

**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
VIKRAM SARABHAI SPACE CENTRE (VSSC)  
THIRUVANANTHAPURAM**

**Tender for Supply and Installation of set of Trace Gas Analyzers(O<sub>3</sub>,  
NO<sub>x</sub> and CO) with calibrator**

**Bids to be submitted online**

**Tender No.: VSSC/PURCHASE UNIT II (AVN)/VS202100535601 dated 03-01-2022**

## **A. Tender Details**

Tender No : **VSSC/PURCHASE UNIT II (AVN)/VS202100535601**

Tender Date : **03-01-2022**

Tender Classification: **GOODS**

Purchase Entity : **PURCHASE UNIT II (AVN)**

Centre : **VIKRAM SARABHAI SPACE CENTRE (VSSC)**

### **Procurement of Supply and Installation of set of Trace Gas Analyzers(O3, NOx and CO) with calibrator**

Procurement of Supply and Installation of set of Trace Gas Analyzers(O3, NOx and CO) with calibrator

#### **A.1 Tender Schedule**

Bid Submission Start Date : **03-01-2022 11:30**

Bid Clarification Due Date : **10-01-2022 11:00**

Bid Submission Due Date : **25-01-2022 11:00**

Bid Opening Date : **25-01-2022 14:00**

Price Bid Opening Date : **08-02-2022 11:00**

## **B. Tender Attachments**

NA

### **Instructions To Vendors**

#### **1. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA**

1. Any bidder from a country which shares a land border with India will be eligible to bid in this tender, only if the bidder is registered with the Competent Authority.

Competent Authority for the purpose of registration shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).

2. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.

3.  
Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order.

#### **2. domestic-Two part Tenders**

1. This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote.

Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.

Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.

This is a TWO-PART tender i.e. Techno-Commercial Bid (Part-I) and Price Bid (Part-II) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same.

Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.

The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.

In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Technical Bids will be opened at the scheduled due date & time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.

### **3. PROFORMA FOR INSTRUCTIONS TO TENDERERS AND TERMS AND CONDITIONS OF TENDER**

1. a All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

b Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense.

c Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

d Specifications Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make and Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

2. a All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

b Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense.

c Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional

details are available the same should also be indicated in your offer.

d Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make or Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

### 3. ACCEPTANCE OF STORES

a The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractors own risk, expense and cost.

b It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.

c If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

d If the whole or any part of the stores supplied are rejected in accordance with Clause No. c above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

### 4. Arbitration

In the event of any disputes, differences or claims arising out of or relating to the interpretation and application of the Contract, such disputes or differences or claims shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such disputes, then the unresolved disputes or differences or claims shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Amendment Act 2015 as amended from time to time. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre Bengaluru, Domestic and International, as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be English only. Work under the Contract shall be continued by the CONTRACTOR during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the DEPARTMENT or unless the matter is such that the works cannot be possibly continued until the

decision whether final or interim of the Arbitrator is obtained.

5. As a Government of India Department, this office is exempted from payment of Octroi and similar local levies. Tenderers shall ensure that necessary Exemption Certificates are obtained by them from the Purchase Officer concerned to avoid any payment of such levies.

6. a Your offer should be valid for 90 days from the date of opening of the tender.

b Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.

7. c The term Purchase Order shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

8. **DESPATCH** The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt or Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on said to contain basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

#### 9. Force Majeure

Neither the Purchaser nor the Contractor shall be considered default of the performance of their obligations under this contract if such performance is prevented or delayed for any causes beyond the reasonable control of the parties to the contract affected, such as Acts of God, war, riots, civil commotion, illegal strikes, legal lockouts, epidemics, fire accidents, floods, earthquakes, proclamation or regulation or ordinance of any Government thereof, provided notice in writing of any such cause with necessary proof that the obligation under the contract is thereby affected or prevented or delayed, is given within 14 days from the happening of the event. As soon as the cause of force majeure has ceased to exist, the party whose ability to perform his obligation has been affected shall notify the other party of the actual delay that has occurred due to such force majeure conditions.

#### 10. FOREIGN VENDORS ARE NOT PERMITTED TO QUOTE

a. Only Class I and Class II Local suppliers as per Make in India Policy are eligible to participate in the bid

b. The percentage of local content should be specifically mentioned in the offer, without which it will be summarily rejected.

c. Preference will be given to Class I Local supplier and in their absence, Class II Local supplier will be considered.

