

Notice Inviting e-Tender

West Bengal Medical Services Corporation Limited
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**Tender for Supply, Installation, Commissioning, Operation &
Maintenance of Medical Gas Pipeline System (MGPS)
In 3 New Medical Colleges of West Bengal**
(Submission of *online* Bid)

Bid Reference No.: WBMSCL/NIT-57/2014

Dated-26.08.2014

INVITATION TO BID

1. West Bengal Medical Services Corporation Limited (WBMSCL) has been entrusted with selection of an Agency for Supply, Installation, Commissioning, Operation & Maintenance of Medical Gas Pipeline System (MGPS) in the 3 (three) new Medical Colleges at College of Medicine and Sagore Datta Hospital, Malda Medical College and Hospital and Murshidabad Medical College and Hospital on behalf of the Health & Family Welfare Department of the Government of West Bengal.
2. WBMSCL hereby invites bids from eligible and qualified Bidders for the Supply, Installation, Commissioning, Operation & Maintenance of Medical Gas Pipeline System (MGPS) as per Schedule of Requirement.
3. Intending Bidder may download the tender document from the website: wbtenders.gov.in and deposit Tender Fees and Earnest Money in favour of the 'West Bengal Medical Services Corporation Limited' through Demand Draft / Bank Guarantee issued by any Scheduled Commercial Bank, and payable at Kolkata.
4. Non statutory documents, Bid – A, Bid – B & Bid – C are to be submitted concurrently.

Sd/-
Managing Director

Table for Important Dates

Sl.	Items	Publishing date(s)
1.	Date of uploading of N.I.T. Documents (online)/ Date of Issue	27.08. 2014
2.	Documents download/sell start date (Online)	27.08. 2014
3.	Date of Pre Tender Meeting with the intending Bidders in the Conference Hall of West Bengal Medical Services Corporation Limited	02.09.2014 at 2:00 p.m.
4.	Bid submission start date (On line)	10.09.2014
5.	Documents download/sell end date (Online)	N.A
6.	<p>Bid submission closing (On line)</p> <p>Bid submission includes:</p> <p>i) Non statutory documents to be submitted under <u>My Space</u> (Each sub-category item should be in multiple page single PDF file)</p> <p>ii) BID – A (Should be in multiple page single PDF file)</p> <p>iii) BID – B (Should be in multiple page single PDF file)</p> <p>iv) BID – C (BOQ and the Statement of Breakup of Duties and Taxes)</p> <p>Detailed list of documents annexed at Section V Check-List Form</p> <p>Non-statutory document (document uploaded in <u>My Space</u>), Bid – A & Bid – B constitute the technical bid and Bid – C is the financial bid.</p> <p style="text-align: center;"><i>Any wrong or misleading information provided by the Bidder during submission of bids shall lead to summary cancellation of bid and may lead to blacklisting in WBMSCL for at least 3 years.</i></p> <p>Each scanned documents should have an index page indicating the name of the documents enclosed with Page no.</p>	16.09.2014 up to 5:00 PM
7.	<p>Last date of submission of</p> <p>a) Cost of Tender Documents (only by Demand Draft) and Earnest Money Deposit (Demand Draft / Pay Order / Bank Guarantee)</p> <p>b) Hard copies of the documents uploaded in e-tender during bid submission. No BOQ to be submitted in hard copy.</p> <p>c) Copy of acknowledgement generated by e-tender portal against the documents uploaded during bid submission.</p> <p>N.B.:</p> <p>1) All the above documents are to be submitted at the registered office of WBMSCL.</p> <p>It is essential that all documents in hard copy are to be placed before the Committee and arranged in the same sequence as given in the Check List. All the documents should be appropriately flagged.</p>	19.09.2014 up to 2:00 PM
8	Bid opening date for Technical Proposals (Online)(Bid A & B)	19.09.2014; 2:00 PM onwards
9.	Bidders to remain present at WBMSCL office, Kolkata for identification of the documents for the technical bid evaluation	To be notified later
11.	Functional demonstration of the equipment	To be notified later
12.	Opening of Financial Bid	To be notified later

Section I

A. Instruction to Bidders

1. Bidders are requested to study the tender document, terms & conditions carefully and inspect the sites before submitting their bids. Submission of tender shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications.
2. Tender documents should be downloaded from the E-tender portal of Govt. of West Bengal at wbtenders.gov.in and the website of WBMSCL at www.wbmsc.gov.in. The submission of bids should only be through online at wbtenders.gov.in
3. Any wrong or misleading information provided by the Bidder during submission of bids may lead to summary cancellation of bid, blacklisting in WBMSCL for at least 3 years and forfeiture of EMD.
4. The finally selected Bidder will have to apply to the Prescribed Government/ Statutory Authority under existing acts/ rules/ regulations at the time of award and execution of contract for grant of requisite Licenses for operation of Manifold services or use of foreign exchange, if required, and the purchaser will only render such assistance, as may be considered necessary.
5. All pages of the bid submitted must be signed and sequentially numbered by the Bidder. All information in the offer must be in English. Information in any other language must be translated to English. Failure to comply with this may render the offer liable to be rejected. In the event of any discrepancy between the offer in a language other than English and its English translation, the English translation will prevail.
6. The finally selected bidder has to ensure that all the statutory requirements applicable for supply, installation and commissioning of gas pipeline and manifold system as prescribed by Government of India are adhered to at the time of execution as well as during the entire duration of the contract (10 years)
7. **Eligibility of Bidder:**
 - 7.1 Who can Bid:
 - i. Company Manufacturing Medical Gas
 - ii. Company Manufacturing or dealing in MGPS
 - iii. Agency having experience in supply, installation, commissioning, O&M of MGPS
 - iv. Consortium or Joint Venture of Companies at i, ii or iii above

7.2 Credentials of the Bidder: The bidder should have following credentials,

7.2.1. Annual Turnover Requirement:

The bidder should submit audited balance sheet for Financial Years 2010-11, 2011-12, 2012-13 & 2013-14 (if available). The average annual turnover of the last three (3) years will be considered for calculating the eligibility criteria of Rs 2 Crore.

7.2.2. Financial Status: The bidder should not have suffered any losses in last 3(three) F.Y.

7.2.3. Work Experience

Should have executed and completed similar work of value not less than Rs. 1.5 crore in last 5 (five) years.

If the bidder is found not meeting the eligibility criteria the bid will be rejected.

7.3 Bidder need to quote for all the jobs in full. Partial or incomplete bids will lead to cancellation.

8. Bidder should have established similar MGPS system in public or private health facilities, preferably in the State of West Bengal and provided necessary service support to such life saving system (necessary proof to be submitted along with the offer).

9. Bidder must submit an affidavit that there is no court case under trial or pending against the Company, instituted by any government hospital and also never been penalized by any Govt. investigating agency for any wrong doing in entire India. Wrong and false information in this regard will be sufficient for forfeiture of EMD and blacklisting of the firm.

10. The bidder is also required to submit performance report from other similar organizations where the firm is registered for supply and erection of similar projects of hospital equipment's/System. The Bidder will also have to submit list of organizations where the System has been installed by the firm in the last five years.

11. Scope of Work:

As per Section IV

12. Technical Specifications:

As per Section IV

13. Time for Completion of work:

3(three) months from the date of award of work

14. Performance Security (PS):

10% of the Bid Value (validity should be till the completion of Warranty + 2 months).

15. Payment Terms

A. Execution of Work:

The successful bidder will submit Performance Bank Guarantee within 7 days of Award of Work. The bidder will have to sign a contract after the submission of performance bank guarantee. Any payment will be made only after signing of contract. The payment to successful bidder/contractor will be made as follows,

- 1 25% of total material cost/value as mobilization advance against submission of equivalent Bank guarantee on pro-rata basis.
- 2 Payment of balance 40% of the material cost against supply of material against pro-rata basis against physical inspection and certification of material within 7 days.
- 3 Remaining 35% after successful installation and commissioning against certification by quality control agency appointed by WBMSCL.

B. CMC:

1. The rates are to be quoted year wise. The annual CMC charges shall be paid quarterly in four equal installments after successful completion of maintenance work in each quarter. For this purpose, selected bidder should produce documentary proof i.e. service/ maintenance reports duly signed by MSVP.
2. Actual CMC charges for hospital(s) will be paid based on the actual quantity of work executed on pro rata basis (calculated based on hospital wise BOQ except the CMC charges –Vs - actual measurement at site)

16. Liquidated damages for Delayed Commissioning

0.5% of the contract value for each week or part thereof up to a maximum deduction of 10% of the contract value subject to site clearance.

B. General

17 Fraud and Corruption

It is WBMSCL policy to require that Bidders, suppliers, and contractors and their subcontractors under WBMSCL contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, WBMSCL:

- (a) Defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) Bribery is the act of unduly offering, giving, receiving or soliciting anything of value to influence the process of procuring goods or services, or executing contracts;
 - (ii) Extortion or coercion is the act of attempting to influence the process of procuring goods or services, or executing contracts by means of threat of injury to person, property or reputation;
 - (iii) Fraud is the misrepresentation of information or facts for the purpose of influencing the process of procuring goods or services, or executing the contracts, to the detriment of WBMSCL or other participants;
 - (iv) Collusion is the agreement between Bidders designed to result in bids at artificial prices that are not competitive.
- (b) Will reject a proposal to award a contract if it determines that a vendor recommended for award has engaged in corrupt practices in competing for the contract in question;
- (c) Will declare a vendor ineligible, either indefinitely or for a stated period of time, to become a WBMSCL registered Vendor if it at any time determines that the vendor has engaged in corrupt practices in competing for or in executing a WBMSCL contract;
- (d) Will cancel or terminate a contract if it determines that a vendor has engaged in corrupt practices in competing for or in executing a WBMSCL contract;
- (e) Will normally require a vendor to allow WBMSCL, or any person that WBMSCL may designate, to inspect or carry out audits of the vendor's accounting records and financial statements in connection with the contract.
- (f) Any vendor participating in WBMSCL's procurement activities, shall facilitate to WBMSCL personnel upon first request, all documents, records and other elements needed by WBMSCL to investigate the allegations of misconduct by either vendors or any other party to the procurement activities. The absence of such cooperation may be sufficient grounds for the debarment of the vendor from WBMSCL vendor roster and may lead to suspension following review by WBMSCL Vendor Review Committee.
- (g) It is required that Vendors, their subsidiaries, agents, intermediaries and principals cooperate with WBMSCL Internal Audit Group as well as with other investigations authorized by WBMSCL or by the Government of West Bengal or the Central Government as and when required. Such cooperation shall include, but not be limited to, the following: access to all employees, representatives, agents and assignees of the vendor; as well as production of all documents requested, including financial records. Failure to fully cooperate with investigations will be considered

sufficient grounds to allow WBMSCL to repudiate and terminate the contract, and to debar and remove the supplier from WBMSCL's list of registered vendors.

(h) A Bidder, and all parties constituting the Bidder, may have the nationality of any country.

18 Period of validity of Bids

Bids shall remain valid for a period of **120 days**. A bid valid for a shorter period than specified in previous lines shall be rejected by WBMSCL as non responsive.

19 Tender Fees: Exempted

20 Earnest Money Deposit (EMD)

Rs. 14 Lakhs in any one of the following form:

i) Demand Draft

ii) Bank Guarantee (BG) as per format given in Form 3 valid for 180 days

21 Refund of EMD: The EMD of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the Performance Security pursuant to Instructions to Bidders

C. Contents of Bidding Documents

23. Sections of Bidding Documents

23.1 The Bidding Documents consist of:

- Section I. Instructions to Bidders
- Section II. General Conditions for Goods (GCG)
- Section III. Special Conditions of Contract (SCC)
- Section IV. Schedule of Requirements
- Section V. Bidding Forms
- Section VI. Contract Forms

23.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of the bid.

23.3 Bidders are cautioned to read the specifications carefully (see Section IV), as there may be special requirements. The technical specifications presented herein are not to be construed as defining a particular manufacturer's product. Bidders are encouraged to advise WBMSCL, if they disagree.

23.4 The specifications are the minimum requirements for the products. Products offered must meet or exceed requirements mentioned in technical specifications. The products shall conform in strength, quality and workmanship to the accepted standards of the relevant industry, if not specified otherwise in the specifications. Modifications or additions to basic standard products of less size or capability to meet these requirements will not be acceptable.

24. Clarification of Bid Document

24.1 A prospective Bidder requiring any clarification of the Bidding Documents shall contact WBMSCL in writing at md.wbmsc@gmail.com, deo.wbmsc@gmail.com & wbmsc.wbhealth@gmail.com

25. Amendment of Bid Document

25.1 At any time prior to the deadline for submission of bids, WBMSCL may amend the Bid Document by issuing amendment to be uploaded in the e-tender portal & website of WBMSCL.

25.2 To give prospective Bidders reasonable time in which to take an amendment into account in preparing their bids, WBMSCL may, at its discretion, extend the deadline for the submission of bids.

D. Preparation of Bids

1. Bidders are to prepare and submit the following:
 - i) Non statutory documents to be submitted under My Space
 - ii) BID – A (Should be in multiple page single PDF file)
 - iii) BID – B (Should be in multiple page single PDF file)
 - iv) BID – C (Financial Bid i.e. 1 BOQ in .xls and 3 Hospital wise BOQ in pdf)

Details are given in “Submission and Opening of Bids”

2. Cost of Bidding

The Bidder shall bear all costs associated with the preparation and submission of its bid.

3. Language of Bid

The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and WBMSCL, shall be written in the English language. Supporting documents and printed literature that are part of the Bid, if submitted in any other language provided they are accompanied by an accurate translation of the relevant passages into English and duly authenticated.

4. Alternative Bids

Alternative Bids will not be accepted.

5. Bid Prices

5.1 The prices in the BOQ shall conform to the requirements as specified in the tender.

5.2 The Incoterms shall be governed by the rules prescribed in the Incoterms 2010, published by The International Chamber of Commerce.

5.3 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account.

6. Currencies of Bid

The Bidder shall quote in INR only.

7. Documents Establishing the Conformity of the Goods and Related Services

To establish the conformity of the goods and related services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section IV, Schedule of Requirements.

8. Documents Establishing the Qualifications of the Bidder

As per Form 2: Check-List of Section V of the bid document.

9. Period of validity of Bids

- 9.1 Bids shall remain valid for a period of **120** days from last date of online submission of bid. A bid valid for a shorter period than specified in previous lines shall be rejected by WBMSCL as non responsive.

9.2 In exceptional circumstances, prior to the expiration of the bid validity period, WBMSCL may request Bidder to extend the period of validity of their bids and EMD. In the event of the request for such extension beyond bid validity period, the bidder may or may not accept such request. In case, the bidder refuses to accept the request, the EMD of the bidder shall not be forfeited.

10. Period of validity of the bid price:

The prices quoted by the Bidder and accepted by the Committee duly constituted by WBMSCL shall hold good and remain valid for a period of **1(one)** year or completion of work from the date of signing of the contract and no additional claims will be admissible on account of any price variation or fluctuation in market rates.

11. Upgradation and Extension of Pipeline:

11.1. The successful bidder shall upgrade and extend the pipeline systems as per the requirement of user/WBMSCL at same rates for the next one year from the date of signing of the agreement.

11.2. However, if this up-gradation is required after one year, the escalation in copper pipe rates in running mts alone will be paid as per London Metal exchange (LME) Cash Buyer rates in comparison with the last date of submission of financial bid –Vs- date of award of extension work. The LME rates at the time of bid opening will be documented between WBMSCL and the successful bidder through a MOM along with the print out of rates obtain from LME site.

11.3. However, if LME rates for copper decreases, deduction in copper pipe rates in running mts will be applicable as per the rules stated above.

11.4. No escalation will be paid for other labour & system components like outlets/valve, box/alarm panel etc for 2 years from signing of the original contract. After 2 years, 2.5% increase in rate per year will be allowed from the current contract rate.

12. Earnest Money Deposit (EMD):

The EMD shall be in the form of Demand Draft (DD) in original from any scheduled commercial bank as per prescribed form in Section V, in favour of **“West Bengal Medical Services Corporation Limited”, GN-29, Swasthya Bhawan, Sec-V, Salt Lake, Kolkata- 700091** in the amount as provided in the **Schedule of Requirements**, and denominated in INR.

12.1 Any bid not accompanied by a substantially responsive EMD in accordance with Instructions to Bidders shall be rejected by WBMSCL as non-responsive.

12.2 The EMD may be forfeited:

- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form, except as provided in Instructions to Bidders; or

- (b) if the successful Bidder fails to:
 - i) sign the Contract in accordance with Instructions to Bidders;
 - ii) furnish a Performance Security in accordance with Instructions to Bidders;
 - iii) any wrong or misleading information provided by the Bidder during submission of bids

13. Signing of Bid

The bid document should be digitally signed and uploaded on the E-tender portal.

14. Withdrawal, Substitution, and Modification of Bids

14.1 The bid once submitted cannot be withdrawn but prior to the deadline prescribed for submission of bids, a Bidder may substitute, or modify its Bid after it has been submitted.

14.2 The objective of this bid is to ensure supply of best quality equipment and execution of work at the most competitive price. If at any stage of the bidding, including at the stage of financial evaluation, it appears that the tendered rate is artificially hiked or is much lower compared to the prevailing market price and available rates of similar or identical composition with the government, WBMSCL reserves the right to cancel the bids.

15. Confidentiality

Any effort by a Bidder to influence WBMSCL in the examination, evaluation, comparison of the bids or contract award decisions may result in the rejection of its Bid.

Notwithstanding Instructions to Bidders from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact WBMSCL on any matter related to the bidding process, it should do so in writing.

16. Language of Bid document

Bidders should enclose the full details including proposed configuration of offers with full documentation, descriptive literature / leaflets supplementing the description and point out any special feature of their system. All documentation is required to be in English.

