



Sri Venkateswara College

(University of Delhi)

Benito Juarez Marg, Dhaula Kuan, New Delhi- 110 021

Phone Off: 24112196; Telefax: 011-24118535

### **Tender for Open Top Chamber**

**Dated: 11-06-2021**

Sealed quotations are invited for a two-bid tender of Open Top Chamber (three in no.) to be installed at Sri Venkateswara College, Dhaula Kuan, New Delhi-110021. The specifications are given below:

#### **Technical Specification for Open Top Chamber**

Sl. No.	Number of OTC with dimensions	3 OTC with 2.5(L)X2.5(B)X3(H)mt a) Chamber 1: Ambient (Control) b) Chamber 2: Elevated CO <sub>2</sub> (550 to 700ppm) c) Chamber 3: Elevated CO <sub>2</sub> plus Temperature control (Temp ambient plus 2-3°C with CO <sub>2</sub> level 380 to 800 ppm)
1	Facilities in Each OTC	Should have independent monitoring / control facilities for CO <sub>2</sub> , Temperature and humidity and online data logging and control to be provided through PC on real time basis
2	CO <sub>2</sub> Gas Cylinders and regulator	04-06 cylinders of 47 lit. capacity with 60 kg pressure with 30 kg CO <sub>2</sub> gas
3	CO <sub>2</sub> supply system	CO <sub>2</sub> manifold with 4 cylinders connecting capacity with individual preheated option and regulator
4	Panel for datalogging system	Panel to accommodate analyzer SCADA Hardware and other accessories
5	Control and Data Acquisition Software	Should have i) Historical & real time basis data through PC ii) Memory back up & data storage and free up gradation of software. iii) Licensed software iv) Integrated SCADA system language and multilanguage HMI applications TCP/IP Client Server support v) Communication option via wired or GSM networks and software accessible from Excel.

6	Temperature sensors	Should have range between 20 ° to +50 °C, Resolution of 0.1°C and accuracy of +0.2 °C
7	Ceramic infrared Heater with controller	Ceramic IR heating module in SS sheath with 2 nos. FSR 500 heater, reflector, connector and total load of approx.1000watt/230VAC
8	Humidity sensor with transmitter	Should have Power supply of 12~36V DC, Humidity working range of 0-100%RH, Humidity sensing element of Polymer humidity capacitor, Output for humidity of 0~5V DC or 0~10V DC or 4~20mA, Accuracy of humidity of ±2%RH (10-95%RH, at 25 °C); <±5% RH(-40 to 80 °C) and Sensitivity for humidity of 0.1%RH Drift rate per year ±0.5%RH
9	CO <sub>2</sub> Monitor	Should have: i) Non dispersive infrared absorption (NDIR) method with analog 4 to 20mA and 0-10 DC outputs ii) Measurement range of 0-3,000 ppm display and Warm-Up time: 60 seconds iii) Voltage output of 0-10vdc,4-20Ma and 24vdc Power supply iv) Accuracy of ±75ppm or ±5% of reading whichever is greater v) Zone LED of Green:<800ppm> Yellow:<800-1200ppm> Red:>1200ppm and Sound Alarm of 70db@10cm
10	Data Transmission unit / data logging system	Should have Programmable logic devices with Human Machine Interface, Wireless Analog to RS485 Converter, 8-CH analog signal acquisition, isolated RS-485/232 output, 24-bit AD converter, testing accuracy>0.05%, can Program and calibrate modules accuracy via RS-485/232 interface, High reliability, easy programming, easy installation, can program setting module address, baud rate, 0-5V voltage signal or 4-20mA current signal input and each Unit with control unit individual
11	Pu tubing/ CPVC pipe line	With Pressure of 40 kg, non-corrosive, inert
12	Solenoid valve	With 230 V or 24 DC power supply and OD ½ inch
13	PC for data acquisition platform	PC with 18.5inch LCD monitor, I- TB HD, 4-16 GB RAM, UPS and laser printer system
14	Control Room	For keeping PC, Control Panel, Hardware, CO <sub>2</sub> Cylinder etc.  With specifications of Size 08 ft X08ft X10 ft with Fan and electrifications
15	Warranty	Two year replacement warranty with One year extended AMC free
16	Accessory	Necessary Instrumentation and power cable, Fiber glass wire for heater, PU fittings, Relay card, DOP module etc

## **OTHER INSTRUCTIONS FOR THE BIDDERS**

### **1. OPENING OF FINANCIAL BID AND EVALUATION**

Financial bid of eligible and technically qualified bid will be opened. The lowest financial bid will be considered.

### **2. FINAL DECISION-MAKING AUTHORITY**

The College reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders. No claim whatsoever will be entertained/paid by the College to the bidder(s).

### **3. SUMMARY REJECTION OF TENDER**

If the bidder proposes any alteration in or additions to the prescribed form of tender or decline to carry out any work of the tender document; or any conditions mentioned, etc., that tender is liable to be rejected.

### **4. WARRANTY**

The supplier has to provide a minimum warranty of two years with One year extended AMC from the date of invoice.

### **5. TERMS OF PAYMENT**

Payment shall be made by the purchaser against the delivery, inspection, successful installation, commissioning and acceptance of the OTC systems at Sri Venkateswara College in good condition and to the entire satisfaction of the Purchaser. TDS will be deducted as per GoI norms.