## 11. GUARANTEE AND REPLACEMENT

- a The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.
- b For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.
- c If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.
- d Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.
- e The decision of the Purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the Purchaser, as to whether or not the Stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or any other period or as to whether the nature of defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.
- f To fulfill guarantee conditions outlined in a to e above, the Contractor shall, at the option of the Purchaser, furnish a Bank Guarantee as prescribed by the Purchaser

## 12. Liquidated Damages

The Delivery Date mentioning in the Contract or Order will be the essence of the Contract. You shall strictly adhere to the delivery schedule mentioned in your quotation. Please confirm acceptance of LD clause and that you will strictly adhere to the delivery schedule.

**13. PACKING FORWARDING AND INSURANCE** The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

14. Preference will be given to those tenders offering supplies from ready stocks and on the basis of FOR destination or delivery at site.

**15. PRICES** Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variations.

## 16. REJECTED STORES

Rejected stores will remain at destination at the Contractors risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractors address at the Contractors entire risk and expense, freight being payable by the Contractor at actuals.

17. Sales Tax and or other duties or levies legally leviable and intended to be claimed should be mentioned in the price bid template. If nothing is mentioned, then it will be presumed that the rate quoted is inclusive of all taxes and duties.

18. SECURITY DEPOSIT Wherever, the Purchase Order value is Rs. 5.00 Lakhs or more, on acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding three percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, Security and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the repurchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause ii and iii of clause regarding Delivery. b hereof and or to recover from the Contractor, damages arising from such cancellation.

## 19. TERMS AND CONDITIONS OF TENDER

20. TEST CERTIFICATE Wherever required, test certificates should be sent along with the despatch documents.

21. The authority of the person signing the tender, if called for, should be produced.

22. The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25percent of the quantity offered by them at the rates quoted.

23. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.

24. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income Tax clearance certificate duly countersigned by the Income Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

25. The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of Stores is placed and shall be deemed to include the Contractors successors,



representative, heirs, executors and administrators unless excluded by the Contract.

26. The term Purchaser shall mean the President of India or his successors or assigns.

27. The term Stores shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.

## C. Bid Templates

### C.1 Technical Bid - Supply and Installation of set of Trace Gas Analyzers(O3, NOx and CO) with calibrator

#### 1. SET OF TRACE GAS ANALYSERS (O3, NOX, CO WITH CALIBRATOR)

##### Item specifications for SET OF TRACE GAS ANALYSERS (O3, NOX, CO WITH CALIBRATOR)

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Technical Specification for Ozone Analyzer :	As given below (Sl. No. 2-10 )	Yes / No / Explain		
2	Measuring Principle of Ozone Analyzer	UV Photometry	Yes / No / Explain		
3	Measuring range for Ozone Analyzer	0 - 10 ppm (manually selectable operation mode in single range, multiple range or auto range Mode)	Yes / No / Explain		
4	Lower detectable limit for Ozone Analyzer	0.5 ppb	Yes / No / Explain		
5	Flow rate for Ozone Analyzer	3 LPM	Yes / No / Explain		
6	Response time for Ozone Analyzer	30 seconds	Yes / No / Explain		
7	Zero drift for Ozone Analyzer	<1 ppb per day	Yes / No / Explain		
8	Span drift for Ozone Analyzer	<1 % full Scale per month	Yes / No / Explain		
9	Linearity for Ozone Analyzer	± 1 % full Scale or better	Yes / No / Explain		
10	Calibration for Ozone Analyzer	Automatic calibration with built-in O3-generator and option for manual calibration.	Yes / No / Explain		
11	Technical Specification for NOx Analyzer :	As given below (Sl. No. 12-20 )	Yes / No / Explain		
12	Measuring Principle of NOx Analyzer	Chemiluminescence Technique	Yes / No / Explain		