E. Submission and Opening of Bids

17. The following Non statutory documents are to be submitted:

- 17.1 The Non statutory documents to be submitted under My Document
- 17.2 Each sub-category item should be in multiple page single PDF file)

Guidelines for uploading documents in My Document:

Sl. No.	Category Name	Sub - Category Name	Document Name
1	CERTIFICATES	CERTIFICATES	a) PAN Card b) Service Tax registration Certificate c) VAT Registration Certificate d) CST registration Certificate
2	COMPANY DETAILS	COMPANY DETAILS 1	a) License from Government/ Statutory Authority as applicable / Registration with the Registrar Of Companies.
		COMPANY DETAILS 2	
3	CREDENTIAL	CREDENTIAL 1	Performance Statement Form (For the period of last five years) - Form 5 of Section V
		CREDENTIAL 2	ISO certificate of the manufacturing factory
4	DECLARATION	DECLARATION1	Income Tax returns for i) 2010-11, 2011-12 & 2012-13 OR ii) 2011-12, 2012-13 & 2013-14
		DECLARATION2	Acknowledgement of VAT Returns/VAT Clearance Certificate for i) 2012-2013 OR ii) 2013-14
		DECLARATION3	Acknowledgement of CST Returns/CST Clearance Certificate for i) 2012-2013 OR ii) 2013-14
		DECLARATION 4	
5	EQUIPMENT	MACHINERIES 1	Manufacturer's Authorization (If applicable) as per Form 4 of Section V
		MACHINERIES 2	List of clients where the bidder has installed MGPS
		MACHINERIES 3	Satisfactory Performance Certificate from at least 1 (one) users of similar MGPS system in public or private health facilities, preferably in the State of West Bengal and provided necessary service support to such life saving system.

Sl. No.	Category Name	Sub - Category Name	Document Name
6	FINANCIAL INFO	P/L & BALANCE SHEET 2011-2012	P/L & Balance sheet 2011-2012
		P/L & BALANCE SHEET 2012-2013	P/L & Balance sheet 2012-2013

18. The following statutory documents are to be submitted:

18.1 BID – A (Should be in multiple page single PDF file)
EMD (Scanned copy of the instrument through which EMD have been submitted).

18.2 BID – B (Should be in multiple page single PDF file)

BID - B	
1	Brochures of the offered product / model.
2	CE ("Conformité Européene") / US FDA approval Certificate of the offered model, as applicable/ UL/BS/CE/DIN CE ("Conformité Européene") Certificate should be from EU Notified Bodies authorized to conduct audits.
3	Pre-requisites of installation [Power (KVA, Phase, Hz), Civil and any other requirement, if any]
4	Legal declaration affirmed before a First Class Magistrate / Notary/ Executive Magistrate on non judicial stamp paper of Rs. 100/- as per Form – 1.
5	Turnover Certificate in the format given in Form 6
6	Financial Status Certificate in the format given in Form 7
7	Certification of Work Experience in the format given in Form 8

Note: Non-statutory document (document uploaded in My Space), Bid – A & Bid – B constitute the technical bid.

19. BID – C [Price bid]

The Price Bid shall comprise the following documents in one cover (folder):

19.1 Bill of Quantity (BOQ) in .xls which is the total of three (3) Hospital wise Bill of Quantity (BOQ) in the specified format.

19.2 Three (3) documents (in PDF) i.e. Hospital wise BOQ in Forms 9.a), 9.b) & 9.c) of Section V (Bidding Forms).

- Hospital wise BOQ shall contain the financial quotes in respect of (a) **Total Price of Equipments, copper pipes and accessories** & (b) **Comprehensive Maintenance Contract (CMC) charges**
 - (a) **Total Price of Equipment, copper pipes and accessories:** includes value of goods, delivery charges, installation, commissioning, operation and maintenance, warranty obligations and all duties and taxes. The taxes will include 1% Entry Tax, if applicable.
 - (b) **Comprehensive Maintenance Contract (CMC) charges:** The charges should include cost of spares, labour, all duties, service tax and all other charges. The CMC should cover the entire MGPS.
- The rates are to be quoted year wise. The annual CMC charges shall be paid quarterly in four equal installments after successful completion of maintenance work each quarter. For this purpose, selected bidder should produce documentary proof i.e. service/ maintenance reports duly signed by MSVP.
- Actual CMC charges will be paid based on the actual quantity of work executed on pro rata basis (calculated based on hospital wise BOQ except the CMC charges –vs- actual measurement at site).

Note: *Comparison of Financial Bids would be based on the clause 19.1. The rates quoted shall be firm and no variation will be allowed during the period of contract.*

Detailed list of documents annexed at Form 2 Check-List Form, Section V

F. Evaluation and Comparison of Bids

20. Tender Evaluation

During the tender evaluation process **Non-statutory document** (document uploaded in My Space), **Bid – A & Bid – B** constituting the technical bid will be opened first and evaluated. The following steps will be followed during technical evaluation of bids.

- (i) **Scrutiny of Form 1** (Letter of Technical Bid in form of Affidavit) of Section V **duly notarized** - to proceed further for scrutiny of the checklist document.
- (ii) Scrutiny of documentary evidence as per Form 2: Check-list, Section V of Bid document submitted by the Bidders – to check for eligibility of the bidder in terms of “**Eligibility of Bidder**” in clause 7 of Section I.
- (iii) After fulfilling the above (i) and (ii), On Site Functional Assessment of the similar installation and equipments of the short list Bidders will be undertaken, if necessary, by the Committee duly constituted by the Managing Director of West Bengal Medical Service Corporation.

Note: *A bidder will be considered technically qualified, if qualify in all 3 above criteria. The financial bids of the technically qualified bidders will be opened.*

21. Tender Evaluation

Comparison of Financial Bids would be based on the total of quotes as formulated in BOQ.

THE DECISION OF THE WBMSCL AUTHORITY WILL BE FINAL AND BINDING IN THIS MATTER.

22. Responsiveness of Bids

22.1 WBMSCL's determination of a bid's responsiveness is to be based on the contents of the bid itself.

22.2 A substantially responsive Bid is one that conforms to all the terms, conditions, and specifications of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

- (a) Affects in any substantial way the scope, quality, or performance of the goods and related services specified in the Contract; or
- (b) Limits in any substantial way, inconsistent with the Bidding Documents, WBMSCL's rights or the Bidder's obligations under the Contract; or
- (c) If rectified would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.

22.3 **A substantially WBMSCL** considers material deviation to include but not to be limited to the following situations. During technical evaluation of bids (verification of formal criteria):

- Lack of proper bid securities in terms of change in the wording (not consistent with the prescribed format), amount or validity period,
- Absence of bid form, change in the wording (not consistent with the prescribed format) or lack of signature in the key portions of the bid form,
- The Bidder does not accept important Contract conditions, i.e. related to Performance Security, Warranty, Force Majeure, Applicable Law, Delivery Schedule, Payment Terms, Limitation of Liability, etc.
- Specifications of the item quoted vary in one or more significant respect(s) from the minimum required Technical Specifications.

22.4 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by WBMSCL

23. Examination of Terms and Conditions and Technical Evaluation

23.1 WBMSCL shall examine the Bid to confirm that it does not contain material deviation or reservation related to the conditions and requirements specified in the GCC of Section II, SCC of Section III and in the Schedule of Requirements of Section IV.

23.2 If, after the examination of the terms and conditions and the technical evaluation, WBMSCL determines that the Bid is not substantially responsive in accordance with Instructions to Bidders, it shall reject the Bid.

24. Domestic Preference

Companies based and manufacturing in India shall not be a factor in bid evaluation.

25. WBMSCL's Right to Accept Any Bid, and to Reject Any or All Bids

WBMSCL reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.

G. Award of Contract

26. Award Criteria

- 26.1 In the event of a Contract award, WBMSCL, prior to the expiry of the period of bid validity shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
- 26.2 Before the award of Contract, WBMSCL may inspect the manufacturing facilities of the lowest evaluated responsive Bidder to assess his capability to successfully perform the Contract as per the terms and conditions specified in the NIT.

27. WBMSCL's right to vary quantities

- 27.1 WBMSCL reserves the right to increase or decrease the quantity of goods and work and related services originally specified in Section IV, Schedule of Requirements, provided this does not exceed 40 % (Forty percent) above or 20% (Twenty percent) below the BOQ for each hospital without any change in the unit prices or other terms and conditions of the Bid Documents.

28. Publication of Award of Contract

- 28.1 WBMSCL shall publish the Award of Contract in e-tender portal of Govt. Of West Bengal and its own website at wbmsc.gov.in

29. Signing of Contract

- 29.1 Prior to the expiry of the period of bid validity, WBMSCL shall issue Award of Contract (AOC). The draft agreement will be sent to the successful Bidder along with the AOC and Special Conditions for Goods, if any.
- 29.2 Within 7 (*seven*) days of receipt of the AOC, the successful Bidder shall sign and return the agreement to WBMSCL along with the required value of Performance Security in full.

30. Performance Security

- 30.1 Within 7 (*seven*) days of receipt of the AOC from WBMSCL, the successful Bidder, if required, shall furnish the Performance Security in full in accordance with the GCC, using for that purpose the Performance Security Form included in Section VI, Contract forms, or another Form acceptable to WBMSCL. WBMSCL shall promptly discharge the Bid Securities of the unsuccessful Bidders pursuant to Instructions to Bidders.
- 30.2 Failure of the successful Bidder to submit the above-mentioned Performance Security in full or in parts in the event of a staggered supply as decided by WBMSCL and sign the agreement within 7 (*seven*) days of issue of AOC shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD.

Section II. General Conditions of Contract

In the event of an order, and any dispute arising out of the same, the FIRST PARTY General Conditions of Contract will apply as under and all references to the General Conditions of Contract include (subject to all relevant approvals) a reference to these terms and conditions as amended, supplemented, substituted, novated or assigned from time to time. Each schedule and annexure referred to in these terms and conditions shall form part of these terms and conditions. The documents forming the supply contract shall be construed and interpreted so that, in the event there is any conflict or ambiguity between them, these terms and conditions shall prevail.

1. APPLICATION AND LEGAL STATUS OF THE PARTIES:

The General Conditions Of Contract incorporated in section –II shall be applicable for the **Supply, Installation, Commissioning, Operation & Maintenance of Medical Gas Pipeline System (MGPS) in the Medical Colleges of the Government of West Bengal** and to the extent the same are not superseded by the Special Conditions Of Contract prescribed under section III, section IV or Schedule of Requirement of this document.

WBMSCL and VENDOR shall respectively be referred to as “FIRST PARTY” & “SECOND PARTY” hereunder and each party acknowledges and agrees that:

- 1.1 Nothing contained in or relating to the contract shall be construed as establishing or creating between the Parties the relationship of employer and employee or of principal and agent. The officials, representatives, employees, or subcontractors of each of the Parties shall not be considered in any respect as being the employees or agents of the other Party and each Party shall be solely responsible for all claims arising out of or relating to its engagement of such persons or entities.

2. DEFINITIONS:

- 2.1 **GOODS:** Goods are hereinafter deemed to include, without limitation, such medicines, raw materials, components, intermediate products and products which the Bidder is required to supply pursuant to the Purchase Order or Special Conditions of this Contract to which these General Conditions are attached. Services are hereinafter deemed to include services ancillary to the supply of the Goods including, without limitation transportation and supply at the point of consignee and such other obligations as required under this Contract.

- 2.2 **TRADE TERMS:** Whenever an Incoterm is used in this Contract it shall be interpreted in accordance with the Incoterms 2010 and as the same has been judicially interpreted in India.

3. CONTRACT PRICE;

Prices charged by the Bidder for the Goods supplied, execution of work and the related services performed under the Contract shall not vary from the prices quoted by the Bidder in its bid, with the exception of any price adjustment authorized in writing by FIRST PARTY.

4. PACKAGING OF THE GOODS:

4.1 The SECOND PARTY shall package the Goods for delivery with the best materials that are adequate to safeguard the Goods while in transit and with all due care and according to the highest standards of export packaging for the type and quantities of the Goods. The Goods shall be packed and marked in a proper manner in accordance with the instructions stipulated in the Contract or, otherwise, as customarily done in the trade, and in accordance with any requirements imposed by applicable law or by the transporters and manufacturers of the Goods. The packing, in particular, shall mark the Contract or Purchase Order number and any other identification information provided by FIRST PARTY as well as such other information as is customary for the Goods in question. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt, precipitation and open storage. The SECOND PARTY shall have no right to any return of the packing materials.

4.2 In case the goods are high radiation material itself or any component of the same emits radiation the same should be packaged to prevent or insulate such radiation so that no health hazard is caused to the user.

5. TRANSPORTATION AND FREIGHT:

Unless otherwise specified in the Contract (including in any INCOTERM 2010) the SECOND PARTY shall be solely liable for making all transport arrangements and for payment of freight and insurance costs for the shipment and delivery of the Goods in accordance with the requirements of the Contract and as defined in **clause 15. Payment Terms of Section I, under sub-section A. Instructions to Bidders.**

6. DELIVERY OF GOODS AND COMPLETION OF WORK:

The SECOND PARTY shall hand over or make available the goods, and the Consignees shall receive the goods (as per detail annexed in Section IV), at the place for the delivery of the Goods and within the time for delivery of the Goods specified as **per clause 13 Time for Completion of Work at Section I, under sub-section A. Instructions to Bidders**, in the Contract. All manuals, instructions, displays and any other information relevant to the Goods shall be in the English language unless otherwise specified in the Contract. Unless specifically stated in the Contract (including in any INCOTERM 2010) the entire risk of loss, theft, damage to, or destruction of the Goods shall be borne as defined in **clause 15. Payment Terms of Section I, under sub-section A. Instructions to Bidders.**

7. INSPECTION OF THE GOODS:

7.1 All goods may be subjected to inspection and testing by FIRST PARTY or its designated representatives at all times and places including the period of manufacture and in any event prior to final acceptance by FIRST PARTY.

7.2 Neither the carrying out of any inspections of the Goods nor any failure to undertake any such inspections shall relieve the SECOND PARTY of any of its warranties or the performance of any obligations under the Contract.

7.3 For goods supplied from within or outside India.

a) For goods supplied from within or outside India, Purchaser retains the right to perform pre-shipment inspection at the manufacturer's premises and an independent quality control laboratory testing **at its own cost**.

b) The Purchaser will retain the right to perform further inspections and quality testing at any time till the satisfactory installation of Goods, as it deems fit, **at its own cost**.

7.4 Should any inspected or tested goods fail to conform to the specifications, the purchaser shall reject them and the supplier shall replace the rejected goods free of cost to the purchaser, within a period of 30 (thirty) days of intimating such rejection.

8. ACCEPTANCE OF GOODS AND WORK:

Under no circumstances shall FIRST PARTY be required to accept any goods and works that do not conform to the specifications of or requirements of the Contract. FIRST PARTY may condition acceptance of the goods and works upon the successful completion of acceptance tests, as may be specified in the Contract or otherwise agreed in writing by the Parties. In no case shall FIRST PARTY be obligated to accept any goods and works unless and until FIRST PARTY has inspected the goods and works following commissioning of the goods in accordance with the requirements of the Contract. The goods and works shall be deemed to be accepted only after FIRST PARTY provides written acceptance.

9. REJECTION OF GOODS AND WORK:

Notwithstanding any other rights of, or remedies available to, FIRST PARTY under the Contract, in case any of the goods is defective or otherwise does not conform to the specifications or other requirements of the Contract, FIRST PARTY may, at its sole option, reject or refuse to accept the goods and works, and the SECOND PARTY agrees promptly to replace the goods with goods of equal or better quality.

10. TITLE:

Unless otherwise expressly provided in the Contract, title including the incidentals of the title and any legal or inchoate right and interest which may accrue in the said Goods shall pass from the SECOND PARTY to the FIRST PARTY upon delivery of the Goods and the acceptance of the same by the FIRST PARTY in accordance with the requirements of the Contract.

11. PERFORMANCE SECURITY:

- 11.1 Within 14 days of receipt of the AOC from WBMSCL, the successful Bidders, if required, shall furnish the Performance Security in full or in parts in the event of a staggered supply as decided by WBMSCL as per clause 14. Performance Security (PS) of Section I, under sub-section A. Instructions to Bidders for an amount of 10% of the Contract Price (bid value)in full or in parts, valid up to 60 days after the date of completion of all contractual obligations, till the last date of warranty obligations.
- 11.2 Banks issuing Performance Securities must be acceptable to the FIRST PARTY, i.e. they have to be scheduled commercial banks.
- 11.3 Discharge of the Performance Security shall take place upon expiry of the Performance Security or the completion of all contractual liabilities of the Supplier as per as per clause 14. Performance Security (PS) of Section I, under sub-section A. Instructions to Bidders.
- 11.4 In the event of any amendment issued to the Contract, the Supplier shall, within 14 (fourteen) days of issue of the amendment, furnish the corresponding amendment to the Performance Security (as necessary) rendering the same valid in all respects in terms of the Contract, as amended.

12.

WARRANTIES:

12.1

Goods Warranties:

Without limitation of any other warranties stated in or arising under the Contract, the SECOND PARTY warrants and represents that:

- 12.1.1 The Goods, including all packaging and packing thereof, conform to the specifications of the Contract, are fit for the purposes for which such Goods are ordinarily used and for the purposes expressly made known in writing by FIRST PARTY to the SECOND PARTY, and shall be of even quality, free from faults and defects in design, material, manufacture and workmanship under normal use in the conditions prevailing in the country of final destination;
- 12.1.2 If the SECOND PARTY is not the original manufacturer of the Goods, the SECOND PARTY shall provide FIRST PARTY with the benefit of all manufacturers' warranties in addition to any other warranties required to be provided hereunder;
- 12.1.3 The Goods are of the quality, quantity and description required by the Contract;
- 12.1.4 The Goods are free from any right of claim by any third-party and unencumbered by any title or other rights, including any liens or security interests and claims of infringement of any intellectual property rights, including, but not limited to, patents, copyright and trade secrets.
- 12.1.5 Unless otherwise indicated in the Technical Specifications, this warranty shall remain valid for 1 (One) year after the Goods have been commissioned at the final destination indicated in the Contract subject to issue of certificate regarding date of commissioning issued by the consignee.
- 12.1.6 During the warranty, free comprehensive annual maintenance and repairs services including testing and calibration, labour and spares shall be provided by the supplier during the period of warranty.
- 12.1.7 If the Supplier, having been notified, fails to remedy the defect(s) within the stipulated period, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to

any other rights which the Purchaser may have against the Supplier under the Contract.

