Following are the Hardware for Fire rated doors		
67		Fire rated Vision Glass	Saint Gobain Vetrotech / AIS – Boropane / Schott - Pyran
68		SS ball Bearing Hinges	Dormakaba/ Geze / Assa Abloy / Hafele
69		Panic Bar (cross/ push) lock 3 point locking	Dormakaba/ Geze / Assa Abloy / Hafele
70		Panic Bar (cross/ push) lock 1 point locking	Dormakaba/ Geze / Assa Abloy / Hafele
71		Panic Trim / External Trim with Key Cylinder	Dormakaba/ Geze / Assa Abloy / Hafele

72		Mortise Dead Lock	Dormakaba/ Geze / Assa Abloy / Hafele
73		Door Handle	Dormakaba/ Geze / Assa Abloy / Hafele
74		Door Closer (Scissor Arm)	Dormakaba/ Geze / Assa Abloy / Hafele
75		Door Closer (Sliding Arm)	Dormakaba/ Geze / Assa Abloy / Hafele
76		Concealed Flush Bolt	Dormakaba/ Geze / Assa Abloy / Hafele

77		Door Stopper	Dormakaba/ Geze / Assa Abloy / Hafele
78		Electromagnetic hold open device	Dormakaba/ Geze / Assa Abloy / Hafele
79		Anchor Fastener	Hilti / Fischer / Wurth
80		Concealed Drop Down Seal	Enviroseal / Dormakaba/ Geze
81		Kick Plate	Dormakaba/ Geze / Assa Abloy / Hafele
82		SS Door Coordinator	Dormakaba/ Geze / Assa Abloy / Hafele
83		Push Plate	Dormakaba/ Geze / Assa Abloy / Hafele
84	5.9	Wooden Fire Door	Tufwud / Navair / Ecotone
85	5.9	Wooden Fire Door - Hardware	Dormakaba/ Geze / Assa Abloy / Hafele
86	5.10	Acoustic Door	Tufwud / Ecotone / Pacific
87	5.10	Acoustic Door - Hardware	Dormakaba/ Geze / Assa Abloy / Hafele
88	5.11	Glazed Shutter - Wood	Second Class Teak Wood
89		Glazed Shutter - Glass	Saint Gobain / Gujarat Guardian Limited / AIS - Asahi
90	5.12	MR Commercial Plywood	Century / Greenply / Greenpanel
91	5.13	Lead Line Door - Wooden	Tufwud / Navair / Sparkel Metal
92	5.13	Lead Line Door - Hardware	Dormakaba/ Geze / Assa Abloy / Hafele
93	5.13.1	Lead Lined Glass – Fixed Window	Tufwud / Navair / Sparkel Metal
94	5.13.1	Lead Lined Glass	Corning (shanghai) / Ultrarays solutions / Xena shield/ As approved
95	5.14	HPL Door	Metaflex / Hicon / PEHSPL (Perfect Engitech)
96	5.14	HPL Door - Hardware	Dormakaba/ Geze / Assa Abloy / Hafele
97	6.1	Aluminium Section	Jindal / Banco / Hindalco
98		Dash Fastener	Hilti / Fischer / Wurth
99	6.1	EPDM rubber / neoprene Gasket	As approved
100	6.1	C. P. Brass Screw	As approved
101	6.1	Stainless Steel Screws	As approved
102	6.1	Hinges	Dorset / Ozone / Hafele
103		Powder Coating	Akzonobel / Asain Paints – PPG / Jotun
104	6.2	Clear float Glass	Saint Gobain / Gujarat Guardian Limited / AIS - Asahi
105	6.3, a,b	DGU Glass	Saint Gobain / Gujarat Guardian Limited / AIS - Asahi
106	6.4	Toughened Glass	Saint Gobain / Gujarat Guardian Limited / AIS - Asahi
107	6.5	Pre-laminated Particle	ArchidPly / Greenply / Action Tesa

		Board	
108	6.6	Pre-laminated MDF Board	Action Tesa / Greenpanel /Century
109	6.7	Fly proof Stainless Steel Mesh	Saintgobain – As approved
110	6.8 & (any items where the same material to be used)	Silicon Sealant	Wacker / Dowcorning / GE / Soudal / Bostik
111	6.9	Aluminium Grill	Jindal / Banco / Hindalco
112			Saint Gobain / Gujarat Guardian Limited / AIS -

112	6.10	Toughened Glass for Door	Sanku Gujarat / Gujarat Guardian Limited / AG - Asahi
113	6.11 to 6.13	Elastomeric PU Sealant	MYK Arment / Fosroc / Pidilite / Master builders Solutions (MBCC)
114	6.14	SS Friction Hinges	Dormakaba/ Hafele / Assa Abloy / Geze / Earl Bihari / Securistyle / EBCO
115	6.15	Mortice latch & lock	As approved
116	6.16	Casement Window Fastener	As approved
117	6.17	Concealed Locks - window	Hivik / Giesse / Cotswold / Assa Abloy As approved
118	6.18	Handle Lock - window	Hivik / Giesse / Cotswold / Assa Abloy As approved
119	6.19	Sliding Roller	Hivik / Giesse / Cotswold / Assa Abloy As approved
120	6.20	Aluminium Hardware	Hivik / Giesse / Cotswold / Assa Abloy As approved
121	a	14x28mm Adjustable Corner Cleat	Hivik / Giesse / Cotswold / Assa Abloy As approved
122	b	50mm Door Frame Adj. Corner Cleat	Hivik / Giesse / Cotswold / Assa Abloy As approved
123	c	50mm Door Shutter Adj. Corner Cleat	Hivik / Giesse / Cotswold / Assa Abloy As approved
124	d	29mm Fixed Pully U-Groove (Roller - 40kg capacity/pair)	Hivik / Giesse / Cotswold / Assa Abloy As approved
125	e	25mm Square Interlock Cap - Black	Hivik / Giesse / Cotswold / Assa Abloy As approved
126	f	36mm Sleek Series Interlock Cap - Black	Hivik / Giesse / Cotswold / Assa Abloy As approved
127	g	50mm Euro Butt Hinge - Black	Hivik / Giesse / Cotswold / Assa Abloy As approved
128	h	50mm Euro Butt Hinge - 3 Wing - Black	Hivik / Giesse / Cotswold / Assa Abloy As approved
129	i	50mm Euro Multi locking Lock Body 35 mm key center and suitable striker	Hivik / Giesse / Cotswold / Assa Abloy As approved
130	j	50mm Euro Multi locking Lock Body 30 mm key center and suitable striker	Hivik / Giesse / Cotswold / Assa Abloy/ As approved
131	k	80mm Cylinder Both Side	Hivik / Giesse / Cotswold / Assa Abloy/ As