13	Measuring range for NOx Analyzer	0 - 1000 ppb with auto-ranging or user adjustable (should operate in single, multiple or auto range mode)	Yes / No / Explain		
14	Lower detectable limit for NOx Analyzer	0.05 ppb	Yes / No / Explain		
15	Flow rate for NOx Analyzer	1 LPM	Yes / No / Explain		
16	Response time for NOx Analyzer	60 seconds	Yes / No / Explain		
17	Zero drift for NOx Analyzer	< 0 .025 ppb per day	Yes / No / Explain		
18	Span drift for NOx Analyzer	< ± 1 % of full scale	Yes / No / Explain		
19	Linearity for NOx Analyzer	± 1 % Full Scale	Yes / No / Explain		
20	Calibration for NOx Analyzer	Capability to calibrate each selected channel independently.	Yes / No / Explain		
21	Technical Specification for CO Analyzer :	As given below (Sl. No. 22- 29 )	Yes / No / Explain		
22	Measuring Principle of CO Analyzer	Non-dispersive Infrared with Gas Filter- Correlation technique	Yes / No / Explain		
23	Measuring range for CO Analyzer	0-100 ppm (should operate in single range , multiple range or auto range mode)	Yes / No / Explain		
24	Lower detectable limit for CO Analyzer	0.04 ppm	Yes / No / Explain		
25	Flow rate for CO Analyzer	0.5 LPM	Yes / No / Explain		
26	Response time for CO Analyzer	60 seconds	Yes / No / Explain		
27	Zero drift for CO Analyzer	0.1 ppm per day	Yes / No / Explain		
28	Span drift for CO Analyzer	< ± 1 % of full scale	Yes / No / Explain		
29	Linearity for CO Analyzer	± 1 % Full Scale or better	Yes / No / Explain		

30	Technical Specification for multi-gas calibrator :	As given below (Sl. No. 31- 39 )	Yes / No / Explain		
31	Should provide precise levels of O3, CO, NO, and NO2 that required for calibration.		-		
32	Flow accuracy	1% of full scale	Yes / No / Explain		
33	Flow repeatability	1% of full scale	Yes / No / Explain		
34	Response time	< 1 minute for low flows and faster for higher flows	Yes / No / Explain		
35	Gas inlet	minimum 3 gas input connections	Yes / No / Explain		
36	zero air inlet	should have one zero air input connection	Yes / No / Explain		
37	Zero air requirement	10 SLPM	Yes / No / Explain		
38	Ozone Generator output	6 ppm-liters	Yes / No / Explain		
39	Photometer with ranges	100 ppb to 5 ppm	Yes / No / Explain		
40	Technical Requirements :	As given below (Sl. No. 41-47 )	Yes / No / Explain		
41	Consumables for Ozone Analyzer: Teflon particulate filter, Maintenance kit for sampling pump, Zero scrubber.		-		
42	Consumables for NOx Analyzer: Teflon particulate filter, Ozone particulate- filter, Active exhaust ozone scrubber/destroyer, Maintenance kit for sampling pump, zero scrubber.		-		
43	Consumables for CO Analyzer: Teflon particulate filter for sample, Maintenance kit for sampling pump, zero scrubber.		-		

44	All analysers and calibrator should have suitable internal/supporting pump for sampling.		-		
45	The analyzers must function properly without any defect between 5 to 40°C ambient temperatures, and 10 to 95% relative humidity conditions.		-		
46	The analyzers should have alpha-numeric and graphical display with simultaneous presentation of concentration and instrument health parameters		-		
47	The analyzers should operate at operating voltage of 230 VAC, 50Hz		-		
48	Specific Conditions :	As given below (Sl. No. 48- 56 )	Yes / No / Explain		
49	All analysers and calibrator should have US-EPA or equivalent approval. Certificate must be provided.		-		
50	Vendor should provide quote for essential spares/consumables for the uninterrupted operation of the instrument for at least 3 years. Quotation should be split for each spare.		-		
51	All the analyser should be factory calibrated. Calibration certificate must be provided.		-		
52	Vendor should provide suitable software for remote operation as well as PC based data acquisition system with suitable Operating System (Windows).		-		

53	Vendor should provide Gas sampling system with SS gas sampling inlet, moisture and dust filter, teflon sampling lines, teflon filter pads, etc & Zero-air unit		-		
54	All analyzers should be rack mounting model and the vendor should provide suitable rack for fixing the analyzers (rack with heavy grade aluminium profiles, telescopic slides, overload protection, power distribution box, tubings & fittings etc)		-		
55	Vendor should provide warranty period of minimum 3 years; also provide quotation for Non-comprehensive AMC (Annual Maintenance contract) for at least 2 years after the warranty period.		-		
56	Vender should provide all the necessary accessories for the independent operation of all the ordered instruments		-		