12.1.8 The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods and services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.

12.1.9 The supplier shall be responsible and shall indemnify on account of any emission or radiation that may cause harm to the user of the supplied product.

12.2 The Goods shall be new and unused. The SECOND PARTY shall remain responsive to the needs of FIRST PARTY for any services that may be required in connection with any of the SECOND PARTY's warranties under the Contract. All warranties will remain fully valid following any delivery of the Goods and for a period of not less than one (1) year following acceptance of the Goods by the Consignee in accordance with the Contract. During any period in which the SECOND PARTY's warranties are effective, upon notice by FIRST PARTY that the Goods do not conform to the requirements of the Contract, the SECOND PARTY shall replace the defective Goods with Goods of the same or better quality or fully reimburse FIRST PARTY for the purchase price paid for the defective Goods; and if having been notified by any means, the SECOND PARTY fails to replace the defective Goods within 30 days, FIRST PARTY may proceed to take such remedial action as may be necessary, at the SECOND PARTY's risk and expense and without prejudice to any other rights which FIRST PARTY may have against the SECOND PARTY under the Contract. The reasonableness of the period of time granted for remedy is subject to the discretion of FIRST PARTY according to the circumstances of the Contract.

13. INDEMNIFICATION:

The SECOND PARTY shall indemnify, defend and hold the FIRST PARTY, the DoHFW and the Government agencies harmless against any or all proceedings, actions and third party claims arising out of a breach by the SECOND PARTY of any of its obligations under this agreement.

This indemnity shall be limited in respect of making harmless to the FIRST PARTY, the DoHFW and the Government agencies.

The bidder shall indemnify the FIRST PARTY against all actions, suits, claims and demands brought or made against it, in respect of anything done or committed to be done by the SECOND PARTY in execution of or in connection with the work of this contract and against any loss or damage to the FIRST PARTY in consequence to any action or suit, or a legal proceeding, being brought against the bidder for anything done or committed to be done in the execution of this contract. The bidder will abide by the job safety measures prevalent in India and will free the FIRST PARTY from all demands or responsibilities arising from accidents or loss of life, on account of the bidder's

negligence and responsibility. The bidder will pay all indemnities arising from such incidents without any extra cost to FIRST PARTY and will not hold the FIRST PARTY responsible or obligated. The FIRST PARTY may at its discretion and entirely at the cost of the bidder defend such suit, either jointly with the bidder or severally in case the latter chooses not to defend the case and /or proceeding.

14. LIQUIDATED DAMAGES:

Except under the circumstances of force majeure as described, if the SECOND PARTY fails to deliver any or all of the Goods by date(s) of delivery as per conditions of the contract, FIRST PARTY may, without prejudice to any or all its other remedies under the contract, deduct from the contract price, as per **clause 16. Liquidated damages for Delayed Commissioning of Section I, under sub-section A. Instructions to Bidders.**

15. PENALTY FOR DEFAULT:

In case of failure by the Bidders to perform according to this Contact to keep Service Up time in Warranty & CMC of all of the Goods, the Company may exercise one or several of the penal provisions of the contract.

15.1 In addition to what has been stated above, the following penalties shall be imposed against offences mentioned against each:

Nature of offence	Penalty to be imposed
Any wrong or misleading information provided by the Bidder during submission of bids	<ul style="list-style-type: none"> a. Forfeiture of EMD b. May lead to blacklisting in FIRST PARTY for at least 3 years
Non execution of agreement within 14 days of issue of AOC	<ul style="list-style-type: none"> a. Forfeiture of EMD b. Blacklisting for 5 years in FIRST PARTY c. Blacklisting to be circulated to all procurement agencies throughout the country
Supplying refurbished goods instead of new	<ul style="list-style-type: none"> a. Termination of Contract. b. Blacklisting c. Blacklisting to be circulated to all procurement agencies throughout the country. d. Forfeiture of the Performance Bank Guarantee. Lodging FIR.
Breach of Agreement	<ul style="list-style-type: none"> a. Termination of Contract. b. Blacklisting

	<ul style="list-style-type: none"> c. Blacklisting to be circulated to all procurement agencies throughout the country. d. Forfeiture of the Performance Bank Guarantee e. Lodging FIR
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16. CHANGES IN QUANTITY:

FIRST PARTY may at any time by written instruction vary the general scope of this Contract by 40% (forty percent) above or 20% (twenty percent) below the BOQ for each hospital without any change in the unit prices or other terms and conditions. The price for the additional quantity will be as per the contracted price of this bid.

17. TERMINATION FOR CONVENIENCE:

17.1 FIRST PARTY may, upon notice to the Bidder, terminate this Contract, in whole or in part, at any time for its convenience. The notice of termination shall state that termination is for FIRST PARTY's convenience, the extent to which performance of the SECOND PARTY under the Contract is terminated and the date upon which such termination becomes effective.

17.2 In the event of Termination for Convenience, no payment shall be due from FIRST PARTY to the Bidder except for Goods satisfactorily delivered and for the cost of such necessary work as FIRST PARTY may request the Bidder to complete.

18. TERMINATION FOR DEFAULT:

18.1 FIRST PARTY, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the SECOND PARTY, may terminate the Contract, in whole or in part if:

18.1.1 The SECOND PARTY fails to deliver any or all of the Goods within the period specified in the Contract:

18.1.2 The SECOND PARTY fails to perform any other obligation under the Contract;

18.1.3 The SECOND PARTY, in the judgment of FIRST PARTY, has engaged in fraud and corruption, in competing for or in executing the present Contract;

18.1.4 The SECOND PARTY attempts to offer any direct or indirect benefit arising from or related to the performance of the Contract or the award there of to any representative, official, employee or other agent of FIRST PARTY or any organization of Health & Family Welfare Department, Government of West Bengal;

- 18.1.5 The SECOND PARTY is adjudged bankrupt, or is liquidated, or becomes insolvent, applies for moratorium or stay on any payment or repayment obligations, or applies to be declared insolvent;
- 18.1.6 FIRST PARTY reasonably determines that the SECOND PARTY has become subject to a materially adverse change in its financial condition that threatens to endanger or otherwise substantially affect the ability of the SECOND PARTY to perform any of its obligations under the Contract.
- 18.1.7 Non-compliance of all statutory norms and applicable laws relating to the said contract will entitle FIRST PARTY to terminate the contract.
- 18.2 Upon occurrence of one or more of the events specified above, FIRST PARTY shall follow the procedure of issuing notice or show cause specifying the time frame and on being not satisfied with the explanation, be entitled to terminate the Contract immediately. The decision of FIRST PARTY shall be final and binding on the Bidder.

19. CONSEQUENCES OF TERMINATION:

- 19.1 In the event of any termination of the Contract, upon receipt of notice of termination by FIRST PARTY, the SECOND PARTY shall, except as may be directed by FIRST PARTY in the notice of termination or otherwise in writing:
 - 19.1.1 Take immediate steps to bring to a close in a prompt and orderly manner the performance of any obligations under the Contract, including, but not limited to, fulfilling any outstanding orders for Goods under the Contract, and in doing so, reduce expenses to a minimum;
 - 19.1.2 Place no further orders for Goods or other materials, except as FIRST PARTY and the SECOND PARTY agree in writing are necessary to fulfil any outstanding order or to complete any portion of the Contract that has not been terminated;
 - 19.1.3 Transfer title and deliver to FIRST PARTY any Goods remaining to be delivered as stipulated in the notice of termination; and
 - 19.1.4 Take any other action that may be necessary or that FIRST PARTY may direct in writing, for the protection and preservation of any property, whether tangible or intangible, related to the Contract that is in the possession of the SECOND PARTY and in which FIRST PARTY has or may be reasonably expected to acquire an interest.
- 19.2 In the event of any termination of the Contract, FIRST PARTY shall not be liable to pay the SECOND PARTY except for those Goods delivered to FIRST PARTY in accordance with the requirements of the Contract, but only if such Goods were ordered, requested or otherwise provided prior to the SECOND PARTY's receipt of notice of termination from FIRST PARTY.

20. CONFIDENTIALITY:

- 20.1 FIRST PARTY and the SECOND PARTY, its agents, employees, sub-contractors and servants shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto, in connection with the Contract, whether such information has been furnished prior to, during or following competition or termination of the contract. Notwithstanding the above, the SECOND PARTY may furnish to its sub-contractor such documents, data, and other information it received from FIRST PARTY to the extent required for the sub-contractor to perform its work under the contract, in which event the SECOND PARTY shall obtain from such sub-contractor an undertaking of confidentiality similar to that imposed on the SECOND PARTY.
- 20.2 FIRST PARTY shall not use such documents, data and other information received from the SECOND PARTY for any purpose unrelated to the contract. Similarly, the SECOND PARTY shall not use such documents, data and other information received from FIRST PARTY for any purpose other than the performance of the contract.
- 20.3 The obligation of a party under the two foregoing paragraphs shall not apply to information that:
- 20.3.1 Now or hereafter enters the public domains through no fault of that party;
- 20.3.2 Can be proven to have been possessed by that party at time of disclosure and which was not previously obtained, directly, from the other party, or
- 20.3.3 Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

21. FORCE MAJEURE:

- 21.1. Force majeure as used herein means any unforeseeable and irresistible act of nature, any act of war (whether declared or not), invasion, revolution insurrection, flood earthquake or any other acts of a similar nature or force, provided that such acts arise from causes beyond the control and without the fault or negligence of the SECOND PARTY. The SECOND PARTY acknowledges and agrees that, with respect to any obligation under the contract that the SECOND PARTY must perform any delays or failure to perform such obligation arising from or relating to harsh conditions within such areas shall not, in and of itself, constitute Force majeure under the contract. Further the SECOND PARTY acknowledges and agrees that scarcity of raw materials, power cut, workers unrest (even if wide spread) will not constitute force majeure under the contract.
- 21.2. In the event of and as soon as possible after the occurrence of any cause constituting Force majeure, the SECOND PARTY shall give notice and full particulars in writing to FIRST PARTY, of such occurrence or cause if the SECOND PARTY is thereby rendered unable, wholly or in part to perform its obligations and meet its responsibilities under the contract. The SECOND PARTY shall also notify FIRST PARTY

of any other changes in condition or the occurrence of any event which interferes or threatens to interfere with its performance of the contract. Not more than fifteen (15) days following the provision of such notice Force majeure or other changes in conditions or occurrence, the SECOND PARTY shall also submit a statement to FIRST PARTY of estimated expenditure that will likely be incurred for the duration of the change in condition or the event. On receipt of notice or notices required hereunder, FIRST PARTY shall take such action as it considers, in its sole discretion, to be appropriate or necessary in the circumstances, including the granting to the SECOND PARTY of a reasonable extension of time in which to perform any obligations under the contract.

21.3. If an event of force majeure exists and the SECOND PARTY fails, within seven (7) days of such event to give notice in writing to FIRST PARTY and if the SECOND PARTY is rendered permanently unable, wholly, or in part, by reason of force majeure to perform its obligations and meet its responsibilities under the Contract, FIRST PARTY shall have the right to suspend or terminate the contract on the same terms and conditions except that the period of notice shall be seven (7) days. In any case, FIRST PARTY shall be entitled to consider the SECOND PARTY permanently unable to perform its obligations under the contract in the case of the SECOND PARTY's suffering any period of suspension in excess of ninety (90) days.

21.4. In the event of force majeure the benefit accrued to the FIRST PARTY in terms of title and any accrued right thereof including all inchoate rights shall remain with the FIRST PARTY and the SECOND PARTY shall not have any claim with the same.

22. SOURCE OF INSTRUCTIONS:

The SECOND PARTY shall neither seek nor accept instructions from any authority external to FIRST PARTY in connection with the performance of its obligations under the contract. Should any authority external to FIRST PARTY seek to impose any instructions on the SECOND PARTYS regarding the SECOND PARTY's performance under the contract, the SECOND PARTYS shall promptly notify and shall provide all reasonable assistance required by FIRST PARTY. The SECOND PARTY shall not take any action in respect of its performance of the contract or otherwise related to its obligations under the contract that may adversely affect the interests of FIRST PARTY, and the SECOND PARTY shall perform its obligations under the contract with the fullest regard to the interests of FIRST PARTY.

23. BENEFITS, CORRUPTION AND FRAUD:

23.1 The SECOND PARTY warrants that it has not and shall not offer any direct or indirect benefit arising from or related to the performance of the contract or the award thereof to any representative, officials, employee, or other agent of FIRST PARTY or any official

of the Health & Family Welfare Department, Government of West Bengal or any organization engaged in the procurement process whether during the period the contract is in process or before or after the contract is over. The SECOND PARTY acknowledges and agrees that any breach of this provision is a breach of an essential term of the contract as specified.

23.2 Corruption means the offering, giving, receiving or soliciting of, directly or indirectly, anything of value to influence the action of any FIRST PARTY representative, official, employee or agent of FIRST PARTY or any official of the Health & Family Welfare department, Government of West Bengal or any organization engaged in the selection process or in the execution of the contract.

23.3 Fraud means a misrepresentation or omission of facts in order to influence the selection process or the execution of the contract.

24. USE OF NAME OR OFFICIAL SEAL OF FIRST PARTY:

The SECOND PARTY shall not advertise or otherwise make public for purpose of commercial advantage or goodwill that it has a contractual relationship with FIRST PARTY, nor shall the SECOND PARTY, in any manner whatsoever use the name or official seal of FIRST PARTY, or any abbreviation of the name of the FIRST PARTY or Health & Family Welfare department, Government of West Bengal in connection with its business or otherwise without the written permission of FIRST PARTY.

25. ASSIGNMENT:

25.1 The SECOND PARTY shall not, except after obtaining the prior written approval of FIRST PARTY, assign, transfer, pledge, or make any other disposition of this contract or any part hereof or of any of the SECOND PARTY's right or obligations hereunder, except with the prior written authorization of FIRST PARTY. The SECOND PARTY may assign or otherwise transfer the contract to the surviving entity resulting from a reorganization of the Party's operations.

25.2 Prior to the written approval of FIRST PARTY, the SECOND PARTY shall promptly notify FIRST PARTY of such assignment at the earliest opportunity subject to the assignee or transferee agrees in writing to be bound by all of the terms and conditions of the contract and such writing is promptly provided to FIRST PARTY following the assignment or transfer and FIRST PARTY finds that the SECOND PARTYs has the

financial and technical capacity as laid down in the tender document to carry out the assignment provided that:

- 25.2.1 Such reorganization is not the result of any bankruptcy, receivership or other similar proceedings; and
- 25.2.2 Such reorganization arises from sale, merger, or acquisition of all or substantially all of the SECOND PARTY's assets or ownership interest; and
- 25.2.3 Such reorganization is not taking place with any of the Bidder who had participated in the Tender or who will be deemed to have conflict of interest as defined in the tender documents process for the same tender.
- 25.3 However, should the SECOND PARTY become insolvent or should control of the SECOND PARTY change by virtue of insolvency, FIRST PARTY may, without prejudice to any other right or remedy, terminate this contract.

26. AMICABLE SETTLEMENT:

When a dispute arises under this agreement, the parties shall make all reasonable efforts to resolve through good faith negotiation, failing which they will attempt at dispute resolution with the intervention of the Principal Secretary, the DoHFW, GoWB

27. ARBITRATION:

- 27.1 Except for a dispute in connection with termination in which respect the decision of FIRST PARTY shall be final, any dispute between the parties arising out of or relating to this agreement which cannot be resolved through good faith negotiation shall be settled in arbitration, in terms of the provisions of the Arbitration and conciliation Act-1996(no.26 of 1996). The arbitration hearing shall be held in Kolkata only. The award of the arbitrator (s) shall be binding on both the parties. The cost of arbitration shall be borne by the respective parties.
- 27.2 Pending the submission of and / or decision on a dispute, difference or claim, or until the arbitral award is published, the party shall continue to perform all of their obligations under this agreement without prejudice to a final adjustment in accordance with such award.

28.

COURT OF LAW:

In case of any dispute in between the parties, the matter will be settled in appropriate Court of Law within Kolkata Jurisdiction.

Section III. Special Conditions of Contract

The following Special Conditions of Contract (hereinafter referred to as SCC) shall supplement the General Conditions of Goods (hereinafter referred to as GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC. The corresponding clause number of the GCC is indicated in the first column.