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		Key (with 3 nos keys)	approved
132	l	80mm Cylinder One Side Key One Side Knob (with 3 nos keys)	Hivik / Giesse / Cotswold / Assa Abloy/ As approved
133	m	Casement Door Mortise Handle - Black	Hivik / Giesse / Cotswold / Assa Abloy/ As approved
134	n	Water Drainage Cap Black with Flip	Hivik / Giesse / Cotswold / As approved
135	o	Water Drainage Cap Black without Flip	Hivik / Giesse / Cotswold / As approved
136	7.1, a	Tower Bolt	Ozone / Dorset / Hafele
137	7.2	Concealed Tower Bolt	Ozone / Dorset / Hafele
138	7.2 (a)	Dust Proof Socket	Ozone / Dorset / Hafele
139	7.3 & 7.3.1	Ball bearing Steel butt hinges	Ozone / Dorset / Hafele
140	7.3.2	Ball bearing Flush hinge	Ozone / Dorset / Hafele

140	7.5.2	Ball bearing Hush hinge	Ozone / Dorset / Hafele
141	7.4 to 7.6	Mortice Sash Lock With Double Cylinder and Escutcheon with Keys	Dormakaba/ Hafele / Assa Abloy / Geze
142	7.7 to 7.9	Mortice Dead Lock With Double Cylinder and Escutcheon with Keys	Dormakaba/ Hafele / Assa Abloy / Geze
143	7.10	Floor Spring	Dormakaba/ Hafele / Assa Abloy / Geze
144	(a)	Hydraulic Floor Spring	Dormakaba/ Hafele / Assa Abloy / Geze
145		Top / Bottom Pivot / Accessories	Dormakaba/ Hafele / Assa Abloy / Geze
146	(b) & (c)	Top / Bottom Patch/ Accessories	Dormakaba/ Hafele / Assa Abloy / Geze
147		Bottom Strap	Dormakaba/ Hafele / Assa Abloy / Geze
148	7.11	SS Door Stopper	Ozone / Dorset / Hafele/Godrej
149	7.12, 7.14 & 7.16	SS Pull Handle	Ozone / Dorset / Hafele/Godrej
150	7.13	SS Concealed Handle	Ozone / Dorset / Hafele/Godrej
151	7.15	SS Lever Handle	Dormakaba/ Hafele / Assa Abloy / Geze /Godrej
152	7.17 & (a)	Concealed Door Closer	Dormakaba/ Hafele / Assa Abloy / Geze /Godrej
153	7.18 & (a) (b) & 7.18.1 & (a)	Hydraulic Surface Mounted Door Closer	Dormakaba/ Hafele / Assa Abloy / Geze /Godrej
154	7.19	Kick Plate	Ozone / Dorset / Hafele
155	7.20	Push Plate	Ozone / Dorset / Hafele
156	7.21, a	Sliding Door Lock With Cylinder And Escutcheon	Dormakaba/ Hafele / Assa Abloy / Geze
157	7.22	Wooden door Sliding fitting	Dormakaba/ Hafele / Assa Abloy - Enox / Geze
158	7.22.1	Aluminium door Sliding fitting	Dormakaba/ Hafele / Assa Abloy - Enox / Geze
159	7.23	Hydraulic Patch With Patch / Glass Fittings For Glass	Dormakaba/ Hafele / Assa Abloy / Geze

IOC (INDIAN) SCHOOL FOUNDATION – TERENGER PUNJAB, RAJASTHAN (R/VI), HYDRABAD & 3111, GP, MEERUT, UTTAR PRADESH

		Door	
160	7.24	Hydraulic Floor Patch With Patch Fittings For Wooden Door / Aluminium Door	Dormakaba/ Hafele / Assa Abloy / Geze
161	7.25	Corner Patch Lock for Glass Door	Dormakaba/ Hafele / Assa Abloy / Geze/Ozone
162	7.25 (a)	Center lock latch lock	Dormakaba/ Hafele / Assa Abloy / Geze /Godrej
163	7.26	Coat Hook	Dormakaba/ Hafele / Assa Abloy / Geze
164	7.27	Mortise Lock / Shaft Door Lock	Dormakaba/ Hafele / Assa Abloy / Geze/Godrej
165	7.28	Narrow Dead Lock With Single Side Key Cylinder, Thumb Turn (Knob) and Escutcheon	Dormakaba/ Hafele / Assa Abloy / Geze /Godrej
166	7.29	Narrow Dead Lock With Both Side Key Cylinder and Escutcheon	Dormakaba/ Hafele / Assa Abloy / Geze/Godrej
167	7.30	Mortise Bathroom/Toilet Lock	Dormakaba/ Hafele / Assa Abloy / Geze/Godrej
168	7.31	RFID lock	Assa Abloy – Yale / Ozone / Dormakaba / Hafele
169	7.32	Master Keys	Dormakaba/ Hafele / Assa Abloy / Geze

169	7.32	Master Keys	Dormakaba/ Hafele / Assa Abloy / Geze
170	7.33	Grand Master Keys	Dormakaba/ Hafele / Assa Abloy / Geze
171	8.1 (a)	Gypsum Board Ceiling	Gyproc - Saint Gobain / USG Knauf/Armstrong
172	8.2 (a) & (b)	GI Metal Ceiling	Knauf-Armstrong / USG Knauf / Anutone / Saint Gobain/GYPROC
173	8.2 (c)	PVC laminated gypsum Tiles	Gyproc - Saint Gobain / USG Knauf / Anutone
174	8.3	Perforated Calcium Silicate	Aerolite / Hilux/GYPROC
175	8.4	Mineral Fibre Suspended Ceiling	Knauf-Armstrong / USG Knauf / Saint Gobain/ Anutone
176	8.5	Acoustical Wall Paneling	Knauf-Armstrong / Saint Gobain / Anutone
177	8.5.1	Acoustical Wall Paneling	Anutone/ Knauf-Armstrong / Saint Gobain
178	8.6	Wooden false ceiling - Plywood	Century / Greenply / Greenpanel
179		Wooden false ceiling - Laminate	Greenlam / Merino / Royal Touché / Century
180	8.7 & 8.8	Calcium Silicate Tile Ceiling	Aerolite / Hilux / Anutone/GYPROC
181	8.9	Baffle Ceiling	Metalium/Oculus/ARMSTRONG
182	8.10	Aluminium Lay-in Plain	Knauf-Armstrong / USG Knauf/ Anutone
183	8.11	Aluminium Lay-in Perforated	Knauf-Armstrong / USG Knauf/ Anutone
184	8.12	Polymer Based false ceiling - Hidden Perforations	Vox/ Paré / DelbyPVC
185	8.13	Mineral Fiber	Knauf-Armstrong / USG Knauf / Saint Gobain/ Anutone
186	8.14	Calcium silicate	Aerolite / Hilux / Anutone/GYPROC