### Common Specifications (Applicable for all items)

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Technical Specification for Ozone Analyzer :	As given below (Sl. No. 2- 10)	Yes / No / Explain		
2	Measuring Principle of O3 Analyzer	UV Photometry	Yes / No / Explain		
3	Measuring range for O3 Analyzer	0 - 10 ppm (manually selectable operation mode in single range, multiple range or auto range Mode)	Yes / No / Explain		

4	Lower detectable limit for O3 Analyzer	0.5 ppb	Yes / No / Explain		
5	Flow rate for O3 Analyzer	3 LPM	Yes / No / Explain		
6	Response time for O3 Analyzer	30 seconds	Yes / No / Explain		
7	Zero drift for O3 Analyzer	<1 ppb per day	Yes / No / Explain		
8	Span drift for O3 Analyzer	<1 % full Scale per month	Yes / No / Explain		
9	Linearity for O3 Analyzer	± 1 % full Scale or better	Yes / No / Explain		
10	Calibration for O3 Analyzer	Automatic calibration with built-in O3-generator and option for manual calibration.	Yes / No / Explain		
11	Technical Specification for NOx Analyzer:	As given below (Sl. No. 12-20 )	Yes / No / Explain		
12	Measuring Principle of NOx Analyzer	Chemiluminescence Technique	Yes / No / Explain		
13	Measuring range for NOx Analyzer	0 - 1000 ppb with auto-ranging or user adjustable (should operate in single, multiple or auto range mode)	Yes / No / Explain		
14	Lower detectable limit for NOx Analyzer	0.05 ppb	Yes / No / Explain		
15	Flow rate for NOx Analyzer	1 LPM	Yes / No / Explain		
16	Response time for NOx Analyzer	60 seconds	Yes / No / Explain		
17	Zero drift for NOx Analyzer	< 0 .025 ppb per day	Yes / No / Explain		
18	Span drift for NOx Analyzer	< ± 1 % of full scale	Yes / No / Explain		
19	Linearity for NOx Analyzer	± 1 % Full Scale	Yes / No / Explain		
20	Calibration for NOx Analyzer	Capability to calibrate each selected channel independently	Yes / No / Explain		

21	Technical Specification for CO Analyzer :	As given below (Sl. No. 22-29 )	Yes / No / Explain		
22	Measuring Principle of CO Analyzer	Non-dispersive Infrared with Gas Filter- Correlation technique	Yes / No / Explain		
23	Measuring range for CO Analyzer	0-100 ppm (should operate in single range , multiple range or auto range mode)	Yes / No / Explain		
24	Lower detectable limit for CO Analyzer	0.04 ppm	Yes / No / Explain		
25	Flow rate for CO Analyzer	0.5 LPM	Yes / No / Explain		
26	Response time for CO Analyzer	60 seconds	Yes / No / Explain		
27	Zero drift for CO Analyzer	0.1 ppm per day	Yes / No / Explain		
28	Span drift for CO Analyzer	< $\pm 1$ % of full scale	Yes / No / Explain		
29	Linearity for CO Analyzer	$\pm 1$ % Full Scale or better	Yes / No / Explain		
30	Technical Specification for multi-gas calibrator :	As given below (Sl. No. 31-39)	Yes / No / Explain		
31	Should provide precise levels of O3, CO, NO, and NO2 that required for calibration.		-		
32	Flow accuracy	1% of full scale	Yes / No / Explain		
33	Flow repeatability	1% of full scale	Yes / No / Explain		
34	Response time	< 1 minute for low flows and faster for higher flows	Yes / No / Explain		
35	Gas inlet	minimum 3 gas input connections	Yes / No / Explain		
36	zero air inlet	should have one zero air input connection	Yes / No / Explain		
37	Zero air requirement	10 SLPM	Yes / No / Explain		