SCC -1	GCC - 6	<p>Delivery of Goods and execution of work shall be made by the SECOND PARTY in accordance with the Schedule of Requirement</p> <p>The details of shipping and/or other documents, as applicable under I or II, to be furnished by the SECOND PARTY are:</p> <p>I. For Goods supplied from abroad :</p> <p>(A) Upon shipment, within 24 hours the SECOND PARTY shall notify the Purchaser in writing the full details of the shipment including Contract number, description of the Goods, quantity, date and port of shipment, mode of shipment, estimated dates of arrival at the port of entry and the place of destination. In the event of Goods sent by airfreight, the SECOND PARTY shall notify the Purchaser a minimum of forty-eight (48) hours ahead of dispatch, the name of the carrier, the flight number, the expected date and time of arrival, the Master airway-bill and the House airway- bill numbers. The SECOND PARTY shall first fax the above details and then send to the Purchaser, by courier, two sets of documents comprising one original and one copy of the following:</p> <ul style="list-style-type: none"> i) Commercial invoice, indicating the West Bengal Medical Services Corporation Limited as the Purchaser on behalf of the Department of Health and Family Welfare, Government of West Bengal; the Contract number, Goods description, quantity, unit price, and total amount. Invoices must be signed in original and stamped, or sealed with the company stamp/seal; ii) Negotiable, clean, on-board through bill of lading marked “freight prepaid” and indicating the West Bengal Medical Services Corporation Limited as the Purchaser on behalf of the Department of Health and Family Welfare, Government of West Bengal, and notify Consignees as stated in the Contract, with delivery through to final destination as per the Schedule of Requirements and non-negotiable bill of lading, or railway consignment note, road consignment note, truck or air waybill, or multimodal transport document, marked “freight prepaid” and showing delivery through to final destination as per the Schedule of Requirements; iii) Packing list identifying contents of each package; iv) Manufacturer’s Warranty Certificate covering all items supplied; v) Manufacturer’s Certificate of Origin covering all items supplied; vi) Original copy of the certificate of weight issued by the port authority/licensed authority and six copies; vii) Manufacturer will submit a pre-shipment advisory note to purchaser & consignee at least 15 days prior to the scheduled delivery of the
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		<p>equipment at the door step of the consignee;</p> <p>viii) Acknowledgement of receipt of Goods by the Consignees, i.e. Consignment Receipt Certificate (CRC).</p> <p>The above documents shall be received by the 'Purchaser' at least 15 days before arrival of Goods at the port or place of arrival and, if not received, the SECOND PARTY will be responsible for any consequent expenses.</p> <p>II. For Goods from within India</p> <p>(A) Upon the delivery of the Goods, the SECOND PARTY shall notify the Purchaser in writing and deliver to the Purchaser two sets of documents comprising one original and one copy of the following:</p> <p>(i) Commercial invoice, indicating the West Bengal Medical Services Corporation Limited as the Purchaser on behalf of the Department of Health and Family Welfare, Government of West Bengal, the Contract number, loan number; Goods' description, quantity, unit price, and total amount. Invoices must be signed in original and stamped or sealed with the company stamp/seal;</p> <p>(ii) Railway consignment note, road consignment note, truck or airway bill, or multimodal transport document showing the Purchaser as the West Bengal Medical Services Corporation Limited on behalf of the West Bengal Medical Services Corporation Limited and delivery through to final destination as stated in the Contract;</p> <p>(iii) Acknowledgement of receipt of Goods by the Consignees, i.e. Consignment Receipt Certificate (CRC);</p> <p>(iv) Packing list identifying contents of each package;</p> <p>(v) Manufacturer's or SECOND PARTY's Warranty certificate covering all items supplied;</p> <p>(vi) Manufacturer will submit a pre-shipment advisory note to purchaser & consignee at least 15 days prior to the scheduled delivery of the equipment at the door step of the consignee.</p>
SCC -2	GCC - 29	<p>Add clause 29- Payment Terms - As per clause 15. Payment Terms of Section I, under sub-section A. Instructions to Bidders.</p>

SCC-3	GCC - 30	<p>Add clause GCC 30- The Comprehensive Maintenance Contract (Including Spare parts)</p> <p>(i) The Consignees/ Government of West Bengal / Operation & Maintenance (O&M) Partner, may, at his own and sole discretion enter into a Comprehensive Maintenance Contract (CMC) with the SECOND PARTY, three months prior to the completion of Warranty Period, at the contracted price, for a period as specified in the tender after the expiry of the warranty period provided that this service shall not relieve the SECOND PARTY of any warranty obligations under this Contract. Wherever the Technical Specifications lay down a different period of CMC, this latter period shall prevail. The CMC will commence from the date of expiry of warranty period. The CMC includes preventive maintenance including testing & calibration as per technical/service/operational manual, labour and spares.</p> <p>(ii) The CMC includes repairs of entire system, preventive maintenance, testing & calibration, labour and spares and all software updates.</p> <p>(iii) The Comprehensive Annual Maintenance and Repair charges (after Warranty period) shall be paid quarterly in four equal instalments.</p> <p>(iv) Details of CMC requirements or otherwise, as spelt out in the Technical Specifications, will prevail over those given in this section.</p>
SCC - 5	GCC - 31	<p>Add GCC clause 31</p> <p>The successful bidder shall be required to undertake supplies and execute work over a period of 1 (one) year at the quoted rate from the date of signing of the contract.</p>

Section IV. Schedule of Requirement

REQUIREMENT FOR MALDA MEDICAL COLLEGE & HOSPITAL

S.No	Description of Items	Unit	Qty
A	OXYGEN SYSTEM		
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1
2	Fully Automatic control panel for Oxygen Having a constant flow output of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	2
3	2 X 10 size emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	517
5	Oxygen flow meters with humidifier as per standards	Nos	493
6	H.P. tubing having anti static core white color 5mtrs with Keat conversion for Oxygen as per Standards	Set	6
B	NITROUS OXIDE SYSTEM		
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder. as per Standards	Set	1
2	Fully Automatic control panel for Nitrous Oxide Having a min. flow output of over 1000 LPM at 4.2 bar pressure as per Standards	Set	1
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per Standards	Set	1
4	Front loading N2O outlets as per standards	No.	6
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per ISO Standards	Set	6
C	VACUUM SYSTEM		
1	Vacuum Central System Complete with Three nos Vacuum Pumps make Mode 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2000 liters, Filter etc.	Set	1
2	Bacterial Filter	Set	1
3	Surface mounted front loading double locked Vacuum out lets, as per Standards	Nos	495
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per Standards	Nos	486
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per Standards	Nos	6
6	High Pressure color coded yellow Tube as per ISO Standards as per Standards	Mtr	30
D	COMPRESSED AIR SYSTEM		
1	Compressed Air system complete with 02 nos. 57 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors with 15 HP motors with a common Receiver of 1000 liter water capacity along with 2 No. Air Dryer	Set	1
2	3-stage Air Filtration System	Set	2
3	Triplex Pressure Reducing System	Set	1
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per Standards	Nos	34
5	Front loading double locked Surgical Air-7 bar out lets , as per Standards	no.	1

6	HP colour coded black Tubing as per ISO Standards as per Standards	Mtr	30
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)		
1	Duplex AGSS complete with Electrical connection etc.	Set	1
2	Front loading double locked AGSS out lets , as per Standards	No.	5
F	MISCELLANEOUS ITEMS		
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1
2	Distribution Copper Pipe		
a	76 mm OD X 1.5 mm Thick	Mtr	100
b	54 mm OD x 1.2 mm thick	Mtr.	150
c	42 mm OD x 1.2 mm thick	Mtr	750
d	28 mm OD x 0.9 mm thick	Mtr	1100
e	22 mm OD x 0.9 mm thick	Mtr	2200
f	15 mm OD x 0.9 mm thick	Mtr	2150
g	12 mm OD x 0.7 mm thick	Mtr	1500
3	Valve Box (without Valves) as per Standards		
a	6 Gas	No.	1
b	5 Gas	No.	4
c	4 Gas	No.	1
d	3 Gas	No.	3
e	2 Gas	No.	15
4	Medical Gas Digital Alarm System as per Standards		
a	6 Gas	No.	1
b	5 Gas	No.	2
c	4 Gas	No.	1
d	3 Gas	No.	3
e	2 Gas	No.	11
5	Isolation Valve		
a	15 MM.	No.	44
b	22 MM.	No.	26
c	28 MM.	No.	2
d	42 MM.	No.	3
e	54 MM.	No.	3
f	76 MM.	No.	1
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	31
6.1	Bed Head Panel with 2-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	2
7	SS 304 Rigid Ceiling OT Pendant	No.	15
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1
9	CMC Charges for year1 after completion of 5 year warranty	LS	1
10	CMC Charges for year2 after completion of 5 year warranty	LS	1
11	CMC Charges for year3 after completion of 5 year warranty	LS	1
12	CMC Charges for year4 after completion of 5 year warranty	LS	1
13	CMC Charges for year5 after completion of 5 year warranty	LS	1

Payment will be made based on

- i) Quantity as per the approved drawing by WBMSCL; and
- ii) Actual measurement at site after commissioning.

REQUIREMENT FOR MURSHIDABAD MEDICAL COLLEGE & HOSPITAL

S.No	Description of Items	Unit	New General	Sadar	Main Building	TB & Chest	Isolation Building	Total
MEDICAL GAS PIPE LINE								
A	OXYGEN SYSTEM							
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards'	Set	1					1
1(a)	2 x 10 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set		1	1	1	1	4
2	Fully Automatic control panel for Oxygen Having a constant flow out put of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	1	1	1	1	1	5
3	2 X 10 size Emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1					1
3(a)	1X 10 size Emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set		1	1	1	1	4
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	467	246	214	27	40	994
5	Oxygen flow meters with humidifier as per standards	Nos	437	234	214	27	40	952
6	H.P. tubing having anti static core white color 5mtrs with Keat conversion for Oxygen as per standards	Set	13	6				19
B	NITROUS OXIDE SYSTEM							
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per standards	Set	1	1				2
2	Fully Automatic control panel for Nitrous Oxide Having a min. flow out put of over 1000 LPM at 4.2 bar pressure as per Standards	Set	1	1				2
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per standards	Set	1	1				2
4	Surface Mounted mounted front loading N2O outlets as per standards	No.	13	6				19
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per Standards	Set	13	13				26
C	VACUUM SYSTEM							
1	Vacuum Central System Complete with Three nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2000 liters, Filter etc.	Set	1					1
1(a)	Vacuum Central System Complete with 2 nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2000 liters, Filter etc.			1	1	1		3

1 (b)	Vacuum Central System Complete with 2 nos Vacuum Pumps v255. each having 60 cfm PD with 5 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 1000 liters, Filter etc.							1	1
2	Bacterial Filter	Set	1	1	1	1	1	1	5
3	Surface mounted front loading double locked Vacuum out lets , as per standards	Nos	463	246	214	27	40		990
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per standards	Nos	437	234	214	27	40		952
5	Theatre Suction Unit , trolley mounted with 2 nos 2000 ml Collection Jars as per standards	Nos	13	6					19
6	High Pressure color coded yellow Tube as per ISO Standards as per standards	Mtr	65	30					95
D	COMPRESSED AIR SYSTEM								
1	Compressed Air system complete with 04 nos. 57 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors with 15 HP motors with a common Receiver of 1000 liter water capacity along with 4 No. Air Dryer	Set	1						1
1(a)	Compressed Air system complete with 02 nos. 57 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors from with 15 HP motors with a common Receiver of 1000 liter water capacity along with 2 No. Air Dryer			1					1
2	3-stage Air Filtration System	Set	2	2					4
3	Triplex Pressure Reducing System	Set	1						1
3(a)	Duplex Pressure Reducing System	set		1					1
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per standards	Nos	67	23					90
5	HP colour coded black Tubing as per ISO Standards as per standards	Mtr	65	65					130
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)								
1	Duplex AGSS complete with Electrical connection etc.	Set	1						1
2	Front loading double locked AGSS out lets , as per standards	No.	13						13
F	MISCELLANEOUS ITEMS								
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1	1	1	1	1	1	5
2	Distribution Copper Pipe								
a	76 mm OD X 1.5 mm Thick	Mtr	100	60	40	50	60		310
b	54 mm OD x 1.2 mm thick	Mtrs	220						220
c	42 mm OD x 1.2 mm thick	Mtr	380	30					410
d	28 mm OD x 0.9 mm thick	Mtr	765	150	125	20	15		1075
e	22 mm OD x 0.9 mm thick	Mtr	2565	400	425	155	50		3595
f	15 mm OD x 0.9 mm thick	Mtr	3000	550	300	135	30		4015
g	12 mm OD x 0.7 mm thick	Mtr	2200	1350	1100	145	110		4905
3	Valve Box (without Valves) as per standards								
a	6 Gas	No.	13						13
b	5 Gas	No.	1						1

c	4 Gas	No.	1	6				7
d	3 Gas	No.	4	1				5
e	2 Gas	No.	18	5	7	3	2	35
4	Medical Gas Digital Alarm System as per standards							
a	6 Gas	No.	3					3
b	5 Gas	No.	1					1
c	4 Gas	No.	1	1				2
d	3 Gas	No.	4	1				5
e	2 Gas	No.	10	2	7	2	2	23
5	Isolation Valve							
a	15 MM.	No.	36	27	7	3	2	75
b	22 MM.	No.	19	12	8	4	3	46
c	28 MM.	No.	2	2	2	2	2	10
d	42 MM.	No.	3	2				5
e	54 MM.	No.	5					5
f	76 MM.	No.	1					1
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	17					17
7	SS 304 Rigid Ceiling OT Pendant	No.	13					13
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1	1	1	1	1	5
9	CMC Charges for year1 after completion of 5 year warranty	LS						1
10	CMC Charges for year2 after completion of 5 year warranty	LS						1
11	CMC Charges for year3 after completion of 5 year warranty	LS						1
12	CMC Charges for year4 after completion of 5 year warranty	LS						1
13	CMC Charges for year5 after completion of 5 year warranty	LS						1

Payment will be made based on

- iii) Quantity as per the approved drawing by WBMSCL; and
- iv) Actual measurement at site after commissioning.

REQUIREMENT FOR COLLEGE OF MEDICINE AND SAGORE DATTA HOSPITAL

S.No	Description of Items	Unit	Qty
A	OXYGEN SYSTEM		
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1
2	Fully Automatic control panel for Oxygen Having a constant flow out put of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	2
3	2 X 10 size emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	718
5	Oxygen flow meters with humidifier as per Standards	Nos	670
6	H.P. tubing having anti static core white color 5mtrs with conversion kit for Oxygen as per Standards	Set	11
B	NITROUS OXIDE SYSTEM		
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder. as per Standards	Set	1
2	Fully Automatic control panel for Nitrous Oxide Having a min. flow out put of over 1000 LPM at 4.2 bar pressure as per Standards	Set	1
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per Standards	Set	1
4	Front loading N2O outlets as per Standards	No.	12
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per ISO Standards	Set	11
C	VACUUM SYSTEM		
1	Vacuum Central System Complete with Three nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2000 liters, Filter etc.	Set	1
2	Bacterial Filter	Set	1
3	Surface mounted front loading double locked Vacuum out lets, as per Standards	Nos	664
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per Standards	Nos	620
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per standards	Nos	11
6	High Pressure color coded yellow Tube as per ISO Standards as per standards	Mtr	55
D	COMPRESSED AIR SYSTEM		
1	Compressed Air system complete with 04 nos. 57 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors with 15 HP motors with a common Receiver of 1000 liter water capacity along with 4 No. Air Dryer	Set	1
2	3-stage Air Filtration System	Set	2
3	Triplex Pressure Reducing System	Set	1
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per standards	Nos	66
5	Front loading double locked Surgical Air-7 bar out lets , as per standards	no.	10
6	HP colour coded black Tubing as per ISO Standards as per standards	Mtr	55
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)		
1	Duplex AGSS complete with Electrical connection etc.	Set	1
2	Front loading double locked AGSS out lets , as per standards	No.	11
F	MISCELLANEOUS ITEMS		

1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading/ seq.) complete with plant Room wiring.	Nos	1
2	Distribution Copper Pipe		
a	76 mm. OD X 1.5 mm. Thick	Mtr.	85
b	54 mm OD x 1.2 mm thick	Mtr.	110
c	42 mm OD x 1.2 mm thick	Mtr	300
d	28 mm OD x 0.9 mm thick	Mtr	1100
e	22 mm OD x 0.9 mm thick	Mtr	3500
f	15 mm OD x 0.9 mm thick	Mtr	3100
g	12 mm OD x 0.7 mm thick	Mtr	2100
3	Valve Box (without Valves) as per standards		
a	6 Gas	No.	8
b	5 Gas	No.	3
c	4 Gas	No.	1
d	3 Gas	No.	5
e	2 Gas	No.	49
4	Medical Gas Digital Alarm System as per standards		
a	6 Gas	No.	1
b	5 Gas	No.	5
c	4 Gas	No.	2
d	3 Gas	No.	3
e	2 Gas	No.	13
5	Isolation Valve		
a	15 MM.	No.	106
b	22 MM.	No.	66
c	28 MM.	No.	2
d	42 MM.	No.	4
e	54 MM.	No.	3
f	76 MM.	No.	1
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	17
7	SS 304 Rigid Ceiling OT Pendant	No.	16
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1
9	CMC Charges for year1 after completion of 5 year warranty	LS	1
10	CMC Charges for year2 after completion of 5 year warranty	LS	1
11	CMC Charges for year3 after completion of 5 year warranty	LS	1
12	CMC Charges for year4 after completion of 5 year warranty	LS	1
13	CMC Charges for year5 after completion of 5 year warranty	LS	1

Payment will be made based on

- v) Quantity as per the approved drawing by WBMSCL; and
- vi) Actual measurement at site after commissioning.

Scope of works, Standards, Safety, System, Installation and Maintenance

Survey, Inspection the site, Plan, Design, Supply, Installation, Testing and Commissioning, Operation & Maintenance of Medical Gases Manifold and Distribution System including turnkey work and providing of free spare parts and service during Warranty/Defect Liability Period of 5 years & in CMC.

1. The system should comprise of

1.1 Source Equipments:

- a. Fully Automatic Oxygen manifold and Control panel and Emergency manifold
- b. Fully Nitrous oxide manifold with automatic control panel and emergency manifold.
- c. Vacuum (suction) supply system complete with bacterial Filters
- d. **Medical and surgical air system with imported air Filtration system**
- e. Synchronized Combined Electrical Control Panel for Air Compressors & Vacuum Pumps (**Indigenous**)
- f. Imported **Duplex Anesthetic Gas Scavenging System (AGSS System)**

1.2 Distribution piping complete with accessories

1.3 Outlets

1.4 Alarm Systems

1.5 Area Valve Service System

1.6 Pendants and bed head panels

1.7 **High pressure tube for O₂, N₂O, Compressed Air & Vacuum**

1.8 Oxygen flow meter with humidifier

1.9 Ward vacuum units

1.10 Theatre Suction units

2. Standards :

Bidder should execute the work complying with the standards like HTM 2022/ NFPA99; should use equipments and materials having standards of CE/FDA/ISO/BIS and copper pipes certified by Lyods/SGS/TUV.

3. Scope of work

3.1 Bidder will be responsible for inspection the sites, design, supply, installation, testing and commissioning, Operation & Maintenance of Medical Gas Pipeline System (MGPS) in the 3 (three) new Medical Colleges in coordination with the Authorities and providing of free spare parts and service during Warranty/Defect Liability Period of 5 years & in CMC.