187	8.15	Linear Panel Ceiling -1	Metalium/ Oculus / Hunter Douglas
188	8.16	Calcium Silicate Tile Ceiling	Aerolite / Hilux / Anutone/GYPROC
189	8.17	Access Panel Door / Trap Door	Danoline –/ Durlum/KNAVF
190	8.18	Trap Door – MDF	Action Tesa / Greenpanel /Century
191		Brass Allen Key	As approved
192	8.19	Wood work – Frame	Sal wood – as approved
193	8.20	Replacement of Various Ceiling Boards / Tiles	With respect to Installed Ceiling
194	8.21	Replacement of Various Ceiling Framing	With respect to Installed Ceiling
195	9.1	Acrylic Distemper	Berger / Asian Paints / Jotun / Akzonobel/NEROLAC
196	9.2	White Wash	As approved
197	9.3	Acrylic Emulsion Paint	Berger / Asian Paints / Jotun / Akzonobel/NEROLAC
198	9.4	Ready Mixed Pink Or Grey Primer	Asian Paints / Akzonobel / Berger / Jotun/NEROLAC
199	9.5	Ready Mixed Red Oxide Zinc Chromate Primer	Berger / Asian Paints / Jotun
200	9.6	Epoxy paint	Berger / Asian Paints / Jotun
201	9.7	Acrylic Smooth Exterior Paint	Akzonobel / Berger / Asian Paints / Jotun
202	9.8	Synthetic Enamel Paint	Jotun / Akzonobel / Berger / Asian Paints
203	9.9	Aluminium Paint	Berger / Asian Paints / Jotun
204		Anti-Corrosive Bitumastic	

204	9.10	Non-Adhesive Groutastic Paint	Berger / Asian Paints / Jotun
205	9.11	Cement Based Putty	Asian Paints / Berger / Jotun / Birla /JK Cement / Akzonobel
206	9.11 (a)	Cement Primer	Jotun / Akzonobel / Berger / Asian Paints
207	9.12	Thermoplastic Paint	Asian Paints / Berger / Jotun
208	9.13	Fire Retardant Paint	Asian Paints / Berger / Jotun / Akzonobel
209	9.14	Antibacterial, Antifungal & washable - Acrylic Emulsion Paint	Berger / Akzonobel / Jotun / Asian Paints
210	9.15	Antibacterial, Antifungal & washable - Water Based Polyurethane Coating	Berger / Akzonobel / Jotun / Asian Paints
211	9.16	Textured Exterior Paint	Akzonobel / Berger / Asian Paints / Jotun
213	9.17	French Spirit Polish	As per IS code - IS : 348 & As approved
214	9.18 (a)	Copal Varnish	Berger / Asian Paints / Jotun
215	9.18 (b)	Spar Varnish	Berger / Asian Paints / Jotun
216	9.19	Melamine Polishing	Akzonobel / Jotun / Berger / Asian Paints
217	9.20	Gloss/Matt Finish Melamine Clear Polish	Akzonobel / Berger / Asian Paints / Jotun
218	9.21	Honeycomb Exterior	Akzonobel / Jotun / Asian Paints / Berger

		Texture with Top Coats	
219	9.22	Sprayed Exterior Texture with Top Coats	Akzonobel / Jotun / Asian Paints / Berger
220	10.1 to 10.1.4	Terrace Water Proofing	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
221	10.2 to 10.2.3	Waterproofing - Podium / Atrium Area / Terrace Garden and Similar Area	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
222	10.3	Waterproofing - Bath / Toilet and Similar Area	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
223	10.4 to 10.4.2	Waterproofing - Water Tanks	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
224	10.5 to 10.5.1	Core Cutting / Bore Packing - For Non waterproofing Zone	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
225	10.6	Injection Grouting and Allied Works	MYK Arment / Pidilite / Fosroc / Master builders Solutions (MBCC)
226	11.1	Steel - for MS Door	Tata steel limited / SAIL / Jindal steel & Power ltd / JSW Steel Ltd.
227	11.2	Rolling Shutter	Gandhi Automation / Avians / Nihva
228	11.3	Stainless Steel (Grade 304) Railing	Ozone / Dorset / Dormakaba – As approved
229	11.4	SS Railing With Glass	Ozone / Dorset / Dormakaba – As approved
230	11.4	Glass	Saintgobain / Gujarat Guardian Limited / AIS - Asahi
231	11.5 (a) to (d)	MS Structure And Allied Work / Hollow Section	Tata steel limited / SAIL / Jindal steel & Power ltd / JSW Steel Ltd./Apollo
232	11.5 (e)	Galvanized Profiled Sheet – Deck Sheet	Tata BlueScope / JSW – Jindal.
234	11.6 (a)	Fire Proofing - Vermiculite Gypsum Compound	Newkem / Berger - Promat / Carboline
		Fire Proofing - Vermiculite	

235	11.6 (b)	Fire Proofing - vermiculite Cementitious Compound	Newkem / Berger - Promat / Carboline
236	11.6 (c)	Intumescent Paint Conforming	Berger / Jotun / Carboline / Newkem
237	11.6 (d)	Zinc Epoxy Primer	Berger / AsianPPG / Jotun / Carboline
238	11.6 (e)	Zinc Phosphate Primer	Berger / AsianPPG / Jotun / Carboline
239	11.6 (f)	Intumescent Paint	Akzonobel / Jotun / Carboline / Hempel
240	12.1	Pre-coated Galvanized Iron Profile Sheets	Tata, Essar, Jindal/JSW / SAIL
241	12.2	Pre-coated Galvanized Steel - accessories	Tata, Essar, Jindal/JSW / SAIL
242	12.4	Toilet Cubical	Merino / Greenlam / Super Creation / T-Line
243	12.5	Safety Foot Rest	As approved
244	12.6	FRP Manhole Cover	Amrock / Vikrant / Fibrocast / Everlast
245	12.7 to 12.9	FRP Gratings	Amrock / Vikrant / Fibrocast / Everlast

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246	12.10	Rubber Guard / Column Guard	Amrock / Alcolite (Ashu Enterprise) / Deesawala Rubber Industries / Dark Eye
247	12.11	Cat's Eye	Alcolite (Ashu Enterprise) / Dark Eye / Greenlite
248	12.12 to 12.14	Expansion Joint	Migua / CS / Kantaflex / Vexcolt
249	12.15	Polycarbonate Panels	Sabic / Danpal / Palram
250	12.16	Car Parking System	Fosroc / Pidilite / MYK Arment
251	12.17	Speed Breaker	Alcolite (Ashu Enterprise) / Deesawala Rubber Industries / Dark Eye
252	12.18	Air tight Selant	Hilti / Fisher / OBO
253	12.19	Helipad Tie down	Skybiz / Hoger / AMCA
254	12.20	SS mesh Net	Jakob / Hoger / Acir system Pvt Ltd
256	12.21	Helipad Epoxy coat	Jotun / Hempel / MYK / AKZONOBLE
257	12.22	Partition	Gyproc- Saint Gobain / USG BORAL - USG-KANUF
258	12.23	Wind Sock	Skybiz / Hoger / AMCA
259	13.9	Construction / Isolation Joint	Adhyalaxmi Industrial Rubber and Polymers Pvt. Ltd., / Narayani Trading Company / Sandhya Flex Rubber & PVC Products.