### **6. FORCE MAJEURE/COVID-19**

In case of any unforeseen situation, suitable exemptions in the timeline of installation and payment may be mutually agreed upon by both the vendor and College.

### **7. INSTALLATION**

Installation and functioning of all OTC units and their monitoring system with proper documentation should be made within a maximum of 6 weeks from the date of placement of purchase order.

### **8. SUPPLIER INTEGRITY**

The supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state of art methods and economic principles and exercising all means available to achieve the performance specified in the contract.

### **9. INSTALLATION AND TRAINING**

- a) The supplier is required to perform the installation and demonstration of the equipment within 10 days of the arrival of materials at the site of installation.

- b) In case of any mishappening/damage to equipment and supplies during the carriage of supplies from the origin of equipment to the installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the insurance company as per his convenience. College will not be liable to any type of loss in any form.
- c) The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the premises of installation site, immediately after completing the installation of the equipment for a minimum period of at the supplier's cost.

## 10. TAXES

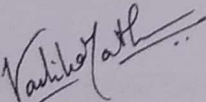
Supplier shall be entirely responsible for all taxes, license, fees, octroi, road permits, etc., incurred until delivery of the contracted goods to the Purchaser. The Purchaser will provide CDEC and GST exemption certificates if asked by the vendor and on providing necessary documents.

## 11. COMPLIANCY CERTIFICATE

This certificate must be provided indicating conformity to the technical specifications (Annexure – III).

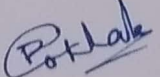
It is to be informed that the procedure given below is strictly followed while submitting the tender; otherwise the tender shall be liable for rejection.

1. The quotation should be sent under sealed cover addressed to “Dr. Vartika Mathur, Animal Plant Interactions Laboratory, Dept of Zoology, Sri Venkateswara College, Dhaula Kuan, New Delhi-110 021” latest by 12<sup>th</sup> July 2021.
2. The title “Quotation for -Open Top Chamber” should be written on the top of the envelope.
3. The sealed quotation should include a Technical Bid and a Financial Bid in two separate envelopes as per the formats given in Annexure I and Annexure II respectively.
4. The quoted price should be inclusive of all the taxes and other charges.
5. Terms and conditions for the AMC will be as per Delhi University /Govt. of India guidelines/conventions, or applicable from time to time.
6. Detailed T&C shall be executed with the approved vendor, upon finalization of the process.

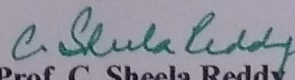


**Dr. Vartika Mathur**  
Principal Investigator

MoEF&CC project: 208/2020/RE



**Dr. Pooja Gokhale Sinha**  
Co-Principal Investigator



**Prof. C. Sheela Reddy**  
Principal  
PRINCIPAL  
Sri Venkateswara College  
Dhaulta Kuan, New Delhi-110021

## TECHNICAL BID

1.	<b>Name of the Firm</b>	
2.	<b>Address of the Firm</b>	
3.	<b>Registration no.</b>	
4.	<b>Name of the Authorized signatory with Designation</b>	
5.	<b>Specimen signature of the Authorized signatory</b>	
6.	<b>Telephone No. of the authorized signatory and the other Telephone numbers of the Firm</b>	
7.	<b>List of the copies of relevant documents</b>	
8.	<b>Details of Departments/ Organisations etc. in which the firm is engaged in instrument is installed in last five years.</b>	
9.	<b>Has the firm ever been black listed by any client if yes please provide the details</b>	
10.	<b>PAN/TAN no (photocopy)</b>	

## FINANCIAL BID

1.	<b>Name of the Firm</b>	
2.	<b>Address of the Firm</b>	
3.	<b>Registration no.</b>	
4.	<b>Name of the Authorized signatory with Designation</b>	
5.	<b>Specimen signature of the Authorized signatory</b>	
6.	<b>Telephone No. of the authorized signatory and the other Telephone numbers of the Firm</b>	

S.No.	Specification	Make	Unit Price	Total Price
<b>Taxes</b>				
<b>Grand total Price</b>				

Name of application specialist/Service Engineer who have the technical competency to handle and support the quoted product during and after the warranty period.		
Nature of the job (Application Specialist/Service Engineer)	Name of the Person	Contact Number

**Signature of the Bidder** : .....

**Designation** : .....

**Name of the Organization** : .....

**Contact Number** : .....

## COMPLIANCE SHEET

Indicate the compliance as per the technical specifications mentioned in the tender

Sl. No.	Technical specifications mentioned in the Tender	Compliance (Y / N)
1.	Total capacity as mentioned in the Technical Specification	
2.	Complete adherence to technical specification and terms and conditions	
3.	_____ Year warranty with the instrument	
4.	<u>Any other specification</u>	

I have also enclosed all relevant documents in support of my claims (as above) in the following pages

**Signature of the Bidder** : .....

**Designation** : .....

**Name of the Organization** : .....

**Contact Number** : .....



<<ORGANISATION LETTER HEAD>>

**DECLARATION**

We, \_\_\_\_\_ hereby certify that all information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

This is certified that our organization has been authorized (Copy attached) by the OEM to participate in Tender. We further certify that our organization meets all conditions of eligibility criteria laid down in this tender document. Moreover, OEM has agreed to support on regular basis with technology / product updates and extend support for the warranty.

The prices quoted in the financial bids are subsidized due to academic discount given to University of Delhi.

Signature of the Tenderer

Name: .....

(Seal of the Company)