3.2 The bidders are required to survey the site before submitting the quotes.

- 3.3 Synchronized Control panel for Manifold Components like Vacuum and Air plant system to be supplied by the bidder. All required electrical connection for installation of entire system including alarm panel/ bed head panel/ pendant/ control panel should be tapped from the nearest available points and shall be in the scope of work of the bidder. Hospital will provide power at one point inside the manifold room only. Further distribution and wiring to be carried out by the bidder to make the system functional.
- 3.4 All the required Consumables, Gases, Cylinders etc. for installation, testing, calibration, QC Tests, Commissioning etc. remains in the scope of work of the selected bidder.
- 3.5 The bidder shall be responsible for the complete works including the submission of working Drawings, and isometric views, detailed work schedule and materials.
- 3.6 Bidder shall be responsible for maintenance of Entire Medical Gas pipeline system from the battery Limits of Liquid Medical Oxygen System.
- 3.7 Bidder should arrange for all statutory approvals, if any required for satisfactory commissioning of the system. Required documentation will be provided by the Hospital.
- 3.8 Bidder shall be responsible for Coordination with Liquid Medical Gas system suppliers for maintenance and day to day operation and Reporting to Hospital authorities. Training of the staff will be arranged by WBMSCL with the LMO Vendor.
- 3.9 Hospital/ WBMSCL will arrange for D type Oxygen/ Nitrous cylinders for the Manifold Room for the regular supply of Gases for the patient use at a later stage. Bidders need not have to consider prices of D type Cylinder in their Bid.
- 3.10 Electricity required for commissioning the system will be provided by the hospital free of Cost.
- 3.11 Hospital will provide facility for storage space for the materials, tools etc. but watch and ward of the material will be the responsibility of the selected bidder. Hospital takes no responsibility for the loss /theft of the materials.
- 3.12 The Bidder should submit technical data sheets, Product catalogs, Drawings, samples etc for approval. WBMSCL or its appointed consultant will provide approval as per Tender specification.
- 3.13 Bidder should supply complete set of part manuals, service manuals and user manuals for all the systems and subsystems to be supplied.
- 3.14 Bidder should arrange from a licensed Third party, the quality certification for the entire MGPS System that the system meets the Design, quality and safety standard. For this purpose bidders should propose three licensed parties with their credentials. WBMSCL will approve the party based on their credentials and work experience.
- 3.15 Bidder should demonstrate Flow rate, purity and quality/type of gas at each outlet point. Selected Bidder is required to demonstrate and Document all safety features incorporated in the system as per HTM 2022/ NFPA Standards.

- 3.16 All material used for Installation, Testing and Commissioning the system should have required quality certification.
- 3.17 All supporting material like saddles, cable tray, channels, joints/ connectors, minor civil works, electrical works etc. are a part of MGPS work. If Bidder feels any items other than those listed in BOQ is required for the commissioning of the system, the cost of such items may be included in his bid. No further payment will be made other than the rates & items in BOQ.
- 3.18 Bidder should display maintenance Log, Normal values etc in the manifold room as prescribed by WBMSCL or its consultant. Daily/Periodical maintenance chart/log should be maintained .This maintenance chart will be provided by WBMSCL.
- 3.19 Final electrical safety test, system test and calibration should be done by authorized persons using calibrated test equipment as per standards. Bidder or his authorized agent should post trained experienced technicians (One plant technician & one helper) in shifts who should be available at site 24 X 365 days.
- 3.20 Earthing arrangements for all the equipment shall be completed by the bidder as per standard practice.
- 3.21 **Incidental Services:** The supplier is required to provide Hardware and Software up–gradation, if any from time to time. During warranty & CMC all software updated version / up–gradations are expected to be provided at free of cost to purchaser.
- 3.22 Further, any bugs/ shortcomings detected by the purchaser/ user as well as the supplier himself shall be rectified at free of cost to purchaser beyond warranty period.
- 3.23 In case any inspected or tested equipments fail to conform to the specifications, the Purchaser may reject them and the supplier shall either replace the rejected equipments or make all alterations necessary to meet specification requirements free of cost to the Purchaser.
- 3.24 Leaflets, equipment operating and maintenance manuals (hard copy, Compact Disk, DVD etc.) and literature should be attached for ready references along with complete documentation of all the measurements conducted during installation period which shall be submitted by the supplier for future reference.
- 3.25 Acceptance Test at site shall be conducted of individual equipment and complete system to ensure that individual equipment and complete system meets the technical specifications and other operational and technical requirements of tender.
- 3.26 The Purchaser shall have the right to reject any individual equipment or complete system, if in its opinion the same does not meet technical specifications, operational or technical requirements. The decision of the purchaser in this regard shall be final.
- 3.27 The delivery, installation or commissioning shall not be deemed to have been completed unless all the equipments and systems are accepted by the purchaser.
- 3.28 If it is found that to meet the performance criteria, any extra equipment is required the same will be provided free of cost by the supplier.

Technical specification for Medical Gas Pipeline System

4. Oxygen Manifold - 2 x 20 Class-D type bulk cylinders(Indigenous)

Manifold shall consist of two high pressure header bar assemblies to facilitate connection of 20nos of primary and 20nos of secondary cylinder supplies. Each header bar shall be provided with 20 numbers of cylinder pigtail connections to suit cylinder valves as per IS.3224 incorporating a check valve at the header connection. The high-pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve.

Oxygen Manifold should consist of 2 rows of 20no of class D-type bulk oxygen cylinders. The manifold should be hydraulically tested to 3500 psig. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The system should have non - return valves for easy changing of cylinders without closing the bank. The cylinder should be placed with the help of cylinder brackets and fixing chains which should be galvanized.

4.a) Oxygen Manifold - 2 x 10 Class-D type bulk cylinders(Indigenous)

Manifold shall consist of two high pressure header bar assemblies to facilitate connection of 10 nos. of primary and 10 nos. of secondary cylinder supplies. Each header bar shall be provided with 10 numbers of cylinder pigtail connections to suit cylinder valves as per IS.3224 incorporating a check valve at the header connection. The high-pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve.

Oxygen Manifold should consist of 2 rows of 10 no of class D-type bulk oxygen cylinders. The manifold should be hydraulically tested to 3500 psig. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The system should have non - return valves for easy changing of cylinders without closing the bank. The cylinder should be placed with the help of cylinder brackets and fixing chains which should be galvanized.

5. Emergency Oxygen System (Indigenous)

It will have emergency arrangement of 2 x 5-cylinder configuration, with Copper tail pipes, Non Return Valves & high flow regulator with pressure gauges for Cylinder & line pressure and safety valve. Pressure regulator shall be detachable from the manifold.

6. Fully Automatic Oxygen Control Panel: (Indigenous)

6.1 The fully automatic oxygen control panel should comply with HTM 20-22/NFPA 99C standards.

The manifold assembly should provide two stages of pressure regulation. A single stage primary regulator, one for each cylinder bank should be used to initially reduce cylinder pressure and two single stage pressure regulators should be provided in the control cabinet for final delivery pressure regulation. One delivery pressure regulator in service and one should be ready for service in a standby mode. The Manifold control panel should be digital, fully automatic type and switches from "Bank in Use" to "Reserve bank " without fluctuation in delivery supply line pressure. Changeover should be performed by electrically/pneumatically operated valves contained in the control cabinet. In the event of an electrical power failure the valves should automatically open to provide an uninterrupted gas flow. It should be 100% automatic and should not require manual adjustment.

6.2 The automatic gas manifold control should include:

- Supply pressure gauges x 2Nos.
- Delivery pressure gauge x 1No.
- Line pressure regulators with bypass valve x 2Nos
- Line pressure relief valve x 1No
- Green in service LED indicators, one for each supply bank x 2Nos
- Amber / yellow ready for service LED indicators, one for each supply valve x 2 Nos.
- Red LEDs to indicate depleted cylinders, one for each supply bank x 2Nos
- Instruction for changing the cylinders should be clearly identified on the front of the control panel.
- All functional components should be enclosed in corrosion resistant robust material.

6.3 All components inside the Control Panel like Pressure Regulators, piping and control switching equipment should be cleaned for Oxygen Service and installed inside the cabinet to minimize tampering with the regulators or switch settings. The Control Panel shall include two pressure relief valves, one high pressure approx.200psi and one low pressure approx.75 psi.

The heavy duty control panel should be provided with a flow capacity of 1500 to 2000 LPM at 50 to 60 psi.

7. Oxygen Flow meter with Humidifier Bottle(Indigenous)

Back Pressure Compensated flow meter for accurate gas flow measurement with following features:

- a) Control within a range of 0-15 LPM.
- b) The flow meter body should be made of brass chrome plated materials.
- c) The flow tube and shroud components should be made of clear, impact resistant polycarbonate.
- d) Flow tube should have large and expanded 0-15 LPM range for improved readability at low flows.
- e) Inlet filter of stainless steel wire mesh to prevent entry of foreign particles

8. Nitrous oxide manifold with automatic control panel and emergency manifold

18.1 Nitrous Oxide Manifold -2 X 5 Class-D type bulk cylinders (Indigenous)

Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with 5 number of cylinder pigtail connections to suit cylinder valves as per IS3224 incorporating a check valve at the header connection. The high-pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The cylinder should be locked with the help of cylinder brackets and fixing chains which should be galvanized.

8.2 Fully Automatic Nitrous Oxide Control Panel (Indigenous)

The manifold assembly should provide two stages of pressure regulation. A single stage primary regulator, one for each cylinder bank should be used to initially reduce cylinder pressure and two single stage pressure regulators should be provided in the control cabinet for final delivery pressure regulation. One delivery pressure regulator in service and one should be ready for service in a Standby mode. The Manifold control panel should be digital, fully automatic type and switches from "Bank in Use" to "Reserve bank" without fluctuation in delivery supply line pressure. Changeover should be performed by electrically/pneumatically operated valves contained in the control cabinet. In the event of an electrical power failure the valves should automatically open to provide an uninterrupted gas flow. The manifold should not require any manual resetting or adjustments after the replacements of the depleted cylinders.

8.2.1. The automatic gas manifold control should include:

- Supply pressure gauges x 2Nos
- Delivery pressure gauge x 1No
- Line pressure regulators with bypass valve x 2 Nos
- Line pressure relief valve x 1No
- Green in service LED indicators, one for each supply bank x 2Nos
- Amber / yellow ready for service LED indicators, one for each supply bank x 2Nos
- Red LEDs to indicate depleted cylinders, one for each supply bank x 2Nos
- Instruction for changing the cylinders should be clearly shown on a metal plate attached on the front of the removable cover of the control panel.
- All functional components should be enclosed on fire resistant, robust synthetic polymer/SS.

8.2.2. The Control Panel shall include two pressure relief valves, one high pressure approx.200psi and one low pressure approx.75 psi.

8.2.3. The control panel should also have heaters to prevent ice formation on the regulators at high flow rates.

8.2.4. The Control Panel should be made to provide Heavy Duty and have a flow capacity of 1000 LPM at 50 to 60 psi.

8.3 Emergency N2O Manifold - 2 x 2 Class-D type bulk Cylinders(Indigenous)

Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with 2 numbers of cylinder pigtail connections to suit cylinder valves as per IS 3224 incorporating a check valve at the header connection. The high-pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve. Nitrous oxide manifold should consist of 2 rows of 2 cylinders.

The manifold should be hydraulically tested to 3500 psig. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The system should have non - return valves for easy changing of cylinders without closing the bank. The cylinder should be placed with the help of cylinder brackets and fixing chains which should be galvanized.

9. Vacuum (suction) supply system complete

FOR MALDA MCH

To design, fabricate, test & install medical vacuum system comprising of TRIPLEX System of Lubricated, Air- cooled, Reciprocating, Vacuum Pumps each having 4200 LPM capacity with 10 HP Motor, common 2000 liters Receiver Tank, Filter, Non-Return Valve, Isolation Valves, Auto Switch Gear to set minimum & maximum operating vacuum and interconnecting piping to take care of the requirement of desired no. of Vacuum Outlets.

Specification of Vacuum Pumps :

TYPE	:	RECIPOCATING AIR COOLED VACUUM PUMP
BORE(S) x STROKE	:	5½" & 5½" x 4"
TYPE DRIVE	:	VEE BELT DRIVE
ELECTRICAL CONDITIONS:	:	415 / 10 HP / 50HZ
TYPE MOTOR	:	TEFC
TYPE STARTER	:	DOL

PERFORMANCE

MAX.VACUUM REFERRED TO 723 MM. BAROMETERS WITH

➤ CLOSED INTAKE	29.20"
➤ PISTON DISPLACEMENT	149.00 CFM
➤ SPEED	1000 RPM
➤ DRIVER HP	10

The Vacuum Pump System will have 3 **identical pumps** (Cascading & Sequential system) with on line starter and pump protection filters. Each Vacuum Pump will be complete with Base Plate, Belt Guard, V-Belts, Motor and Starter. The system will be of Automatic Start and Stop Type and operated by Electrical Control Panel.

10. Vacuum Pump Module (Indigenous)

FOR COLLEGE OF MEDICINE AND SAGORE DATTA HOSPITAL

To design, fabricate, test & install medical vacuum system comprising of **TRIPLEX** System of Lubricated, Air- cooled, Reciprocating, Vacuum Pumps each having 4200 LPM capacity with 10 HP Motor, common 2000 liters Receiver Tank, Filter, Non-Return Valve, Isolation Valves, Auto Switch Gear to set minimum & maximum operating vacuum and interconnecting piping to take care of the requirement of desired no. of Vacuum Outlets.

Specification of Vacuum Pumps :

TYPE	:	RECIPOCATING AIR COOLED VACUUM PUMP
BORE(S) x STROKE	:	5½" & 5½" x 4"
TYPE DRIVE	:	VEE BELT DRIVE
ELECTRICAL CONDITIONS:	:	415 / 10 HP / 50HZ
TYPE MOTOR	:	TEFC
TYPE STARTER	:	DOL

PERFORMANCE

MAX.VACUUM REFERRED TO 723 MM. BAROMETERS WITH

- CLOSED INTAKE 29.20"
- PISTON DISPLACEMENT 149.00 CFM
- SPEED 1000 RPM
- DRIVER HP 10

The Vacuum Pump System will have 3 **identical pumps** (Cascading & Sequential system) with on line starter and pump protection filters. Each Vacuum Pump will be complete with Base Plate, Belt Guard, V-Belts, Motor and Starter. The system will be of Automatic Start and Stop Type and operated by Electrical Control Panel.

11. Vacuum Pump Module (Indigenous)

FOR MURSHIDABAD MCH

NEW GENERAL HOSPITAL

To design, fabricate, test & install medical vacuum system comprising of **TRIPLEX** System of Lubricated, Air- cooled, Reciprocating, Vacuum Pumps each having 4200 LPM capacity with 10 HP Motor, common 2000 liters Receiver Tank, Filter, Non-Return Valve, Isolation Valves, Auto Switch Gear to set minimum & maximum operating vacuum and interconnecting piping to take care of the requirement of desired no. of Vacuum Outlets.

Specification of Vacuum Pumps :

TYPE	:	RECIPOCATING AIR COOLED VACUUM PUMP
BORE(S) x STROKE	:	5½" & 5½" x 4"
TYPE DRIVE	:	VEE BELT DRIVE
ELECTRICAL CONDITIONS:	:	415 / 10 HP / 50HZ
TYPE MOTOR	:	TEFC
TYPE STARTER	:	DOL

PERFORMANCE

MAX.VACUUM REFERRED TO 723 MM. BAROMETERS WITH

- CLOSED INTAKE 29.20"
- PISTON DISPLACEMENT 149.00 CFM
- SPEED 1000 RPM
- DRIVER HP 10

The Vacuum Pump System will have 3 **identical pumps** (Cascading & Sequential system) with on line starter and pump protection filters. Each Vacuum Pump will be complete with Base Plate, Belt Guard, V-Belts, Motor and Starter. The system will be of Automatic Start and Stop Type and operated by Electrical Control Panel.

12. Vacuum Pump Module (Indigenous)

FOR MATRI SADAN, SADAR HOSPITAL

To design, fabricate, test & install medical vacuum system comprising of **TRIPLEX** System of Lubricated, Air- cooled, Reciprocating, Vacuum Pumps each having 4200 LPM capacity with 10 HP Motor, common 2000 liters Receiver Tank, Filter, Non-Return Valve, Isolation Valves, Auto Switch Gear to set minimum & maximum operating vacuum and interconnecting piping to take care of the requirement of desired no. of Vacuum Outlets.

Specification of Vacuum Pumps :

TYPE	:	RECIPOCATING AIR COOLED VACUUM PUMP
BORE(S) x STROKE	:	5½" & 5½" x 4"
TYPE DRIVE	:	VEE BELT DRIVE
ELECTRICAL CONDITIONS:	:	415 / 10 HP / 50HZ
TYPE MOTOR	:	TEFC
TYPE STARTER	:	DOL

PERFORMANCE

MAX.VACUUM REFERRED TO 723 MM. BAROMETERS WITH

➤ CLOSED INTAKE	29.20"
➤ PISTON DISPLACEMENT	149.00 CFM
➤ SPEED	1000 RPM
➤ DRIVER HP	10

The Vacuum Pump System will have 3 **identical pumps** (Cascading & Sequential system) with on line starter and pump protection filters. Each Vacuum Pump will be complete with Base Plate, Belt Guard, V-Belts, Motor and Starter. The system will be of Automatic Start and Stop Type and operated by Electrical Control Panel.

13. Vacuum Pump Module (Indigenous)

FOR MAIN BUILDING, SADAR HOSPITAL

To design, fabricate, test & install medical vacuum system comprising of **DUPLEX** System of Lubricated, Air- cooled, Reciprocating, Vacuum Pumps each having 4200 LPM capacity with 10 HP Motor, common 2000 liters Receiver Tank, Filter, Non-Return Valve, Isolation Valves, Auto Switch Gear to set minimum & maximum operating vacuum and interconnecting piping to take care of the requirement of desired no. of Vacuum Outlets.