NOTES:

1. All materials should confirm to relevant standards and Codes of Bureau of Indian standards and shall have ISI mark validated for the period of use / installation.
2. The construction materials required for the overall construction of buildings works should be procured locally wherever possible to reduce the carbon footprint of the project and to fulfil the green building commitments.
3. Aggregate material must be procured from government-approved quarry only; contractor shall submit certification and other required document time to time.

SECTION-20 : APPROVED MAKE LIST

SI. NO.	ITEM DESCRIPTION	APPROVED MAKES
1.	HT SUBSTATION/ HT & LT SWITCHGEARS	SIEMENS/ ABB/SCHNEIDER/EATON
2.	TRANSFORMERS	SIEMENS/SCHNEIDER/VOLTAMP/SUDHIR / KIRLOSKAR / INDOTECH / VOLTECH / TOSHIBA
3.	DIESEL GENERATOR SETS ENGINE AND ALTERNATOR	STERLING & WILSON/ CUMMINS/ CATERPILLAR. MOTEURS BAUDOUIN / MITSUBISHI / PERKINS

		ALTERNATOR:- KIRLOSKAR GREEN/ CROMPTON/ STAMFORD/LEROY SOMER
4.	DG SYNCHRONIZING CONTROLLER	WOODWARD / DIF / DEEP SEA
5.	HSD SYSTEM	MARUTHI / STANDARD INDUSTRIES / UNITED / GANANADHA
6.	DISTRIBUTION BOARDS	LEGRAND/HAGER/SCHNEIDER ELECTRIC/ HONEYWELL/ ABB/ PANASONIC ANCHOR / EATON / SIEMENS
7.	MOULDED CASE CIRCUIT BREAKER	LEGRAND/ SCHNEIDER ELECTRIC/ ABB / EATON / SIEMENS
8.	ISOLATORS	LEGRAND/ SCHNEIDER ELECTRIC/ ABB / EATON / SIEMENS
9.	MINIATURE CIRCUIT BREAKER	LEGRAND/HAGER/SCHNEIDER ELECTRIC/ HAVELLS/ ABB/ PANASONIC ANCHOR / EATON / SIEMENS
10.	RESIDUAL CIRCUIT BREAKER (RCCB, RCBO'S)	LEGRAND/HAGER/SCHNEIDER ELECTRIC/ HAVELLS/ ABB/ PANASONIC ANCHOR / EATON / SIEMENS
11.	POWER/AUX. CONTACTOR 3/4 POLE	ABB/LARSEN & TOUBRO/ SCHNEIDER ELECTRIC/ EATON / SIEMENS
12.	ON – LOAD CHANGE OVER SWITCH	SOCOMEK/LARSEN & TOUBRO/ SCHNEIDER ELECTRIC / HPL
13.	AUTOMATIC TRANSFER SWITCH (ATS)	L&T / ABB / SCHNEIDER / SOCOMEC
14.	CONTROL TRANSFORMER / POTENTIAL TRANSFORMERS	AUTOMATIC ELECTRIC/ GILBERT & MAXWELL / L&T / ABB / SCHNEIDER / SOCOMEC
15.	CURRENT TRANSFORMERS (EPOXY CAST RESIN)	AUTOMATIC ELECTRIC/ GILBERT & MAXWELL/ MATRIX / L&T / LAPP / C&S / CGL / AE / MECO
16.	INDICATING LAMPS LED TYPE, PUSH BUTTON	LARSEN & TOUBRO/ SCHNEIDER ELECTRIC/ SIEMENS
17.	PVC INSULATED XLPE ALUMINIUM / COPPER CONDUCTOR ARMoured MV CABLES UPTO 1100 V GRADE	CABLE CORPORATION OF INDIA/ UNIVERSAL/ FINOLEX/ KEI/ POLYCAB / HAVELLS / RAVI CAB / KEC / SIEMENS
18.	HT/LT JOINING KIT/ TERMINATION	3M/ RAYCHEM/GSEAL
19.	MS & PVC CONDUIT & ACCESSORIES (ISI APPROVED)	BEC/ AKG/ POLYPACK/ PRECISION/ATUL/NELCO / POLYCAB / ANCHOR / VIP
20.	SWITCH & SOCKET RANGE	PANASONIC ANCOR- VISION/NORISYS/ SCHNEIDER ELECTRIC ZENCELO/ WIPRO-ARTISA/ LEGRAND- ARTEOR/ ABB-MILENIA/ HAVELLS- MURNO. (MODEL SHALL BE AS APPROVED AS PER ARCHITECH)

21.	LIGHTING FIXTURES (AVIATION OBSTRUCTION LIGHT/ LED LIGHT/ CLEAN ROOM FITTINGS)	PHILIPS/ WIPRO/ BAJAJ/ PANASONIC/MAPPIN LIGHT/LIGHTFORM/JAQUAR
22.	LI- IONBATTERIES WITH BATTERY CHARGER	SAMSUNG/LG / DELTA
23.	CABLE TRAYS, RACEWAYS, TRUNKING (FABRICATED)	CABLE TECH/ NEIDAX/ FEDDERS LLOYD CORPORATION LTD/RICCO/STEEL WAYS/MEM / OBO BETTERMAN / HAVELLS.
24.	INSULATING MATS (ISI MARK)	DL MILLER & CO. LTD./PREMIER POLYFILM LTD / ISI MARKED
25.	BUSDUCT, RISING MAIN (SANDWICH TYPE)	L&T – HENIKWON/ SCHNEIDER ELECTRIC/ CONTROL & SWITCHGEAR (C&S) / /GODRE/LEGRAND / NAXSO
26.	SURGE PROTECTION	SCHNEIDER/ PHOENIX/HAGER/ L&T / LEGRAND / SIEMENS / EATON / ABB
27.	FIRE SURVIVAL CABLES	BONTON/POLYCAB/ HAVELLS/ BATRA HENLAY CABLES / POLYCAB / HAVELLS
28.	LT PANELS	CPRI APPROVED PANEL BANGALORE BASED MANUFACTURERS
29.	UPS	SCHNEIDER/EMERSON (VRTIV) / REILLO/DELTA/SOCOMAK/ETON / BPE
30.	ISOLATION TRANSFORMERS	DATSON / PIECO / MAGNETIC CONTROLS / KRYKARD
31.	INSULATORS	MODERN INSULATORS, SARAVANA GLOBAL ENERGY, WS INSULATOR
32.	MEDICAL ISOLATION PANEL	SCHNEIDER/ PIECO/BENDER
33.	CABLE GLANDS	HMI/COMET/BRACCO / DOWEL / GRIPWELL
34.	CABLE LUGS	DOWELL'S/3D / HEX / COMMET
35.	INDICATING METERS	CONZERV/ AE/ PROK DVS
36.	SELECTOR SWITCHES	VAISHNO/ SAIFR/ KAYCFE