38	Ozone Generator output	6 ppm-liters	Yes / No / Explain		
39	Photometer with ranges	100 ppb to 5 ppm	Yes / No / Explain		
40	Technical Requirements :	As given below (Sl. No. 41- 47 )	Yes / No / Explain		
41	Consumables for Ozone Analyzer: Teflon particulate filter, Maintenance kit for sampling pump, Zero scrubber.		-		
42	Consumables for NOx Analyzer: Teflon particulate filter, Ozone particulate-filter, Active exhaust ozone scrubber/destructor, Maintenance kit for sampling pump, zero scrubber.		-		
43	Consumables for CO Analyzer: Teflon particulate filter for sample, Maintenance kit for sampling pump, zero scrubber.		-		
44	All analysers and calibrator should have suitable internal/supporting pump for sampling.		-		

45	The analyzers must function properly without any defect between 5 to 40°C ambient temperatures, and 10 to 95% relative humidity conditions.		-		
46	The analyzers should have alpha-numeric and graphical display with simultaneous presentation of concentration and instrument health parameters		-		
47	The analyzers should operate at operating voltage of 230 VAC, 50Hz		-		
48	Specific Conditions	As given below (Sl. No. 49- 56 )	Yes / No / Explain		
49	All analysers and calibrator should have US-EPA or equivalent approval. Certificate must be provided.		-		
50	Vendor should provide quote for essential spares/consumables for the uninterrupted operation of the instrument for at least 3 years. Quotation should be split for each spare.		-		

51	All the analyser should be factory calibrated. Calibration certificate must be provided.		-		
52	Vendor should provide suitable software for remote operation as well as PC based data acquisition system with suitable Operating System (Windows).		-		
53	Vendor should provide Gas sampling system with SS gas sampling inlet, moisture and dust filter, teflon sampling lines, teflon filter pads, etc & Zero-air unit		-		
54	All analyzers should be rack mounting model and the vendor should provide suitable rack for fixing the analyzers (rack with heavy grade aluminium profiles, telescopic slides, overload protection, power distribution box, tubings & fittings etc)		-		

55	Vendor should provide warranty period of minimum 3 years; also provide quotation for Non-comprehensive AMC (Annual Maintenance contract) for at least 2 years after the warranty period.		-		
56	Vender should provide all the necessary accessories for the independent operation of all the ordered instruments		-		

**Supporting Documents required from Vendor**

5 additional documents can be uploaded by the vendor

## C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Supply and Installation at our site	Yes / No / Explain	
2	Security Deposit: Successful Tenderer shall submit Security Deposit equivalent to 10% of the order value valid for a period of 60 days beyond the date for completion of the Purchase Order shall be furnished. This security deposit is collected towards the performance of the Contract. The said Security Deposit shall be submitted either in the form of Bank Guarantee or Fixed Deposit receipts from Nationalised/Scheduled Banks.	Yes / No / Explain	
3	I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.	Yes / No / Explain	
4	PO ordering address in full with Contact Persons Name, E-mail id, Phone No. [also attach your Quotation in PDF format without prices details].	Yes / No / Explain	
5	Foreign vendors are not permitted to quote 1. Only Class -I and Class-II Local suppliers as per make in India policy are eligible to participate in the bid. 2. The percentage of local content should be specifically mentioned in the offer, without which will be summarily rejected 3. Preference will be given to class-I Local Supplier and in their absence, class-II Local supplier will be considered.	Yes / No / Explain	

6	Taxes and other costs, if any. [Please Specify the rates]. Note: All Tax invoices issued by suppliers/service providers on or after July 01, 2017 shall invariably bear their GST registration number (GSTIN) and the applicable GST rates. In the absence of which, the invoices shall not be processed for payment.	Yes / No / Explain	
7	VSSC is a Public Funded Research Institution under the administrative control of Department of Space and is eligible for partial exemption of IGST @ 5% against IGST EXEMPTION CERTIFICATE.	Yes / No / Explain	
8	Warranty [Minimum Three years required]	Yes / No / Explain	
9	Delivery Terms [Normal delivery terms - FOR Destination (for Indigenous cases)]	Yes / No / Explain	
10	Delivery Period [Please Specify the period, LD Clause applicable]	Yes / No / Explain	
11	Payment [Within 30 days after receipt and acceptance for indigenous cases.]	Yes / No / Explain	
12	Quote Validity: Minimum 180 days [for Two Part Tender] from the date of Tender opening. [Mandatory. Otherwise offer will not be considered for evaluation].	Yes / No / Explain	
13	10% Performance Bank Guarantee valid two months beyond warranty period to be provided.	Yes / No / Explain	
14	Liquidated Damages @ 0.5% per week subject to maximum of 10% of order value is applicable beyond the promised delivery schedule.	Yes / No / Explain	