Specification of Vacuum Pumps :

TYPE	:	RECIPOCATING AIR COOLED VACUUM PUMP
BORE(S) x STROKE	:	5½" & 5½" x 4"
TYPE DRIVE	:	VEE BELT DRIVE
ELECTRICAL CONDITIONS:	:	415 / 10 HP / 50HZ
TYPE MOTOR	:	TEFC
TYPE STARTER	:	DOL

PERFORMANCE

MAX.VACUUM REFERRED TO 723 MM. BAROMETERS WITH

- CLOSED INTAKE 29.20"
- PISTON DISPLACEMENT 149.00 CFM
- SPEED 1000 RPM
- DRIVER HP 10

The Vacuum Pump System will have 2 **identical pumps** (Cascading & Sequential system) with on line starter and pump protection filters. Each Vacuum Pump will be complete with Base Plate, Belt Guard, V-Belts, Motor and Starter. The system will be of Automatic Start and Stop Type and operated by Electrical Control Panel.

14. Vacuum Pump Module (Indigenous)

FOR TB & CHEST BLOCK, SADAR HOSPITAL

To design, fabricate, test & install medical vacuum system comprising of **DUPLEX** System of Lubricated, Air- cooled, Reciprocating, Vacuum Pumps each having 1699 LPM capacity with 5 HP Motor, common 1000 liters Receiver Tank, Filter, Non-Return

Valve, Isolation Valves, Auto Switch Gear to set minimum & maximum operating vacuum and interconnecting piping to take care of the requirement of desired no. of Vacuum Outlets.

Specification of Vacuum Pumps :

TYPE	:	RECIPOCATING AIR COOLED VACUUM PUMP
BORE(S) x STROKE	:	5½" & 5½" x 4"
TYPE DRIVE	:	VEE BELT DRIVE
ELECTRICAL CONDITIONS:		415 / 5 HP / 50HZ
TYPE MOTOR	:	TEFC
TYPE STARTER	:	DOL

PERFORMANCE

MAX. VACUUM REFERRED TO 723 MM. BAROMETERS WITH

➤ CLOSED INTAKE	29.00"
➤ PISTON DISPLACEMENT	60.00 CFM
➤ SPEED	1000 RPM
➤ DRIVER HP	5

The Vacuum Pump System will have 2 **identical pumps** (Cascading & Sequential system) with on line starter and pump protection filters. Each Vacuum Pump will be complete with Base Plate, Belt Guard, V-Belts, Motor and Starter. The system will be of Automatic Start and Stop Type and operated by Electrical Control Panel.

15. Vacuum Pump Module (Indigenous)

FOR ISOLATION BUILDING, SADAR HOSPITAL

To design, fabricate, test & install medical vacuum system comprising of **DUPLEX** System of Lubricated, Air- cooled, Reciprocating, Vacuum Pumps each having 1699 LPM capacity with 5 HP Motor, common 1000 liters Receiver Tank, Filter, Non-Return Valve, Isolation Valves, Auto Switch Gear to set minimum & maximum operating vacuum and interconnecting piping to take care of the requirement of desired no. of Vacuum Outlets.

Specification of Vacuum Pumps :

TYPE	:	RECIPOCATING AIR COOLED VACUUM PUMP
BORE(S) x STROKE	:	5½" & 5½" x 4"
TYPE DRIVE	:	VEE BELT DRIVE
ELECTRICAL CONDITIONS:		415 / 5 HP / 50HZ
TYPE MOTOR	:	TEFC
TYPE STARTER	:	DOL

PERFORMANCE

MAX.VACUUM REFERRED TO 723 MM. BAROMETERS WITH

➤ CLOSED INTAKE	29.00"
➤ PISTON DISPLACEMENT	60.00 CFM
➤ SPEED	1000 RPM
➤ DRIVER HP	5

The Vacuum Pump System will have 2 **identical pumps** (Cascading & Sequential system) with on line starter and pump protection filters. Each Vacuum Pump will be complete with Base Plate, Belt Guard, V-Belts, Motor and Starter. The system will be of Automatic Start and Stop Type and operated by Electrical Control Panel.

Bacterial Filter

The vaccum system should have bacterial filter installed on line. The filter should have a filter efficiency , when tested by the sodium flame test in accordance with BS 3928:1969 of greater than 99.995% at the system design flow . It should achieve the penetration of < 0.0001%

Accessories

Accessories included for job site installation are inlet and discharge flexible connectors, vibration mounting pads, and source isolation valve, inlet check valve, oil temperature gauge, thermal malfunction switch and vacuum control switch. Flexible connectors on inlet and exhaust of each pump, exhaust tee with union as well as copper tubing with Shut-off-cock for gauge and vacuum switch etc.

Ward Vacuum Unit(Indigenous)

The vacuum unit will include vacuum regulator along with 0 - 760mm of Hg vacuum gauge of 2 1/2" size dial, 600 ml capacity reusable plastic collection bottle with overflow safety trap with plastic slide wall mounted type.

Theatre Vacuum Unit(Indigenous)

It will be trolley mounted. The unit will include one regulator having gauge and mounted on the trolley stand, having two reusable each 2000 ml plastic collection bottles mounted on the base of trolley unit and connected with regulator & low pressure tube inter-connections.

Medical and surgical air system

Should have the following main features

- Air-cooled compressors for continuous duty application

Air Compressor(Indigenous)

MALDA MCH

To design, fabricate, test & install medical compressed air system comprising of 2 nos. of suitable Air Compressors each having 15 HP Motor with common 1000 liters Receiver Tank and Filter, Non-Return Valve, Isolation Valves, 2 no. of Air Dryer , Pressure Reducing Station with filtration system.

Specification of Pumps :

TYPE	: Non Lubricated Air-Cooled Air Compressor
TYPE DRIVE	VEE BELT DRIVE
ELECTRICAL CONDITIONS	415 / 15 HP / 50 HZ
REGULATION	ASSC
RECEIVER SIZE	1000 LITERS W.C.
MOTOR TYPE	TEFC

The breathing air filters has maximum contaminant removal efficiency with minimum pressure drop. The filtration system conforms to breathing air filtration as per ISO 8573 Ch-1 Standard.

Air Compressor Module (Indigenous)

COLLEGE OF MEDICINE AND SAGORE DATTA HOSPITAL

To design, fabricate, test & install medical compressed air system comprising of 4 nos. of suitable Air Compressors each having 15 HP Motor with common 1000 liters Receiver Tank and Filter, Non-Return Valve, Isolation Valves, 4 no. of Air Dryer , Pressure Reducing Station with filtration system.

Specification of Pumps :

TYPE	: Non Lubricated Air-Cooled Air Compressor
TYPE DRIVE	VEE BELT DRIVE
ELECTRICAL CONDITIONS	415 / 15 HP / 50 HZ
REGULATION	ASSC
RECEIVER SIZE	1000 LITERS W.C.
MOTOR TYPE	TEFC
STARTER TYPE	Star Delta

PERFORMANCE

DISCHARGE PRESSURE	125 PSIG
PISTON DISPLACEMENT	50 CFM
ACTUAL DELIVERY	42 CFM
SPEED	930 RPM
DRIVER	15 HP

The Compressed Air System will have 4 nos. identical Air Compressors (with Cascading and Sequential).

AIR DRYER:

Air Dryer Type: Suitable Heatless type Compressed Air Dryer- 4 no.

TECHNICAL SPECIFICATION:

INLET FLOW CAPACITY	60 CFM
WORKING PRESSURE	12.5 BARG
INLET TEMPERATURE	42°C
ATMOSPHERIC DEW POINT	(-) 40°C
END CONNECTION	½" BSP
SUPPLY VOLTAGE	220V AC,(+/-) 10%,50 Hz., Single Phase.

Pressure Reducing System

The System would have 3 Nos. Pressure Regulators (one in working & one stand-by for Medical Air and the third is for Surgical Air) with required isolation valve to reduce air pressure to 4.2 Kg. / cm² required for Medical Air System and 7 Kg/cm² required for Surgical Air System.

3-Stage Breathing Air Filters with UL/BS/CE/DIN Certified

The breathing air filters has maximum contaminant removal efficiency with minimum pressure drop. The filtration system conforms to breathing air filtration as per ISO 8573 Ch-1 Standard.

Air Compressor Module (Indigenous)

MURSHIDABAD MCH (NEW GENERAL HOSPITAL)

To design, fabricate, test & install medical compressed air system comprising of 4 nos. of suitable Air Compressors each having 15 HP Motor with common 1000 liters Receiver Tank and Filter, Non-Return Valve, Isolation Valves, 4 no. of Air Dryer , Pressure Reducing Station with filtration system.

Specification of Pumps :

TYPE : Non Lubricated Air-Cooled Air Compressor

TYPE DRIVE VEE BELT DRIVE

ELECTRICAL CONDITIONS 415 / 15 HP / 50 HZ

REGULATION ASSC

RECEIVER SIZE 1000 LITERS W.C.

MOTOR TYPE TEFC

STARTER TYPE Star Delta

PERFORMANCE

DISCHARGE PRESSURE 125 PSIG

PISTON DISPLACEMENT 50 CFM

ACTUAL DELIVERY 42 CFM

SPEED 930 RPM

DRIVER 15 HP

The Compressed Air System will have 4 nos. identical Air Compressors (with Cascading and Sequential).

AIR DRYER:

Air Dryer Type: Suitable Heatless type Compressed Air Dryer- 4 no.

TECHNICAL SPECIFICATION:

INLET FLOW CAPACITY	60 CFM
WORKING PRESSURE	12.5 BARG
INLET TEMPERATURE	42°C
ATMOSPHERIC DEW POINT	(-) 40°C
END CONNECTION	½" BSP
SUPPLY VOLTAGE	220V AC,(+/-) 10%,50 Hz., Single Phase.

Pressure Reducing System

The System would have 3 Nos. Pressure Regulators (one in working & one stand-by for Medical Air and the third is for Surgical Air) with required isolation valve to reduce air pressure to 4.2 Kg. / cm² required for Medical Air System and 7 Kg/cm² required for Surgical Air System.

3-Stage Breathing Air Filters with UL/BS/CE/DIN Certified

The breathing air filters has maximum contaminant removal efficiency with minimum pressure drop. The filtration system conforms to breathing air filtration as per ISO 8573 Ch-1 Standard.

Air Compressor Module (Indigenous)

MURSHIDABAD MCH (MATRI SADAN, SADAR HOSPITAL)

To design, fabricate, test & install medical compressed air system comprising of 2 nos. of suitable Air Compressors each having 15 HP Motor with common 1000 liters Receiver Tank and Filter, Non-Return Valve, Isolation Valves, 2 no. of Air Dryer , Pressure Reducing Station with filtration system.

Specification of Pumps :

TYPE : Non Lubricated Air-Cooled Air Compressor

TYPE DRIVE	VEE BELT DRIVE
ELECTRICAL CONDITIONS	415 / 15 HP / 50 HZ
REGULATION	ASSC
RECEIVER SIZE	1000 LITERS W.C.
MOTOR TYPE	TEFC
STARTER TYPE	Star Delta

PERFORMANCE

DISCHARGE PRESSURE	125 PSIG
PISTON DISPLACEMENT	50 CFM
ACTUAL DELIVERY	42 CFM
SPEED	930 RPM
DRIVER	15 HP

The Compressed Air System will have 2 nos. identical Air Compressors (with Cascading and Sequential).

AIR DRYER:

Air Dryer Type: Suitable Heatless type Compressed Air Dryer- 2 no.

TECHNICAL SPECIFICATION:

INLET FLOW CAPACITY	60 CFM
WORKING PRESSURE	12.5 BARG
INLET TEMPERATURE	42°C

ATMOSPHERIC DEW POINT	(-) 40°C
END CONNECTION	½" BSP
SUPPLY VOLTAGE	220V AC, (+/-) 10%, 50 Hz. Single Phase.

Pressure Reducing System

The System would have 2 Nos. Pressure Regulators (one in working & one stand-by for Medical Air) with required isolation valve to reduce air pressure to 4.2 Kg./ cm² required for Medical Air System and 7 Kg/cm² required for Surgical Air System.

3-Stage Breathing Air Filters with UL/BS/CE/DIN Certified

The breathing air filters has maximum contaminant removal efficiency with minimum pressure drop. The filtration system conforms to breathing air filtration as per ISO 8573 Ch-1 Standard.

16. Combined electrical control panel for air compressors & vacuum pumps(indigenous)

Common Electrical Control Panel for Air-Compressors and Vacuum Pumps, cubicle type, complete with Mains Incomer, Bus Bar arrangement, Voltmeter with VSS, Phase indicating lights, Phase loss/Phase Reversal indicating light, individual MCBs for all starters, individual Ammeters for all motors, Single Phasing Preventer, Contactors, Overload Relays, Control Circuit MCB, Start/Stop Push buttons, Auto/Manual switches, Pump "ON" and Pump "TRIP" indicating lights, Sequencing Relays (Separate for Air Compressors and Vacuum pumps) with overriding feature. The Control Panel should facilitate synchronize operation of Vacuum Pump and Compressor.

The Panel must be a powder coated enclosure. All terminals, switches and lights must be duly marked. Internal wiring must be duly ferruled. Incomer shall be of adequate size so that it is suitable for the total load of the system.

17. AGSS (anesthetic gas scavenging system) plant -1560 lpm,

Duplex Anesthetic Gas Scavenging System (AGSS) of 1560 l/min. should be European CE Certified or UL listed under Medical Devices Directive. It shall conform to HTM 02-01/ NFPA 99C/EN/DIN. Duplex AGSS System with twin stand alone AGSS pumps of 3phase 1560 l/min capacity each with built in flow indication and pressure regulation valve. It should be mounted on single frame with control panel and separate warning label. One pump working

and one stand by and vice versa. The package should consist of two rotary vane vacuum pumps, a control panel, and mounted on a common base frame.

AGSS pump: AGSS pump shall operate completely dry permanently lubricated and sealed. Each pump should be completely air cooled and have absolutely no water requirements.

Control System: The duplex control system should conform to International Standards. The control system should provide automatic changeover from running to reserve with circuit breaker disconnects for each AGSS pump with external operators, full voltage motor starters with overload protection, control circuit transformers, visual and audible reserve unit alarm with isolated contacts for remote alarm. Should be in duplex format and must be chassis mounted ready for installation. Duplex system in-line non-return valves should allow individual pump servicing. Active anesthetic gas scavenging systems should be designed to safely remove exhaled anesthetic agents from the operating environment and dispose of them to atmosphere, thus preventing contamination of the operating department and providing a safe and healthy workspace for the personal. AGSS design should be dependent upon flow rate and pressure drop characteristics of the individual components of a systems, it is essential that terminal units, remote controls and pump units. AGSS Remote Control indicator must be provided for each OT with the system.

Installation should be on roof top. Piping, Non-Return-Valves (NRVs), and inlet nozzle should be suitably placed.

18. Distribution piping complete with accessories

18.1 Piping specifications Suggestion –

Copper pipe should be as per standard BS: EN 1057 standards; Solid drawn, seamless, deoxidized, non-arsenical, half hard, tempered and degreased copper pipe conforming to the standard. All copper pipes should be degreased & delivered capped at both ends. The pipes should be accompanied with manufacturers test certificate for the physical properties & chemical composition.

Copper pipe must have reputed third party inspection certificate (Eg. Lloyd's or TUV or SGS). Fittings should be made of copper and suitable for a working Pressure of up to 17bar and especially made for brazed socket type connections.

The isolation valve body shall be made of chromium plated brass with non-lubricated ball-type. All valves shall be pneumatically tested for twice the working pressure and factory degreased for medical gas service.

Copper fittings should comply with EN 1254:1 factory degreased and brazing filler metals should comply with EN 1044. Fitting should be degreased, individually packed for medical use.

18.2 Installation

Installation of piping shall be carried out with utmost cleanliness. Prior drawing approvals should be taken from hospital or third party inspection team before execution. Only pipes, fittings and valves that have been degreased and fittings shall be used at site. Pipe fixing clamps shall be of nonferrous or non-deteriorating plastic suitable for the diameter of the pipe. Inert gas welding technique should be used by passing oxygen Free Nitrogen Gas inside the copper pipes during silver brazing, in order to avoid carbon deposition inside the copper pipes. Only copper-to-copper joints are permitted on site except threaded. No flux shall be used for joining Copper to Copper joints and on for joints made on site. Copper to copper joints shall be brazed using a 5% silver-copper phosphorous brazing alloy CP104. Adequate

supports should be provided while laying pipelines to ensure that the pipes do not sag. Suitable sleeves shall be provided wherever pipes cross through walls / slabs. All pipe clamps shall be non-reactive to copper.

Universal Standard Pressure to be maintained at outlet points:

ITEMS	Gas volume of Cylinder to be attached / Pressure of Vacuum and Compressed Gas at Manifold	Pressure at Distribution Junction	Pressure at Target PORTALS / point of use/outlet point
O ₂	7.1 M ³	4 Kg/cm ² or 62-64 PSI	4 Kg/cm ² or 62-64 PSI
N ₂ O	17.1 M ³	4 Kg/cm ² or 62-64 PSI	4 Kg/cm ² or 62-64 PSI
Vacuum	-400 to -650 mmHg	-400 to -650 mmHg	-400 to -650 mmHg
Compressed Air	4 kg/cm ² or 62-64 PSI & 7Kg/cm ²	4 kg/cm ² or 62-64 PSI & 7Kg/cm ²	4 kg/cm ² or 62-64 PSI & 7Kg/cm ²

18.3 Testing

- A total of 5 joints shall be cut out for examination to establish the quality of the joints being made on site. If the joints examined do not conform to these requirements, then adjacent joints shall be cut out and examined until the extent of faulty workmanship has been made good.
- After erection, the pipes are to be flushed with dry nitrogen gas and then pressure tested with dry nitrogen at 10bar for minimum of 24 hrs. later to be flushed out with concern gases
- Cross connection test
- Required pressure to be attained at each outlet
- Functional test of NIST connectors
- Area Valve Service Units - closure and zoning tests
- Line Valve Assemblies – closure and zoning tests

18.4 Painting

All exposed pipes should be painted with two coats of synthetic enamel paint and colour codification should be as per IS : 2379 . Labeling and marking for direction of the gas.