Sl. No.	DESCRIPTION	MANUFACTURER/ SUPPLIER/ MODEL
37.	SOLAR PV CELLS/MODULE	ZINCO / WAREE / VIKRAM SOLAR LTD. / PANASONIC/ EMMVEE / TRINA/ RENEW SYS INDIA PVT. LTD. / TATA POWER SOLAR SOLUTIONS / VIKRAM SOLAR LTD. / SAATVIK GREEN ENERGY PVT. LTD. / IN FORCE SOLAR
38.	DC BATTERY CHARGER	CHHABI / HBL / AMARAJA / SABNIFE / STATCON / VOLTSTAT / QUANTA
39.	CHEMICAL EARTHING	DEHN/OBO BETTERMANN / ASHLOK / JEF / POWER TRACK
40.	CEILING FAN / EXHAUST FAN	CROMPTON / BAJAJ / ORIENT / HAVELLS/ ANCHOR BY PANASONIC/ USHA
41.	PAINT	NEROLAC / ASIAN PAINTS/ BERGER/ ICI
42.	MULTICORE FLEXIBLE CABLE	FINOLEX / POLYCAB / HAVELLS / RR KABEL / CALIPLAST / EMINENT / RAJNIGANDHA / PANASONIC- ANCHOR / RAVICAB
43.	SIGNAL CABLE	ENERCON / LAPP INDIA / SYSTEM TEK / CALIPLAST / EMINENT / RAJNIGANDHA
44.	FLEXIBLE WIRE	FINOLEX / HAVELLS / POLYCAB / RR KABEL / PANASONIC-ANCHOR / RAVICAB / RAJNIGANDHA / LAPP INDIA / KEC

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45.	BIMETALLIC LUGS	DOWELL'S / 3D / HEX JAINSON / COMET / HMI/ CCI
46.	LOAD MANAGER	SCHNEIDER / NIPPEN/ L & T / HPL / SOCOMEC/SECURE/ ELMEASURE/ CRYSTAL/ NAPTUNE
47.	PUSH BUTTON AND PUSH BUTTON SET	SIEMENS / SCHNEIDER ELECTRIC / L & T / LEGRAND / C&S / ABB/ GE
48.	ENERGY METER	SCHNEIDER / L&T / NIPPEN / HPL / SOCOMEC/SECURE/ ELMEASURE/ CRYSTAL/ NAPTUNE/ CONZERV / RISHABH / GE
49.	METERS (ANALOG)	MECO / RISABH / NIPPEN / CONSERVE / AE/SECURE/ ELMEASURE/ CRYSTAL/ NAPTUNE / GE
50.	METERS (DIGITAL)	AE / SCHNEIDER / NIPPEN / CONSERVE / L&T/SECURE/ ELMEASURE/ CRYSTAL/ NAPTUNE / GE
52.	ELECTRIC TIMER	SIEMENS / LEGRAND / L&T / LEGRAND / MECO/ BCH
53.	LT CAPACITORS	L & T / EPCOS / LEGRAND / SCHNEIDER SUBODHAN / VISHAY / SHREEM / PMX/ DUCATI/ EPCOS/ ABB/ SCHNEIDER
54.	METAL CLAD SOCKET WITH MCB	LEGRAND / HENSEL / SCHNEIDER / SCAME / SPELSBERG/ HAGER/ L&T/ ABB/ SIEMENS
55.	PVC JUNCTION BOX	HENSEL / CLIPSAL / SPELSBERG / SCAME / SINTEX
56.	FLOOR TRUNKING	MK / LEGRAND / OBO BETTERMANN/ SCHNEIDER
57.	FLOOR JUNCTION BOX	LEGRAND / MK / OBO BETTERMANN/ SCHNEIDER
58.	CONVECTIONAL LPS	ERICO / OBO / ABB / POWERTRACK / DEHN OR ANY LOCAL SYSTEM/ FURSE
59.	SMF BATTERY	EXCIDE / AMARARAJA / STANDARD/ AMCO/ PRESTOLITE
60.	GRID TIE INVERTER	SMA / GROWATT / SUNGROW / DEYE / ABB / TMEIC / HUAWAI
61.	AIR CIRCUIT BREAKER	L&T/ ABB/ SIEMENS/ C & S / SCHNEIDER
62.	PROGRAMMABLE LOGIC CONTROLLER(PLC)	SIEMENS/ALLEN-BRADLEY/SCHNEIDER
63.	DCDB - FUSE BOX	TRINITY TOUCH / HENSEL / ALLTECH
64.	DC CABLES	POLYCAB / SEICHEM / LAPP / KEC
65.	DC CONNECTORS	MULTI CONTACT / ELCOM/ POLYCAB/ NORDIC (INDIA) SOLUTIONS PRIVATE LIMITE
66.	MODULE MOUNTING STRUCTURE	COLUMN POSTS (HOT DIP GALVANIZED) / TATA / JINDAL / SAIL
		PURLINS/RAFTERS/BRACINGS – GALVALUME/POSMAC/GP
		FASTENERS – HOT DIP & SS 304
67.	EARTHING PITS AND ACCESSORIES	JEF / INDILEC / DHEN / OBO / FURSE
68.	EV CHARGING SYSTEM	ABB / PANASONIC / DELTA / EATON
69.	BALANCE OF THE SYSTEM IF NOT AVAILABLE ABOVE	IS STANDARD MATERIALS – APPROVED BY PMC / IMSF

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SECTION-12 : APPROVED MAKE LIST