15	<p>This is a Two-Part Tender i.e. Part 1: Technical &amp; Commercial, Part-2: Price Bid. Hence all technical &amp; commercial details shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid.</p> <p>2. This being a Two Part Tender, Technical &amp; Commercial part and Price Part separately, the tenderers should not attach any documents containing Pricing information along with Technical &amp; Commercial Bid. We do not open Part - II (Price Bid), if Part I (Technical &amp; Commercial Offer) does not meet with our technical specification requirements.</p> <p>3. Our Tender Enquiry contains technical requirements and specification. The detailed technical specification of your offer should be covered in the technical part. The Technical documents need to be attached online as single PDF file without any price information. Technical bid containing Price details will be treated as unresponsive offers and rejected.</p> <p>4. The prices are to be mentioned only in the price Bid form attached. The vendor have to compulsorily submit the compliance statement online otherwise their offer will not be considered for further evaluation. Before entering the compliance statement, vendors are advised to refer the detailed specification provided.</p> <p>5. The Technical Specification/ Drawing/ Product Catalogues/ Works Carried by vendor/ Make offered etc. as a single PDF file without any financial details has to be uploaded online mode by the vendor. This being TWO PART TENDER the PDF document uploaded should not contain any pricing details. If the attached PDF contains any pricing details the offer will be treated as unresponsive and will be summarily rejected</p>	Yes / No / Explain	
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16	<p>This tender is proposed as a DOMESTIC PUBLIC TENDER. This tender is restricted only to Class-I and Class-II Local Suppliers as defined under DPIIT Order dtd 04/06/2020- Preference to Make in India Order-2017 Revision. Non-Local Suppliers need not quote. Foreign OEMs/Agents quoting on behalf of Foreign OEMs are not permitted to quote. High Sea Sales Quotes not permitted. The bids shall be in INR only.</p> <p>Tenderers are advised NOT TO UPLOAD any documents revealing the price of the main equipment, accessories, spares or AMC. They are however, requested to upload UNPRICED BIDS (i.e. Price details masked) showing appropriate break-up of components of main equipment, individual accessories and spares as desired.</p> <p>This is a TWO-PART tender i.e. Techno-Commercial Bid (Part-I) and Price Bid (Part-II) shall be submitted separately. All technical and commercial terms and conditions shall be furnished in the Techno-Commercial Bid while price shall be indicated only in the Price Bid. Uploading price details anywhere else other than the price-bid shall lead to unconditional rejection of the tender. Please make note of the same.</p> <p>Purchase preference to eligible vendors are applicable as per extant notifications issued by the Government of India.</p> <p>The Class-I/Class-II Local suppliers, at the time of submitting their offer, shall also indicate percentage of local content and provide self-certification that the item (s) offered meets the local content requirement for Class-I/Class-II Local Suppliers as the case may be. They shall also give details of location (s) at which the local value addition is made.</p>	Yes / No / Explain	
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17	<p>In cases if the item(s) offered exceed Rs. 10 Crores, the Class-I/Class-II Local Suppliers shall provide a Certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.</p> <p>False Declarations will be in breach of the Code of Integrity under Rule 175 (1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.</p> <p>Technical Bids will be opened at the scheduled due date &amp; time. No further intimation will be sent in this regard. The schedule for price bid opening shown is only indicative. Price bids will only be opened in the case of parties who have been techno-commercially accepted, the details of which will be communicated at a later stage.</p>	Yes / No / Explain	
18	<p>If any bidder submits forged / false document along with the tender, offer of such vendors will be summarily rejected and such bidders will be blacklisted all future tenders.</p>	Yes / No / Explain	

### C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	SET OF TRACE GAS ANALYSERS (O3, NOX, CO WITH CALIBRATOR)	1.00 Sets		-		

### Common charges (Applicable for all items)

Customs Duty	
IGST	