The Pipe Sizes to be used are from among as under:

Outside Diameter (mm)	Maximum interval between supports (Horizontal and Vertical).. (mm)
12	1.5
15	1.5
22	2
28	2
35	2.5
42	2.5
54	2.5
76	3
108	3

19 Medical Gas Alarm (Main & Area)(Indigenous)

The medical gas central alarms should meet with HTM 02-01/NFPA 99C/EN/DIN. Should be capable of monitoring 6 medical gas services by means of pressure sensors which detect deviations from the normal operating limits of either pressure or medical vacuum. The area alarm should have a digital/analogue display of pressures.

Each gas service should be displayed by colored LED's to show 'Normal' (green), 'Low' and 'High Pressure' (red) conditions. Medical vacuum systems should be displayed in the 'Normal' (green) and 'Low Vacuum' (red) conditions only.

Failure indications should be displayed by flashing lights and normal indications should be steady light. An audible warning should sound simultaneously with any failure indication and a mute facility should be provided. A maintenance 'Mute' switch should be provided internally to the panel for use during maintenance which results in prolonged pipeline or plant shutdown. This facility should automatically reset when the gas service returns to normal.

The alarm panel should incorporate a volt free normally closed relay to allow for interconnection to either a medical gas central alarm system.

20. Area valve service unit(indigenous)

Area valve service units should meet with HTM 20-22/NFPA 99C standard. It should provide a zone isolation facility for use either in an emergency or for maintenance purpose. The Area Valve Service Unit should incorporate a ball valve with NIST connectors either side mounted in a lockable box with emergency access. It should be reliable and easy to operate and must have NIST connectors facilitate easy purge, sample & pressure testing and emergency supply system.

A color coded service identity label should be fitted behind the valve handle. The unit should provide a zone isolation facility, for use either in an emergency or for maintenance purposes.

The box shall be made from extruded aluminum to prevent corrosion. All wetted parts (except seals and gaskets) should be brass or copper. Each unit assembly should be factory tested for gas tightness. Rubber pipe grommets should be provided to ensure any leaking gas does not escape from the unit into a wall cavity. All visible aluminum surfaces should be powder coated.

21. Fully Automated panel for change over from LMO to Manifold and Manifold to LMO

Whenever pressure in LMO tank goes below the pre set level, this fully automated control panel should switch over from LMO to Manifold and from Manifold to LMO automatically without human intervention. The system to be supplied with necessary valves and control panel.

22. Manifold room

Hospital will provide manifold room for installation of MGPS system.

- Hospital will provide electrical supply with isolator in the plant. The wiring, peripheral lighting, fans, fire-fighting etc. have to be done by the bidder.
- Should provide with necessary exhaust fan for heat dissipation.
- Marking- All gases name and directions should be marked on the pipelines.
- Minimum 2 Fire extinguishers should be provided.
- All safety signage and color coding details are to be provided in the manifold room

23. Pendants and Bed Head Panels (indigenous)

23.1 Single Arm Rigid Pendant for Operation Theatre

The support arms should be extremely robust and revolve on high quality bearings, so that the pendant head glides smoothly and quickly to any desired position. Pendant should be CE / ISO / BIS certified.

The Pendant should be available as follows:

- The weight carrying capacity of the arm should not be less than 40 Kgs.
 - The Pendant Service Head should be supplied with medical gas terminal units and 5/15 Amps electrical Sockets.
- The medical gas outlets should be provided with pendant as per specification of gas outlets. Each pendant should have:
 - Oxygen Outlets- 2
 - Nitrous Oxide Outlet - 2
 - Medical Air (4 bar)/Surgical Air- 2
 - Vacuum Outlets- 2
 - AGSS outlet - 1

- **Electrical Sockets** - 12 nos. (at least 8nos. of UPS sockets).

23.2 Horizontal Bed Head Panel.

- Efficient, Safe & Robust design in extruded aluminum section.
- Smooth curved surfaces, and choice of base color and fascia plates.
- The headwall system should be constructed of aluminum extrusions joined together to form a carcass to suit the particular application. Unit should be factory assembled for electrical and mechanical components.
 - Front fascia plate should be removable individually to access for respective service.

All down drops should be installed at one end preferably & Vertical drop installed at one end should be covered with Aluminum boxing with matching color.

Entire pipe line should run in continuous horizontal panels with no break for each unit & length as per area where it has to be installed.

Each bedhead unit shall be supplied with electrical and electrical outlets pre-fitted, wired and certified, (wired up to the distribution box provided with leakage protection).
- Facility per unit as under:
 - **Oxygen** - 2
 - **Vacuum** - 2
 - **Medical Air**-2
 - **Nurse call switch** - 1
 - **Electrical outlets** - 6.

24. Gas outlets (Indigenous)

24.1 Terminal Units (Gas Outlets) with SS Probes/Adaptors for O₂, N₂O, Compressed Air (4), AGSS, Vacuum

The Medical gas outlets shall conform to HTM 20-22/NFPA 99C standard. Front Loading Type Terminal Outlets should be designed to dispense medical gases (or an inlet for medical vacuum) to the secondary equipment (flow meters, Suction regulators, etc.) at the point of use and is gas specific so that secondary devices cannot be "attached" to the wrong gas. When not in use the gas in a non-flowing state within the Outlet (Terminal unit) sealed by "O" ring. The adapter when inserted pushes the poppet inside and the gas starts flowing and sealing is ensured by the "O" ring or a seat. The Outlets are Quick Connect Type and gas specificity is accomplished by "geometric indexing." The outlets should have following features:

- Push to insert and press-to-release mechanism for probes.
- Allows plugging of probes from front.
- Self-sealing valve on disengaging the probe (Quick disconnect)
- Non return valve for on line servicing/ repairing
- Geometric Indexed to eliminate inter-changeability of gas services

- Color-coded gas specific front plate
- Totally leak proof, safe & easy to operate
- Configurations possible: surface, flush & Bead-head.

25. High pressure tube for O₂, N₂O, Compressed Air& Vacuum

It should be color coded for individual services i.e. white for Oxygen, Blue for N₂O and Yellow for Vacuum, Black for air. Antistatic rubber tube should be as per ISO standards.

26. Document submission

1. Drawings for approval before laying pipeline.
2. Inspection certification of copper pipes. (Eg. Lloyd's or TUV or SGS).
3. CE/ ISO/ BIS certificates for relevant product as in specification.
4. Operation and service manuals for all equipment.
5. Site test reports-
 - Leakage test
 - Cross connection test
 - Anti-confusion test
6. As-build drawings(5 sets)

27. Warranty and CMC

The supplier is to assure uninterrupted service

- 27.1 Complete system including labour& spares should have comprehensive onsite warranty for 5(Five) years; commencing from the date of issue of installation certificate by the institute. Post guarantee annual comprehensive maintenance contract (CMC) to cover main equipment/ civil construction including all accessories supplied with the unit should be quoted separately for additional five years with year wise break up. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. The price comparison shall be made taking into account on basic price and post warranty CMC.
- Incremental Cost (if any) for, up gradation, if required, should form part of the contract for the Warranty and Post Warranty period. The Supplier (manufacturer) shall set-up a maintenance base to provide maintenance service of the entire turnkey system being offered, at short notice during the warranty and post warranty period. **The technical maintenance personnel of the supplier responsible for supervision and maintenance shall be available to reach the site(s) within 1 hour's notice.**
 - If the performance of any individual equipment or system is not satisfactory, the same shall be replaced by the supplier free of cost.
 - If it is found that to meet the performance criteria, any extra equipment is required the same will be provided free of cost by the supplier.
 - All faults appearing and their rectification shall be periodically advised to the hospital, the period being not more than a month.

- The **warranty** shall remain valid for 5 (Five) years from the date of installation & commissioning followed by a CMC for a period of 5 (Five) Years for all the equipments after the goods or any portion thereof as the case may be, have been delivered to the final destination and installed and commissioned at the final destination and accepted by the purchaser/CONSIGNEE in terms of the contract. No conditional warranty like mishandling, manufacturing defects etc. will be acceptable.

No conditional warranty will be acceptable.

- a. Warranty as well as Comprehensive Maintenance contract will be inclusive of all accessories and Turnkey work and it will also cover the following wherever applicable:-

- Any kind of motor.
- Plastic & Glass Parts against any manufacturing defects.
- All kind of sensors.
- All kind of coils, probes and transducers.

- b. Replacement and repair will be under taken for the defective goods. Proper marking has to be made for all spares for identification like printing of installation and repair dates.

27.2 In case of any claim arising out of this warranty, the Purchaser/Consignee shall promptly notify the same in writing to the supplier.

27.3 Upon receipt of such notice, the supplier shall, within 8 hours on a 24(hrs) X 365 (days) basis respond to take action to repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The supplier shall take over the replaced parts / goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/goods thereafter. The penalty clause for non-rectification will be applicable as per tender conditions.

27.4 In the event of any rectification of a defect or replacement of any defective goods during the warranty period, the warranty for the rectified/replaced goods shall be extended till the completion of the original warranty period of the main equipment.

If the supplier, having been notified, fails to respond to take action to repair or replace the defect(s) within 8 hours on a 24(hrs) X 365 (days) basis, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser may have against the supplier.

During Warranty & CMC, the supplier of Compressor, Vacuum Pump, AGSS and Control Panel is required to visit at consignee's site at least once in 6 months commencing from the date of the installation for preventive maintenance of the goods.

Part B

Approved makes or Equivalent Components

Equipment description	Approved makes
Connectors / Joints	IBP Connex/Mex flow/Mehta Tubes/Cubex /Hindustan metal corporation or equivalent.
Manifold	Linde/Prax Air/NSP/Alchon / B.S. Medical/Active /MR engineering/IPS/MPS or equivalent
Oxygen / Nitrous Controlled panel	Linde,/Prax Air,/ NSP /Alchon/ IPS/MPS/ or equivalent
Vacuum Pumps	Ingersoll rand/ Indo Air / Kirloskar or equivalent
Air Compressors	Kirloskar/ Ingersoll Rand/ Anest Iwata/Hitachi or equivalent
Air driers	Dominick hunter or equivalent
AGSS System	Amico/Beacon Meadasis/Tritek/Phoenix /Allied or equivalent
Isolation Valve	Legris/RB/Audco/ B.S. Medical/NSP/IBP Connex / B S Medical or equivalent
Copper pipes	Lyods /SGS/TUV Certified Pipes of Mex Flow /Mehta Tubes /Hindustan Copper/Cubex
Flow meter	Linde/NSP/Aneer/ Active engineer /MR engineering/MPS or equivalent
Suction unit	Linde/NSP/Aneer engineers/ Hind Medico Product/ Active engineer /MR engineering or equivalent
Alarm Panels	Linde/NSP/Aneer Engineers/AMICO/Active engineer /MR engineering or equivalent
Gas Outlets	BOC/Linde/NSP/Medflow/AMICO/ Skumar/Active engineers/IPS or equivalent
Combined Electrical Panel	L&T/Siemens/Schnider or equivalent

Part C

Operation and Maintenance of Medical Gas system

Scope of the work

The primary objective of the bidder is to ensure safe and reliable MGPSs and their efficient Operation and use as per **HTM 20-22/NFPA 99 C standards**. Bidder will be responsible for operational management and maintenance of

- Medical oxygen System -Liquid oxygen system , Manifold and Control panels
- Nitrous oxide System-Manifold and Control Panel
- Medical and Surgical Air System-Compressor systems , Control panel,Dryers,Reservior, Filters etc.
- Medical vacuum System- Vacuum pumps, Control panel, Reservoir, Filters etc.
- Waste anesthetic gas scavenging systems (AGSS)
- Copper pipelines
- Area Valve Service Units
- Isolation Valves
- Area Alarm panels and Master alarm panels
- Gas Outlets
- Bed Head Panels
- Pendants

Staff responsible for plant operation should be aware of the activities necessary to ensure the continued safe operation of the system and what action should be taken in an emergency. The authorized person (MGPS) in particular should take a lead in explaining to users the function of the system and will have to be adequately trained and informed about the system. Operator will be responsible for safe cylinder handling, storage and transportation. Any work involving alterations, extensions or maintenance work on the system should be subject to the permit-to-work procedure as per HTM standards.

Operation of Medical Gas

The contractor should provide skilled manpower to operate the plant throughout the day 365 days in a year.

The operators should ensure a trouble free supply at the outlets at the required pressure. They should Monitor the consumption of O₂ & N₂O on hourly basis and submit a consolidated report weekly. Timely intimation of cylinders refill due date, Timely intimation of oxygen plant refill due date based on consumption, and other service maintenance has to be done by the operator.

The contractors and operator should be fully aware of the safety regulation applied to Medical gas System. It is the mandatory responsibility of the contractor to conduct training sessions of adequate level to the workforce to keep them fit for handling the plants and associated systems. All tests to be conducted by authorized persons, competent persons, quality controller etc have to be arranged by the contractor additionally as required. The contractor may refer to relevant part of HTM for details like responsibilities.

Operational Policy

Refer Section: 5,HTM 2022 Part B (operational Management)

Operational Procedures

Refer Section: 6,HTM 2022 Part B (operational Management)

- Permit to work procedure
- Test of work on MGPS
- Procedure for cleaning & contamination of vacuum systems

Training & Communication

Refer Section: 7,HTM 2022 Part B (operational Management)

Cylinder Management

Refer Section: 8,HTM 2022 Part B (operational Management)

External safety and Fire Precautions

Refer Section: 9,HTM 2022 Part B

Maintenance

Refer Section: 10, HTM 2022 Part B

Routine Activity

1) Oxygen plant

- Checking oxygen pressure and liquid level
- Entering details in the log
- Checking for leaks
- Checking the change over
- Intimating the preventive Maintenance one week ahead of the schedule
- Supervising Maintenance jobs and checking reports

2) Manifold (Oxygen and Nitrous oxide)

- Inspection of working
- Checking for leakage
- Checking inlet and outlet pressure
- Checking the change over
- Loading the cylinder as required
- Replacement of defective parts
- Notifying breakdown Logging details

3) Compressed Air

- Checking change over
- Checking pressure
- Checking the dryer and change over
- Checking the receiver Checking the filter

4) Medical Vacuum system

- Checking vacuum pump
- Checking vacuum level
- Checking controls
- Checking change over
- Checking for drop in Vacuum level Checking the filters.

Section V. Bidding Forms

FORM: 1

Letter of Technical Bid in form of Affidavit

(To be furnished on non-judicial stamp-paper of Rs. 100/-, affirmed before a First Class Magistrate/
Notary/ Executive Magistrate)

Date:

Bid Reference No.: _____

Name of Contract: Supply, Installation, Commissioning, Operation & Maintenance of Medical Gas Pipeline System (MGPS) In 3 New Medical Colleges of West Bengal.

To

Managing Director,

West Bengal Medical Services Corporation Ltd,

Swasthya Bhavan Complex,

GN- 29, Sector – V, Salt Lake,

Kolkata - 700 091.

We, the undersigned,

1. Certify that:

- a) We accept all the terms and conditions of the Bid Reference No.: **WBMSCL/NIT-57/2014, dated-26.08.2014** and its Amendments and Addendum thereto are read and accepted without any modification or condition(s).
- b) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders.
- c) We have quoted for all the jobs in full.

- d) We offer to execute the Scope of Work in conformity with Bidding Documents.
- e) The offered products are in accordance with the required specifications and technical requirements
- f) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of 120 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents. However, the prices quoted by us and accepted by WBMSCL shall hold good and remain valid for a period of **1(one)** year or completion of work from the date of signing of the contract and no additional claims will be made on account of any price variation or fluctuation in market rates. The rate quoted shall remain binding upon us and may be accepted at any time before the expiration of **1(one)** year or completion of work.
- g) If our bid is accepted, we will submit a performance security within 7 (seven) days in accordance with the Bidding Documents.
- h) Our company has been incorporated in accordance with the laws of India and governed by them.
- i) Our Company have established similar MGPS system in public or private health facilities in the State of _____ and provided necessary service support to such life saving system.
- j) We have no court case under trial or pending against us, instituted by any government hospital and also never been penalized by any Govt. investigating agency for any wrong doing in entire India. Wrong and false information in this regard will be sufficient for forfeiture of EMD and blacklisting of the firm.
- k) There is no adverse report against the work executed, services provided & equipment supplied by us.
- l) We will permit WBMSCL or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the WBMSCL.

m) All the statements made in the attached documents are true and correct. In case of any information submitted proved to be false or concealed, penalties shall be imposed in terms of the bid document.

2. We understand that:

(i) Partial or incomplete bid submission will lead to cancellation of our bid.

(ii) The tender inviting and accepting authority can vary quantity up to 40% (forty percent) above or 20% (twenty percent) below the BOQ for each hospital under this project.

(iii) The tender inviting and accepting authority reserves the right to reject any application without assigning any reason.

Enclo:

- 1. Non Statutory Documents/ My Documents
- 2. Statutory Documents (Bid A & Bid B)
- 3. Forms & Annexure duly filled up, signed & notarized (where applicable)

Name.....

In the capacity of.....

Signed

Duly authorised to sign the Bid for and on behalf of (if applicable).....

Date.....

Form 2: Check-List

[Please fill in and include with your Bid]

Note 1: It is essential that all documents in hard copy are to be placed before the Committee and arranged in the same sequence as given in the Check List. All the documents should be appropriately flagged.

Note 2: If any document is written in any language other than English, an English translation of the document duly authenticated is to be submitted.

Note 3: After opening of the technical bids, if it is found that any of the documents required to be submitted with the bids is wanting, WBMSCL shall reserve the right to allow late submission of such document at its discretion within a specified time limit.