SL.NO	EQUIPMENT/ITEM	APPROVED MAKE
1	WATER COOLED CENTRIFUGAL CHILLERS	CARRIER/TRANE/JOHNSON CONTROLS (YORK)/DAIKIN MC QUAY / NICOTRA
2	COOLING TOWERS	MARLEY/BALTIMORE/NIHON PINDLE/ ADVANCE/ PAHARPUR/BELL / NICOTRA
3	PRIMARY AND CONDENSER WATER PUMPS	XYLEM/GRUNDFOS/ARMSTRONG/KSB/WILO / NICOTRA
4	DISTRIBUTED PUMPING SYSTEM	GRUNDFOS/KSB/WILO/XYLEM / NICOTRA
5	AIR HANDLING UNITS	SYSTEM AIR/CARRIER/ FIN POWER / ZECO / WAVES
6	CHILLED WATER CASSETTE UNITS	FIN POWER/DAIKIN/CARRIER
7	AIR COOLED SPLIT AC UNITS	DAIKIN / TOSHIBA / LG / MITSUBISHI / BLUESTAR
8	BASEMENT VENTILATION JET FANS	SYSTEMAIR/KRUGER/GREENHECK/FLAKTWOODS/ KRUGER/NICOTRA
9	TUBE AXIAL FANS	SYSTEMAIR/KRUGER/FLAKTWOODS/GREENHECK / KRUGER/NICOTRA
10	VENTILATION FANS	SYSTEMAIR/KRUGER/GREENHECK/FLAKTWOODS/ KRUGER/NICOTRA
11	CENTRIFUGAL FANS	SYSTEMAIR/CARYAIRE/KRUGER/OSTBERG/GREENHECK / NICOTRA
12	DUCT INLINE FANS	SYSTEMAIR/CARYAIRE/KRUGER/OSTBERG/GREENHECK
13	ROOF UP BLAST FANS	SYSTEMAIR/CARYAIRE/GREENHECK/ KRUGER/NICOTRA
14	EXPLOSION PROOF FANS	SYSTEMAIR / KRUGER / ROSENBERG/ NICOTRA/GREENHECK
15	SCRUBBER SYSTEM (SPRAY TYPE)	SYSTEMAIR / AAF / MAICO / RYDAIR/GREENHECK/ SAGAR AIR PVT LTD
16	PRESSURIZATION UNIT EXPANSION TANK WITH BUILTIN DE AERATOR	SEVCON (FLAMCO)/XYLEM/IMI/CALEFFI/KD / HYDRONIC SOLUTION
17	GSS DUCTING	JINDAL / TATA STEEL/SAIL
18	FACTORY FABRICATED DUCTS	ZECO/ CAM DUCT/VEDA/DUCTOFAB/ COOL FREEZ SYSTEM/VENUS ENGINNERING
19	MS DUCT	JINDAL / TATA STEEL/SAIL

20	ALUMINIUM DUCT	JINDAL/HINDALCO/RAJAT UDYOG
21	ACOUSTIC INSULATION OF DUCT	ARMACELL/ K-FLEX/APL AEROCELL/HIRA AEROFORM
22	WALL ACOUSTIC INSULATION	ARMACELL/ K-FLEX/APL AEROCELL/HIRA AEROFORM
23	UNDERDECK INSULATION WITH ELASTOMERIC INSULATION	ARMACELL/ K-FLEX/APL AEROCELL/HIRA AEROFORM
24	THERMAL INSULATION	ARMACELL/ K-FLEX/APL AEROCELL/HIRA AEROFORM
25	ELASTOMERIC NITRILE RUBBER	ARMACELL/ K-FLEX/APL AEROCELL/HIRA AEROFORM

TENDERER'S SEAL AND SIGNATURE

26	VOLUME CONTROL OPPOSED BLADE DAMPER	AIRMASTER / SYSTEMAIR / CARYAIRE/ AADHYA VENTUREPRISES (COSMOS)/SYNCRON INDUSTRIES
27	GRILLES AND DIFFUSERS	SYSTEM AIR/AIR MASTER/ CARYAIR/COSMOS/ SYNCRON INDUSTRIES
28	FIRE DAMPER WITH OPPOSED BLADE (FUSIBLE LINK TYPE)	GREENHECK / RUSKIN/ COSMOS /CARYAIRE/AIRMASTER
29	MOTORISED FIRE & SMOKE DAMPER WITH OPPOSED BLADE	GREENHECK / RUSKIN/ COSMOS /CARYAIRE/AIRMASTER
30	SLOT DIFFUSERS	SYSTEM AIR/AIR MASTER/ CARYAIR/COSMOS/ SYNCRON INDUSTRIES
31	DISPLACEMENT DIFFUSERS	PRICE INDUSTRIES /SYSTEMAIR/ TROX
32	LOUVERS - AL.	SYSTEM AIR/AIR MASTER/ CARYAIR/COSMOS/ SYNCRON INDUSTRIES
33	VARIABLE AIR VOLUME BOXES (VAV)	TRANE/TROX/SYSTEMAIR/AADHYA VENTUREPRISES (COSMOS)/SYNCRON INDUSTRIES
34	ECO+ INTERNAL DUCTING SYSTEM	ASAWA/ZECO/DURKEESOX
35	SMART PIR FLAT OVAL DUCTS	JINDAL / TATA STEEL/SAIL
36	TERMINAL HOUSING BOX FOR HEPA FILTERS	JINDAL/HINDALCO/RAJAT UDYOG
37	MAGNEHELIC GAUGES	DWYER/ WAREE/ WIKA
38	ROOM MOUNTED TEMPERATURE TRANSMITTER	DWYER / SIEMENS / HONEYWELL /WIKA/JCI
39	ROOM MOUNTED COMBINED TEMPERATURE AND RH TRANSMITTER	DWYER / SIEMENS / HONEYWELL /WIKA/JCI
40	DIFFERENTIAL PRESSURE TRANSMITTER (FOR ROOMS)	DWYER / SIEMENS / HONEYWELL /WIKA / JCI
41	ROOM MOUNTED INDICATOR FOR TEMPERATURE, RELATIVE HUMIDITY	DWYER / SIEMENS / HONEYWELL /WIKA/JCI
42	CHILLED&COND WATER PIPING	JINDAL / TATA STEEL/SAIL
43	CHILLED WATER PIPING INSULATION	ARMACELL / K-FLEX / AEROFLEX / HIRA / C & R
44	BUTTERFLY VALVE	INTERVALVE / DANFOSS / ADVANCE / AUDCO / UTAM / ZOLOTO / SANT/LEHRY/HONEYWELL / C & R
45	BUTTERFLY VALVE-WHEEL OPERATED TYPE	INTERVALVE / DANFOSS / BELIMO / ADVANCE / AUDCO / UTAM / ZOLOTO / SANT/LEHRY/HONEYWELL

46	BALL VALVE WITHOUT STRAINER	INTERVALVE / DANFOSS / BELIMO / ADVANCE / AUDCO / UTAM / ZOLOTO / SANT//HONEYWELL
47	BALL VALVE WITH STRAINER	INTERVALVE / DANFOSS / C & R / ADVANCE / AUDCO / UTAM / ZOLOTO / SANT//HONEYWELL
48	BALANCING VALVE - MANUAL	OVENTRAP / TOUR & ANDERSON/DANFOSS/ LEHRY