Non statutory documents to be submitted under <u>My Document</u>				
Sl. No.	Activity	Yes/No/NA	Page No in the Bid	Remark
1	PAN Card			
2	Service Tax registration Certificate			
3	VAT Registration Certificate			
4	CST registration Certificate			
5	License from Government/ Statutory Authority as applicable/ Registration with the Registrar Of Companies.			
6	Performance Statement Form (For the period of last five years) - Form 5 of Section V			
7	ISO certificate of the manufacturing factory			
8	Income Tax returns for i) 2010-11, 2011-12 & 2012-13 OR ii) 2011-12, 2012-13 & 2013-14			
9	Acknowledgement of VAT Returns/VAT Clearance Certificate for i) 2012-2013 OR ii) 2013-14			
10	Acknowledgement of CST Returns/CST Clearance Certificate for i) 2012-2013 OR ii) 2013-14			
11	Manufacturer's Authorization (If applicable) as per Form 4 of Section V			
12	List of clients where the bidder has installed MGPS			
13	Satisfactory Performance Certificate from at least 1 (one) users of similar MGPS system in public or private health facilities, preferably in the State of West Bengal and provided necessary			

	service support to such life saving system.			
14	P/L & Balance sheet 2011-2012			
15	P/L & Balance sheet 2012-2013			
BID - A				
Sl. No.	Activity	Yes/No /NA	Page No in the Bid	Remark
16	Earnest Money Deposit (EMD)/ Bid Security in the form of Demand Draft (DD)			
BID - B				
Sl. No.	Activity	Yes/No/N A	Page No in the Bid	Remark
17	Brochures of the offered product / model.			
18	CE ("Conformité Européene") / US FDA approval Certificate of the offered model, as applicable/ UL/BS/CE/DIN CE ("Conformité Européene") Certificate should be from EU Notified Bodies authorized to conduct audits.			
19	Pre-requisites of installation [Power (KVA, Phase, Hz), Civil and any other requirement, if any]			
20	Legal declaration affirmed before a First Class Magistrate / Notary/ Executive Magistrate on non judicial stamp paper of Rs. 100/- as per Form – 1.			
21	Turnover Certificate in the format given in Form 6			
22	Financial Status Certificate in the format given in Form 7			
23	Certification of Work Experience in the format given in Form 8			

Form 3: Bid Security (Bank Guarantee) Form

[Insert: No Bid Security is requested or The Bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: _____ *[Name and Address of WBMSCL]*

Date: _____

BID GUARANTEE No.: _____

We have been informed that *[name of the Bidder]* (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of *[name of contract]* under Invitation to Bid No. *[NIT number]* ("the NIT").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we *[name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[amount in figures]* (*[amount in words]*) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by WBMSCL during the period of bid validity, (i) fails or refuses to execute the Contract Form; or (ii) fails or refuses to furnish the performance security, if required, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s)]

Form 4: Manufacturer's Authorization Form

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions in the bid document. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. Such certificate is not required where Manufacturer is the Bidder.]

Date:
NIT No.:

To:
MD, WBMSCL

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with the General Conditions for Goods, with respect to the Goods offered by the above firm.

Authorized Signatory of the Manufacturer _____

Name _____

Designation with stamp _____

Date _____

Form 5: Performance Statement Form

(For the period of last five years, if applicable)

Bid no: _____

Date of Opening: _____

Name of the Firm _____

Order placed by (Full address of purchaser)	Order no & date	Description & quantity of ordered items	Value of Order	Date of completion of Delivery		Remarks indicating reasons of late delivery, if any	Was the supplies of goods satisfactory
				As per Contract	Actual		

Signature and seal of the Bidder

Countersigned by and seal of Chartered Accountant _____

Form 6: Turnover Certificate

I certify that Average Annual Turnover of *(insert the name of the company)* during the last 3 Financial Years 2010-11, 2011-12 & 2012-13 / 2011-12, 2012-13 & 2013-14 *(strike off the combination which is not required)* is Rs. *(in Crore)* as per the Audited Accounts of the Organization.

Signature and seal of Chartered Accountant

Form 7: Financial Status Certificate

I certify that *(insert the name of the company)* have not suffered any loss during the last 3 Financial Years 2010-11, 2011-12 & 2012-13 / 2011-12, 2012-13 & 2013-14 *(strike off the combination which is not required)* as per the Audited Accounts of the Organization.

Signature and seal of the Chartered Accountant

Form 8: Certification of Work Experience

I certify that *(insert the name of the company)* have executed & completed ____ numbers of "Supply, Installation, Commissioning, Operation & Maintenance of Medical Gas Pipeline System (MGPS)" of value not less than Rs. 1.5 crore in last 5 (five) years.

Signature and seal of the Chartered Accountant

Form 9: Hospital wise Bill of Quantity (BOQ)

9.a) MGPS BOQ FOR MALDA MEDICAL COLLEGE & HOSPITAL

S.No	Description of Items	Unit	Qty	Basic Price in INR (A)	Taxes & duties (B)	Total Price in INR [(A) + (B)]
A	OXYGEN SYSTEM					
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1			
2	Fully Automatic control panel for Oxygen Having a constant flow output of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	2			
3	2 X 10 size emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1			
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	517			
5	Oxygen flow meters with humidifier as per standards	Nos	493			
6	H.P. tubing having anti static core white color 5mtrs with Keat conversion for Oxygen as per Standards	Set	6			
B	NITROUS OXIDE SYSTEM					
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder. as per Standards	Set	1			
2	Fully Automatic control panel for Nitrous Oxide Having a min. flow output of over 1000 LPM at 4.2 bar pressure as per Standards	Set	1			
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per Standards	Set	1			
4	Front loading N2O outlets as per standards	No.	6			
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per ISO Standards	Set	6			
C	VACUUM SYSTEM					
1	Vacuum Central System Complete with Three nos Vacuum Pumps make Mode 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2000 liters, Filter etc.	Set	1			
2	Bacterial Filter	Set	1			
3	Surface mounted front loading double locked Vacuum outlets, as per Standards	Nos	495			
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per Standards	Nos	486			
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per Standards	Nos	6			
6	High Pressure color coded yellow Tube as per ISO Standards as per Standards	Mtr	30			
D	COMPRESSED AIR SYSTEM					
1	Compressed Air system complete with 02 nos. 57 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors with 15 HP motors with a common Receiver of 1000 liter water capacity along with 2 No. Air Dryer	Set	1			
2	3-stage Air Filtration System	Set	2			
3	Triplex Pressure Reducing System	Set	1			

4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per Standards	Nos	34			
5	Front loading double locked Surgical Air-7 bar out lets , as per Standards	no.	1			
6	HP colour coded black Tubing as per ISO Standards as per Standards	Mtr	30			
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)					
1	Duplex AGSS complete with Electrical connection etc.	Set	1			
2	Front loading double locked AGSS out lets , as per Standards	No.	5			
F	MISCELLANEOUS ITEMS					
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1			
2	Distribution Copper Pipe					
g	76 mm OD X 1.5 mm Thick	Mtr	100			
a	54 mm OD x 1.2 mm thick	Mtr.	150			
b	42 mm OD x 1.2 mm thick	Mtr	750			
c	28 mm OD x 0.9 mm thick	Mtr	1100			
d	22 mm OD x 0.9 mm thick	Mtr	2200			
e	15 mm OD x 0.9 mm thick	Mtr	2150			
f	12 mm OD x 0.7 mm thick	Mtr	1500			
3	Valve Box (without Valves) as per Standards					
a	6 Gas	No.	1			
b	5 Gas	No.	4			
c	4 Gas	No.	1			
d	3 Gas	No.	3			
e	2 Gas	No.	15			
4	Medical Gas Digital Alarm System as per Standards					
a	6 Gas	No.	1			
b	5 Gas	No.	2			
c	4 Gas	No.	1			
d	3 Gas	No.	3			
e	2 Gas	No.	11			
5	Isolation Valve					
a	15 MM.	No.	44			
b	22 MM.	No.	26			
c	28 MM.	No.	2			
d	42 MM.	No.	3			
e	54 MM.	No.	3			
f	76 MM.	No.	1			
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	31			
6.1	Bed Head Panel with 2-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	2			
7	SS 304 Rigid Ceiling OT Pendant	No.	15			
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1			
9	CMC Charges for year1 after completion of 5 year warranty	LS	1			
10	CMC Charges for year2 after completion of 5 year warranty	LS	1			
11	CMC Charges for year3 after completion of 5 year warranty	LS	1			
12	CMC Charges for year4 after completion of 5 year warranty	LS	1			

13	CMC Charges for year5 after completion of 5 year warranty	LS	1			
BOQ for Malda Medical College & Hospital						

9.b) MGPS BOQ FOR MURSHIDABAD MEDICAL COLLEGE & HOSPITAL

S.No	Description of Items	Unit	New General	Sadar	Main Building	TB & Chest	Isolation Building	Total	Basic Price in INR (A)	Taxes & duties (B)	Total Price in INR [(A)+(B)]
MEDICAL GAS PIPE LINE											
A	OXYGEN SYSTEM										
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards'	Set	1					1			
1(a)	2 x 10 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set		1	1	1	1	4			
2	Fully Automatic control panel for Oxygen Having a constant flow out put of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	1	1	1	1	1	5			
3	2 X 10 size Emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1					1			
3(a)	1X 10 size Emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set		1	1	1	1	4			
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	467	246	214	27	40	994			
5	Oxygen flow meters with humidifier as per standards	Nos	437	234	214	27	40	952			
6	H.P. tubing having anti static core white color 5mtrs with Keat conversion for Oxygen as per standards	Set	13	6				19			
B	NITROUS OXIDE SYSTEM										
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per standards	Set	1	1				2			
2	Fully Automatic control panel for Nitrous Oxide Having a min. flow out put of over 1000 LPM at 4.2 bar pressure as per Standards	Set	1	1				2			
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per standards	Set	1	1				2			
4	Surface Mounted mounted front loading N2O outlets as per standards	No.	13	6				19			
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per Standards	Set	13	13				26			

C	VACUUM SYSTEM										
1	Vacuum Central System Complete with Three nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2000 liters, Filter etc.	Set	1					1			
1(a)	Vacuum Central System Complete with 2 nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2000 liters, Filter etc.			1	1	1		3			
1 (b)	Vacuum Central System Complete with 2 nos Vacuum Pumps v255. each having 60 cfm PD with 5 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 1000 liters, Filter etc.						1	1			
2	Bacterial Filter	Set	1	1	1	1	1	5			
3	Surface mounted front loading double locked Vacuum out lets, as per standards	Nos	463	246	214	27	40	990			
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per standards	Nos	437	234	214	27	40	952			
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per standards	Nos	13	6				19			
6	High Pressure color coded yellow Tube as per ISO Standards as per standards	Mtr	65	30				95			
D	COMPRESSED AIR SYSTEM										
1	Compressed Air system complete with 04 nos. 57 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors with 15 HP motors with a common Receiver of 1000 liter water capacity along with 4 No. Air Dryer	Set	1					1			
1(a)	Compressed Air system complete with 02 nos. 57 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors from with 15 HP motors with a common Receiver of 1000 liter water capacity along with 2 No. Air Dryer			1				1			
2	3-stage Air Filtration System	Set	2	2				4			
3	Triplex Pressure Reducing System	Set	1					1			
3(a)	Duplex Pressure Reducing System	set		1				1			

4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per standards	Nos	67	23				90		
5	HP colour coded black Tubing as per ISO Standards as per standards	Mtr	65	65				130		
E ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)										
1	Duplex AGSS complete with Electrical connection etc.	Set	1					1		
2	Front loading double locked AGSS out lets , as per standards	No.	13					13		
F MISCELLANEOUS ITEMS										
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1	1	1	1	1	5		
2	Distribution Copper Pipe									
a	76 mm OD X 1.5 mm Thick	Mtr	100	60	40	50	60	310		
a	54 mm OD x 1.2 mm thick	Mtr	220					220		
b	42 mm OD x 1.2 mm thick	Mtr	380	30				410		
c	28 mm OD x 0.9 mm thick	Mtr	765	150	125	20	15	1075		
d	22 mm OD x 0.9 mm thick	Mtr	2565	400	425	155	50	3595		
e	15 mm OD x 0.9 mm thick	Mtr	3000	550	300	135	30	4015		
f	12 mm OD x 0.7 mm thick	Mtr	2200	1350	1100	145	110	4905		
3	Valve Box (without Valves) as per standards									
a	6 Gas	No.	13					13		
b	5 Gas	No.	1					1		
c	4 Gas	No.	1	6				7		
d	3 Gas	No.	4	1				5		
e	2 Gas	No.	18	5	7	3	2	35		
4	Medical Gas Digital Alarm System as per standards									
a	6 Gas	No.	3					3		
b	5 Gas	No.	1					1		
c	4 Gas	No.	1	1				2		
d	3 Gas	No.	4	1				5		
e	2 Gas	No.	10	2	7	2	2	23		
5	Isolation Valve									
a	15 MM.	No.	36	27	7	3	2	75		
b	22 MM.	No.	19	12	8	4	3	46		
c	28 MM.	No.	2	2	2	2	2	10		
d	42 MM.	No.	3	2				5		
e	54 MM.	No.	5					5		
f	76 MM.	No.	1					1		
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	17					17		
7	SS 304 Rigid Ceiling OT Pendant	No.	13					13		

8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1	1	1	1	1	5			
9	CMC Charges for year1 after completion of 5 year warranty	LS						1			
10	CMC Charges for year2 after completion of 5 year warranty	LS						1			
11	CMC Charges for year3 after completion of 5 year warranty	LS						1			
12	CMC Charges for year4 after completion of 5 year warranty	LS						1			
13	CMC Charges for year5 after completion of 5 year warranty	LS						1			
BOQ for Murshidabad Medical College & Hospital											

9.c) BOQ FOR COLLEGE OF MEDICINE AND SAGORE DATTA HOSPITAL

S.No	Description of Items	Unit	Qty	Basic Price in INR (A)	Taxes & duties (B)	Total Price in INR [(A) + (B)]
A	OXYGEN SYSTEM					
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1			
2	Fully Automatic control panel for Oxygen Having a constant flow out put of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	2			
3	2 X 10 size emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1			
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	718			
5	Oxygen flow meters with humidifier as per Standards	Nos	670			
6	H.P. tubing having anti static core white color 5mtrs with conversion kit for Oxygen as per Standards	Set	11			
B	NITROUS OXIDE SYSTEM					
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder. as per Standards	Set	1			
2	Fully Automatic control panel for Nitrous Oxide Having a min. flow out put of over 1000 LPM at 4.2 bar pressure as per Standards	Set	1			
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per Standards	Set	1			
4	Front loading N2O outlets as per Standards	No.	12			
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per ISO Standards	Set	11			
C	VACUUM SYSTEM					
1	Vacuum Central System Complete with Three nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2000 liters, Filter etc.	Set	1			
2	Bacterial Filter	Set	1			
3	Surface mounted front loading double locked Vacuum outlets, as per Standards	Nos	664			
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per Standards	Nos	620			
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per standards	Nos	11			
6	High Pressure color coded yellow Tube as per ISO Standards as per standards	Mtr	55			
D	COMPRESSED AIR SYSTEM					
1	Compressed Air system complete with 04 nos. 57 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors with 15 HP motors with a common Receiver of 1000 liter water capacity along with 4 No. Air Dryer	Set	1			
2	3-stage Air Filtration System	Set	2			
3	Triplex Pressure Reducing System	Set	1			
4	Surface mounted front loading double locked Medical Air-4 bar outlets , as per standards	Nos	66			

5	Front loading double locked Surgical Air-7 bar out lets , as per standards	no.	10			
6	HP colour coded black Tubing as per ISO Standards as per standards	Mtr	55			
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)					
1	Duplex AGSS complete with Electrical connection etc.	Set	1			
2	Front loading double locked AGSS out lets , as per standards	No.	11			
F	MISCELLANEOUS ITEMS					
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1			
2	Distribution Copper Pipe					
a	76 mm. OD X 1.5 mm. Thick	Mtr.	85			
b	54 mm OD x 1.2 mm thick	Mtr.	110			
c	42 mm OD x 1.2 mm thick	Mtr	300			
d	28 mm OD x 0.9 mm thick	Mtr	1100			
e	22 mm OD x 0.9 mm thick	Mtr	3500			
f	15 mm OD x 0.9 mm thick	Mtr	3100			
g	12 mm OD x 0.7 mm thick	Mtr	2100			
3	Valve Box (without Valves) as per standards					
a	6 Gas	No.	8			
b	5 Gas	No.	3			
c	4 Gas	No.	1			
d	3 Gas	No.	5			
e	2 Gas	No.	49			
4	Medical Gas Digital Alarm System as per standards					
a	6 Gas	No.	1			
b	5 Gas	No.	5			
c	4 Gas	No.	2			
d	3 Gas	No.	3			
e	2 Gas	No.	13			
5	Isolation Valve					
a	15 MM.	No.	106			
b	22 MM.	No.	66			
c	28 MM.	No.	2			
d	42 MM.	No.	4			
e	54 MM.	No.	3			
f	76 MM.	No.	1			
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	17			
7	SS 304 Rigid Ceiling OT Pendant	No.	16			
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1			
9	CMC Charges for year1 after completion of 5 year warranty	LS	1			
10	CMC Charges for year2 after completion of 5 year warranty	LS	1			
11	CMC Charges for year3 after completion of 5 year warranty	LS	1			
12	CMC Charges for year4 after completion of 5 year warranty	LS	1			
13	CMC Charges for year5 after completion of 5 year warranty	LS	1			
BOQ for College of Medicine and Sagore Datta Hospital						

Note: Please upload 3 (three) separate statements for Gross price as above in pdf.

Section VI. Contract Forms

Form 1: Performance Security

[Insert: No Performance Security shall be requested or the bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year) of Bid Submission]*

ITB No. and title: *[insert no. and title of bidding process]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

Beneficiary: *[insert legal name and address of WBMSCL]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s) in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*,² and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

[signatures of authorized representatives of the bank and the Supplier]

¹ The Bank shall insert the amount(s) specified in the SCG and denominated, as specified in the SCG, either in the currency(ies) of the Contract or a freely convertible currency acceptable to WBMSCL.

² Dates established in accordance with Clause 12 of the General Conditions of Contract ("GCG"). WBMSCL should note that in the event of an extension of the time to perform the Contract, WBMSCL would need to request an extension of this Guarantee from the Bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee. In preparing this Guarantee, WBMSCL might consider adding the following text to the Form, at the end of the penultimate paragraph: "We agree to a one-time extension of this Guarantee for a period not to exceed [six months] [one year], in response to WBMSCL's written request for such extension, such request to be presented to us before the expiry of the Guarantee."