TENDERER'S SEAL AND SIGNATURE

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49	MOTORIZED BUTTERFLY VALVE (ON- OFF TYPE)	AUDCO / DANFOSS / UTAM / ADVANCE / ZOLOTO / SANT/ LEHRY/HONEYWELL
50	Y'-STRAINER & POT -STRAINER	AUDCO / UTAM / ZOLOTO / SANT/ADVANCE/ C & R /HONEYWELL
51	NON RETURN VALVE (NRV)	AUDCO / UTAM / ZOLOTO / SANT/ADVANCE/LEHRY/HONEYWELL / C & R
52	FLOW METER	DANFOSS/SIEMENS/JHONSON CONTROL / LEHRY VALVS
53	AUTOMATIC AIR VENT.	SANT / EMERALD / KITZ / ADVANCE/AUDCO/ZOLOTO / LEHRY
54	TEMPERATURE GAUGE WITH THERMOWELL	H. GURU / WAREE / DWYER /ACUTHERM ITALY/ OMRICRON
55	TEST POINT	ANERGY/ITAP/RB
56	PRESSURE GAUGE	FIELDMARSHALL / H-GURU / FIBIG / DWYER/WAREE / BAUMER / MASS/ DWYER/ SIEMENS
57	CONDENSATE DRAIN PIPE	FINOLEX / SUPEREME / ASHIRWAD/ PRINCE/ASTRAL/BIRLA HIL
58	MAKE UP WATER PIPE	JINDAL / TATA STEEL/SAIL
59	FLEXIBLE RUBBER BELLOWS	GERB / CORI / KUNWAL/ EASYFLEX/ RESISTOFLEX/BASE/DUNLOP/HIRA
60	BTU METER	KAMSTRUP/SIEMENS/SHARKY/ DWYER
61	DIFFERENTIAL PRESSURE SENSOR	SANT / EMERALD / KITZ / ADVANCE/AUDCO/ZOLOTO/ DWYER/ SIEMENS
62	PRESSURE INDEPENDENT TYPE DYNAMIC BALANCING CUM FLOW CONTROL VALVE - (PIBCV)	FLOWCON / DANFOSS / DELTA - P/ FRESE / BELIMO / ADVANCE/ DWYER/ SIEMENS
63	VRF SYSTEM	DAIKIN / TOSHIBA / LG / MITSUBISHI / BLUESTAR
64	COPPER PIPE	RAJCO/MEXFLOW/PTP K SERIES/NIPON/SHIVA SHAKTI/MANDEV
65	THERMOSTAT FOR AHU 2 WAY VALVE	HONEYWELL/JOHNSON CONTROL/SCHNEIDER
67	DAMPER ACTUATOR	BELIMO/SIEMENS/JOHNSON/SAUTER/HONEYWELL
68	AIR FLOW SWITCH	OMICRON/JCI/GREYSTONE/DANFOSS
69	VFD	DANFOSS /ABB /SIEMENS /SCHNEIDER/ YASKAWA
70	FIRE SEALANT	PROMAT / HILTI / OBO BETTERMANN
71	DIFFUSER PLENUM BOXES	AIRMASTER / SYSTEMAIR / CARYAIRE/ AADHYA VENTUREPRISES (COSMOS)/SYNCO INDUSTRIES
72	FLEXIBLE DUCTS	SUPA FLEX / ATCO / SEVEN STAR /SEMCO FLEX
73	FILTERS	AAF / CAMFIL / SPECTRA / AFI / FREDEN BURG
74	VIBRATION / SPRING ISOLATORS	GERB / CORI / KUNWAL/ EASYFLEX/

74	VIBRATION / SHOCK ISOLATORS	RESISTOFLEX/BASE/DUNLOP/HIRA
75	MS STRUCTURAL SUPPORTS	TATA/SAIL/JINDAL
76	DUCT INSTALLATION SUPPORT	HILTI/GRIFFLE/INDOGRIP/FISCHER/OBO BETTERMANN

TENDERER'S SEAL AND SIGNATURE

77	CHILLED WATER PIPE SUPPORT	DIMOND WALRAVAN(HIRA)/TEMBO GLOBAL/ EASYFLEX/ STARLINE
78	TERMINAL HOUSING BOX WITH HEPA FILTER	CAMFIL / AAF / FREUDENBERG
79	ROOM MOUNTED INDICATOR FOR TEMPERATURE, RELATIVE HUMIDITY	DWYER / SIEMENS / HONEYWELL /WIKA/JCI
80	WELDING ELECTRODE	ADOR/ESAB/DNH SEHRON.
81	FOR ELECTRICAL WORK	REFER ELECTRICAL APPROVED MAKE LIST
82	HVLS FAN	MARUT AIR
83	G I SHEET	TATA / SAIL / JINDAL
84	KITCHEN SCRUBBER	SAGAR AIR / ENVIGARD / DUSTECH

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SECTION-15 : APPROVED MAKE LIST

15.1 LIST OF RECOMMENDED MAKES FOR WATER SUPPLY & SANITARY INSTALLATION:

PLUMBING: LIST OF APPROVED MAKES OF MATERIALS		
S.NO	ITEM	APPROVED MAKES
1	SANITARY FIXTURES (PREMIUM)	KOHLER/ AMERICAN STANDARD/ ROCA/ TOTO/ GROHE/RAK/JAQUAR
2	SANITARY FIXTURES (ECONOMY)	CERA/SIMPOLO/RAK-REVIERA/ PARRYWARE/HINDWARE/DURAVIT/ JAQUAR / KOHLER
3	CONCEALED CISTERN	KOHLER/ AMERICAN STANDARD/ ROCA/ TOTO/ GROHE/RAK/ JAQUAR
4	C.P. BRASS FITTINGS	KOHLER/ JAQUAR/ ROCA/ GROHE/ EURONICS/ DOLPHY / AMERICAN STANDARD
5	SENSOR TAPS AND URINAL FLUSHING SYSTEM	EURONICS/ DOLPHY/ UTEC/ GROHE / JAQUAR / AMERICAN STANDARD

6	TOILET ACCESSORIES	KOHLER/ JAQUAR/ ROCA/GROHE / EURONICS/ DOLPHY
7	HAND DRIER	EURONICS/ D LINE/ CARL F/ DOLPHY
8	LIQUID SOAP DISPENSER & PAPER TOWEL DISPENSER	EURONICS / DOLPHY / AMERICAN STANDARD / ROCA / TOTO / GROHE / RAK / KOHLER / JAQUAR
9	KITCHEN SINK	JAYNA/CARYSIL/BLANCO/ NEELKANTH/ NIRALI / JAQUAR
10	HEAT PUMPS	AO-SMITH/ CLIMAVENETA/ ARMSTRONG/ VENUS
11	UPVC (SWR) PIPE AND FITTINGS	ASHIRVAD/ SUPREME / TRUEFLOW (HINDWARE)/ BIRLA HIL/_ASTRAL PIPES / PRINCE
12	CPVC PIPE AND FITTINGS	ASHIRVAD/ SUPREME / TRUEFLOW (HINDWARE)/ BIRLA HIL/_ASTRAL PIPES / PRINCE
13	CAST IRON PIPES	NECO/ BIC/ RIF
14	G.I. PIPE / M.S. PIPE	TATA/ JINDAL HISSAR/ SURYA PRAKASH
15	G.I. PIPE JOINTING MATERIAL	LOCTITTE/ DR. FIXIT –PIDILITE
16	BALL VALVES	LEHRY/L&T/SANT/ZOLOTO/ AUDCO / RB /ADVANCE/LEADER/ HONEYWELL
17	BUTTERFLY VALVES	LEHRY/L&T/SANT/ZOLOTO/ AUDCO / RB /ADVANCE/LEADER/ HONEYWELL
18	SLUICE VALVES	LEHRY/L&T/SANT/ZOLOTO/ RB /ADVANCE/LEADER/ HONEYWELL

19	AIR RELEASE VALVES	LEHRY/L&T/SANT/ZOLOTO/ LEADER /HONEYWELL / RB / ADVANCE
20	NON RETURN VALVES	LEHRY/L&T/SANT/ZOLOTO/ LEADER /HONEYWELL / RB / ADVANCE
21	PRESSURE REDUCING VALVES	LEHRY/L&T/SANT/ZOLOTO/ LEADER /RB / ADVANCE / HONEYWELL/WATTS
22	GI SPECIALS(FITTINGS)	'R' BRAND/ HB ISI/ GENESIS / UNIK / DRP – M
23	PUMPS & MOTORS	GRUNDFOS/ XYLEM /ARMSTRONG/ KIRLOSKAR/ WILO
24	WATER METERS	ANGLIAN WATER/ ACORN CONTROLS/ HTM HYDRAULICS/ ANAND WATER METER/ FLEXIM INDIA/ MEGITECH AUTOMATION / L & T
25	WATER HAMMER ARRESTER	LEHRY / ASHIRVAD/SKS/ BISINEER
26	SOLENOID VALVES	JEKON CONTROLS/ RB/ SANT/ LEHRY
27	MOTRISED BUTTERFLY VALVE	AUDCO/ SKS (ITALY)/ AIP VALVES
28	S.S. PIPES	TATA STEEL/ JSW STEEL/ SURYA ROSHNI
29	S.S.HORIZONTAL/VERTICALGRATING & COCKROACH TRAPS	CHILLY/ VIKING/ NEER
31	PIPE JOINTING MATERIAL FOR UPVC, PVC & CPVC PIPES	M-SEAL (PIDILITE INDUSTRIES LTD.) / SUPREME/ AS PER PIPE OEM RECOMMENDATION
32	G.I. PIPE SUPPORT CLAMPS / HOT DIP GALVANIZED IRON SPLIT CLAMP WITH NEOPRENE RUBBER LINING	CHILLY-INTELLOTECH/ MUPRO/HIRA / TEMPO INDUSTRIES

33	CHECK VALVE (SLIM TYPE)	LEHRY/L&T/SANT/ZOOTO/ LEADER /HONEYWELL / RB / ADVANCE
34	GULLY TRAP	PERFECT/ BERM/ TSF/ ANAND
35	HDPE DWC PIPE	SUPREME/ ASTRAL/ HTC/ ARHAM
36	RCC PIPE / HUME PIPE	JAIN SPUN PIPE/ INDIAN HUME PIPE/ DEWAN SPUN PIPE/ PRAGATI UDYOG
41	HOT WATER INSULATION	THERMAFLEX/ KAIFLEX/ ARMA CELL / ARMA FLEX
42	ANTI CORROSIVE TAPE FOR PIPE PROTECTION	PYPKOTE/ KIMPL/ B.M. CONCOR
43	ANTICORROSIVE BITUMASTIC PAINT	SHALIMAR/ MRF/ BERGER/ J & N
44	EPOXY PAINT	MRF/ BERGER/ J & N / AS APPROVED
45	VIBRATION ELIMINATOR PADS	RESISTOFLEX/ KANWAL/ DYNEMECH SYSTEMS PVT. LTD / HIRA
46	SEWAGE / STORM WATER HANDLING PUMPS	GRUNDFOS/ XYLEM /ARMSTRONG/ KIRLOSKAR/ WILO
47	HYDRO-PNEUMATIC SYSTEM	GRUNDFOS/ EBARA/ WILO/ XYLEM / ARMSTRONG / KIRLOSKAR
48	FILTER / SOFTENER	THERMAX/ ION EXCHANGE/ ECO PARYAVARAN
49	DOSING PUMP SYSTEM	ASIA LMI/ GRUNDFOS/ PULSAFEEDER/ E dose

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50	MEMBRANE	GE/ HYDRANAUTICS/ IMEMFLOW/ MEMCOR(DUPONT)/KUBOTA
51	ALL ELECTRICAL RELATED WORKS	AS PER ELECTRICAL MAKE LIST
52	IRRIGATION SYSTEM	DOLPHIN IRRIGATION SYSTEMS / JAIN IRRIGATION SYSTEMS / NETAFIM IRRIGATION INDIA / SIGNET GROUP / SANGIR
53	SIPHONIC SYSTEM	WAVEN / GEBRIT / SIPHONIC INNOVATIONS / SUPREME INDUSTRIES / ACO / SANGIR
54	LEVEL INDICATORS	NEXTECH / HONEYWELL / SIEMENS
55	HDPE TANK	SUPREME / ASTRAL / BIRLA-HIL / PRINCE
56	BABY DIAPER CHANGING STATION	DOLPHY / EURONICS / JAQUAR
57	SHOWER ENCLOSURE	JAQUAR / TOTO / KOHLER
58	SS GRATING	CHILLY / JAQUAR / KOHLER / RAK
59	CLEAN OUT PLUG	ASHIRVAD/ SUPREME / TRUEFLOW (HINDWARE)/ BIRLA HIL/_ASTRAL PIPES / PRINCE
60	MOTORIZED ON / OFF VALVE	HONEYWELL/ JOHNSON CONTROL/ ZOOTO / SANT
61	DUAL PLATE CHECK VALVE	HONEYWELL/ JOHNSON CONTROL/ ZOOTO / SANT

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